DEPARTMENT OF HEALTH & HUMAN SERVICES
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CENTERS FOR MEDICARE & MEDICAID SERVICES
CENTER FOR MEDICAID & CHIP SERVICES

State Demonstrations Group

August 18, 2022

Amir Bassiri
Medicaid Director
Office of Health Insurance Programs
New York State Department of Health
One Commerce Plaza, Room 1605
Albany, NY 12237

Dear Mr. Bassiri:

The Centers for Medicare & Medicaid Services (CMS) completed its review of the New York State Health and Recovery Plans (HARP) Interim Evaluation Report and the Self-Directed Care (SDC) Pilot Interim Evaluation Report, which are required by the Special Terms and Conditions (STCs) of New York's section 1115 demonstration, "Medicaid Redesign Team" (Project No: 11-W-00114/2). The HARP amendment to the long-standing Medicaid Redesign Team demonstration was authorized from October 2015 through March 31, 2021, with extension through March 31, 2022. CMS determined that the HARP Interim Evaluation Report, submitted on February 9, 2022, is in alignment with the approved Evaluation Design and the requirements set forth in the STCs, and therefore, approves the state's Interim Evaluation Report. With this letter CMS also approves the SDC Pilot Interim Evaluation Report, submitted on March 9, 2022, which is also in alignment with the approved Evaluation Design and the requirements set forth in the STCs.

Consistent with the approved Evaluation Design for the HARP amendment, a mixed methods approach used both quantitative and qualitative analysis to analyze data on the HARP and behavioral health (BH) programs, which included quasi-experimental methods as well as key informant interviews. The report's findings show that while BH utilization decreased over the demonstration period, utilization decreased relatively less so for HARP participants. Additionally, there was a notable increase in utilization of BH home and community-based services (HCBS), as well as other community-based behavioral health services, which include Non-Licensed Clinic services. HARP enrollee health outcomes improved over the evaluation time period, and utilization of Health Homes services also increased, with enrollees generally reporting positive experiences.

With this letter, CMS is also approving the SDC Pilot Interim Evaluation Report. The evaluation incorporated administrative and programmatic data, as well as a wealth of qualitative data collected from program participant surveys and key informant interviews. The small sample size of participants (233 over the first two years of the program) did not allow for robust quantitative analyses, but descriptive statistics show a significant increase in self-reported quality of life by program participants during the duration of their enrollment. Additionally, in interviews, program participants described overwhelmingly positive experiences with the SDC program.

In accordance with the STCs, the approved Interim Evaluation Reports may now be posted to the state's Medicaid website within thirty days. CMS will also post these Interim Evaluation Reports on Medicaid.gov.

We look forward to our continued partnership on the New York Medicaid Redesign Team section 1115 demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

Danielle Daly
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Danielle Daly
Director
Division of Demonstration
Monitoring and Evaluation

cc: Frankeena McGuire, State Monitoring Lead, CMS Medicaid and CHIP Operations Group

PR No. A783-1

Independent Evaluation of the New York State Health and Recovery Plans (HARP) Program

Interim Evaluation Report

Submitted to:
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Executive Summary

Through the New York Medicaid Redesign Team Section 1115 Demonstration, New York State has pursued the goal of improving access to and quality of health care for the Medicaid population through a managed care delivery system. In August 2015, an amendment to the Demonstration authorized two policies targeted to Medicaid beneficiaries with behavioral health needs: (1) a Medicaid managed care carve-in of behavioral health services for Supplemental Security Income beneficiaries whose behavioral health benefit was previously covered under a fee-for-service payment arrangement and (2) the creation of Health and Recovery Plans for Medicaid beneficiaries meeting criteria specified by New York State's Office of Mental Health (OMH) or Office of Addiction Services and Supports (OASAS). The Health and Recovery Plans, known as HARPs, are specialized managed care products that cover physical health, mental health, and substance use services for adults with significant behavioral health care needs. The goals of the Behavioral Health Demonstration were to improve health care quality, costs, and outcomes for the State's Medicaid behavioral health population, and to transform the behavioral health system from an inpatient-focused system to a recovery-focused outpatient system.

The New York State (NYS) Department of Health (DOH), the State's Medicaid program, contracted with the RAND Corporation to conduct an independent evaluation of the Behavioral Health Demonstration programs, including a HARP program evaluation.[1] The HARP program evaluation used a mixed methods approach to determine the extent to which three goals of the Behavioral Health Demonstration have been achieved since implementation (October 2015 in New York City; July 2016 in Rest of State). The three goals are as follows:

1. Improve health and behavioral health outcomes for adults enrolled in Mainstream Medicaid Managed Care plans whose behavioral health care was previously covered under a fee-for-service payment arrangement.
2. Improve health, behavioral health, and social functioning outcomes for adults enrolled in the HARP program.
3. Develop behavioral health home and community-based services (HCBS) focused on recovery, social functioning, and community integration for HARP enrollees meeting eligibility criteria for such services.

Evaluation Research Questions

For each program goal, the evaluation examined specific research questions as shown in Table ES.1. For Goal 1, the research questions focus on use of community-based behavioral and primary care health services among the entire population that was carved into Medicaid Managed Care. Goal 2, which focuses on HARP enrollees, is addressed through questions about the population that enrolled in HARP, their use of services, the quality of care they receive, their experience of that care, and the costs of their care to the Medicaid program. Goal 3, which focuses on the subgroup of HARP enrollees who become eligible for behavioral health HCBS, is addressed through questions about the eligibility determination process, use of behavioral health HCBS, the behavioral health HCBS provider network, and the costs of care to the Medicaid program.

Table ES.1. Evaluation Research Questions for Each Program Goal

Goal 1: Improve health and behavioral health outcomes for adults in Mainstream Medicaid Managed Care whose behavioral health care was previously carved out in an FFS payment arrangement	
Research Question 1	To what extent are Medicaid Managed Care enrollees accessing community-based behavioral health specialty services (e.g., ACT, PROS, and FEP programs)?
Research Question 2	To what extent are Medicaid Managed Care enrollees accessing community-based health care?
Goal 2: Improve health, behavioral health, and social functioning outcomes for adults in the HARP program	
Research Question 1	How has enrollment in HARP plans increased over the length of the Demonstration?
Research Question 2	What factors are associated with non- enrollment in HARP plans?
Research Question 3	What are the demographic and clinical characteristics of the HARP population? Are they changing over time?
Research Question 4	What are the educational and employment characteristics of the HARP population?
Research Question 5	To what extent are HARP enrollees accessing primary care?
Research Question 6	To what extent are HARP enrollees accessing community-based behavioral health specialty services (e.g., ACT, PROS, OMH Outpatient Clinic, Continuing Day Treatment, Partial Hospitalization, OASAS Opioid Treatment Program, OASAS Outpatient Clinic, and FEP programs)?
Research Question 7	To what extent are HARP enrollees accessing Health Homes for care coordination?
Research Question 8	To what extent is HARP quality of care improving, especially related to the HEDIS measures of health monitoring, prevention, and management of behavioral health conditions, cardiovascular disease, asthma, diabetes, and other selected chronic health conditions?
Research Question 9	To what extent are HARP enrollee experiences with care and access to health and behavioral health services positive?
Research Question 10	To what extent are HARP enrollees satisfied with the cultural sensitivity of behavioral health providers and their wellness, recovery, and degree of social connectedness?
Research Question 11	To what extent are HARPs cost effective? What are the PMPM costs of inpatient psychiatric services, SUD ancillary withdrawal, hospital-based detox, and ED services for the HARP population? Are these costs decreasing over time?
Goal 3: Develop HCBS focused on recovery, social functioning, and community integration for individuals in HARPs meeting eligibility criteria	
Research Question 1	To what extent are HARP enrollees deemed eligible to receive HCBS?
Research Question 2	To what extent are HARP enrollees who are deemed HCBS-eligible receiving HCBS?
Research Question 3	To what extent has the Demonstration developed provider network capacity to provide behavioral health HCBS for HARPs?
Research Question 4	To what extent are the added costs arising from access to behavioral health HCBS offset elsewhere in the continuum of care?

TERMS: ACT: Assertive Community Treatment; PROS: Personalized Recovery Oriented Services; FEP: First Episode Psychosis; OMH: Office of Mental Health; OASAS: Office of Addiction Services and Supports; PMPM: Per Member per Month; SUD: Substance Use Disorder; ED: Emergency Department

Evaluation Design

To address the research questions, RAND conducted a comprehensive, statewide independent evaluation of the Behavioral Health Demonstration that adheres to the evaluation standards set forth in the Special Terms and Conditions for the Demonstration.[4] Designed as a mixed methods investigation, the evaluation addresses testable hypotheses to assess whether the expected beneficiary- and system-level impacts of the Medicaid Managed Care behavioral health carve-in and HARP programs have been achieved. Quantitative methods were used for descriptive purposes and to assess the impact of the policy on the stated outcomes, and qualitative methods were used to provide context for the quantitative findings and to conduct a process evaluation that captured administrator, provider, and beneficiary perspectives on the HARP program's functioning and effectiveness. As requested by the DOH, results are presented separately for New York City and other regions of the State, referred to as Rest of State for the purposes of this report.

Quantitative Components

A variety of secondary data sources were used to construct study variables (outcome measures and covariates for risk adjustment) for the quantitative component of the HARP program evaluation. Data were provided by the DOH and OMH and included data from Medicaid, Mental Health Automated Record System, OnTrackNY, Healthcare Effectiveness Data and Information Set / Quality Assurance Reporting Requirements Plan-Reported Metrics, Community Mental Health Screens, the Health Plan version of the Consumer Assessment of Healthcare Providers and Systems Survey, the HARP Perception of Care Survey, Medicaid Choice Enrollment, Complaints and Appeals, the Medicaid Managed Care HCBS Provider Network, and the Area Health Resource Files.

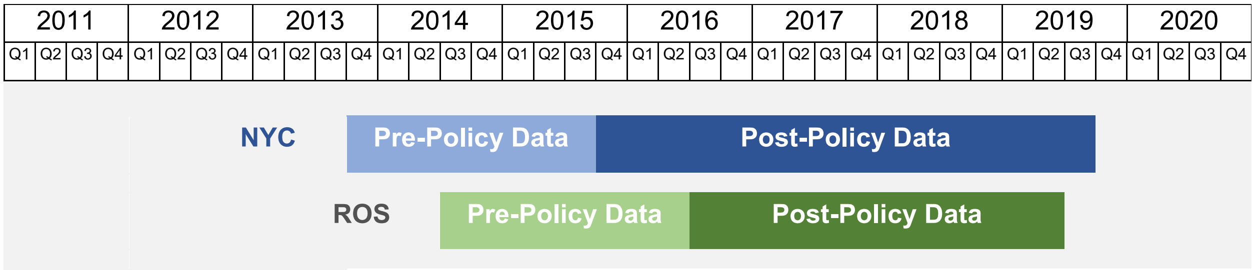
Analytic Approach for the Quantitative Components

The analytic approach to address each research question was developed to conduct the most rigorous test of the evaluation hypotheses possible with the available data. A range of statistical methods were used, depending on whether there was an appropriate control group and the nature of the research question. For selected research questions for which it was important to determine if the effects were attributable to the HARP program (Goal 2) or the behavioral health HCBS benefit (Goal 3) and a control group was available, our main analyses involved the implementation of a doubly robust method that compared HARP enrollees to HARP eligibles not enrolled in HARP (Goal 2) and behavioral health HCBS users to non-behavioral health HCBS individuals (Goal 3). Because Goal 2 results from these analyses are limited in their generalizability (see Strengths and Limitations section), these were supplemented with an interrupted time series analysis. Although the interrupted time series analysis is not necessarily a causal inference method as some of the effects could be attributed to any other program being implemented in the state at the same time, this additional analysis permitted assessment of post-period outcomes for the full population of HARP-enrolled beneficiaries relative to the baseline period. Interrupted time series analyses were also used in Goal 1 analyses, for which control groups were not available and data were limited to the group that participated in the demonstration. However, in some cases we were limited to point in time descriptive analyses of outcomes among individuals who participated in the demonstration. These analyses provide a baseline for future comparative work, but they do not identify effects of the demonstration.

Time Periods Used in the Evaluation

Figure ES.1 describes the period used for the quantitative component of the evaluation covering calendar years 2013-2019,[1] although it should be noted that the HARP program is ongoing. Due to the lagged roll-out of the Behavioral Health Demonstration in the Rest of State relative to New York City, the evaluation period differs between the regions: New York City has a six-year evaluation period (October 1, 2013, through September 30, 2019), with four post-policy (or post-period) years; Rest of State has a five-year evaluation period (July 1, 2014, through June 30, 2019), with three post-period years. The evaluation period for the selected statewide analyses is similar to that of Rest of State, i.e., it is five years long. We note that the regions' two-year pre-policy period, also referred to as pre-period, is used as the baseline for our analyses (we use both terms interchangeably).

Figure ES.1. Pre- and Post-Policy Data Used for Quantitative Evaluation



NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream Medicaid Managed Cares and HARPs. Statewide: Excludes NYC data from October 2018 to September 2019.

Qualitative Components

The qualitative components of the HARP evaluation sought to provide additional context and multiple perspectives from key informants on program implementation, including barriers and

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[1] The evaluation period started in 2013 due to data limitations for earlier years and ended in 2019, the original end year for an evaluation that began in 2019 and employed some of the data that had been used in the DSRIP evaluation. Although by the time we began with the planned analyses we could have employed 2020 data, logistical reasons and the potential for the COVID-19 pandemic to complicate the interpretation of our results led to our decision to not expand the analyses to 2020.

facilitators to implementation success and insight into potential mechanisms of impact on program outcomes. Key HARP informants included stakeholders representing leadership from provider organizations delivering an array of services (e.g., behavioral health HCBS, Care Coordination, Assertive Community Treatment), Managed Care Organizations, NYS DOH agencies (e.g., OMH, OASAS), and other statewide organizations (e.g., advocacy, provider, trade, and intermediary organizations). Interviews with these informants focused on understanding how the HARP program was being implemented; the communication and coordination among various stakeholders administering, overseeing, and delivering services related to the program; the perceived impact of the program; challenges; and factors that might impact potential program scale-up. Interviews were also conducted with HARP enrollees to understand their perspectives on HARP enrollment; ongoing HARP membership and communication with Managed Care Organizations; how HARP has impacted their access to and satisfaction with services, including behavioral health HCBS; and the impact of HARP and behavioral health HCBS on recovery, well-being, and community integration. Due to the COVID-19 pandemic, procedures for interviews with HARP enrollees were revised to be conducted individually and by phone. Efforts were made to ensure that a broad range of perspectives were represented in the HARP enrollee sample, including diversity of demographics and geographic areas, as well as types of support services utilized.

Evaluation Findings

Findings are presented below in Table ES.2. Individual findings are discussed in detail below the table. We note that for the Goal 2 research questions where results from our main (doubly robust) analyses and interrupted series analyses are not well aligned, namely research questions 6 and 11, this is because trends among HARP enrollees captured by the interrupted time series analyses are also experienced by non-HARP individuals but to a different degree. In this setting, although results diverge, they still provide a coherent picture of the observed effects as one is only looking at the trend in the full HARP population while the other is looking at the difference in trends between the non-HARP population and the HARP subpopulation with similar characteristics as the non-HARP population.

Table ES.2. Overview of Findings

Goal	Research Question	Hypotheses	Conclusions
1. Improve health and behavioral health outcomes for adults in Mainstream Medicaid Managed Care whose behavioral health care was previously carved out in an FFS payment arrangement.	1. To what extent are Medicaid Managed Care enrollees accessing community-based behavioral health specialty services (e.g., ACT, PROS, and FEP services delivered through OTNY)?	Utilization of behavioral health specialty services and evidence-based care for FEP will increase.	**Inconclusive** • Inconsistent utilization trends across behavioral health specialty services • Some trends appear to have started prior to the policy • Modest utilization of specialty behavioral health care by SSI beneficiaries with SMI and SUD and substantial variability in utilization of specialty behavioral health services, both among services and by region
	2. To what extent are Medicaid Managed Care enrollees accessing community-based health care?	The percent of Medicaid Managed Care behavioral health members with primary care will increase.	**Inconclusive** • Utilization increased toward end of post-period relative to the baseline period—however, caution is advised in interpreting these results • Additionally, access barriers remain despite potential for improvement in integrated care
2. Improve health, behavioral health, and social functioning outcomes for adults in the HARP program.	1. How has enrollment in HARP plans increased over the length of the Demonstration?	HARP enrollment will increase and the majority of HARP eligibles will enroll in HARP or HIV Special Needs Plans rather than mainstream Medicaid Managed Care plans.	**Supported** • HARP enrollment increased substantially over the post-period in both regions • Passive enrollment was a key factor in achieving high enrollment rates
	2. What factors are associated with non-enrollment in HARP plans?	HARP-eligible members who are not enrolled in HARP are younger and less behaviorally acute than those who remain enrolled in HARP/HIV Special Needs Plans.	**Inconclusive** • Non-HARP individuals were younger and generally less acute than HARP enrollees • However, they were more likely to have SUD diagnoses and, in NYC, more likely to utilize acute behavioral health services

Goal	Research Question	Hypotheses	Conclusions
	3. What are the demographic and clinical characteristics of the HARP population? Are they changing over time?	On a population level, it is expected that the distribution of the measured risk factors and protective factors for this population will shift toward fewer risk factors and greater protective factors over time as the program matures; regional differences in improvements will be observed. On an individual level, trajectories of improvement in risk and protective factors over time will be observed.	**Inconclusive** • Due to data limitations, we were unable to substantively weigh in on risk and protective factors • Annual cohorts of HARP enrollees became younger and had declining shares of enrollees with serious diseases • However, they had growing shares of enrollees with SUD needs, and acute behavioral health care utilization increased over time
	4. What are the educational and employment characteristics of the HARP population?	Higher rates of educational and employment attainment will be observed for the HARP enrolled population over time as the program matures; individual-level improvements will be noted.	**Unable to weigh in on hypothesis** • Due to limitations of the CMH Screen data, we were unable to weigh in on this hypothesis or draw other conclusions from findings
	5. To what extent are HARP enrollees accessing primary care?	Percent of HARP members with primary care access will increase.	**Inconclusive** • No utilization differences between HARP and non-HARP individuals—however, caution is advised in interpreting these results • Some access barriers may have been reduced
	6. To what extent are HARP enrollees accessing community-based behavioral health specialty services (ACT, PROS, OMH Outpatient Clinic, Continuing Day Treatment, Partial Hospitalization, OASAS Opioid Treatment Program, OASAS Outpatient Clinic, and FEP programs)?	Access to and utilization of behavioral health specialty services will increase.	**Unsupported** • Utilization of key specialty behavioral health services declined over the course of the post-period—*however, the declines were generally less pronounced for HARP enrollees relative to non-HARP individuals* • Notably, utilization of Other Community-Based behavioral health services, which include Non-Licensed Clinic services, increased • Despite positive impressions of access to services through the HARP program, continuing challenges were also identified
	7. To what extent are HARP enrollees accessing Health Homes for care coordination?	Access to care coordination services will increase in terms of Health Home engagement for HARP members.	**Largely Supported** • Utilization of Home Health services increased throughout the post-period • Despite generally positive enrollee experiences with these services, challenges have complicated Health Home enrollment

Goal	Research Question	Hypotheses	Conclusions
	8. To what extent is HARP quality of care improving, especially related to the HEDIS measures of health monitoring, prevention, and management of behavioral health conditions, cardiovascular disease, asthma, diabetes, and other selected chronic health conditions?	Healthcare Effectiveness Data and Information Set / Quality Assurance Reporting Requirements quality profiles for HARP plans will improve over time as the program matures.	**Inconclusive** • HARP enrollees had higher probability of meeting measures of quality of care during the post-period, relative to the baseline period and, to a lesser extent, non-HARP individuals • However, improvements were not consistent year to year, so it was not possible to discern a temporal pattern related to program maturity
	9. To what extent are HARP enrollee experiences with care and access to health and behavioral health services positive?	Perception of experience of care and satisfaction with care will improve over time as the program matures.	**Unable to weigh in on hypothesis** • However, positive experiences were reported with respect to access to and quality of care, and quality of provider communication
	10. To what extent are HARP enrollees satisfied with the cultural sensitivity of behavioral health providers and their wellness, recovery, and degree of social connectedness?	HARP enrollee satisfaction with the cultural sensitivity of their behavioral health providers will increase over the length of the Demonstration; HARP enrollee satisfaction with their wellness, recovery, and degree of social connectedness will improve over the time of the Demonstration.	**Unable to weigh in on hypothesis** • However, positive experiences were reported with respect to cultural sensitivity of care, and levels of social connectedness were generally high • Physical health limitations and substance use were common, and engagement in productive activities was low
	11. To what extent are HARPs cost effective? What are the PMPM costs of inpatient psychiatric services, SUD ancillary withdrawal, hospital-based detox, and ED services for the HARP population? Are these costs decreasing over time?	It is expected that costs for HARP enrollees are shifting from acute services to non-acute outpatient-based health and behavioral health services.	**Inconclusive** • Costs for all acute behavioral health care combined declined for HARP enrollees—in ROS, only late in the post-period; *however, because cost declines were also observed among non-HARP individuals, this finding may not be attributable to the policy* • HARP enrollees had higher post-period costs for inpatient psychiatric services, and more consistently, behavioral health ED services relative to the baseline period—*however, these costs (only ED costs in NYC) also increased for non-HARP individuals*. • HARP enrollees did experience an increase in outpatient behavioral health service utilization and costs relative to the baseline period; *similar*

Goal	Research Question	Hypotheses	Conclusions
			differences relative to non-HARP individuals were only observed in ROS
3. Develop HCBS focused on recovery, social functioning, and community integration for individuals in HARPs meeting eligibility criteria.	1. To what extent are HARP enrollees deemed eligible to receive HCBS?	It is expected that 75 percent of HARP members will be eligible for any HCBS, 75 percent of HARP members will be eligible for HCBS Tier 1, and 70 percent of HARP members will be eligible for HCBS Tier 2 by the end of 2019.	**Unsupported** • Goal was not met • Result likely stems from the complexity of the assessment process.
	2. To what extent are HARP enrollees who are deemed HCBS-eligible receiving HCBS?	It is expected that Per Member per Month behavioral health HCBS utilization will increase over the course of the demonstration.	**Supported** • There were substantial increases in rates of behavioral health HCBS utilization over time • However, by 2019, utilization remained quite low, particularly in NYC, a result that may be driven by extensive challenges regarding behavioral health HCBS access
	3. To what extent has the Demonstration developed provider network capacity to provide behavioral health HCBS for HARPs?	It is expected that the number and ratio of behavioral health HCBS providers per 1,000 HCBS-eligible enrollees will increase over the course of the Demonstration.	**Inconclusive** • The number of behavioral health HCBS providers increased initially in most of the State but declined toward the end of the Behavioral Health Demonstration, a trend driven by counties with the largest numbers of providers • Number of providers per 1,000 behavioral health HCBS-eligible HARP enrollees decreased over time
	4. To what extent are the added costs arising from access to behavioral health HCBS offset elsewhere in the continuum of care?	It is expected that the added costs arising from access to behavioral health HCBS will be offset elsewhere in the continuum of care.	**Unsupported** • Behavioral health HCBS users' costs and utilization of all forms of acute care tended to not be different in the post-period, relative to the early post-period and for costs only, non-behavioral health HCBS individuals • Total Medicaid costs were not different for behavioral health HCBS users in the post-period relative to the early post-period • Analyses with some methodological limitations suggest that behavioral health HCBS users in both regions had higher outpatient behavioral health care utilization than non-behavioral health HCBS individuals

Goal 1: Improve health and behavioral health outcomes for adults in Mainstream Medicaid Managed Care whose behavioral health care was previously carved out in an FFS payment arrangement

Goal 1 included two research questions related to the impacts of the Medicaid Managed Care behavioral health carve-in policy on access to community-based behavioral health specialty services and health care. We addressed these questions with a mixed methods approach focused on utilization of a variety of community-based behavioral health programs and primary and/or preventive care by the Supplemental Security Income (SSI) population targeted by the policy.

The analyses addressed the following hypotheses associated with the corresponding research questions:

- Hypothesis 1.1: Utilization of behavioral health specialty services and evidence-based care for First Episode Psychosis will increase.
- Hypothesis 1.2: The percent of Medicaid Managed Care behavioral health members with primary care will increase.

Our findings provide inconclusive evidence regarding the DOH's hypotheses that both sets of services would increase after the launch of the Medicaid Managed Care behavioral health carve-in policy. There were no consistent trends in utilization of community-based behavioral health specialty services throughout the evaluation period. Moreover, some of the observed trends appear to have started prior to the launch of the Medicaid Managed Care carve-in, suggesting that at least some of our findings were unrelated to the policy, as the qualitative evidence seems to indicate is the case for Personalized Recovery Oriented Services. Key informants identified multiple barriers to access, not all of them related to the carve-in policy, that may have limited the policy's impact on utilization. Thus, we are unable to conclude that the policy had a consistently positive impact on access to this important group of behavioral health services. Our analyses did find that the utilization by SSI beneficiaries with serious mental illnesses (SMI) and substance use disorders (SUD) of specialty behavioral health care, including OMH and OASAS Outpatient Clinic services, was modest at best; additionally, there was substantial variability in utilization of specific specialty behavioral health services, both among the services and by region. In terms of primary care utilization, although adjusted analyses revealed an increase in primary care utilization following the launch of the policy, methodological considerations suggest caution in the interpretation of this finding, and unadjusted analyses in fact revealed a slight decline in this utilization.

Goal 2: Improve health, behavioral health, and social functioning outcomes for adults in the HARP program

Goal 2 included 11 research questions related to the HARP program. For ease of exposition given their commonalities, we group the questions into the following five clusters: program enrollment and characteristics of the enrollee population; access to primary care, community-based behavioral health specialty services, and care coordination services; quality of HARP-covered behavioral health and physical health care; recovery outcomes and experiences and satisfaction with care; and cost-effectiveness of HARP-covered care.

The first cluster of questions relates to hypotheses about the impact of the policy on program enrollment and characteristics of the enrollee population:

- Hypothesis 2.1: HARP enrollment will increase and the majority of HARP eligibles will enroll in HARP or HIV Special Needs Plans rather than mainstream Medicaid Managed Care plans.
- Hypothesis 2.2: HARP-eligible members who are not enrolled in HARP are younger and less behaviorally acute than those who remain enrolled in HARP/HIV Special Needs Plans.
- Hypothesis 2.3: On a population level, it is expected that the distribution of the measured risk factors and protective factors for this population will shift toward fewer risk factors and greater protective factors over time as the program matures; regional differences in improvements will be observed. On an individual level, trajectories of improvement in risk and protective factors over time will be observed.
- Hypothesis 2.4: Higher rates of educational and employment attainment will be observed for the HARP enrolled population over time as the program matures; individual-level improvements will be noted.

Our findings support the DOH’s hypothesis that HARP enrollment would increase throughout the evaluation period, which, based on qualitative evidence, may have been propelled by the passive enrollment policy. Among those who were eligible but did not enroll, we found that not perceiving a need for treatment was a key driver of this decision. Other drivers were concerns about stigma and about losing access to current services, which may be misinformed. Key informants noted the social and personal implications of being identified as someone with a mental illness. This evidence suggests a need to dispel unfounded concerns and improve communication of the potential benefits of the HARP program, particularly for beneficiaries with serious mental illnesses given that they could greatly benefit from the program’s enhanced services. A greater emphasis on the social as opposed to clinical benefits of HARP enrollment could be an effective strategy. However, our findings provide inconclusive evidence regarding the DOH’s hypothesis that non-HARP individuals would be younger and less behaviorally acute than HARP enrollees—while they were younger and generally less acute clinically than their HARP-enrolled counterparts, non-HARP individuals in New York City were more likely than HARP enrollees to utilize acute behavioral health services. Similarly, mixed findings from limited available data provide inconclusive evidence regarding the DOH’s hypothesis that the distribution of risk versus protective factors would shift in a positive direction for HARP enrollees. Data limitations prevented us from evaluating the DOH’s hypothesis regarding the HARP population’s educational and employment characteristics.

The second cluster of questions relates to hypotheses about the impact of the policy on access to primary care, community-based behavioral health specialty services, and care coordination services:

- Hypothesis 2.5: Percent of HARP members with primary care access will increase
- Hypothesis 2.6: Access to and utilization of behavioral health specialty services will increase
- Hypothesis 2.7: Access to care coordination services will increase in terms of Health Home engagement for HARP members.

Our analyses generated mixed findings regarding the effect of the HARP program on access to primary care, community-based behavioral health specialty services, and care coordination services. Our quantitative and qualitative findings provide inconclusive evidence regarding the DOH's hypothesis that *primary care access* would increase among HARP enrollees. Regarding *access to community-based behavioral health specialty services*, our quantitative analyses showed that contrary to the DOH's expectation, there was a decline in utilization of key services over the course of the post-period, although the declines were generally less pronounced for HARP enrollees relative to non-HARP individuals. The exception was utilization of Other Community-Based Behavioral Health Services, a category that includes Non-Licensed Clinic services, which increased for HARP enrollees until late in the post-period; however, non-HARP individuals also experienced increased utilization of these services. Unadjusted findings for infrequently utilized programs were generally aligned with findings from Goal 1 observed for the SSI disabled Medicaid Managed Care carve-in population. Qualitative findings were mixed, with some key informants stressing the need for a longer time period to evaluate these impacts. Regarding *access to care coordination services*, our findings were largely supportive of the DOH's hypothesis of an increase in this utilization through greater Health Home engagement. Our quantitative analyses revealed increased utilization, and qualitative evidence from HARP enrollees suggests generally positive experiences with Health Home services. However, key informants focused on the challenges associated with Health Home enrollment.

The third cluster includes one question that relates to a hypothesis about the impact of the policy on the quality of HARP-covered behavioral and physical health care:

- Hypothesis 2.8: Healthcare Effectiveness Data and Information Set / Quality Assurance Reporting Requirements quality profiles for HARP plans will improve over time as the program matures.

Our findings provide inconclusive evidence regarding the DOH's hypothesis. Although our analyses did reveal that HARP enrollees experienced improvements in measures of quality of care relative to the baseline period and, to a lesser extent, non-HARP individuals, it is not possible to discern a temporal pattern related to program maturity because these improvements were not consistent year to year. Such a pattern may become apparent over a longer time period.

The fourth cluster of questions relates to hypotheses about the impact of the policy on recovery outcomes, and experiences and satisfaction with care:

- Hypothesis 2.9: Perception of experience of care and satisfaction with care will improve over time as the program matures.
- Hypothesis 2.10: HARP enrollee satisfaction with the cultural sensitivity of their behavioral health providers will increase over the length of the Demonstration; HARP enrollee satisfaction with their wellness, recovery, and degree of social connectedness will improve over the time of the Demonstration.

Although we are unable to address the DOH's hypothesis regarding outcome improvements associated with program maturity, we found that enrollees are satisfied with their care and feel socially connected. HARP enrollees reported high satisfaction with the cultural sensitivity of their behavioral health care providers. However, respondents also reported high levels of substance use and physical health conditions.

The fifth cluster includes one question that relates to a hypothesis about the impact of the policy on cost-effectiveness of HARP-covered care:

- Hypothesis 2.11: It is expected that costs for HARP enrollees are shifting from acute services, e.g., inpatient admissions and emergency department visits, to non-acute outpatient-based health and behavioral health services.

Our findings provide inconclusive evidence regarding the DOH's hypothesis. Our analyses suggest that the HARP policy may not have been able to bend the cost curve for specific acute behavioral health services, particularly emergency department services. Moreover, although costs for all acute behavioral health services combined declined in the post-period, in Rest of State only in the last post-period year, cost declines appear to have been experienced also by HARP eligibles who were not enrolled; thus, the decline may not be attributable to the policy. By the same token, the increase in Any acute non-behavioral health service costs and total costs relative to the baseline period in both regions may not be attributable to the policy, as these costs were either not different between HARP enrollees and non-HARP individuals or, in the case of Any acute non-behavioral health service costs, they were actually lower for HARP enrollees in some post-period years. However, HARP enrollees did experience an increase in outpatient behavioral health service utilization in one or more post-period years relative to the baseline period and to non-HARP individuals; while a similar pattern was observed for costs relative to the baseline period, differences relative to non-HARP individuals were only observed in Rest of State. Utilization of Any Outpatient non-behavioral health services also increased for HARP enrollees in the post-period relative to the baseline period and non-HARP individuals but only in New York City, with the opposite being the case in Rest of State. Costs for these services were higher in both regions relative to the baseline period, and in Rest of State, also higher relative to non-HARP individuals.

Goal 3: Develop behavioral health HCBS focused on recovery, social functioning, and community integration for HARP enrollees who meet eligibility criteria for such services

This goal included four research questions related to the behavioral health HCBS benefit available to HARP enrollees starting in January 2016 in New York City and October 2016 in Rest of State. For ease of exposition given their commonalities, we group the questions into the following three clusters: characteristics and size of the behavioral health HCBS-eligible population; access to behavioral health HCBS; and cost offsets achieved through availability of behavioral health HCBS.

The first cluster includes one question that relates to a hypothesis about the impact of the policy on characteristics and size of the behavioral health HCBS-eligible population:

- Hypothesis 3.1: It is expected that 75 percent of HARP members will be eligible for any behavioral health HCBS, 75 percent of HARP members will be eligible for behavioral health HCBS Tier 1, and 70 percent of HARP members will be eligible for behavioral health HCBS Tier 2 by the end of 2019.

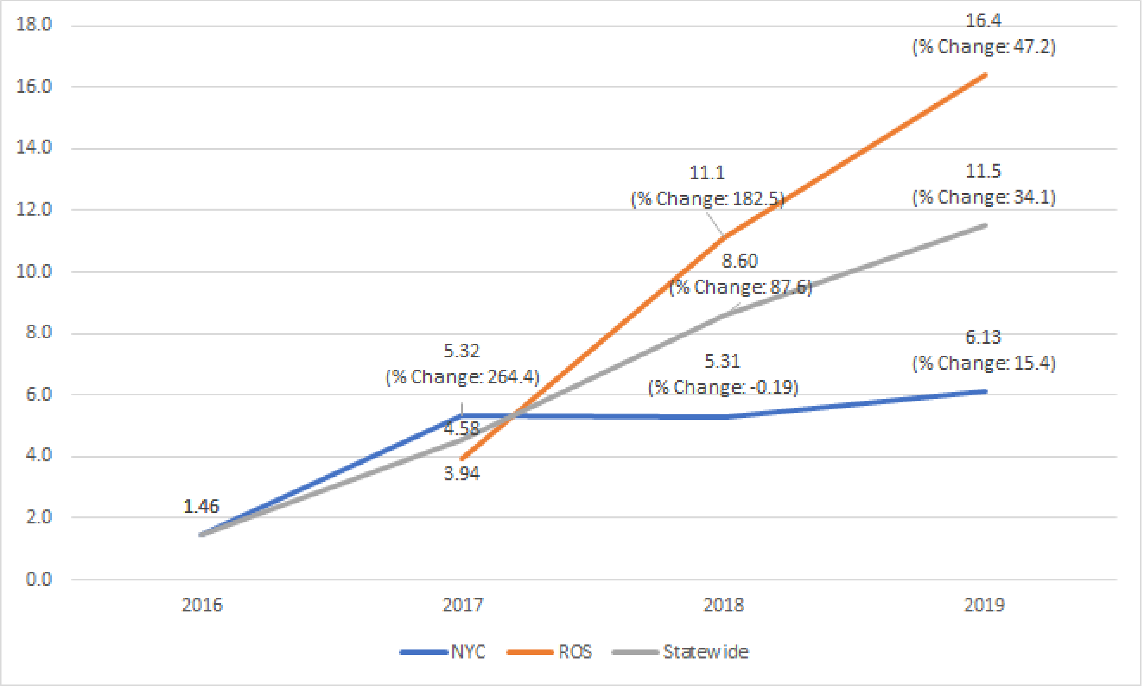
Our analyses do not support the DOH's hypothesis. The DOH had expected that three out of four HARP enrollees would be eligible for any behavioral health HCBS by the end of 2019, but this goal was not met, a result that likely stems from the complexity of the assessment process. Achieving the target enrollment levels seems unlikely without significantly streamlining the process of eligibility determination. Providing case managers more effective means of engaging with HARP enrollees who could benefit from behavioral health HCBS could also help address these issues.

The second cluster of questions relates to hypotheses about the impact of the policy on access to behavioral health HCBS and adequacy of the behavioral health HCBS provider network:

- Hypothesis 3.2: It is expected that Per Member per Month behavioral health HCBS utilization will increase over the course of the demonstration.
- Hypothesis 3.3: It is expected that the number and ratio of behavioral health HCBS providers per 1,000 behavioral health HCBS-eligible enrollees will increase over the course of the Demonstration.

Our analyses support the DOH's hypothesis, as the *rates of behavioral health HCBS utilization* increased substantially over time. However, by the end of 2019, behavioral health HCBS utilization rates remained quite low in both regions, well under 10 percent in New York City and under 20 percent in Rest of State. Although multiple factors are likely to be implicated, this result is partly due to the complexity of the process to access behavioral health HCBS. Because these are highly valued services, the DOH may want to look for ways to streamline the process.

Figure ES.2. Behavioral Health HCBS Utilization by Behavioral Health HCBS-Eligible HARP Enrollees, Unadjusted Rates (Percent), 2016-2019, NYC, ROS and Statewide



SOURCE: Authors' analyses of Medicaid data (2016–2019)

Regarding the *adequacy of the behavioral health HCBS provider network*, our findings provide inconclusive evidence regarding the DOH's hypothesis that the number of behavioral health HCBS providers and the ratio per 1,000 behavioral health HCBS-eligible HARP enrollees would increase over the course of the Behavioral Health Demonstration. Although the number of providers did increase in most of the State, a decrease was observed toward the end of the Behavioral Health Demonstration, a trend driven by the counties with the largest numbers of providers; moreover, the ratio of providers per enrollees decreased over time. Interpretation of these mixed results should consider that we lack information on the overall capacity of behavioral health HCBS providers. If the average size of the behavioral health HCBS provider pool was changing during the Behavioral Health Demonstration, then the raw number of providers could lead to mistaken conclusions regarding the capacity of the provider network. Investigation of trends in system capacity would provide more actionable evidence. Although the evidence does not suggest that availability of behavioral health HCBS providers was a barrier, this could change if eligibility is significantly increased. The low rates of complaints related to denials suggests that if denials were accurately captured, they were not a barrier. The importance of developing more robust and valid measures of network capacity is highlighted by the concerns raised by key informants regarding barriers to provision of behavioral health HCBS that may not be captured in the available quantitative data.

The fourth cluster includes one question that relates to a hypothesis about the impact of the policy on cost offsets achieved through availability of behavioral health HCBS:

- Hypothesis 3.4: It is expected that the added costs arising from access to behavioral health HCBS will be offset elsewhere in the continuum of care.

Our analyses do not support the DOH's hypothesis. Behavioral health HCBS availability did not consistently reduce behavioral health HCBS users' need for acute behavioral health services or, more relevant to the DOH's expectations, their costs. However, analyses burdened with some limitations showed that behavioral health HCBS users had higher Outpatient behavioral health care utilization relative to non-behavioral health HCBS individuals. Given that total Medicaid costs were unchanged in both regions, the possible increase in outpatient behavioral health care utilization would not have significantly impacted those costs. In addition, costs for Any acute non-behavioral health services were lower for behavioral health HCBS users than for non-behavioral health HCBS individuals although only in Rest of State and only in the second post-period year. These results need to be interpreted with caution—in addition to methodological concerns regarding the outpatient behavioral health evidence, rates of behavioral health HCBS utilization remained quite low during the evaluation and thus, evidence of cost offsets may not be easy to detect.

Policy Implications

Our findings have several implications that should be considered by NYS policymakers.

A striking finding is the low level of behavioral health HCBS eligibility determination among HARP enrollees, which was most likely driven by the low level of assessment for behavioral health HCBS eligibility. Reasons for the lower-than-expected assessment rates should be investigated in detail, but qualitative evidence suggested the burdensome bureaucratic process required to receive an assessment was playing a role.

The low level of assessment for behavioral health HCBS might have also directly impacted all Goal 3 outcomes. While we found that behavioral health HCBS utilization was minimal by the end of the Behavioral Health Demonstration, with at best one in five eligible individuals utilizing these services, this utilization would likely have been higher had more HARP enrollees been assessed for behavioral health HCBS (Research Question 2). Similarly, while we found a downward trend in the ratio of behavioral health HCBS providers per enrollees and other concerning trends in provider network adequacy, higher demand may have encouraged providers to provide behavioral health HCBS (Research Question 3). Finally, greater behavioral health HCBS utilization may have led to offsets of acute services (Research Question 4). Because the target population of behavioral health HCBS consists of the highest users of services across the entire SSI population that was moved into Medicaid Managed Care as well as the HARP-eligible population, higher levels of behavioral health HCBS assessment might have also impacted Goal 1 and especially Goal 2.

Our behavioral health HCBS related findings—assessment, eligibility determination, utilization, and provider adequacy—suggest that the system was ill prepared to support these *services.* To the extent that behavioral health HCBS is potentially effective in reducing acute care utilization among beneficiaries with high behavioral health needs, efforts to address the assessment bottleneck should be pursued. Approaches suggested by the qualitative interviews include simplifying the behavioral health HCBS eligibility assessment process and providing case managers with more effective means of explaining the potential value of behavioral health HCBS.

The bottleneck in access to behavioral health HCBS may have contributed to the mixed findings with respect to whether the Behavioral Health Demonstration achieved its stated goals, and no clear trends emerged that could be attributed to the policy that were consistent across types of services or regions of the State. *In particular, there was no clear effect of the HARP policy on acute care utilization, the reduction of which was a primary goal of the Demonstration.*

Although no clear explanations for this finding were suggested by the data, important possibilities to consider are the lack of a clear and robust effect of the carve-in policy on quality of behavioral and physical health care or, relatedly, on clinical integration. It is also possible that the period of observation was too short for quality to improve in a consistent manner or for changes related to increased integration to appear. Carve-in driven integration could take several years to begin to influence clinical practice and, in turn, these impacts may also take time to influence patterns of care for this complex and undertreated population. Monitoring the functionality of linking structures such as integrated information technology systems and the Health Homes program and promptly addressing deficiencies can promote organizational integration, a key facilitator of clinical integration. In this regard, although Health Home enrollment among HARP enrollees increased over the post-policy period, rates remained low; thus, efforts should be undertaken to expand and strengthen the program. Additionally, strengthening initiatives such as the intensive program of care management for beneficiaries being discharged from psychiatric hospitalizations, a part of the Performance Opportunity Project, might promote greater community tenure among high utilizers of acute care. Evaluating the degree of clinical integration can be challenging but approaches and measures are available; measures include several quality indicators already being monitored by the DOH and others such as receipt of evidence-based obesity interventions that, to our knowledge, are not being monitored. The DOH might also consider ways to increase the uptake of procedure codes capturing the delivery of care in integrated settings.

Last, our findings of modest utilization of specialty behavioral health care by SSI beneficiaries with SMI and SUD, and frequent differences between New York City and Rest of State in their patterns of utilization and outcomes (with Rest of State often but not always lagging behind New York City) merit policy attention. Although these concerning findings are likely to be the end result of multiple factors, efforts are needed to understand the contribution of deficiencies in the health care infrastructure as a stepping stone toward the design of solutions that may need to be implemented through the Medicaid Managed Care system.

Strengths and Limitations

A main strength of our evaluation is the use of a mixed methods approach to assess the impacts of the behavioral health Demonstration that entailed not just the use of qualitative and quantitative methods but enrichment of both sets of results through iterative team discussions of findings.

However, the evaluation had limitations. First, our evaluation was limited by the nonrandom assignment of beneficiaries to the intervention and control groups, a limitation shared by most policy evaluations. Because of the small size of the sample of non-HARP individuals that could serve as a control group for continuously enrolled HARP enrollees, our main analyses are only able to address what would have happened to non-HARP individuals had they actually enrolled. Moreover, the fact that the small non-HARP population is not broadly representative of all HARP-eligible beneficiaries, including those who did enroll in the HARP program, limits the generalizability of our main findings. An additional limitation was our inability to use the rich Community Mental Health screen data due to the low rates of assessment among HARP enrollees and the differences between HARP enrollees with available data and the larger HARP-enrolled beneficiary population; furthermore, non-HARP individuals are not assessed with the screen.

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Abbreviations

AAP	Adults' Access to Preventive/Ambulatory Health Services
ACA	Affordable Care Act
ACT	Assertive Community Treatment
AHRF	Area Health Resource Files
ANOVA	Analysis of Variance
ATC	Average Treatment on the Control
ATT	Average Treatment on the Treated
BH	Behavioral Health
BHO	Behavioral Health Organization
BHP	Behavioral Health Provider
CAHPS	Consumer Assessment of Health Providers and Systems
CCBHC	Certified Community Behavioral Health Clinic
CCO	Coordinated Care Organizations
CDT	Continuing Day Treatment
CI	Confidence Intervals
CMA	Care Management Agency
CMH	Community Mental Health
CMS	Centers for Medicare & Medicaid Services
CPST	Community Psychiatry Support and Treatment
CRG	Clinical Risk Group
CSC	Coordinated Specialty Care
CTI	Critical Time Intervention
CVD	Cardiovascular Disease
DiD	Difference-in-Differences
DOH	Department of Health
DSRIP	Delivery System Reform Incentive Payment
ED	Emergency Department

EDC	Episode Diagnostic Category
FEP	First Episode Psychosis
FFS	Fee for Service
HARP	Health and Recovery Plans
HCBS	Home and Community-Based Services
HEDIS	Healthcare Effectiveness Data and Information Set
HH	Health Home
HIT	Health Information Technology
HRSA	Health Resources & Services Administration
ICP	Integrated Care Program
IP	Inpatient
ITS	Interrupted Time Series
MCO	Managed Care Organizations
MCTAC	Managed Care Technical Assistance Center
MHARS	Mental Health Automated Record System
MMC	Medicaid Managed Care
MRT	Medicaid Redesign Team
NIMH	National Institute of Mental Health
NYC	New York City
NYS	New York State
OASAS	Office of Addiction Services and Supports
OMH	Office of Mental Health
OP	Outpatient
OR	Odds Ratios
OTNY	OnTrackNY
OUD	Opioid Use Disorders
PCP	Primary Care Physician
PCS	Perceptions of Care Survey
PH	Physical Health

PMPM/Y	Per Member per Month/Year
POP	Performance Opportunity Project
PPCs	Provider Preventable Conditions
PPS	Performing Provider System
PROS	Personalized Recovery Oriented Services
PSM	Propensity Score Matching
PTAO	Provider/Trade/Advocacy/Other Organization
QARR	Quality Assurance Reporting Requirements
RCA	Recovery Coordinating Agency
Rehab	Rehabilitation
RFP	Request for Proposal
ROS	Rest of the State
RQ	Research Question
SA	State Agency
SD	Standard Deviation
SDC	Self-Directed Care
SE	Standard Error
SMART	Save Medicaid Access and Resources Together
SMI	Serious Mental Illness
SNP	Special Needs Plans
SSI	Supplemental Security Income
SUD	Substance Use Disorder
TCM	Targeted Case Management
VBP	Value Based Payment

1. Introduction

1.1 Overview of the Behavioral Health Demonstration

Through the New York Medicaid Redesign Team (MRT) Section 1115 Demonstration, the State of New York's Department of Health (DOH) pursued the goal of improving access to and quality of health care for the Medicaid population through a managed care delivery system. The Demonstration included reforms specifically targeted to Medicaid beneficiaries with behavioral health (BH) needs (hereafter, Behavioral Health Demonstration). These included the Medicaid Managed Care (MMC) carve-in of BH specialty services for Supplemental Security Income (SSI) beneficiaries and the creation of the Health and Recovery Plans (HARP) program.

1.2 Overview of the RAND Evaluation

The RAND team, including our Columbia University partners, conducted a comprehensive, statewide independent evaluation of the Behavioral Health Demonstration, hereafter the *HARP program evaluation*. We note that despite its name, the evaluation covered both the HARP program and the larger MMC BH carve-in. The evaluation was designed and conducted in accordance with the evaluation plan laid out in the request for proposal (RFP) 20024 by the DOH. This final report describes RAND's understanding of these reforms, the questions the evaluation aimed to answer, the proposed methodology to conduct the evaluation, and the evaluation findings. This report supersedes the interim report, published in November 2020 (Wagner, 2020).

The HARP program evaluation was designed to determine the extent to which the following three goals of the Behavioral Health Demonstration have been achieved since the MMC BH carve-in and the HARP program were implemented (October 1, 2015 for New York City [NYC]; July 1, 2016 for the rest of the State [ROS]):

1. Improve health and BH outcomes for adults enrolled in Mainstream MMC plans whose BH care was previously covered under a fee-for-service (FFS) payment arrangement
2. Improve health, BH, and social functioning outcomes for adults enrolled in the HARP program
3. Develop BH home and community-based services (HCBS) focused on recovery, social functioning, and community integration for HARP enrollees meeting eligibility criteria for such services.

The evaluation used both primary and secondary data in a mixed methods investigation of the beneficiary- and system-level impacts of the Behavioral Health Demonstration. We examined research questions (RQs) related to a variety of outcomes: HARP enrollment; access to outpatient (OP) services (primary care, BH specialty services, including services for individuals

Table 1.1. HARP Program Evaluation Goals, Methods, and Research Questions

Goal	Methods	Research Question
1. Improve health and BH outcomes for adults in Mainstream MMC whose BH care was previously carved out in a FFS payment arrangement.	Analyses of Medicaid claims and encounter data and data from the OTNY system; interviews with key informants.	1. To what extent are MMC enrollees accessing community-based BH specialty services (e.g., ACT, PROS, and FEP programs)? 2. To what extent are MMC enrollees accessing community-based health care?
2. Improve health, BH, and social functioning outcomes for adults in the HARP program.	Analyses of Medicaid claims, encounter, and enrollment data; data from CMH Screens; plan-reported HEDIS/QARR quality measures; Consumer Assessment of Health Providers and Systems (CAHPS) and HARP PCS patient experience data; interviews with key informants and HARP enrollees.	1. How has enrollment in HARP plans increased over the length of the Demonstration? 2. What factors are associated with non- enrollment in HARP plans? 3. What are the demographic and clinical characteristics of the HARP population? Are they changing over time? 4. What are the educational and employment characteristics of the HARP population? 5. To what extent are HARP enrollees accessing primary care? 6. To what extent are HARP enrollees accessing community-based BH specialty services (e.g., ACT, PROS, OMH Outpatient Clinic, Continuing Day Treatment, Partial Hospitalization, OASAS Opioid Treatment Program, OASAS Outpatient Clinic, and FEP programs)? 7. To what extent are HARP enrollees accessing Health Homes for care coordination? 8. To what extent is HARP quality of care improving, especially related to the HEDIS measures of health monitoring, prevention, and management of BH conditions, cardiovascular disease, asthma, diabetes, and other selected chronic health conditions? 9. To what extent are HARP enrollee experiences with care and access to health and BH services positive? 10. To what extent are HARP enrollees satisfied with the cultural sensitivity of BH providers and their wellness, recovery, and degree of social connectedness? 11. To what extent are HARPs cost effective? What are the PMPM cost of inpatient psychiatric services, SUD ancillary withdrawal, hospital-based detox, and ED services for the HARP population? Are these costs decreasing over time?
3. Develop HCBS focused on recovery, social functioning, and community integration for individuals in HARPs meeting eligibility criteria.	Analyses of Medicaid claims and encounter data; data from the MMC HCBS Provider Network Data System; Complaints and Appeals data; interviews with key informants and HARP enrollees.	1. To what extent are HARP enrollees deemed eligible to receive HCBS? 2. To what extent are HARP enrollees who are deemed HCBS-eligible receiving HCBS? 3. To what extent has the Demonstration developed provider network capacity to provide BH HCBS for HARPs? 4. To what extent are the added costs arising from access to BH HCBS offset elsewhere in the continuum of care?

TERMS: OTNY, OnTrackNY; CMH, Community Mental Health; HEDIS/QARR, Healthcare Effectiveness Data and Information Set/ Quality Assurance Reporting Requirements; PCS, Perceptions of Care Survey; ACT, Assertive Community Treatment; PROS, Personalized Recovery Oriented Services; OMH, Office of Mental Health; OASAS, Office of Addiction Services and Supports; FEP, First Episode Psychosis; PMPM, Per Member per Month experiencing first episode psychosis (FEP), care coordination services, BH home and community-based services (HCBS); quality of BH and physical health (PH) care; quality of life and recovery outcomes; experiences and satisfaction with care; utilization of acute care, including inpatient (IP) and emergency department (ED) services and, for those with BH needs, also high-acuity substance use disorder (SUD) and crisis respite HCBS; Medicaid spending; and cost shift from spending on acute care to community-based services.

Table 1.1 above shows the goals, methods used, and RQs used to structure the evaluation. Note that some details have evolved over the course of the study; changes are reflected in the table.

1.3 Report Organization

The remainder of this report is structured as follows:

- Section 2 presents an overview of the BH Demonstration and implementation, including the timeline of implementation.
- Section 3 provides an overview of the study design, with the methodology as related to the type of data collection and the related RQs.
- Section 4 presents the findings organized by RQ, along with a summary of findings across the evaluation.
- Section 5 discusses the policy implications of the study findings.
- Section 6 reviews the interactions of the Behavioral Health Demonstration with other initiatives implemented in NYS.
- The appendixes offer information on study protocols as well as selected data tables.

2. Demonstration Description

2.1 Landscape Prior to HARP

In 1997, the NYS DOH initiated a Section 1115 Medicaid Demonstration that permitted the implementation of a MMC delivery system and enrollment of most Medicaid enrollees into managed care organizations (MCOs) (Centers for Medicare & Medicaid Services, 2019). Initially, MMC plans covered PH services and a limited set of BH services for most adults and children, while most BH services were provided through the DOH's FFS system (Belfort & Striar, 2020). The Demonstration's goals included improving access to health care for the Medicaid population, improving the quality of health services delivered, and capitalizing on efficiencies resulting from managed care, expanding coverage for individuals needing long-term services and supports and low-income New Yorkers (New York State, 2020).

The Demonstration has evolved over time. It was originally authorized for a five-year period and has been extended multiple times through amendments that have covered different Medicaid populations, including disabled beneficiaries whose Medicaid eligibility is mediated by receipt of SSI; beneficiaries with BH needs; and certain populations in need of BH HCBS (Centers for Medicare & Medicaid Services, 2019).

In 2011, in response to rising spending by the State's Medicaid program, Governor Andrew Cuomo appointed an MRT composed of State legislators, health care industry representatives, and patient representatives (New York State Department of Health, 2011b). It was intended to help "conduct a fundamental restructuring of [the] Medicaid program" for the purpose of improving health outcomes, controlling costs, and improving administrative efficiency.

The MRT's Behavioral Health Work Group was tasked with making recommendations to improve care for people with SMI and SUD (New York State Department of Health, 2011a). In the MRT's recommendation report, the Work Group attributed the management and financing of PH and BH services by separate systems as contributors to lack of integration and coordination between PH and BH care at the clinic level, as well as lack of accountability for health care quality and outcomes. Ultimately, MRT recommended that the DOH provide BH services through MMC plans, which could include subdelegated[2] behavioral health organizations (BHOs), comprehensive MMC plans managing both PH and BH services for a broad population, special needs plans (SNPs) managing PH and BH services for people with special health care needs, or a combination of such plan types.

Following MRT's recommendations, the DOH launched multiple Medicaid reform initiatives with the potential to impact care and outcomes for people with BH needs.

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[2] Subdelegation is an arrangement where the MCO enters into a subcontract with a specialized BH MCO to manage BH services; the specialized plans are often referred to as behavioral health organizations.

In 2012, the DOH launched the Health Home program, which designated specific providers to coordinate health care and health-related services for people with chronic conditions, including physical health, mental health, and substance use conditions (Centers for Medicare & Medicaid Services, Undated).

In 2014, the DOH amended the Medicaid Demonstration to authorize the creation of a Delivery System Reform Incentive Payment (DSRIP) Program that allowed the DOH to take the first steps toward a major reform in the financing and delivery of Medicaid-funded health care (Centers for Medicare & Medicaid Services, 2014). Through DSRIP, the DOH created regional Performing Provider Systems (PPSs)—coalitions of safety net hospitals, clinics, and other eligible providers tasked with carrying out health improvement projects to achieve several system transformation goals. The program provided funds to incentivize provider participation in DSRIP transformation activities beginning in 2015. In addition, as part of the Demonstration, the DOH created a Value Based Payment (VBP) Roadmap that set forth goals for increasing the use of VBP arrangements in Medicaid and described requirements for MCOs to include VBP arrangements in their contracts with health care providers (Centers for Medicare & Medicaid Services, 2016). Section 6 provides further details on these policies.

In August 2015, the DOH received approval for an amendment targeting beneficiaries with BH needs, including SSI beneficiaries, which required management and financing of all BH services by MMC plans (Centers for Medicare & Medicaid Services, 2016). The programs implemented as a result of this particular amendment are the focus of the evaluation reported here and will be discussed in greater detail in the next section.

2.2 Behavioral Health Demonstration

The August 2015 amendment to the Demonstration authorized two policies targeted to Medicaid beneficiaries with BH needs: (1) an MMC carve-in of BH services for SSI beneficiaries whose BH benefit was previously covered under a FFS payment arrangement, and (2) the creation of the HARP program for Medicaid beneficiaries meeting criteria specified by DOH's Office of Mental Health (OMH) or Office of Addiction Services and Supports (OASAS). The goals of the BH Demonstration were to improve health care quality, costs, and outcomes for the State's Medicaid BH population, and to transform the BH system from an inpatient-focused system to a recovery-focused OP system (New York State Department of Health, 2015). Thus, the 2015 amendment "carved in" BH services to MMC, making a single entity responsible for financing and managing PH and BH services, and led to the creation of SNPs offered by the same MCOs that had mainstream MMC plans to manage PH and BH services for high-need beneficiaries. In doing so, the amendment further aligned NYS's Medicaid BH system with MRT's recommendations. Key among policymakers' expectations was that a MMC BH carve-in would provide MCOs "flexibility to provide the best mix of physical and behavioral health care services to meet individual needs" and incentivize them to work with providers on meeting PH and BH needs of enrollees (A. Smith, Coulter Edwards, & Frederick, 2020).

Mainstream MMCs and HARPs covered the full set of PH and BH services offered by New York's Medicaid program, including inpatient and OP BH services, as well as four new BH services defined by the 1115 waiver: residential addiction services, OP addiction services, crisis intervention, and licensed behavioral health practitioner services. In addition to these services, HARPs covered BH HCBS such as peer supports, employment supports, education support services, and crisis respite, to address the health-related social needs of eligible HARP enrollees.

The MMC BH carve-in and the HARP program launched on October 1, 2015 in NYC and on July 1, 2016 in ROS (New York State Department of Health, 2015). HARPs began covering BH HCBS on January 1, 2016 for enrollees in NYC and on October 1, 2016 for enrollees in ROS (New York State Department of Health, 2015) (see timeline in Section 3, Table 3.1).

Program Components of the Behavioral Health Demonstration

Mainstream MMC Program

The mainstream MMC program manages Medicaid State plan and BH Demonstration services, including specialty services, through an MMC delivery system comprised of MCO and primary care case management arrangements. The covered population includes all adult MMC-eligible recipients except those with dual Medicare-Medicaid eligibility and certain other populations. Following the 2015 amendment, MMC plans began covering an expanded BH benefit that includes inpatient and OP BH services previously carved out in the Medicaid FFS program for the SSI population; community-based BH specialty services such as Assertive Community Treatment (ACT), Personalized Recovery Oriented Services (PROS), and First Episode Psychosis (FEP) programs, some of which were previously covered only by the FFS program; SUD inpatient rehabilitation (rehab) services, previously carved out for SSI beneficiaries; and SUD OP services, previously carved out for all beneficiaries.

HARP Program

HARPs are specialty lines of business operated by qualified mainstream MMC plans and available statewide. As described above, in addition to the benefit package covered by mainstream MMC plans (i.e., BH inpatient and OP services and community-based BH specialty services including ACT, PROS, and FEP programs), the HARP program covers BH HCBS for eligible individuals meeting defined functional needs criteria, discussed below. HARPs were required to connect enrollees with Health Homes and also to contract with Health Homes to develop a comprehensive plan of care that includes PH services, BH services, and BH HCBS (New York State Department of Health, 2015).

The HARP eligibility criteria have not changed since the launch of the program (Appendix E, Figure E.1). The criteria include age 21 or over; meeting eligibility for mainstream MMC; and having diagnoses of "serious and persistent mental illness" as defined by the DOH[3] and/or SUD[4] (HARP Target Criteria). Beneficiaries must also meet HARP Risk Factor criteria, most of which are based on BH utilization patterns. Eligibility for Medicaid through SSI is not an eligibility criterion.

HARP-eligible individuals are identified through queries of Medicaid data conducted every two months by the DOH that indicate whether specific pre-determined criteria have been met. This process, often referred to as the "HARP algorithm," was developed by the DOH and focuses on BH service utilization, including inpatient psychiatric admissions, medical conditions associated with SUD, and other information (Soper, 2016). Eligible Medicaid beneficiaries are passively enrolled into HARPs, but not all HARP-eligible individuals become HARP enrollees. The main reasons HARP-eligible individuals may remain in the mainstream MMC system include: (i) individuals may opt out within the first 90 days following passive enrollment and return to their original plan; (ii) they may not be reached with a notice regarding their HARP eligibility and are thus ineligible for passive enrollment; or (iii) they may be enrolled in an MCO that does not operate a HARP line of business and do not transfer to a plan that does.

HARP-eligible beneficiaries may access the HARP benefit package through the newly created HARPs or, for those with HIV, HIV SNPs. HARP-eligible individuals who are already enrolled in an HIV SNP receive the enhanced HARP benefits while enrolled in their current plan. Although they may disenroll from an HIV SNP into a HARP, this is not encouraged as this entails loss of the HIV SNP benefits.

Accessing BH HCBS

Upon enrollment, the HARPs and HIV SNPs work with Health Homes or other DOH-designated entities to develop a person-centered care plan and provide care management for all services, including BH HCBS. The plan of care includes assessment for eligibility for BH HCBS, Tier 1, or Tier 2 services. Eligibility for BH HCBS is assessed through the BH HCBS Eligibility Assessment, a standardized clinical and functional assessment tool derived from the interRAI™ Community Mental Health (CMH) Assessment (Hirdes et al., 2000), also referred to as CMH Screen.

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[3] The definition requires that individuals aged 18 years or older meet the following criteria: have a DSM-IV (and equivalent ICD-CM) psychiatric diagnosis other than alcohol or drug disorders, organic brain syndromes, developmental disabilities, or social conditions *and* SSI or SSDI due to Mental Illness or extended impairment in functioning due to mental illness or reliance on psychiatric treatment, rehabilitation, and supports. Although the DOH uses the abbreviation SMI to refer to this population, we reserve the abbreviation SMI for a narrower set of serious mental illnesses that includes schizophrenia and related disorders and bipolar and related disorders.

[4] SUD is defined by the DOH as "misuse of, dependence on, or addiction to alcohol and/or legal or illegal drugs leading to effects that are detrimental to the individual's physical and mental health, or the welfare of others and shall include alcoholism, alcohol abuse, substance abuse, substance dependence, chemical abuse, and/or chemical dependence."

Tier 1 services include individual employment support, education support, and peer services. Tier 2 services include all Tier 1 services plus additional services for beneficiaries with a higher level of need. All HARP enrollees, regardless of tier, are eligible for crisis respite HCBS, including intensive crisis respite and short-term crisis respite in a dedicated facility. BH HCBS are delivered to HARP and HARP-eligible HIV SNP enrollees in residential and non-residential settings located in the community.

The eligibility threshold for Tier 2 services, which is higher relative to Tier 1 services, requires evidence of at least "moderate" level of need as indicated by a DOH-designated score on the CMH Screen (see Appendix E Figure E.2). While these are the current criteria, the original criteria were more stringent. (Table 3.1 provides a timeline of key events.) Until June 2018, eligibility for Tier 2 services required moderate need on at least four domains or extensive need on at least one domain; a third criterion permitting previously eligible BH HCBS users to continue receiving services was added in June 2019. Reassessment of the plan of care, including eligibility for BH HCBS, should be done annually at a minimum, with additional assessments conducted when the individual's circumstances or needs change significantly, or at the request of the individual.

2.3 Review of the Research Literature

Models for Financing Medicaid BH Care

State Medicaid programs use a variety of approaches to finance and manage BH services, which include services for beneficiaries with mild to moderate mental illnesses, SMI, and SUD. Historically, public mental health systems financed by state governments and coordinated at the local level by counties or not-for-profit community health centers have coordinated or provided care for beneficiaries with SMI and SUD. Under these arrangements, community mental health agencies billed state Medicaid programs for Medicaid-covered services and used state funding to cover other costs (Hogan, 1999). In the 1990s, state Medicaid programs began using capitated managed care plans provided by MCOs to finance and manage PH services. Typically, BH services remained carved out of MMC plans that covered PH services and were instead managed by BHOs, local governments, or the states' FFS programs (Highsmith & Somers, 2000; Hogan, 1999; A. Smith et al., 2020).

Recently, multiple states have moved to include BH services among the services covered by mainstream MMC plans, thereby carving in BH to managed care (A. Smith et al., 2020). Of the 40 states using MCOs to cover PH services as of July 1, 2019, more than half always carved in specific BH services to their MCO contracts. These included 23 states that carved in specialty OP mental health, defined as services for adults with SMI and youth with serious emotional disturbances; 28 states that carved in inpatient MH services; 29 states that carved in OP SUD services; and 29 states that carved in inpatient SUD services (Gifford et al., 2019). Examples of states with broad carve-ins for most MH and SUD services include Arizona, Oregon, Texas, and

Washington State (Kelly, 2020; K John McConnell et al., 2014; Soper, 2016). Generally, state policymakers intended such carve-ins to improve coordination of PH and BH services, increase integration of PH and BH care at the clinic level, and improve outcomes for people with BH needs, who typically experience co-occurring health problems and high costs (A. Smith et al., 2020).

Evidence on the MMC BH Carve-In Policy

To provide context for the results of this evaluation, this section reviews states' design options for a BH carve-in, implementation experiences with carve-ins, and evidence of carve-in impacts. A search of peer-reviewed and grey literature identified three qualitative studies that provide recommendations for carve-in design (Bachrach, Anthony, & Detty, 2014; Palmer & Rossier Markus, 2020; Soper, 2016); two qualitative studies focusing on implementation, including one that incorporated evidence from ten states and another that focused on NYS (Acri et al., 2019); and three quantitative studies that reported impacts, one of which focused on NYS's HARPs (Charlesworth, Zhu, Horvitz-Lennon, & McConnell, 2021; Frimpong, Ferdousi, Rowan, & Radigan, 2021; Xiang et al., 2019).

The studies have limitations. Those that provide design recommendations do not provide strong justifications for making recommendations based on the experience of states they sampled. One study described sample states as exemplifying "successful integrated delivery models," and another described the states as pursuing "innovative approaches to integrate behavioral health services within a comprehensive managed care arrangement" and did not include comparison groups. The quantitative studies each used a comparison group to estimate the impact of a carve-in. However, payment and delivery systems before and after the carve-in differ substantially in the other study states from those in NYS. As a result, findings from these studies may not be generalizable to NYS's BH Demonstration.

Carve-In Design

Qualitative studies emphasize that carving in BH services to MMC plans that cover PH services is important but insufficient for integrating the delivery of PH and BH care: "In the absence of clear and enforceable contract provisions that require or incentivize integrated care approaches, a carve-in payment approach ultimately may be no more supportive of integrated care than a carve-out approach" (Bachrach et al., 2014). Multiple factors may prevent a state Medicaid program from achieving its goals for a BH carve-in. For instance, in states that permit subdelegation, MCOs may subcontract with BHOs to cover BH services, obviating the need for MCOs to manage and coordinate PH and BH care and eliminating risk. MCOs may lack expertise needed to manage care for people with SMI and SUD. State regulations and Medicaid billing rules may impede delivery system innovations needed to integrate care at the clinic level, such as colocation of PH and BH providers, use of nontraditional BH providers, billing for same-day BH and PH visits, and emerging BH treatments. In addition, lack of information technology and legal barriers may impede information sharing between PH and BH providers as needed to coordinate PH and BH services.

State Medicaid programs and MCOs have options for designing and implementing a carve-in that can help with achieving the goals of integrated care and improved outcomes for people with BH needs. States may pilot a carve-in to test program features and identify vulnerabilities, select MMC plans through a competitive bidding process or expand the responsibilities of existing plans to include BH services, implement protections for BH providers and patients during the carve-in transition, and use performance measures that reflect PH and BH care. MCOs could integrate their internal processes for managing PH and BH benefits (e.g., by using a single IT platform to manage PH and BH data and involving PH and BH leadership in meetings) and use nontraditional providers such as peer counselors to support enrollees (Soper, 2016). Several studies emphasize the need for states to engage stakeholders—including providers, patients, and families—before and also after a carve-in launches. Examples include informing enrollees and families about transitions before they occur, training providers on managed care billing, meeting frequently with MCOs and encouraging MCOs to innovate, and convening policymakers and providers to discuss barriers to integration and vet solutions (Palmer & Rossier Markus, 2020; Soper, 2016). In addition, states can integrate their PH and BH expertise and authority by consolidating PH and BH purchasing decisions, contracting, and rate-setting in a single agency or by promoting informal collaboration between Medicaid and BH agencies to carry out these functions (Bachrach et al., 2014).

The evidence we reviewed suggests that the NYS DOH used several of these options when implementing its MMC BH carve-in. The DOH limited initial implementation to NYC "to test which program features work well and identify vulnerabilities" (Soper, 2016). The DOH expanded the BH responsibilities of existing MCOs participating in its already robust PH MMC program and required plans to complete a comprehensive readiness review, which included an assessment of policies and procedures between plans and any subdelegated BHOs for important functions. To protect patients and providers during the transition, the DOH required that plans contract with all BH providers that serve five or more members and required plans to reimburse providers at FFS rates for two years after launch of the carve-in. In addition, the DOH created the Managed Care Technical Assistance Center (MCTAC) "to help providers improve their business and clinical practices during the transition to managed care" (Soper, 2016). In terms of integrating the PH and BH Medicaid authorities, rate-setting responsibility was transitioned from BH agencies into the DOH prior to launching the carve-in (Bachrach et al., 2014).

Carve-In Implementation Experiences

State Medicaid programs that carved in BH to managed care did so generally to increase coordination of PH and BH services and promote care integration at the clinic level. Medicaid programs tended "to believe that having one care management entity responsible for coordinating all services for the individual can result in improved outcomes, and potentially lower costs, overall." These agencies desired "a single party to hold accountable for outcomes" (A. Smith et al., 2020).

However, these states described difficult implementation experiences and lack of intended outcomes. "While some Medicaid agencies could point to some positive outcomes for covered beneficiaries postreform, most stakeholders, including state officials, reported that there had been little movement toward the level of accountability desired." Specific challenges reported by states include lack of BH expertise, experience, or provider networks on the part of MCOs; lack of performance measures to hold MCOs accountable for PH and BH integration and recovery outcomes; lack of IT and administrative infrastructure for functions like MCO billing; and inadequate financial reserves that providers needed to take on increased risk. MCOs commonly subcontracted administration and financial risk to other organizations, and the separation of PH and BH care at clinic level often remained in place. Notably, two states that were early adopters of a BH carve-in transitioned back to a carve-out approach due to unsatisfactory experience with carve-in models (A. Smith et al., 2020).

While the NYS DOH carried out several of the recommended carve-in design and implementation steps, the studies we reviewed indicate that it experienced implementation challenges. Based on a survey of ambulatory MH and SUD service providers administered by MCTAC approximately seven months before the carve-in, one study found that "agencies were, as a whole, unprepared to shift to a managed Medicaid behavioral health system." The survey asked agencies to assess themselves in 11 domains reflecting readiness for a business relationship with MCOs (e.g., IT, finance and billing, and data-driven decisionmaking). On average, agencies reported feeling "partially ready" in six domains and "not ready at all" in the remaining five domains. Based on the results, the study team concluded that "systems of care will require substantial supports in order to adopt and adapt to large-scale reforms, and that supports should be tailored to specific areas of need" (Acri et al., 2019). In the area of IT, "New York reported that it undertook an explicit Health Information Technology (HIT) initiative for BH providers to build provider and system capacity for accountable care in an integrated managed care model and, since this initiative was concurrent with, not prior to, the move to an integrated model, the capacity is still in development" (A. Smith et al., 2020). In addition, the NYS DOH reported extended claims payment challenges following the carve-in (A. Smith et al., 2020).

Carve-In Impacts

We reviewed three single-state quasi-experimental studies that reported on quantitative analyses that estimated the impact of different types of carve-in arrangements for different populations. They include an Oregon study that compared outcomes under an MCO-like entity that used carve-in financing to outcomes under another MCO-like entity that carved out the BH benefit and used separate risk-accepting entities for PH and BH (carve-in versus carve-out for beneficiaries with BH needs); an Illinois study that compared outcomes under a carve-in operated by MCOs to outcomes under the State's FFS program (carve-in versus FFS for beneficiaries with BH needs); and a study conducted by a research team affiliated with OMH that compared outcomes for HARP enrollees to outcomes for HARP-eligible Medicaid enrollees in either FFS or mainstream MMCs (carve-in with SNP versus FFS or regular managed care carve-in for beneficiaries with high BH needs); Table 2.1 summarizes the timeframes, types of payment arrangements, populations, and findings from the studies.

Table 2.1. Summary of Quantitative Studies that Evaluate Carve-In Impacts

Study; Timeframe	Carve-In Arrangement	Comparison Arrangement	Enrollee Population	Impacts of Carve-In Arrangement
Charlesworth et al., 2012; 2016	MCO-like entity	County providing BH care under subcontract with MCO-like entity (carve-out)	Adults with a mental health condition (Oregon county)	Greater utilization of BH and PH OP care (BH effects only among enrollees with mild to moderate needs), lower PH ED utilization
Xiang et al. 2019; July 2010-May 2013	MMC plan	FFS program	Seniors and people with disabilities (Chicago area)	Initial and subsequent reductions in total costs per individual from the payer perspective, but no overall changes
Frimpong et al., 2021; October 2013-July 2019	SNP	SNP-eligible individuals in FFS or MMC carve-in plans	Adults with serious and persistent mental illnesses or SUD as defined by the Medicaid program (New York State)	Increased utilization of BH and PH OP care, decreased utilization of BH and PH inpatient care, mixed changes on BH and PH ED care

MMC Carve-In versus Carve-out via Subdelegation: Oregon State

Charlesworth et al. compared ED, inpatient, and OP visits among adult enrollees in two of Oregon's 15 Coordinated Care Organizations (CCOs) in 2016 (Charlesworth et al., 2021). CCOs are MCO-like

entities that receive global budgets[5] covering both PH and BH services. The two CCOs in this study operated in the same geographic area and had similar populations. However, one of the two CCOs subdelegated the management of the BH benefit to the county, thus creating a carve-out. The authors tested the effects of these financing arrangements in the entire enrollee population and in subgroups, including racial/ethnic subgroups and those with SMI versus those with less serious illnesses. Relative to the carve-out arrangement, enrollees with mild to moderate mental illnesses in the carve-in CCO had a greater probability of any BH OP visits, an effect that was not observed for enrollees with SMI. Carve-in enrollees overall had a greater number of BH visits compared to carve-out enrollees. Carve-in enrollees were more likely to

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[5] Global budget is the total amount established prospectively by Oregon State to be paid to the CCOs to deliver and manage health services for CCO members, including providing access to and ensuring the quality of those services.

access primary care physicians (PCPs), psychologists, and social workers for BH care, but less likely to access psychiatrists and specialists. Carve-in enrollees had a greater probability of any PH utilization but no difference in number of PH visits compared to carve-out enrollees. Carve-in enrollees had a lower probability and number of PH ED visits relative to the carve-out; no other acute care differences were observed. Lastly, the authors reported an equity effect, with higher access to OP BH care for carve-in black (but not Latinx) enrollees relative to whites.

MMC Carve-In versus FFS: Illinois State

Xiang et al. evaluated the effect of the Illinois Integrated Care Program (ICP) on service utilization and per capita spending in the two-year period after ICP was launched (Xiang et al., 2019). ICP was a mandatory MMC plan for seniors and people with disabilities that carved in BH and long-term care. It was piloted in six Illinois counties surrounding Chicago starting in May 2011 and expanded to most of the State in summer 2014. The authors compared changes in service utilization among enrollees of ICP pilot counties with changes among enrollees in Chicago, who remained in FFS. The study findings vary depending on the period when they were assessed: the initial period following the implementation of the carve-in ("initial"); two subsequent periods following the implementation of the Save Medicaid Access and Resources Together (SMART) Act, which reduced Medicaid reimbursement rates, primarily affecting FFS enrollees, followed by a slight reduction of the capitated payment rates to the carve-in plan, which only affected carve-in enrollees (we combined both periods in our summary and refer to them as "subsequent"); or the entire study period ("overall"). Given the potential outcome effects of these other policies, we only highlight the outcomes in our summary of findings that had consistent effects in the same direction and/or no effects across all observation periods. Only one outcome fit this criterion: The carve-in was associated with reductions in total per person costs from the payer's perspective in the initial and subsequent periods, although no overall cost effects were observed.

Carve-In through SNPs versus FFS or Mainstream MMC Plans: New York State

Frimpong et al. evaluated the effect of HARPs on ED visits, inpatient stays, and OP visits (Frimpong et al., 2021). They compared changes in the utilization of these services for HARP enrollees to HARP-eligible enrollees whose BH benefit either remained under an FFS arrangement or was carved in to comprehensive MCOs. The two-year periods before HARPs launched in NYC and ROS were used as the pre-policy (baseline) period, and the two-year periods after launch, excluding a one-year period immediately after launch as a transition period, were used as the post-launch intervention period. While the authors reported outcomes separately for NYC and ROS, we highlight outcomes in our own summary if at least one of the two regions had a statistically significant result. Relative to the comparison group, HARP enrollees experienced increased probability of any OP visits and number of OP visits for both BH and PH services. In addition, the HARP program was associated with decreases in the probability of any inpatient visits and number of inpatient visits for both BH and PH care. In terms of ED use, the

HARP was associated with increases in probability of any use for BH and PH, but a decrease in the number of BH ED visits.

Our evaluation builds on these studies but is broader in its scope both in terms of the programs (MMC carve-in and HARP) and the outcomes evaluated. The next section describes our evaluation design and methods.

3. Evaluation Design and Methods

3.1 Overview of the HARP Evaluation

RAND has conducted a comprehensive, statewide independent evaluation of the BH Demonstration that adheres to the evaluation standards set forth in the Special Terms and Conditions for the Demonstration (New York State, 2020). Designed as a mixed methods investigation, the structure of the evaluation is built around research questions and testable hypotheses that sought to determine whether the beneficiary- and system-level impacts of the MMC BH carve-in and HARP programs had been achieved. Quantitative methods were used for descriptive purposes and to assess the outcomes of the BH Demonstration, and qualitative methods were used to provide context for the quantitative findings and to inform the process evaluation with administrative, provider, and beneficiary perspectives on HARP programs' functioning and effectiveness.

The data sources included qualitative data collected during the course of the evaluation and a variety of administrative and survey data previously collected by the NYS DOH, OMH, and OASAS during the course of health care administrative or clinical operations and quality improvement initiatives. The RAND team also employed data describing county-level characteristics that have the potential to affect program outcomes.

The length of time following the launch of the BH Demonstration covered by the evaluation—four years for NYC and three years for ROS—ensured adequate availability of post-policy period patient populations (e.g., comparisons of HARP-eligible enrollees enrolled in the HARP program with those who were not enrolled). Hence, RAND expects that the findings of this evaluation will be a valuable resource for DOH and CMS in determining whether and what kinds of changes or corrections to the implementation of the BH Demonstration are needed.

Discussions with Experts to Refine Approach

To better understand the policy context, objectives, and challenges to the implementation of the BH Demonstration, the RAND team held multiple calls with subject matter experts within DOH, OMH, OASAS, and OnTrackNY (OTNY), including subcontractors, to discuss the background and implementation of the MMC BH carve-in and HARP programs. In addition, the evaluation team held discussions with data experts within these agencies to review the feasibility of fully addressing the RQs as originally developed, given constraints of the available data.

The evaluation team used the information gathered to both inform the qualitative component of the evaluation and to revise and enhance the planned quantitative analyses. The RAND team worked closely with DOH and OMH to revise or refine individual RQs and outcome measures to reflect limitations in the data. Moreover, due to data availability limitations, the pre-policy period was constrained from four to two years.

Table 3.1. BH Demonstration Timeline

Year	Month	Event
2015	April	DSRIP (Performing Provider Systems)
	August	Amended 1115 Waiver includes BH reform initiatives: (a) qualified MCOs may manage BH benefits for SSI beneficiaries through MMC plans and HARPs (BH carve-in) (b) eligible individuals meeting defined functional needs criteria may access BH-HCBS
	October	MMC BH Carve-in launches in **NYC**
		HARP program launches in **NYC** (also for eligible HIV SNP enrollees)
2016	January	BH-HCBS become available in **NYC** (for eligible HARP & HIV SNP enrollees)
	July	MMC BH Carve-in launches in **ROS**
		HARP program launches in **ROS** (also for eligible HIV SNP enrollees)
	October	BH-HCBS become available in **ROS** (for eligible HARP and HIV SNP enrollees)
	December	DOH pauses Health Homes (HH) billing to Plans for payment for BH-HCBS assessment and authorizes direct FFS billing to DOH
2017	March	BH-HCBS assessment process was streamlined
	October	Quality Funds become available to MCOs to promote access to BH-HCBS for their HARP enrollees (awards retained based on number of new BH HCBS recipients)
		Revision of BH-HCBS Workflow Guidance for HH-enrolled HARP enrollees
	October – March 2019	BH-HCBS Infrastructure Funds added to the HARP premium for MCOs and providers to develop capacity, connectivity, and innovative service delivery
2018	January	Funds for BH-HCBS (including assessments and plans of care) are included in the HARPs' premium rates (**NYC**)
	February	Beneficiary-targeted BH-HCBS educational initiatives implemented (e.g., peer focused outreach & training about BH-HCBS)
	April	HARPs may contract with DOH Designated Entities (RCAs) to conduct BH-HCBS assessments and care planning for enrollees not enrolled in HHs
	May	Expansion of 'Health Home Plus' to include high-need individuals with DOH-defined serious and persistent mental illnesses
	June	HARP becomes an option on the NYS of Health (Exchange)
		Changes to eligibility criteria for BH-HCBS Tier 2 services
	July	DOH resumes payments to HHs for BH-HCBS assessment via HARPs' capitated budgets
		All health plans contracted with HHs need to submit Engagement & Enrollment (outreach) Optimization Proposal to enroll high-risk enrollees
	August	Launch of HARP performance measures for HHs
	October	Funds for BH-HCBS (including assessments and plans of care) are included in the HARPs' premium rates (**ROS**)
2019	January	Updated HH re-designation policy and chart review and scoring tools (including HARP performance)
	June	Addition of new criterion to eligibility criteria for BH-HBCS
	September	Update of (a) staff qualifications to serve 'Health Home Plus' enrollees with DOH-defined serious and persistent mental illnesses and (b) assessor qualifications for administering the BH-HCBS assessments
		Care managers and/or supervisors may request a waiver of education/experience qualifications

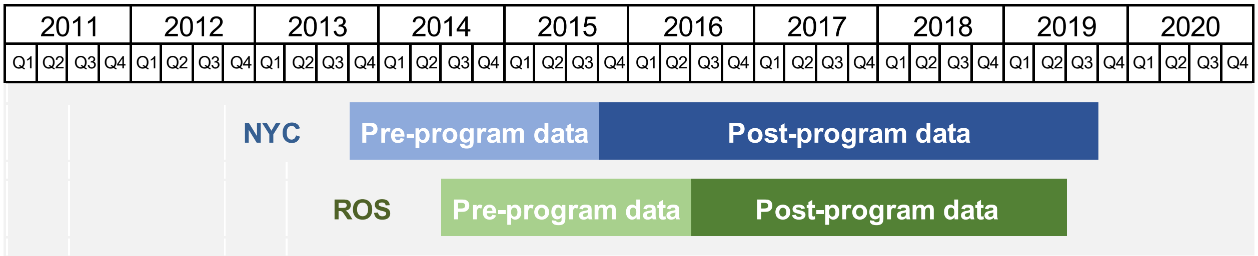
Using the information gathered in these calls along with publicly available DOH documents, we developed a timeline to indicate key events of the BH Demonstration with the potential to impact the implementation and outcomes of the MMC BH carve-in and HARP programs. Table 3.1 above presents these key events and associated dates.

Evaluation Approach

Table 1.1 presents an overview of the goals of the evaluation, the final RQs related to each goal, and the methods employed to answer each RQ. Each goal will be discussed in Section 3.2, and the data sources will be discussed more thoroughly in Sections 3.3 and 3.4.

Figure 3.1 describes the period used for the quantitative component of the evaluation covering calendar years 2013-2019.[6] Due to the lagged roll-out of the BH Demonstration in ROS relative to NYC, the evaluation period differs between the regions: While NYC has a six-year evaluation period (October 1, 2013, through September 30, 2019), with four post-policy (or post-period) years, ROS has a five-year evaluation period (July 1, 2014, through June 30, 2019), with three post-period years. The evaluation period for the selected statewide analyses is similar to that of ROS, i.e., it is five years long. We note that the regions' two-year pre-policy period, also referred to as pre-period, is used as the baseline for our analyses (we use both terms interchangeably).

Figure 3.1. Pre- and Post-Period Data Used for Quantitative Evaluation



NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and HARPs. Statewide: Excludes NYC data from October 2018 to September 2019

3.2 HARP Goals and Research Questions

The HARP program evaluation was designed to determine the extent to which three goals of the BH Demonstration have been achieved since the program was implemented (October 2015, NYC; July 2016, ROS). These include improving health outcomes (1) in mainstream MMC, (2) among HARP-enrolled beneficiaries, and (3) among BH HCBS-using beneficiaries. These three goals are described below.

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[6] The evaluation period started in 2013 due to data limitations for earlier years and ended in 2019, the original end year for an evaluation that began in 2019 and employed some of the data that had been used in the DSRIP evaluation. Although by the time we began with the planned analyses we could have employed 2020 data, logistical reasons and the potential for the COVID-19 pandemic to complicate the interpretation of our results led to our decision to not expand the analyses to 2020.

Goal 1: Improve Health Outcomes in Mainstream MMC

The first goal of the BH Demonstration is to improve health and BH outcomes for disabled SSI adults enrolled in Mainstream MMC plans whose BH care was previously carved out in a FFS payment arrangement. This goal has two RQs, shown in Table 3.2 along with the data sources and outcome measures for each RQ.

Table 3.2. Goal 1 Research Questions, Data Sources, and Outcome Measures

Research Questions	Data Sources	Outcome Measures
1. To what extent are MMC enrollees accessing community-based BH specialty services (e.g., ACT, PROS, and FEP services delivered through OTNY)?	Medicaid Data (Claims and Encounters)	Percentage of Mainstream MMC enrollees receiving non-FEP BH specialty services, by annual period, NYC and ROS
	OTNY Data System	Percentage of Mainstream MMC receiving FEP services, by annual period, NYC and ROS
	Key informant interviews with BH Providers	Barriers and facilitators to BH specialty care under mainstream MMC
2. To what extent are MMC enrollees accessing community-based health care?	Medicaid Data (Claims and Encounters)	Percentage of MMC enrollees receiving primary and/or preventive services, by annual period, NYC and ROS
	Key informant interviews with BH Providers	Barriers and facilitators to primary and preventive care under mainstream MMC

Goal 2: Improve Health Outcomes among HARP-enrolled Beneficiaries

The second goal of the BH Demonstration is to improve health, BH, and social functioning outcomes for adults enrolled in the HARP program. This goal has 11 RQs, shown in Table 3.3 along with the data sources and outcome measures for each RQ.

Table 3.3. Goal 2 Research Questions, Data Sources, and Outcome Measures

Research Question	Data Source	Outcome Measure
1. How has enrollment in HARP plans increased over the length of the Demonstration?	Medicaid Data (Enrollment Data)	Percentage of HARP eligible beneficiaries enrolled in MMC, HARP, or HIV SNP, by annual period, NYC and ROS
	Key informant interviews with BH providers, care coordinators, and NYS DOH officials; Interviews with HARP enrollees	Barriers and facilitators of HARP enrollment

Research Question	Data Source	Outcome Measure
2. What factors are associated with non-enrollment in HARP plans?	Medicaid Data (Claims and Encounters)	Population-level differences in person-level characteristics (demographic and clinical characteristics including BH service utilization) for HARP eligible enrollees who are enrolled versus not enrolled in HARP, by annual period, NYC and ROS
	Medicaid Choice Enrollment Data	Reasons for opting out of HARP, by annual period, NYC and ROS
	Key informant interviews with BH providers, care coordinators, and NYS DOH officials	Barriers and facilitators to HARP enrollment
3. What are the demographic and clinical characteristics of the HARP population? Are they changing over time?	Medicaid Data (Claims and Encounters)	Percentage of HARP enrollees with specific characteristics, by annual period, NYC and ROS
4. What are the educational and employment characteristics of the HARP population?	CMH Screen	Educational and employment attainment for HARP enrollees, by annual period, NYC and ROS
5. To what extent are HARP enrollees accessing primary care?	Medicaid Data (Claims and Encounters)	Percentage of HARP eligible enrollees receiving primary and/or preventive health services, by annual period, NYC and ROS
	Key informant interviews with BH providers, care coordinators, and NYS DOH officials; Interviews with HARP enrollees	Barriers and facilitators to access to primary and preventive care
6. To what extent are HARP enrollees accessing community-based BH specialty services (ACT, PROS, OMH Outpatient Clinic, Continuing Day Treatment, Partial Hospitalization, OASAS Opioid Treatment Program, OASAS Outpatient Clinic, and FEP programs)?	Medicaid Data (Claims and Encounters) OTNY Data System	Percentage of HARP eligible enrollees receiving any and specific BH specialty services, by annual period, NYC and ROS
	Key informant interviews with BH providers, care coordinators, and NYS DOH officials	Barriers and facilitators to access to community-based specialty BH care
7. To what extent are HARP enrollees accessing Health Homes for care coordination?	Medicaid Data (Claims and Encounters)	Percentage of HARP eligible enrollees engaged in Health Home services, by annual period, NYC and ROS
	Key informant interviews with BH providers, care coordinators, and NYS DOH officials; Interviews with HARP enrollees	Barriers and facilitators to access to health home care coordination

Research Question	Data Source	Outcome Measure
8. To what extent is HARP quality of care improving, especially related to the HEDIS measures of health monitoring, prevention, and management of BH conditions, cardiovascular disease, asthma, diabetes, and other selected chronic health conditions?	Plan-reported HEDIS® / QARR quality measures Medicaid Data (Claims and Encounters)	Quality of care among HARP eligible enrollees, by annual period, NYC and ROS
9. To what extent are HARP enrollee experiences with care and access to health and BH services positive?	CAHPS	Percentage of HARP enrollees who: 1) report it was easy to get BH treatment; 2) report it was easy to get SUD treatment; 3) rated their BH treatment positively; 4) rated their SUD treatment positively. By annual period when data are available, NYS and ROS
10. To what extent are HARP enrollees satisfied with the cultural sensitivity of BH providers and their wellness, recovery, and degree of social connectedness?	HARP PCS	Percentage of HARP enrollees who: 1) report that BH care was responsive to their cultural background; 2) had a positive overall rating of quality of life; 3) had overall positive beliefs about health and wellness; 4) rated PCS questions in the social connectedness domain positively; 5) rated items related to communication with health care providers positively. By annual period when data are available, NYS and ROS
11. To what extent are HARPs cost effective? What are the PMPM cost of inpatient psychiatric services, SUD ancillary withdrawal, hospital-based detox, and ED services for the HARP population? Are these costs decreasing over time?	Medicaid Data (Claims and Encounters) MHARS	Risk-adjusted utilization of acute care and non-acute (OP) BH services among HARP eligible enrollees, by annual period (PMPM/Y), NYC and ROS Risk-adjusted PMPM cost of acute care and non-acute (OP) BH services among HARP eligible enrollees, by annual period (PMPM/Y), NYC and ROS

Goal 3: Improve Health Outcomes among BH HCBS-using Beneficiaries

The third goal of the BH Demonstration is to develop BH HCBS focused on recovery, social functioning, and community integration for HARP enrollees who meet eligibility criteria for such services. This goal, presented in Table 3.4, has four RQs, shown in Table 3.4 along with the data sources and outcome measures for each RQ.

Table 3.4: Goal 3 Research Questions, Data Sources, and Outcome Measures

Research Questions	Data Sources	Outcome Measures
1. To what extent are HARP enrollees deemed eligible to receive HCBS?	Medicaid Data (Claims and Encounters)	Percentage of HARP enrollees who are deemed BH HCBS-eligible (any, by Tier), by annual period, NYC and ROS Percentage of HARP enrollees who are assessed for BH HCBS eligibility, by annual period, NYC and ROS
	Key informant interviews with BH providers, care coordinators, and NYS DOH officials; Interviews with HARP enrollees	Barriers and facilitators to BH HCBS eligibility assessment
2. To what extent are HARP enrollees who are deemed HCBS-eligible receiving HCBS?	Medicaid Data (Claims and Encounters)	Percentage of BH HCBS-eligible HARP enrollees receiving any BH HCBS, by month and annually, at the HARP plan level, regionally (NYC, ROS, by county) and statewide; and annual percent change
	Key informant interviews with BH providers, care coordinators, and NYS DOH officials; Interviews with HARP enrollees	Barriers and facilitators to access to BH HCBS
3. To what extent has the Demonstration developed provider network capacity to provide BH HCBS for HARPs?	Medicaid Data (Claims and Encounters)	Number of providers contracted for BH HCBS in HARP plans, by HARP plan, by annual period, regionally (NYC, ROS, by county) and statewide
	MMC HCBS Provider Network Data System	Rate of BH HCBS providers per 1,000 BH HCBS-eligible enrollees, by annual period, regionally (NYC, ROS, by county) and statewide
	Complaints and Appeals Data	Rate of complaints and appeals due to denial of BH HCBS per 1,000 BH HCBS-eligible enrollees, by annual period, regionally (NYC, ROS, by county) and statewide
	Key informant interviews with BH HCBS providers, Health Home and HARP administrators, NYS DOH officials	Barriers and facilitators to provision of BH HCBS and the effectiveness of the services provided
4. To what extent are the added costs arising from access to BH HCBS offset elsewhere in the continuum of care?	Medicaid Data (Claims and Encounters)	Risk-adjusted total Medicaid PMPM costs, by annual period (PMPM/Y), NYC and ROS Risk-adjusted PMPM costs for acute care BH services, by annual period (PMPM/Y), NYC and ROS Percentage using acute care BH services, by annual period, NYC and ROS Percentage using non-acute (OP) BH services, by annual period, NYC and ROS

3.3 Quantitative Methods

This evaluation adopted a rigorous analytic approach that combined descriptive statistical analyses with state-of-the-art methods to assess the impact of the BH Demonstration while also utilizing the temporal trends in the data. We first describe our data sources and then provide a detailed description of our approach.

Data Sources

A variety of secondary data sources were used to construct study variables (outcome measures and covariates for risk adjustment) for the quantitative component of the HARP program evaluation. Data were provided by the DOH and OMH and included data from Medicaid, Mental Health Automated Record system (MHARS), OTNY, HEDIS®/QARR Plan-Reported Metrics, CMH Screens, the Health Plan version of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Survey, the HARP Perception of Care Survey, Medicaid Choice Enrollment, Complaints and Appeals, the MMC HCBS Provider Network, and the Area Health Resource Files (AHRF).

Medicaid Data

This dataset, available with a six-month lag and maintained by the NYS Medicaid Data Warehouse, contains the following information: demographics, eligibility and enrollment information, and service utilization billing records for all health services, including pharmacy, regardless of whether the payment arrangement was FFS or managed care (i.e., claims and encounters). These data were the source of information for variables describing Medicaid enrollment status, plan membership, BH HCBS eligibility status, demographics, health status, service utilization, provider associated with the billed services, and costs of health care. Health status was evaluated with variables capturing BH diagnoses of interest as well as overall health status. The BH diagnoses were based on episode diagnostic categories (EDCs) and included schizophrenic disorders, severe bipolar disorder, other serious affective/psychotic disorders, any of the aforementioned serious mental illnesses (Any SMI), opioid abuse and dependence (opioid use disorders [OUD]), chronic alcohol abuse, and any of the aforementioned substance abuse-related diagnoses or other substance use disorders (Any SUD). Overall health status was evaluated using clinical risk groups (CRGs), specifically the 9-rank core health status variable, which we collapsed into three categories (core health status revised): healthy to minor chronic disease, moderate to significant chronic disease, and dominant chronic disease to catastrophic conditions. The 2014–2019 data were used in all three goals of the evaluation to construct risk adjustment variables and utilization and cost variables (outcome measures).

Mental Health Automated Record system (MHARS) Data

This OMH dataset contains information on inpatient, residential, and OP utilization in the State’s Psychiatric Centers. The dataset was used to identify psychiatric admissions falling under the Institutions for Mental Diseases exclusion and thus not captured in the Medicaid data. This dataset permitted a complete assessment of inpatient utilization by Medicaid enrollees. The 2013–2019 data were used in Goals 2 and 3 of the evaluation to construct the MHARS inpatient utilization variable (outcome measures).

ONTrackNY Data System

This dataset contains patient and program-level information collected by the OTNY Coordinated Specialty Care program, a statewide program that began in earnest in 2015. The data were linked to the Medicaid data for OTNY enrollees with Medicaid coverage. Although the dataset contains rich person-level information as well as OTNY program components, our main use of the dataset was to determine access to the OTNY program for Medicaid beneficiaries included in our MMC carve-in and HARP cohorts. The 2015–2019 data were used in Goals 1 and 2 of the evaluation to construct variables capturing FEP service utilization (outcome measures).

HEDIS®/QARR Plan-Reported Metrics

This dataset contains person-level quality of care information in the form of HEDIS®/ Quality Assurance Reporting Requirements (QARR) quality measures collected by mainstream MMC plans, HARPs, and HIV SNPs and reported annually to the DOH. The dataset was supplemented at least annually with DOH-generated BH measures populated with service utilization data, including inpatient discharge events and measures related to OP care. The 2014–2019 data[7] including measures of quality of BH and PH care selected by DOH were used in Goal 2 (RQ 8) of the evaluation (outcome measures). The measures include:

- Adherence To Antipsychotic Medications for People with Schizophrenia
- Antidepressant Medication Management, Effective Acute Phase Treatment (Acute) and Effective Acute or Continuation Phase Treatment (Any)
- Cardiovascular Monitoring for People with Cardiovascular Disease (CVD) and Schizophrenia
- Diabetes Monitoring for People with Diabetes and Schizophrenia
- Diabetes Screening for People with Schizophrenia or Bipolar Disease (Who Are Using Antipsychotic Medication)
- Medication Management for People with Asthma—50 Percent of Treatment Days Covered (50 Percent Compliance)
- Medication Management for People with Asthma—75 Percent of Treatment Days Covered (75 Percent Compliance)

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[7] These data were available as rolling year data to accommodate to the annual periods used in the evaluation; the only exception were the data used to construct the *comprehensive diabetes screening* measures, for which only calendar years 2015–2018 were available.

- Comprehensive Diabetes Screening, Received Hba1c
- Comprehensive Diabetes Screening, Received Hba1c, Dilated Eye Exam, and Nephropathy Monitoring (Overall).

Community Mental Health Assessment Screen Data

This dataset, linkable to Medicaid data, contains lifetime and current person-level data, a mix of self-reported and assessor-gathered information on a variety of social and health-related domains. This information is used to assess BH HCBS eligibility with the BH HCBS Eligibility scale, brief and full,[8] a standardized clinical and functional assessment tool derived from the interRAI™ CMH Assessment (Hirdes et al., 2000). Domains include sociodemographic characteristics (e.g., marital status, homelessness); functional status (independent living skills, cognitive skills, social relations, employment, education and finances); risky behaviors (substance use, harmful/self-injurious behaviors); traumatic events; and criminal justice system involvement. It also contains health status and BH service utilization information. The CMH Screen is required annually for all HARP and HARP-eligible HIV SNP enrollees, but it is not available for HARP-eligible members who are not enrolled in the HARP program. The 2015–2019 data were used in Goal 2 of the evaluation (RQ 4) to construct variables capturing educational and employment characteristics of the HARP population (outcome measures).

Consumer Assessment of Healthcare Providers and Systems Survey Data

This dataset contains deidentified self-reported information on experiences with access to care and experiences with health care providers and health plan staff, assessed through the Health Plan version of the CAHPS® survey and collected every other year from a sample of adults enrolled in all MMC product lines. The data were reported at the plan level for all plans that met minimum sample size criteria. Survey data for 2017 and 2019 were used in Goal 2 (RQ 9) to construct variables capturing HARP enrollee assessment of ease of access to BH/SUD treatment and satisfaction with BH/SUD treatment. As with other survey data, these data are vulnerable to non-response bias.

HARP Perception of Care Survey Data

This dataset contains self-reported information collected through a survey of a randomly selected sample of enrollees in HARPs or HIV SNPs. The survey asks respondents about their perception of access to and quality of behavioral health care, the cultural sensitivity of their providers, their quality of life, activity limitations due to physical health problems and substance use, and social connectedness. The survey was adapted from the Experience of Care and Health Outcomes Survey, the Mental Health Statistics Improvement Program/NYS OMH Consumer Assessment of Care Survey, and others. It was piloted and implemented in 2017 and again in 2019, but only the 2019 data are linkable to Medicaid data. The 2019 survey data were used in

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[8] The BH HCBS Full Assessment ceased to be required in March 2017.

Goal 2 (RQ 10) of the evaluation to construct variables capturing HARP enrollee assessment of BH providers' cultural sensitivity, quality of life, health and wellness, and social connectedness (outcome measures). As with other survey data, these data are vulnerable to non-response bias.

Medicaid Choice Enrollment Data

This dataset contains information on the HARP enrollment process collected on an ongoing basis by New York Medicaid Choice (an enrollment broker) and available since program implementation. Data include passive enrollment, opt-out acknowledgement letters distributed and returned, number of beneficiaries who were enrolled, number of beneficiaries who opt out, reasons for opting out. The 2015–2019 data were used in Goal 2 (RQ 2) of the evaluation to construct variables capturing the reasons for opting out of HARPs (outcome measures).

Complaints and Appeals Data

This dataset contains complaint and appeal information pertaining to denials of access to BH HCBS. Complaint information was collected through a designated email address available to BH HCBS providers since October 2015. These data permitted assessment of the number of complaints and appeals related to access to BH HCBS. The 2015–2019 data were used in Goal 3 (RQ 3) to construct a variable capturing complaints and appeals due to BH HCBS denial per BH HCBS-eligible enrollees (outcome measure).

MMC HCBS Provider Network Data System

This dataset contains information on providers who have applied for licenses to provide BH HCBS, including contact information, location, services provided, staff qualifications, and funding information, permitting assessment of provider availability and HARP/HIV SNP contracts by geographic area. The 2015–2019 data were used in Goal 3 (RQ 3) of the evaluation to construct a variable capturing the rate of providers per BH HCBS-eligible enrollees (outcome measure).

Area Health Resource Files

The publicly available AHRF is a collection of data from multiple sources including the Health Resources & Services Administration (HRSA), the U.S. Census Bureau, the American Medical Association Physician Masterfile, and the U.S. Department of Agriculture's Economic Research Service. For our evaluation, adjusted models included three county-level variables to control for area-level characteristics with the potential to affect our outcomes. These variables included measures of households with incomes below the Federal Poverty Line in the past 12 months (AHRF poverty; this may be expressed as a percentage or, as we do for this report, a proportion) and racial/ethnic diversity (AHRF diversity index, expressed as an index ranging between 0 = no diversity and 0.875 = uniform distribution between the eight categories), and a HRSA variable reflecting the characteristics of the mental health care infrastructure (health professional shortage area, mental health, assessed with three levels: 0 = no shortage, 1 = whole county, 2 = partial county). We used aggregated data for 2010–2014 (pre-period) and 2014–2018 (post-period) to construct the poverty and diversity index variables, and data from 2014 (pre-period) and 2018 (post-period) to construct the HRSA-designated mental health professional shortage area variable.

Cohort Construction

Beneficiaries were included in the cohorts employed in the evaluation (Goals 1–3) if they met criteria for inclusion in the evaluation: Medicaid-only (i.e., we excluded dually-eligible beneficiaries), were eligible for full Medicaid benefits, had continuous enrollment in Medicaid (defined as 11 out of 12 months of Medicaid eligibility), and were aged 21–64.

A critically important task the of the evaluation of the HARP program was to identify control individuals whenever feasible. For Goal 2, which focused on HARP program impacts, because HARP-eligible beneficiaries can opt out and not all HARP-eligible beneficiaries are enrolled in the program (see Chapter 2), this group provided a potential control group. Upon assessment of the population of HARP-eligible beneficiaries, it became evident that the vast majority joined HARP during the evaluation period and most who joined the HARP program remained enrolled in it; also, a non-negligible number of beneficiaries became newly enrolled in the program from year to year. Although we considered employing an open cohort for the controlled analyses, i.e., allowing beneficiaries to switch from control to intervention from one year to the next, we opted for assessing the impact of the HARP program with a closed cohort. This cohort included beneficiaries observed in the two years prior to the start of the HARP program who were also observed in ***all*** the subsequent years of the program; beneficiaries who were not enrolled from the beginning of the program were excluded because the HARP effect can be attenuated among them. Thus, the closed cohort included HARP-eligible individuals eligible for inclusion in the evaluation who (a) were either enrolled in HARP, defined as ≥1 months of HARP enrollment per annual period every post-period year (intervention group), or were eligible but not enrolled in HARP, defined as 0 months of HARP enrollment every post-period year (control group), and (b) were also observed each year of the pre-period. Individuals contributing to the closed cohort were observed for the entire length of the evaluation period, i.e., six years for NYC and five years for ROS (see Consort Diagram for the NYC sample in Figure 3.2). Although the control group provides the pure comparison where the true unattenuated HARP effect can be estimated, a key limitation of this control group is its very small size resulting from the fact that most beneficiaries, when eligible, do enroll in HARP. For RQs related to the HARP program that did not involve controlled analyses, we employed an open cohort that included HARP-eligible beneficiaries who, in any year of the post-period, met criteria for inclusion in the evaluation. For RQs that compared HARP enrollees with HARP-eligible individuals not enrolled in the HARP program, the latter group could include HARP enrollees if they lost HARP enrollment. Individuals could contribute to the open cohort a minimum of one year and a maximum of three to four years, depending on the region.

For the controlled analyses planned for Goal 3, which focused on the impacts of the BH HCBS benefit, the intervention group included HARP enrollees who were eligible for and actively utilizing BH HCBS (i.e., BH HCBS users), while the control group included HARP enrollees not utilizing BH HCBS regardless of BH HCBS eligibility status (non-BH HCBS individuals). BH HCBS users were allowed to contribute to the control group if they lost BH HCBS eligibility or ceased to utilize BH HCBS. For these and other Goal 3 analyses, we opted to use an open cohort because the number of HARP enrollees utilizing BH HCBS was very small and thus, a closed cohort would have led to a very small intervention sample size. Members of the Goal 3 cohort were the HARP enrollees included in the open cohort employed in Goal 2 analyses, all of whom could become eligible for BH HCBS at any time during the post-period. In any post-period year, a fraction of HARP enrollees became BH HCBS-eligible,[9] defined as ≥1 months of BH HCBS eligibility per annual period, and among them, a fraction became BH HCBS users, defined based on evidence of ≥6 months of BH HCBS utilization per annual period. Individuals could contribute to the cohort a minimum of one year and a maximum of three years (2017–2019) for ROS and statewide analyses, and four years (2016–2019) for NYC analyses.

For Goal 1, which focused on the impacts of the MMC BH carve-in, we opted to use an open cohort to address the two RQs because the objective was to understand the population receiving specific care and no control group was feasible in this setting. Individuals were included if in addition to meeting criteria for inclusion in the evaluation, they were eligible for Medicaid through receipt of SSI benefits for a minimum of 11 months per year during any year of the evaluation period, i.e., pre-period or post-period. Hence, beneficiaries could contribute to the cohort a minimum of one year and a maximum of five to six years depending on the region.

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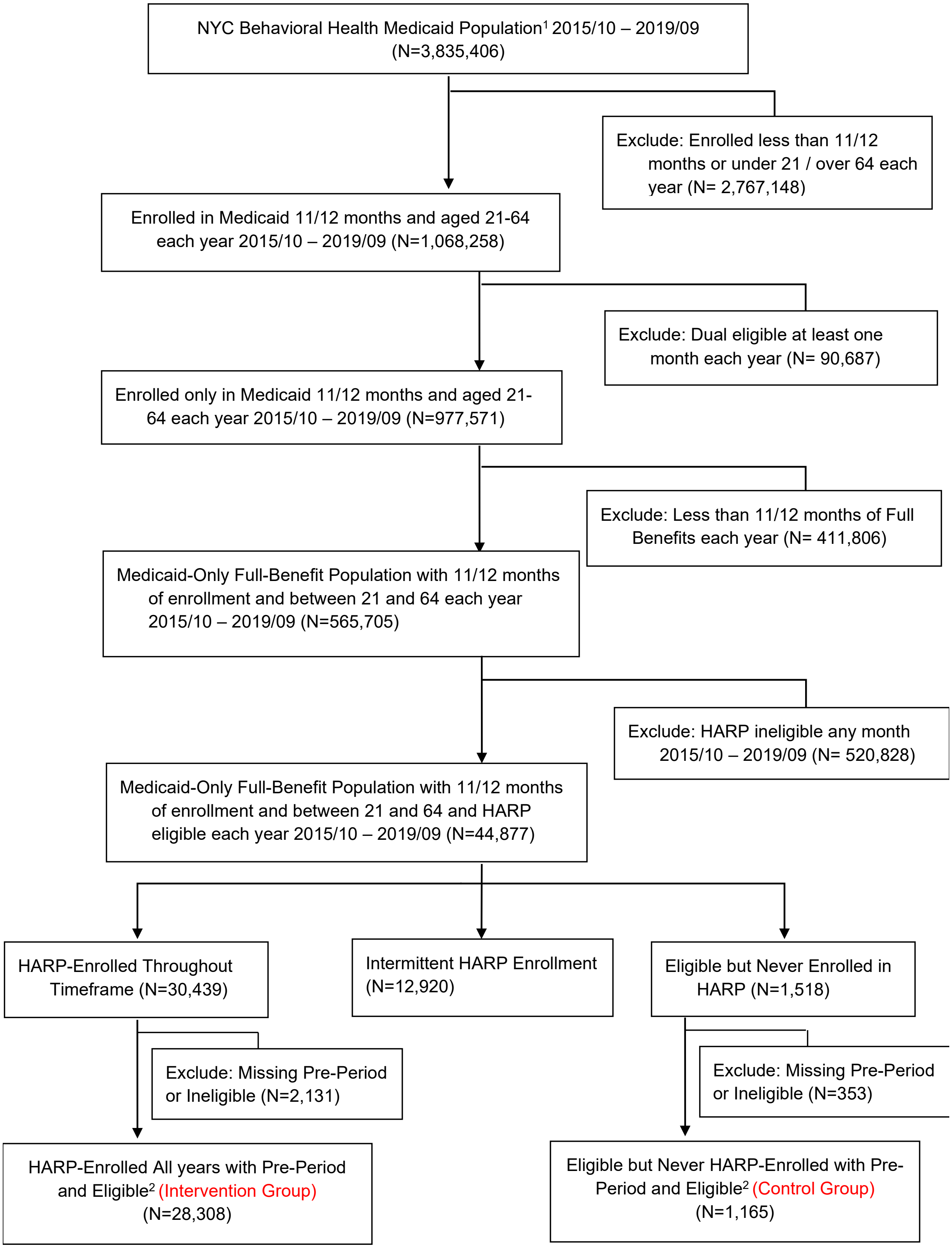
[9] We note that because participation in the Self-Directed Care (SDC) pilot requires BH HCBS eligibility, SDC participants were deemed eligible even if they were not thus classified in the Medicaid data.

Figure 3.2. Consort Diagram, HARP Closed Cohort, NYC



Analytic Considerations

Our analytic approach was anchored in the notion of counterfactual, where a comparison is chosen to match a treatment group on available characteristics and, subsequently, it is augmented by a model (e.g., a difference-in-difference model) to produce a doubly robust analysis. This approach minimized confounding posed by the effect of other ongoing health care policies, e.g., other MRT initiatives, provisions of the Affordable Care Act (see Chapter 6). For RQs where comparison groups were not necessary or available, we only assessed the changes over time.

For selected RQs for which it was important to determine if the effects were attributable to the HARP program (Goal 2) or the BH HCBS benefit (Goal 3) and a control group was available, our main analyses involved the implementation of a doubly robust method that compared HARP enrollees (Goal 2) and BH HCBS users (Goal 3) to the control groups.

For Goal 2, our main analyses assessed the potential impact of the program on eligible beneficiaries who did not enroll (i.e., how they would have fared had they enrolled). Because most of the HARP-eligible population ended up enrolling in the HARP program and those who did not enroll are a very selective sample of the population, we next assessed the incremental effect of the program on enrollees who have been in the HARP program since the beginning. We designed these analyses to be complementary in providing an understanding of the overall impact of the demonstration.

This analytic approach involved the following: (1) conducting an average treatment on the control (ATC) method augmented by difference-in-difference (DiD) models (to account for concurrent historical trends), which assessed the outcomes of HARP-eligible beneficiaries who did not enroll had they actually enrolled, and (2) estimating interrupted time series (ITS) models that assessed changes in outcomes for HARP enrollees during the evaluation period. We stress that this approach was necessitated by the fact that despite its robustness, the DiD method only addresses the outcomes of a very selected group of HARP-eligible individuals, and thus the findings are not necessarily generalizable to the full HARP population. We address this limitation by supplementing the DiD method with ITS analyses of the change over time in the full population of HARP enrollees.

For Goal 3, we needed to use a different approach because we were not able to create a closed cohort with concurrent intervention and control groups. Thus, we investigated the impact of the BH HCBS benefit by conducting a counterfactual average treatment on the treated (ATT) method, augmented by a longitudinal controlled model that assessed the outcomes of BH HCBS users had they not utilized the services during the post-policy period.

For analyses with very small sample sizes or rates less than 5 percent or more than 95 percent, we refrained from conducting any modeling to avoid very small cells and model identification issues. In those instances, we have reported summary statistics through unadjusted (Goal 1) or simple matched sample (ATC or ATT) comparisons (Goals 2 and 3). These summary statistics should be interpreted with caution as the concerns that led to the decision to not conduct models also limit the generalizability of these results. Model results for outcomes with unadjusted rates greater than 5 percent or smaller than 95 percent but close to those thresholds should be interpreted with caution as some of them can mean relatively small sample sizes in some subgroups. More broadly, interpretation of results should account for the possibility that significant differences may simply be the result of large sample sizes and, hence, lack policy significance.

For all analyses, we report estimates, their standard errors where appropriate, and a p-value for test of significance when comparing groups. In the presentation and discussion of our findings, we only describe results as different when the difference is statistically significant (i.e., p-value of $\leq .05$). When rates appear to be changing over time, but we have not assessed the statistical significance of the trend, we refer to those changes in a more tentative fashion.

Analytic Approaches

Throughout the evaluation, different analytic approaches were used to adequately address each RQ.

Descriptive Statistics

This approach was used in Goals 1–3 for simple population-level, year-to-year comparisons in NYC and ROS during the evaluation period. With it, we examined the characteristics of HARP enrollees in NYC and ROS in each annual period since program implementation. For categorical variables, we conducted a chi-square test and McNemar's chi-square test (to compare binary outcomes between correlated groups for each region before and after implementation). For continuous variables, we used the Analysis of Variance (ANOVA) test and paired t-test (to compare pairs of years). This descriptive analytic method was also used when conducting comparisons on matched samples (see propensity score method below).

Interrupted Times Series

This pre-post quasi-experimental approach was used in Goals 1 and 2 to assess outcome changes over time for the entire population of HARP enrollees. ITS models assessed for changes in the level and trend in the outcome variables from pre- to post-intervention and used the estimates to test hypotheses about program impacts. Although the approach does not employ a control group, it minimizes the confounding effect of other potential drivers of observed effects. Our ITS models included several adjustor variables: demographic characteristics (age, sex, race/ethnicity), BH diagnoses (Any SMI and SMI diagnoses, and Any SUD and selected SUD diagnoses), overall health status described with the core health status revised variable, and AHRF county-level variables (poverty rate, diversity index, and professional shortage area for mental health care). For binary outcomes, ITS models were conducted as logistic regressions as well as linear probability models; for interpretability given interaction terms, we report only linear probability model results unless otherwise specified.

Difference-in-Differences

This pre-post quasi-experimental approach, used in Goal 2 given that a concurrent comparison group was available in the setting of a closed cohort, permitted a robust assessment of HARP program outcomes. This approach accounts for any secular trend/changes in the outcome metrics, i.e., eliminates fixed differences not related to program implementation; thus, remaining significant differences may be validly attributable to the impact of program implementation. The DiD approach was augmented with the propensity score method (see below) where additional matching was added into the mix of the analysis even on time-variant characteristics.

Propensity Score Matching

This approach was used in Goals 2 and 3 to control for potential confounding by identifying individuals with similar characteristics belonging to the treatment and control groups, thus enabling the use of quasi-experimental causal models (Austin, Grootendorst, & Anderson, 2007). Propensity score matching (with a 1 to 5 matching) was used in combination with other approaches to examine the impact of the HARP program (Goal 2) and the BH HCBS benefit (Goal 3) on various outcomes. The method used a logistic regression to estimate each individual's conditional probability (or propensity score) of belonging to the intervention group (HARP enrollees or BH HCBS users). Predictors included the same adjustor variables used in the ITS models. A greedy matching algorithm with a 1 to 5 matching ratio of control to treatment individuals was used to create a matched analytic cohort based on the estimated propensity score and other variables, such as service utilization variables, assessed prior to program implementation. Balance in covariate distribution between treatment and control individuals in the matched analytic cohorts was assessed for each of the propensity score models conducted. We employed this method to assess an ATC augmented by a DiD approach (Goal 2), whereas for Goal 3 we employed this method to assess an ATT augmented by a longitudinal controlled model. The matched samples were used to conduct ATC and ATT estimates using simple descriptive analytic methods, which were augmented by DiD (Goal 2) and longitudinal controlled (Goal 3) models.

3.4 Qualitative Methods

The qualitative component of the HARP evaluation sought to provide additional context and multiple perspectives from key informants on program implementation, including barriers and facilitators to implementation success and insight into potential mechanisms of impact on program outcomes. Key HARP informants included stakeholders representing leadership from provider organizations delivering an array of services (e.g., HCBS, Care Coordination, ACT), MCOs, NYS DOH agencies (e.g., OMH, OASAS), and other statewide organizations (e.g., advocacy/provider/trade/intermediary organizations). Interviews with these informants focused on understanding how the HARP program was being implemented; the communication and coordination among various stakeholders administering, overseeing, and delivering services related to the program; the perceived impact of the program; challenges; and factors that might impact potential program scale-up. Interviews were also conducted with HARP enrollees to understand their perspectives on HARP enrollment; ongoing HARP membership and communication with MCOs; how HARP has impacted their access to and satisfaction with services, including BH HCBS; and the impact of HARP and BH HCBS on recovery, well-being, and community integration. Due to the COVID-19 pandemic, procedures for interviews with HARP enrollees had to be revised to be conducted individually and by phone. Efforts were made to ensure that a broad range of perspectives were represented in the HARP enrollee sample, including diversity of demographics and geographic areas that were represented, as well as types of support services utilized.

Protocol Development

The evaluation team developed a semi-structured interview guide for key informants (N=35) representing a diversity of (non-HARP enrollee) stakeholders (Appendix A) and covering the MMC BH carve-in, the HARP program, and the BH HCBS program. The interview guide focused on understanding the implementation and operation of each initiative/program, including barriers and facilitators to implementation, as well as factors that may influence program access and outcomes.

The team also developed a separate semi-structured interview guide for HARP enrollees (N=12) and BH HCBS recipients (Appendix B). It focused on topics including participant perspectives regarding enrollment; barriers and facilitators to accessing BH HCBS; relationships between participants and BH HCBS providers, care coordinators, and MCOs; satisfaction with HARP and BH HCBS and other health and BH services; and the impact of HARP and BH HCBS on participants’ recovery and quality of life.

Key Informant Selection

The evaluation team employed a combined purposive and snowballing sampling approach to recruit key informants. Through maximum variation sampling, the evaluation team sought to maximize the diversity of organizations represented by key informants and considered factors such as agency type, geographic region within NYS, degree to which areas served were urban or rural, and the program size and number of beneficiaries served (e.g., number of HARP enrollees within an MCO, number of BH HCBS enrollees served by a provider organization). Publicly available data and NYS DOH agency reports were reviewed to identify and sample potential agencies and stakeholders in order to capture variation along key factors. This was complemented by snowball sampling, wherein several key informants identified other stakeholders who could provide additional perspectives and who were subsequently invited to participate (e.g., HH organizations identifying Care Management Agencies in different regions with varying numbers of HARP enrollees).

The key informants interviewed represented organizational leadership staff, from the program director to senior executive management levels, in organizations including MCOs, Health Homes, Care Management Agencies, providers of BH services (e.g., ACT, PROS, BH HCBS), statewide groups (e.g., patient, provider, and trade associations), and NYS agencies (e.g., OMH, OASAS). The interview tool can be found in Appendix A.

A similar approach was taken for the interviews with HARP enrollees. To identify HARP enrollees eligible for participation, evaluators utilized purposive and convenience sampling strategies. To capture a range of perspectives, the evaluation team sought to maximize the diversity of HARP enrollees who participated, considering factors such as geographic region within NYS, location in urban or rural areas, status of enrollment in BH HCBS, and a range of demographic characteristics (e.g., gender, race, psychiatric diagnosis).

Respondent Recruitment

Potential key informants received an e-mail inviting them to participate in the evaluation interview and to contact the evaluators if they were interested in participating. An information sheet explaining the evaluation and interview process was e-mailed to key informants in advance of scheduled interviews and reviewed prior to commencing the interview.

For the HARP enrollee interviews, provider agencies identified potential HARP members and provided them with a flyer and information about the evaluation. HARP enrollees interested in participating contacted the evaluators directly or informed the provider agency staff that they consented to having the evaluators contact them to schedule an interview. HARP enrollees were contacted by phone or e-mail and were sent an information sheet explaining the evaluation and interview process in advance of scheduled interviews, which was then reviewed prior to commencing the interview.

Interviewer Training

The interviewers included two qualitative researchers, one a senior investigator and the other a doctoral-level researcher, both with expertise in qualitative interviewing and analysis, particularly within behavioral health. Prior to beginning the key informant interviews, the qualitative team received training on the MMC BH carve-in, the HARP Program, the BH HCBS program, and the roles of various stakeholder agencies involved in the implementation and operation of these initiatives and programs. The training included a review of documents, participation in discussions with DOH, OMH, and OASAS subject matter expert staff, and internal discussions with the project leads and technical advisors who have experience with NYS Medicaid and the development and implementation of these initiatives. The training ensured that the interviewers were aware of issues relevant to the program implementation for each type of key informant.

Data Collection

Interviews with key informants other than the HARP enrollees were conducted virtually and lasted one hour, on average. The majority of data collection consisted of individual interviews with one identified key informant; in several cases the originally recruited key informant suggested additional informants to be included in the interview. Key informants did not receive reimbursement for participating in the interview. Interviews with HARP enrollees were conducted individually by phone, and lasted one hour, on average. HARP enrollees were reimbursed with a $25 gift card for participating in the interview.

Interviews were conducted by one qualitative researcher, with an additional researcher taking notes concurrently that were used to produce a written interview summary. Interviewers covered core topic areas but maneuvered flexibly through the interview guide and probed certain topics more in-depth as appropriate. Interviews were audio-recorded and transcribed verbatim. The IRB of the NYS Psychiatric Institute determined that activities conducted for this evaluation did not constitute human subjects research and were thus exempt from review.

Analysis

Analytic methods, aligned with recommendations of Bradley, Curry, and Devers, followed a grounded theory approach by developing coding structures that emphasized inductive codes emerging directly from the data (Bradley, Curry, & Devers, 2007). Consistent with grounded theory, qualitative analysis occurred concurrently with data collection, allowing interviews to be shaped by preliminary concepts and themes that emerged from the data. The analysis proceeded in a series of steps: development of initial codes (i.e., open coding), code validation and refinement (e.g., adding, removing, or modifying codes and how they were applied), use of the codes (i.e., coding transcripts with a final code list), clustering and interpretation of codes and associated excerpts, and development of broader findings and themes. Strategies for rigor included weekly data collection and analysis debrief meetings, development of interview summaries and memos, and the use of multiple coders. As described below, analyses of the qualitative data informed evaluation of each of the HARP program evaluation goals.

Goal 1 (Improve health and BH outcomes for adults in Mainstream MMC whose BH care was previously carved out in an FFS payment arrangement)

This goal was addressed using data from key informant interviews with MCOs, Health Homes, Care Management Agencies, providers of BH services (e.g., ACT, PROS, OASAS certified substance use disorder clinics), statewide groups (e.g., advocacy/provider/trade associations), and NYS agencies (e.g., OMH, OASAS). Analyses were informed by interview content that focused on how the mainstream MMC BH carve-in has affected stakeholders' work, as well as barriers and facilitators that, according to these informants, may impact Medicaid beneficiaries' access to services.

Goal 2 (Improve health, BH, and social functioning outcomes for adults in the HARP)

In addition to the key informants in Goal 1, analyses for this goal also drew from interviews with HARP enrollees, who provided additional perspectives on barriers and facilitators to enrollment, accessing primary/preventive services, specialty behavioral health services, and care coordination. The evaluation team also explored HARP enrollees' perceptions of care quality, including experiences interacting with providers and receiving services, satisfaction with these services, and how these services are aligned with educational, employment, wellness, recovery, social functioning, and community integration outcomes. Analyses focused on identifying factors that, in the view of key informants, affected how the HARP program may have impacted the physical health, BH, and social functioning of HARP enrollees.

Goal 3 (Develop BH HCBS focused on recovery, social functioning, and community integration for individuals in HARP meeting eligibility criteria)

Data from all key informant interviews were used to address Goal 3. Analyses examined informant perspectives on assessment of BH HCBS eligibility; linkages between MCOs, Health Homes, and BH HCBS providers; BH HCBS providers' assessment processes for specific services; and ongoing approval processes from Health Homes providers and MCOs. Analysis of interviews with HARP enrollees and with HARP enrollees receiving BH HCBS explored their experiences with qualifying and using BH HCBS.

Table 3.5. Number of Key Informant Interviews by Informant Type

Key Informant Type	Number of Key Informant Interviews	Relevant Population Served (Approximate Range)
BH Provider	10	0-150+ HCBS
CMA	2	100-200+ HARP
CMA/BH Provider	2	150-300 HARP (CMA)
Health Home/CMA	2	1200-1500 HARP (HH); 500+ HARP (CMA)
Health Home	4	<1,0000 to 5,000+ HARP
MCO	5	<5,000 to 30,000+ HARP
Provider / Trade / Advocacy / Other Organization	5	N/A
NYS DOH Agency	5	N/A

NOTE: Reliable estimates of HARP enrollees served by individual organizations are not available. Key informants represented varying subsets of BH programs within their respective organizations.

4. Findings

4.1 Goal 1: Improve health and BH outcomes for adults in Mainstream MMC whose BH care was previously carved out in an FFS payment arrangement.

This section addresses two RQs and associated hypotheses related to the MMC carve-in that targeted the adult SSI beneficiary population whose BH benefit was carved out in a FFS arrangement prior to the Demonstration.[10] The RQs focus on two outcomes community-based BH and PH care utilization, to determine the extent to which the first goal of the Demonstration has been attained. The RQs were addressed with a mixed methods approach (Table 4.1).

Table 4.1. Overview of Goal 1 Approach

Research Question	Data Source	Outcome Measure	Design and Analytic Approach*
1. To what extent are MMC enrollees accessing community-based BH specialty services? (e.g., ACT, PROS, and FEP services delivered through OTNY)	Medicaid Data	Percentage of Mainstream MMC enrollees receiving non-FEP BH specialty services, by annual period	Analyses over pre-period (two (2) years) and post-period (four (4) years NYC; three (3) years, ROS) [OTNY-based outcomes are only possible post-policy] • Unadjusted Analyses[#] • Adjusted Analyses[@] [selected outcomes]
	OTNY Data System	Percentage of Mainstream MMC receiving FEP services, by annual period, NYC and ROS	
	Key informant interviews	Barriers and facilitators to BH specialty care under mainstream MMC	Qualitative methods
2. To what extent are MMC enrollees accessing community-based health care?	Medicaid Data	Percentage of MMC enrollees receiving primary and/or preventive services, by annual period	Analyses over pre-period (two (2) years)^ and post-period (four (4) years NYC; three (3) years, ROS) • Unadjusted Analyses[#] • Adjusted Analyses[@] [selected outcomes]
	Key informant interviews	Barriers and facilitators to primary and preventive care under mainstream MMC	Qualitative methods

* All analyses conducted separately for NYC and ROS in an open cohort of SSI beneficiaries.

[#] Unadjusted analyses estimated annual rates of any utilization during the evaluation period; we provide a p-value on the statistical significance of the chi-square test that compares all the annual periods together

[@] ITS models were conducted as logistic regressions that compared utilization each post-period year relative to the first pre-period year; results are presented as Odds Ratios (OR) and 95% Confidence Intervals (CI). Goal 1 models included adjustor variables described in Section 3.3 and a variable indicating FFS coverage for BH care.[11]

^ NYC analyses only included one year of pre-period because we lacked 2015 PPCs data.

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[10] The number of cohort-eligible SSI beneficiaries declined steadily over the evaluation period; our analyses suggest that a key driver was the growth of dual Medicaid and Medicare eligible beneficiaries (Appendix Table E.1).

[11] Defined as (a) a minimum of 10 months of FFS payments for all OMH specialty services, OASAS services, and BH inpatient services, and (b) up to three (3) months of MMC payments for those services per annual period.

Population Characteristics

Table 4.2 shows the characteristics of the MMC carve-in SSI beneficiary population included in our Goal 1 cohort. In the pre-period, 216,850 SSI beneficiaries met criteria for eligibility in the Goal 1 cohort, with 123,465 in NYC and 93,385 in ROS. The disabled adult Medicaid population was 46.3 percent male and had a mean (SE) age of 46.4 (0.03), with older beneficiaries in NYC than ROS. Racial/ethnic composition differed between NYC and ROS with fewer whites and more minorities in NYC than ROS. There were also higher proportions of Any SMI, OUD, and SUD among the beneficiary population in NYC compared to ROS. SSI beneficiaries in NYC had higher levels of dominant chronic to catastrophic conditions than other regions. More than two-thirds of beneficiaries had any annual utilization of key community-based BH services, with the rate higher in ROS than NYC; key behavioral and non-BH OP visits were higher in NYC than ROS. While most BH care was financed through a FFS arrangement, only 8.18 percent of beneficiaries met our indicator of FFS coverage for BH care statewide, with the rate in NYC being double that in ROS. The county-level mean (SD) poverty rate was higher in NYC than in ROS. NYC's diversity index was also higher than ROS's, and all NYC beneficiaries lived in mental health professional shortage areas, whereas the shortage areas were not universal in ROS.

RQ1: To what extent are MMC enrollees accessing community-based BH specialty services including ACT, PROS, and FEP programs?

This RQ included two hypotheses:

1. Utilization of BH specialty services will increase in the MMC population.
2. Utilization of evidence-based care for FEP will increase.

We addressed this RQ with quantitative and qualitative methods (see Table 4.1). Our quantitative analyses focused on the community-based BH specialty services listed in the RFP and of primary interest to the DOH (ACT, PROS, and FEP programs). We evaluated several additional services identified in collaboration with OMH and OASAS: OMH Outpatient Clinic services, OASAS Outpatient Clinic services, OASAS Opioid Treatment Program services, OASAS Residential Program services, Continuing Day Treatment (CDT), Partial Hospitalization, and several smaller programs including OMH and OASAS Certified Community Behavioral Health Clinic (CCBHC) services, OMH Intensive Outpatient Program services, OMH Intensive Psychiatric Rehabilitation Program services, and Mental Health and SUD Non-Licensed Clinics that we captured through a composite measure we refer to as *Other Community-based BH services*. In addition, we evaluated utilization of any of these services through a composite measure we refer to as *Any Key BH OP services*. Due to the low utilization of FEP, we excluded this utilization from the composite measure. Because some of the community-based services we focused on are evidence-based or otherwise appropriate only for beneficiaries with specific needs based on their diagnoses, we repeated some of the analyses for individuals with OUD and the larger population of individuals with Any SUD, and individuals with Any SMI.

Table 4.2. Characteristics of the MMC carve-in SSI Beneficiary Population, Unadjusted Rates (Percent) and Means, NYC, ROS and Statewide

	NYC (N=123,465)	ROS (N=93,385)	Statewide (N=216,850)
Age, Mean (SE)	48.0 (0.03)	44.2 (0.04)	46.4 (0.03)
Sex, %			
Male	46.1	46.5	46.3
Female	53.9	53.6	53.7
Race/Ethnicity, %			
White	26.7	59.8	40.9
Black	41.8	21.9	33.2
Hispanic	19.3	10.3	15.4
Asian/American Indian/Other	11.6	3.0	7.86
Behavioral Health (BH) diagnosis, %			
Schizophrenic disorders	26.1	21.5	24.2
Bipolar disorder (severe)	2.37	2.35	2.36
Other Serious Affective/Psychotic Disorders	33.6	27.6	31.0
Chronic alcohol abuse	10.0	10.0	10.0
Opioid abuse and dependence (OUD)	11.7	6.63	9.52
Any Serious Mental Illness (SMI) diagnosis	44.8	37.1	41.5
Any Substance Use Disorder (SUD) diagnosis	23.5	19.4	21.8
Core Health Status (revised), %			
Healthy to Minor Chronic disease	13.6	20.3	16.5
Moderate to Significant Chronic Disease	62.1	63.4	62.7
Dominant Chronic Disease to Catastrophic Conditions	24.3	16.3	20.9
Any Utilization of Key Behavioral Health Outpatient Services, %	77.1	79.3	78.0
Health Service Utilization, Per Year, mean (SE)			
Key Behavioral Health Outpatient Visits	15.6 (0.05)	11.1 (0.05)	13.7 (0.03)
Non-Behavioral Health Outpatient Visits	10.1 (0.03)	8.66 (0.03)	9.45 (0.02)
Acute Behavioral Health Visits	4.22 (0.06)	3.59 (0.05)	3.95 (0.04)
Acute Non-Behavioral Health Visits	4.82 (0.03)	5.10 (0.03)	4.94 (0.02)
Behavioral Health Fee for Service	10.4	5.23	8.18
Small Area (County) Characteristics, mean (SE)			
Area Health Resource Files (AHRF): Poverty	0.22 (0.00)	0.12 (0.00)	0.18 (0.00)
Area Health Resource Files (AHRF): Diversity Index	0.68 (0.00)	0.36 (0.00)	0.54 (0.00)
Health Professional Shortage Area, Mental Health, %			
0 (none)	0.00	6.52	2.81
1 (whole county)	30.3	8.8	21.0
2 (partial county)	69.7	84.7	76.2

SOURCE: Authors' analyses of Medicaid data (2014–2019), OTNY data (2015–2019), and AHRF data (2010–2014, 2014–2018)

Unadjusted Quantitative Findings

Over the entire evaluation period, six years for NYC and five for ROS, the rates of utilization for Any Key BH OP services were 47.9 and 41.3 percent, NYC and ROS, respectively (Table 4.3). However, these overall rates reflect varying annual rates. In NYC, utilization increased steadily throughout the entire period, with an upward trend that began in the first year of the two-year pre-period. However, in ROS, although there was an upward trend in the post-period, the rate observed in the first post-period year was lower than the rate observed in the last pre-period year (41.5 versus 42.4 percent).

The frequency of utilization of the individual treatment programs varied, typically appearing higher in NYC (Table 4.3). Several programs were rarely utilized, with rates across all years combined consistently under 5 percent, including FEP (0.01 percent, both regions), OASAS Residential Program (0.04 percent and 0.09 percent, NYC and ROS, respectively), Partial Hospitalization (0.14 percent and 0.20 percent, NYC and ROS, respectively), CDT (0.50 percent and 0.22 percent, NYC and ROS, respectively), ACT (1.05 percent and 0.76 percent, NYC and ROS, respectively), and PROS (1.29 percent and 2.34 percent, NYC and ROS, respectively). At the other end of the spectrum, utilization was substantial for OMH Outpatient Clinic services (29.7 percent and 25.1 percent, NYC and ROS, respectively) and Other Community-Based BH Services (22.9 percent and 20.3 percent, NYC and ROS, respectively), with two OASAS programs, Opioid Treatment Program (7.11 percent and 1.45 percent, NYC and ROS, respectively) and Outpatient Clinic (4.20 percent and 5.15 percent, NYC and ROS, respectively) having utilization over 5 percent in at least one region.

Table 4.3. Access to Community-Based BH Specialty Services and Health Care, MMC Carve-in SSI population, Unadjusted Rates (Percent) of Any Annual Utilization, by Pre- and Post-Period Year and All Years Combined, NYC and ROS

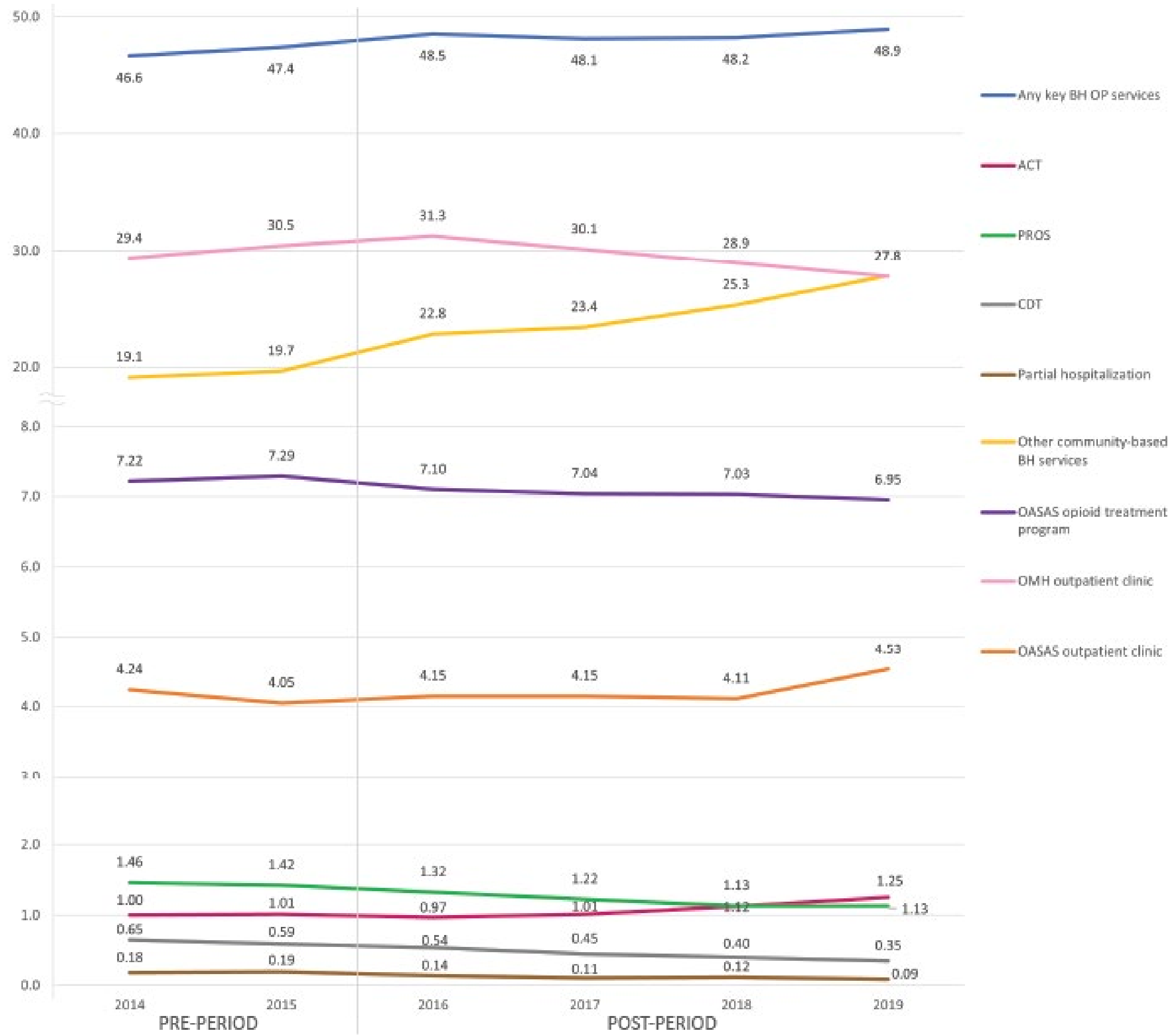
BH Specialty Services	Pre-Period		Post-Period				All Years	
NYC	**2014** (N=131,096)	**2015** (N=126,913)	**2016** (N=124,040)	**2017** (N=120,292)	**2018** (N=116,994)	**2019** (N=112,457)	**2014-2019** (N=731,792)	**P-value**
Any Key BH OP services	46.6	47.4	48.5	48.1	48.2	48.9	47.9	**0.00**
First Episode Psychosis (FEP) Program*	N/A	N/A	0.00	0.00	0.01	0.01	0.01	**0.04**
Assertive Community Treatment (ACT)	1.00	1.01	0.97	1.01	1.12	1.25	1.05	**0.00**
Personalized Recovery Oriented Services (PROS)	1.46	1.42	1.32	1.22	1.13	1.13	1.29	**0.00**
Continuing Day Treatment (CDT)	0.65	0.59	0.54	0.45	0.40	0.35	0.50	**0.00**
Partial Hospitalization	0.18	0.19	0.14	0.11	0.12	0.09	0.14	**0.00**
Other Community-Based BH Services	19.1	19.7	22.8	23.4	25.3	27.8	22.9	**0.00**
OASAS Opioid Treatment Program	7.22	7.29	7.10	7.04	7.03	6.95	7.11	**0.01**
OMH Outpatient Clinic	29.4	30.5	31.3	30.1	28.9	27.8	29.7	**0.00**
OASAS Outpatient Clinic	4.24	4.05	4.15	4.15	4.11	4.53	4.2	**0.00**
OASAS Residential Program	0.00	0.00	0.00	0.01	0.10	0.16	0.04	**0.00**
Receipt of Community-Based Health Care	0.00	93.5	94.4	94.0	92.9	92.7	93.5	**0.00**

	Pre-Period		Post-Period			All Years	
ROS	**2015** (N=98,915)	**2016** (N=96,995)	**2017** (N=95,512)	**2018** (N=92,852)	**2019** (N=90,535)	**2015-2019** (N=474,809)	**P-value**
Any Key BH OP services	38.6	42.4	41.5	41.9	42.4	41.3	**0.00**
First Episode Psychosis (FEP) Program*	N/A	0	0	0.01	0.01	0.01	**0.04**
Assertive Community Treatment (ACT)	0.71	0.70	0.74	0.79	0.86	0.76	**0.00**
Personalized Recovery Oriented Services (PROS)	2.54	2.42	2.39	2.23	2.07	2.34	**0.00**
Continuing Day Treatment (CDT)	0.33	0.27	0.21	0.15	0.12	0.22	**0.00**
Partial Hospitalization	0.26	0.23	0.20	0.17	0.15	0.2	**0.00**
Other Community-Based BH Services	15.5	19.5	20.4	22.5	24.2	20.3	**0.00**
OASAS Opioid Treatment Program	1.32	1.40	1.43	1.53	1.61	1.45	**0.00**
OMH Outpatient Clinic	24.9	26.5	25.9	24.6	23.2	25.1	**0.00**
OASAS Outpatient Clinic	5.23	5.26	5.37	4.97	4.91	5.15	**0.00**
OASAS Residential Program	0.00	0.00	0.05	0.15	0.29	0.09	**0.00**
Receipt of Community-Based Health Care	90.2	91.0	90.9	90.9	90.8	90.8	**0.00**

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)
*Sample sizes vary across measure due to different data source for this utilization (OTNY).
NOTE: The p-value describes the statistical significance of the chi-square test that compares all the annual periods together.

Trends of utilization over the period of the evaluation varied among these individual programs. ACT and PROS exhibited opposite trends (Figures 4.1 and 4.2). ACT utilization generally increased in the post-period relative to the two-year pre-period (from 1.0 percent in 2014 and 1.01 percent in 2015 to 1.25 percent in 2019, in NYC, and from 0.71 percent in 2015 and 0.70 percent in 2016 to 0.86 percent in 2019, in ROS). On the other hand, utilization of PROS, more robust in ROS than in NYC, generally decreased (from 1.46 percent in 2014 and 1.42 percent in 2015 to 1.13 percent in 2019 in NYC, and from 2.54 percent in 2015 and 2.42 percent in 2016 to 2.07 percent in 2019 in ROS). Due to the minimal utilization of FEP services starting in 2018, no trends are discernible for this program.

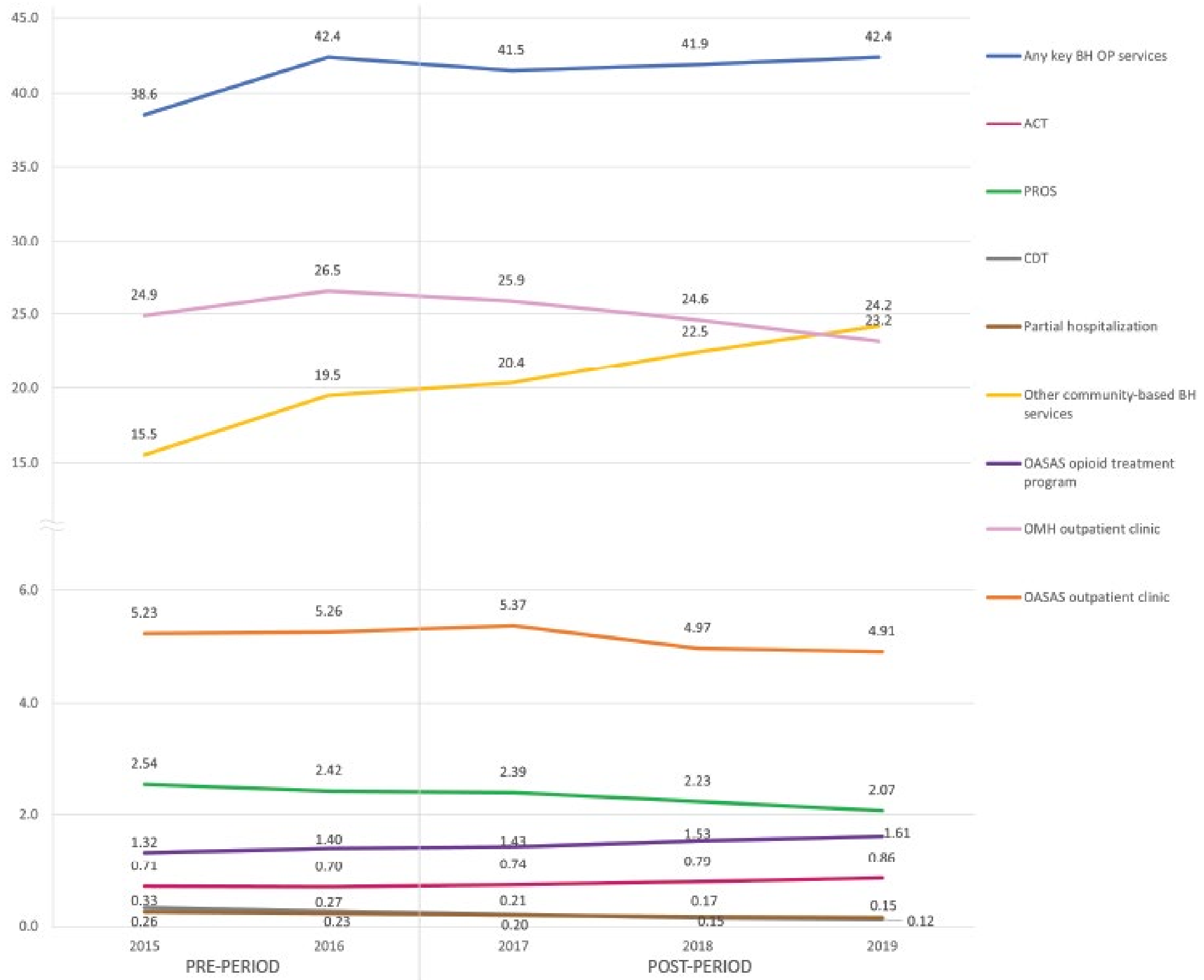
Figure 4.1. Access to Community-Based BH Specialty Services, MMC Carve-in SSI Population, Unadjusted Rates (Percent) of Any Utilization, NYC



SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

While utilization of OMH Outpatient Clinic services exhibited a downward trend in both regions after peaking in 2016, in the first post-period year in NYC but still part of the pre-period in ROS, utilization of Other Community-based BH services grew steadily from the first year of the two-year pre-period (19 percent and 15.5 percent, NYC and ROS, respectively) through 2019, the end of the post-period (27.8 percent and 24.2 percent, NYC and ROS, respectively).

Figure 4.2. Access to Community-Based BH Specialty Services, MMC Carve-in SSI Population, Unadjusted Rates (Percent) of Any Utilization, ROS



SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Utilization of OASAS Outpatient Clinic services, which unlike most other services was on average higher in ROS than in NYC, exhibited different trends throughout the evaluation period in each region. In NYC, utilization declined during the pre-period (from 4.24 percent in 2014 to 4.05 percent in 2015) but then generally increased throughout the post-period and ended at 4.53 percent in 2019. In ROS, however, utilization increased between the first year of the pre-period (5.23 percent in 2015) and through the first year of the post-period but trended down thereafter

(4.91 percent in 2019). Utilization of OASAS Opioid Treatment Program services, much higher on average in NYC than in ROS, also exhibited varying trends by region but in the opposite direction. In NYC, utilization was relatively stable during the pre-period (7.22 percent in 2014 and 7.29 percent in 2015) but exhibited a clear downward trend throughout the post-period, reaching 6.95 percent in 2019. In ROS, to the contrary, there was a clear upward trend throughout the entire evaluation period, with utilization steadily growing from 1.32 percent in 2015 to 1.61 percent in 2019.

In both NYC and ROS, utilization of CDT and Partial Hospitalization exhibited a consistent downward trend from the first year of the two-year pre-period. Utilization of OASAS Residential Program services grew steadily in both regions starting in 2017.

Subgroup analyses

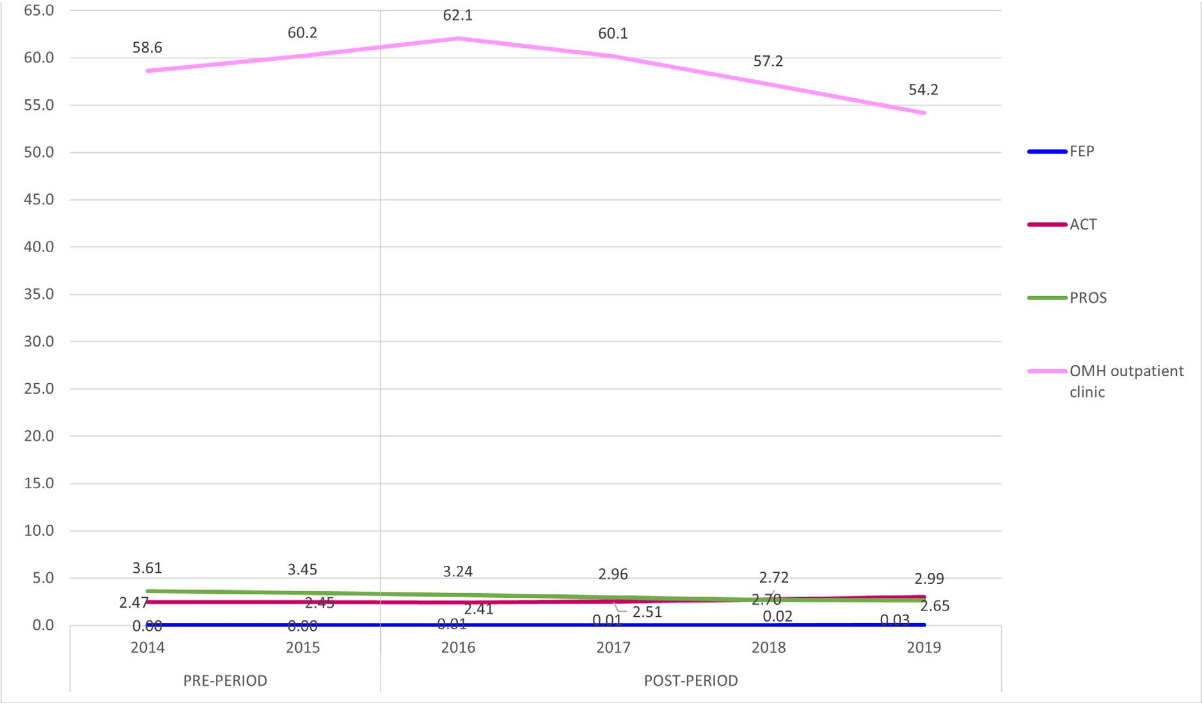
Analyses focused on the utilization of specific BH services among beneficiaries with Any SMI, Any SUD, and OUD revealed similar patterns as those observed in the larger SSI population (Appendix Table E.2).

Beneficiaries with SMI

In both regions, rates of utilization of OMH Outpatient Clinic services in the SMI population were twice as high as the rates for those without SMI, with overall rates of 58.8 percent (NYC) and 57.0 percent (ROS). However, as they did for the larger SSI population, rates also peaked in 2016 (62.1 percent and 61.9 percent, NYC and ROS, respectively), and dropped steadily thereafter, reaching their lowest utilization in 2019 (54.2 percent and 50.4 percent, NYC and ROS, respectively) (Figures 4.3 and 4.4).

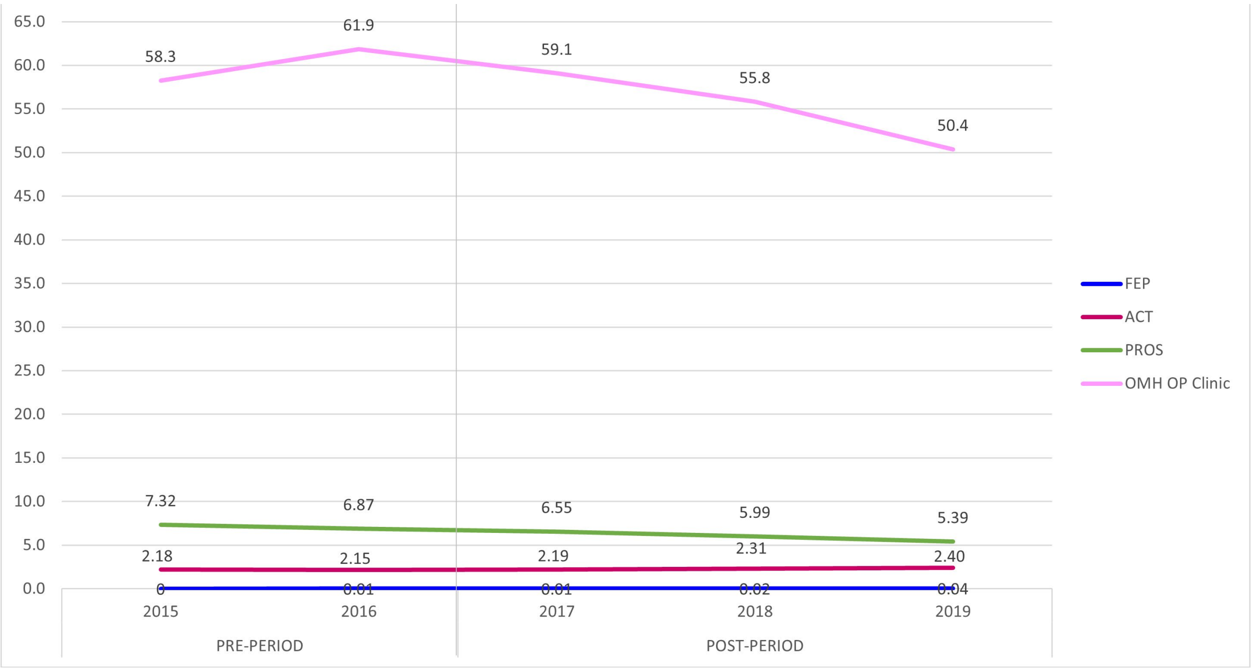
As anticipated, rates of ACT and PROS utilization in both regions were substantially higher for this population than for the general SSI population, with overall rates of 2.59 percent and 2.25 percent for ACT, and 3.11 percent and 6.42 percent for PROS, NYC and ROS, respectively; however, the same trends described for the larger population were evident in these targeted analyses (Figures 4.3 and 4.4).

Figure 4.3. Access to Selected Community-Based BH Specialty Services, MMC Carve-in SSI Population with SMI, Unadjusted Rates (Percent) of Any Utilization, NYC



SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Figure 4.4. Access to Selected Community-Based BH Specialty Services, MMC Carve-in SSI Population with SMI, Unadjusted Rates (Percent) of Any Utilization, ROS



SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Following a slight downward trend during the two-year pre-period, ACT utilization increased in both regions starting the first year of the post-period. However, the upward trend was statistically significant only for NYC, where utilization grew from 2.41 percent in 2016 to 2.99 percent in 2019. As observed for the larger population, PROS utilization decreased steadily between the first year of the two-year pre-period and 2019, from 3.61 percent to 2.65 percent in NYC and from 7.32 percent to 5.39 percent in ROS.

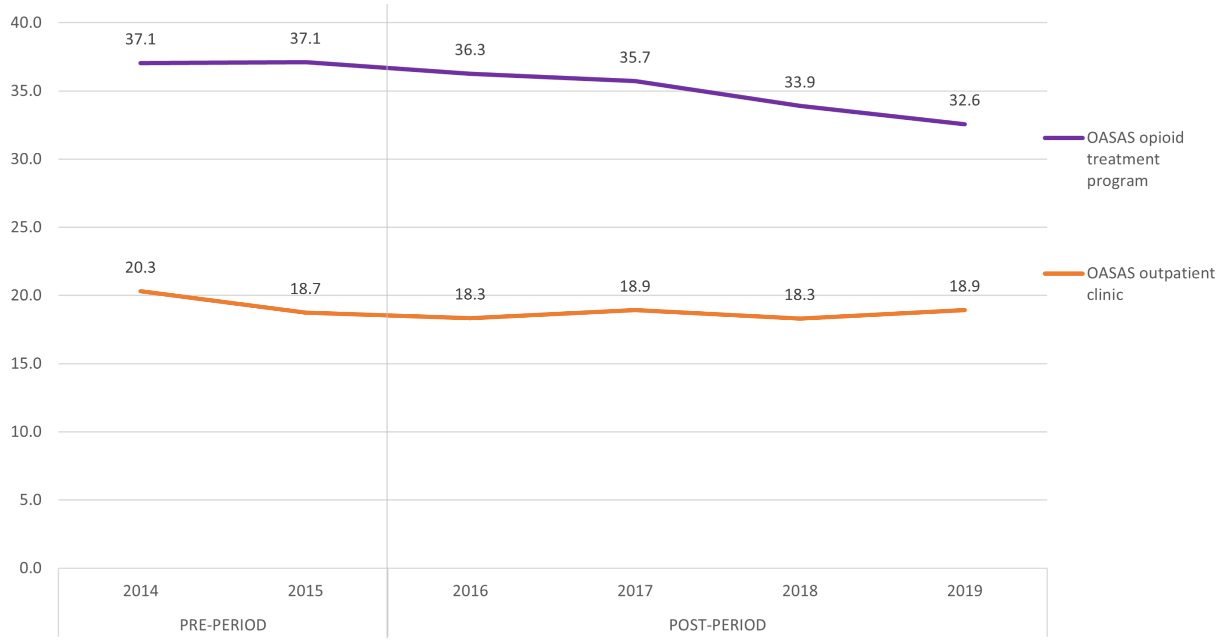
FEP services trended up throughout the post-period, growing from 0.01 percent in the first year of the post-period in both regions, to 0.03 percent in NYC and 0.04 percent in ROS by 2019.

Beneficiaries with SUD

Utilization of OASAS Outpatient Clinic services was predictably larger for this population than for the general SSI population, with the overall rate in ROS (28.6 percent) substantially higher than that in NYC (18.9 percent) (Figures 4.5 and 4.6). Temporal trends among beneficiaries with SUD diagnoses differed between the regions in a similar manner as described above for the larger population. In NYC, utilization declined during the pre-period (from 20.3 percent in 2014 to 18.7 percent in 2015) but then generally increased throughout the post-period and ended at 18.9 percent in 2019. In ROS, however, utilization trended down throughout the entire evaluation period, from 31.4 percent in 2015, the first year of the two-year pre-period, to 24.0 percent in 2019.

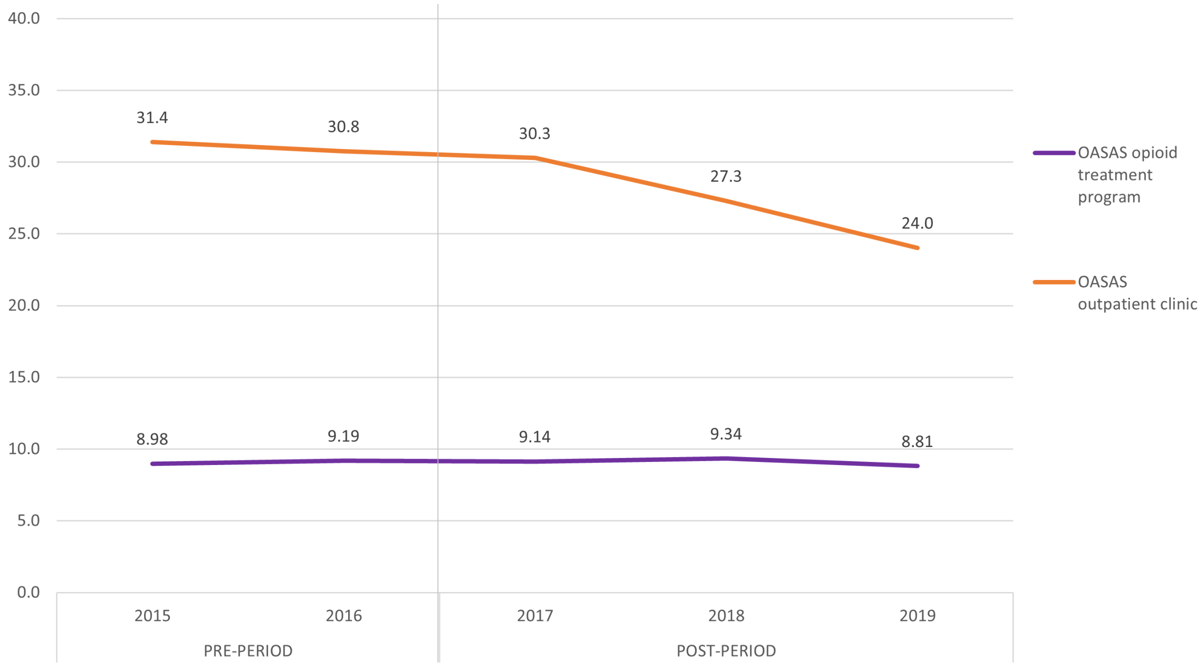
Relative to the larger SSI population, utilization of OASAS Opioid Treatment Program services was also predictably larger among beneficiaries with SUD diagnoses, with overall rates of 35.5 percent and 9.09 percent, NYC and ROS, respectively, and those with OUD, with overall rates of 66.9 percent and 25.5 percent, NYC and ROS, respectively. Utilization trends throughout the evaluation period were generally similar to those observed in the SSI population. In NYC, there was clear downward trend following the pre-period, with rates declining from 37.1 percent in 2014 and 2015 to 32.6 percent in 2019. Utilization in ROS, consistently over one-third smaller than that observed for NYC, trended up between the first year of the pre-period through 2018 (from 8.98 percent to 9.34 percent) but shifted down in 2019; differences among these rates, however, were not statistically significant. This same pattern was observed among beneficiaries with OUD (Figure 4.7). In NYC, utilization declined steadily throughout the entire evaluation period (from 68.9 percent in 2014 to 65.2 percent in 2019). However, utilization was less consistent in ROS even though an upward trend was discernible in the post-period, and the differences among these rates were not statistically significant.

Figure 4.5. Access to Selected OASAS Programs, MMC Carve-in SSI Population with SUD, Unadjusted Rates (Percent) of Any Utilization, NYC



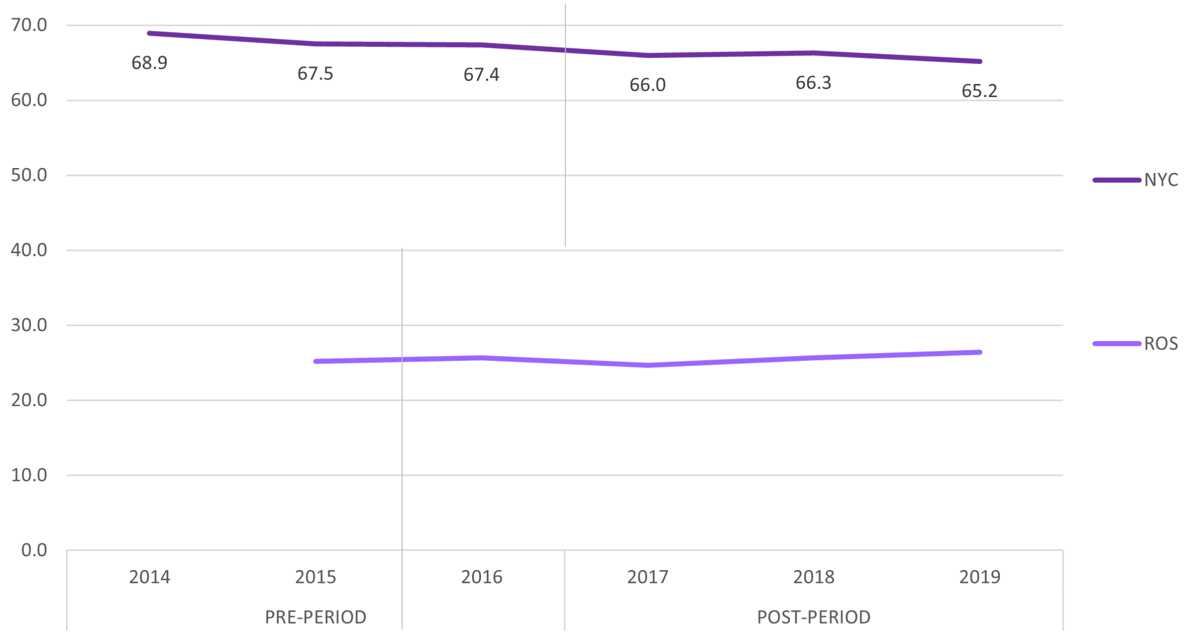
SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Figure 4.6. Access to Selected OASAS Programs, MMC Carve-in SSI Population with SUD, Unadjusted Rates (Percent) of Any Utilization, ROS



SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Figure 4.7. Access to OASAS Opioid Treatment Program, MMC Carve-in SSI Population with OUD, Unadjusted Rates (Percent) of Any Utilization, NYC and ROS



SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Adjusted Quantitative Findings

These analyses were conducted for the entire SSI population (Table 4.4) and individually for the populations of beneficiaries with Any SMI, Any SUD, and OUD (Table 4.5), and compared their utilization in each post-period year relative to the first year of the pre-period (2014 in NYC and 2015 in ROS). With some notable exceptions, the adjusted analyses generally confirmed the unadjusted findings for the services and programs for which we were able to run adjusted models.

Table 4.4. Likelihood of Utilization of Selected Community-Based BH Specialty Services, MMC Carve-in SSI population, by Post-period Year Relative to Early Pre-period, NYC and ROS

	NYC (N=701,295)				ROS (N=574,806)		
Odds Ratio (95% CI)	2016*	2017*	2018*	2019*	2017*	2018*	2019*
Any Key BH OP services	1.30 (1.28, 1.32)	1.29 (1.27, 1.31)	1.30 (1.27, 1.32)	1.33 (1.30, 1.35)	0.97 (0.96, 0.99)	1.00 (0.98, 1.01) *	1.00 (0.99, 1.02) *
Other Community-Based BH services	1.29 (1.26, 1.31)	1.33 (1.31, 1.36)	1.48 (1.45, 1.50)	1.67 (1.64, 1.70)	1.12 (1.10, 1.14)	1.27 (1.24, 1.29)	1.38 (1.36, 1.41)
OASAS Opioid Treatment Program	5.29 (5.07, 5.51)	5.62 (5.39, 5.86)	5.86 (5.62, 6.12)	5.89 (5.64, 6.15)	3.51 (3.24, 3.81)	3.99 (3.68, 4.33)	4.33 (3.99, 4.69)
OMH Outpatient Clinic	1.09 (1.07, 1.10)	1.03 (1.01, 1.05)	0.97 (0.95, 0.98)	0.91 (0.89, 0.92)	0.89 (0.87, 0.90)	0.83 (0.81, 0.84)	0.75 (0.74, 0.77)

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)
*Annually versus Early Pre-Period

Table 4.5. Likelihood of Utilization of Selected Community-Based BH Specialty Services, MMC Carve-in SMI, SUD, and OUD Subgroups, by Post-period Year Relative to Early Pre-period, NYC and ROS

Odds Ratio (95% CI)		NYC (N=283,129)				ROS (N=157,514)		
		2016*	2017*	2018*	2019*	2017*	2018*	2019*
SMI	PROS	2.25 (2.09, 2.43)	2.18 (2.02, 2.35)	1.98 (1.83, 2.15)	1.85 (1.70, 2.00)	2.79 (2.60, 2.98)	2.65 (2.47, 2.85)	2.39 (2.23, 2.57)
	OMH Outpatient Clinic	1.00 (0.98, 1.03)	0.92 (0.90, 0.94)	0.82 (0.80, 0.84)	0.72 (0.70, 0.74)	0.85 (0.83, 0.88)	0.73 (0.71, 0.75)	0.59 (0.57, 0.60)
SUD	OASAS Opioid Treatment Program	6.89 (6.54, 7.27)	7.32 (6.94, 7.73)	7.09 (6.72, 7.48)	6.89 (6.53, 7.27)	4.52 (4.09, 4.99)	5.26 (4.76, 5.82)	5.13 (4.64, 5.67)
	OASAS Outpatient Clinic	0.72 (0.69, 0.76)	0.73 (0.70, 0.77)	0.70 (0.67, 0.73)	0.72 (0.69, 0.75)	0.92 (0.88, 0.97)	0.78 (0.74, 0.82)	0.66 (0.63, 0.69)
OUD	OASAS Opioid Treatment Program	12.99 (12.02, 14.04)	13.22 (12.22, 14.30)	13.79 (12.75, 14.92)	13.34 (12.33, 14.44)	6.51 (5.76, 7.35)	8.21 (7.25, 9.30)	9.00 (7.95, 10.19)

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)
*Annually versus Early Pre-Policy

Utilization of Any Key BH OP services

In NYC, the odds of utilization of Any Key BH OP services were 29 to 33 percent higher in the post-period years relative to the early pre-period (e.g., 2016, OR =1.30, 95 percent CI = 1.28, 1.32, and 2019, OR =1.33, 95 percent CI = 1.30, 1.35). However, in ROS, the only significant difference was in the first post-period year (2017), when the odds were actually 3 percent lower than in the early pre-period (OR = 0.97, 95 percent CI = 0.96, 0.99).

Utilization of OMH Outpatient Clinic services

In NYC, the odds of utilization of OMH Outpatient Clinic services were 9 percent higher in the first post-period year (2016) relative to the early pre-period (OR =1.09, 95 percent CI = 1.07, 1.10), but the advantage shrank to just 3 percent the following year (2017). In the last two years of the post-period, the odds of utilization of these services were actually lower than in the early pre-period, by 3 percent in 2018 and by 9 percent in 2019 (OR = 0.91, 95 percent CI = 0.89, 0.92). In ROS, the likelihood of OMH Outpatient Clinic utilization was consistently lower in all post-period years relative to the early pre-period, with the odds declining steadily between the first post-period year (2017) (OR = 0.89, 95 percent CI = 0.87, 0.90) and the end of the post-period (2019) (OR = 0.75, 95 percent CI = 0.74, 0.77).

These patterns were also observed, although in a more pronounced fashion, when the analyses were circumscribed to those with SMI. In NYC, the likelihood of utilization of OMH Outpatient Clinic services in the first post-period year was comparable to that of the early pre-period, but it declined every year thereafter, and by 2019 the odds were 28 percent lower (OR = 0.72, 95 percent CI = 0.70, 0.74). In ROS, the odds of utilization of these services relative to the early pre-period were consistently lower, by 15 percent in the first post-period year (2017) and by 41 percent in the last year of the post-period (2019) (OR = 0.59, 95 percent CI = 0.57, 0.60).

Utilization of Other Community-based BH services

The likelihood of utilization of Other Community-based BH services increased every year of the post-period relative to the early pre-period in both regions. In NYC, while the odds were 29 percent higher in the first post-period year (2016) relative to the early pre-period (OR = 1.29, 95 percent CI = 1.26, 1.31), they were 67 percent higher by 2019 (OR = 1.67, 95 percent CI = 1.64, 1.70). In ROS, the likelihood of this utilization grew over the post-period, with higher odds ranging between 12 percent in 2017 (OR = 1.12, 95 percent CI =1.10, 1.14) and 38 percent in 2019 (OR = 1.38, 95 percent CI = 1.36, 1.41).

Utilization of PROS services

The likelihood of utilization of PROS services among those with SMI was higher in the post-period relative to the early pre-period in ROS, an unexpected result given the unadjusted finding of a consistent downward trend throughout the evaluation period. (We did not conduct adjusted analyses for NYC due to the region's low rate of PROS utilization.) However, the size of the difference declined consistently throughout the post period: While the odds of PROS utilization relative to the early pre-period were 2.8 times higher in the first post-period year (OR = 2.79, 95 percent CI = 2.60, 2.98), they were only 2.4 times higher in 2019 (OR = 2.39, 95 percent CI = 2.23, 2.57).

Utilization of OASAS Outpatient Clinic services

We evaluated the likelihood of utilization of OASAS Outpatient Clinic services only in ROS due to NYC's low rate of utilization of these services. Consistent with results from unadjusted analyses, the odds of this utilization in ROS were lower every year of the post-period relative to the early pre-period, with the lowest odds of utilization observed in 2019 (OR = 0.87, 95 percent CI = 0.84, 0.90).

Analyses focused on those with SUD diagnoses, which we were able to conduct for both regions, uncovered a different pattern of utilization of OASAS Outpatient Clinic services for NYC than observed in unadjusted analyses. In NYC, relative to the early pre-period, the odds of this utilization were lower in the post-period, by 28 percent in both the first and last post-period years (e.g., 2019, OR = 0.72, 95 percent CI = 0.69, 0.75). The patterns for ROS resembled those observed for the larger SSI population, although they were more pronounced. For instance, by 2019, the odds of utilization of these services were 34 percent lower relative to the early pre-period (OR = 0.66, 95 percent CI = 0.63, 0.69).

Utilization of OASAS Opioid Treatment Program services

We evaluated likelihood of utilization of OASAS Opioid Treatment Program services only in NYC due to ROS's low rate of utilization of these services. In NYC, the odds of this utilization were higher every year of the post-period relative to the early pre-period, an unexpected finding given the downward trend observed in the unadjusted analyses. Thus, while utilization of these services was 5.3 times more likely in the first year of the post-period than in the early pre-period, it was 5.9 times more likely by the end of the post-period (2019, OR = 5.89, 95 percent CI = 5.64, 6.15).

Both regions were included in analyses circumscribed to those with SUD and OUD, and the likelihood of this utilization was higher in the post-period relative to the early pre-period in both populations. In NYC, unlike the trend observed for the larger SSI population, the odds of utilization of these services relative to the early pre-period began trending down after peaking in the second year of the post-period for those with SUD and in the third year of the post-period for those with OUD. In ROS, the odds of this utilization for those with SUD also peaked in the second post-period year relative to the early pre-period (2018, OR = 5.26, 95 percent CI = 4.76, 5.82; 2019, OR = 5.13, 95 percent CI = 4.64, 5.67), but among those with OUD the odds grew larger throughout the post-period (2017, OR = 6.51, 95 percent CI =5.76, 7.35; 2019, OR = 9.00, 95 percent CI = 7.95, 10.19).

Qualitative Findings

Key informants discussed a range of factors that may impact access to BH specialty services. We have organized these factors into two sections. In the first section, we focus on factors that cut across different service types to potentially impact BH specialty service access overall. In the second section, we focus on a subset of BH specialty services to illustrate how informants discussed different factors that may influence access, depending on the type of service. Finally, we highlight informants' suggestions for areas to prioritize in efforts to increase access to specialty BH services.

Barriers and Facilitators to BH Specialty Care Under Mainstream MMC

Overarching themes that reflected informants' perspectives on members' overall access to BH services primarily included fears regarding MCOs constraining access to care not being realized, addressing challenges of increased administrative burden and the need to build agency capacity, diversity of experiences in providers' working relationships with different MCOs, and descriptions of the positive impact of the managed care carve-in.

Across key informants, there was consensus that initial concerns regarding overall access to behavioral health services becoming disrupted once carved into managed care did not materialize. Key informants noted that initial perceptions of managed care companies being largely oriented towards limiting care as part of a focus on the "bottom line" shifted positively as the carve-in unfolded.

> There was a lot of fear when it all first started... [that] the services were gonna be cut…We only work with two managed care companies [but] we just haven't seen that be true. [BHP-24]
>
> I think the MCOs, they're workable with us. We found that they wanna see success just as much as we do. These are their clients, too—that they field phone calls from, that they see the claims from. [BHP/CMA-18]

This shift in perspective was facilitated by providers and MCOs developing better working relationships over time and providers perceiving that MCO denials for care were not arising as a significant barrier to service access.

> The whole time I've been doing this, I've never had anybody denied for PROS…I would go to these meetings and people [were] like, "People aren't going to be able to get care. They're going to be denied." That's not how the managed care plans are functioning...There's a benefit to them for participants coming [to program] tomorrow and not going to inpatient… [BHP-35]
>
> I think overall managed care has really come to understand what happens in the community. I think that relationships have been built, to better that. I think it was difficult in the beginning, there was a lot of distrust and that has shifted over time. [MCO-32]

Generally, informants expressed that managed care companies did not exhibit a pattern of refusing to authorize services. However, they noted that there were still situations where providers had to engage in greater advocacy to get participants authorized for services, or that administrative delays could lead to difficulties in the timeliness of access to BH health care.

> When I get a referral from the hospital that a client needs an ACT team, and we do a screening and the person needs an ACT team, we don't always necessarily get that same level of approval or guidance or acceptance from the managed care company. They sometimes [say], "Oh, well, did you try this" and "Oh, did you try this," because ACT is a high-paying model obviously, so they don't necessarily always want to pay that, which I get. [BHP/CMA-23]

> We deal with one of the bigger managed care organizations pretty consistently, and they aren't as responsive…Another thing is they don't know their member [in the same way]...[that] can have a very dramatic impact. We may find a client who needs more authorized hours than they're providing, and our hands are pretty much tied…We would advocate…And we encourage the participants themselves to advocate for themselves as well. [BHP-15]

In earlier phases of the carve-in, informants explained there was a greater need to invest time and effort to help MCOs understand the different types of behavioral health services offered and the rationale for enrollees using them, in order to obtain approval.

> There was a little bit of a learning curve…I think they didn't really know what they [MCO] were doing when it came to ACT …We were having to kind of manage up and explain to them what ACT was, and the types of people who receive ACT services, and the reason why they receive ACT services… But after that initial period, things are kind of going okay. [BHP-33]

> A lot of the barrier in providing these services has been…that we don't speak the same language, we don't operate in the same way. We often think that a client should receive something, and the MCO may not agree or may not know what we're talking about, so it's caused a lot of hiccups… [BHP/CMA-23]

Informants also discussed the role of MCOs as partners in facilitating members' access to services. Some believed MCOs were helpful in advocating and strategizing for members to have access to appropriate care, including using their leverage as payers to ensure timely access to services.

> Now the insurance is at the table…It has been a phenomenal relationship…100 percent, there have been times where we have worked very, very closely with the managed care company in regards to what services we can get clients into to really help them… [BHP/CMA-23]

> [If an] OP clinic is stonewalling or not moving quick around the admission process, [the] managed care company has…[moved] them to become a little bit more expeditious about admitting [a member]….It's not to a significant amount, but you hear whispers of it. [SA-10]

Most key informants noted that the role of MCOs as advocates for access to care was generally limited. Most explained that, despite potential, MCOs had fairly minimal influence and were not necessarily viewed as a helpful resource for providers to turn to in their efforts to help members access care.

> I think [the MCOs] would like to think they had more pull or push, but they don't often, but they're at the table because they're paying the bill. [BHP-33]
>
> I think that…reminding [providers] that they can reach out to [the] managed care company as a resource… [It] hasn't felt like a helpful resource, that I think it actually has the potential to be… [BHP-12]
>
> They don't use us as a resource or use us as a partner, so that as the [member] may be having some kind of struggle, that we can intervene before the hospitalization needs to occur…[or prevent] a hospitalization that may be longer than necessary, if there have been other pieces that were put in place in advance. [MCO-32]

The ability to engage in innovative pilot projects with MCOs to improve members' engagement in behavioral health care was viewed positively. Informants noted that members experienced numerous challenges with social determinants of health, which posed an overarching barrier to accessing BH services. The opportunity to engage in pilot projects with managed care companies to help providers address social determinants of health, such as housing, was beneficial to supporting members' engagement with BH services.

> We work on a pilot project with one managed care company for housing. So, clients who are high spenders in that specific managed care company who are also homeless, or are going to be homeless, can potentially live in this housing paid directly by this managed care company...Things like that…are happening in this new environment… [BHP/CMA-23]

In terms of overarching challenges, informants identified a significant increase in administrative burden associated with managed care as one of the biggest challenges to the ongoing access, utilization, and provision of BH services. Informants consistently emphasized "it was administratively complicated" and outlined challenges associated with authorizations, utilization management reviews, and billing under managed care. Further exacerbating this administrative burden was that "each MCO has their own process" and timelines, which made it difficult for providers to coordinate work across multiple MCOs, upon whom they are dependent for payment.

> For some, you need to go through portals or others it's a phone number…They might have one for region or program type, or as another company…It's difficult to find a specific person that you can contact…And then some are turning around a response within 48 hours, but in other cases, it's taking sometimes weeks…I'm often hearing that people are waiting for authorization…It's just bureaucracy…across the different managed care companies, like each one does it in their specific way. [BHP-12]
>
> The only point where access is an issue is the fifteen thousand hoops everybody has to jump through, both providers and the clients, to get services…When we

> were moving into managed care…[people at meetings were] saying, "Well you're going to have to figure out the administrative burden…" And it's still a huge administrative burden. And I think there are lots of programs that aren't getting paid for the services they're doing because of that administrative burden. [BHP-35]

> I said this to [MCO]… "There's so many more steps to do the same job that we were already doing"…And their response was, "We only added two more steps." No, you added two more steps, but it added more steps for us. We've never billed Medicaid before so figuring out that process, making sure that we have insurance cards that we never had to ask for, that we had an electronic billable system, that we're billing, billing's getting kicked back, so figuring out why and what's wrong with it… [BHP-14]

> I think that it has not been necessarily so easy for the providers having multiple managed care companies with multiple requirements. What we find is provider error in submitting the claim and I am quite sure that that is because there are so many managed care companies that they have to know billing methods for all different companies and that's very difficult. [MCO28]

MCOs' subdelegation of behavioral health to other entities, particularly in earlier stages of the carve-in when subcontracting was more common, further exacerbated administrative, communication, and, most significantly, billing and reimbursement challenges, with denials being more common in these scenarios, altogether jeopardizing access to behavioral health care.

> The one that's carved out, the [MCO]…either they turn a blind eye, or they don't really know what's going on, on the behavioral health side. Because there's been a number of occasions where multiple providers will complain about a particular carve-out company to the primary [MCO]…to the degree, where that [MCO] has thought about changing, or has changed, to a different carve out because of the way the carve outs are handling it…The subcontracted behavioral health organization [was] not wanting to authorize anything, ever, anytime, for anyone. When they did it, it was at a reimbursement rate that was absolutely ridiculous. [BHP-17]

> Process-type things, like paying claims…denial rates, [what] we see are usually lower in the plans that manage the services themselves. So, I guess we just kind of feel that people are utilizing behavioral health services more in the plans that manage behavioral health services themselves. [SA-11]

Given the new administrative complexities, informants consistently referenced the need to build capacity and infrastructure across behavioral health providers and care management agencies (CMAs) to work as part of a managed care system. However, they noted this was often financially challenging, and not all organizations were able to pursue the same strategies or build the same levels of capacity, potentially compromising their ability to provide person-centered care and receive reimbursement for services. Developing capacity often required ongoing training for staff, hiring additional personnel, and developing or expanding processes and information systems to facilitate documentation, data collection and reporting, and billing.

> This shift from fee for service over to Medicaid managed care has been really difficult for providers…from training your staff, on getting EHR, to learning and maybe also having to have a clearinghouse as well as to making sure that you're putting…all of the different billing codes that you are eligible for, not leaving money on the table, hiring staff that really know this, and then making sure that your clinical staff or your front line staff are inputting the correct information so things can be billed correctly….Some larger organizations might have the resources and capacity to be able to do this, but smaller organizations really have had a hard time. [PTAO-13]
>
> I had to hire somebody and/or take someone else's full-time job and make them responsible for the utilization management, because what I know, and what I experience is, you cannot put that burden onto the clinical staff…We're all living on this very slim margin. And to go to…my management and say, "I need a whole UM person." Where are we going to get the funding for that? [MCO35]

While many key informants acknowledged that, with time, both their agency's capacity to engage in the administrative processes of managed care and the communication with the MCO improved, most still underscored the continued need to "simplify" and develop more "universal ways of handling things under different MCOs."

> If the state took more direction in terms of having the managed care companies behave in a certain way that streamlines with the other plans, that would go a long way. [MCO-28]

Finally, informants discussed how the quality of provider relationships with individual MCOs and the ease and consistency of communication impacted BH service provision. They identified factors that supported positive and collaborative relationships with MCOs including providers "developing personal relationships" with MCOs; providers being "responsive to [MCOs] inquiries;" MCOs "recogniz[ing] how hard this work is;" spending time to learn about an agency and the services that are provided; MCOs having "open lines of communication" and "reaching out...proactively" to address issues; and MCOs working to bridge the gap between their staff who are making decisions within an "arm's reach" and providers working on the ground.

> [MCO] is our boots on the ground. I know those people. I see them all over. We're on a first-name basis with a lot of their people…They come to the meetings. Like, they're interested. They wanna know things. [BHP/CMA-18]
>
> There was a huge push to hire clinicians who were coming from non-profit agencies, I think, or who had been doing this work, so I've actually found people to be, or the spirit to be, like recovery-oriented or person-centered… [BHP-12]

Barriers and Facilitators Impacting Access to Different Types of BH Specialty Services

Personalized Recovery Oriented Services (PROS). In addition to describing factors that could influence access to services across the carve-in, key informants also discussed factors they perceived as relevant to specific types of behavioral health services. For example, when deliberating why there may be decreases in utilization of PROS over time, informants highlighted potential factors, such as the mentality of shifting away from traditional mental health services as “lifelong programs,” where members spend most of their time meeting targeted recovery goals and moving towards graduation, as well as a decreasing availability of PROS providers.

> We started to do what the model was supposed to do, which is not have people here five days a week…Almost everybody in [PROS] was…spending the max amount of time at program. In my six and a half years there, we watched that drop off because…that is what we're supposed to be doing. [BHP-35]

> A few PROS programs have closed and that's kind of been contributing to reduced PROS capacity…Because there's reduced capacity, we see reduced utilization… [SA-11]

They also noted that it was unclear the degree to which the PROS model of in-person group supports matched the needs of younger adults accessing BH services:

> [If] you don't have a certain level of care within PROS, then you don't get paid…[If] we're to work with a younger set of people…they don't want to sit in groups all day and talk about whatever. They want to get boyfriends and girlfriends, and get a job, and leave their mother's apartment or something. [BHP-33]

> When you bring new people in, young adults, people who are just hitting the system for the first time…they don't want to come five days a week… The PROS model has been pretty stagnant for the last, almost two decades now. And I don't think that we're thinking about how technology—I mean COVID has forced us to do all of this…young adults are loving this. This is how they communicate all the time…. [BHP-35]

Assertive Community Treatment (ACT). When discussing ACT, informants reiterated that, as was the case generally, denials for ACT services specifically were not a significant challenge and that the high level of need for ACT services was generally recognized throughout the system. Informants speculated that ACT’s focus on serving those with extensive histories of unsuccessful encounters with other services, and its evidence base on reducing hospitalization, helped managed care companies recognize the need for ACT and its value. Overall, the influence of the carve-in and managed care specifically may be more limited when it comes to ACT utilization patterns.

> I don’t think the MCOs have anything to do with [ACT utilization patterns]. I think there's so many protective factors covering ACT… Oftentimes by the time folks get onto an ACT team, MCOs…they have a record of all the other interventions that have been tried. And they know as well as we do that this is it, that if this isn't going to work, they're going to be in the state hospital, or they're going to be in the local hospital and they're going to be covering the bill, whatever. [BHP-33]

One key informant cited above also elaborated on differences between ACT and PROS that shed further light on explaining potentially different patterns in utilization trends of these two program models:

> I think it's [the] program model, and I think it's a population that's served…because of the high frequency of hospitalizations that often happen with people who are in an ACT team, that there is a very clear intervention that can happen. And the result is right there. Where with PROS…it's not as clear of a line between the interventions that happen in PROS program and the results of those. What are they paying out? How is what they're paying for reduc[ing] costs in another area? Whereas with ACT...[it's] still a money-saver, if we're able to reduce the number of hospitalizations… [BHP-33]

Informants highlighted that ACT utilization was likely more dependent on the availability of ACT slots overall: "It's a huge barrier. Oh yeah, totally. It's a big problem. It's a big problem." In smaller part, this dependence could be due to challenges with specialty ACT teams not always being able to match open slots to members that fit the "narrow definition of who qualifies for [that specific ACT] program," or the mandate to hold slots for members "who [have been placed] in a controlled environment for an undetermined amount of time" (e.g., state hospital). Members' movement through ACT was also considered a significant factor in limiting growth in the number of people that could be served. While it was noted that MCOs may create more ACT openings by promoting graduation, graduation from ACT was still often constrained by members' reluctance to move on and by limited options for transitioning to lower care that was viable or that matched members' needs or preferences.

> The requirement that most clinics have that someone attend therapy along with a psychiatrist, it's just not reasonable. That's just not going to work for [transitioning ACT clients]…Those are the people…who end up remaining with us for long periods of time, because—no one will take them, and they refuse to go to a counselor, which is typically now the requirement for most OP clinics…The reimbursement rate is so abysmal for just med only….The MCOs in terms of reimbursement rate for medication only patients at clinics is an issue that can be addressed, and that can directly affect our ability to discharge people. [BHP-33]
>
> Once a person no longer meets medical necessity for [ACT]—[MCOs'] creating more opportunity for less intensive services and expediting that person receiving those services will increase the amount of flow [into ACT]…[but] people wanting to go into those services [is still an issue]…There's other things that they want besides just that clinic model for treatment…[And some have] gotten accustomed to [providers] they've been dealing with so they got comfortable with [staying in ACT]…As managed care [begins] to really question whether a person continues to need the service, I think that will create more flow and by creating more flow…the front door [to ACT] will just be open that much more because of vacancies. [SA-10]

OnTrackNY Coordinated Specialty Care Services. With respect to individuals experiencing first episode psychosis, key informants noted that the carve-in itself may not have been a significant factor influencing individuals' access to evidence-based Coordinated Specialty Care (CSC) services, given the current mandate of OnTrackNY and its complex model of funding, which seemed to be the biggest factor impacting availability of CSC.

> The OnTrack New York teams have a mandate to enroll individuals regardless of insurance status…OnTrack New York has the blended and complex funding model where teams bill for billable services. Most teams receive funding from the state, which is a mix of state funds and federal funds… [PTAO-5]

Suggestions for System Improvements

Moving forward, key informants suggested areas where the system needs to continue to develop to further enhance access to care. This included ongoing attention to facilitating transitions of care (whether from a hospital to an OP program, or from a more intensive service to a less intensive one); expanding ways to monitor and address social determinants of health that impact both behavioral health service utilization and outcomes; expanding access to more same-day OP services in clinics; continuing to promote mutual trust, partnership, and collaboration between providers and MCOs; and streamlining and increasing uniformity for administrative processes across MCOs.

> One of the things that we want to continue to work on with our behavior health population are around some of our follow-up measures where it's follow-up after, like continuity of care, type of measures that are related to acute services…We have a few projects that are dedicated to that, around **care transitions**, so I think that's one thing we're really trying to move the needle more on. [MCO-32]
>
> What they don't sometimes see on the MCO side is some of those **social determinants** and how much of a factor that those have eventually on their claims data? That's where the people that are actually directly working with clients see the impacts…Does somebody have stable housing? Does somebody have stable food source? [BHP/CMA-18]
>
> If we had more [OMH OP] **walk-in clinics**. Because people walk in the building, right then and there, they need care. They need to walk into a place immediately—do it quick, intake to get set up in the hopes that maybe eliminate hospitalization…We have clients who are living on the street; they're homeless and that would really be great, walk-in clinics. [BHP-22]
>
> MCOs are constantly just referred to as payers. And so, thinking of us as a resource for care management and in connections to care comes so far down the line when the initial thought is "They are the payer." I think choosing the right language and…really promoting **systemic partnership and collaboration**, as a shift away from, I think, arguably an overemphasis on the nature of claim operations…would be useful. [MCO-32]
>
> I wish the MCOs had the same process and they don't…I wish that…they would include the downstream providers, and the care managers, to the frontline [staff in decisionmaking]…making it [a] **universal [process] for all MCOs**. It would make life so much easier. [BHP-14]

Summary of Findings

RQ 1 Hypotheses 1 and 2: Utilization of BH specialty services and evidence-based care for FEP will increase.

The mixed findings generated by our analyses of MMC enrollees' utilization of community-based BH specialty services provide inconclusive evidence regarding the DOH's hypothesis.

An important finding regarding utilization of *any* of the community-based BH specialty services of interest to the DOH (i.e., Any Key BH OP services) is the variability between the regions in their utilization patterns. In NYC, the likelihood of utilization of Any Key BH OP services was higher in the post-period than in the early pre-period as part of an upward trend that started before the launch of the policy. However, trends were less consistent in ROS. Reports from key informants also suggested mixed impacts on utilization of BH services. Overall, informants reported that the shift into MMCs did not result in lower utilization of BH services as they had expected. However, they reported some challenges, including an increase in administrative burden and lack of appreciation of beneficiaries' needs. Informants generally interpreted the barriers they experienced as temporary problems related to implementation of new procedures that would likely improve over time. Key informants identified three factors that influenced access to all BH services: the heavy administrative burden on providers, the extent to which the working relationships with MCOs were positive, and the impacts of social determinants of health on enrollees.

Analyses that evaluated utilization of individual programs uncovered significant variation in trends over time, with some programs also having different trends in each region. To some extent, these differences in trends in utilization of different BH service types were also reported by our key informants. It is noteworthy that the overall utilization of specialty BH clinic programs, including OMH and OASAS Outpatient Clinic services, by SSI beneficiaries with SMI and SUD, was quite modest, with fewer than two out of ten beneficiaries with SUD utilizing OASAS Outpatient Clinic services and fewer than six out of ten beneficiaries with SMI utilizing OMH Outpatient Clinic services.

ACT and PROS. These programs exhibited opposite utilization trends. Unadjusted findings among both the SSI and the SMI populations in both regions suggest that ACT utilization generally increased between the pre-period and the post-period, while PROS utilization generally decreased as part of a trend that started before the launch of the policy. Although adjusted PROS utilization analyses conducted only among those with SMI in ROS showed higher post-period likelihood of utilization relative to the pre-period, our confidence in the adjusted results is diminished by the relative low PROS utilization and small numbers of individuals included in the analyses. Informants reported a positive impact of MMC plans on access to ACT and a longer-term reduction in demand for PROS unrelated to the changing role of MMC plans.

OMH Outpatient Clinic and Other Community-based BH services. Opposite trends were also apparent for these frequently utilized BH services. While likelihood of utilization of OMH Outpatient Clinic services was lower in the post-period years relative to the early pre-period, a pattern that was more pronounced in ROS and among those with SMI, likelihood of utilization of Other Community-based BH services increased every year of the post-period relative to the pre-period in both regions in an upward trend that started before the launch of the policy.

OASAS Outpatient Clinic and OASAS Opioid Treatment Program. These programs also exhibited generally opposite trends throughout the evaluation period although in a less consistent manner as trends varied by region and also by population for Opioid Treatment Program services. While in NYC, unadjusted utilization of OASAS Outpatient Clinic services generally increased throughout the post-period after declining during the pre-period, the opposite was true in ROS; generally, similar patterns were observed for beneficiaries with SUD diagnoses. Adjusted analyses conducted only for ROS for the SSI and SUD populations generally confirmed the downward trend. In contrast, unadjusted utilization of OASAS Opioid Treatment Program services declined in NYC throughout the post-period, yet this utilization experienced an upward trend in ROS that started before the launch of the policy. Similar patterns were observed for beneficiaries with SUD and OUD diagnoses. Although adjusted analyses conducted for NYC contradict the unadjusted analyses for the three populations examined, we note that the low frequency of this utilization or relatively small number of individuals included in these analyses reduces our confidence in the results. Thus, the most consistent result appears to be the upward trend for ROS, one that appears to have started before the launch of the policy.

Other small programs. OASAS Residential Program, CDT, and Partial Hospitalization differed in their utilization patterns, with the latter two trending down statewide. FEP program utilization was observed only late in the post-period and it was minimal, probably due to the nature of our MMC carve-in cohort (SSI disabled Medicaid beneficiaries); however, utilization of FEP services trended up in both regions among beneficiaries with SMI.

RQ2: To what extent are MMC enrollees accessing community-based health care?

This RQ included one hypothesis:

1. The percent of MMC BH members with primary care will increase.

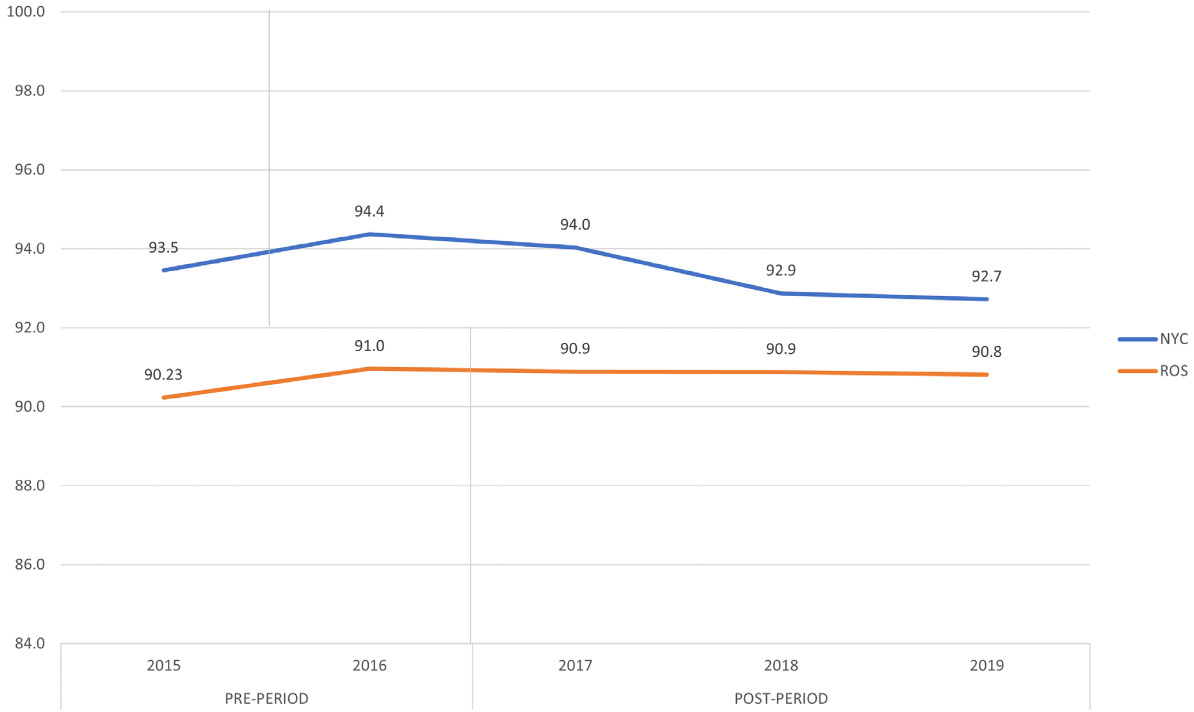
We addressed this RQ with quantitative and qualitative methods (see Table 4.1). For the quantitative analyses, we assessed annual rates of any utilization of community-based health care among disabled SSI adult beneficiaries enrolled in the mainstream MMC system. We evaluated this utilization with a measure capturing receipt of primary and/or preventive care, the Provider Preventable Conditions (PPCs) measure created by DOH. For adults, PPCs captures information collected as part of the Healthcare Effectiveness Data and Information Set (HEDIS) measure "Adults' Access to Preventive/Ambulatory Health Services" (AAP), which defines such access based on evidence of office-based evaluation and management and preventive care visits with a physician or physician extender (NCQA, 2021). Because the PPCs measure is constructed to report lack of receipt of primary and/or preventive care, we inverted it to report receipt of such care.

Unadjusted Quantitative Findings

In NYC, the number of beneficiaries eligible for the PPCs measure ranged between 116,661 in 2015 (the only pre-period year) and 108,488 in 2019 (the last post-period year). In ROS, the number of beneficiaries eligible for this measure ranged between 89,015 in 2015 (the first pre-period year) and 85,993 in 2019.

The annual rates of utilization of primary and/or preventive services among SSI disabled MMC beneficiaries declined slightly but significantly throughout the post-period in both regions, ranging between 94.4 percent in 2016 and 92.7 percent in 2019 in NYC, and between 90.9 percent in 2017 and 90.8 percent in 2019 in ROS (Figure 4.8).

Figure 4.8. Access to Primary and/or Preventive Services, MMC Carve-in SSI population, Unadjusted Rates (Percent) of Any Utilization, NYC and ROS



Adjusted Quantitative Findings

In both regions adjusted results were not entirely consistent with the results obtained in the unadjusted analyses (Table 4.3). In NYC, the odds of utilization of primary and/or preventive services in the first two post-period years (2016 and 2017) were 18 percent and 11 percent lower than in the early pre-period, respectively. However, in the last two years of the post-period, and contrary to the results obtained in the unadjusted analyses, the odds of this utilization relative to the early pre-period were 15 percent higher in 2018 and 19 percent higher in 2019 (OR = 1.19, 95 percent CI = 1.14, 1.24). In ROS, the likelihood of utilization differed between the periods only in the last year of the post-period (2019), when the odds were 7 percent higher than in the early pre-period (OR = 1.07, 95 percent CI = 1.03, 1.10).

Qualitative Findings

Barriers and Facilitators to Primary and Preventive Care Under Mainstream MMC

The qualitative interviews provide information on how key informants perceive the impact of MMC on access to primary and preventive care. Our informants representing MCOs described the administrative integration between management of BH and PH care within their organizations. Informants representing providers recognized the potential for these administrative changes to improve integration of care, saying that the carve in "opened the opportunity for integration" and that "the opportunity for integration is much stronger through this [the carve-in]." However, these informants also described four continuing challenges with integration of actual clinical services: ongoing difficulties in communication across providers in the system, limited availability of doctors/clinics that were well-suited to meeting the complex needs of the population, limited knowledge or ability of BH and PH care providers, and challenges specific to subdelegation of BH services by MCOs.

MCO informants discussed the ways in which there was enhanced integration at their organizations for behavioral and physical health.

> There's still some difficulties with integration…in the provider world and understanding how to do that. [MCO32]

However, many informants noted that, while there may have been more progress in the administrative integration of care with the carve-in, integration "in the provider world" on the ground continued to be more limited. Providers' optimism about potential improvements in care integration were tempered by the four remaining concerns listed above about access to physical health services. Informants emphasized that in practice communication between providers was an ongoing challenge and that those challenges limit the ability of care coordinators to ensure that their patients access care they need.

> Care coordinators…really struggle with…getting access to the information and kind of being seen in the care team as that role and responsibility…The [care manager/coordinator role] hasn't been clearly delineated outside of the behavioral health system…where a care manager will call a provider's physician and they'll have the…consent form signed and everything, and the physician will be like, "I don't know what this is, I don't know who you are, [I'm] not talking to you," so it's tricky. [PTAO-13]

> One of the problems…trying to do more integration is really about HIPAA and kind of communicating with providers like the PCP, but then more specifically with the SUD providers and our restraints with kind of trying to coordinate care and not being able to kind of discuss all of their substance use history for our members. [MCO32]

Informants noted that there still seemed to be multiple steps in linking participants with appropriate physical health care and communicating with primary care providers.

> The amount of backflips and the quadruple somersaults that my nurses have to do to get somebody in to see a doctor is outrageous. A doctor who will actually see them and understand that they have a lot of other issues going on and might not get there on time for an appointment, etc... [BHP-33]

Many providers do not have the time or knowledge to engage in activities outside of their specialty in either physical or behavioral health.

> If we're talking specifically about physical health integration with behavioral health, some of the screenings that we would like to see in the PCP office don't necessarily get completed. Sometimes there's not an awareness that they can actually code and bill for having done a particular screening for a test. I feel like there's not a consolidated way to get that information out as clearly as we would like. And sometimes, also on the behavioral health side, if you have a psychiatrist in a clinic or a PROS program, and they identify that there is something that's needed from a physical health standpoint, their ability to know how and what steps to take to connect the person beyond just giving them a referral is really limited, and we hear a lot of complaints about time constraints in the ability to do these things. [MCO32]

Finally, informants specifically noted challenges in integrating care when BH care is subdelegated by an MCO to a specialty behavioral health organization. MCOs that subdelegate BH services were perceived to be less capable of using data on all the care a beneficiary receives to make informed decisions.

> In the insurance industry in general, roads that carve out behavioral health need to figure out how to put all that data together with the medical side of the plan to look at total costs of care for individuals. Some managed care companies can do, some can't. … Until we're really able to look at the total cost of care, to say this is what the average spending is on the average person and this is what the spending is on the high utilizers and this is what we spend when we don't do something…I think it's less of a problem for the companies that don't carve it out because they're looking at one dataset and they can gather information from that dataset. [CMA-17]

Summary of Findings

RQ2 Hypothesis 1: The percent of MMC BH members with primary care will increase.

Our findings provide inconclusive evidence regarding the DOH's hypothesis with respect to the utilization of primary and/or preventive services, already very high in NYC and ROS prior to the launch of the policy. The slight decline in the unadjusted utilization observed in the post-period contrasted with adjusted analyses suggesting that the likelihood of this utilization was actually higher in both regions toward the end of the post-period than prior to the launch of the policy. Although this inconsistency may be caused by the adjustor variables having a large explanatory power on the unadjusted analysis results*, we suggest caution in the interpretation of the adjusted results as the high utilization of these services may mean relatively small sample* *sizes in some subgroups*. The key informants interviewed noted the potential for improvement in integrated care resulting from management by MMC plans, but they also noted other factors that continue to limit access to primary and/or preventive services including lack of communication among providers, the multiple step process involved in linking enrollees with primary care services, limited time and knowledge of serious mental illness among providers, and continued fragmentation of behavioral health and primary care services when MMCs subdelegate BH services.

4.2 Goal 2: Improve health, BH, and social functioning outcomes for adults in the HARP program

This section addresses 11 RQs and associated hypotheses related to the HARP program. The RQs focus on multiple outcomes relevant to HARP-eligible beneficiaries, including those enrolled in the HARP program (HARP enrollees) and those who despite their eligibility are not enrolled (non-HARP individuals), to determine the extent to which the second goal of the BH Demonstration has been attained. The RQs were addressed with a mixed methods approach (Table 4.6).

Table 4.6. Overview of Goal 2 Approach

Research Question	Data Source^	Outcome Measure	Design and Analytic Approach*
1. How has enrollment in HARP plans increased over the length of the Demonstration?	Medicaid Data	Percentage of HARP eligible beneficiaries enrolled in MMC, HARP, or HIV SNP, by annual period	Open cohort Unadjusted analyses over post-period (four (4) years NYC; three (3) years, ROS)
	Key informant interviews; Interviews with HARP enrollees	Barriers and facilitators of HARP enrollment	Qualitative methods
2. What factors are associated with non-enrollment in HARP plans?	Medicaid Data	Population-level differences in person-level characteristics for HARP eligible enrollees who are enrolled versus not enrolled in HARP, by annual period	Open cohort Unadjusted analyses over post-period (four (4) years NYC; three (3) years, ROS)
	Medicaid Choice Enrollment Data	Reasons for opting out of HARP, by annual period	Open cohort Unadjusted analyses over post-period (four (4) years NYC; three (3) years, ROS)
	Key informant interviews	Barriers and facilitators to HARP enrollment	Qualitative methods

Research Question	Data Source^	Outcome Measure	Design and Analytic Approach*
3. What are the demographic and clinical characteristics of the HARP population? Are they changing over time?	Medicaid Data	Percentage of HARP enrollees with specific characteristics, by annual period	Open cohort Unadjusted analyses over post-period (four (4) years NYC; three (3) years, ROS)
4. What are the educational and employment characteristics of the HARP population?	CMH Screen	Educational and employment attainment for HARP enrollees, by annual period	Open cohort Unadjusted analyses over post-period (four (4) years NYC; three (3) years, ROS)
5. To what extent are HARP enrollees accessing primary care?	Medicaid Data	Percentage of HARP eligible enrollees receiving primary and/or preventive health services, by annual period	Closed cohort Analyses over pre-period (two (2) years) and post-period (four (4) years NYC; three (3) years, ROS) • Unadjusted Analyses • Adjusted (Matched Sample) Analyses@
	Key informant interviews; Interviews with HARP enrollees	Barriers and facilitators to access to primary and preventive care	Qualitative methods
6. To what extent are HARP enrollees accessing community-based BH specialty services (ACT, PROS, OMH Outpatient Clinic, Continuing Day Treatment, Partial Hospitalization, OASAS Opioid Treatment Program, OASAS Outpatient Clinic, and FEP programs)?	Medicaid Data OTNY Data System	Percentage of HARP eligible enrollees receiving any and specific BH specialty services, by annual period	Closed cohort Analyses over pre-period (two (2) years) and post-period (four (4) years NYC; three (3) years, ROS) • Unadjusted Analyses • Adjusted Analyses@ [selected outcomes]: DiD, ITS
	Key informant interviews	Barriers and facilitators to access to specialty BH care	Qualitative methods
7. To what extent are HARP enrollees accessing Health Homes for care coordination?	Medicaid Data	Percentage of HARP eligible enrollees engaged in Health Home services, by annual period	Closed cohort Analyses over pre-period (two (2) years) and post-period (four (4) years NYC; three (3) years, ROS) • Unadjusted Analyses • Adjusted Analyses@ [selected outcomes]: DiD, ITS
	Key informant interviews; Interviews with HARP enrollees	Barriers and facilitators to access to care coordination services	Qualitative methods

Research Question	Data Source^	Outcome Measure	Design and Analytic Approach*
8. To what extent is HARP quality of care improving, especially related to the HEDIS measures of health monitoring, prevention, and management of BH conditions, cardiovascular disease, asthma, diabetes, and other selected chronic health conditions?	Plan-reported HEDIS® / QARR quality measures[#] Medicaid Data	Quality of care among HARP eligible enrollees, by annual period	Closed cohort Analyses over pre-period (two (2) years) and post-period (four (4) years NYC; three (3) years, ROS) • Unadjusted Analyses • Adjusted Analyses[@] [selected outcomes]: DiD, ITS
9. To what extent are HARP enrollee experiences with care and access to health and BH services positive?	CAHPS	Percentage of HARP enrollees who: 1) report it was easy to get BH treatment; 2) report it was easy to get SUD treatment; 3) rated their BH treatment positively; 4) rated their SUD treatment positively. By annual period when data are available	Open cohort Unadjusted analyses at the plan level for 2017 and 2019 reporting years
10. To what extent are HARP enrollees satisfied with the cultural sensitivity of BH providers and their wellness, recovery, and degree of social connectedness?	HARP PCS	Percentage of HARP enrollees who: 1) report that BH care was responsive to their cultural background; 2) had a positive overall rating of quality of life; 3) had overall positive beliefs about health and wellness; 4) rated PCS questions in the social connectedness domain positively; 5) rated items related to communication with health care providers positively. By annual period when data are available	Open cohort Unadjusted analyses over post-period (four (4) years NYC; three (3) years, ROS)
11. To what extent are HARPs cost effective? What are the PMPM cost of inpatient psychiatric services, SUD ancillary withdrawal, hospital-based detox, and ED services for the HARP population? Are these costs decreasing over time?	Medicaid Data MHARS	Risk-adjusted utilization of acute care and non-acute (OP) BH services among HARP eligible enrollees, by annual period (PMPM/Y) Risk-adjusted PMPM cost of acute care and non-acute (OP) BH services among HARP eligible enrollees, by annual period (PMPM/Y)	Closed cohort Analyses over pre-period (two (2) years) and post-period (four (4) years NYC; three (3) years, ROS) • Unadjusted Analyses • Adjusted Analyses[@] [selected outcomes]: DiD, ITS

Research Question	Data Source^	Outcome Measure	Design and Analytic Approach*

[*] All analyses were conducted separately for NYC and ROS; see Appendix E for unadjusted results for RQs 5-8 and RQ11.

[@] Adjusted Analyses (see Section 3.3 for adjustor variables): ITS models compared outcomes each post-period year relative to the first pre-period year (full HARP enrollee population); DiD models (and matched sample ATC analyses) compared outcomes for non-HARP individuals versus the HARP enrollee subpopulation with similar characteristics as the non-HARP population. Linear regression estimates are presented as changes in utilization (percent probability, number of visits) or costs ($), and their respective standard errors. Matched sample results are presented only for key outcomes we were unable to model.

[^] We were unable to use CMH Screen data to characterize risk and protective factors (RQ3) or construct adjustor variables due to low rates of completion and the lack of longitudinal data (see Appendix Table E.4).

[#] We lacked 2019 HEDIS/QARR data for the two Comprehensive diabetes screening measures.

Characteristics of the Future HARP-eligible Population

Table 4.7 describes the characteristics of the HARP-eligible population assessed during the pre-period and hence before these individuals had become HARP enrollees or non-HARP individuals. In the pre-period and statewide, there were 53,887 beneficiaries who became HARP enrollees in the post-period and 3,493 beneficiaries who became non-HARP individuals in the post-period and met eligibility criteria for inclusion in our Goal 2 cohort. Relative to the population that become HARP enrollees, the population that did not enroll in HARP tended to be more male, more white, and healthier in terms of overall health status. In NYC, the non-HARP-to-be population did not differ from the HARP enrollee-to-be population with regard to rates of Any SMI but were generally less burdened with Any SUD. In ROS, the non-HARP-to-be population had lower rates of Any SMI but higher rates of OUD than the HARP enrollee-to-be population. In terms of service utilization, the non-HARP-to-be population had lower rates of Any utilization of key BH OP services relative to the HARP enrollee-to-be population, in both regions and across the State. The non-HARP-to-be population in NYC had higher intensity of acute care utilization of both BH and non-BH services, while those in ROS had lower intensity of OP utilization of Any key BH and non-BH services.

Table 4.7. Characteristics of the HARP-eligible Population, NYC, ROS, and Statewide)

	NYC				ROS			
	All (N=29,473)	**HARP (N=28,308)**	**Non HARP (N=1,165)**	**P-Value**	**All (N=27,907)**	**HARP (N=25,579)**	**Non HARP (N=2,328)**	**P-Value**
Age, Mean (SE)	45.1 (0.06)	45.04 (0.06)	45.55 (0.32)	0.10	41.1 (0.07)	41.1 (0.07)	40.8 (0.24)	0.20
Sex, %								
Male	46.4	46.4	47.5	0.46	40.7	40.3	45.5	**0.00**
Female	53.6	53.6	52.5		59.3	59.7	54.5	
Race/Ethnicity, %								
White	25.7	25.5	30.6	**0.00**	60.5	59.8	68.6	**0.00**
Black	43.6	43.8	39.3		24.7	25.3	19.0	
Hispanic	20.6	20.9	14.7		11.9	12.2	9.0	
Asian/American Indian/Other	10.1	9.90	15.4		2.84	2.79	3.36	
Behavioral Health (BH) diagnosis, %								
Schizophrenic disorders	42.4	42.3	46.6	**0.00**	33.0	33.2	30.5	**0.01**
Bipolar disorder (severe)	3.95	3.98	3.02	**0.03**	3.92	3.98	3.23	0.06
Other Serious Affective/Psychotic Disorders	51.6	51.8	47.7	**0.00**	46.0	46.4	41.2	**0.00**
Chronic alcohol abuse	15.2	15.2	16.0	0.38	16.8	16.8	16.7	0.93
Opioid abuse and dependence (OUD)	16.1	16.2	13.4	**0.00**	11.9	11.6	15.0	**0.00**
Any Serious Mental Illness (SMI) diagnosis	72.5	72.5	72.7	0.83	60.8	61.2	55.6	**0.00**
Any Substance Use Disorder (SUD) diagnosis	33.7	33.9	29.5	**0.00**	32.0	31.8	33.7	0.07
Core Health Status (revised), %								
Healthy to Minor Chronic disease	6.54	6.46	8.41	**0.00**	11.6	11.3	14.3	**0.00**
Moderate to Significant Chronic Disease	70.1	70.0	71.5		75.7	75.9	73.9	
Dominant Chronic Disease to Catastrophic Conditions	23.4	23.5	20.1		12.8	12.8	11.8	
Any Utilization of Key Behavioral Health Outpatient Services, %	84.8	85.1	77.5	**0.00**	77.3	77.8	71.6	**0.00**

	NYC				ROS			
	All (N=29,473)	**HARP (N=28,308)**	**Non HARP (N=1,165)**	**P-Value**	**All (N=27,907)**	**HARP (N=25,579)**	**Non HARP (N=12,328)**	**P-Value**
Health Service Utilization, Per Year, mean (SE)								
Key Behavioral Health Outpatient Visits	9.76 (0.03)	9.77 (0.03)	9.60 (0.16)	0.30	8.28 (0.04)	8.31 (0.04)	7.96 (0.13)	0.01
Non-Behavioral Health Outpatient Visits	5.46 (0.03)	5.47 (0.03)	5.30 (0.14)	0.26	4.96 (0.03)	5.02 (0.03)	4.27 (0.09)	0.00
Acute Behavioral Health Visits	3.23 (0.05)	3.19 (0.05)	4.28 (0.41)	0.01	2.96 (0.04)	2.97 (0.04)	2.90 (0.14)	0.65
Acute Non-Behavioral Health Visits	3.40 (0.04)	3.36 (0.04)	4.38 (0.38)	0.01	3.65 (0.03)	3.66 (0.04)	3.42 (0.12)	0.05
Small Area (County) Characteristics, mean (SE)								
Area Health Resource Files (AHRF): Poverty	0.22 (0.00)	0.22 (0.00)	0.22 (0.00)	0.02	0.13 (0.00)	0.13 (0.00)	0.13 (0.00)	0.00
Area Health Resource Files (AHRF): Diversity Index	0.68 (0.00)	0.68 (0.00)	0.68 (0.00)	0.00	0.36 (0.00)	0.36 (0.00)	0.35 (0.00)	0.00
Health Professional Shortage Area, Mental Health, %								
0 (none)	0.00	0.00	0.00	0.94	6.25	6.28	5.90	0.00
1 (whole county)	30.7	30.7	30.8		8.27	7.84	13.0	
2 (partial county)	69.4	69.4	69.2		85.5	85.9	81.1	

	Statewide			
	All (N=57,380)	**HARP (N=53,887)**	**Non-HARP (N=3,493)**	**P-Value**
Age, Mean (SE)	43.1 (0.05)	43.2 (0.05)	42.4 (0.20)	0.00
Sex, %				
Male	43.7	43.5	46.2	0.00
Female	56.4	56.5	53.9	
Race/Ethnicity, %				
White	42.4	41.5	55.8	0.00
Black	34.6	35.1	25.9	
Hispanic	16.5	16.8	11.0	
Asian/American Indian/Other	0.00	6.58	7.43	
Behavioral Health (BH) diagnosis, %				
Schizophrenic disorders	39.4	39.5	38.6	0.34
Bipolar disorder (severe)	3.94	3.98	3.13	0.00
Other Serious Affective/Psychotic Disorders	49.8	50.1	44.5	0.00
Chronic alcohol abuse	15.7	15.7	16.4	0.27
Opioid abuse and dependence (OUD)	14.8	14.8	14.2	0.36
Any Serious Mental Illness (SMI) diagnosis	68.7	69.0	64.2	0.00
Any Substance Use Disorder (SUD) diagnosis	33.2	33.2	31.6	0.05
Core Health Status (revised), %				
Healthy to Minor Chronic disease	8.98	8.76	12.3	0.00
Moderate to Significant Chronic Disease	72.8	72.8	73.1	
Dominant Chronic Disease to Catastrophic Conditions	18.2	18.5	14.6	
Any Utilization of Key Behavioral Health Outpatient Services, %	82.4	82.9	74.5	0.00
Health Service Utilization, Per Year, mean (SE)				
Key Behavioral Health Outpatient Visits	9.31 (0.03)	9.34 (0.03)	8.81 (0.10)	0.00
Non-Behavioral Health Outpatient Visits	5.30 (0.02)	5.32 (0.02)	4.75 (0.08)	0.00
Acute Behavioral Health Visits	3.14 (0.04)	3.12 (0.04)	3.61 (0.22)	0.03
Acute Non-Behavioral Health Visits	3.48 (0.03)	3.46 (0.03)	3.86 (0.19)	0.04
Small Area (County) Characteristics, mean (SE)				
Area Health Resource Files (AHRF): Poverty	0.19 (0.00)	0.19 (0.00)	0.17 (0.00)	0.00
Area Health Resource Files (AHRF): Diversity Index	0.57 (0.00)	0.58 (0.00)	0.52 (0.00)	0.00
Health Professional Shortage Area, Mental Health, %				
0 (none)	2.06	2.01	3.00	0.00
1 (whole county)	23.3	23.4	21.7	
2 (partial county)	74.7	74.6	75.3	

SOURCE: Authors' analyses of Medicaid data (2014–2019), OTNY data (2015–2019), and AHRF data (2010–2014, 2014–2018)

RQ1: How has enrollment in HARP plans increased over the length of the Demonstration?

This RQ included one hypothesis:

1. The HARP enrollment will increase and the majority of HARP eligibles will enroll in HARP or HIV SNP rather than MMC mainstream plans.

We addressed this RQ with quantitative and qualitative methods (see Table 4.6). For the quantitative (unadjusted) analyses, we assessed the percentage of HARP eligible beneficiaries enrolled in MMC plans, HARPs, or HIV SNPs through a binary measure of any enrollment, defined as having at least one month of plan enrollment annually in any year of the post-period; we note that this definition allowed beneficiaries to be enrolled in more than one plan annually. We supplemented this binary measure with the mean number of months of enrollment per year in any year of the post-period.

Quantitative Findings

Over the course of the post-period, there were growing numbers of Medicaid beneficiaries meeting HARP eligibility criteria in both regions, increasing from 68,163 (2016) to 85,194 (2019) in NYC, and from 67,409 (2017) to 85,410 (2019) in ROS (Table 4.8).

The percentages of HARP-eligible beneficiaries enrolled in MMC plans and the mean number of enrollment months declined substantially over the post-period in both regions, from 85.1 percent (2016) to 33.7 percent (2019) in NYC, and from 99.0 percent (2017) to 51.3 percent (2019) in ROS, with their respective mean numbers of enrollment months also decreasing.

The percentages of HARP eligibles enrolled in HARPs increased substantially over the post-period in both regions, from 70.2 percent (2016) to 86.8 percent (2019) in NYC, and from 61.5 percent (2017) to 81.8 percent (2019) in ROS. The number of enrollment months also increased: By the end of the post-period (2019), HARP enrollees were enrolled for close to nine months in NYC and close to eight months in ROS.

The percentages of HARP eligibles enrolled in HIV SNPs were much lower, particularly in ROS, and they did not increase over the post-period in either region. Overall post-period rates of enrollment were 5.24 percent in NYC and 0.02 percent in ROS. However, in NYC, the number of HIV SNP enrollment months did increase, although only slightly.

Table 4.8. MMC, HARP, and HIV SNP Enrollment, HARP-Eligible Beneficiaries, Unadjusted Rates (Percent), by Post-Policy Year and All Years Combined, NYC and ROS

	2016	2017	2018	2019	Overall	P-value
NYC	**(N=68,163)**	**(N=79,644)**	**(N=83,469)**	**(N=85,194)**	**(N=316,470)**	
Any enrollment in MMC, %	85.1	52.6	42.8	33.7	51.9	**0.00**
Number of months enrolled in MMC, Mean (SE)	5.25 (0.02)	4.40 (0.02)	3.53 (0.02)	2.51 (0.01)	3.84 (0.01)	**0.00**
Any enrollment in HARP, %	70.2	74.2	83.9	86.8	79.3	**0.00**
Number of months enrolled in HARP, Mean (SE)	6.14 (0.02)	7.11 (0.02)	8.04 (0.02)	8.99 (0.02)	7.65 (0.01)	**0.00**
Any enrollment in HIV SNP, %	5.04	5.30	5.25	5.32	5.24	0.08
Number of months enrolled in HIV SNP, Mean (SE)	0.53 (0.01)	0.56 (0.01)	0.59 (0.01)	0.60 (0.01)	0.57 (0.00)	**0.00**
ROS		**(N=67,409)**	**(N=79,568)**	**(N=85,410)**	**(N=232,387)**	
Any enrollment in MMC, %		99.0	59.8	51.3	68.1	**0.00**
Number of months enrolled in MMC, Mean (SE)		6.60 (0.02)	5.28 (0.02)	3.56 (0.02)	5.03 (0.01)	**0.00**
Any enrollment in HARP, %		61.5	65.3	81.8	70.3	**0.00**
Number of months enrolled in HARP, Mean (SE)		4.80 (0.02)	6.23 (0.02)	7.94 (0.02)	6.44 (0.01)	**0.00**
Any enrollment in HIV SNP, %		0.03	0.03	0.02	0.02	0.16
Number of months enrolled in HIV SNP, Mean (SE)		0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.21

SOURCE: Authors' analyses of Medicaid data (2014–2019)
NOTE: The p-value describes the statistical significance of the chi-square test that compares all annual periods together.

Qualitative Findings

Barriers and facilitators to HARP enrollment: Key Informants' Perspective

When discussing HARP enrollment, key informants discussed factors that they perceived as facilitating enrollment, while also expressing some concerns about the HARP eligibility determination and enrollment process. Informants primarily attributed the high enrollment of members into HARP to the implementation of a passive enrollment process.

> It was a passive enrollment maneuver…You've been switched into this other plan, but it's the same parent company. It's the same benefit package. It's the same network. So ideally you don't even notice that anything changed. [PTAO-34]

Other factors that informants perceived as facilitating HARP enrollment included members having positive relationships with an existing provider. These providers could clarify what HARP was, provide assurances that a member's existing services would not be impacted, and that enrolling in HARP would help providers sustain services for the member.

> Their relationships they let develop with us as a provider [helped with HARP enrollment]. A few of the ones that were already with us, it took some talking into, right? Because, "I already got this service, why do I need to enroll in this?

> Because I'm already coming here…why do I got to enroll in a HARP now?" "Well, grant funding's ending. And this is a new process...so your insurance company pays us to do the service we're already providing for you to keep us in business and keep us around." And they're all like "Oh okay! Go ahead." "It is more steps for you, we do have to do a different care plan, but in reality, you'll still just be doing the same thing you were doing…" [BHP-14]

Despite high enrollment, however, key informants expressed some concern regarding the degree to which individuals they served, who appeared to fit components of HARP criteria from the informants' perspective, were not eligible or enrolling in HARP, or that there appeared to be a mismatch in the timing of eligibility and the need for the enhanced care offered through HARP. With a high degree of consistency, key informants expressed the feeling that HARP eligibility was still "kind of a mystery."

> It's a bit unclear, like was their [high] utilization…12-months ago and now they're in a different place…[My] understanding [is] that people with high ER and inpatient utilization [were eligible]. So when you see they haven't had any in the past year, it's surprising. [BHP-12]

> There are definitely clients that come up as HARP-enrolled or HARP-eligible and I look at the screen and say, "I don't get it." These people haven't had hospitalizations in three or four years…And then I look at some clients that we have who…more recently have a whole bunch of hospitalizations, who aren't HARP eligible. And you can't make them HARP eligible. You have to just, like, wait for this imaginary formula to take place. [BHP/CMA-23]

Informants explained that many individuals in HARP had significant behavioral health needs and a host of other complex challenges, but they were also concerned about the potential for many other individuals, who have similar needs and who could benefit from HARP, being missed by the eligibility system. They noted that the current process seemed to lead to a significant portion of members being eligible or enrolled in HARP but not needing or wanting enhanced services, while others were not eligible or not enrolled but needed or wanted enhanced services. While initial descriptions of HARP included an option for bottom-up referrals from the community, key informants were unclear on why this option never materialized. Across a range of stakeholder types, they emphasized that bottom-up referrals would further help identify individuals in high need of HARP, boost enrollment, and result in more timely access to services by targeting individuals based on current (versus prior history of) need and utilization.

> You can't even refer people into HARP at this point either, and there's this sort of, kind of, known criteria, but the specific algorithm I think has never been released [to us], of like who actually qualifies for HARP…It's just very limiting and confusing. [BHP-12-PA]

> I think it would make much more sense if there was a way for providers to have input or at least apply. I would like to be able to call the MCO and say, "Hey, I have this person here—with their history, can they be eligible for the HARP program?" [For] the MCO to say "Sure" or "No, I don't agree with that." [BHP/CMA-23]

> One critique from an enrollment perspective here, and by the very nature of the state's HARP eligibility algorithm, it really means people have to be sick for a really long time before they are picked up to qualify for HARP. …I think figuring out how to finally activate on promises of the program like community referrals or like a fast-track enrollment path would be crucial…before it really turns into a chronic long-term situation. [MCO-32]

Barriers and Facilitators to HARP Enrollment: HARP Enrollees' Perspectives

When HARP enrollees were asked if they knew they were in a HARP, what a HARP was, and how to describe it, participants had a range of responses. Some had never heard of HARP and were not sure whether they had been enrolled, others knew they were in HARP and had an understanding that it could help them access additional services, and others referenced components that were potentially associated with HARP, such as care coordination and developing care plans.

> No, I never heard of [HARP]. [ENROLLEE-4]
>
> I think so?...I can't remember which one…I've been getting things from different agencies… I don't really need somebody to call me up about [help with my daily living things] and I don't really, really need help. [ENROLLEE-1]
>
> I know I'm with HARP. They don't contact me. I don't contact them. I actually have no idea what a HARP is…I think HARP has certain stages or certain criteria that I have to be—with a certain level to qualify for HARP, which I did do. About a year ago, somebody from HARP contacted me as a counselor to ask if I needed any help or anything like that. [ENROLLEE-3]
>
> I understand the services that are provided for people who have challenges with mental health and who need access to medical services provided by a care coordinator that help make sure that I'm connected to—this is going on my medical needs and my psych needs as well… [ENROLLEE-6]

HARP enrollees identified few concerns regarding HARP enrollment, though two mentioned their main concern was having something change about their existing coverage or services. One participant recalled receiving a HARP enrollment letter and discussing potential concerns, and then feeling reassured upon learning that nothing would change about current coverage or services, except for expanded access to additional services.

> I got a letter in the mail that said, "We want to…put you in this program" because I've been utilizing those services quite a bit, was my assumption… I got a couple of phone calls to tell me they were offering me that and "Would it be OK?"…I said, "[What's] the caveat to doing that?" and they said, "It's the same coverage we offer, some more assistance" and I said, "Yeah sure." So…It wasn't something I thought out, it was something that came to me and I accepted. [ENROLLEE-5]

However, most participants were "not sure" how they had gotten enrolled in HARP and did not recall the actual HARP enrollment process or receiving letters informing them of the possible transition to HARP enrollment. For those that knew they were in HARP, most had learned about it retrospectively, explaining that they generally found out about their HARP status from a provider with whom they worked.

> I don't remember any specific letters. They sent a lot of mail… [ENROLLEE-2]
>
> One of my peer counselors did mention that [I was in HARP]. [ENROLLEE-1]
>
> I don't quite remember how the HARP came about. Yeah, I think it did come about the health home because I was being hospitalized a lot as well…I think it came about helping me instead of going to the hospital a lot…instead of going to the emergency room a lot… [ENROLLEE-6]

Despite some ambiguities in describing HARP and their enrollment, when enrollees were asked about the role of the MCO care manager, almost all responded that they had been contacted by someone from their MCO, who called to check-in on them and helped connect them with needed care. While there was some variability in the frequency of contact, many participants mentioned monthly check-in calls with their MCO care manager to help identify potential needs or offer assistance in accessing a variety of services, in particular medical care. While some reported not needing the offer of extra support— "I have enough counselors, if I am being quite honest"—many viewed the MCO care manager as a helpful resource.

> She calls me to make sure that everything is going through [the MCO] and she helps me through anything…I'm looking for a PCP and anything, and she can get me the people to talk to me, all the numbers of all my workers and everything. And it surprises me the things that happened because I was like, "Are you serious?" She sent me a list of primary care physicians because I was having issues with mine and then she sent me a list of ENT specialists and then she sent me places where I can go get food, she helped me…to get set up with how to get care management…Also, I get a home health aide…she helped set that up and told me everything I had to do. (HARP-C11)

Summary of Findings

RQ 1 Hypothesis 1: HARP enrollment will increase and the majority of HARP eligibles will enroll in HARP or HIV SNP rather than mainstream MMC plans

Our analyses support the DOH's hypothesis. HARP enrollment increased, and the majority of HARP-eligible beneficiaries were enrolled in HARP rather than mainstream MMC plans. Enrollment in HIV SNPs was very low, however, particularly in ROS, and it did not increase over time. Interview data from key informants and HARP enrollees suggest that passive enrollment in HARP was a key factor in achieving high enrollment rates.

RQ2: What factors are associated with non- enrollment in HARP plans?

This RQ included one hypothesis:

1. The HARP eligible members who are not enrolled in HARP are younger and less behaviorally acute than those who remain enrolled in HARP/HIV SNP.

We addressed this RQ with quantitative and qualitative methods (see Table 4.6). We undertook two sets of quantitative (unadjusted) analyses. The main analyses used the Medicaid data to assess differences in demographic and clinical characteristics between HARP enrollees and non-HARP individuals assessed when first observed (i.e., only once during the post-period, at their first year of enrollment). The variables used in the comparisons included demographic characteristics (age, sex, race/ethnicity); BH diagnoses including Any SMI and SMI diagnoses (schizophrenic disorders, severe bipolar disorder, other serious affective/psychotic disorders), and Any SUD and selected SUD diagnoses (OUD and chronic alcohol abuse); overall health status evaluated with the CRG-based core health status, revised variable (healthy to minor chronic disease, moderate to significant chronic disease, and dominant chronic disease to catastrophic conditions); and several measures of health service utilization, including mean number of visits for Any Key BH OP services, non-BH OP services, Any acute BH services, and Any acute non-BH services. A second set of analyses used the Medicaid Choice Enrollment data to compute and plot aggregate measures capturing reasons for opting out of HARP by annual period.

Quantitative Findings

Relative to HARP enrollees, HARP eligibles not enrolled in HARP were younger, more likely to be male, white, or Hispanic, and less likely to be diagnosed with Any SMI (and SMI diagnoses) and Any SUD (and SUD diagnoses), or be in poor health (i.e., have dominant chronic disease to catastrophic conditions), in NYC and ROS (Table 4.9). However, in NYC, non-HARP individuals were more likely to utilize BH acute services. In both regions, non-HARP individuals were less likely to utilize Any Key BH OP services. This same pattern was observed for non-BH care, both acute and OP services, for both regions.

Table 4.9. Factors Associated with Non-Enrollment in the HARP Program, HARP-Eligible Beneficiaries, Unadjusted Rates (Percent) and Means, First Year of Enrollment, NYC and ROS

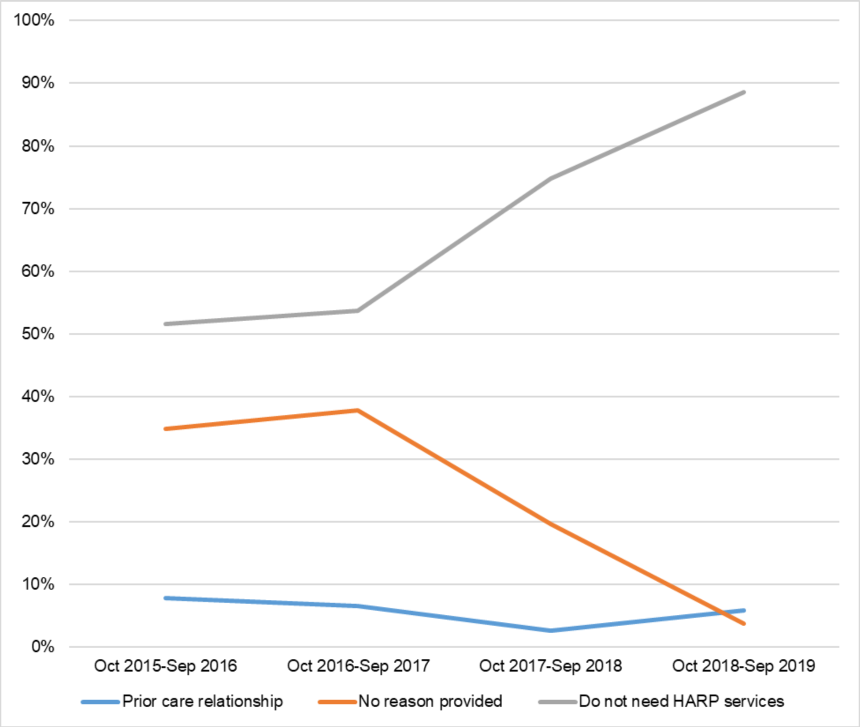
	NYC			ROS		
	HARP* (N=73,054)	**Non-HARP* (N=43,092)**	**P-Value**	**HARP* (N= 60,895)**	**Non-HARP* (N=49,105)**	**P-Value**
Age, Mean (SE)	44.3 (0.04)	40.0 (0.06)	**0.00**	39.9 (0.05)	35.6 (0.05)	**0.00**
Sex, %						
Male	53.3	62.0	**0.00**	49.1	58.0	**0.00**
Female	46.7	38.0		50.9	42.0	
Race/Ethnicity, %						
White	27.9	32.9	**0.00**	62.3	72.6	**0.00**
Black	45.7	46.0		24.3	17.6	
Hispanic	16.0	9.10		10.6	6.27	
Asian/American Indian/Other	10.4	12.1		2.85	3.58	
Behavioral Health (BH) diagnosis, %						
Schizophrenic disorders	35.6	30.2	**0.00**	28.4	19.8	**0.00**
Bipolar disorder (severe)	3.96	4.34	**0.00**	3.97	3.91	0.66
Other Serious Affective/Psychotic Disorders	46.3	41.6	**0.00**	44.5	40.0	**0.00**
Chronic alcohol abuse	21.7	32.1	**0.00**	24.6	36.7	**0.00**
Opioid abuse and dependence (OUD)	21.6	26.9	**0.00**	21.2	36.4	**0.00**
Any Serious Mental Illness (SMI) diagnosis	63.6	53.8	**0.00**	56.8	46.7	**0.00**
Any Substance Use Disorder (SUD) diagnosis	44.2	56.9	**0.00**	45.6	66.7	**0.00**
Core Health Status (revised), %						
Healthy to Minor Chronic disease	7.32	10.6	**0.00**	11.0	11.0	**0.00**
Moderate to Significant Chronic Disease	67.4	73.8		74.8	79.8	
Dominant Chronic Disease to Catastrophic Conditions	25.3	15.6		14.2	9.28	
Health Service Utilization, Per Year, mean (SE)						
Key Behavioral Health Outpatient Visits	9.42 (0.03)	8.21 (0.03)	**0.00**	8.80 (0.03)	7.95 (0.03)	**0.00**
Non-Behavioral Health Outpatient Visits	5.47 (0.02)	4.39 (0.02)	**0.00**	4.78 (0.02)	3.80 (0.02)	**0.00**
Acute Behavioral Health Visits	3.70 (0.04)	4.17 (0.05)	**0.00**	3.10 (0.03)	3.09 (0.03)	0.81
Acute Non-Behavioral Health Visits	3.84 (0.03)	4.29 (0.04)	**0.00**	3.61 (0.02)	3.59 (0.02)	0.48

SOURCE: Authors' analyses of Medicaid data (2014–2019)

Aggregate Findings for Reasons for Opting Out

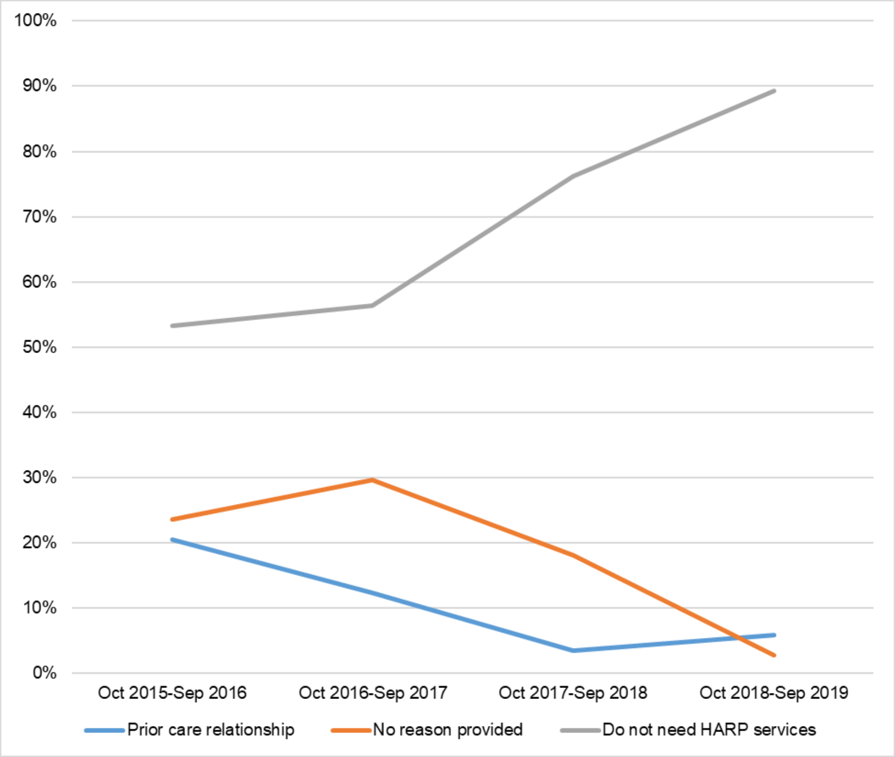
Our data source included reasons for opting out, reported weekly by the MMC plans spanning the period October 1, 2015 to September 30, 2019 (i.e., post-period years 2015–2019). The total number of HARP eligibles opting out (hereafter, opt-outs) grew over the post-period, from 793 and 146 (2015) to 4,784 and 2,619 (2019), NYC and ROS, respectively (Figures 4.9 and 4.10). The smaller number of opt-outs in ROS in 2015 is likely due to the fact that the HARP program launched late that year.

Figure 4.9. Reasons for Opting Out of HARP, HARP-eligible Beneficiaries, NYC



SOURCE: Authors' analyses of Medicaid Choice data (2015–2019

Figure 4.10. Reasons for Opting Out of HARP, HARP-eligible Beneficiaries, ROS



SOURCE: Authors' analyses of Medicaid Choice data (2015–2019

The main reasons cited for opting out—which we defined as reasons endorsed by at least 5 percent of opt-outs—included prior care relationship, no reason provided, and not needing HARP services. In both regions, a main reason for opting out was not needing HARP services, which became more dominant throughout the post-period, reaching 89 percent of all reasons by 2019 in both regions. Prior care relationship was infrequently endorsed with the exception of ROS in 2015, when it was endorsed by 21 percent of opt-outs; in both regions, rates declined over the post-period.

Qualitative Findings

Factors Associated with Non-Enrollment in HARP: Key Informants' Perspectives

From key informants' perspective, the most common reasons for why members decline or disenroll from HARP included members not wanting to be labeled and identified as someone who has mental health issues, not wanting to be associated with a plan that was for individuals with mental health issues, not perceiving themselves as needing any additional services, feeling that they were already receiving similar services, or concerns about their existing care potentially being adversely impacted.

> People do not want to be in a health plan that's for people with mental illness. If you're in the HARP, you have to acknowledge you have mental illness. If you're in the mainstream, you're like anybody else. And we have noted that there is still a huge amount of stigma of members not wanting to be in the HARP. [MCO-28]
>
> Generally what I hear is, "We're good, we're good. No thanks, I don't need that right now." [HH-19]
>
> [HARP enrollees] were like, "I don't know what HARP is." And the letter that the state would send to HARP beneficiaries would say, "Talk to your doctor about this"…and they would talk to their doctor and the doctor would say, "I've never heard of this before." So, in the beginning people were disenrolling from HARP because they were not sure what it was, they didn't know if they would be able to keep their doctors…There just wasn't enough communication and knowledge about what this new product was or people simply just threw the letter away, or if they were in a managed care plan that didn't have a HARP, they needed to change their plan. [PTAO-13]

Key informants also expressed concern that individuals who already face significant challenges to consistent engagement in care, especially those who experience difficulties across social determinants of health, may constitute a significant portion of the population still not enrolled.

> This issue of people not being reached right, so those are like people who are homeless, so they are some of the most disenfranchised people with mental health or substance use issues...so I think there's still a lot of people out there…in an eternal HARP eligible category that never get properly moved through. [MCO-32]

> There is kind of a turning over…[of] the people who have been eligible for the HARP by a third every year. And so, most people who are in a higher intensity service are still in mainstream plans…What we had intended was that people who had a single detox or [were] a repeat patient in a calendar year—that would identify a certain kind of a pattern. And often that would come with people who had social determinants [needs]… But I don't know that there's a significant difference between the people who we've actually been able to get enrolled in the HARP and the people who are still in the mainstream plan…I think that getting into the HARP may be as much a luck [of] being pulled out. [SA-27]

Summary of Findings

RQ2 Hypothesis 1: HARP-eligible members who are not enrolled in HARP are younger and less behaviorally acute than those who remain enrolled in HARP/HIV SNP

Our findings provide inconclusive evidence regarding the DOH's hypothesis. In both regions, among those assessed when first observed in either group, non-HARP individuals were younger and less likely to have any SMI and SMI diagnoses or be in poor overall health. However, they were more likely to have SUD diagnoses than HARP enrollees and, in NYC, non-HARP individuals were more likely than HARP enrollees to utilize acute BH services. MMC plan-collected data indicates that the main reason for opting out of HARPs was not needing HARP, a finding that is consistent with qualitative evidence suggesting that non-enrollment was related to beneficiaries not perceiving a need for treatment. Interviews with enrollees also uncovered concern about the social and personal implications of being identified as someone with a mental illness as well as concerns (which may be misinformed) about losing access to current services.

RQ3: What are the demographic and clinical characteristics of the HARP population? Are they changing over time?

This RQ included one hypothesis:

1. On a population level, it is expected that the distribution of the measured risk factors and protective factors for this population will shift toward fewer risk factors and greater protective factors over time as the program matures; regional (NYC versus ROS) differences in improvements will be observed. On an individual level, trajectories of improvement in risk and protective factors over time will be observed.

We addressed this RQ with quantitative methods (see Table 4.6). We conducted (unadjusted) analyses that assessed demographic and clinical characteristics of the annual groups of HARP enrollees contributing to the cohort throughout the post-period; in this design, HARP enrollees could contribute to more than one annual period. Due to limitations of the CMH Screen data (see footnote in Table 4.6), we were unable to use those data to assess the broad array of risk and protective factors listed in the RFP. Thus, we described the HARP population solely with variables constructed with Medicaid data, including *demographic characteristics* (age, sex, race/ethnicity); *BH diagnoses* including Any SMI and SMI diagnoses (schizophrenic disorders, severe bipolar disorder, other serious affective/psychotic disorders), and Any SUD and selected SUD diagnoses (OUD and chronic alcohol abuse); *overall health status* evaluated with the CRG-based core health status, revised variable (healthy to minor chronic disease, moderate to significant chronic disease, and dominant chronic disease to catastrophic conditions); and several measures of *health service utilization*, including mean number of visits for Any Key BH OP services, non-BH OP services, Any acute BH services, and Any acute non-BH services.

Quantitative Findings

Over the course of the post-period, the annual groups of HARP enrollees were younger and had higher percentages of male and white individuals across both NYC and ROS (Table 4.7). However, the trends in the racial/ethnic composition of the cohorts differed by region: While the percentages of black enrollees increased over time in NYC, they declined in ROS along with the share of Hispanics (Table 4.10). In both regions, there was a downward trend in the percentages of individuals with SMI diagnoses (and, with the exception of severe bipolar in NYC, SMI diagnoses) or in poor health (i.e., those with dominant chronic disease to catastrophic conditions). However, there was an upward trend in the percentages of individuals with SUD and any of the SUD diagnoses in both regions.

Table 4.10. Demographic and Clinical Characteristics of the HARP Population, Unadjusted Rates (Percent) and Means, by Post-Policy Year and All Years Combined, NYC and ROS

	2016	**2017**	**2018**	**2019**	**Overall**	**P-value**
NYC	**(N=47,867)**	**(N=59,113)**	**(N=70,065)**	**(N=73,290)**	**(N=250,965)**	
Age, Mean (SE)	46.5 (0.05)	45.5 (0.05)	43.5 (0.04)	42.5 (0.04)	44.3 (0.02)	**0.00**
Sex, %						
Male	48.9	50.5	53.4	54.4	52.2	**0.00**
Female	51.1	49.5	46.7	45.6	47.9	**0.00**
Race/Ethnicity, %						
White	27.1	27.1	28.1	28.2	27.7	**0.00**
Black	43.6	45.2	45.8	46.4	45.4	
Hispanic	19.0	17.7	15.7	14.9	16.6	
Asian/American Indian/Other	10.2	10.0	10.4	10.5	10.3	
Behavioral Health (BH) diagnosis, %						
Schizophrenic disorders	38.4	36.51	38.57	37.64	37.78	**0.00**
Bipolar disorder (severe)	3.72	3.70	3.57	3.63	3.65	0.52
Other Serious Affective/Psychotic Disorders	47.4	46.2	44.1	44.1	45.2	**0.00**
Chronic alcohol abuse	16.3	17.8	21.7	22.9	20.1	**0.00**
Opioid abuse and dependence (OUD)	18.2	20.5	22.1	22.8	21.2	**0.00**
Any Serious Mental Illness (SMI) diagnosis	67.9	65.0	62.1	61.3	63.7	**0.00**
Any Substance Use Disorder (SUD) diagnosis	36.0	39.6	43.9	45.7	41.9	**0.00**
Core Health Status, %						
Healthy to Minor Chronic disease	6.50	7.70	9.21	9.26	8.35	**0.00**
Moderate to Significant Chronic Disease	66.7	65.6	66.1	66.4	66.2	
Dominant Chronic Disease to Catastrophic Conditions	26.8	26.7	24.7	24.4	25.5	
Health Service Utilization, Per Year, mean (SE)						
Key Behavioral Health Outpatient Visits	9.62 (0.03)	9.92 (0.03)	9.81 (0.03)	10.01 (0.03)	9.86 (0.01)	**0.00**
Non-Behavioral Health Outpatient Visits	5.76 (0.02)	5.58 (0.02)	4.79 (0.02)	5.24 (0.02)	5.30 (0.01)	**0.00**
Acute Behavioral Health Visits	3.69 (0.05)	3.82 (0.05)	4.07 (0.05)	4.06 (0.05)	3.95 (0.02)	**0.00**
Acute Non-Behavioral Health Visits	3.65 (0.03)	3.88 (0.03)	3.96 (0.03)	4.04 (0.03)	3.91 (0.01)	**0.00**

2016	**2017**	**2018**	**2019**	**Overall**	**P-value**
ROS	**(N= 41,446)**	**(N=51,966)**	**(N=69,862)**	**(N=163,274)**	
Age, Mean (SE)	41.8 (0.06)	40.6 (0.05)	38.3 (0.04)	40.0 (0.03)	**0.00**
Sex, %					
Male	45.14	46.41	49.42	47.38	**0.00**
Female	54.86	53.59	50.58	52.62	
Race/Ethnicity, %					
White	60.9	61.2	65.3	62.8	**0.00**
Black	24.8	24.7	22.2	23.7	
Hispanic	11.5	11.4	9.61	10.7	
Asian/American Indian/Other	2.81	2.78	2.90	2.85	
Behavioral Health (BH) diagnosis, %					
Schizophrenic disorders	31.1	28.7	27.7	28.9	**0.00**
Bipolar disorder (severe)	3.98	4.01	3.64	3.84	**0.00**
Other Serious Affective/Psychotic Disorders	44.9	44.5	42.8	43.8	**0.00**
Chronic alcohol abuse	18.8	21.0	27.6	23.2	**0.00**
Opioid abuse and dependence (OUD)	15.7	18.9	24.6	20.5	**0.00**
Any Serious Mental Illness (SMI) diagnosis	59.3	57.5	54.0	56.5	**0.00**
Any Substance Use Disorder (SUD) diagnosis	36.3	41.5	49.5	43.6	**0.00**
Core Health Status, %					
Healthy to Minor Chronic disease	11.6	11.9	11.9	11.8	**0.00**
Moderate to Significant Chronic Disease	72.1	73.0	74.2	73.3	
Dominant Chronic Disease to Catastrophic Conditions	16.4	15.2	13.9	14.9	
Health Service Utilization, Per Year, mean (SE)					
Key Behavioral Health Outpatient Visits	8.61 (0.03)	8.95 (0.03)	8.84 (0.03)	8.82 (0.02)	**0.00**
Non-Behavioral Health Outpatient Visits	5.10 (0.02)	4.67 (0.02)	4.13 (0.01)	4.55 (0.01)	**0.00**
Acute Behavioral Health Visits	3.17 (0.04)	3.20 (0.04)	3.10 (0.03)	3.15 (0.02)	0.09
Acute Non-Behavioral Health Visits	3.72 (0.03)	3.61 (0.02)	3.52 (0.02)	3.60 (0.01)	**0.00**

SOURCE: Authors' analyses of Medicaid data (2014–2019)
NOTE: The p-value describes the statistical significance of the chi-square test that compares all annual periods together.

Patterns of health service utilization changed throughout the post-period in both regions. In NYC, there was an upward trend in the utilization of BH care. While the mean (SE) number of annual visits for Any Key BH OP services increased from 9.62 (0.03) (2016) to 10.01 (0.03) (2019), so did Any acute BH care utilization, which increased from 3.69 (0.05) (2016) to 4.06

(0.05) (2019). Moreover, while utilization of non-BH OP services declined, utilization of Any acute non-BH services increased over time. ROS's patterns were different in some respects. Utilization of Any Key BH OP services trended up, increasing from a mean (SE) number of annual visits of 8.61 (0.03) (2017) to 8.84 (0.03) (2019), but Any acute BH care utilization trended down, decreasing from 3.17 (0.04) (2017) to 3.10 (0.03) (2019). Utilization of non-BH services trended down for both OP and acute non-BH services.

Summary of Findings

RQ3 Hypothesis 1: On a population level, it is expected that the distribution of the measured risk factors and protective factors for this population will shift toward fewer risk factors and greater protective factors over time as the program matures; regional differences in improvements will be observed. On an individual level, trajectories of improvement in risk and protective factors over time will be observed

Given the limitations of a principal data source for these analyses, we are unable to substantively weigh in on the distribution of risk and protective factors in the HARP population. Moreover, findings from analyses focused on demographic and clinical factors provide inconclusive evidence regarding the DOH's hypothesis. Although the annual cohorts of HARP enrollees in both regions became younger and had declining shares of enrollees with serious diseases, they had growing shares of enrollees with SUD needs. Additionally, acute BH care utilization increased in both regions, which in ROS contrasted with a downward trend in utilization of Any Key BH OP services. In NYC, an upward trend in Any acute non-BH care utilization contrasted with a downward trend in non-BH OP service utilization.

RQ4: What are the educational and employment characteristics of the HARP population?

This RQ included one hypothesis:

1. Higher rates of educational and employment attainment will be observed for the HARP enrolled population over time as the program matures; individual level improvements will be noted.

We addressed this RQ with quantitative methods (see Table 4.6). We conducted (unadjusted) analyses that assessed the annual groups of HARP enrollees contributing to the cohort throughout the post-period on education- and employment-related variables for which the CMH Screen was the sole data source; in this design, HARP enrollees could contribute to more than one annual period. The CMH Screen variables used to characterize educational and employment attainment were college or higher level of education; enrolled in educational program; and currently employed.

Because of the limitations of the CMH Screen (see below), most of the information used to construct the outcomes was not time-varying; as a result, we were not able to assess changes over time for the individuals included in the cohort.

CMH Screen Data

Given that the CMH Screen data was the sole source of our outcome measures, we briefly describe features of the dataset that substantially limit its generalizability. Only 23,448 (21.4 percent) of HARP enrollees had at least one assessment over the course of post-period; among them, the majority (16,682 representing 71 percent) only had one assessment, and most of those with more than one annual assessment only had two assessments. Moreover, HARP enrollees for whom CMH Screen data were available (CMH Screen respondents) and those for whom we lacked CMH Screen data (non-respondents) had important differences on demographic and clinical characteristics (see Appendix Table E.4). In both regions, relative to non-respondents, CMH Screen respondents were older, less likely to be white or Hispanic and more likely to be black, and more likely to have SMI or SUD diagnoses or be in poor health. In addition, with the exception of acute BH services for NYC enrollees, CMH Screen respondents had higher utilization of acute and OP care (BH and non-BH services) than non-respondents.

Quantitative Findings

Over the course of the post-period, the percentages of HARP enrollees with college or higher level of education decreased very slightly in NYC but the inverse was true in ROS (2019) (Table 4.11). The percentages of HARP enrollees in educational programs also decreased in NYC, but no changes were evident in ROS. Both regions exhibited increases in the percentages of HARP enrollees who were currently employed. All rates were numerically higher in ROS than NYC.

Table 4.11. Educational and Employment Characteristics of the HARP Population, Unadjusted Rates (Percent), by Post-Policy Year and All Years Combined, NYC and ROS

	2016	2017	2018	2019	Overall	P-value
NYC	**(N= 3,446)**	**(N= 4,902)**	**(N= 8,101)**	**(N= 12,240)**	**(N= 28,677)**	
Enrolled in Educational Program	3.85	3.24	3.33	2.88	3.18	**0.03**
Have College or More	19.8	17.7	19.0	19.6	19.2	**0.03**
Currently Employed	5.15	4.32	6.06	6.32	5.77	**0.00**
ROS		**(N=67,409)**	**(N=79,568)**	**(N=85,410)**	**(N=232,387)**	
Enrolled in Educational Program		3.86	3.75	3.81	3.80	0.95
Have College or More		25.7	24.5	26.2	25.5	**0.01**
Currently Employed		7.51	8.44	10.62	9.17	**0.00**

SOURCE: Authors' analyses of CMH Screen data (2016–2019)

NOTE: The p-value describes the statistical significance of the chi-square test that compares all annual periods together.

Summary of Findings

RQ4 Hypothesis 1: Higher rates of educational and employment attainment will be observed for the HARP enrolled population over time as the program matures; individual-level improvements will be noted

Given the limitations of the sole data source for these analyses, we are unable to substantively weigh in on the DOH's hypothesis regarding educational and employment attainment outcomes or draw any other conclusions from information collected from the CMH Screen data.

RQ5: To what extent are HARP enrollees accessing primary and/or preventive care?

This RQ included one hypothesis:

1. Percent of HARP members with primary care access will increase.

We addressed this RQ with quantitative and qualitative methods (see Table 4.6). For the quantitative analyses, we assessed annual rates of any utilization of primary and/or preventive health care among HARP enrollees over the course of the post-period and compared their utilization to that of non-HARP individuals. We evaluated this utilization using the PPCs measure created by DOH, which we inverted so that we could report receipt of primary and/or preventive care (also see Goal 1, RQ2). We were unable to conduct DiD or ITS models to assess the HARP effect on this utilization because of high rates of utilization on the matched samples (i.e., exceeded 95 percent, with sample sizes in some of the "No" cells as small as n=23 in 2016 in NYC). We do, however, report on the results obtained from our matched sample (ATC) estimation.

Adjusted Quantitative Findings

Matched sample (ATC) estimates showed no differences in utilization of primary and/or preventive services between HARP and non-HARP individuals year on year throughout the post-period (Table 4.12). For all post-period years combined, the rates were 96.8 percent (HARP) versus 96.3 percent (non-HARP) in NYC and 95.3 percent (HARP) versus 94.5 percent (non-HARP) in ROS.

Table 4.12. Primary Care Access Among HARP Enrollees, Matched Sample Rates (Percent) of Any Annual Utilization, by Post-Period Year and All Years Combined

	2016			2017			2018			2019			Overall		
	HARP	Non-HARP	P-Value	HARP	Non-HARP	P-Value	HARP	Non-HARP	P-Value	HARP	Non-HARP	P-Value	HARP	Non-HARP	P-Value
NYC, %															
Receiving primary and/or preventive care	98.8	98.2	0.13	97.8	97.3	0.26	95.1	94.5	0.24	95.1	94.7	0.63	96.8	96.3	0.23
ROS, %															
Receiving primary and/or preventive care				96.0	95.2	0.08	95.1	94.5	0.24	94.7	93.9	0.18	95.3	94.5	0.09

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)
NOTE: NYC HARP Annual N=28,308/Overall N=113,232. NYC Non-HARP Annual N=1,165/Overall N=4,660. ROS HARP Annual N=25,579/Overall N=76,737. ROS Non-HARP Annual N=2,328/Overall N=6,984.

Qualitative Findings

Barriers and facilitators to accessing primary/preventive services: HARP enrollee perspectives.

The majority of HARP enrolled interviewees reported accessing some type of physical health services, including primary care or other specialty care services. Generally, participants disclosed having some type of chronic medical condition(s) (e.g., diabetes, glaucoma, asthma) that required medical attention, ongoing management, and access to primary care services. In addition, some shared experiences with accessing specialty care services such as an ear, nose, and throat physician; neurologist; or hematologist. One benefit they perceived was increased ease in accessing services because they were often no longer required to have referrals/approvals/authorizations sent by their primary care physician.

> I can kind of dictate some things without a referral…like if I needed to go see a specialist…I can kind of just call that office and make my own appointment. [ENROLLEE-2]

> With the insurance, everything was like pre-approve[d]….There were no issues and there are no issues…So I've been very satisfied with that. [ENROLLEE-5]

Overall, HARP enrollees were satisfied with their ability to access physical health services, and only a few noted barriers. Barriers were often associated with frustration with paperwork and lengthy wait times.

> It's kind of a whole day for me to go out, but I am able to access it when I need it… For me personally, the wait times and sometimes the volume of paperwork that should kind of already be in the system a lot of the time, or like having these repeat things, that that's the most annoying thing about my insurance at least. [ENROLLEE-2]

Some HARP enrollees expressed significant preference for being able to see the same primary care physician over time and thus maintain a relationship and continuity of care. Engaging with clinics or services where providers frequently rotated was therefore more challenging and deterred some from continuing to access care.

> I haven't seen a general practitioner in a while…They all were all rotators; you weren't going to see the same one each time and so I just kind of gave up. [ENROLLEE-3]

> I haven't made an appointment to see any of their primary doctor[s] because I want to make sure that I am not hopping around from doctor to doctor. I'd rather wait to have a doctor that would be staying at each site, and I would rather not go to the clinic and rather just wait for a doctor that is going to be there. [ENROLLEE-6]

The quality of the relationship with their primary care doctor was another influential factor, and HARP enrollees discussed spending time trying to find the right fit.

> I started out at a larger clinic, and I was being seen by a nurse practitioner that I really didn't connect with and I found that my services weren't kind of being coordinated… Then I tried another doctor… She prescribed me a medication. And when I went to review it with the pharmacist, he said that this medication she had prescribed was not going to address [my] symptoms…[So] then, I went to [another] physician and his answer to everything was that I was overweight…And then I found my [current] doctor…His staff is just excellent. And the doctor himself is easy to talk to, he listens to you, he kind of weighs options. You tell him what you're thinking, he tells you what he's thinking, and you agree on a plan, more of a two-way street. [ENROLLEE-9]

While participants were generally satisfied with the extent of coverage offered by their MCO, some participants described instances in which efforts to access services or treatment was impacted by lack of coverage from their insurance company. For example, changes in coverage resulted in some HARP enrollees not being able to access medication from their local pharmacy and having to work with an alternate pharmacy, which could be particularly burdensome for those who do not live in urban areas.

Barriers and facilitators to HARP enrollees accessing primary/preventive care: Key Informant Perspectives.

Informants highlighted several positive developments with HARP, Health Homes, and Care Coordination that increased integration of care, including raising awareness, knowledge, and conversations regarding physical health, which set the stage for a more holistic approach to care.

> The triple aim of integration with medical and mental health, I think that care coordination has done a lot to move that forward…We're talking about medical appointments in a different way. We're recognizing how physical health impacts mental health… Even just in our conversations, care coordinators are bringing up medical issues that we wouldn't have talked about in the past…If they're having a conversation with the doctor's office…we're getting information that we weren't getting before. There's sort of this link between primary care—an additional link between primary care and the psych care that wasn't there before because the care coordinators are well trained in knowing how to give us that information. [BHP-35]

> In case management, all we did was just focus on mental health…We treat the client as a whole now… We've now had nurse care managers on our team to help us with that. A lot more training that we've done in terms of the medical part… because we have to explain to our clients why it is so important for them to make these appointments and making sure your diabetes is being taken care of. [HH/CMA-7]

MCOs also shared their perceptions of how this integration of care at the level of the MCO/insurance plan has the potential to impact access to physical health care.

> All of our HARP members have a dedicated care manager at [our MCO]…We still have a process of how we manage tracking their doctor's appointment or pharmacy. So we can tell if they're in need of something, and this might be an opportunity to engage them further… We do clinical rounds on them more so than our other BH members. And so those rounds can be interdisciplinary where you have the HARP care manager, a psychiatrist, a physical health MD…trying to suggest interventions…For HARP, there's expectations of the care managers that they're reviewing somebody's full needs... and that they're connecting them to a comprehensive care. They're pulling in potentially a case manager from our medical side of the house…Also, with pharmacy being able to identify if medications have been picked up. If they haven't been, then what the gap may be…The HEDIS quality measures are really about population health expectations, and so being able to see that there's a gap that somebody made it into a measure but didn't complete what they needed to for that measure… We're able to reach out to that member…we're also notifying those providers in the community of other gaps…. [MCO-32]

Informants also identified ways to further increase access to physical health care, such as providing training to care coordinators on how to better support members who are not yet willing to engage with primary care and expanding the use of telehealth and acceptance of verbal consent.

> What if the client doesn't want to be engaged in primary care?... I try to teach the staff that if the direct goal, which would be engagement of care…is not an

> option, you got to find out, "Why not?"… If they're not going to go—start with an education goal and that's it—simple! Just get the person some education over the next couple of months as to why it's important that they get care. [HH-19]

> Allowing verbal consent for more things to be accepted. I think it will allow for quicker connection with clients, as we have a complex transportation system and a lot of clients live in buildings where the intercom is not working, and we can't get in. Allowing for telehealth and verbal consent…can improve the timeliness for actions to care. [HH-26]

Summary of Findings

RQ5 Hypothesis 1: Percent of HARP members with primary care access will increase

Our findings provide inconclusive evidence regarding the DOH's hypothesis. Adjusted analyses in the HARP enrollee subpopulation with similar characteristics as the non-HARP population showed no differences in primary care utilization between HARP enrollees and non-HARP individuals; however, this finding should be interpreted with caution given previously discussed methodological concern*s* (Section 3.3). Qualitative findings, both from interviews with HARP enrollees and key informants, suggest that the transition to MMC may have facilitated access to primary and/or preventive care for the HARP population, but enrollees described some persistent barriers.

RQ6: To what extent are HARP enrollees accessing community-based BH specialty services (ACT, PROS, OMH Outpatient Clinic, Continuing Day Treatment, Partial Hospitalization, OASAS Opioid Treatment Program, OASAS Outpatient Clinic, and FEP programs)?

This RQ included one hypothesis:

1. Access to and utilization of BH specialty services will increase.

We addressed this RQ with quantitative and qualitative methods (see Table 4.6). For the quantitative analyses, we assessed annual rates of any utilization of community-based BH specialty services among HARP enrollees over the course of the post-period and compared their utilization to (a) that of HARP-eligible beneficiaries not enrolled in HARP (non-HARP individuals), with findings only applicable to the HARP population with similar characteristics as the eligible-not-enrolled (DiD) and (b) their own during the early pre-period (ITS).

Our analyses focused on services listed in the RFP and of primary interest to the DOH (ACT, PROS, OMH Outpatient Clinic, CDT, Partial Hospitalization, OASAS Opioid Treatment Program, OASAS Outpatient Clinic, and FEP programs). In addition, we evaluated the following smaller programs identified in collaboration with OMH and OASAS: OASAS Residential Program services; BH HCBS, with the exception of crisis respite services; and several programs that we have captured through a composite measure we refer to as *Other Community-based BH services* (OMH and OASAS CCBHC services, OMH Intensive Outpatient Program services, OMH Intensive Psychiatric Rehabilitation Program services, and Mental Health and SUD Non-

Licensed Clinics). Among these small programs, we only report separate rates of utilization for the composite measure (Other Community-Based BH services) given its robust utilization; the other two programs (OASAS Residential, BH HCBS other than crisis respite services) are included in the larger composite measure that captures utilization of any of these key services (Any Key BH OP Services). Due to the extremely low utilization of FEP, with no enrollees utilizing these services in NYC and only two enrollees utilizing these services in ROS, the larger composite measure excludes FEP utilization.

Adjusted Quantitative Findings

Difference-in-Differences Model

These analyses were conducted among cohort members with the demographic and clinical characteristics of the non-HARP population and compared outcomes for HARP enrollees relative to non-HARP individuals in each post-period year (Table 4.13).

Table 4.13. Probability of Utilization of Selected Community-Based BH Specialty Services, HARP Enrollees vs. Non-HARP Individuals, by Post-Period Year, NYC and ROS

	Post-Period Year 1		**Post- Period Year 2**		**Post- Period Year 3**		**Post- Period Year 4**	
Estimate (SE)	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**
NYC								
Any Key BH OP Services*	3.07 (1.51)	**0.04**	3.37 (1.51)	**0.03**	1.27 (1.51)	0.40	3.75 (1.52)	**0.01**
Other Community-Based BH Services*	2.69 (1.91)	0.16	3.21 (1.91)	0.09	2.51 (1.91)	0.19	5.83 (1.92)	**0.00**
OASAS Opioid Treatment Program*	0.01 (0.74)	0.99	-0.31 (0.74)	0.68	-0.11 (0.74)	0.88	-0.99 (0.74)	0.18
OMH OP Clinic*	1.56 (1.87)	0.40	1.78 (1.87)	0.34	0.43 (1.87)	0.82	0.52 (1.88)	0.78
OASAS OP Clinic*	0.40 (0.99)	0.69	0.63 (0.99)	0.52	0.89 (0.99)	0.37	0.83 (1.00)	0.40
Health Home Enrollment**	6.12 (1.91)	**0.00**	10.3 (1.91)	**0.00**	12.1 (1.92)	**0.00**	11.0 (1.92)	**0.00**
ROS								
Any Key BH OP Services*	0.16 (1.14)	0.89	0.22 (1.15)	0.85	1.53 (1.15)	0.18		
Other Community-Based BH Services*	-0.54 (1.33)	0.68	-2.25 (1.33)	0.09	-2.95 (1.33)	**0.03**		
OASAS Opioid Treatment Program*	0.26 (0.50)	0.60	0.22 (0.50)	0.65	0.32 (0.50)	0.52		
OMH OP Clinic*	-0.54 (1.33)	0.68	0.59 (1.33)	0.66	2.63 (1.33)	**0.05**		
OASAS OP Clinic*	0.40 (0.86)	0.64	0.61 (0.86)	0.48	0.75 (0.86)	0.39		
Health Home Enrollment**	5.83 (1.36)	**0.00**	8.47 (1.36)	**0.00**	9.77 (1.36)	**0.00**		

*NYC N=35,899, ROS N=60,779
**NYC N=35,899, ROS N=60,779
SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

In NYC, HARP enrollees had a higher probability than non-HARP individuals of utilizing Any Key BH OP services throughout the post-period with the exception of the third post-period year. While HARP enrollees' higher probability of utilizing such services relative to non-HARP individuals was 3.07 percent (1.51) in the first post-period year (2016), it was 3.75 percent (1.52) by the last (and fourth) post-period year (2019). HARP enrollees also had a higher probability of utilizing Other Community-Based BH services than non-HARP individuals, but this advantage emerged only in the last post-period year (5.83 percent (1.92)). There were no differences between the HARP-enrolled and non-HARP groups in their probability of utilizing OMH Outpatient Clinic, OASAS Opioid Treatment Program, or OASAS Outpatient Clinic services.

In ROS, relative to non-HARP individuals, HARP enrollees had a 2.95 percent (1.33) lower probability of utilizing Other Community-Based BH services but a 2.63 percent (1.33) higher probability of utilizing OMH Outpatient Clinic services in the last (and third) post-period year (2019).

Interrupted Time Series Model

These analyses were conducted for all HARP enrollees in our cohort and compared their outcomes in each post-period year relative to the first year of the pre-period (2014 in NYC and 2015 in ROS) (Table 4.14).

In NYC, HARP enrollees had a 1.52 percent (0.29) lower probability of utilizing Any Key BH OP services in the first post-period year (2016) relative to the pre-period (2014). Their probability of utilizing Any Key BH OP services relative to 2014 declined steadily over the course of the post-period; by the last (and fourth) post-period year (2019), HARP enrollees had a 4.38 percent (0.29) lower probability of utilizing such services. Similar patterns were observed for their probability of utilizing OMH Outpatient Clinic and OASAS Outpatient Clinic Services, which were, respectively, 8.10 percent (0.39) and 2.67 percent (0.22) lower in the last post-period year (2019) relative to 2014. However, HARP enrollees' probability of utilizing Other Community-Based BH Services grew steadily during the post-period. In 2016 (the first post-period year), they had a 3.58 percent (0.40) higher probability of utilizing such services relative to 2014. That probability increased to 9.80 percent (0.40) by the last post-period year (2019). HARP enrollees' probability of utilizing OASAS Opioid Treatment Program did not change during the post-period relative to 2014.

Similar patterns were observed for ROS. HARP enrollees' probability of utilizing Any Key BH OP Services, OMH Outpatient Clinic Services, and OASAS Outpatient Clinic Services declined steadily over the course of the post-period relative to the pre-period (2015). HARP enrollees' probabilities of utilizing those three services were 5.13 percent (0.33), 11.94 percent (0.40), and 4.96 percent (0.26) lower, respectively, by the last (and third) post-period year (2019) relative to 2015. HARP enrollees in ROS also had a higher probability of utilizing Other Community-Based BH Services in the post-period relative to 2015, and as observed for NYC enrollees, it also increased over time, from 5.66 percent (0.41) in 2017, the first post-period year, to 9.37 percent (0.41) in 2019, the last post-period year.

Table 4.14. Probability of Utilization of Selected Community-Based BH Specialty Services and Health Home Services, HARP Enrollees, by Post-period Year Relative to Early Pre-period, NYC and ROS

	Post-Period Year 1		Post- Period Year 2		Post- Period Year 3		Post- Period Year 4	
Estimate (SE)	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**
NYC								
Any Key BH OP Services*	-1.52 (0.29)	**0.00**	-2.58 (0.29)	**0.00**	-3.72 (0.29)	**0.00**	-4.38 (0.29)	**0.00**
Other Community-Based BH Services*	3.58 (0.40)	**0.00**	3.72 (0.40)	**0.00**	6.23 (0.40)	**0.00**	9.80 (0.40)	**0.00**
OASAS Opioid Treatment Program*	0.01 (0.17)	0.97	-0.17 (0.17)	0.31	-0.03 (0.17)	0.84	-0.11 (0.17)	0.50
OMH OP Clinic*	0.88 (0.38)	**0.02**	-1.65 (0.38)	**0.00**	-4.74 (0.39)	**0.00**	-8.10 (0.39)	**0.00**
OASAS OP Clinic*	-0.88 (0.22)	**0.00**	-1.83 (0.22)	**0.00**	-2.62 (0.22)	**0.00**	-2.67 (0.22)	**0.00**
Home Health Enrollment**	16.1 (0.41)	**0.00**	19.6 (0.41)	**0.00**	18.7 (0.41)	**0.00**	16.0 (0.41)	**0.00**
ROS								
Any Key BH OP Services*	-0.86 (0.33)	**0.01**	-2.41 (0.33)	**0.00**	-5.13 (0.33)	**0.00**		
Other Community-Based BH Services*	5.66 (0.41)	**0.00**	8.49 (0.41)	**0.00**	9.37 (0.41)	**0.00**		
OASAS Opioid Treatment Program*	0.51 (0.13)	**0.00**	0.75 (0.13)	**0.00**	0.93 (0.13)	**0.00**		
OMH OP Clinic*	-0.81 (0.40)	**0.04**	-5.82 (0.40)	**0.00**	-11.94 (0.40)	**0.00**		
OASAS OP Clinic*	-1.16 (0.26)	**0.00**	-2.75 (0.26)	**0.00**	-4.96 (0.26)	**0.00**		
Home Health Enrollment**	11.3 (0.43)	**0.00**	13.7 (0.43)	**0.00**	11.7 (0.43)	**0.00**		

*NYC N= 158,994, ROS N= 123,670
**NYC N= 159,047, ROS N= 123,774
SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Matched Sample Estimates

Because we were unable to model utilization of infrequently utilized services of interest to the DOH, we present matched sample (ATC) estimates for those services, with results applicable to the HARP population with similar characteristics as the non-HARP population (Appendix Table E.7). Among the relevant community-based BH specialty services, the only differences in utilization between HARP enrollees and non-HARP individuals were observed for ACT and only in NYC. For all post-period years combined, ACT utilization rates were higher for HARP enrollees, 2.88 percent versus 1.97 percent for non-HARP individuals.

Qualitative Findings

Barriers and Facilitators to HARP Enrollees Accessing Specialty BH Services: Key Informants' Perspectives

Key informants identified several factors that impacted HARP enrollees' access to a range of services and overall management and quality of care that cut across multiple types of services. These included HARP enrollees being unaware that they are enrolled in a HARP, varying relationships and levels of involvement of MCOs with respect to HARP and provider agencies, the role of having a system where multiple entities are involved in HARP enrollees' care, and concerns regarding an escalating climate of competition among providers.

While passive enrollment, in particular, was credited with high HARP enrollment and minimal disruption in care, informants also highlighted how it could be an overarching challenge to expanding access to services. They explained that, as a result of the passive enrollment process, many members did not know they were enrolled in HARP or did not fully understand what it meant or offered, and thus they were unaware that they were eligible, or potentially eligible, for enhanced access to services.

> Ideally you don't even notice that anything changed. But that's also the downside, because it means that you don't realize that you actually are entitled to this care management and potentially to these other services unless the plan, or the state, or the Care Management Agency, or whatever, are successful in reaching out to you and getting you on the phone and kind of providing that education piece… These folks really didn't even know that this had happened… You don't know what you're not getting. [PTAO-34]

As noted in Goal 1, administrative burden and relationships with MCOs were highlighted as overarching factors potentially impacting how members access services, the timeliness of access, and how care is managed across the entire system. As pertains to RQ 6, informants similarly emphasized the need to develop more uniform and streamlined protocols across MCOs.

Factors that helped strengthen communication and coordination around HARP specifically included MCOs having a team dedicated to HARP, as well as care management agencies and providers being able to develop more direct relationships with MCO staff. This was cited as benefiting both providers and members.

> What I think is most necessary or actually most efficient is having a [HARP] dedicated team… A lot of times…people who pick up the phone at the MCOs, don't know what HARP is or don't know what a health home is…Whenever there isn't a team dedicated to HARP, it makes things much more difficult. [BHP-17]

Informants also described different degrees to which MCOs more closely and intensively monitored and managed the service utilization, care, and outcomes of HARP enrollees.

> We were thinking that…managed care plans would…monitor the HARP population and their behavioral health services and processes, and help them more closely than they would if the person was in a mainstream plan… I think it varies by the plan: Some plans seem to really pay attention to it, others not much. [SA-11]

> [Mainstream members] have the same amount of psychiatric coverage and case consultation, the rounds that we have. If you're a mainstream member, you're eligible for the rounds as if you're a HARP member. I kind of think the two major things [differentiating HARP members] are access to HCBS and perhaps a little more case management. [MCO-28]

> To drive plan function around quality improvement, care management best practices, specialized monitoring and reporting all the technical stuff that goes into addressing the needs of a high-risk population…having members in their own plan has been critical for that. Otherwise, we're really left with less tools to identify where the high needs are in a huge population through lots of different approaches and different algorithms and different factors at every plan may apply.…There's more structure to what's offered and what's valuable in HARP…And being able to have some of the quality measures that are specific to this population really helps us put our arms around what their needs are and tailor our efforts. [MCO-32]

While some informants described having engagement with MCO data analytics, others mentioned less consistency in the extent to which providers had ready access to data that could inform care and decisionmaking.

> How often do we really get a report that says "Hey, we do this, this is going to work great" because the insurance company is a proprietary, so they're not necessarily sharing those types of analytics across the board. Insurers should be having these conversations with us, and that doesn't happen very often, if at all. [BHP-17]

Informants also discussed the potential impact of having multiple entities involved across the spectrum of HARP. On the one hand, they noted it could increase access to care by making it less likely that a participant could fall through the cracks with multiple touch points, and that members could more easily have a range of need addressed. On the other hand, they were concerned that it created a complex system for everyone—providers and participants—to navigate, potentially making access to care more challenging.

> I think that it has helped because it actually brings more people to the attention of clients as they're going through the system…[it helps to] actually monitor a lot more effectively…You have people that's assigned to individuals…especially those that are high utilizers of services. [SA-10]

> [It's] complicated! There's a lot of different players involved for the one client's care…There's definitely a lot of [challenges] sometimes, just because of having multiple entities working…for the client and just very complex system in terms of documentation, and file keeping…What I see more of now is that there are multiple touch points [that] clients…have to move through to get certain services… I think from a client's standpoint, it is very confusing—because

> there's a HARP care manager assigned by the MCO, then there is a HARP care manager assigned by the associated care management agency...[HH-26]
>
> You have this independent entity: the health home. But then the health home subcontracts it out to [a care] management agency…So you actually have like these three different layers. And depending upon the plan and the individual, they might actually have multiple care managers. There might be someone at the plan and someone at the CMA…it just creates extra layers of complexity. [PTAO-34]

A final overarching challenge described by informants was an increasing atmosphere of competition among providers that rippled through all levels of the system. While this climate had emerged prior to HARP, it was seen as further exacerbated by the changes brought on by HARP. This push towards competition among Health Homes, CMAs, and providers was perceived as increasingly concentrating services among select agencies that were already larger and better resourced, and as potentially impacting access and quality of behavioral health services.

> I have strong concerns with the direction of behavioral health services…what's happening is a lot of money is going towards these larger agencies…I think there's going to be a few large agencies that are going to operate everything in the next 7–10 years, which I don't think is good for the people we serve, and I don't think it's good for taxpayer money being used in that direction. [BHP-22]
>
> [OMH] were saying like, "Well, if you're not a 50-million-dollar agency, you're not going to be here in four years…" They were literally telling all of us that we should all merge because we were never going to survive this competition. And that was a theme that was repeated over and over and over again…They need to be more mindful that we are a group of providers that have been consistently underfunded and under-supported for decades. And to then pit us against each other while we're watching agencies...fold…People don't work well in a fear-based environment. [BHP-35]
>
> Especially through our homeless drop-ins and such…with health homes because they stand to get so much money…they're fighting for space, they have their outreach workers…buying them shirts, offering them the world to enroll in their health home…just really presenting this sales marketing package to the person, which is all well and good I think…because people are super happy, but then they never deliver on it. So people never know that they're enrolled into a health home or what they're getting from them. [BHP-22]

To continue to enhance access to services for HARP enrollees, key informants highlighted the need for more proactive and direct outreach to HARP enrollees; expansion of practices and structures that facilitate stronger relationships between MCOs, HARP enrollees, and providers (e.g., HARP-dedicated teams); developing more efficient methods and protocols for communication across multiple entities; and mitigating the developing climate of competition among providers and the subsequent increased concentration of services among fewer agencies.

> My vision…would be like a chat room option for each person who's enrolled into these services and providers could just chat in and everybody in the provider team would get it. So I could say, "Hey, we scheduled John's HCBS service visit

> for the 14th," and his care manager would get an alert, his therapist would get an alert. "Hey, has anybody heard from John? He didn't show up for his appointment, his number's been disconnected" and they all get this alert….So, I think getting a platform that would allow that instant messaging, chatting function, with HIPAA compliance and even if you have one, you have to have multiple agencies' compliance officers agree that its compliant, so I think that's probably the largest [barrier] is having a platform to host in. [BHP/CMA-23]

Summary of Findings

RQ 6 Hypothesis 1: Access to and utilization of BH specialty services will increase

The findings generated by our analyses of HARP enrollees' utilization of community-based BH specialty services do no support the DOH's hypothesis. The quantitative analyses showed that utilization of key services declined over the course of the post-period in this population. However, among HARP enrollees with similar characteristics as the non-HARP population, these declines were generally less pronounced for HARP enrollees relative to non-HARP individuals. An exception was utilization of Other Community-Based BH services, an umbrella category grouping several small programs such as CCBHC services and Non-Licensed Clinics, which increased over time for the full HARP enrollee group and likely did too for the non-HARP group. Matched sample analyses for infrequently utilized programs we were unable to model uncovered higher rates of ACT utilization for HARP enrollees relative to non-HARP individuals in NYC, a finding that is consistent with our Goal 1 findings. In our interviews, HARP enrollees and key informants both suggested positive impressions of access to services through the HARP program, though continuing challenges were also identified. For instance, key informants noted several factors that influence BH service access including the degree to which MCOs developed internal HARP expertise and HARP-dedicated teams, extent of successful collaboration across multiple entities across the system, and an emerging climate of competition and consolidation among providers. Some key informants stressed that the impacts on the delivery system may only become apparent over a longer time period.

RQ7: To what extent are HARP enrollees accessing Health Homes for care coordination?

This RQ included one hypothesis:

1. Access to care coordination services will increase in terms of Health Home engagement for HARP members.

We addressed this RQ with quantitative and qualitative methods (see Table 4.6). For the quantitative analyses, we evaluated annual rates of any utilization of Health Home services among HARP enrollees over the course of the post-period and compared their utilization to (a) that of HARP-eligible beneficiaries not enrolled in HARP (non-HARP individuals), with findings only applicable to the HARP population with similar characteristics as the eligible-not-enrolled (DiD) and (b) their own during the early pre-period (ITS).

Adjusted Quantitative Findings

Difference-in-Differences Model

These analyses were conducted among cohort members with the demographic and clinical characteristics of the non-HARP population and compared Health Home utilization for HARP enrollees relative to non-HARP individuals in each post-period year (Table 4.12).

In both NYC and ROS, HARP enrollees had a higher probability than non-HARP individuals of utilizing Health Home services, and this advantage grew throughout the post-period. In NYC, relative to non-HARP individuals, HARP enrollees had a 6.12 percent (1.91) higher probability of utilizing such services in the first post-period year (2016) and a 11.0 percent (1.92) higher probability by the last (and fourth) post-period year (2019). In ROS, relative to non-HARP individuals, HARP enrollees had a 5.83 percent (1.36) higher probability of utilizing Health Home services in the first post-period year (2017) and a 9.77 percent (1.36) higher probability in the last (and third) post-period year (2019).

Interrupted Time Series Model

These analyses were conducted for all HARP enrollees in our cohort and compared their Health Home utilization in each post-period year relative to the first year of the pre-period (2014 in NYC and 2015 in ROS) (Table 4.13).

The ITS model results aligned with the DiD findings: In both regions, HARP enrollees had a higher probability of utilizing Health Home services each year of the post-period relative to 2014 (NYC) and 2015 (ROS). In both regions, HARP enrollees' higher probability of utilizing Health Home services relative to the early pre-period grew somewhat over the course of the post-period but ended at roughly the same percentage difference by the last post-period year (2019): 16.0 percent (0.41) in NYC, 11.7 percent (0.43) in ROS.

Qualitative Findings

Barriers and Facilitators to Care Coordination (Health Homes) Services: Key Informants' Perspectives

Key informants noted that initial challenges to accessing care coordination services were related to challenges with Health Home enrollment. These barriers occurred across three separate entities (HH, CMAs, and MCOs) as they learned to work together toward the same goal.

> It probably took about three years…for a health home manager to call a MCO and for the MCO who's answering the call to figure out who they actually need to speak to in regards to HARP. There's a huge disconnect on the obligation and responsibility of health homes…It definitely has improved… It took them a few years to understand HARP and what their roles are in working with the clients and/or the MCOs. It's definitely a learning curve. [HH-26]

While there were originally three routes of referral of HARP enrollees to Health Homes—"top-down" lists from the DOH or MCOs; referrals from entities such as hospitals, doctor's offices, or other community organizations; and direct outreach to recruit members—rates of successful linkage varied greatly based on the referral method. The top-down referral process eventually led to very low rates of care coordination enrollment, often attributed to lists having insufficient or outdated information for reaching HARP enrollees, as well as for casting too wide a net without consideration for enrollees' potential interest in the service. Informants noted that the lists had "dried up" and were no longer being used as referrals.

> When we used to get the majority of our referrals from the state, from the Department of Health, or even from the managed care companies—our success rate was extremely low. The information that they were able to provide to us was from outdated claims information…People hadn't lived at that address for years, or telephone numbers are disconnected. [CMA-2]
>
> When they just send the full list [of] people who are [HH] eligible and HARP [enrolled], those are the ones that are typically a lot harder to engage… These lists don't seem to be members who are actively seeking services. [HH-16]

Key informants noted that developing a more targeted approach to top-down referrals could facilitate enrollment, suggesting that MCO HARP care managers could provide direct referrals of HARP enrollees with whom they have recently had contact and who may be interested in additional services.

> We would love to have direct referrals…from the HARP care managers that are talking with their clients regularly—that are HARP enrolled, that need to get to HCBS. [BHP/CMA-18]
>
> More recent [MCO lists] of these are people hospitalized, in ER, in this particular time [would help]…Even if they had their own algorithm of people that they've deemed to be at higher risk who are disconnected. [BHP-12]

Successful linkage to care coordination was often attributed to having referrals from other providers, particularly those who could participate in an introductory "warm hand-off" to care coordinators and having access to completed paperwork for referrals.

> Probably our highest success rate—if an OP provider [is the referral source]. Someone that can stay with the client, someone the client has developed a relationship with and that they can then introduce us. [CMA-2]

Many, though not all, care management agencies also found it beneficial to conduct their own direct outreach for recruitment. They described various ways in which they used a "feet on the street" approach for HARP enrollees, including partnering with community agencies and embedding staff within those agencies, attending health fairs and community events, or applying for a street outreach grant to better engage transient populations, such as people experiencing homelessness.

From key informants' perspective, difficulties with explaining care coordination, distinguishing it from other services, and highlighting its potential benefits was another barrier to enrollment in care coordination. They noted that many HARP enrollees did not perceive a need for care coordination or for another provider in their lives.

> I think a lot of people don't understand why they even need this. Some folks have care managers through their housing programs, or other programs, and they're like, "What is this person doing for me that…all the other people in my team aren't doing?" …I think a lot of folks don't like the idea of having another person even if they understand what the role is…[PTAO-34]

Key informants also noted that some HARP enrollees were hesitant to start anew with providers, finding the enrollment process and ongoing check-ins invasive, while others, in contrast, became frustrated by lack of care coordinator involvement.

> Care management is a little invasive. They check on you a lot…and they're supposed to, that's kind of the point, right? But that constant phone call and …[other] people sign up for that, and want that, and don't get that…A lot of the care managers had max caseloads and they didn't have the time to meet with people…It was how it was the first year or two of health homes. So, a lot of people had a bad experience with health homes. [BHP-14]

To address HARP enrollees' reluctance to engage with yet another provider and difficulties distinguishing care coordination from a myriad of other services, key informants emphasized the importance of a tailored approach to enrollment—one that emphasizes how care coordination can provide a specific service that matches a particular HARP enrollee's needs and goals.

> What we've learned is that the more concrete you can be, the more likely you are to get a client on board. So saying, "Do you have a PCP that you see, do you have a psychiatrist, are you connected to specialty providers?"…We also try to hit the things that people are most interested in. So, if a client has unstable housing, we can help you through the housing process and stuff like that. [CMA-2]

Experiences with Care Coordination (Health Homes) Services: HARP Enrollee Perspectives

Many HARP enrollees expressed positive views of care coordination and its role in helping them access care. HARP enrollees described care coordinators as accessible and articulated how care coordinators helped them find providers, facilitated appointments, and coordinated a range of information relevant to members' care.

> They can advocate for you…like setting up appointments for you…Through coordination, I've managed to find resources for myself in mental health… finding a different psychiatrist…The care [coordinator] was able to provide referrals to [a] respite center. That was good. They helped me to navigate crises while I was homeless and also post-homelessness as well. And he would connect me to training programs throughout the city…And it's just always very accommodating of my emotional needs as I was navigating life…act as a medical liaison, for my appointments as well between city agencies. [ENROLLEE7]
>
> She checks in every month. She asks if you need any doctor, do you need this, do you need that. Yes, she's on it. If I needed something, she would get back with me. [ENROLLEE-3]

However, some HARP enrollees also identified challenges in working with their care coordinator, such as lack of rapport hindered by administrative duties (e.g., assessments) or limited accessibility outside of the standard check-ins.

> I think every six months, [we] update on goals or stuff like that…They ask me the same stupid questions, like I don't do drugs and I don't drink, but they keep asking me, so we have to go through the whole process…It's unnecessary to ask me, it takes up time and it's annoying. [ENROLLEE-4]

> I definitely feel as though I'm being heard effectively. I definitely feel like when there is an issue, he can mediate it. It's just a matter of…being available, like having the availability to connect with them to create the linkages to services. [ENROLLEE-7]

Though not common, HARP enrollees also noted that care coordinators sometimes had limited access to information across all the providers in their lives, which made the process more challenging, or they expressed frustration with care coordinators' lack of follow-through on tasks.

> The only problem is…if they don't talk to each other…they're not aware of what you're getting from in the same company…I think that they should have a file where they can look you up…to see what you're getting. So they're aware of your whole 360, of what's going on in your life. [ENROLLEE-3]

> For the second time, I am asking for a transfer from my case coordinator. [What] I feel is that I am doing more of the work than I should have to and that just defeats the whole purpose…Yes of course, I have to get her basic information in terms of what my appointments are, but then she could make them for me. But I don't feel like I [should] have to constantly remind her to make the appointment…I was becoming more stressed with this particular case coordinator that I have now…I don't feel a connection. [ENROLLEE-6]

Summary of Findings

RQ 7 Hypothesis 1: Access to care coordination services will increase in terms of Health Home engagement for HARP members

Our analyses are largely supportive of the DOH's hypothesis. Findings from quantitative analyses indicated higher utilization of Health Home services for HARP enrollees, relative to both non-HARP individuals (among HARP enrollees with similar characteristics as the non-HARP population) and the early pre-period (full HARP enrollee population). Although HARP enrollees reported generally positive experiences with Health Home care coordination, key informants focused on the challenges that have complicated beneficiary enrollment in Health Homes. These included varying degrees of success with different referral mechanisms, learning curves amid involvement of multiple entities, high caseloads, and difficulties of distinguishing HH care coordination from other services. They also noted facilitators, which included warm hand-offs from known providers, direct outreach by care management agencies, and focusing on how care coordination can support participants with their concrete personalized goals.

RQ8: To what extent is HARP quality of care improving, especially related to the HEDIS measures of health monitoring, prevention, and management of BH conditions, cardiovascular disease, asthma, diabetes, and other selected chronic health conditions?

This RQ included one hypothesis:

1. The HEDIS® / QARR quality profiles for HARP plans will improve over time as the program matures.

We addressed this RQ with quantitative methods (see Table 4.6). We assessed several measures of quality of care among HARP enrollees and compared their performance over the course of the post-period to (a) that of HARP-eligible beneficiaries not enrolled in HARP (non-HARP individuals), with findings only applicable to the HARP population with similar characteristics as the eligible-not-enrolled (DiD) and (b) their own during the early pre-period (ITS).

Our analyses focused on ten MMC plan-reported HEDIS/QARR measures of BH and PH care captured as annual percentages of enrollees meeting the specific quality domain, selected by DOH due to their significance for the HARP population (see Section 3.3). Briefly, the measures are: Adherence to Antipsychotic Medications for People with Schizophrenia; Antidepressant Medication Management, Acute; Antidepressant Medication Management, Any; Cardiovascular Monitoring for People with CVD and Schizophrenia; Diabetes Monitoring for People with Diabetes and Schizophrenia; Diabetes Screening for People with Schizophrenia or Bipolar Disease (who are using antipsychotic medication); Medication Management for People with Asthma, 50 Percent Compliance; Medication Management for People with Asthma, 75 Percent Compliance; Comprehensive Diabetes Screening, Received HbA1c; and Comprehensive Diabetes Screening, Overall.

Adjusted Quantitative Findings

Difference-in-Differences Model

These analyses were conducted among cohort members with the demographic and clinical characteristics of the non-HARP population and compared quality outcomes for HARP enrollees relative to non-HARP individuals in each post-period year (Table 4.15).

In both NYC and ROS, HARP enrollees were more likely to meet the measure that assesses Antidepressant Medication Management, Acute, than non-HARP individuals. Specifically in NYC, HARP enrollees had a 29.31 percent (10.09) higher probability than non-HARP individuals of meeting the measure in the last (and fourth) post-period year (2019), and in ROS

Table 4.15. Probability of Meeting Specific Quality Measures, HARP Enrollees vs. Non-HARP Individuals, by Post-Period Year, NYC and ROS

	Post-Period Year 1		Post- Period Year 2		Post- Period Year 3		Post- Period Year 4	
NYC Estimate (SE)	HARP	P-Value	HARP	P-Value	HARP	P-Value	HARP	P-Value
Adherence To Antipsychotic Medication for People with Schizophrenia (N= 10,630)	-1.04 (3.46)	0.76	1.96 (3.45)	0.57	2.44 (3.49)	0.49	0.37 (3.54)	0.92
Antidepressant Medication Management, Acute (N=2,320)	5.85 (8.64)	0.50	14.0 (8.53)	0.10	12.1 (9.17)	0.19	29.3 (10.09)	**0.00**
Antidepressant Medication Management, Any (N=2,320)	11.8 (8.47)	0.16	7.04 (8.36)	0.40	12.8 (8.98)	0.15	13.0 (9.89)	0.19
Cardiovascular Monitoring for People With CD and Schizophrenia (N=454)	18.5 (14.56)	0.20	8.02 (13.75)	0.56	20.9 (13.29)	0.12	4.53 (13.91)	0.74
Diabetes Monitoring for People with Diabetes and Schizophrenia (N=3,121)	7.20 (5.87)	0.22	0.54 (5.67)	0.92	15.6 (5.68)	**0.01**	9.09 (5.90)	0.12
Diabetes Screening for People with Schizophrenia and Bipolar Disorder (N=10,683)	1.31 (3.10)	0.67	0.02 (3.12)	1.00	2.19 (3.18)	0.49	-1.71 (3.18)	0.59
Medication Management for People with Asthma - 50% Compliance (N=1,948)	-0.17 (7.11)	0.98	-7.46 (7.71)	0.33	-17.0 (7.39)	**0.02**	-6.33 (7.78)	0.42
Medication Management for People With Asthma - 75% Compliance (N=1,948)	10.0 (8.25)	0.23	-10.8 (8.94)	0.23	-8.32 (8.57)	0.33	-8.22 (9.02)	0.36
ROS Estimate (SE)								
Adherence To Antipsychotic Medication for People with Schizophrenia (N=10,087)	1.24 (3.19)	0.70	1.40 (3.18)	0.66	1.11 (3.25)	0.73		
Antidepressant Medication Management, Acute (N=5,137)	6.96 (5.12)	0.17	13.1 (5.48)	**0.02**	2.17 (5.25)	0.68		
Antidepressant Medication Management, Any (N=5,137)	0.45 (4.95)	0.93	4.97 (5.29)	0.35	4.44 (5.07)	0.38		
Cardiovascular Monitoring for People with CD and Schizophrenia (N=340)	-22.4 (21.74)	0.30	-22.4 (21.06)	0.29	-17.6 (18.34)	0.34		
Diabetes Monitoring for People with Diabetes and Schizophrenia (N=2,769)	-1.97 (6.65)	0.77	-4.65 (6.30)	0.46	-2.69 (6.60)	0.68		
Diabetes Screening for People with Schizophrenia and Bipolar Disorder (N=13,750)	-0.46 (2.59)	0.86	-1.43 (2.61)	0.58	-1.31 (2.66)	0.62		
Medication Management for People with Asthma - 50% Compliance (N=1,617)	-4.81 (8.50)	0.57	-6.65 (8.50)	0.43	-18.1 (8.83)	**0.04**		
Medication Management for People with Asthma - 75% Compliance (N=1,617)	-11.6 (9.11)	0.20	-7.67 (9.11)	0.40	-14.1 (9.47)	0.14		

SOURCE: Authors' analyses of Medicaid data (2014–2019)

they had a 13.14 percent (5.48) higher probability of meeting the measure than their counterparts in the second post-period year (2018). In addition, in NYC, HARP enrollees had a 15.60 percent

(5.68) higher probability than non-HARP individuals of meeting the measure that assesses Diabetes Monitoring for people with diabetes and schizophrenia in the third post-period year (2018).

However, in both regions, HARP enrollees were less likely than non-HARP individuals to meet the measure that assesses Medication Management for People with Asthma, 50 percent Compliance. In NYC, HARP enrollees had a 16.95 percent (7.39) lower probability than non-HARP individuals of meeting the measure in the third post-period year (2018), and in ROS they had an 18.06 percent (8.83) lower probability than their counterparts in the last post-period year (2019).

Interrupted Time Series Model

These analyses were conducted for all HARP enrollees in our cohort and compared their quality outcomes in each post-period year relative to the first year of the pre-period (2014 in NYC and 2015 in ROS) (Table 4.16).

The ITS model presented a different picture than the DiD model. In both regions, HARP enrollees had a higher probability of meeting several quality measures during the post-period relative to 2014 (NYC) and 2015 (ROS). These measures were Adherence to Antipsychotic Medication for People with Schizophrenia, Diabetes Screening for People with Schizophrenia and Bipolar Disorder, and the two measures assessing medication management for people with Asthma. The improved performance relative to the early baseline period was particularly robust and consistent for the antipsychotic medication adherence measure; by the last post-period year (2019), HARP enrollees in NYC had a 13.4 percent (0.80) higher probability of meeting the measure relative to 2014, and those in ROS had a 6.55 percent (0.99) higher probability of meeting the measure relative to 2015.

In addition, in NYC, in some of the post-period years, HARP enrollees had a higher probability relative to 2014 of meeting the two antidepressant medication management measures. In ROS, relative to 2015, HARP enrollees had a 4.01 percent (1.89) higher probability of meeting the measure that assesses Diabetes Monitoring for People with Diabetes and Schizophrenia in the first post-period year.

Table 4.16. Probability of Meeting Specific Quality Measures, HARP Enrollees, by Post-period Year Relative to Early Pre-period, NYC and ROS

	Post-Period Year 1		**Post- Period Year 2**		**Post- Period Year 3**		**Post- Period Year 4**	
NYC Estimate (SE)	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**
Adherence To Antipsychotic Medication for People with Schizophrenia (N=41,511)	10.1 (0.79)	**0.00**	10.7 (0.80)	**0.00**	11.6 (0.80)	**0.00**	13.4 (0.80)	**0.00**
Antidepressant Medication Management, Acute (N=11,087)	3.60 (1.56)	**0.02**	0.31 (1.61)	0.85	1.29 (1.62)	0.43	3.48 (1.62)	**0.03**
Antidepressant Medication Management, Any (N=11,087)	4.26 (1.52)	**0.01**	2.84 (1.57)	0.07	2.02 (1.58)	0.20	0.55 (1.58)	0.73
Cardiovascular Monitoring for People with CD and Schizophrenia (N=1,453)	6.32 (4.00)	0.11	0.40 (4.01)	0.92	4.30 (3.83)	0.26	1.97 (3.90)	0.61
Diabetes Monitoring for People with Diabetes and Schizophrenia (N=12,532)	0.04 (1.34)	0.97	-0.60 (1.32)	0.65	1.34 (1.31)	0.31	-0.71 (1.33)	0.60
Diabetes Screening for People with Schizophrenia and Bipolar Disorder (N=44,059)	0.24 (0.65)	0.71	0.63 (0.65)	0.34	3.69 (0.66)	**0.00**	0.57 (0.66)	0.39
Medication Management for People with Asthma - 50% Compliance (N=8,908)	4.78 (1.50)	**0.00**	6.29 (1.51)	**0.00**	5.04 (1.53)	**0.00**	2.84 (1.55)	0.07
Medication Management for People with Asthma - 75% Compliance (N=8,908)	6.01 (1.77)	**0.00**	7.46 (1.79)	**0.00**	7.22 (1.81)	**0.00**	0.68 (1.83)	0.71
Ros Estimate (Se)								
Adherence To Antipsychotic Medication for People with Schizophrenia (N=21,545)	4.11 (0.98)	**0.00**	4.51 (0.98)	**0.00**	6.55 (0.99)	**0.00**		
Antidepressant Medication Management, Acute (N=11,178)	0.56 (1.46)	0.70	1.02 (1.48)	0.49	-0.19 (1.48)	0.90		
Antidepressant Medication Management, Any (N=11,178)	1.39 (1.40)	0.32	0.84 (1.42)	0.56	0.92 (1.42)	0.51		
Cardiovascular Monitoring for People with CD and Schizophrenia (N=711)	6.75 (6.01)	0.26	5.69 (5.88)	0.33	-1.15 (5.75)	0.84		
Diabetes Monitoring for People with Diabetes and Schizophrenia (N=6,103)	4.01 (1.89)	**0.03**	3.46 (1.87)	0.06	0.42 (1.90)	0.83		
Diabetes Screening for People with Schizophrenia and Bipolar Disorder (N=29,106)	1.25 (0.76)	0.10	1.56 (0.76)	**0.04**	-0.08 (0.77)	0.91		
Medication Management for People with Asthma - 50% Compliance (N=3,859)	4.79 (2.30)	**0.04**	5.22 (2.34)	**0.03**	2.61 (2.43)	0.28		
Medication Management for People with Asthma - 75% Compliance (N=3,859)	2.90 (2.42)	0.23	4.22 (2.46)	0.09	5.61 (2.56)	**0.03**		

SOURCE: Authors' analyses of Medicaid data (2014–2019)

Matched Sample Estimates

Because we were unable to model the two Comprehensive Diabetes Screening measures due to the lack of sufficient observations per group in both regions and all years, we present matched sample (ATC) estimates for those measures, with results applicable to the HARP population with similar characteristics as the non-HARP population (Appendix Table E9). These analyses showed no differences between HARP enrollees and non-HARP individuals in their performance regarding Comprehensive Diabetes Screening, Received HbA1c and Comprehensive Diabetes Screening, Overall.

Summary of Findings

RQ8 Hypothesis 1: HEDIS/QARR quality profiles for HARP plans will improve over time as the program matures

Our findings provide inconclusive evidence regarding the DOH's hypothesis. HARP enrollees had a higher probability of meeting several measures of quality of BH and PH care during the post-period relative to the early pre-period, with a particularly robust and consistent trend for the measure assessing adherence to antipsychotic medication. Among HARP enrollees with similar characteristics as the non-HARP population, HARP enrollees fared better than non-HARP individuals on some measures even if they fared worse on a PH measure on which the full HARP enrollee group improved over time relative to the early pre-period (Medication management for people with asthma, 50 percent compliance). However, improvements in quality were not consistent year to year; consequently, it is not possible to discern a temporal pattern related to program maturity.

RQs 9 and 10: To what extent are HARP enrollee experiences with care and access to health and BH services positive? To what extent are HARP enrollees satisfied with the cultural sensitivity of BH providers and their wellness, recovery, and degree of social connectedness?

These two RQs included the following three hypotheses:

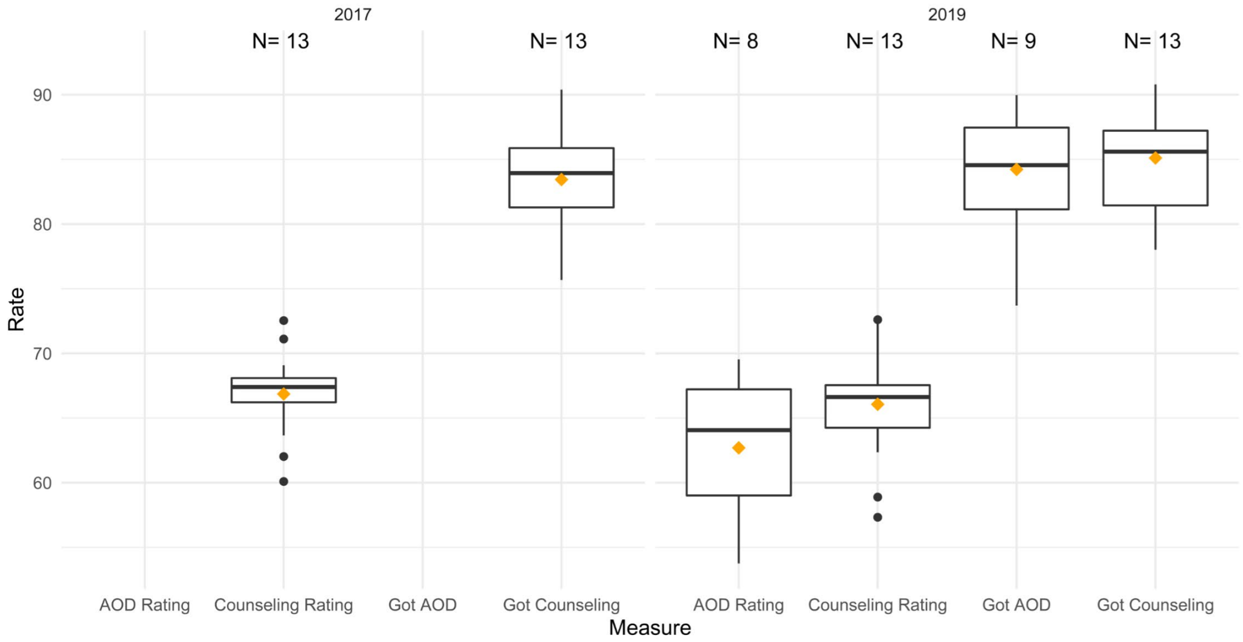
1. Perception of experience of care and satisfaction with care will improve over time as the program matures.
2. HARP enrollee satisfaction with the cultural sensitivity of their BH providers will increase over the length of the Demonstration.
3. HARP enrollee satisfaction with their wellness, recovery, and degree of social connectedness will improve over the time of the Demonstration.

We addressed this RQ with quantitative methods employed to analyze two data sources: CAHPS survey and the HARP PCS survey (see Table 4.6). The version of the CAHPS survey we used is administered every other year to a random sample of adults enrolled in all MMC product lines, and measures assessed by the survey are reported at the plan level. The PCS is administered to HARP enrollees and is reported at the individual level. Due to the small sample size for the PCS, we were unable to carry out comparisons across years.

Consumer Assessment of Healthcare Providers Survey (CAHPS)

Figure 4.11 shows the distribution of plan scores on four CAHPS items related to access to and rating of MH and SUD care. For the access to care measures, we report the proportion of survey respondents who indicated that it was easy to get that type of care. For the rating of care measures, we report the proportion of survey respondents who rated their treatment positively. Due to the small number of plans for which we have data, we have not attempted to conduct statistical tests for differences between the measurement years. Results are reported for the plans with sample sizes meeting reporting requirements set by NYS. The MH items were reported with sufficiently large sample sizes for 13 plans in both 2017 and 2019. The SUD items were reported with sufficiently large sample sizes in 2019 only when the SUD access item was reported for nine plans, and the SUD treatment rating item was reported for eight plans.

Figure 4.11 Distribution of Plan Scores on MH and SUD CAHPS Items



SOURCE: Consumer Assessment of Healthcare Providers Survey, 2017 and 2019.

Ratings of access to care were high in both years for MH care as well as in the one year for which we have data (2019) for SUD treatment. The access to MH measure was higher in 2019 than in 2017. Ratings of quality of mental health treatment were similar in 2017 and 2019. Although we cannot directly compare ratings of the quality of SUD treatment to those of mental health treatment, it is worth noting that the difference between the access and quality measures are similar for both SUD and MH treatment.

HARP Perception of Care Survey

The HARP PCS was administered to a random sample of HARP enrollees in 2017 and 2019. Despite the random sampling, we note that PCS respondents differed from non-PCS respondents on demographic and clinical characteristics—in both regions, PCS respondents were more female, had higher rates of Any SMI and Any SUD, higher utilization of Key BH outpatient services, and higher AHRF poverty rates (Appendix Table E.19).

HARP PCS respondents were asked questions across multiple domains pertaining to the care they received through the HARP program. These domains covered perceptions about HARP enrollees':

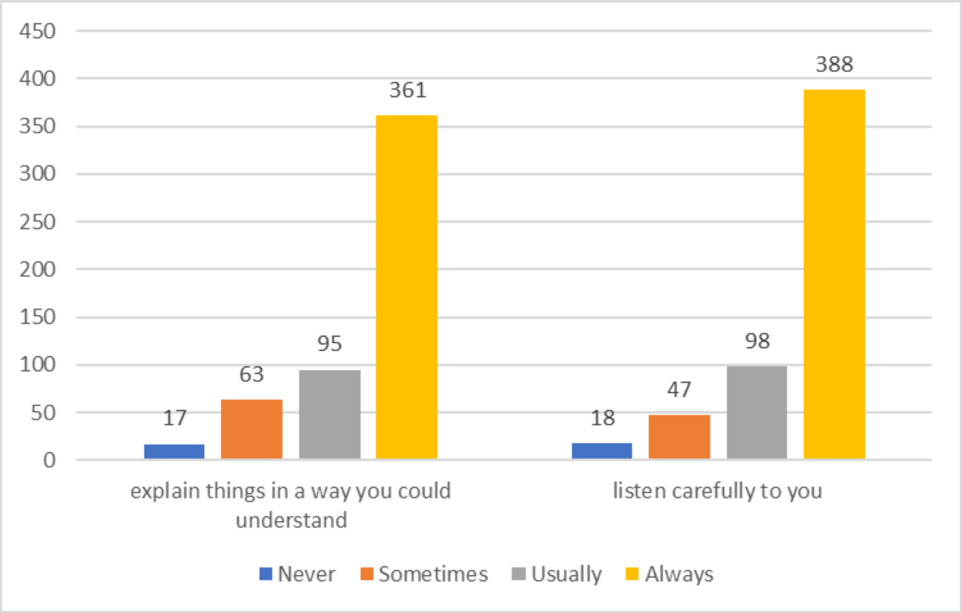
- quality of communication with BH care providers
- cultural sensitivity of BH providers
- quality of life
- health and wellness (daily PH activities and substance use)
- social connectedness.

Data to assess the quality of communication with BH care providers was drawn from the following two PCS items:

- How often did the people you went to for counseling or treatment explain things in a way you could understand?
- How often did the people you went to for treatment listen carefully to you?

The response options for these items are on a four-point scale: 1-Never, 2-Sometimes, 3-Usually, 4-Always. The response distribution for these two items is shown in Figure 4.12. For both items, the median response was the most positive response option. The mean response was 2.7 (N=536) for "explain things in a way you could understand" and 2.8 (N=551) for "listen carefully to you." Responses were aggregated across the two survey years.

Figure 4.12. PCS Respondents' Rating of Communication with Behavioral Health Providers



SOURCE: HARP Perception of Care Survey, 2017 and 2019

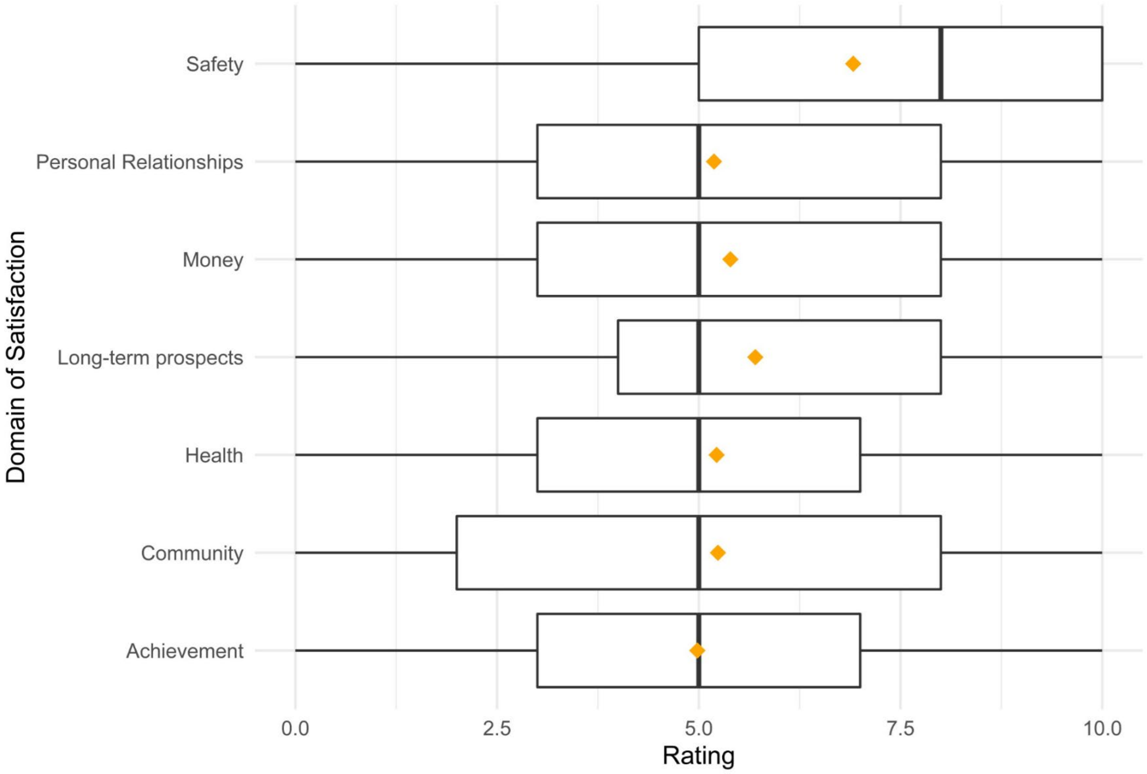
Data to assess the cultural sensitivity of their behavioral health providers were derived from respondents' ratings on the following item:

- How often were the people you went to for treatment sensitive to your cultural background (race, religion, language, etc.)?

The response options for this item were on a four-point scale: 1-Never, 2-Sometimes, 3-Usually, 4-Always. The ratings were quite high, with the most respondents indicating that their care providers were always sensitive to their cultural background. The mean rating was 3.52 (N=612).

Data to assess satisfaction with respondents' quality of life came from a series of seven items, each rated on a 10-point scale, with 1 representing the lowest satisfaction and 10 representing the highest satisfaction. Each item asked about how satisfied the respondent is with an aspect of their lives. For instance, satisfaction with money is asked with the following question: "How satisfied are you with the things you have? Like the money you have and the things you own?" Results, shown in Figure 4.13, indicate consistent ratings in the middle of the rating scale for most items, and a relatively high rating on the item regarding safety.

Figure 4.13. Quality of Life in the PCS[1]



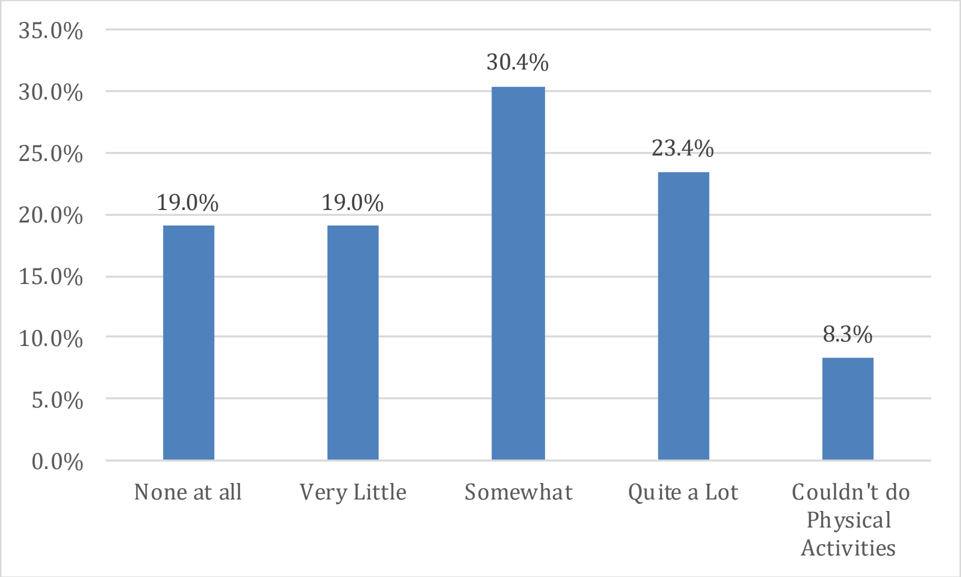
[1] Responses pooled across 2017 and 2019 PCS samples.
SOURCE: HARP Perception of Care Survey, 2017 and 2019

Data to assess respondents' health and wellness were derived from one question on their difficulty with daily activities due to physical health and three questions about their experience of problems related to use of tobacco, alcohol, or other drugs. The item on daily activities read:

- During the past 4 weeks, how much difficulty did you have doing your daily work, both at home and away from home, because of your physical health?

The response options were 1-none at all, 2-very little, 3-somewhat, 4-quite a lot, and 5-could not do physical activities. More than half of respondents reported that they had difficulty with their daily activities due to their physical health at the level of "somewhat" or "quite a lot," and an additional 8 percent reported that they were not able to do physical activities (Figure 4.14).

Figure 4.14. Difficulty with Daily Activities Due to Physical Health[1]



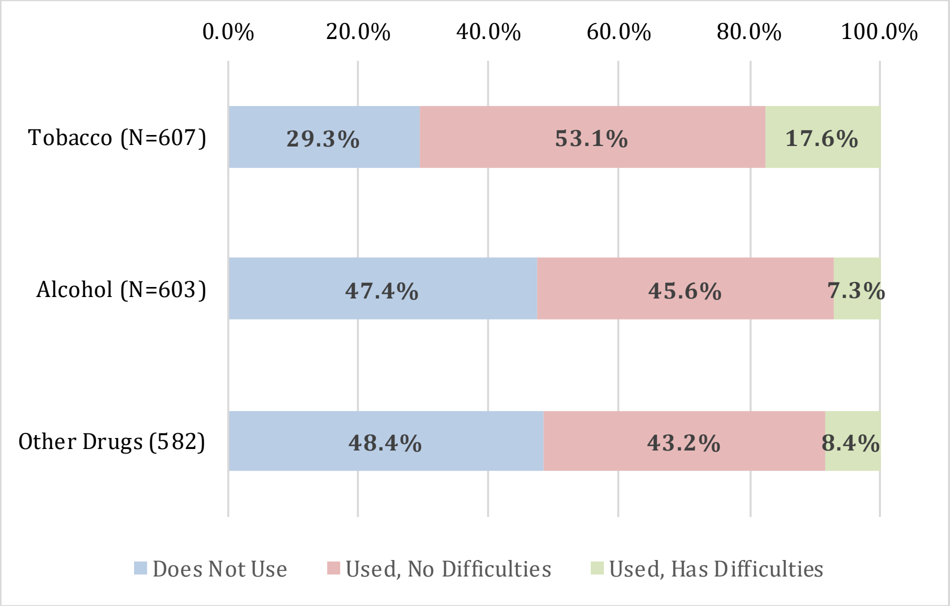
[1]Responses pooled across 2017 and 2019 PCS samples.
SOURCE: HARP Perception of Care Survey, 2017 and 2019

Problems due to substance use were assessed using the following three items:

- Have you experienced any difficulties as a result of your tobacco use in the last 12 months (e.g., health, social, legal, or financial problems)?
- Have you experienced any difficulties as a result of your alcohol use in the last 12 months (e.g., personal/family conflict, job instability, legal problems, and/or injuries)?
- Have you experienced any difficulties as a result of your drug use in the last 12 months (e.g., personal/family conflict, job instability, legal problems, and/or injuries)?

These items were assessed with a binary (yes/no) response. Respondents could also indicate that they did not use the substance in question. Results from these items are presented in Figure 4.15. The proportion of respondents reporting no use was 29.3 percent for tobacco and just under half for alcohol and other drugs (47.4 percent and 48.4 percent, respectively). The percentage of respondents indicating problems with substance use was 17.6 for tobacco and slightly under 10 percent for alcohol and other drugs (7.3 percent and 8.4 percent, respectively).

Figure 4.15. Difficulty with Substance Use in Past 12 Months[1]



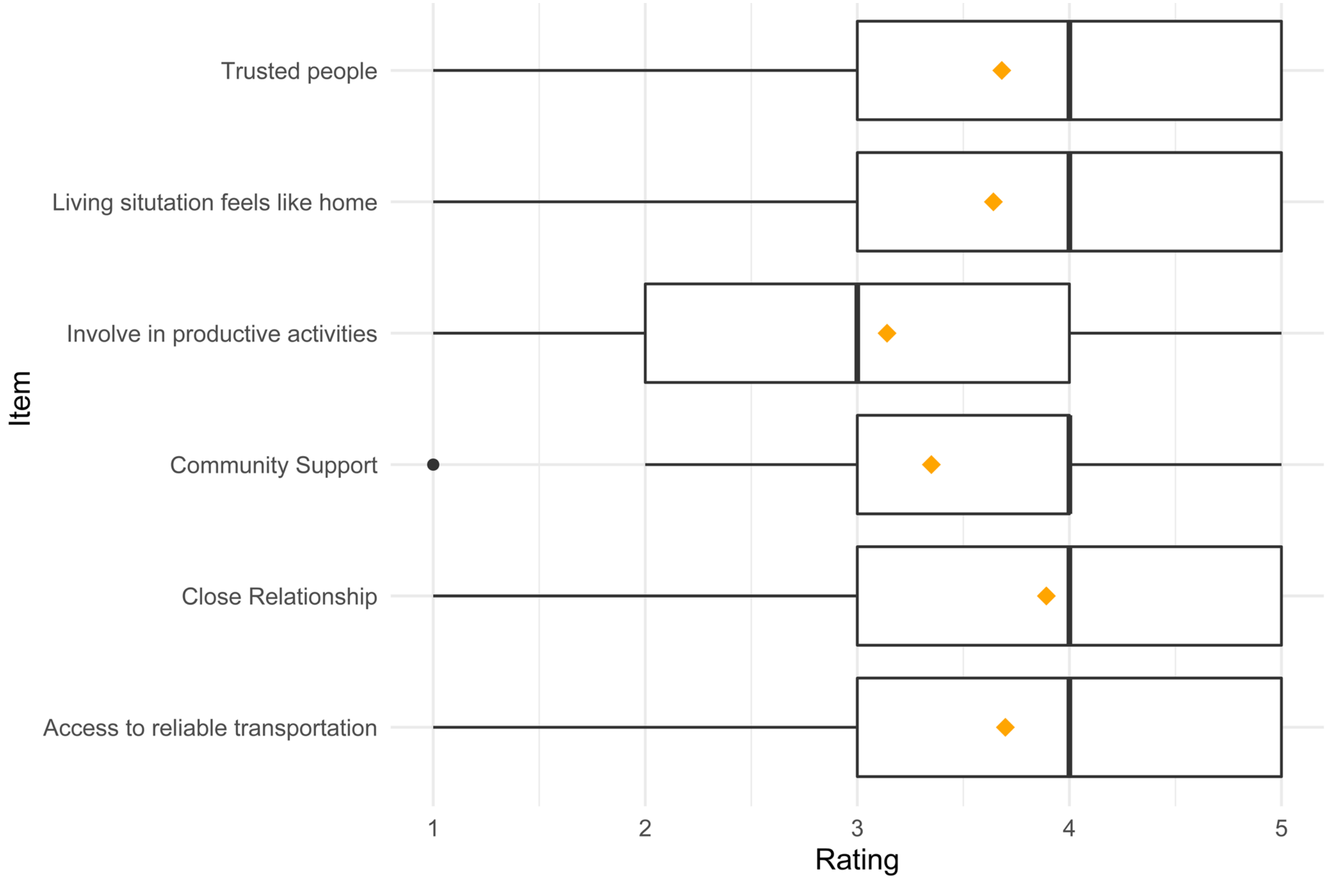
[1] Responses pooled across 2017 and 2019 PCS samples.
SOURCE: HARP Perception of Care Survey, 2017 and 2019

PCS respondents were asked about their social connectedness through the following six items:

- I have trusted people I can turn to for help.
- My living situation feels like home to me.
- I am involved in meaningful productive activities.
- I am aware of community supports available to me.
- I have at least one close relationship.
- I have access to reliable transportation.

Each item was rated on a 5-point scale ranging from 1-strongly disagree to 5-strongly agree. As shown in Figure 4.16, respondents rated their social connectedness highly, with a median score of 4 for five of the six items. Ratings were lower for the item related to being involved in meaningful productive activities, where the median score was 3.

Figure 4.16. Social Connectedness in the PCS[1]



[1]Responses pooled across 2017 and 2019 PCS samples
SOURCE: HARP Perception of Care Survey, 2017 and 2019

Summary of Findings

RQs 9 and 10 Hypotheses 1-3: Perception of experience of care and satisfaction with care will improve over time as the program matures; HARP enrollee satisfaction with the cultural sensitivity of their BH providers will increase over the length of the Demonstration; HARP enrollee satisfaction with their wellness, recovery, and degree of social connectedness will improve over the time of the Demonstration

We were unable to directly test the hypotheses related to change over time in patient experiences of care, quality of life, and well-being due to small sample sizes. However, our results, which pool data across years, provide a baseline for future comparisons. The results indicate positive experiences with respect to access to and quality of MH and SUD care, the quality of provider communication, and the cultural sensitivity of care. PH limitations and substance use were common, as expected. Respondents reported generally high levels of social connectedness, though low ratings of engagement in productive activities stand out as an area of need.

RQ11: To what extent are HARPs cost effective? What are the PMPM costs of inpatient psychiatric services, SUD ancillary withdrawal, hospital-based detox, and ED services for the HARP population? Are these costs decreasing over time?

This RQ included one hypothesis:

1. It is expected that costs for HARP enrollees are shifting from acute services to non-acute OP-based health and BH services.

We addressed this RQ with quantitative methods (see Table 4.6). We assessed annual outcomes among HARP enrollees over the course of the post-period and compared their outcomes to (a) that of HARP-eligible beneficiaries not enrolled in HARP (non-HARP individuals), with findings only applicable to the HARP population with similar characteristics as the eligible-not-enrolled (DiD) and (b) their own during the early pre-period (ITS).

We evaluated costs and utilization of multiple forms of acute and OP care. Acute care included inpatient psychiatric services (BH IP), which for utilization analyses was captured separately as Medicaid and MHARS IP admissions; psychiatric ED services (BH ED); a composite measure of acute BH care capturing BH IP or BH ED care (Any Acute BH Care); several high-acuity SUD services (SUD Ancillary Withdrawal Services, Hospital-Based Detoxication (Detox) Services, and SUD Inpatient Rehabilitation (Rehab) Services); crisis respite HCBS, available only to HARP enrollees; a composite measure of any of these acute BH services (Any Acute BH Care Plus); and Any Acute Non-BH Care (Non-BH Care IP or Non-BH ED). Outpatient care included Any Key BH OP Services (outcome for Goal 1, RQ 1 and Goal 2, RQ 6); Any OP BH Services, a measure capturing all OP BH care; and Any OP Non-BH Services, a measure capturing all PH care including primary and/or preventive care. We also constructed measures capturing costs and utilization of all non-pharmacy services (total costs and any-cause utilization). Costs and utilization outcomes were estimated as total annual mean costs divided by the number of months of utilization (i.e., per member per month (PMPM) costs) and visits (or admissions), respectively.[12]

Adjusted Quantitative Findings

Difference-in-Differences Model

These analyses were conducted among cohort members with demographic and clinical characteristics of the non-HARP population and compared utilization and cost outcomes for HARP enrollees relative to non-HARP individuals in each post-period year.

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[12] When interpreting costs for the acute care composite measures, the reader should bear in mind that the costs of the less expensive and/or more frequently utilized services will have an important effect on mean PMPM cost estimates calculated on a larger population; thus, there should not be an expectation that the components will add to the composite, e.g., BH IP and BH ED may not add to the composite Acute BH care, since their sample sizes are different (this concern is also valid for utilization outcomes).

Utilization outcomes

The only differences between the groups in terms of acute care utilization were observed in the last post-period year (2019) and only in NYC, where HARP enrollees had 1.14 (0.50) more BH ED visits and 1.02 (0.51) more Any acute BH care plus visits relative to non-HARP individuals (Table 4.17).

Table 4.17. Probability of Outpatient and Acute Care Utilization, HARP Enrollees vs. Non-HARP Individuals, by Post-Period Year, NYC and ROS

	Post-Period Year 1		**Post- Period Year 2**		**Post- Period Year 3**		**Post- Period Year 4**	
NYC Estimate (SE)	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**
Key BH OP Visits (N=28,707)	0.26 (0.24)	0.28	0.55 (0.25)	**0.02**	0.34 (0.25)	0.17	0.21 (0.25)	0.41
Any OP BH (N=30,648)	0.32 (0.26)	0.22	0.34 (0.26)	0.20	0.20 (0.26)	0.45	0.23 (0.27)	0.40
Any OP Non-BH (N=25,235)	0.31 (0.20)	0.11	0.28 (0.20)	0.16	0.38 (0.20)	0.05	0.80 (0.20)	**0.00**
Acute BH (N=7,400)	0.56 (0.48)	0.24	0.13 (0.49)	0.78	0.53 (0.50)	0.29	1.01 (0.52)	0.05
BH IP (Medicaid) (N=3,668)	0.01 (0.21)	0.97	0.02 (0.22)	0.94	0.03 (0.22)	0.89	-0.03 (0.25)	0.91
BH ED (N=6,561)	0.80 (0.46)	0.08	0.48 (0.47)	0.30	0.63 (0.49)	0.20	1.14 (0.50)	**0.02**
Acute BH Plus (N=7,835)	0.44 (0.47)	0.35	0.05 (0.48)	0.92	0.38 (0.49)	0.45	1.02 (0.51)	**0.04**
Acute Non-BH (N=18,363)	0.13 (0.27)	0.62	-0.08 (0.27)	0.78	0.27 (0.27)	0.32	0.31 (0.27)	0.25
Total (N=35,660)	1.15 (0.55)	**0.04**	1.36 (0.55)	**0.01**	1.93 (0.55)	**0.00**	2.55 (0.56)	**0.00**
ROS Estimate (SE)								
Key BH OP Visits (N=45,209)	0.15 (0.17)	0.39	-0.01 (0.18)	0.93	0.10 (0.18)	0.59		
Any OP BH (N=49,936)	0.27 (0.19)	0.16	0.69 (0.19)	**0.00**	0.98 (0.20)	**0.00**		
Any OP Non-BH (N=45,550)	0.08 (0.12)	0.52	-0.16 (0.12)	0.16	-0.28 (0.12)	**0.02**		
Acute BH (N=12,912)	0.01 (0.22)	0.98	0.01 (0.23)	0.97	-0.19 (0.23)	0.40		
BH IP (Medicaid) (N=4,961)	0.05 (0.13)	0.72	-0.10 (0.14)	0.49	-0.19 (0.13)	0.16		
BH ED (N=12,175)	-0.02 (0.19)	0.92	0.02 (0.21)	0.92	-0.08 (0.21)	0.70		
Acute BH Plus (N=13,693)	-0.14 (0.21)	0.50	0.00 (0.23)	0.98	-0.19 (0.23)	0.40		
Acute Non-BH (N=36,870)	0.17 (0.15)	0.26	0.08 (0.15)	0.59	0.24 (0.15)	0.11		
Total (N=60,494)	0.19 (0.39)	0.62	1.09 (0.39)	**0.01**	1.57 (0.39)	**0.00**		

SOURCE: Authors' analyses of Medicaid data (2014–2019)

In both regions, HARP enrollees had higher OP BH service utilization than non-HARP individuals. While in NYC the advantage over non-HARP individuals was observed for Any Key OP BH service utilization only in the second post-period year, HARP enrollees in ROS had higher Any OP BH service utilization in the last two post-period years; e.g., in 2019, they had 0.98 (0.20) more visits than their counterparts. In both regions, HARP enrollees differed from non-HARP individuals in their utilization of Any OP Non-BH services in the last post-period year but in opposite ways: In NYC, HARP enrollees had 0.80 (0.20) more visits, but in ROS they had 0.28 (0.12) fewer visits than their counterparts.

HARP enrollees had higher Any-cause utilization than non-HARP individuals in both regions, with the difference becoming larger throughout the post-period, particularly for NYC. By the last post-period year (2019), HARP enrollees had 2.55 (0.56) and 1.57 (0.39) more Any-cause visits relative to non-HARP individuals, NYC and ROS, respectively.

PMPM Cost outcomes

In NYC, HARP enrollees had generally higher acute BH care costs relative to non-HARP individuals. HARP enrollees had consistently higher costs associated with utilization of BH IP services, Any acute BH care, and Any acute BH care plus starting in the second post-period year, e.g., relative to non-HARP individuals, costs of Any acute BH care plus services for HARP enrollees were higher by $1281.0 (465.28) in the second post-period year (2017) and $1611.8 (489.23) in the last post-period year (2019) (Table 4.18). In ROS, however, the only acute BH care cost difference between the groups was observed in the first post-period year, when ED BH costs were $63.4 (30.30) higher for HARP enrollees relative to non-HARP individuals (Table 4.18).

The regions differed in terms of costs associated with Any acute non-BH service utilization. While in NYC, HARP enrollees had lower costs than non-HARP individuals in the middle post-period years—e.g., by $732.3 (339.12) in the third post-period year (2018)—in ROS there were no differences between groups throughout the entire post-period.

The regions also differed in terms of costs associated with OP service utilization. While no differences were observed between the groups in NYC, in ROS, costs associated with OP services were higher for HARP enrollees relative to non-HARP individuals, consistently throughout the post-period only for Any OP non-BH services. HARP enrollees' costs for any OP BH service utilization were higher relative to those of non-HARP individuals in the first and second post-period years, e.g., by $33.4 (15.54) in the second post-period year.

In both regions, the groups did not differ in their total costs.

Table 4.18. Probability of Outpatient and Acute Care PMPM Costs, HARP Enrollees vs. Non-HARP Individuals, by Post-Period Year, NYC and ROS

	Post-Period Year 1		Post- Period Year 2		Post- Period Year 3		Post- Period Year 4	
NYC Estimate (SE)	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**
Key BH OP Visits (N=28,705)	17.3 (23.68)	0.46	-20.4 (23.83)	0.39	-7.80 (23.88)	0.74	-2.89 (24.22)	0.90
Any OP BH (N=30,647)	22.4 (22.37)	0.32	-11.1 (22.52)	0.62	-10.2 (22.53)	0.65	10.8 (22.88)	0.64
Any OP Non-BH (N=25,234)	31.5 (24.51)	0.20	-16.6 (24.64)	0.50	-5.58 (24.54)	0.82	-29.4 (24.65)	0.23
Acute BH (N=7,394)	535.4 (470.44)	0.26	1131.5 (479.97)	**0.02**	1001.7 (494.24)	**0.04**	1567.3 (508.62)	**0.00**
BH IP (Medicaid) (N=3,664)	843.1 (724.49)	0.24	1804.6 (748.90)	**0.02**	2317.3 (764.58)	**0.00**	1904.4 (854.86)	**0.03**
BH ED (N=6,556)	-10.0 (79.00)	0.90	151.9 (79.83)	0.06	-8.33 (83.73)	0.92	166.8 (85.35)	0.05
Acute BH Plus (N=7,829)	594.3 (454.31)	0.19	1281.0 (465.28)	**0.01**	1056.4 (478.61)	**0.03**	1611.8 (489.23)	**0.00**
Acute Non-BH (N=18,356)	-40.6 (338.67)	0.90	-698.4 (343.24)	**0.04**	-732.3 (339.12)	**0.03**	-225.8 (342.08)	0.51
Total (N=35,659)	45.8 (100.07)	0.65	-119.7 (100.22)	0.23	12.8 (100.33)	0.90	18.5 (100.70)	0.85
ROS Estimate (SE)								
Key BH OP Visits (N=45,209)	36.1 (17.48)	**0.04**	28.4 (17.78)	0.11	17.3 (17.97)	0.33		
Any OP BH (N=49,936)	43.4 (15.31)	**0.00**	33.4 (15.54)	**0.03**	27.1 (15.60)	0.08		
Any OP Non-BH (N=45,550)	44.0 (16.22)	**0.01**	50.3 (16.17)	**0.00**	38.0 (16.19)	**0.02**		
Acute BH (N=12,912)	-63.3 (225.31)	0.78	129.2 (242.13)	0.59	-322.5 (241.72)	0.18		
BH IP (Medicaid) (N=4,961)	-225.8 (513.63)	0.66	-238.8 (567.72)	0.67	-478.8 (544.76)	0.38		
BH ED (N=12,175)	63.4 (30.30)	**0.04**	15.0 (32.45)	0.64	29.5 (32.53)	0.36		
Acute BH Plus (N=13,693)	-209.9 (223.18)	0.35	146.4 (240.32)	0.54	-392.3 (238.82)	0.10		
Acute Non-BH (N=36,870)	116.3 (175.46)	0.51	-95.8 (178.61)	0.59	39.0 (176.94)	0.83		
Total (N=60,494)	12.8 (52.28)	0.81	50.5 (52.53)	0.34	94.8 (52.51)	0.07		

SOURCE: Authors' analyses of Medicaid data (2014–2019)

Interrupted Time Series Model

These analyses were conducted for all HARP enrollees in our cohort and compared their outcomes in each post-period year relative to the first year of the pre-period (2014 in NYC and 2015 in ROS) (Tables 4.15 and 4.16).

Utilization outcomes

In NYC, HARP enrollees had a modestly higher utilization of all services, whether BH or non-BH, acute care or OP, during the post-period relative to 2014 (Table 4.19). The only exception was Any OP Non-BH services in the third post-period year, when they had lower utilization than in the early pre-period. Thus, by the last post-period year (2019), the excess visits relative to 2014 ranged between 0.10 (0.04) (Any OP Non-BH services) and 0.69 (0.09) (Any acute BH care plus services). In terms of acute versus OP BH care, HARP enrollees had, respectively, 0.14 (0.04) (BH IP) and 0.64 (0.09) (BH ED) more visits in 2019 relative to the early pre-period, while the difference was 0.57 (0.05) for Any OP BH service visits. Not surprisingly, HARP enrollees had higher Any-cause utilization relative to 2014 in three out of the four post-period years; however, the excess utilization dropped from 1.58 (0.12) visits in the first post-period year to 0.50 (0.12) visits in the last post-period year. We note that although some of these changes in utilization were relatively small, their statistical significance is due to the large sample sizes in these ITS analyses.

Table 4.19. Outpatient and Acute Care Utilization (Total Number of Visits), HARP Enrollees, by Post-period Year Relative to Early Pre-period, NYC and ROS

	Post-Period Year 1		Post- Period Year 2		Post- Period Year 3		Post- Period Year 4	
NYC Estimate (SE)	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**
Key BH OP visits (N=132,302)	-0.03 (0.05)	0.54	0.32 (0.05)	**0.00**	0.31 (0.05)	**0.00**	0.47 (0.05)	**0.00**
Any OP BH (N=139,068)	0.01 (0.05)	0.87	0.32 (0.05)	**0.00**	0.30 (0.05)	**0.00**	0.57 (0.05)	**0.00**
Any OP Non-BH (N=119,551)	0.23 (0.04)	**0.00**	0.08 (0.04)	**0.05**	-0.47 (0.04)	**0.00**	0.10 (0.04)	**0.01**
Acute BH (N=31,912)	0.48 (0.09)	**0.00**	0.45 (0.09)	**0.00**	0.63 (0.09)	**0.00**	0.64 (0.09)	**0.00**
BH IP (Medicaid) (N=14,618)	0.14 (0.04)	**0.00**	0.08 (0.04)	**0.05**	0.08 (0.04)	0.05	0.14 (0.04)	**0.00**
BH ED (N=28,779)	0.44 (0.09)	**0.00**	0.43 (0.09)	**0.00**	0.64 (0.09)	**0.00**	0.64 (0.09)	**0.00**
Acute BH Plus (N=34,166)	0.48 (0.09)	**0.00**	0.49 (0.09)	**0.00**	0.65 (0.09)	**0.00**	0.69 (0.09)	**0.00**
Acute Non-BH (N=86,731)	0.10 (0.06)	0.08	0.16 (0.06)	**0.01**	0.28 (0.06)	**0.00**	0.41 (0.06)	**0.00**
Total (N=158,440)	1.58 (0.12)	**0.00**	1.74 (0.12)	**0.00**	-0.16 (0.12)	0.17	0.50 (0.12)	**0.00**
ROS Estimate (SE)								
Key BH OP visits (N=95,691)	0.22 (0.05)	**0.00**	0.26 (0.05)	**0.00**	-0.05 (0.05)	0.34		
Any OP BH (N=103,790)	0.01 (0.06)	0.84	0.61 (0.06)	**0.00**	0.51 (0.06)	**0.00**		
Any OP Non-BH (N=96,590)	0.12 (0.04)	**0.00**	-0.27 (0.04)	**0.00**	-0.63 (0.04)	**0.00**		
Acute BH (N=26,687)	0.11 (0.06)	0.10	0.21 (0.07)	**0.00**	0.07 (0.07)	0.33		
BH IP (Medicaid) (N=10,765)	0.05 (0.04)	0.21	0.05 (0.04)	0.20	-0.00 (0.04)	0.99		
BH ED (N=25,070)	0.14 (0.06)	**0.02**	0.22 (0.06)	**0.00**	0.13 (0.06)	**0.03**		
Acute BH Plus (N=28,249)	0.09 (0.06)	0.14	0.25 (0.06)	**0.00**	0.11 (0.07)	0.08		
Acute Non-BH (N=78,011)	-0.07 (0.05)	0.11	-0.13 (0.05)	**0.01**	-0.16 (0.05)	**0.00**		
Total (N=123,247)	-1.20 (0.12)	**0.00**	-1.70 (0.12)	**0.00**	-3.19 (0.12)	**0.00**		

SOURCE: Authors' analyses of Medicaid data (2014–2019)

In ROS, differences in service utilization between the post-period and 2015 were slightly less pronounced than those observed in NYC. HARP enrollees had consistently higher BH ED utilization throughout the post-period relative to the early pre-period, highest in the second post-period year, when they had 0.22 (0.06) additional visits; only in that year did they have higher utilization of Any acute BH care/plus services (0.25 (0.06) additional visits). Their utilization of Any acute non-BH services was lower in the last two years of the post-period relative to the early pre-period. HARP enrollees utilized more Any Key BH OP and Any OP BH services in one or more post-period year relative to 2015, e.g., 0.26 (0.05) more Any Key BH OP service visits (second post-period year) and 0.51 (0.06) more Any OP BH services (third post-period year). However, their utilization of Any OP non-BH services was lower in the post-period relative to the early pre-period—by the third (and last) post-period year, HARP enrollees had 0.63 (0.04) fewer visits. HARP enrollees had lower Any-cause utilization relative to 2015 in all three post-period years, with the difference growing each year; by 2019, they had 3.19 (0.12) fewer visits.

PMPM Cost Outcomes

In both regions, costs were different for one or all post-period years from those observed in the early pre-period for all service categories.

In NYC, relative to the early pre-period, costs for Any acute BH care/plus services were lower during most of the post-period, although by the last post-period year (2019), only Any acute BH care plus service costs were different and by a generally smaller amount than in the previous years ($208.8 (89.37)) (Table 4.20). However, relative to 2014, BH ED costs were higher every year of the post-period, e.g., by $224.6 (18.60) in the last post-period year (2019), while BH IP costs switched from being lower in the first post-period year to also being consistently higher starting in the second post-period year, e.g., by $951.2 (157.01) in 2019. A similar pattern of consistently higher post-period costs starting in the second post-period year relative to 2014 was observed for Any acute non-BH care utilization, with the difference reaching $751.1 (71.41) in 2019. Costs for Any Key BH OP and Any OP BH services were lower in the first post-period year relative to the early pre-period, but they were higher thereafter, with the differences peaking in the third post-period year, e.g., Any OP BH service costs were $36.4 (4.39) higher in 2018. Any OP non-BH service costs, on the other hand, were consistently higher throughout the post-period, e.g., by $66.7 (10.58) in the last post-period year (2019). Total costs were higher relative to 2014 starting in the second post-period year, with the difference reaching $233.2 (22.26) in the last post-period year.

In ROS, costs for Any acute BH care/plus services were not different in the first two post-period years relative to 2015, but they were lower by similar amounts in the last post-period year (2019), by $341.3 (71.45) for Any acute BH care plus. BH ED costs, on the other hand, were consistently higher every year of post-period, by $100.4 (10.59) in 2019. BH IP costs were higher relative to the early pre-period in the first and second post-period years, e.g., by $544.7 (153.81) in 2018. Costs for Any acute non-BH care utilization were higher throughout the post-period relative to 2015, by $296.9 (48.63) in 2019. Costs for Any Key BH OP and Any OP BH services were higher every post-period year relative to the early pre-period, with the largest differences observed in the second post-period year (2018) (e.g., Any OP BH = $897.0 (49.48)). Similarly, post-period Any OP non-BH service costs were higher during the post-period relative to the early pre-period, also peaking in 2018. Total costs were higher relative to 2015 every year of the post-period, with the largest difference observed in the mid-year of the post-period; by the last post-period year (2019), costs were $67.4 (14.58)) higher than in the early pre-period.

Table 4.20. Probability of Outpatient and Acute Care PMPM Costs, HARP Enrollees, by Post-period Year Relative to Early Pre-period, NYC and ROS

	Post-Period Year 1		Post- Period Year 2		Post- Period Year 3		Post- Period Year 4	
NYC Estimate (SE)	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**	**HARP**	**P-Value**
Key BH OP visits (N=132,302)	-11.1 (4.69)	**0.02**	24.3 (4.73)	**0.00**	39.7 (4.75)	**0.00**	26.6 (4.76)	**0.00**
Any OP BH (N=139,068)	-12.4 (4.35)	**0.00**	18.5 (4.37)	**0.00**	36.4 (4.39)	**0.00**	29.6 (4.40)	**0.00**
Any OP Non-BH (N=119,551)	12.6 (10.63)	0.24	26.7 (10.65)	**0.01**	41.2 (10.60)	**0.00**	66.7 (10.58)	**0.00**
Acute BH (N=31,912)	-621.4 (91.75)	**0.00**	-198.3 (92.23)	**0.03**	-456.1 (93.35)	**0.00**	-177.2 (93.58)	0.06
BH IP (Medicaid) (N=14,618)	-799.0 (151.18)	**0.00**	598.8 (153.18)	**0.00**	352.2 (156.57)	**0.02**	951.2 (157.01)	**0.00**
BH ED (N=28,779)	176.3 (18.31)	**0.00**	170.8 (18.34)	**0.00**	221.0 (18.52)	**0.00**	224.6 (18.60)	**0.00**
Acute BH Plus (N=34,166)	-618.7 (88.04)	**0.00**	-221.1 (88.53)	**0.01**	-526.0 (89.19)	**0.00**	-208.8 (89.37)	**0.02**
Acute Non-BH (N=86,731)	125.0 (71.88)	0.08	290.5 (71.78)	**0.00**	408.5 (71.54)	**0.00**	751.1 (71.41)	**0.00**
Total (N=158,440)	13.9 (22.16)	0.53	111.9 (22.23)	**0.00**	99.9 (22.24)	**0.00**	233.2 (22.26)	**0.00**
ROS Estimate (SE)								
Key BH OP visits (N=95,691)	58.8 (5.30)	**0.00**	72.1 (5.36)	**0.00**	35.7 (5.41)	**0.00**		
Any OP BH (N=103,790)	49.2 (4.80)	**0.00**	80.6 (4.83)	**0.00**	46.1 (4.85)	**0.00**		
Any OP Non-BH (N=96,590)	13.3 (4.53)	**0.00**	17.0 (4.53)	**0.00**	11.1 (4.52)	**0.01**		
Acute BH (N=26,687)	-58.2 (69.98)	0.41	8.1 (70.88)	0.91	-356.6 (71.82)	**0.00**		
BH IP (Medicaid) (N=10,765)	407.9 (151.95)	**0.01**	544.7 (153.81)	**0.00**	-56.4 (158.02)	0.72		
BH ED (N=25,070)	83.4 (10.36)	**0.00**	81.7 (10.47)	**0.00**	100.4 (10.59)	**0.00**		
Acute BH Plus (N=28,249)	-127.4 (69.65)	0.07	3.9 (70.56)	0.96	-341.3 (71.45)	**0.00**		
Acute Non-BH (N=78,011)	252.2 (48.47)	**0.00**	281.4 (48.79)	**0.00**	296.9 (48.63)	**0.00**		
Total (N=123,247)	35.2 (14.55)	**0.02**	104.3 (14.59)	**0.00**	67.4 (14.58)	**0.00**		

SOURCE: Authors' analyses of Medicaid data (2014–2019)

Matched Sample Estimates

Because we were unable to model utilization of infrequently utilized services of interest to the DOH, we present matched sample (ATC) estimates for MHARS inpatient admissions and the three high-acuity SUD services (SUD ancillary withdrawal services, hospital-based detoxication (detox) services, and SUD inpatient rehabilitation (rehab) services), with results applicable to the HARP population with similar characteristics as the non-HARP population. Only in NYC and only for all years combined, HARP enrollees had more MHARS inpatient admissions than non-HARP individuals (Appendix Table E.12). In ROS, there were largely no differences in high-acuity SUD service outcomes between HARP enrollees and non-HARP individuals (Appendix Tables E.12 and E.13). However, some differences in costs but not utilization were observed between the two groups in NYC in isolated years and for all years combined. Relative to non-HARP individuals and for all years combined, HARP enrollees had higher costs associated with SUD inpatient rehabilitation (rehab) services. Outcomes for crisis respite HCBS were only observed for HARP enrollees for all years combined, as non-HARP individuals are not eligible for BH HCBS.[13]

Summary of Findings

RQ 11 Hypothesis 1: It is expected that costs for HARP enrollees are shifting from acute services to non-acute OP-based health and BH services.

Our findings provide inconclusive evidence regarding the DOH's hypothesis. Over the course of the post-period and relative to the early pre-period, there was an increase in utilization of acute BH services in NYC and also in ROS (though less pronounced and consistent). Despite these increases, however, the changes in utilization were small, and among HARP enrollees with similar characteristics as the non-HARP population, few differences in utilization were observed between HARP enrollees and non-HARP individuals. Moreover, the composite measures capturing acute BH service costs (i.e., BH IP, BH ED plus/minus, high-acuity SUD services, and crisis respite HCBS) showed that relative to the early pre-period, costs for acute BH services were lower in NYC for most of the post-period, and in ROS, in the last post-period year. However, among HARP enrollees with similar characteristics as the non-HARP population, HARP enrollees had higher costs for those services relative to non-HARP individuals for most of the post-period in NYC. These findings suggest that while costs for all acute BH services combined may have declined for all individuals targeted by the HARP policy (i.e., all HARP eligibles regardless of HARP enrollment status), in ROS only in the last post-period year, these costs declined more for the non-HARP population in NYC. In both regions, HARP enrollees had higher post-period costs for BH ED services and, less consistently, BH IP services, relative to the early pre-period. Among HARP enrollees with similar characteristics as the non-HARP population, costs for BH IP but not BH ED were higher for HARP enrollees relative to non-HARP individuals for most of the post-period in NYC, while in ROS the reverse was true but only in the first post-period year. These findings suggest that while BH ED and BH IP costs increased for HARP enrollees, these increases were also experienced for most of the post-period by unenrolled individuals targeted by the HARP policy in ROS, and in NYC, the BH ED cost increases were also experienced by the larger HARP-eligible population. Costs of acute non-BH

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[13] Although the table presents results for crisis respite HCBS, we note that since these services are not available to non-HARP individuals, the focus should not be on the comparison between the groups.

services were higher for HARP enrollees in the post-period relative to the early pre-period in both regions and so were total costs. However, among HARP enrollees with similar characteristics as the non-HARP population, while there were no differences in Any acute non-BH care costs between HARP enrollees and non-HARP individuals in ROS, HARP enrollees in NYC had lower costs than non-HARP individuals in the middle post-period years.

In both regions, however, HARP enrollees did have higher utilization of OP BH services in one or more post-period years relative to the early pre-period, and among HARP enrollees with similar characteristics as the non-HARP population, also relative to non-HARP individuals. Costs for Any Key BH OP and Any OP BH services were also higher in most or all of the post-period relative to the early pre-period in both regions; however, among HARP enrollees with similar characteristics as the non-HARP population, there were no cost differences between HARP enrollees and non-HARP individuals in NYC, and costs differences observed in ROS had dissipated by the last post-period year. In NYC, HARP enrollees had generally higher Any OP non-BH service utilization in the post-period relative to the early pre-period, and among HARP enrollees with similar characteristics as the non-HARP population, also relative to non-HARP individuals in the last post-period year; however, the opposite was true in ROS. Costs exhibited a different pattern, higher for both regions relative to the early pre-period but among HARP enrollees with similar characteristics as the non-HARP population, higher relative to non-HARP individuals only in ROS.

4.3 Goal 3: Develop HCBS focused on recovery, social functioning, and community integration for individuals in HARPs meeting eligibility criteria

This section addresses four RQs and associated hypotheses related to the BH HCBS benefit available to HARP enrollees starting on January 1, 2016, in NYC and on October 1, 2016, in ROS. The RQs focus on several outcomes relevant to HCBS-eligible HARP enrollees, whether utilizing BH HCBS or not, to determine the extent to which the third goal of the BH Demonstration has been attained. The RQs were addressed with a mixed methods approach (Table 4.21).

Table 4.21. Overview of Goal 3 Approach

Research Question	Data Source	Outcome Measure	Design and Analytic Approach*
1. To what extent are HARP enrollees deemed eligible to receive HCBS?	Medicaid Data CMH Screen	Percentage of HARP enrollees who are deemed BH HCBS-eligible (any, by Tier), by annual period, NYC and ROS Percentage of HARP enrollees who are assessed for BH HCBS eligibility, by annual period, NYC and ROS	Unadjusted Analyses over post-period (four (4) years NYC; three (3) years, ROS)
2. To what extent are HARP enrollees who are deemed HCBS-eligible receiving HCBS?	Medicaid Data	Percentage of BH HCBS-eligible HARP enrollees receiving any BH HCBS, by month and annually, at the HARP plan level, regionally (NYC, ROS, by county) and statewide; and annual percent change	Unadjusted Analyses over post-period (four (4) years NYC; three (3) years, ROS)
	Interviews with HARP Enrollees	Barriers and facilitators to accessing BH HCBS	Qualitative methods
3. To what extent has the Demonstration developed provider network capacity to provide BH HCBS for HARPs?	Medicaid Data	Number of providers contracted for BH HCBS in HARP plans, by HARP plan, by annual period, regionally (NYC, ROS, by county) and statewide	Unadjusted Analyses over post-period (four (4) years NYC; three (3) years, ROS)
	MMC HCBS Provider Network Data System	Rate of BH HCBS providers per 1,000 BH HCBS-eligible enrollees, by annual period, regionally (NYC, ROS, by county) and statewide	Unadjusted Analyses over post-period (four (4) years NYC; three (3) years, ROS)
	Complaints and Appeals Data	Rate of complaints and appeals due to denial of BH HCBS per 1,000 BH HCBS-eligible enrollees, by annual period, regionally (NYC, ROS, by county) and statewide	Unadjusted Analyses over post-period (four (4) years NYC; three (3) years, ROS)
	Key informant interviews with BH HCBS providers, Health Home and HARP administrators, NYS DOH officials	Barriers and facilitators to provision of BH HCBS and the effectiveness of the services provided	Qualitative methods

Research Question	Data Source	Outcome Measure	Design and Analytic Approach*
4. To what extent are the added costs arising from access to BH HCBS offset elsewhere in the continuum of care?	Medicaid Data	Risk-adjusted total Medicaid PMPM costs, by annual period (PMPM/Y), NYC and ROS Risk-adjusted PMPM costs for acute care BH services, by annual period (PMPM/Y), NYC and ROS Percentage using acute care BH services, by annual period, NYC and ROS Percentage using non-acute (OP) BH services, by annual period, NYC and ROS	Adjusted analyses over pre-period (two (2) years) and post-period (four (4) years NYC; three (3) years, ROS)@

* All analyses employed the open cohort and were conducted separately for NYC and ROS.
@ Adjusted Analyses (see Section 3.3 for adjustor variables) are applicable to a population with similar characteristics as the BH HCBS user population; model estimates correspond to changes (and their respective standard errors) in utilization (percent probability) or costs ($) over time for BH HCBS users relative to the first post-period year; the models also provide estimates of the effect of the BH HCBS benefit among HARP enrollees with the characteristics of BH HCBS users. Matched sample (ATT) results are presented for OP BH service outcomes, not modeled due to 100 percent utilization (all post-period years combined due to the small size of annual cohorts).

RQ1: Access to Care: To what extent are HARP enrollees deemed eligible to receive HCBS?

This RQ included one hypothesis:

1. It is expected that 75 percent of HARP members will be eligible for any HCBS, 75 percent of HARP members will be eligible for HCBS Tier 1, and 70 percent of HARP members will be eligible for HCBS Tier 2 by the end of 2019.

We addressed this RQ with quantitative and qualitative methods (see Table 4.21). For the quantitative (unadjusted) analyses, we assessed the percentage of HARP enrollees deemed eligible for BH HCBS, by Tier and annually throughout the post-period. We also characterized this population using demographic (age, sex, race/ethnicity) and clinical (BH diagnoses and overall health status) variables. In addition, we evaluated the percentage of HARP enrollees who were assessed for BH HCBS eligibility,[14] a procedure that the DOH had planned to do through the administration of the CMH Screen. Because the number of enrollees denoted as assessed or BH HCBS eligibility using the Medicaid data alone was much lower than the number of enrollees with evidence of CMH Screen, we used both sources to define status of BH HCBS eligibility assessment (Appendix Table E.17).

Population-level characteristics of HARP enrollees deemed eligible for BH HCBS

In both regions and annually over the course of the post-period, the cohorts of BH HCBS-eligible HARP enrollees trended younger and became more male (Appendix Table E.14). Over

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[14] Given the relative low numbers of HARP enrollees assessed for BH HCBS eligibility, we made the decision to report rate of enrollees deemed BH HCBS-eligible relative to the total number of HARP enrollees—that is, not relative to the total number of enrollees who were assessed.

time, the shares of BH HCBS-eligible HARP enrollees with schizophrenic disorders and Any SMI declined, while the shares with any SUD diagnoses grew. In ROS only, BH HCBS-eligible HARP enrollees became healthier based on overall health status as they had less dominant chronic disease to catastrophic conditions.

Quantitative Findings

Over the course of the post-period, four years for NYC and three for ROS, growing percentages of HARP enrollees in both regions became eligible for any Tier BH HCBS (Table 4.22). Rates increased from 6.01 percent (2016) to 20.7 percent (2019) in NYC, and from 17.2 percent (2017) to 24.2 percent (2019) in ROS. Of note, many more enrollees were deemed eligible for Tier 2 than Tier 1 BH HCBS, and most of the growth was observed for eligibility for Tier 2 BH HCBS.

Table 4.22. BH HCBS Assessment and Eligibility, HARP Enrollees, Unadjusted Rates (Percent), by Post-Policy Year and All Years Combined, NYC and ROS

	2016	2017	2018	2019	Overall	P-value
NYC	(N=47,867)	(N=59,113)	(N=70,065)	(N=73,290)	(N=250,965)	
Assessed, %						
BH HCBS Assessed	7.65	8.90	12.2	18.1	12.31	**0.00**
BH HCBS Eligibility by Tier, %						
BH HCBS Tier 1	0.46	0.82	0.74	0.40	0.60	**0.00**
BH HCBS Tier 2	5.58	9.74	13.5	20.4	13.1	**0.00**
BH HCBS, Any	6.01	10.58	14.2	20.7	13.7	**0.00**
ROS		(N=41,446)	(N=51,966)	(N=69,862)	(N=163,274)	
Assessed, %						
BH HCBS Assessed		17.0	20.5	19.7	19.2	**0.00**
BH HCBS Eligibility by Tier, %						
BH HCBS Tier 1		0.85	1.13	0.43	0.76	**0.00**
BH HCBS Tier 2		16.4	23.7	23.9	21.9	**0.00**
BH HCBS, Any		17.2	24.7	24.2	22.6	**0.00**

SOURCE: Authors' analyses of Medicaid data (2014–2019)

NOTE: The p-value describes the statistical significance of the chi-square test that compares all annual periods together.

The percentage of HARP enrollees assessed for BH HCBS eligibility grew in both regions (Table 4.22). In NYC, the rates were relatively stable in the first two post-period years but began increasing by the third post-period year (12.2 percent) and more than doubled by the last post-period year (18.1 percent). The rates also increased in ROS but in a more gradual manner, from 17.0 percent (2017) to 19.7 percent (2019).

Qualitative Findings

Barriers and facilitators to BH HCBS Eligibility: Key Informant Perspectives

Key informants discussed several challenges along the pathway to care for BH HCBS. They noted that one of the biggest hurdles is clearly articulating to members what BH HCBS is, distinguishing it from other services, and outlining the processes required for linking to BH HCBS. Key informants noted that many care coordinators lacked sufficient understanding of these issues themselves to effectively engage HARP enrollees in the process.

> There're so many services out there and [HCBS] was just one more that was just added to the menu of services. And I'm not sure that people fully understood what the goals were, and I'm not sure how well explained it might have been to participants. [BHP-15]
>
> Are care managers educated, informed well enough to accurately describe these services and really capture what they do and are clients receiving that information in a way that they understand and that is meaningful to them and really speaks to them? And I think sometimes there was a big disconnect. [PTAO-13]

Key informants emphasized that a lot of training was required in initial phases to educate care coordinators on BH HCBS but that the challenge persists and is further exacerbated by high turnover among care coordinators.

> Years later, it's like we're still doing these same sorts of training about…what is HCBS and what's a health home, and I feel like honestly, the interactions I've had with some care managers around the state has been that they actually do not really understand what the HCBS services are…They just don't know the nuance between them… One of the other things that we really saw in the community was high turnover rates among care managers. The minute you train somebody, they leave and so that was a really big issue too because you're constantly retraining the workforce, which means that the clients are also having to build a new relationship with a care [coordinator]. [PTAO-13]

Though the BH HCBS eligibility assessment process changed in 2018, informants emphasized that completing the assessment presented significant challenges to enrollment in earlier stages.

> The whole set up that the health home care coordinators are completing the eligibility assessments has just proved to be challenging, especially given the other requirements that they have in terms of assessments and plans of care for just general health homes….It's true that there's some increased reimbursement, but I think given the way that many care management agencies are structured, it didn't properly incentivize completion of those assessments. [BHP-12]
>
> [It] required…a very lengthy full assessment. The training was confusing, it was a lot to manage…We struggled with it, [it] was kind of on the back burner for many people… it could range from 10–12 hours in getting it done…it was a little bit challenging because they already had a caseload [that was] moving from 12

> clients [under targeted case management] to 40 something clients or around 30 clients or whatever it is. [HH/CMA-7-HH]

Key informants identified several factors that facilitated BH HCBS eligibility assessment over time. While some informants questioned the need for an assessment in general, they noted that shortening the BH HCBS Assessment requirement helped to reduce one hurdle.

> When they shortened the assessment…it probably takes about a half an hour to get through with clients and if you know the client well, it might be even shorter…So, [now] the assessment process isn't where the issues lie. [CMA-2]

Infrastructure contracts, which provided funds for organizations to develop capacity for facilitating access to BH HCBS and engaging HARP enrollees, were also seen as highly beneficial. Informants credited infrastructure contracts with enabling better training for care coordinators in BH HCBS, investments in more direct outreach for recruitment, improvements in communication and relationships with MCOs, and overall creation of better linkages across the system. In addition, informants discussed the introduction of recovery coordinating agencies (RCAs) that were intended to facilitate BH HCBS assessment completion and referral, but it was unclear to what degree the RCAs had made a significant impact on BH HCBS enrollment.

> Those infrastructure contracts [helped]…the legacy of it…the time and effort in resources put into really strengthening [the] care coordination program's ability to connect people through all the training they did on the actual logistics of the workflow and then also…how you engage people in that process. [BHP-12]
>
> Because I have that infrastructure contract, I can enroll people [with a recovery coordinator] into HARP services if they're HARP eligible and don't have a care manager and don't want a care manager…so it has helped. [BHP-14]

Barriers and Facilitators to BH HCBS Eligibility: HARP Enrollee Perspectives

From the perspective of HARP enrollees who were interviewed, barriers to eligibility for BH HCBS were minimal. Most informants were unable to recall the BH HCBS eligibility assessment process, but those who did expressed concern with the length of the assessment process and the associated paperwork. Participants described eligibility assessment as a "long" process that required meeting in person with their care coordinator to go over a comprehensive series of questions.

> They just asked me questions about my life, about my physical health, and my mental health, and my history, and they just wanted to evaluate who I was, it's just, yeah…just to see my history of my medication, my history of therapy, of how I feel, and what I feel. All those questions. [ENROLLEE-3]

One HARP enrollee questioned the validity of such an assessment, expressing uncertainty and confusion regarding how these questions would identify the type of BH HCBS they would be able to access.

> How do these questions provide a better assessment? I'm just curious how these questions influence the services. Hopefully the questions that they do ask is going to determine that correctly. [ENROLLEE-6]

Despite some issues with the length and scope of the BH HCBS eligibility assessment, participants explained that needing help and wanting to access BH HCBS motivated them to go through the eligibility process.

> At the time, I was in the midst of trauma…I would do anything to get any help…[I was open to] anything that was going to help me get to the next point... [ENROLLEE-3]

> This is business…this is a program and this is what I have to do—get used to that now…I didn't take it personally...I just thought, OK, this is what I have to do to get this program. So, I answered the question[s]. [ENROLLEE-1]

Summary of Findings

RQ1 Hypothesis 1: It is expected that 75 percent of HARP members will be eligible for any HCBS, 75 percent of HARP members will be eligible for HCBS Tier 1, and 70 percent of HARP members will be eligible for HCBS Tier 2 by the end of 2019

Our analyses do not support the DOH's hypothesis. Although the percentages of HARP enrollees deemed eligible for BH HCBS increased over the course of the post-period, particularly for BH HCBS Tier 2, they were well below the DOH's expectations for 2019 (75 percent); the rates of assessment for BH HCBS eligibility also grew but remained very low. The annual cohorts of BH HCBS-eligible individuals trended toward becoming younger and less burdened with serious diseases, particularly in ROS. The qualitative interviews suggest that the complexity of the process was indeed a barrier, due in part to a lack of appreciation on the part of HARP enrollees of the potential value of BH HCBS.

RQ2: To what extent are HARP enrollees who are deemed HCBS-eligible receiving HCBS?

This RQ included one hypothesis:

1. It is expected that PMPM BH HCBS utilization will increase over the course of the demonstration.

We addressed this RQ with quantitative and qualitative methods (see Table 4.21). For the quantitative (unadjusted) analyses, we assessed the annual rates of BH HCBS-eligible HARP enrollees who became BH HCBS users, by region and statewide, and also by HARP and county. Although the original measure was based on monthly rates, we present annual estimates (i.e., monthly rate times 12) because the monthly rates rarely change.

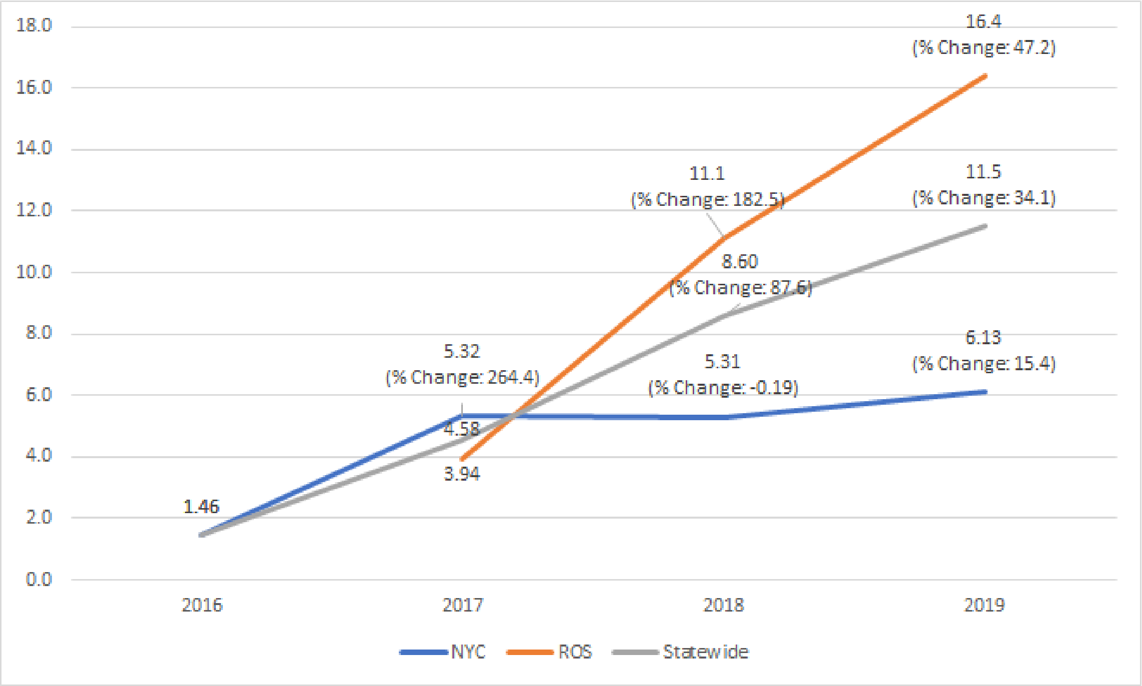
Quantitative Findings

Over the course of the post-period, growing percentages of BH HCBS-eligible HARP enrollees became BH HCBS users in both regions, with ROS registering a particularly dramatic growth (Figure 4.17). In NYC, the rates of BH HCBS users increased from 1.46 percent (2016) to 6.13 percent (2019), with an annual increase of 15.4 percent between the third and the last post-period years (2018 to 2019). In ROS, the rates increased from 3.94 percent (2017) to 16.4 percent (2019), with an annual increase of 47.2 percent between the third and the last post-period years (2018 to 2019). Statewide, the rates increased from 4.58 percent (2017) to 11.5 percent (2019), with an annual increase of 34.1 percent between the third and the last post-period years (2018 to 2019).

BH HCBS utilization increased in the post-period across all HARPs, with the largest increases observed in 2018 for CDPHP, Excellus Blue Cross Blue Shield, Independent Health, and YourCare Option Plus (Figure 4.18). These plans also have the highest overall BH HCBS utilization rates across the 13 plans in the post-period.

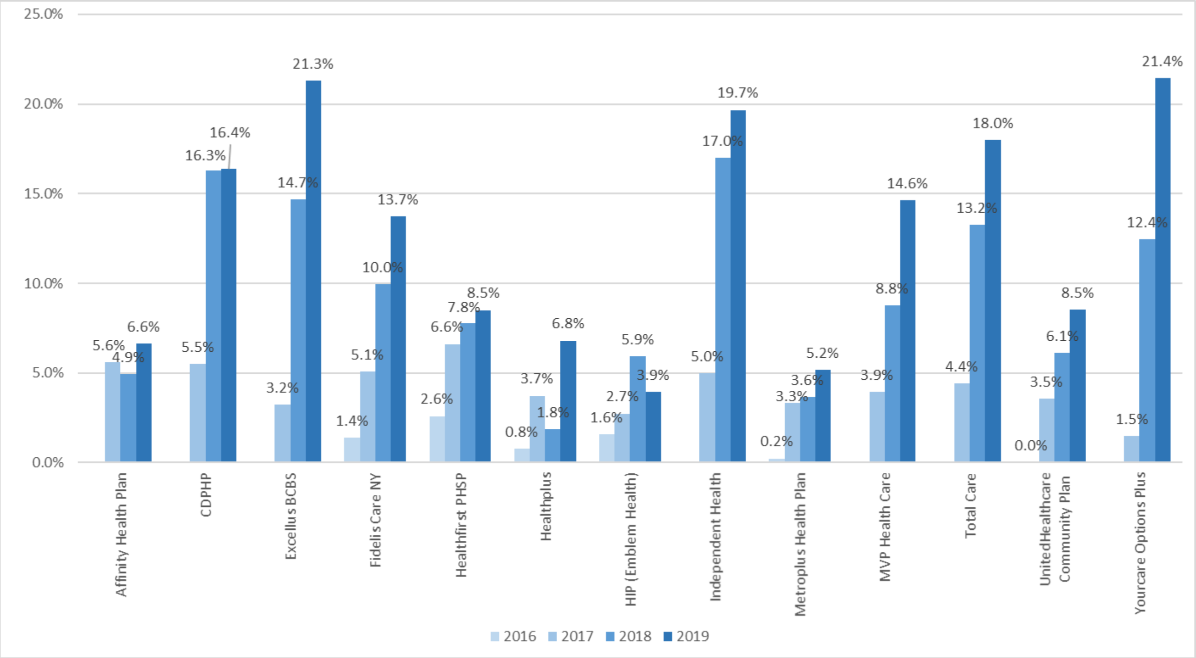
By county, overall BH HCBS utilization rates were highest in Finger Lakes, North County, Capital Region, Western NY, Central NY and Southern Tier. BH HCBS utilization rates generally increased over the course of the post-period across all counties (Appendix Table E.16). Finger Lakes experienced a large increase in 2018 from 3.14 percent (2017) to 17.51 percent (2018) while Mid-Hudson experienced a large decrease from 20.0 percent (2016) to 4.45 percent (2017).

Figure 4.17. BH HCBS Utilization by BH HCBS-Eligible HARP Enrollees, Unadjusted Rates (Percent), 2016–2019, NYC, ROS, and Statewide



SOURCE: Authors' analyses of Medicaid data (2016–2019)

Figure 4.18. BH HCBS Utilization by HARP, Unadjusted Rates (Percent), 2016-2019



Qualitative Findings

Barriers and Facilitators to HARP enrollees accessing BH HCBS: Key Informant Perspectives

Beyond initial challenges of getting stakeholders across the system to understand BH HCBS and complete the assessment process, key informants outlined multiple sources of potential delay further down the road given all the steps involved from referral to officially starting BH HCBS.

> You have to then refer the client to an HCBS provider. The MCO is supposed to give you a list of three providers that you then discuss with the client…The client says, “I want to go with this particular agency…” The first person you get on the phone says, “HCBS? I have no idea what you’re talking about. Thanks.” Go back to the MCO, “Do you have another number for this agency…” You try that one, “Oh yeah, we provide that service, but right now, we are currently at capacity…” You go back to the client, “We can’t do that agency, how about we try one of the other two?”…and now the process starts all over again. You finally find a HCBS provider…Now they are supposed to contact the client to fill up the first intake appointment… Not to mention our clients are not the most reliable with returning phone calls…it could be months since you’ve done this assessment and they’ve had their first intake appointment. At this point, something [may have] changed in the client’s life. Or there’s a lapse in Medicaid coverage and they lose their HARP service. Or they just say “This process is taking so long I don’t even want to do it anymore…” I think that the MCOs…[should] have a directory with real-time vacancies that would be helpful…you have it by type of HCBS services and this is the current contact person in order to make a real call. [CMA-2]

Providers contrasted the cumbersome BH HCBS eligibility and assessment process with members' relatively direct and easier access to a range of other services.

> In a perfect world…if I was somebody that wanted a service, why couldn't I just call up a potential HCBS provider? Why can't I sort of say, "What do you have to offer me…" Call for an intake appointment, and then that person does a quick assessment and says, "Yeah, you're good to go?" [PTAO-13]

As noted previously, challenges also emerged as care coordinators and BH HCBS providers struggled to navigate working with multiple managed care companies and health homes.

> In HARP, it's contracted out to a health home, and then to a care management agency. It's just an extra layer that's confusing and just another thing that people have to go through…Then on the provider side…having all these different plans involved is just creating so much paperwork that's not the same. So when they're trying to get client services, it's hard. [PTAO-34]

The lack of understanding of BH HCBS and the complicated workflow also discouraged buy-in across the system. Key informants shared that it was often perceived as more efficient to refer members to services other than BH HCBS.

> They said that they're finding it's easier to connect them with a similar service that isn't HCBS because…you can skip the entire workflow. So there are community providers…that can provide similar services without going through all of the steps and that's not something that we've heard from like everyone, [but] it does highlight some of the frustration people feel about just trying to get access to HCBS. [HH-16]

> [One care coordinator] just said, "Why would I possibly put somebody through the HARP assessment, the referral process, the plan of care process, to [go for] education when they can get it right from the state aid service and do none of this extra work and I don't have to do the extra work?" This whole thing is disincentivized. [BHP-24]

Finally, informants highlighted that progress has been made in getting members interested in BH HCBS but that now availability of certain types of BH HCBS was emerging as a challenge. They explained that there was a shortage of providers for certain services, such as peer support, in certain areas, resulting in waitlists for members.

> There's a long waitlist now. So, that's a little bit more challenging, because now the clients are interested and now there's another barrier…to be told, that there is a long waitlist and there's not enough providers in our community doing HCBS services. [Provider agency] is the only one doing most of it…and they're getting all these referrals, so there's not enough staff to get that done… [HH/CMA-7]

In terms of facilitators of BH HCBS access, similar to findings regarding successful linkages to care coordination, explaining how BH HCBS could concretely help HARP enrollees with a specific goal, warm-handoffs, and having a trusted provider to guide members through the complicated workflow were seen as facilitating connections to BH HCBS.

> Letting them see the value of [HCBS], like you talked about wanting to have a friend, well these services can assist you with that. They have peers available for that. You want to learn to do certain things for cooking or being organized or whatever it is, we're able to explain all of that. [HH/CMA-7]
>
> If they had an individual…guiding them through the process…, somebody to help keep them motivated through the workflow…following up, checking in, keeping them engaged throughout, that was what we saw was the successful element, it didn't matter who it was—it just needed to be somebody. [PTAO-13]

Key informants also emphasized that peer specialists were particularly successful with engaging HARP enrollees in BH HCBS.

> Of those who actually…made it to the HCBS point and are connected, I would comfortably say over eighty percent are connected because of peers…peers have really taken over to really be our introduction to HCBS…even though HCBS cannot bill for it…Bringing the peer or the peer going out with the health home manager and introducing themselves and that relationship building from the start, knowing that that's the face I am going to see at the end of all of this paper work, has been really reassuring. [HH/CMA-4]

Perceived Impact of BH HCBS: Key Informant Perspectives

There was near unanimous consensus that BH HCBS, when the services could be successfully accessed, were extremely beneficial in supporting HARP enrollees to progress with recovery, achieve life goals, and be more involved in their community.

> Once individuals were connected to HCBS, they loved HCBS. They really saw the benefits and really felt that it helped them improve and helped them reach their health and recovery goals. So once they got to the service, they were really happy… [PTAO-13]

Key informants often identified BH HCBS as the main benefit of HARP, emphasizing the value of having enrollees working on goals that are meaningful to them, with an individualized service approach that took place within one's home or community.

> As far as the services themselves, I think they're really wonderful. We've seen just some amazing outcomes…I think meeting people where they are physically, too, is really powerful and equalizing and joining alliances, if I'm coming to your house, if we're meeting at a coffee shop, versus you always coming to me. So I think those are really great… [BHP-24]
>
> Because it's so individualized, it's really increased the success rate and how much people get out of it, 'cause it's really what they want to get out of it and it's all adapted around their particular needs, done in their communities, done in their homes, done in their home environment, so that's much better success rate. [HH/CMA-7]

Overall, they noted BH HCBS was a viable option for HARP enrollees for whom existing services were not sufficient or were not the best fit, or for members who were needing to step down from more intensive services, such as ACT.

> HCBS has the ability to catch the in-between people. So there are always clients that fit very nice and neat into PROS or an ACT or clinic and they do great, and that's wonderful. But more often than not, there are clients that don't fit so neatly into either of those categories…if we didn't have all of the barriers to get to HCBS, I think it would be a phenomenal thing to be able to offer every client, if they're not ready for a full-blown step-down [from higher intensity services]. [CMA-23]

Finally, many informants suggested expanding the populations that could be eligible for BH HCBS.

> I would actually hope that we could even open the gates a little bit more, a little wider, and have better access to HCBS because I think they're a great set of services…My wish list is that duals could get access to HCBS, people with dual eligibility, not just Medicaid. Cause there's so many services that people can benefit from HCBS and getting them in the community. [HH/CMA-7]

Experiences with Access and Utilization of HCBS: HARP Enrollee Perspectives

Once determined eligible for BH HCBS, HARP enrollees seldom recalled difficulties with accessing BH HCBS. However, one participant shared the time it took to be assigned an BH HCBS provider: "It was probably like a year. I might be wrong…but it was a process." [ENROLLEE-2] While some participants noted delays in accessing BH HCBS due to challenges in communicating with their care coordinator, most participants credited their care coordinators' recommendation for BH HCBS and its benefits as the reason they followed through with the assessment and referral process.

> [Care coordinator] told me that I was eligible to get the services…I have mental and physical medical issues and they put me up with a care manager…and got me a peer specialist by asking me what I need and what my issues are, and actually not that long of a process to get there. I now have support everywhere. [ENROLLEE-9]

Across the HARP enrollees interviewed, there was a consistent theme of high satisfaction with the quality and impact of BH HCBS, promoting participation in these services. Once introduced to their BH HCBS providers, HARP enrollees described various ways in which they utilized BH HCBS. Many highlighted working together with their provider to identify, assess, and address specific goals. Overall, they reported positive experiences with BH HCBS that motivated their ongoing engagement with the services.

> Oh my goodness. Everything and anything…[HCBS peer specialist] help[s] me with some ideas, some things that I hadn't thought of, that gives me a different perspective…She helps to keep [me] positive…[She] has been great. [ENROLLEE-12]

As noted, barriers were few and, when noted by enrollees, mostly focused on expanding the range of supports offered by BH HCBS.

> A little bit more services actually available would be great... If the goal was to help people socialize better or connect better with their community. That could

> definitely be more of a life skills element to it…say financial awareness, like basic checkbook balancing…In my personal case, learning to drive would be a big one. If there was more concrete help for life skills like that, I'm sure that would be a huge difference in a lot of people's lives. [ENROLLEE-2]

In the sections below, we highlight how HARP enrollees described their experiences with specific types of BH HCBS.

Peer Support Services. Peer services were the most frequently utilized BH HCBS among the HARP enrollees interviewed. Overwhelmingly, participants expressed positive experiences and shared the unique value of peer support in their recovery.

> [We] talk about everything…come up with solutions to what might help me…I love her…I had an issue with [Department of Social Services] and she sat with me…and she helped me…I don't know what I'd do without her because she has calmed down my nerves and helped me with things…I didn't know someone like me could have support like that… If I get in one of my suicidal moments, then I can talk to her. [ENROLLEE-11]

HARP enrollees highlighted the differences between their peer provider and mental health clinicians as key to their ongoing engagement with BH HCBS.

> It's peer counseling. It's different from a therapist…it's more equal terms. Because, I guess the therapist is more of an authority…They have the authority to even commit you if you're off your meds and whatever else…[The therapist] always asks me…about my medication and if it's working and everything. [The peer specialist] does not do that. She asks me about…a lot of improvement and one of my goals and stuff like that. I've been telling her about things I've been doing and trying to make some improvements. [ENROLLEE-1]

> I would describe it as a helping tool for anybody that needs help with their mental health or they need to get it out, someone to talk to…with a peer counselor… I can talk more personal than I can with a counselor, or a therapist…We go over scenarios. Why is that happening? Why is it doing this? Where a counselor, "Maybe we can fix it with this, or fix it with that" and try to basically push it with more drugs, which I don't need. [ENROLLEE-8]

HARP enrollees appreciated the distinct role of the peer specialist given their shared lived experience.

> I think she has had a great impact in my life. I don't know if keeping something in my head for months is good and I know I can just contact her instead right now… she works with me and she can compare some of the things I go through with things that she has gone through as well…She reminds me that I am going to get through it. She reminds me of how strong I am. [ENROLLEE-12]

Supported Employment Services. While only one HARP enrollee reported receiving supported employment services, they discussed the various ways in which they worked with their supported employment specialist on employment goals.

> The main thing they work at is my finances, my employment, my income from work, from both of my jobs… I have a learning disability as well…I have some

> challenges, like things with memory… [We talk about] how emotionally and profoundly my job [at the crisis hotline impacts me]. [ENROLLEE-6]

This member also shared the ways in which the employment specialist provided support beyond the realm of employment.

> She also helps me emotionally, like I broke down in her office the other day because one of the things I am having a hard time with is keeping my own place clean…[She] tries to help me out with everything. I had a conference meeting with her and my therapist…and we decided it was time for her to come to my place and help me out. So, she is going to come and help me out cleaning…[ENROLLEE-6]

Psychosocial Rehabilitation Services. Participants often discussed the benefits of receiving assistance from a peer specialist specifically related to psychosocial rehabilitation goals in their living, social, and learning environments.

> It has impacted [me] greatly. I have been getting out more because I haven't gotten out of the house for almost ten years and now, I'm forcing myself to get out of the house…to go shopping, take out my trash, go out and do laundry… confidence in myself to do things… Having [peer support] feels great…I've been trying to get out of the house for a long time and I actually got someone to talk me through it, push me a little bit to get going…coaching me. [ENROLLEE-8]

Another participant shared the ways in which Psychosocial Rehabilitation Services helped them to re-engage in the community, thereby promoting connectedness, health, and avoiding substance use relapse.

> Things that we were doing were going to a ladies' exercise group…at our local church here. And then they started doing Tai Chi lessons and we started with that….and we will go to the library and volunteer… So I have the support of someone going with me…It gets me there where I wouldn't get there on my own. I'm meeting people in my community [and] making a connection, which is very important to my mental health, avoiding substance abuse…Then there's the benefit of the exercise itself. [ENROLLEE-9]

Crisis Respite Services. Two HARP enrollees reported utilizing crisis respite and emphasized that, despite the short-term temporary nature of the service, it was an invaluable resource. They expressed gratitude for the positive impact of crisis respite on their recovery and felt a sense of reassurance in knowing they could seek the service again if they were in crisis.

> Crisis respite center is an amazing resource. It allows you to stay for a week and basically kind of de-toxify from other—from stressors, and I'll be in a safe place, safe space where…mental health peers can help you navigate the issues that you have at that time...It's an amazing place and the people that work there are all impacted individuals who have their own stories around mental health and their own history…To be in a situation where I have people that understand me and know me and can continue to foster that kind of relationship…that was an amazing experience…The respite center…did play a great role in me staying or being out of the hospital for a bit as well…I think that had I not had that safe

> place to stay for a week, I would have ended up being hospitalized…
> [ENROLLEE-7]

Summary of Findings

RQ 2 Hypothesis 1: It is expected that PMPM BH HCBS utilization will increase over the course of the demonstration

Our analyses support the DOH's hypothesis, as the rates of BH HCBS utilization increased over the course of the post-period, more vigorously in ROS than in NYC. However, by 2019, the rates of BH HCBS utilization were well under 10 percent in NYC and under 20 percent in ROS. Interviews with key informants highlighted extensive challenges regarding enrollees' access to BH HCBS, including difficulties in distinguishing BH HCBS from other services, lack of understanding of specific types of BH HCBS across the system (e.g., care coordinators, providers, enrollees), a lengthy eligibility assessment process (prior to instituted changes), complex workflows involving multiple steps and multiple entities, and a potential mismatch or delay in the timing of when individuals need BH HCBS versus when they are deemed HARP-eligible by virtue of the algorithm's use of historical data. Despite these challenges, key informants and enrollees placed high value on these services, emphasizing their mobile and community-based approach, personalized goals, individualized services, and the wide range of peer supports available.

RQ3: To what extent has the Demonstration developed provider network capacity to provide BH HCBS for HARPs?

This RQ included one hypothesis:

1. It is expected that the number and ratio of BH HCBS providers per 1,000 enrollees will increase over the course of the Demonstration.

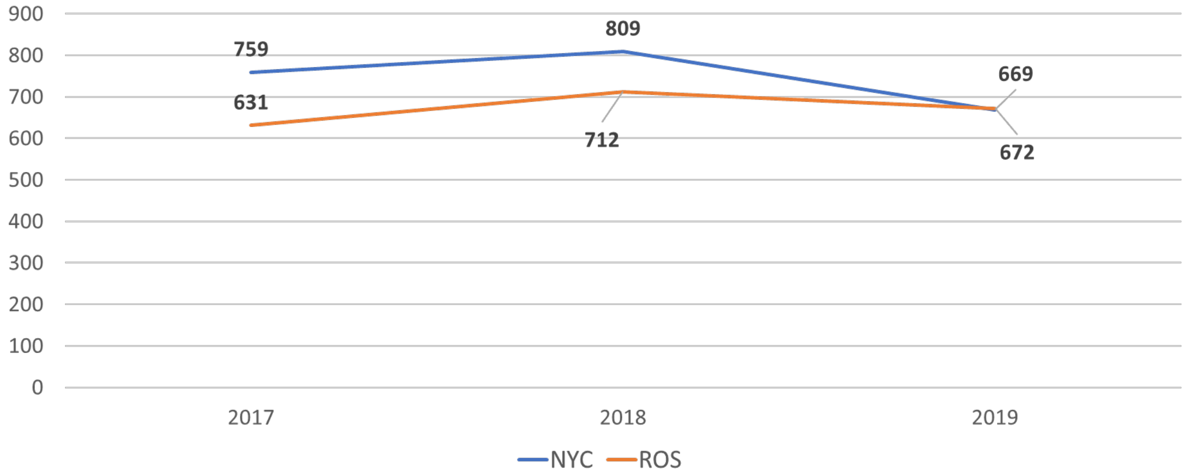
This RQ was addressed with quantitative methods (see Table 4.21). To address this impact of the Demonstration on BH HCBS provider network capacity, the evaluation team used the MMC HCBS Provider Network Data System and examined trends in the number of BH HCBS providers at the level of HARPs, counties, region (NYC and ROS), and statewide. Providers were linked to geographic areas (regions or counties) based on provision of services to a beneficiary located in that area. Data on the number of BH HCBS-eligible beneficiaries, also obtained from MMC HCBS Provider Network Data System, were used to calculate the number of providers per 1,000 eligible individuals. In addition, Complaints and Appeals data were used to examine complaints related to denials of coverage for BH HCBS.

Number of BH HCBS providers by year

The total number of providers increased in both NYC and ROS between 2017 and 2018, but then decreased in both NYC and ROS in 2019 (Figure 4.19). In NYC, there were about 90 fewer

BH HCBS providers in 2019 than there were in 2017, a 12 percent decrease. In contrast there was a net increase of 41 BH HCBS providers between 2017 and 2019 (6 percent) in ROS.

Figure 4.19. Total Number of BH HCBS Providers, NYC, and ROS, 2017–2019

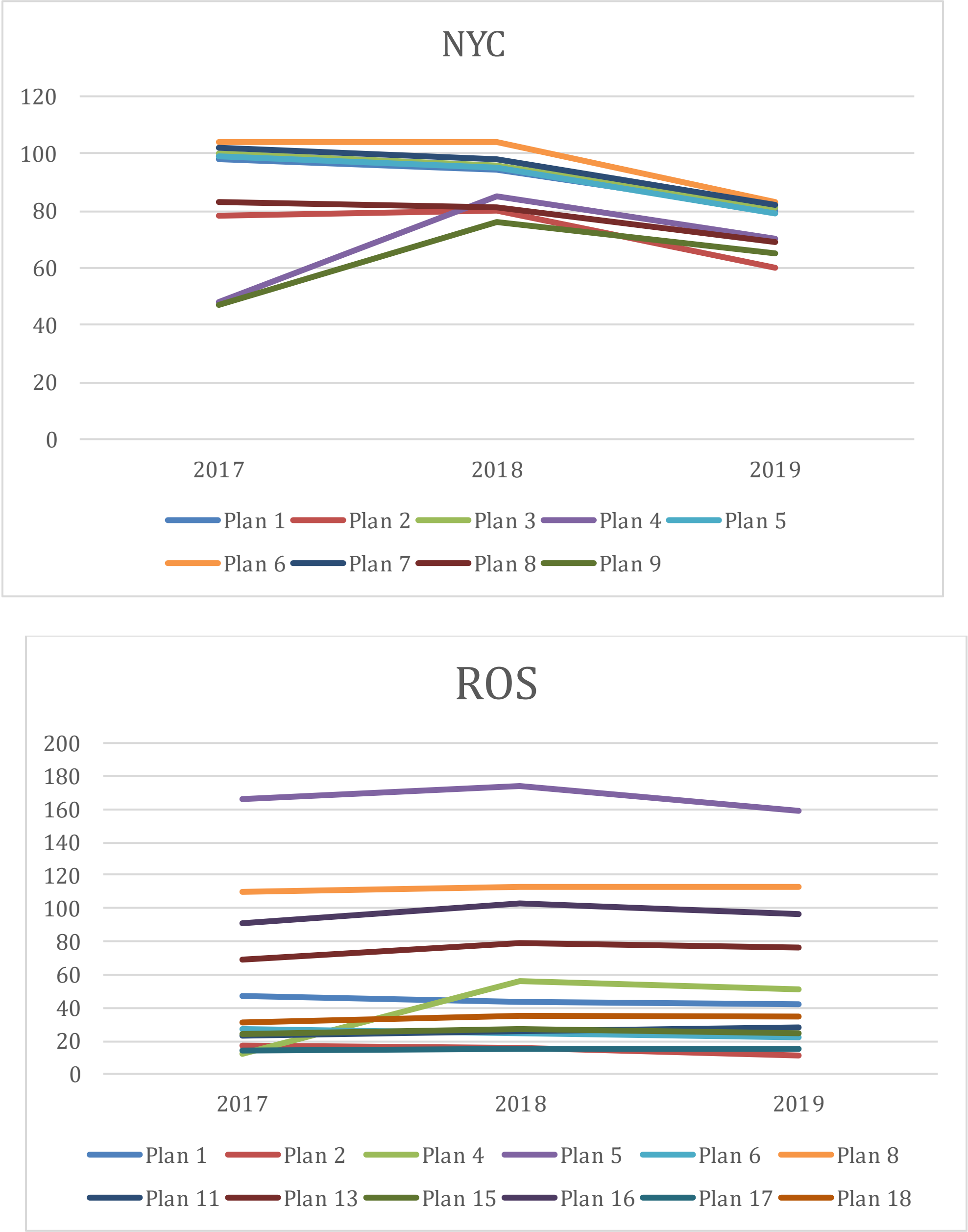


SOURCE: MMC HCBS Provider Network Data System

Number of BH HCBS providers by plan

In NYC there was a gradual decrease in the number of BH HCBS providers in seven of nine health plans operating at the time (Figure 4.20). In the other two plans, which had the lowest number of BH HCBS providers in 2017, there was an increase between 2017 and 2018 and then a decrease from 2018 to 2019. In contrast, the number of BH HCBS providers per plan was more stable in the ROS plans. The exception is the plan that had the fewest BH HCBS providers in 2017, which saw a dramatic increase in BH HCBS providers between 2017 and 2018.

Figure 4.20. Total Number of BH HCBS Providers, NYC, and ROS, 2017–2019



SOURCE: MMC HCBS Provider Network Data System

Number of BH HCBS Providers by County

To find the number of providers in each county, we counted the providers seen by enrollees in that county. To examine trends in the number of BH HCBS providers by county, we ranked the 62 counties in NYS from smallest to largest average number of providers for the 2017–2019 period. Table 4.23 shows the trends for the four quartiles of counties, from smallest to largest. In all quartiles, there was an increase in the number of BH HCBS providers between 2017 and

2018. Notably, in the 15 counties with the fewest providers, the number of providers nearly doubled during this period, increasing from 63 to 117 providers. The increasing trend continued during the 2018 to 2019 period for the three lower quartiles, but the trend reversed in the highest quartile, resulting in a net decrease in that group relative to 2017. This indicates that the decline in number of providers is largely due to change in the largest counties, while there was stability or growth in number of providers in other counties.

Table 4.23. Total Number of BH HCBS Providers by County, 2017–2019

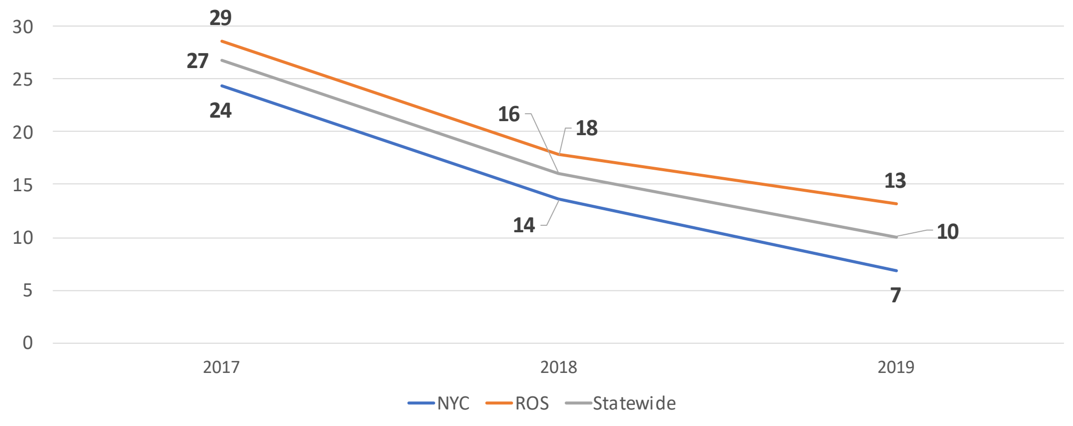
County Rank	2017	2018	2019
1 to 15	63	117	119
16 to 30	166	217	250
31 to 45	261	335	359
46 to 62	1,694	1,926	1,673
TOTAL	2,184	2,595	2,401

SOURCE: MMC HCBS Provider Network Data System

Number of BH HCBS Providers per Thousand HCBS-Eligible Enrollees

The number of BH HCBS providers per thousand eligible enrollees steadily declined in both NYC and ROS between 2017 and 2019 (Figure 4.21). In NYC the decline was from 24 to 7 BH HCBS providers per thousand eligible enrollees, and in ROS the decline was from 29 to 13 BH HCBS providers per thousand eligible enrollees.

Figure 4.21. Number of BH HCBS Providers Per 1,000 Eligible Enrollees, Statewide, NYC, and ROS, 2017–2019

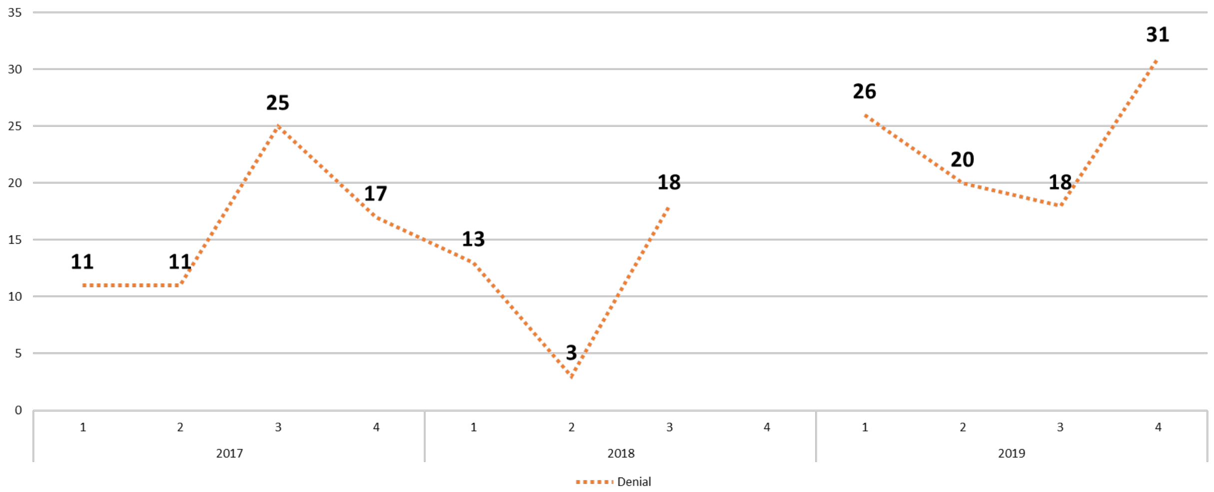


SOURCE: MMC HCBS Provider Network Data System

Complaints Related to Denials of BH HCBS

The rate of complaints related to denials was quite low over the course of the Demonstration, with the highest number of complaints occurring in the fourth quarter of 2019, when there were 31 such complaints (Figure 4.22).

Figure 4.22. Enrollee Complaints on HARP Denials



NOTE: Data for 2018 Q4 were not available
SOURCE: Medicaid Choice

Qualitative Findings

There was general consensus across key informants that provider network capacity to provide BH HCBS was limited. Factors that hindered providers' ability to offer BH HCBS included lack of funds to develop administrative capacity and BH HCBS infrastructure, low reimbursement rates, uncertainty regarding the pacing of referrals, and stringent regulations regarding the operation of certain services.

> In the beginning, the issue was that there wasn't enough startup capital to put the infrastructure around these services then like staffing, quality assurance, billing, all of those factors. Then there was an infusion of [infrastructure contracts]…a one-time payment to [providers to] build their infrastructure, but their rates are too low…the a la carte payment structure doesn't quite work…Then there is…some on the ground rules and regulations that also prevent particularly in crisis services, that prevent the peer programs from billing. For example…to bill a HCBS or crisis respite, the respite needs to have at least two staff during the overnight shift, which programmatically isn't necessarily needed, and programs can't fund that…if I had the magic wand and could make a change…[if] we were able to bundle services or if we could have…coverage similar to ACT…[if] HCBS was packaged…and reimbursed from a bundle perspective, that might help the organization, but there's just not enough revenue. So, the agencies then are not inclined to really go all out to really focus on building the infrastructure. [PTAO-3]

While infrastructure grants were consistently highlighted as essential to building capacity, many providers underscored the ongoing lack of financial viability of operating BH HCBS.

> For HCBS services, it's not independently sustainable, and that's why you'll find that the larger entities are not really going for or desiring to provide HCBS services. Because as compared to the other services, there's no money in it…My board asks me all the time, "Do we continue doing this?" Like it's not a financial winner. [BHP-22]

Providers emphasized that lower reimbursement rates were particularly challenging for BH HCBS that required staff to spend time traveling to participants' communities.

> You're going to the person, but the problem is that that takes a lot more time and money than if you're not going to the person…Driving there, the person's not there, you wasted all that time. So, there would need to be things in place to be able to make it sustainable…if you drive 20–40 miles to meet with someone, they're not there, if we can call someone on the way back and provide services like we have Telephonic services too, that would be good. [BHP-22]
>
> People sitting on trains to do home and community-based services…Destroyed our budget….To get from [neighborhood to neighborhood] took an hour and a half…When I first got to the [agency], I immediately disenrolled us from CPST services because the moment you send a licensed clinician into the field, you're losing money. [BHP-35]

Those who reported fewer financial challenges to operating BH HCBS had developed delivery structures that differed from the usual ways of operating BH services, such as utilizing per diem employees or subcontracting with a range of BH HCBS providers through an Independent Practice Association. In addition, training was identified as helping providers to better understand BH HCBS and how to develop effective processes for operating the services.

> [Training] around engagement, workflow, administrative function, just because for most of these providers, they can't afford to…hire staff. So, it's about the reallocating staff…We do a lot of stuff around workflow and training staff…[PTAO-9]

The unpredictable ebb and flow of referrals into BH HCBS was also a barrier to building provider capacity, with key informants noting that initially there were few BH HCBS referrals and more providers, but that over time this shifted to having more BH HCBS referrals but fewer providers.

> Back in the day when the services first went live…[we] trained everybody, but no one was getting referrals at the time. So it was like we had tons of people in the room and then it took a really long time to get referrals to start trickling in, and when they did come in, it was a trickle, not a downpour…Now…there are parts of the state that have waitlists for some of their services. Like especially the empowerment service, the peer service…they just can't keep up with the number of referrals that they are getting. [PTAO-9]

> But now we're just seeing HCBS is full and at capacity to take anymore new referrals…I think almost every single HCBS provider in our region has at least a cap on some of their services…We have full agencies that aren't taking anymore referrals, "We're full, full, full, full." [BHP-24]

Insufficient provider capacity to deliver peer services specifically was consistently noted, with shortages of certified peer providers seen as exacerbating the challenge.

> We'd get a referral, and we didn't have a peer, then we'd have a peer and then we didn't have the referral. We had quite a few people that were interested in being peers, but…they didn't have the certification, and that process became tedious for some of them. [BHP-15]

Finally, as noted, providers also highlighted the specific shortage of community psychiatry support and treatment (CPST) services as a result of low reimbursement rates.

> CPST is particularly hard to offer… There are not enough providers out there…It's pretty much psychiatric level staff that can go out in the community and meet the clients. It is hard to come by. [HH-26]

Summary of Findings

RQ 3 Hypothesis 1: It is expected that the number and ratio of BH HCBS providers per 1,000 BH HCBS-eligible enrollees will increase over the course of the Demonstration

Our findings provide inconclusive evidence regarding the DOH's hypothesis. Although the number of BH HCBS providers increased initially in most of the State, there was a decrease toward the end of the BH Demonstration, a trend driven by the counties with the largest numbers of providers. Moreover, the number of providers per 1,000 BH HCBS eligible HARP enrollees decreased over this period just as the number of HARP enrollees was increasing. Rates of complaints related to denials of BH HCBS were very low. In discussing factors that influence overall BH HCBS capacity within the provider network, key informants identified constraints such as low BH HCBS reimbursement rates, challenges with providers developing administrative capacity and infrastructure to support BH HCBS, the ebb and flow and overall uncertainty regarding pacing of referrals to BH HCBS, and workforce shortages for certain services (e.g., certified peer specialists in certain areas of the State). In contrast, availability of funds for infrastructure contracts and BH HCBS training were seen as bolstering capacity.

RQ4: To what extent are the added costs arising from access to BH HCBS offset elsewhere in the continuum of care?

This RQ included one hypothesis:

1. It is expected that the added costs arising from access to BH HCBS will be offset elsewhere in the continuum of care.

We addressed this RQ with quantitative methods (see Table 4.21). We assessed annual outcomes among BH HCBS users over the course of the post-period and compared their outcomes to those of HARP enrollees not utilizing BH HCBS (non-BH HCBS), with findings applicable to enrollees with similar characteristics as the BH HCBS user population.

We evaluated total Medicaid costs and costs and utilization of acute and OP BH care (see Goal 2 RQ11 for similar outcomes). Acute BH care included BH IP, which for utilization analyses was captured separately as Medicaid and MHARS IP admissions; BH ED; Any acute BH care (BH IP or BH ED); several high-acuity SUD services; crisis respite HCBS; and Any acute BH care plus (Any acute BH care, high-acuity SUD services, or crisis respite HCBS). We captured OP BH care through a composite measure capturing all OP BH care including Any Key BH OP services (Any OP BH services); we also constructed a measure capturing utilization of all non-pharmacy services (Any-cause utilization). Costs were estimated as total annual mean costs divided by the number of months of utilization (i.e., PMPM costs), and utilization was estimated as annual rates of any utilization.[15]

Population Characteristics

The cohort used for these analyses included 6,315 BH HCBS users and 64,870 non-BH HCBS individuals at the statewide level (Appendix Table E.18). In both regions, relative to BH HCBS users, non-BH HCBS individuals were older, had lower rates of SMI and higher rates of OUD and SUD, and in ROS non-BH HCBS individuals were in better overall health.

Adjusted Quantitative Findings

These analyses were conducted in a population of BH HCBS users and non-BH HCBS individuals with the demographic and clinical characteristics of BH HCBS users, generally a less healthy even if younger population than non-BH HCBS individuals (see above, Population Characteristics section).

Longitudinal Controlled Model

In NYC, BH HCBS users' total Medicaid costs and both costs and utilization of all forms of acute care, including Any acute BH care/plus, BH IP, BH ED, and Any acute non-BH services, were not different in the second, third, or last post-period year relative to the first post-period year (2016) (Table 4.24). However, because the BH HCBS main effect for BH IP utilization was negative (-9.91 (4.88)), BH HCBS users had a lower probability of utilizing these services relative to non-BH HCBS individuals with similar characteristics as the BH HCBS user population.

In ROS, total Medicaid costs, all acute care utilization, and costs of BH IP, BH ED, and Any acute non-BH services were not different in the second or last post-period year relative to the

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[15] When interpreting costs for the acute care composite measures, the reader should bear in mind that the PMPM costs of the less expensive and/or more frequently utilized services will have an important effect on mean cost estimates calculated on a larger population; thus, there should not be an expectation that the components will add to the composite, e.g., BH IP and BH ED may not add to the composite Acute BH care, since their sample sizes are different (this concern is also valid for utilization outcomes).

first post-period year (2017) (Table 4.23). BH HCBS users' costs for Any acute BH care/plus services were lower in the second post-period year relative to the first post-period year, by $1305.2 (634.67) for Any acute BH care plus, but the difference had dissipated by the last post-period year (2018). However, the BH HCBS main effect was negative for some comparisons between BH HCBS users and non-BH HCBS individuals with similar characteristics as the BH HCBS user population. Thus, utilization of BH ED and Any acute BH care plus services was lower for BH HCBS users relative to non-BH HCBS individuals; similarly, given a negative BH HCBS main effect (-769.52 (378.04)), costs for Any acute non-BH care were in fact lower for BH HCBS users relative to non-BH HCBS individuals in the second post-period year relative to the first post-period year (2017).

Table 4.24. Utilization and PMPM Costs of BH care, BH HCBS Users, by Post-period Year Relative to First Post-period Year, NYC and ROS

	PMPM Costs		Acute BH Plus Visits				Acute BH Visits			
Estimate (SE)	Costs (N=10,328)*	P-Value	Utilization (N=10,328)*	P-Value	Costs (N=2,681)	P-Value	Utilization (N=10,328)*	P-Value	Costs (N=2,498)*	P-Value
NYC										
BH HCBS Main Effect	-154.9 (423.35)	0.71	-4.29 (6.86)	0.53	-1556.8 (1886.81)	0.41	-4.81 (6.78)	0.48	-2419.3 (2041.29)	0.24
Year 2 after start of BH HCBS	215.5 (184.53)	0.24	-0.98 (2.99)	0.74	-633.5 (730.88)	0.39	0.26 (2.95)	0.93	-577.7 (764.30)	0.45
Year 3 after start of BH HCBS	49.1 (180.83)	0.79	-3.26 (2.93)	0.27	-631.4 (715.79)	0.38	-2.29 (2.90)	0.43	-653.2 (749.40)	0.38
Year 4 after start of BH HCBS	72.0 (178.13)	0.69	-1.87 (2.89)	0.52	-902.0 (702.24)	0.20	-1.29 (2.85)	0.65	-911.2 (735.31)	0.22
BH HCBS Post-Period Year 2	338.9 (449.77)	0.45	4.11 (7.29)	0.57	1456.7 (1979.05)	0.46	4.59 (7.20)	0.52	2314.5 (2133.63)	0.28
BH HCBS Post-Period Year 3	471.4 (440.44)	0.28	0.07 (7.14)	0.99	2088.4 (1954.48)	0.29	-0.57 (7.05)	0.94	3273.1 (2112.04)	0.12
BH HCBS Post-Period Year 4	199.6 (433.07)	0.64	-0.72 (7.02)	0.92	1297.0 (1924.69)	0.50	-1.11 (6.93)	0.87	2514.8 (2082.01)	0.23
ROS	**Costs (N=20,167)**	**P-Value**	**Utilization (N=20,174)**	**P-Value**	**Costs (N=5,070)**	**P-Value**	**Utilization (N=20,174)**	**P-Value**	**Costs (N=5,070)**	**P-Value**
BH HCBS Main Effect	-109.1 (119.03)	0.36	-5.33 (2.71)	**0.05**	608.5 (580.36)	0.29	-5.15 (2.70)	0.06	748.7 (556.97)	0.18
Year 2 after start of BH HCBS	68.7 (56.26)	0.22	-0.44 (1.28)	0.73	465.4 (258.17)	0.07	-0.47 (1.27)	0.71	522.6 (246.89)	**0.03**
Year 3 after start of BH HCBS	33.3 (54.58)	0.54	-1.32 (1.24)	0.29	150.3 (249.27)	0.55	-1.41 (1.24)	0.25	82.1 (238.44)	0.73
BH HCBS Post-Period Year 2	226.6 (129.96)	0.08	0.81 (2.96)	0.79	-1305.2 (634.67)	**0.04**	0.88 (2.94)	0.76	-1274.4 (609.44)	**0.04**
BH HCBS Post-Period Year 3	179.9 (125.02)	0.15	0.06 (2.85)	0.98	-1023.5 (608.49)	0.09	0.01 (2.83)	1.00	-1067.8 (584.54)	0.07

	Acute Non-BH Visits				**BH IP (Medicaid) Admissions**				**BH ED Visits**			
Estimate (SE)	**Utilization (N=10,328)***	**P-Value**	**Costs (N= 6,467)***	**P-Value**	**Utilization (N=10,328)***	**P-Value**	**Costs (N= 1,072)***	**P-Value**	**Utilization (N=10,328)***	**P-Value**	**Costs (N= 2,316)***	**P-Value**
NYC												
BH HCBS Main Effect	-1.12 (8.10)	0.89	-482.97 (1412.21)	0.73	-9.91 (4.88)	**0.04**	1444.1 (6484.65)	0.82	0.07 (6.62)	0.99	-428.7 (546.77)	0.43
Year 2 after start of HCBS	-1.41 (3.53)	0.69	505.24 (604.78)	0.40	-3.21 (2.13)	0.13	1145.6 (1310.21)	0.38	2.86 (2.88)	0.32	-292.1 (221.28)	0.19
Year 3 after start of HCBS	0.65 (3.46)	0.85	407.23 (592.71)	0.49	-4.01 (2.08)	0.05	1532.1 (1277.68)	0.23	0.80 (2.83)	0.78	-189.1 (217.53)	0.38
Year 4 after start of HCBS	1.84 (3.41)	0.59	257.12 (584.59)	0.66	-5.22 (2.05)	**0.01**	1133.8 (1250.54)	0.36	1.72 (2.78)	0.54	-165.5 (213.91)	0.44
HCBS Post-Period Year 2	2.38 (8.60)	0.78	1117.71 (1490.19)	0.45	6.95 (5.18)	0.18	171.0 (6616.31)	0.98	0.63 (7.03)	0.93	439.5 (572.20)	0.44
HCBS Post-Period Year 3	-0.88 (8.43)	0.92	401.38 (1461.56)	0.78	8.50 (5.07)	0.09	-1437.7 (6550.38)	0.83	-4.84 (6.88)	0.48	348.1 (566.32)	0.54
HCBS Post-Period Year 4	-4.93 (8.28)	0.55	883.30 (1442.25)	0.54	7.82 (4.99)	0.12	-1193.3 (6528.08)	0.86	-5.55 (6.77)	0.41	370.2 (558.37)	0.51
ROS	**Utilization (N=20,174)**	**P-Value**	**Costs (N=5,070)**	**P-Value**	**Utilization (N=20,174)**	**P-Value**	**Costs (N=5,070)**	**P-Value**	**Utilization (N=20,174)**	**P-Value**	**Costs (N=5,070)**	**P-Value**
BH HCBS Main Effect	-3.20 (3.19)	0.32	-769.52 (378.04)	**0.04**	-1.15 (1.86)	0.54	342.7 (1154.43)	0.77	-6.24 (2.66)	**0.02**	133.6 (76.15)	0.08
Year 2 after start of HCBS	0.47 (1.51)	0.76	-69.06 (176.36)	0.70	0.59 (0.88)	0.50	468.9 (549.41)	0.39	-0.44 (1.26)	0.73	15.5 (32.51)	0.63
Year 3 after start of HCBS	0.84 (1.46)	0.57	-157.28 (170.85)	0.36	-0.53 (0.85)	0.54	-177.7 (533.73)	0.74	-1.07 (1.22)	0.38	16.1 (31.37)	0.61
HCBS Post-Period Year 2	-0.54 (3.48)	0.88	635.31 (413.28)	0.12	-1.84 (2.03)	0.36	-1460.2 (1285.19)	0.26	2.44 (2.91)	0.40	-40.5 (82.84)	0.62
HCBS Post-Period Year 3	1.53 (3.35)	0.65	776.75 (396.45)	0.05	-2.48 (1.96)	0.20	-171.4 (1231.18)	0.89	1.70 (2.80)	0.54	-71.2 (79.63)	0.37

*Sample is propensity score matched

SOURCE: Authors' analyses of Medicaid data (2014–2019)

Matched Sample Estimates

Because we were unable to model BH OP care outcomes, we present matched sample (ATT) estimates for those outcomes, with results applicable to the non-BH HCBS individuals in the HARP population with similar characteristics as the BH HCBS user population (Appendix Table E.20). In both regions, relative to non-BH HCBS individuals, BH HCBS users had higher BH OP service utilization and costs. In NYC, 100 percent versus 91.1 percent of BH HCBS users versus non-BH HCBS individuals had Any BH OP utilization, while in ROS, the respective rates were 100 percent versus 89.8 percent. Costs for BH HCBS users versus non-BH HCBS individuals were $588.0 (12.02) versus $499.2 (6.48) in NYC, and $634.3 (9.09) versus $488.2 (4.72) in ROS. Of note, only in ROS were the groups different in terms of Any Key BH OP services, but while BH HCBS users had higher utilization than non-BH HCBS individuals—86.1 percent versus 84.0 percent—they had lower costs—$460.5 (8.30) versus $492.1 (4.73).

Summary of Findings

RQ 4 Hypothesis 1: It is expected that the added costs arising from access to BH HCBS will be offset elsewhere in the continuum of care

Findings from analyses applicable to HARP enrollees with similar characteristics as the BH HCBS user population do not support the DOH's hypothesis. BH HCBS users' post-period costs and utilization of all forms of acute care tended to not be different relative to the first post-period year; the exception was for Any acute BH care/plus service costs in ROS, which were lower in the second post-period year but not different in the third and last post-period year. However, BH HCBS users had a lower probability of utilizing selected acute BH services relative to non-BH HCBS individuals with similar characteristics as the BH HCBS user population in both regions (BH IP in NYC and BH ED and Any acute BH care plus services in ROS); these utilization findings did not translate into lower relative costs for those services. BH HCBS users did have lower costs for Any acute non-BH services relative to non-BH HCBS individuals but only in ROS and only the second post-period year.

Matched sample analyses showed that relative to non-BH HCBS individuals, BH HCBS users had higher OP BH care utilization, and also costs, in both regions. We urge caution in the interpretation of these particular findings as the reasons that prevented us from conducting the planned modeling analyses also limit the generalizability of the matched sample results.

5. Policy Implications

This chapter provides a discussion of the policy implications of the findings of our independent evaluation of New York State's BH Demonstration, which had a MMC BH carve-in featuring special needs plans for individuals with high BH needs, the HARPs, as its centerpiece (New York State Department of Health, 2015). Our discussion, will be informed by the goals of the BH Demonstration and the larger MRT Section 1115 Demonstration: improve health care access, quality, costs, and outcomes for the State's Medicaid BH population through a managed care delivery system, and transform the BH system from an inpatient-focused system to a recovery-focused OP system (New York State Department of Health, 2015). We first present high-level conclusions for each Goal of the evaluation, and following our discussion of policy implications, we end the chapter with a review of the evaluation's strengths and limitations.

Conclusions

Goal 1: Improve health and BH outcomes for adults in Mainstream MMC whose BH care was previously carved out in an FFS payment arrangement.

This goal included two RQs related to the impacts of the MMC BH carve-in policy on access to community-based BH specialty services and health care among SSI beneficiaries whose BH benefit was carved out in an FFS arrangement prior to the BH Demonstration. Although neither RQ directly addressed health or BH health outcomes for the affected population, adequate access to services is critical to efforts to improve health outcomes.

Our findings provide inconclusive evidence regarding the DOH's hypotheses that both sets of services would increase after the launch of the MMC BH carve-in policy. There were no consistent trends in utilization of community-based BH specialty services throughout the evaluation period. Moreover, some of the observed trends appear to have started prior to the launch of the MMC carve-in, suggesting that at least some of our findings were unrelated to the policy, as the qualitative evidence seems to indicate is the case for PROS. Key informants identified multiple barriers to access, not all of them related to the carve-in policy, that may have limited the policy's impact on utilization. Thus, we are unable to conclude that the policy had a consistently positive impact on access to this important group of BH services. Our analyses did find that the utilization by SSI beneficiaries with SMI and SUD of specialty BH care, including OMH and OASAS Outpatient Clinic services, was modest at best; additionally, there was substantial variability in utilization of specific specialty BH services, both among the services and by region. In terms of primary care utilization, although adjusted analyses revealed an increase following the launch of the policy, methodological considerations suggest caution in the interpretation of this finding, and unadjusted analyses in fact revealed a slight decline in this utilization.

Goal 2: Improve health, BH, and social functioning outcomes for adults in the HARP program.

This goal included 11 RQs related to the HARP program launched in October 2015 in NYC and July 2016 in ROS. For ease of exposition given their commonalities, we have grouped outcomes into the following five clusters:

- Program enrollment and characteristics of the enrollee population (RQ1–RQ4)
- Access to primary care, community-based BH specialty services, and care coordination services (RQ5–RQ7)
- Quality of BH and PH care (RQ8)
- Recovery outcomes and experiences and satisfaction with care (RQ9, RQ10)
- Cost-effectiveness of HARP-covered care (RQ11).

Although this goal is focused on health and functional outcomes, except for social functioning measures analyzed to address RQ10, the outcomes were primarily process measures. However, improvements in these measures, particularly access, quality, and experiences and satisfaction with care, are critical to efforts to improve health and social functioning outcomes.

We note that for the RQs where results from our main (doubly robust) analyses and ITS analyses are not well aligned, namely RQs 6 and 11, this is because trends among HARP enrollees captured by the ITS analyses are also experienced by non-HARP individuals but to a different degree. In this setting, although results diverge, they still provide a coherent picture of the observed effects as one is only looking at the trend in the full HARP population while the other is looking at the difference in trends between the non-HARP population and the HARP subpopulation with similar characteristics as the non-HARP population.

HARP Program Enrollment and Characteristics of the Enrollee Population

Our findings support the DOH’s hypothesis that HARP enrollment would increase throughout the evaluation period, which, based on qualitative evidence, may have been propelled by the passive enrollment policy. Among those who were eligible but did not enroll, we found that not perceiving a need for treatment was a key driver of this decision. Other drivers were concerns about stigma and about losing access to current services, which may be misinformed. Key informants also noted the social and personal implications of being identified as someone with a mental illness as an additional factor. This evidence suggests a need to dispel unfounded concerns and improve communication of the potential benefits of the HARP program, particularly for beneficiaries with SMI given that they could greatly benefit from the program’s enhanced services. A greater emphasis on the social as opposed to clinical benefits of HARP enrollment could be an effective strategy. However, our findings provide inconclusive evidence regarding the DOH’s hypothesis that non-HARP individuals would be younger and less behaviorally acute than HARP enrollees—while they were younger and generally less acute clinically than their HARP-enrolled counterparts, non-HARP individuals were more likely than HARP enrollees to utilize acute BH services in NYC. Similarly, mixed findings from limited available data provide inconclusive evidence regarding the DOH's hypothesis that the distribution of risk versus protective factors would shift in a positive direction for HARP enrollees. Data limitations prevented us from evaluating the DOH's hypothesis regarding the HARP population's educational and employment characteristics.

Access to Primary Care, Community-Based BH Specialty Services, and Care Coordination Services

Our analyses generated mixed findings regarding the effect of the HARP program on access to primary care, community-based BH specialty services, and care coordination services. Our quantitative and qualitative findings provide inconclusive evidence regarding the DOH's hypothesis that *primary care access* would increase among HARP enrollees. Regarding *access to community-based BH specialty services*, our quantitative analyses showed that contrary to the DOH's expectation, there was a decline in utilization of key services over the course of the post-period, although the declines were generally less pronounced for HARP enrollees relative to non-HARP individuals. The exception was utilization of Other Community-Based BH services, a category that includes Non-Licensed Clinic services, which increased for HARP enrollees until late in the post-period; however, non-HARP individuals also experienced increased utilization of these services. Unadjusted findings for infrequently utilized programs were generally aligned with findings from Goal 1 observed for the SSI disabled MMC carve-in population. Qualitative findings were mixed, with some key informants stressing the need for a longer time period to evaluate these impacts. Regarding *access to care coordination services*, our findings were largely supportive of the DOH's hypothesis of an increase in this utilization through greater Health Home engagement. Our quantitative analyses revealed increased utilization, and qualitative evidence from HARP enrollees suggests generally positive experiences with Health Home services. However, key informants focused on the challenges associated with Health Home enrollment.

Quality of HARP-Covered BH and PH Care

Our findings provide inconclusive evidence regarding the DOH's hypothesis with respect to improvements in quality of care for HARP enrollees as the program matures. Although our analyses did reveal that HARP enrollees experienced improvements in measures of quality of care relative to the baseline period and, to a lesser extent, non-HARP individuals, it is not possible to discern a temporal pattern related to program maturity because these improvements were not consistent year to year. Such a pattern may become apparent over a longer time period.

Recovery Outcomes and Experiences and Satisfaction with Care

Although we are unable to address the DOH's hypothesis regarding outcome improvements associated with program maturity, we found that enrollees are satisfied with their care and feel socially connected. HARP enrollees reported high satisfaction with the cultural sensitivity of their BH care providers. However, respondents also reported high levels of substance use and PH conditions.

Cost-Effectiveness of HARP-Covered Care

Our findings provide inconclusive evidence regarding the DOH's hypothesis with respect to a shift of costs for HARP enrollees from acute services to OP-based health and BH services. Our analyses suggest that the HARP policy may not have been able to bend the cost curve for specific acute BH services, particularly ED services. Moreover, although costs for all acute BH services combined declined in the post-period (in ROS only in the last post-period year), cost declines appear to have been experienced also by HARP eligibles who were not enrolled; thus, the decline may not be attributable to the policy. By the same token, the increase in Any acute non-BH service costs and total costs relative to the baseline period in both regions may not be attributable to the policy, as these costs were either not different between HARP enrollees and non-HARP individuals or, in the case of Any acute non-BH service costs, they were actually lower for HARP enrollees in some post-period years. However, HARP enrollees did experience an increase in OP BH service utilization in one or more post-period years relative to the baseline period and to non-HARP individuals; while a similar pattern was observed for costs relative to the baseline period, differences relative to non-HARP individuals were only observed in ROS. Utilization of Any OP non-BH services also increased for HARP enrollees in the post-period relative to the baseline period and non-HARP individuals but only in NYC, with the opposite being the case in ROS. Costs for these services were higher in both regions relative to the baseline period, and in ROS, also higher relative to non-HARP individuals.

Goal 3: Develop BH HCBS focused on recovery, social functioning, and community integration for HARP enrollees who meet eligibility criteria for such services

This goal included four RQs related to the BH HCBS benefit available to HARP enrollees starting in January 2016 in NYC and October 2016 in ROS. For ease of exposition given their commonalities, we have grouped outcomes into the following three clusters:

- Characteristics and size of the HCBS-eligible population (RQ1)
- Access to HCBS (RQ2, RQ3)
- Cost offsets achieved through availability of HCBS (RQ4)

Collectively, these RQs adequately addressed whether Goal 3 of the BH Demonstration was achieved *during* the post-period used for this evaluation.

Characteristics and Size of the BH HCBS-Eligible Population

Our analyses do not support the DOH's hypothesis. The DOH had expected that three out of four HARP enrollees would be eligible for any BH HCBS by the end of 2019, but this goal was not met, a result that likely stems from the complexity of the assessment process. Achieving the target enrollment levels seems unlikely without significantly streamlining the process of eligibility determination. Providing case managers more effective means of engaging with HARP enrollees who could benefit from BH HCBS could also help address these issues.

Access to HCBS

Our analyses support the DOH's hypothesis that the *rates of BH HCBS utilization* would increase over the course of the BH Demonstration, as this utilization did increase over time. However, by the end of 2019, BH HCBS utilization rates remained quite low in both regions—well under 10 percent in New York City and under 20 percent in ROS. Although multiple factors are likely to be implicated, this result is partly due to the complexity of the process to access BH HCBS. Because these are highly valued services, the DOH may want to look for ways to streamline the process. Regarding the *adequacy of the BH HCBS provider network*, our findings provide inconclusive evidence regarding the DOH's hypothesis that the number of BH HCBS providers and the ratio per 1,000 BH HCBS-eligible HARP enrollees would increase over the course of the BH Demonstration. Although the number of providers did increase in most of the State, a decrease was observed toward the end of the BH Demonstration, a trend driven by the counties with the largest numbers of providers; moreover, the ratio of providers per enrollees decreased over time. Interpretation of these mixed results should consider that we lack information on the overall capacity of BH HCBS providers. If the average size of the BH HCBS provider pool was changing during the BH Demonstration, then the raw number of providers could lead to mistaken conclusions regarding the capacity of the provider network. Investigation of trends in system capacity would provide more actionable evidence. Although the evidence does not suggest that availability of BH HCBS providers was a barrier, this could change if eligibility is significantly increased. The low rates of complaints related to denials suggests that if denials were accurately captured, they were not a barrier. The importance of developing more robust and valid measures of network capacity is highlighted by the concerns raised by key informants regarding barriers to provision of BH HCBS that may not be captured in the available quantitative data.

Cost Offsets Achieved Through Availability of BH HCBS

Our findings do not support the DOH's hypotheses in connection with the launch of the BH HCBS benefit. BH HCBS availability did not consistently reduce BH HCBS users' need for acute BH services or, more relevant to the DOH's expectations, their costs. However, analyses burdened with some limitations showed that BH HCBS users had higher OP BH care utilization relative to non-BH HCBS individuals. Given that total Medicaid costs were unchanged in both regions, the possible increase in OP BH care utilization would not have significantly impacted those costs. In addition, costs for Any acute non-BH services were lower for BH HCBS users than for non-BH HCBS individuals although only in ROS and only in the second post-period year. These results need to be interpreted with caution—in addition to methodological concerns regarding the OP BH evidence, rates of BH HCBS utilization remained quite low during the evaluation; thus, evidence of cost offsets may not be easy to detect.

Comparing our Findings to Other Empirical Evidence

As reviewed in Chapter 2, the quasi-experimental evidence on carve-in effects is very modest. We focus on the Oregon study by Charlesworth et al. and the New York State study by Frimpong et al. due to the methodological challenges of the Illinois study by Xiang et al.

The Oregon study showed that relative to a carve-out, an MCO-like entity using carve-in financing was associated with greater access to OP BH care but only for people with mild to moderate mental illnesses, and to greater access to primary care for all enrollees. Our results are aligned with the Oregon study only regarding primary care utilization; methodological and contextual differences between the evaluations may explain the different results. The NYS study, which focused on HARP program utilization outcomes, found that HARPs were associated with increased utilization of OP care and reduced utilization of acute care, yet some types of ED visits increased. A*lthough our approaches have some similarities, there are enough differences between them as to preclude direct comparisons of our utilization results.* We note, however, that in both cases, a decline in service utilization was observed among both HARP enrollees and HARP-eligible individuals. The drivers of this decline are not well understood, but they may be related to other reform initiatives implemented in the State at around that time (see Chapter 6 for a discussion of potentially impactful initiatives).

Policy Implications of Our Findings

Our findings have several implications that should be considered by NYS policymakers.

A striking finding is the low level of BH HCBS eligibility determination, which was most likely driven by the low level of assessment for BH HCBS eligibility. Reasons for the lower-than-expected assessment rates were suggested by the qualitative interviews, but they should be investigated in greater detail. Key informants pointed to the burdensome bureaucratic process required to receive an assessment and suggested that case managers and HARP enrollees often decided not to seek an BH HCBS assessment because it was too burdensome. Case managers and HARP enrollees may not have perceived that the value of BH HCBS was worth the effort required to become eligible. The low level of assessment for BH HCBS might have also directly impacted all Goal 3 outcomes. While we found that BH HCBS utilization was minimal by the end of the BH Demonstration, with at best one in five eligible individuals utilizing these services, this utilization would likely have been higher had more HARP enrollees been assessed for BH HCBS (RQ2). Similarly, while we found a downward trend in the ratio of BH HCBS providers per enrollees and other concerning trends in provider network adequacy, higher demand may have encouraged providers to provide BH HCBS (RQ3). Finally, greater BH HCBS utilization may have led to offsets of acute services (RQ4). Because the target population of BH HCBS are the highest users of services across the entire SSI population that was moved into MMC as well as the HARP-eligible population, higher levels of assessment for BH HCBS might have also impacted findings with respect to acute care utilization and costs for the HARP population (Goal 2) and also the larger SSI population targeted by the MMC carve-in policy (Goal 1).

Our BH HCBS-related findings—assessment, eligibility determination, utilization, and provider adequacy—suggest that the system was ill prepared to support these services. To the extent that behavioral health HCBS is potentially effective in reducing acute care utilization among beneficiaries with high behavioral health needs, efforts to address the assessment bottleneck should be pursued. The qualitative interviews suggest some approaches that might be effective. First, simplifying the process of being assessed for BH HCBS eligibility would address the most commonly cited barrier. Second, providing case managers with more effective means of explaining the potential value of BH HCBS to eligible enrollees could address the low level of perceived need for these services in the target population. The DOH might consider these and other approaches to address this gap as it prepares to transition to a new BH HCBS program, the Community Oriented Recovery & Empowerment, which would remain only available to HARP enrollees and HARP-eligible HIV/SNP enrollees and would only include BH HCBS that can be provided under State plan authority.

The bottleneck in access to BH HCBS may have contributed to the mixed findings with respect to whether the BH Demonstration achieved its stated goals. There were some increases in utilization of services and some reductions in costs, but in general, there were no trends that could be attributed to the policy that were consistent across types of services or regions of the State. *In particular, there was no clear effect of the HARP policy on acute care utilization, the reduction of which was a primary goal of the Demonstration.*

Although no clear explanations for this finding were suggested by the data, important possibilities to consider are the lack of a clear and robust effect of the carve-in policy on quality of behavioral and physical health care or, relatedly, on clinical integration. It is also possible that the period of observation was too short for quality to improve in a consistent manner or for changes related to increased integration to appear. The establishment of integrated clinical practices in response to the MMC carve-in could take several years to begin to influence clinical practice, and the impact of changes in clinical practice may also take time to influence patterns of care for this complex and undertreated population.

Monitoring the functionality of linking structures such as integrated information technology systems and the Health Homes program and promptly addressing deficiencies can promote organizational integration, a key facilitator of clinical integration. In this regard, although we found that HH enrollment among HARP enrollees increased over the post-policy period, rates remained low; thus, it is crucial to undertake efforts to expand and strengthen the program (see Chapter 6). Additionally, strengthening initiatives such as the intensive program of care management for beneficiaries being discharged from psychiatric hospitalizations deployed by the DOH as part of the Performance Opportunity Project (POP) (see Chapter 6) might promote greater community tenure among high utilizers of acute care. Evaluating the degree of clinical integration can be challenging, but approaches and measures are available (Breslau, Dana, Pincus, Horvitz-Lennon, & Matthews, 2021; Kennedy-Hendricks, Daumit, Choksy, Linden, & McGinty, 2018; Niles & Olin, 2021). Measures include several quality indicators already being monitored by the DOH (e.g., diabetes monitoring for people with diabetes and schizophrenia) and others such as receipt of evidence-based obesity interventions that do not appear to be monitored. The DOH might also consider ways to increase the uptake of procedure codes that permit billing for and tracking the delivery of care in integrated settings.

Last, although this evaluation did not aim to determine the extent to which the levels of utilization of BH services are appropriate to the level of need, we highlight two concerning findings. One is the modest utilization of specialty BH clinic programs, whether OMH or OASAS Outpatient Clinic services, by SSI beneficiaries with SMI and SUD. The other is our finding of frequent differences between NYC and ROS in their patterns of utilization and other outcomes, with ROS often but not always lagging behind NYC. Both findings merit policy attention. Person-level factors and social determinants are most likely at play for both sets of findings (Frimpong et al., 2021). However, efforts are needed to understand the contribution of deficiencies in the health care infrastructure as a stepping stone toward the design of solutions that may need to be implemented through the MMC system. In this regard, the DOH might consider undertaking a needs assessment to determine both the extent of unmet need in the community, particularly for evidence-based practices such as ACT, and its potential drivers.

Recommendations for Future Evaluations

Including assessments of organizational and clinical integration into future evaluation efforts could provide valuable information on the process of change in the delivery system. This is particularly important given that the DOH permits subdelegation, which reproduces a carve-out arrangement (K. John; McConnell et al., 2021). In addition to measures of integration, a broader range of quality measures could help determine whether changes in patterns of BH care were occurring in response to the MMC carve-in. Additional measures could include follow-up after hospital discharge, medication reconciliation, and measures capturing delivery of BH evidence-based practices, particularly if underused. In this regard, the DOH may consider assessing receipt of cognitive therapies for people with SMI (e.g., cognitive remediation, cognitive-behavioral therapy for psychosis), electroshock therapy, and treatment with clozapine, an antipsychotic drug of unrivaled effectiveness for treatment-resistant and severe schizophrenia. Expanding the POP clozapine initiative (see Chapter 6) might prove cost-effective.

Future evaluations may assess additional outcomes, including the racial/ethnic equity effects of the BH Demonstration and the value of care, i.e., the costs to the DOH of producing high-quality care for MMC and HARP enrollees with BH needs. The DOH might consider evaluating the effect of value-based payment (VBP) and VBP contract types on MMC carve-in and HARP outcomes. Also, augmenting access analyses focused on binary utilization outcomes with analyses focused on intensity of utilization can be valuable, as these can be more informative in the evaluation of shifts in utilization patterns.

The DOH may also attempt to understand the drivers of some of the utilization patterns that appeared particularly stable and preceded or were independent of the BH Demonstration; among them we highlight the steady decline in PROS utilization and the steady increase in utilization of other community-based BH services, which may have been driven by increases in any or all the BH programs we evaluated together as part of this category (e.g., CCBHC services, Non-Licensed Clinics, etc.).

5.3 Strengths and Limitations of the Evaluation

Our evaluation has several strengths but was also constrained by some limitations. We expand on each of these below.

Strengths of the Evaluation

A main strength of our evaluation is the use of a mixed methods approach to assess the impacts of the BH Demonstration, which entailed not just the use of qualitative and quantitative methods but enrichment of both sets of results through iterative team discussions of findings.

Our quantitative approach for the evaluation of HARP program effects was a strength as we employed state-of-the-art quasi-experimental study methodologies (a propensity score method coupled with a DiD analysis) permitting causal inference, i.e., attributing effects to the HARP program under relatively mild assumptions although only for HARP enrollees with similar characteristics as the non-HARP population (see Limitations). Because non-HARP individuals are somewhat different from the larger population of HARP-eligible beneficiaries, we also assessed the change in the HARP effect over time through an ITS model conducted in the entire HARP-enrolled population. As a whole, these analyses provided us with an assessment of the global impact of the HARP on the different parts of the population.

Limitations

Interpretation of the findings need to account for some limitations.

First, our evaluation was limited by the fact that the assignment of beneficiaries to the intervention and control groups was not random, a limitation shared by most policy evaluations. Eligible beneficiaries self-selected to enroll in the HARP program or utilize BH HCBS, providing potential confounding between membership in those groups and some of the outcomes of interest. In addition, because the majority of HARP-eligible beneficiaries eventually enrolled, it was challenging to find an adequate sample of non-HARP individuals throughout the post-policy period that could serve as a control group for continuously enrolled HARP enrollees. We therefore used the ATC method to assess what would have happened to non-HARP individuals *had they enrolled in HARPs*. The differences between HARP-enrolled and non-HARP individuals on observed (and potentially, unobserved) confounders may have impacted our assessment of the HARP effect. If the HARP and non-HARP groups differ in their propensity to be enrolled in HARPs, the assumptions of the DiD model might be violated. As a result, our analyses permitting causal inference can only attribute effects to the HARP program for the HARP subpopulation with similar characteristics as the non-HARP population. Moreover, the fact that the small non-HARP population is not broadly representative of all eligible beneficiaries limits the generalizability of our main findings. Although we used an ITS method to assess outcome changes over time for the entire population of HARP enrollees, in the absence of a control group, we are unable to rule out that the observed changes may have been driven by other initiatives implemented in the State.

Second, although the CMH Screen is required annually for all HARP and HARP-eligible HIV SNP enrollees, as shown by our analyses, only a small minority of HARP enrollees were assessed at all with the screen, and even fewer were assessed annually; moreover, the CMH Screen was not available for non-HARP individuals. We considered using the sparse CMH Screen data to construct risk and protective factor covariates to enrich our outcome assessments, but the small sample of enrollees with available CMH Screen data turned out to be different from the average HARP-enrolled beneficiaries. The lack of these covariates made it difficult to isolate the effect of the intervention from the effects of other factors associated with our outcomes.

Third, because the policy was launched first in NYC and nine months later in ROS, the post-period differs between the regions, with NYC having four post-policy years and ROS having only three post-policy years. Because program maturity can affect outcomes, the interpretation of regional differences in our findings should attend to the post-policy year being examined.

Last, our inability to conduct planned focus groups due to the COVID-19 pandemic to some extent limited the breadth of perspectives gathered by our qualitative analyses.

6. Interactions with Other State Initiatives

Several health care delivery policies, payment policies, and other initiatives were launched in the State around the time the BH Demonstration was launched or reached maturity during the post-policy period (October 2015–September 2019). Such initiatives include other components of the MRT Section 1115 Demonstration and specific provisions of the ACA. These initiatives may have affected outcomes that the BH Demonstration was intended to improve, such as access to primary or preventive care and BH services, quality of health care, and use of acute (IP and ED) services. While it would be impossible to disentangle the effects of these initiatives from the BH Demonstration in our analysis, this chapter describes the policies and their potential effects to enable a more nuanced interpretation of our results.

Through a scan of government documents and meetings with NYS DOH officials to discuss background and implementation of the BH Demonstration, we identified five initiatives that could have affected the MMC carve-in or HARP program outcomes evaluated in this study. Two initiatives were included in the April 2014 amendment to the Demonstration (described in Section 2.1), two other initiatives were provisions of the ACA, and the remaining initiative was a DOH-initiated quality improvement project:

- DSRIP Program (April 2014 amendment)
- VBP Roadmap (April 2014 amendment)
- Health Homes (HHs) (ACA)
- Medicaid eligibility (ACA)
- Performance Opportunity Project (POP).

To learn more about the possible effects of these concurrent initiatives, we conducted nine 60-minute interviews with DOH key informants. Our goal was to elicit their opinions on (a) initiatives we should consider and (b) their likely effects on the mainstream MMC BH carve-in and HARP populations. In addition, we expanded our review of government documents and other gray literature to achieve a greater understanding of these initiatives (Bailit Health, 2020; Castillo, Pincus, Smith, Miller, & Fish, 2017; Citizens Budget Commission, 2018; Moses & Ensslin, 2014; New York State Department of Health, 2019; T. Smith & Cohen, 2021; Weller et al., 2019).

This chapter describes the findings from these efforts. For each initiative, we provide a timeline that compares the timing of its launch and operation with the time periods of the data we used to evaluate the MMC BH carve-in and the HARP program. The timeline in Figure 3.1 shows the pre(post)-policy periods for NYC and ROS used in our evaluation. The BH Demonstration continued after our evaluation ended.

6.1 April 2014 Amendment to the NYS DOH's Section 1115 Demonstration

The April 2014 amendment to the Demonstration included two components that may have affected outcomes for the MMC BH carve-in and HARP populations: the DSRIP program and the VBP Roadmap (Centers for Medicare & Medicaid Services, 2017).

Delivery System Reform Incentive Payment

The DSRIP program aimed to reduce avoidable inpatient hospital and ED use, with incentives to drive system transformation and improve clinical management and population health. DSRIP created 25 Performing Provider Systems (PPSs)—coalitions of safety net hospitals, clinics, and other eligible providers that were tasked with carrying out health improvement projects in four domains (Weller et al., 2019). PPSs were required to select health improvement projects from a menu of options provided by the DOH and could earn incentive payments based on improvement in performance metrics associated with each project. For projects to integrate primary care and BH services, the DOH defined three model options: (1) bringing BH services into a Patient Centered Medical Home or Advanced Primary Care practice (primary-care based); (2) bringing primary care services into a BH clinic (BH-based); and (3) implementing an evidence based Collaborative Care model in a primary care practice.

The DOH evaluated DSRIP outcomes through population-level metrics, including PPS-level reduction in utilization of acute care (ED visits, readmissions). Care integration was measured through process metrics, partly constructed with Medicaid data, related to implementation of the chosen integrated care model. The Demonstration enabled the State to spend Medicaid funds on PPS infrastructure and incentive payments. Incentive payments included pay for reporting of outcome metrics and pay for performance for improvements on metrics within PPS regions. The DOH could lose DSRIP funding if statewide performance metrics failed to improve.

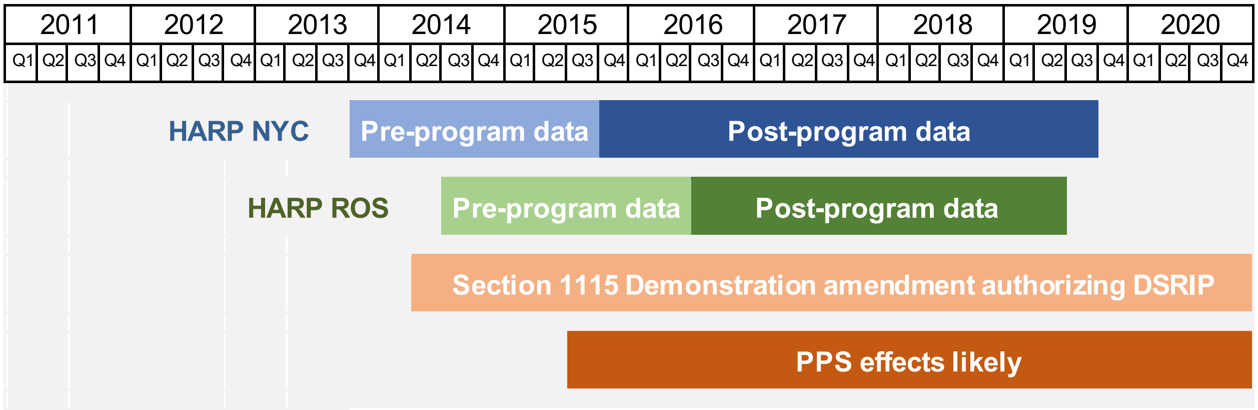
Each PPS was required to carry out five to ten projects across four domains, with at least one project in each domain. Several projects implemented by PPSs may have interacted positively with the BH Demonstration, bolstering the DOH's capacity to achieve the goals of the BH Demonstration. Projects in one of the four domains (Domain 2), for example, were related to system transformation and included projects to create more integrated delivery systems, improve care coordination, connect different care settings, and "activate" patients. Projects in another domain (Domain 3) were related to improving care for specific conditions, including BH and chronic PH conditions. PPSs were required to select at least one BH project from a menu of five BH projects within Domain 3. All PPSs selected a project on integration of primary care and behavioral health services, and 15 of 25 PPSs selected more than one BH project.

DOH informants for our evaluation reported that PPSs targeted clinical quality improvement activities to people with co-occurring physical and behavioral health conditions to help achieve DSRIP's goal of reducing inpatient use. They also reported that provision of integrated physical and behavioral health care by primary care providers and federally qualified health centers increased because of PPS efforts.

Consistent with information provided by our DOH informants, NYS's DSRIP summative evaluation identified improvements in metrics assessing care processes of high significance for the MMC BH carve-in population, particularly HARP-eligible and enrolled individuals: Nearly all PPSs reduced potentially preventable hospital admissions, and most PPSs reduced potentially avoidable emergency department visits, overall and for BH populations (Weller et al., 2019). Except for initiation of alcohol and drug treatment, most PPSs improved performance on BH utilization measures, although improvement varied among PPSs. Stakeholders interviewed for the evaluation described improvements in key targets of health system transformation, including integration of primary care and BH care, with the latter leading to improved overall access and quality of care.

The first year PPSs received incentive payments was from April 2016 to March 2017, based on their performance metrics in the year July 2015 to June 2016. Thus, we expect that PPS activities would start to affect outcomes for the MMC BH carve-in and HARP populations as early as mid-2015, denoted as "PPS effects likely" in Figure 6.1.

Figure 6.1. Overlap of HARP and DSRIPs in NYC and ROS



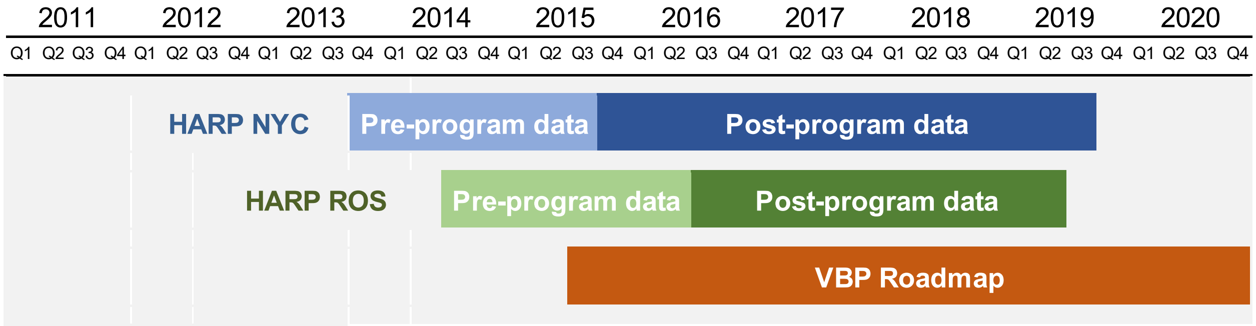
NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and HARPs.

Overall, it appears that PPSs may have improved health care outcomes for the State's Medicaid population, including the MMC BH carve-in and HARP program beneficiary populations. Because PPSs would have started working on their health improvement projects around the time of the launch of the MMC BH carve-in and the HARP program, PPS efforts may have upwardly biased our estimates of the effects of the BH demonstration on key measures such as access to primary care and BH care, and reductions of acute care utilization (inpatient admissions and ED visits).

Value-Based Payment Roadmap

Special Terms and Conditions 39 of the April 2014 amendment to the Demonstration required the DOH to create a VBP Roadmap that set forth the DOH's goals for increasing the use of VBP arrangements in Medicaid and described requirements for Medicaid MCOs to include VBP arrangements in their contracts with health care providers (Centers for Medicare & Medicaid Services, 2017; New York State Department of Health, 2019). The Roadmap was approved by CMS in July 2015 and was updated in each waiver year (Figure 6.2).

Figure 6.2. Overlap of HARP and VBP in NYC and ROS



NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and HARPs.

The Roadmap committed the DOH to achieving the goal of channeling 80 percent of MCO spending through VBP arrangements—including 35 percent in FFS arrangements with upside and downside risk sharing or prospective payment with a quality component—by 2020 and described payment arrangements that would qualify as VBP arrangements for the purpose of meeting the target. The options included Total Care for General Population and Total Care for Special Needs Subpopulation arrangements, where provider organizations would assume responsibility for all services needed by a group of members, and several bundled payment arrangements, where provider organizations would assume responsibility for services needed to treat specific conditions or episodes of care. For each qualifying payment arrangement, the Roadmap specified three levels of risk (i.e., potential savings or losses) that participating providers could be exposed to as well as a set of quality measures that MCOs could use to adjust savings or losses (i.e., to reduce savings to providers that performed poorly on quality or reduce losses incurred by providers that performed well on quality). Special Needs Subpopulations included HARP enrollees as well as people with HIV/AIDS, people with intellectual or developmental disabilities, and people eligible for Medicaid long-term care.

The Roadmap required the DOH to create financial incentives for MCOs that executed VBP arrangements with providers and increased the level of risk in the arrangements. In addition, it required the DOH to impose financial penalties on MCOs that fell behind Roadmap goals for VBP contracting. However, no penalties had been imposed as of March 2020 (Bailit Health, 2020). In the most recent Roadmap update, the DOH reported that it had achieved the interim goal of channeling at least 50 percent of all MCO spending through VBP arrangements, including at least 15 percent of all spending through arrangements with upside and downside risk.

Policymakers intended the Roadmap to stimulate VBP arrangements that were focused on improving care and outcomes for special needs populations. However, informants related that VBP arrangements created under the Roadmap did not meet this goal, as most MCOs adopted Total Care for General Population arrangements instead of Total Care for Special Needs Subpopulation arrangements. In the former and most prevalent arrangements, members were attributed to primary care providers rather than to behavioral health care providers; thus, primary care providers were targeted for the performance incentives. However, as noted by our informants, primary care providers were not always equipped to provide or arrange for the full complement of services needed by people with serious mental illnesses (SMI) and others with BH needs. Furthermore, these individuals tend to be less well-connected to PCPs than to BH providers. Moreover, MCOs chose quality measures for their VBP arrangements that were generally less relevant to beneficiaries with SMI.

Informants generally agreed that VBP arrangements stimulated by the VBP Roadmap were unlikely to have had much effect on health care outcomes for HARP members. Overall, it appears unlikely that NYS's VBP Roadmap meaningfully affected health care outcomes for MMC BH carve-in beneficiaries with significant BH need and those enrolled in the HARP program because MCOs and providers adopted VBP arrangements focused on general populations, not special populations like HARP enrollees.

6.2 Affordable Care Act

The ACA of 2010 included a variety of provisions to increase health care coverage, contain health care costs, and improve the performance of the health care delivery system (Kaiser Family Foundation, 2013). We focus on the potential effects of two of them among MMC BH carve-in and HARP populations: the option for states to establish a Health Home program and the Medicaid eligibility expansion.

The Health Home Program

The ACA enabled states to establish HHs for the purpose of coordinating health care and health-related services for people with chronic conditions, including physical health, mental health, and substance use conditions (Centers for Medicare & Medicaid Services, Undated). HHs were required to provide enrollees with six kinds of services: comprehensive care management, care coordination, health promotion, comprehensive transitional care, patient and family support, and referral to community and social supports.

The ACA incentivized states to establish HHs by covering 90 percent of spending on the required services for the first two years of a state's HH program and provided states with broad flexibility to design HH programs. For example, an HH provider could be an individual physician, a community health center, a community mental health center, a team of professionals at a hospital, or another kind of individual or provider organization. In addition, states could tailor the populations targeted by HHs and the methods used to pay HHs.

Through its HH program, NYS sought to merge existing care management programs for specific populations into one initiative that would serve a broader population. The existing programs included the Targeted Case Management (TCM) program, which provided case management to adults with DOH-defined serious and persistent mental illnesses and children with severe emotional disturbance, and three other programs that provided care management to people with SUD, HIV/AIDS, and chronic conditions (Citizens Budget Commission, 2018). In consolidating these programs, the DOH created a broader HH program aimed at serving people with a variety of conditions, including PH conditions, serious mental illnesses, and SUD (Citizens Budget Commission, 2018; Neighbors, Choi, Yerneni, Forthal, & Morgenstern, 2021).

The HH program experienced challenges enrolling eligible Medicaid members overall, and HARP members specifically, following its launch in 2012. After three years, enrollment was less than half the target for the high-need, high-cost Medicaid members that the program prioritized; after six years, total enrollment was approximately half of target enrollment (Citizens Budget Commission, 2018). While the DOH’s intention was to enroll HARP members in HHs, only 41 percent of HARP members were enrolled in HHs by 2017.

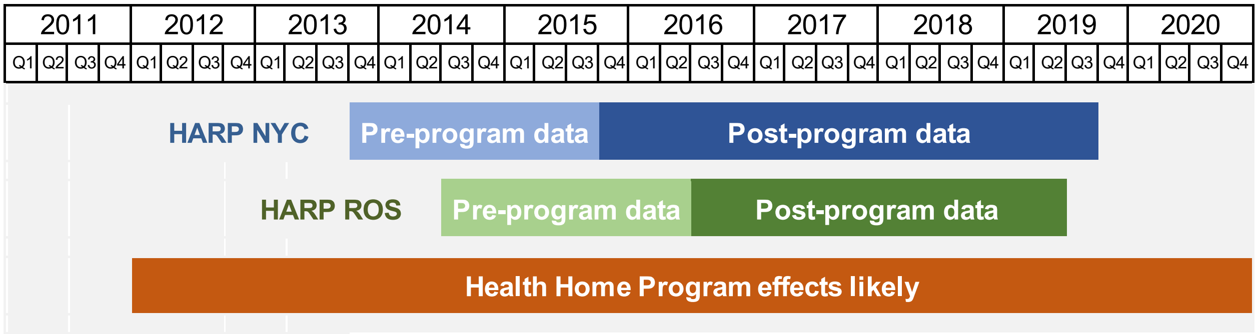
Informants described challenges with carrying out the first round of HH designation visits, identifying quality measures to monitor the program, and meeting the ambitious implementation timeframe. In response to those challenges, the DOH acted to improve access to the program, including steps to improve training and address workflow barriers that had impeded HARP enrollment. By the time of our interviews, informants reported that the DOH had completed a comprehensive policy revision, completed a second round of HH designation visits, and obtained feedback and buy-in from HHs. In addition, DOH informants reported having valid measures and tools to collect data and evaluate progress, including analysis of ED visits and hospitalization, follow-up after hospitalization, integration of primary and specialty care, and connection to pharmacy.

Informants described HHs as positively impacting populations targeted by the BH Demonstration. Although many people who received care management from HHs had been receiving care management from the TCM program, the HH program expanded the population receiving care management and the scope of services they received. Whereas TCM focused on people with SMI and HIV/AIDS, the HH program opened care management to a broader population. Whereas TCM focused on improving everyday life and functioning, such as assisting enrollees with shopping and transportation, the HH program expanded the focus of care management to primary care and physical health. Informants described care management provided by HHs as an important component of HARP for the HARP enrollees who enrolled in HHs. However, the low number of HARP enrollees who enrolled in HHs relative to the total number of individuals eligible for HHs indicates that the HH program could have been more impactful for HARP enrollees.

Despite the challenges, a recent study indicated that the DOH's HHs improved care for people with SUD (Neighbors et al., 2021). The study found that HHs were associated with reduced acute care service use and increased OP medical visits among HH enrollees with SUD relative to a matched control group (Neighbors et al., 2021).

Overall, it appears likely that the HH program improved health care outcomes for HARP enrollees, although early challenges with implementation and low enrollment suggest that their potential impact could have been greater. However, HH implementation started almost four years before HARP enrollment began, preceding the pre-period for our analysis (Figure 6.3). As a result, it is very likely that the effects of the HH program were already evident during the pre-period, the baseline for our analysis; thus, it is unlikely that they have biased our estimates of the effects of the BH Demonstration.

Figure 6.3. Overlap of HARP and HHs in NYC and ROS

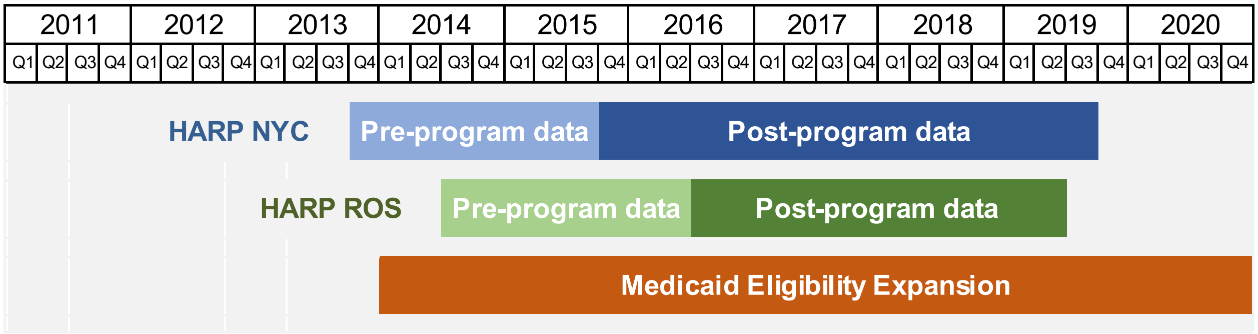


NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and HARPs.

Medicaid Eligibility Expansion

Starting in 2014, the ACA provided states with the opportunity to expand Medicaid eligibility to all non-Medicare-eligible people under age 65, including adults without dependent children, with incomes up to 133 percent of the federal poverty level (Kaiser Family Foundation, 2013). The DOH chose to expand its Medicaid program in 2014 (Figure 6.4).

Figure 6.4. Overlap of HARP and Medicaid Eligibility Expansion in NYC and ROS



NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and HARPs

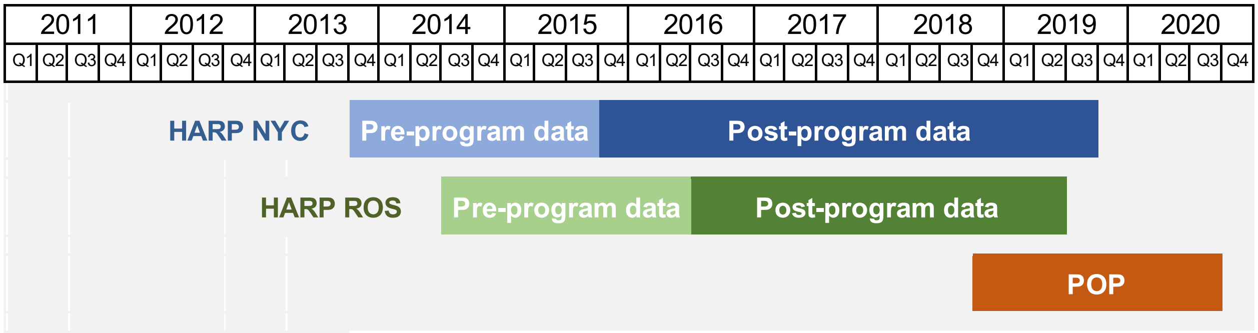
Medicaid expansion could have negatively impacted access to care for the MMC BH carve-in and HARP populations if a sufficiently large population gained health care coverage through expansion and used their new coverage to access health care, thereby “crowding out” the MMC BH carve-in and HARP populations. However, the increase in NYS’s Medicaid enrollment following expansion was modest, relative to other states (Macpac, 2020). One DOH informant noted that NYS had robust Medicaid coverage before the ACA. DOH informants did not believe that expansion substantially impacted access to or quality of care received by NYS’s Medicaid beneficiary population. Thus, it is unlikely that the ACA-related Medicaid expansion affected health care outcomes attributed to the BH Demonstration in our analysis.

6.3 Performance Opportunity Project

The POP awarded incentive payments to Medicaid MCOs for increasing the use of two interventions among high users of acute mental health services: Intensive Care Transition Services, a nine-month program of care management aimed at helping members transition from a psychiatric hospital to community-based care, and increase rates of treatment with clozapine (T. Smith & Cohen, 2021). At the time POP was conceived, the DOH had decided to reduce premiums across Medicaid managed care plans, including HARPs, in response to a budget shortfall. POP allowed plans to earn back a portion of the reduced premiums by working with health care providers to scale up intensive care management and clozapine use. Mainstream MMC plans, HARPs, and HIV SNPs' could choose to participate.

The DOH implemented POP in two phases. In Phase 1, which spanned October 2018 to September 2020 (i.e., in the post-policy period of our evaluation), POP targeted members age 16 to 64 with four or more mental health ED or inpatient visits per year (Figure 6.5). Within this period, 28,585 people were identified as POP high users, and a nine-month episode of care was initiated for 3,470 of these people. An analysis conducted by OMH found that inpatient costs, mental health inpatient costs, and mental health ED costs decreased substantially among POP enrollees who reached milestone four, five, or six of the program's six milestones for contacts with care managers (T. Smith & Cohen, 2021). However, only 12 percent of POP-eligible members "enrolled" in the program (i.e., had an episode of care initiated), and less than one-fifth of enrolled members reached more than two of six milestones.

Figure 6.5. Overlap of HARP and POP in NYC and ROS



NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and HARPs

A DOH informant stated that few of the State's case management and health home provider agencies were able to offer intensive care management consistent with the Critical Time Intervention (CTI) model. CTI is a case management strategy that involves coordinating ongoing treatment between inpatient and OP staff after a patient is discharged from inpatient care (Dixon et al., 2009). Intensive Care Transition Services were modeled on CTI. Thus, lack of CTI may have impeded the scaling up of POP.

POP's target population overlaps with the HARP program's population. The OMH analysis that identified cost savings among participants who received the full complement of Intensive Care Transition Services milestones indicates that POP had the potential to improve outcomes for HARP enrollees (T. Smith & Cohen, 2021). However, it is unlikely that the POP program affected outcomes attributed to HARP in our analysis because the POP program enrolled relatively few eligible members and began relatively late in the post-policy period for our analysis.

6.4 Conclusion

Among the policies we examined, the DSRIP's PPS and the HH program are the most likely of the five policies examined to have meaningfully affected the outcomes we focused on in the evaluation of the BH Demonstration. Both had substantial overlap in timing and programmatic targets with the BH Demonstration, and both had substantial uptake among the populations targeted by the BH Demonstration.

Because PPSs likely started their performance improvement projects around the same time that the MMC BH carve-in and HARP programs were launched in NYC, their effects may have introduced an upward bias to our estimates of the BH Demonstration's impacts. Policymakers should bear in mind this possibility when interpreting our results.

In contrast, the HH program's effects are unlikely to have biased our results because the HH program was launched before the pre-intervention period for our evaluation. Although the HH program certainly had the potential to affect the outcomes of the BH Demonstration, we believe its effects would have been incorporated into our pre-period observations, and thus should not be considered to bias our evaluation results.

Based on our review of available evidence and DOH informants' insights, the other three of the five policies examined (VBP Roadmap, Medicaid expansion, and POP) are unlikely to have meaningfully affected the outcomes assessed as part of our evaluation of the BH Demonstration.

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Appendix A. Key Stakeholder Interview Protocol

HARP & BH HCBS:
Interview Guide: Non-Client Stakeholder

Participant ID: ________________ Interview Date: __________________

Region: Central ___ Hudson River ___ Long Island ___ NYC ___ Western ___

Providers Only Number of BH HCBS Clients Served: 1-10 11-20 21-40 41-60 61-80 81-100 100+

Stakeholder Type: _____________________________

Agency Type: ____

Interviewer: ____________________________

The purpose of this interview is to explore your perspective and experience regarding the shift of behavioral health services for adults with Medicaid into Managed Care in New York State. This included enrolling eligible adults with Medicaid and significant behavioral health (BH) needs into Health and Recovery Plans (HARPs). HARPs sought to offer an enhanced benefits package that would expand access to specialized services and care coordination of physical health, mental health, and substance use services. HARP members work with Health Home agencies, or other DOH-designated entities, to develop a person-centered plan and to meet wellness goals, including accessing an array of specialty services, such as BH Home and Community Based Services (BH HCBS). BH HCBS seek to help people move forward in their recovery and life goals, such as improving quality of life, finding employment, going to school, managing stress, and living independently.

The interview will take approximately 60 minutes to complete. Again, the goal is to learn about your views and experience of the shift in behavioral health services to Medicaid Managed care, and in particular the implementation of HARPs and BH HCBS in New York State. There are no right or wrong answers to these questions. We are only interested in your honest opinions. Any questions before we begin?

INTERVIEWER PROBES

a. Enrollment issues
b. Administrative issues/burden - billing? Paperwork/documentation?
c. Developing plans of care?
d. Care coordination/integration – coordinating care among mental illness, substance use, and physical healthcare providers
e. Communication with other agencies (e.g., OMH, Health Homes, Managed Care)
f. Clients' access to services?

        i. What services are most accessible? What services are now available to clients that didn't used to be?
        ii. What services are harder to access or are under-utilized? What services are no longer available to clients?
    g. Quality of services/care?
    h. Impact/Measuring impact; recipient/enrollees/client outcomes?
    i. Funding/Financing

<< BEGIN RECORDING >> << BEGIN RECORDING >> << BEGIN RECORDING >>

Role

What is your **role** in this organization/agency?

a. How do your responsibilities relate to HARPs and BH HCBS?
b. How familiar are you with HARPs and BH HCBS?

I. Behavioral Health Carve-in for Adults in Mainstream Managed Care *Goal One: Improve health and BH outcomes for adults in Mainstream MMC whose BH care was previously carved out in an FFS payment arrangement*

Now I'm going to ask you questions about your experience and thoughts on transitioning behavioral health services to mainstream managed care.

2. What has your **experience** been with the transition to mainstream managed care for individuals whose behavioral health benefits were previously carved out in a Fee for Service arrangement?
    a. How has it been different from when behavioral health had been carved out through a fee-for-service arrangement?

3. How has the transition to Medicaid Managed Care for behavioral health **impacted your agency?**
    a. SEE PROBES

4. How has the switch to mainstream Medicaid Managed Care **impacted Medicaid recipients** with behavioral health needs?
    a. How has it impacted recipients' administrative burden (e.g., paperwork, applications)?
    b. How has it impacted recipients' access to services?
    c. How has it impacted recipient outcomes (e.g., health, recovery, wellness goals, quality of life, stress management, employment, school, community involvement/integration, functioning)?

5. What have been some of the **benefits** of having mainstream Medicaid Managed Care plans manage behavioral health for adults in New York State?
    a. For recipients? Are there certain recipients who have benefited more/less?

   b. For your organization? Are there certain organizations who have benefited more/less?
   c. For systems of care? Are there certain systems of care who have benefited more/less?
   d. SEE PROBES

6. What have been some of the **challenges** of having behavioral health managed by mainstream Medicaid Managed Care?
   a. For recipients?
   b. For your organization?
   c. For the system of care?
   d. SEE PROBES
   e. What can be done to address those challenges?
   f. *If not addressed:* What can be done to improve access to services? Quality of services? Coordination or integration of care? Client outcomes?

<u>II. HARP</u> *Goal 2: Improve health, BH, and social functioning outcomes for adults in the HARP*

Now I'm going to ask you some specific questions about Health and Recovery Plans.

7. What has been your **experience** with the HARP program?
   a. Experiences with HARPs in general and care management?
   b. Experiences specifically with BH HCBS aspects of HARP?

8. How has the implementation of HARP **impacted your agency's** work?
   a. SEE PROBES
   b. What has made your agency's work easier? More difficult?

9. How would you describe your **interactions with other agencies/organizations** involved in HARPs?
   a. Managed Care Companies
   b. Health Homes
   c. DOH, OMH, OASAS
   d. Service Providers
      i. Mental Health
      ii. Substance use
      iii. Primary care
      iv. Other psychiatric services (ACT, PROS)
      v. Other services/providers?

10. How has belonging to a HARP program **impacted enrollees**?
    a. Ability to access care?
    b. Quality of care received?

   c. The degree to which their care is integrated?
   d. Enrollee outcomes (e.g., health, recovery, wellness goals, quality of life, stress management, employment, school, community involvement/integration, functioning)?
   e. In what areas have you seen the biggest improvement for enrollees?
   f. In what areas have you seen less improvement for enrollees?
   g. Are there any potential long-term benefits for enrollees?

11. What have been some of the **benefits** of having the HARP program? What has gone well?
   a. For HARP enrollees? Are there certain enrollees who have benefited more/less?
   b. For your organization? Are there certain organizations who have benefited more/less?
   c. For systems of care? Are there certain systems of care who have benefited more/less?
   d. SEE PROBES
   e. How would you define or measure HARP success?

12. What have been some of the **challenges** of the HARP program?
   a. For HARP enrollees?
   b. For your organization?
   c. For systems of care?
   d. SEE PROBES
   e. What could be improved? What would help address some of the challenges?
   f. *If not addressed:* What can be done to improve access to services? Quality of services? Coordination or integration of care? Client outcomes?

13. What other **changes** would you suggest making to the HARP program?
   a. SEE PROBES

<u>III. BH HCBS</u> *Goal 3: Develop BH HCBS focused on recovery, social functioning, and community integration for individuals in HARPs meeting eligibility criteria*

Finally, I'm going to ask you some questions specifically about Behavioral Health Home and Community Based Services:

14. What has been your **experience** with BH HCBS?
   a. With Tier 1 BH HCBS?
   b. With Tier 2 BH HCBS?

15. How has the implementation of BH HCBS **affected your agency**?
   a. SEE PROBES

16. How would you describe **your interactions with other agencies/organizations** involved in BH HCBS?

    a. Managed Care Companies
    b. Health Homes
    c. DOH, OMH, OASAS
    d. Service Providers
        i. Mental Health
        ii. Substance use
        iii. Primary care
        iv. Other psychiatric services (ACT, PROS)
        v. Other services/providers?

17. How has BH HCBS **impacted individuals** with behavioral health needs?
    a. How well is BH HCBS meeting clients' needs?
    b. Ability to access services?
    c. Quality of services received?
    d. The degree to which their care is integrated?
    e. Enrollee outcomes (e.g., health, recovery, wellness goals, quality of life, stress management, employment, school, community involvement/integration, functioning)?
    f. In what areas have you seen the biggest improvement for enrollees?
    g. In what areas have you seen less improvement for enrollees?
    h. Are there any potential long-term benefits for enrollees?

18. What have been some of the **benefits** of having BH HCBS? What has gone well?
    a. For people with behavioral health needs? Are there certain people who have benefited more/less?
    b. For your organization? Are there certain organizations who have benefited more/less?
    c. For systems of care? Are there certain systems of care who have benefited more/less?
    d. SEE PROBES
    e. How would you define or measure the success of BH HCBS?
    f. To what degree are clients receiving the care they need through BH HCBS?

19. What have been some of the **challenges** of BH HCBS?
    a. For HARP enrollees?
    b. For your organization?
    c. For systems of care?
    d. SEE PROBES
    e. What could be improved? What would help address some of the challenges?

20. What do you see as the **future** for BH HCBS?

21. We are also interested in speaking with HARP/BH HCBS enrollees to get their perspective on the program. Do you have any suggestions on how best to **recruit and/or contact HARP/BH HCBS enrollees** to get their perspectives?

22. Is there **anything else** that we did not ask that is important for us to know?

Appendix B. Client Interview Protocol

Interview Guide: Client Stakeholder

Participant ID: ________________ Interview Date: __________________

New York State Region: ___________

Stakeholder Type: ____________________________

Agency Type: ____

Interviewer: ____________________________

The purpose of this interview is to explore your thoughts about services that you receive as a result of being in a Health and Recovery Plan (HARP) Program. HARPs provide an enhanced benefits package for Medicaid members that seeks to expand their access to specialized services, increase care coordination, and increase the integration of physical health, mental health, and substance use support services. HARPs also provide some individuals with access to Behavioral Health Home and Community Based Services (BH HCBS). BH HCBS programs offer individuals a range of support services in the community, such as peer support, skill-building, supported employment, and respite services. You do not need to have had experience with a specific service to participate in this interview.

Before we begin, I want to discuss the process of this interview. The interview will take approximately 60 minutes to complete. Again, the goal of this interview is to learn about your views and experiences receiving services as part of the HARP program. There are no right or wrong answers to these questions. We are only interested in your honest opinion. Any questions before we begin?

<< BEGIN RECORDING >> << BEGIN RECORDING >> << BEGIN RECORDING >>

HARP AND USE OF PHYSICAL HEALTH & BEHAVIORAL HEALTH SERVICES (ALL PARTICIPANTS)

1. Do you remember being <u>enrolled in the Health and Recovery Plan program</u>?
    a. If so, how long have you been in this program?
    b. How did you find out about HARP? Do you remember receiving a letter saying that you were eligible for HARP?

2. Why did you <u>choose to enroll</u> in the HARP?
    a. Did you have any concerns/hesitation about enrolling in the HARP?

    b. If so, what were they?

Now I'm going to ask you about services or supports that you may be receiving.

3. Where do you go to get <u>care for your physical health</u>?
    a. Do you have a regular primary care doctor or clinic?
        i. How long have you been with this doctor/clinic?
    b. How often do you use this type of care?
    c. Are you satisfied with this service?
    d. Do you get any other services or support for your physical health?
    e. How easy or hard is it to for you to get these services?
    f. Have you ever had any problems with your insurance? (i.e., paying for services?)
    g. Any suggestions for improvement to access this type of care?

4. How have things been <u>going for you in terms of your physical health</u>?
    a. Has your physical health changed over time? Gotten better/worse?
    b. How well are you able to manage your physical health concerns?
    c. Have your physical health needs changed over time?

5. What kinds of services or support do you receive for your <u>mental health, wellness, and recovery?</u>
    a. Where do you get these services?
    b. How did you get connected to these services?
    c. Which services do you use most often/less often?
    d. What do you like / what's helpful about these services?
    e. What do you not like as much / what's not helpful about these services?
    f. How easy or hard is it for you to get these services?
    g. Have you ever had any problems with your insurance? (i.e., paying for services?)
    h. What would you change about these services to better meet your needs?
    i. Are there any other services that you think would be helpful for you to have?

6. How have things been <u>going for you in terms of your mental health, wellness, and recovery?</u>
    a. Has your mental health changed over time? Gotten better/worse?
    b. How well are you able to manage any mental health concerns?
    c. Have your needs for mental health support changed over time?

7. What kinds of services or support do you receive for any <u>alcohol or drug use / substance use recovery?</u>
    a. Where do you get these services?
    b. How did you get connected to these services?
    c. Which services do you use most often/less often?
    d. What do you like / what's helpful about these services?
    e. What do you not like as much / what's not helpful about these services?
    f. What would you change about these services to better meet your needs?
    g. How easy or hard is it for you to get these services?
    h. Have you ever had any problems with your insurance? (i.e., paying for services?)

        i. Are there any other services that you think would be helpful for you to have?
8. How have things been <u>going for you in terms of any alcohol or drug use / substance use recovery?</u>
    a. Has your use of alcohol or drugs changed over time? Gotten better/worse?
    b. How well are you able to manage any concerns about substance use?
    c. Have your needs for support with substance use changed over time?

9. Does <u>anyone help you to work with all these different services/providers</u> or do you feel like you are more on your own?
    a. Do you have someone who helps you keep track of all these services?
    b. Do you have someone who helps you make appointments or reminds you of appointments?
    c. Do any of these providers talk to each other?

HEALTH HOME / CARE MANAGEMENT (ALL PARTICIPANTS)

1. Have you ever been <u>enrolled in a Health Home</u>? A health home is a program that helps you manage the services and care that you need. In a health home, you work closely with a Care Coordinator, who helps you to understand and manage your health.
    a. Are you currently in a Health Home?
    b. If ever yes, how did you get connected to the Health Home?
    c. Did you have any concerns about enrolling in a Health Home?
    d. What convinced you to enroll or to not enroll?

2. Have you ever received <u>care coordination services</u> from a Care Management Agency? This means you would be working with a care coordinator or care manager who helps you identify goals and helps connect you to services you may need.
    a. Are you currently working with a care coordinator/care manager?
    b. If ever yes, how did you get connected to the Care Coordinator/Manager
    c. Did you have any kinds of concerns about enrolling in Care Management?
    d. What convinced you to enroll or to not enroll?

3. [CARE MANAGEMENT PARTICIPANTS ONLY] What's it like <u>working with your Care Coordinator/Manager</u>?
    a. What kinds of things do you talk about?
    b. How often do you talk with them?
    c. Have they helped you get connected to any services?
    d. (if yes) What kind of services did they connect you to?
    e. What do you like / what's helpful about working with the care coordinator/manager?
    f. What do you not like as much / what's not helpful about working with the care coordinator/manager?
    g. What would you change about the way you work with the care coordinator/manager to better meet your needs?

BH HCBS (ALL PARTICIPANTS)

4. Have you heard about BH <u>HCBS Services?</u> [define]
    a. Have you ever received BH HCBS services?
    b. Are you currently receiving BH HCBS services?
    c. [if ever yes] How did you get connected to BH HCBS services?
        i. What BH HCBS services have you received?

5. Do you remember <u>completing an assessment</u> that determined if you were eligible for BH HCBS services? [briefly define process]
    a. [If yes] What was the assessment process like?
    b. [if yes] Do you remember if you were eligible or not eligible for BH HCBS?

6. [If eligible for BH HCBS] What happened after you learned you were <u>eligible for BH HCBS?</u>
    a. Did you develop a care plan?
    b. Did someone try and link you to BH HCBS services? What types of services did they try to connect you with?
    c. What things make it harder to get these services?
    d. Was there ever a time you felt discouraged while trying to access BH HCBS services?

IF NEVER RECEIVED BH HCBS, STOP HERE. IF RECEIVED BH HCBS, CONTINUE

<u>BH HCBS SERVICES & IMPACT (ONLY PARTICIPANTS WHO RECEIVED BH HCBS)</u>

7. What was the process like of <u>getting connected to BH HCBS?</u>
    a. How long did it take to get connected to BH HCBS?
    b. How did you feel about the process and the paperwork?

8. What made you <u>want to start BH HCBS services?</u>
    a. What types of things did you want help with?
    b. Did your needs or goals change from the time you were assessed for BH HCBS and by the time you got connected with BH HCBS services?

9. What kinds of BH <u>HCBS services have you received</u>?
    a. Where do you get these services?
    b. How did you get connected to these services?
    c. Which services do you use most often/less often?
    d. What do you like / what’s helpful about these services?
    e. What do you not like as much / what’s not helpful about these services
    f. What would you change about these services to better meet your needs?
    g. How easy or hard is it for you to get these services?
    h. Were there BH HCBS services that you tried getting, but could not access?

        i. Have you ever been turned down for a BH HCBS service? Did a program ever tell you that you could no longer receive a certain service?
        ii. If you were/are turned down for a BH HCBS service, do you have any options for making a complaint or asking them to re-consider?
    i. Have you ever had any problems with your insurance? (i.e., paying for services?)
    j. Are there any other services that you think would be helpful for you to have?

10. What's it like <u>working with your BH HCBS providers</u>?
    a. What kinds of things do you talk about?
    b. How often do you talk with them?
    c. What do you like / what's helpful about working with the BH HCBS providers?
    d. What do you not like as much / what's not helpful about working with the BH HCBS providers?
    e. How do you figure out the types of things that you work on with your BH HCBS provider?
    f. What happens if you and the BH HCBS provider disagree about the types of needs you have or the services that you want?
    g. What would you change about these services to better meet your needs?

11. What have been some of the <u>benefits</u> of getting these BH HCBS services?
    a. What has changed for you since you've been in the program?
    b. How has the program helped you?
    c. How have you been able to meet your needs?
    d. Have you been making progress with any goals or the things that you want to do in life?
    e. How has BH HCBS affected how you manage your:
        i. Mental health? Physical health? Alcohol/Drug/Substance Use?
    f. Has being in BH HCBS made it easier to get the services or things you need?
    g. What are you able to do now that you could not done before BH HCBS?

12. Can you give me an example of a <u>goal or need that you struggled to achieve</u> or make progress on?
    a. What was getting in the way? What made it hard?
    b. Is there anything that could have been done differently to help you?

13. Have the BH HCBS services been <u>different in any way from other types of behavioral health services</u> you use?

14. How has being in BH HCBS <u>impacted your ability to make choices or have a say</u> in your wellness and recovery?
    a. Has it impacted how you think about behavioral health services in general?

15. Is there <u>anything else</u> that you would like to add?

THANK YOU FOR YOUR PARTICIPATION!!

Appendix C. Client Interview Survey

Health and Recovery Plans & Home and Community Based Services
Client Interview Survey

To be completed by Research Staff:

Today's Date: _____/______/_______ **Subject ID**: _________

Site ID: ___________________

Instructions: Please check or fill in the appropriate answers. Please note that all information provided will be kept confidential and not linked to your name.

What is your age? ________

How long have you been a client/member of [agency referring]? ________

How long have you been enrolled in a Health and Recovery Program? __________

Are you enrolled in a Health Home?
- ☐ Yes (if YES, go to question 5)
- ☐ No (if NO, go to 6)

How long have you been enrolled in a Health Home? __________

Do you receive Home and Community-Based Services?
- ☐ Yes (if YES, go to question 7)
- ☐ No (if NO, go to 11)

How long have you been receiving BH **HCBS?** __________

Are you enrolled in Tier 1 or Tier 2 for BH **HCBS services?**
- ☐ Tier 1
- ☐ Tier 2

What types of BH **HCBS services are you currently receiving or have received in the past? (CHECK ALL THE APPLY)**
- ☐ Psychosocial Rehabilitation (PSR)

☐ Community Psychiatric Support and Treatment (CPST) or Peer Services

☐ Habilitation

☐ Family Support and Training (FST)

☐ Education Support

☐ Pre-vocational

☐ Transitional Employment

☐ Intensive Supported Employment

☐ Ongoing Supported Employment

Do you receive any services from this agency other than the services you get from BH **HCBS? (Check One)**

☐ Yes

☐ No

What is your gender? (Check One)

☐ Male

☐ Female

☐ Other (Specify): ____________________

What is your ethnicity? (Check One)

☐ Hispanic/Latino (Specify): ____________________

☐ Non-Hispanic/Non-Latino

What is your race? (Check One)

☐ White

☐ Black/African American

☐ Asian American/Pacific Islander (e.g., Asian Indian, Chinese, Korean, Pakistani, Vietnamese, Thai, Native Hawaiian, Samoan)

☐ Native American/Alaskan Native

☐ Multiracial/multiethnic

☐ Other (Specify): ___________________________

What is the last grade you completed / your highest level of education? (Check One)

- ☐ Grammar school or middle school
- ☐ Some high school
- ☐ High school graduate or GED
- ☐ Post high school technical training
- ☐ Some college/university
- ☐ College graduate or higher

A. **Are you currently school? Full-time or Part-time? (Check One)**

- ☐ Yes, full-time
- ☐ Yes, part-time
- ☐ No

A. Are you currently employed? Full-time or part-time? (Check One)

- ☐ Yes, full-time
- ☐ Yes, part-time
- ☐ No

A. Have you ever been told by a doctor or mental health provider that you have any of the following mental health conditions? (Check all that Apply)

- ☐ Major Depression
- ☐ Bipolar disorder
- ☐ Schizophrenia
- ☐ Schizoaffective
- ☐ Schizophreniform
- ☐ Delusional Disorder
- ☐ Other Psychotic Disorder
- ☐ Borderline personality disorder
- ☐ Autism Spectrum Disorder
- ☐ Anxiety disorder (Panic Disorder, Phobia, etc.)
- ☐ Substance abuse or dependence
- ☐ Other (Specify):__________

B. Have you ever been told by a doctor or other medical provider that you have any of the following physical health conditions? (Check all that Apply)

- ☐ Diabetes
- ☐ Hypertension

☐ High Cholesterol

☐ Coronary Heart Disease or Heart Trouble

☐ Asthma

☐ Cancer

☐ Stroke

Now I'd like to ask you about the medical care that you have been getting in the past 6 months. When I say "medical care", I'm talking about any type of care that you get from a doctor or other health professional, such as a nurse, a physical therapist, or anyone else who specializes in physical health. Medical care could be anything from an emergency room visit to a routine check-up or screening. I'm not including dental care or routine vision services, like glasses or contact lenses. I'm also not including visits to the pharmacy if all you are doing is buying medication. [Does that make sense? Any questions before I continue]

SU1 **In the <u>past 6 months</u>, was there a time when you needed medical care for a <u>physical illness, injury or condition</u>? Remember don't include dental care or routine vision services** ________ SU1b

Code: 0 = No; 1 = Yes *(IF 0 GO TO SU3)*

SU2 **In the <u>past 6 months</u> when you needed medical care for physical illness, injury or condition did you get: <u>all the care that you need, some but not all of the care that you needed or you got no care at all for any physical condition in the last 6 months</u>** ________ SU2b

Code: 0 = No care at all; 1 = Some but not all; 2 = All care needed

SU3 **Is there one place you usually go to get medical care?** ________ SU3b

Code
0 = No Place *(IF 0 GO TO SU5)*
1 = Yes
2 = More than one place

SU4 **What kind of place do you go <u>most often</u>, is it a doctor's office, a hospital emergency room, urgent care center or some other place?** ________ SU4b

Code
1 = Doctor's Office
2 = Hospital ER
3 = Urgent Care Center
4 = Other Place (Specify): ________________________________ SU4ob

____

Appendix D. HARP & BH HCBS Enrolled Interviewees Self-Reported Characteristics

Table D.1. Interviewee Characteristics (N=12)

	N (%)
Geographic Location	
NYC	6 (50.00)
ROS	6 (50.00)
Years Enrolled in HARP	
Time Enrolled in HARP: Mean years (SD)	2.56 (.73)
Time Enrolled in BH HCBS: Mean years (SD)	2.38 (.83)
Demographics	
Age: Mean (SD)	44.5 (9.58)
Female	7 (58.33)
Male	5 (41.67)
Hispanic	5 (21.43)
Non-Hispanic Black	2 (28.58)
Non-Hispanic White	2 (35.71)
Multiracial/Other	3 (14.29)
Education	
Some High School	2 (16.67)
High School Graduate or GED	4 (33.33)
Some College	4 (33.33)
College Graduate or Higher	2 (16.67)
Employment	
No	10 (83.33)
Yes, part-time	1 (8.33)
Yes, full-time	1 (8.33)
Education	
Not currently in school	12 (100)
Currently Enrolled in Health Home	
No	3 (25.00)
Yes	2 (16.67)
Not Sure	7 (58.33)
Currently enrolled in BH Home and Community Based Services (BH HCBS)	
Yes	11 (91.67)
Type of BH HCBS Service Received*	
Community Psychiatric Support and Treatment (CPST) or Peer Services	9 (62.50)
Psychosocial Rehabilitation	5 (31.25)

	N (%)
Crisis Respite	2 (16.67)
Employment	1 (8.33)
Self-Reported Lifetime Physician Confirmed Mental Health Diagnoses**	
Anxiety Disorder	8 (23.53)
Major Depression	8 (23.53)
Bipolar disorder	3 (21.43)
Schizophrenia/Schizoaffective Disorder	6 (50.00)
Alcohol Use Disorder	3 (21.43)
Drug Use Disorder	4 (11.76)
Other	2 (16.67)
Number of Self-Reported Lifetime Physician Confirmed Physical Health Diagnoses	
0	6 (50.00)
1	3 (25.00)
2	1 (8.33)
3 or more	2 (16.67)

* Could be receiving more than one type of BH HCBS service. **Could be diagnosed with more than one MH condition

Appendix E. Analytic Tables

Figure E.1. HARP Eligibility, Target Criteria, and Risk Factors

Health and Recovery Plans: Adult Medicaid beneficiaries 21 and over who are eligible for mainstream MCOs are eligible for enrollment in the HARP program if they meet target criteria and risk factors as defined below.

HARP Target Criteria: NYS has chosen to define HARP Target Criteria as:
i. Medicaid enrolled individuals age 21 and over
ii. Severe Mental Illness diagnoses (DOH-defined serious and persistent mental illnesses) and/or SUD
iii. Eligible to be enrolled in Mainstream MCOs
iv. Not Medicaid/Medicare enrolled ("duals")
v. Not participating or enrolled in a program with the NYS Office for People with Developmental Disabilities (OPWDD)
vi. Not participating in the Traumatic Brain Injury Waiver or Nursing Home Transition and Diversion Waiver

HARP Risk Factors: Risk Factor criteria may include any of the following:
i. SSI individuals who received an "organized" mental health service in the year prior to enrollment
ii. Non-SSI individuals with three or more months of ACT or Targeted Case Management (TCM),* PROS, or prepaid mental health plan (PMHP)* services in the year prior to enrollment
iii. SSI and non-SSI individuals with more than 30 days of psychiatric inpatient services in the three years prior to enrollment
iv. SSI and non-SSI individuals with three or more psychiatric inpatient admissions in the three years prior to enrollment
v. SSI and non-SSI individuals discharged from a NYS Office of Mental Health (OMH) Psychiatric Center after an inpatient stay greater than 60 days in the year prior to enrollment
vi. SSI and non-SSI individuals with a current or expired Assisted Outpatient Treatment (AOT) order in the five years prior to enrollment
vii. SSI and non-SSI individuals discharged from correctional facilities with a history of inpatient or OP BH treatment in the four years prior to enrollment
viii. Residents in OMH-funded housing for persons with SMI in any of the three years prior to enrollment
ix. Enrollees with two or more services in an inpatient/OP chemical dependence detoxification program within the year prior to enrollment
x. Enrollees with one inpatient stay with a SUD primary diagnosis within the year prior to enrollment
xi. Enrollees with two or more inpatient hospital admissions with SUD primary diagnosis or members with an inpatient hospital admission for an SUD-related medical diagnosis-related group and a secondary diagnosis of SUD within the year prior to enrollment
xii. Enrollees with two or more ED visits with primary substance use diagnosis or primary medical non-substance use that is related to a secondary substance use diagnosis within the year prior to enrollment
xiii. Individuals transitioning with a history of involvement in children's services

*Adult TCM Transition to Health Home ended on 12/1/2015 and PMHP ended on 12/31/2015; both are no longer funded programs.

Figure E.2. Determination of BH HCBS Eligibility

A. Criterion 1: Tier 1 Services
  i. For Individual Employment Support, person must express desire to receive employment support services.
  ii. For Education Support, person must express desire to receive education support services to assist with vocational goals.
  iii. For Peer Support, person must express desire to receive peer support services.
B. Criterion 2: Tier 2 Services
  i. Meets threshold score for MODERATE need on at least one domain of Functional and Safety Needs* OR
  ii. Meets threshold score for EXTENSIVE need on at least one domain of Functional and Safety Needs.*
C. Criterion 3
  i. Individuals who receive or have previously received BH HCBS in the past six months will maintain their eligibility level for the current assessment (i.e., algorithm will return the higher of the two scores to prevent loss of potentially beneficial services).

* Domains of Functional and Safety needs include employment/education, instrumental activities of daily living (IADLs), cognitive skills, social relations, stress and trauma, co-occurring conditions, engagement, substance use, and risk of harm.

Table E.1. NYC Medicaid Population Meeting Goal 1 Inclusion Criteria

Year	Goal 1 Inclusion Criteria*	Without Dual Exclusion**
2014	137,539	196,463
2015	132,381	198,271
2016	129,048	206,654
2017	125,118	213,617
2018	122,080	223,528
2019	117,352	231,087

*Full benefit 11 months, SSA 11 months, age 21–64, not eligible for Medicare (i.e., not dually eligible for Medicaid and Medicare)

**Full benefit 11 months, SSI 11 months, age 21–64

SOURCE: MBR_SUMMARY_PROFILE for deriving Full Benefit, SSI, and dual eligibility indicator

Table E.2. Access to Community-Based BH Specialty Services by MMC Enrollees, SMI, SUD, and OUD Subgroups, Unadjusted Estimates (Percent), by Pre- and Post-Policy Year and All Years Combined

	Pre-Policy		Post-Policy				All Years	
NYC	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2014-2019**	**P-value**
SMI Subgroup	(N=51,878)	(N=50,906)	(N=49,116)	(N=48,224)	(N=47,861)	(N=46,696)	(N=294,681)	
First Episode Psychosis (FEP) Program*	n/a	n/a	0.01	0.01	0.02	0.03	0.02	**0.02**
Assertive Community Treatment (ACT)	2.47	2.45	2.41	2.51	2.72	2.99	2.59	**0.00**
Personalized Recovery Oriented Services (PROS)	3.61	3.45	3.24	2.96	2.70	2.65	3.11	**0.00**
OMH Outpatient Clinic	58.6	60.2	62.1	60.1	57.2	54.2	58.8	**0.00**
SUD Subgroup	(N=25,290)	(N=24,918)	(N=24,063)	(N=23,572)	(N=24,101)	(N=23,766)	(N=145,710)	
OASAS Opioid Treatment Program	37.1	37.1	36.3	35.7	33.9	32.6	35.5	**0.00**
OASAS Outpatient Clinic	20.3	18.7	18.3	18.9	18.3	18.9	18.9	**0.00**
OUD Subgroup	(N=12,889)	(N=13,186)	(N=12,836)	(N=12,530)	(N=12,086)	(N=11,626)	(N=75,153)	
OASAS Opioid Treatment Program	68.9	67.5	67.4	66.0	66.3	65.2	66.9	**0.00**
ROS	**2015**	**2016**	**2017**	**2018**	**2019**		**2015-2019**	**P-value**
SMI Subgroup	(N=31,163)	(N=31,067)	(N=31,831)	(N=31,222)	(N=32,231)		(N=157,514)	
First Episode Psychosis (FEP) Program*	n/a	0.01	0.01	0.02	0.04		0.02	**0.04**
Assertive Community Treatment (ACT)	2.18	2.15	2.19	2.31	2.40		2.25	0.15
Personalized Recovery Oriented Services (PROS)	7.32	6.87	6.55	5.99	5.39		6.42	**0.00**
OMH Outpatient Clinic	58.3	61.9	59.1	55.8	50.4		57.0	**0.00**
SUD Subgroup	(N=14,512)	(N=14,708)	(N=14,885)	(N=14,951)	(N=16,444)		(N=75,500)	
OASAS Opioid Treatment Program	8.98	9.19	9.14	9.34	8.81		9.09	0.54
OASAS Outpatient Clinic	31.4	30.8	30.3	27.3	24.0		28.6	**0.00**
OUD Subgroup	(N=5,148)	(N=5,264)	(N=5,490)	(N=5,403)	(N=5,450)		(N=26,755)	
OASAS Opioid Treatment Program	25.2	25.7	24.6	25.7	26.4		25.5	0.30

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)
*Sample sizes vary across measure due to different data source for this utilization (OTNY).
NOTE: The p-value describes the statistical significance of the chi-square test that compares all the annual periods together.

Table E.3. Probability of Access to Community-Based BH Specialty Services by MMC Enrollees, SMI, SUD, and OUD Subgroups, by Post-period Year Relative to Early Pre-period, NYC and ROS

Odds Ratio (95% CI)	NYC (N=283,129)				ROS (N=157,514)		
	2016*	2017*	2018*	2019*	2017*	2018*	2019*
SMI							
PROS	2.25 (2.09, 2.43)	2.18 (2.02, 2.35)	1.98 (1.83, 2.15)	1.85 (1.70, 2.00)	2.79 (2.60, 2.98)	2.65 (2.47, 2.85)	2.39 (2.23, 2.57)
OMH Outpatient Clinic	1.00 (0.98, 1.03)	0.92 (0.90, 0.94)	0.82 (0.80, 0.84)	0.72 (0.70, 0.74)	0.85 (0.83, 0.88)	0.73 (0.71, 0.75)	0.59 (0.57, 0.60)
SUD							
OASAS Opioid Treatment Program	6.89 (6.54, 7.27)	7.32 (6.94, 7.73)	7.09 (6.72, 7.48)	6.89 (6.53, 7.27)	4.52 (4.09, 4.99)	5.26 (4.76, 5.82)	5.13 (4.64, 5.67)
OASAS Outpatient Clinic	0.72 (0.69, 0.76)	0.73 (0.70, 0.77)	0.70 (0.67, 0.73)	0.72 (0.69, 0.75)	0.92 (0.88, 0.97)	0.78 (0.74, 0.82)	0.66 (0.63, 0.69)
OUD							
OASAS Opioid Treatment Program	12.99 (12.02, 14.04)	13.22 (12.22, 14.30)	13.79 (12.75, 14.92)	13.34 (12.33, 14.44)	6.51 (5.76, 7.35)	8.21 (7.25, 9.30)	9.00 (7.95, 10.19)

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)
*Annually versus Pre-Policy

Table E.4. Population Characteristics, CMH Screen vs. No CMH Screen among HARP Enrollees, NYC and ROS

	NYC				**ROS**			
	CMH Screen (N=14,380)	**No CMH Screen (N=103,512)**	**All (N=117,892)**	**P-Value**	**CMH Screen (N=15,153)**	**No CMH Screen (N= 68,568)**	**All (N= 83,721)**	**P-Value**
Age, Mean (SE)	45.4 (0.11)	45.0 (0.06)	45.1 (0.06)	**0.00**	41.9 (0.12)	41.0 (0.07)	41.1 (0.07)	**0.00**
Sex, %								
Male	46.5	46.4	46.4	0.95	38.1	41.3	40.7	**0.00**
Female	53.6	53.6	53.6		61.9	58.7	59.3	
Race/Ethnicity, %								
White	24.0	25.9	25.7	**0.00**	56.9	61.3	60.5	**0.00**
Black	48.6	42.9	43.6		29.8	23.6	24.7	
Hispanic	18.1	21.0	20.6		11.0	12.1	11.9	
Asian/American Indian/Other	9.25	10.2	10.1		2.38	2.93	2.84	
Behavioral Health (BH) diagnosis, %								
Schizophrenic disorders	49.6	41.9	42.9	**0.00**	40.4	31.4	33.1	**0.00**
Bipolar disorder (severe)	4.3	3.38	3.5	**0.00**	5.52	3.56	3.93	**0.00**
Other Serious Affective/Psychotic Disorders	53.7	46.4	47.3	**0.00**	56.1	42.7	45.2	**0.00**
Chronic alcohol abuse	17.1	13.6	14.1	**0.00**	19.0	15.8	16.4	**0.00**
Opioid abuse and dependence (OUD)	16.5	16.5	16.5	0.94	11.0	13.2	12.8	**0.00**
Any Serious Mental Illness (SMI) diagnosis	77.8	68.9	70.0	**0.00**	73.1	58.1	60.9	**0.00**
Any Substance Use Disorder (SUD) diagnosis	36.8	32.1	32.7	**0.00**	34.0	31.7	32.1	**0.00**
Core Health Status (revised), %								
Healthy to Minor Chronic disease	2.67	7.69	7.08	**0.00**	5.70	13.4	12.0	**0.00**
Moderate to Significant Chronic Disease	62.9	66.2	65.8		70.9	71.5	71.4	
Dominant Chronic Disease to Catastrophic Conditions	34.4	26.1	27.2		23.4	15.1	16.6	
Any Utilization of Key Behavioral Health Outpatient Services, %	88.8	79.2	80.4	**0.00**	86.4	71.2	74.0	**0.00**

	NYC				ROS			
	CMH Screen (N=14,380)	**No CMH Screen (N=103,512)**	**All (N=117,892)**	**P-Value**	**CMH Screen (N=15,153)**	**No CMH Screen (N= 68,568)**	**All (N= 83,721)**	**P-Value**
Health Service Utilization, Per Year, mean (SE)								
Key Behavioral Health Outpatient Visits	10.9 (0.07)	10.1 (0.03)	10.2 (0.03)	**0.00**	9.60 (0.06)	8.39 (0.03)	8.65 (0.03)	**0.00**
Non-Behavioral Health Outpatient Visits	6.47 (0.05)	5.36 (0.02)	5.52 (0.02)	**0.00**	5.37 (0.04)	4.62 (0.02)	4.77 (0.02)	**0.00**
Acute Behavioral Health Visits	3.58 (0.10)	3.65 (0.06)	3.64 (0.06)	0.49	3.33 (0.07)	3.03 (0.05)	3.10 (0.04)	**0.00**
Acute Non-Behavioral Health Visits	3.88 (0.07)	3.52 (0.04)	3.57 (0.04)	**0.00**	3.94 (0.05)	3.51 (0.03)	3.59 (0.03)	**0.00**
Small Area (County) Characteristics, mean (SE)								
Area Health Resource Files (AHRF): Poverty	0.21 (0.00)	0.21 (0.00)	0.21 (0.00)	0.17	0.12 (0.00)	0.12 (0.00)	0.12 (0.00)	**0.00**
Area Health Resource Files (AHRF): Diversity Index	0.67 (0.00)	0.67 (0.00)	0.67 (0.00)	**0.04**	0.39 (0.00)	0.38 (0.00)	0.38 (0.00)	**0.00**
Health Professional Shortage Area, Mental health, %								0.05
0 (none)	0.04	0.01	0.01		7.22	7.56	7.50	
1 (whole county)	0.00	0.01	0.01		4.57	5.09	5.00	
2 (partial county)	99.96	99.99	99.99		88.2	87.4	87.5	

SOURCE: Authors' analyses of Medicaid data (2014–2019), OTNY data (2015–2019), and AHRF data (2010–2014, 2014–2018)

Table E.5. Community-Based Health Care Access, HARP Enrollees vs. Non-HARP Individuals, Unadjusted Rates (Percent), by Post-Policy Year and All Years Combined

	2016			2017			2018			2019			Overall		
Receiving primary or preventive care, %	**HARP**	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**
NYC	98.6	97.8	**0.02**	97.7	96.0	**0.00**	95.2	93.5	**0.01**	95.1	93.2	**0.00**	96.7	95.1	**0.00**
ROS				95.8	94.0	**0.00**	94.8	93.0	**0.00**	94.3	92.6	**0.00**	95.0	93.2	**0.00**

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Table E.6. Community-Based BH Specialty Service Access, HARP Enrollees vs. Non-HARP Individuals, Unadjusted Rates (Percent), by Post-Policy Year and All Years Combined

	2016			2017			2018		
	HARP	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**
NYC, %	**(N=28,308)**	**(N=1,165)**		**(N=28,308)**	**(N=1,165)**		**(N=28,308)**	**(N=1,165)**	
Any Key BH OP Services	82.3	73.9	**0.00**	80.9	71.4	**0.00**	79.9	72.1	**0.00**
FEP program	0.00	0.00		0.00	0.00		0.00	0.00	
ACT	2.40	1.90	0.28	2.45	1.89	0.23	2.65	1.83	0.09
PROS	3.25	3.37	0.82	3.02	2.58	0.40	2.78	2.71	0.88
CDT	0.97	1.47	0.10	0.78	1.12	0.21	0.71	1.31	**0.02**
Partial Hospitalization	0.35	0.17	0.31	0.27	0.43	0.30	0.32	0.09	0.17
Other Community-Based BH Services	34.3	28.0	**0.00**	34.3	26.4	**0.00**	37.1	29.7	**0.00**
OASAS Opioid Treatment Program	11.4	6.2	**0.00**	11.4	6.9	**0.00**	11.4	6.6	**0.00**
OMH Outpatient Clinic	63.6	57.6	**0.00**	60.7	54.2	**0.00**	57.5	53.0	**0.00**
OASAS Outpatient Clinic	8.97	7.08	**0.03**	7.95	6.46	0.07	7.62	5.07	**0.00**
ROS, %				**(N=25,579)**	**(N=2,328)**		**(N=25,579)**	**(N=2,328)**	
Any Key BH OP Services				76.2	73.5	**0.00**	73.7	69.8	**0.00**
FEP program				0.00	0.04	**0.03**	0.00	0.00	
ACT				1.79	1.26	0.06	1.82	1.22	0.04
PROS				6.63	6.11	0.33	5.60	5.04	0.26
CDT				0.36	0.35	0.91	0.29	0.22	0.54
Partial Hospitalization				0.52	0.30	0.16	0.44	0.22	0.11
Other Community-Based BH Services				32.3	30.7	0.13	34.5	33.1	0.16
OASAS Opioid Treatment Program				3.02	4.11	**0.00**	3.23	4.34	**0.00**
OMH Outpatient Clinic				57.0	50.3	**0.00**	51.3	44.1	**0.00**
OASAS Outpatient Clinic				14.9	16.2	0.09	12.9	12.7	0.79

	2019			Overall		
	HARP	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**
NYC, %	**(N=28,308)**	**(N=1,165)**		**(N=113,232)**	**(N=4,660)**	
Any Key BH OP Services	79.9	70.5	**0.00**	80.8	72.0	**0.00**
FEP program	0.00	0.00		0.00	0.00	
ACT	2.89	1.95	0.06	2.60	1.89	0.07
PROS	2.62	2.75	0.80	2.92	2.85	0.88
CDT	0.56	0.44	0.59	0.76	1.09	0.22
Partial Hospitalization	0.21	0.18	0.82	0.29	0.22	0.46
Other Community-Based BH Services	40.9	30.2	**0.00**	36.6	28.6	**0.00**
OASAS Opioid Treatment Program	11.3	6.7	**0.00**	11.4	6.6	**0.00**
OMH Outpatient Clinic	54.6	50.4	**0.01**	59.1	53.8	**0.00**
OASAS Outpatient Clinic	7.55	5.40	**0.01**	8.02	6.01	**0.00**
ROS, %	**(N=25,579)**	**(N=2,328)**		**(N=76,737)**	**(N=6,984)**	
Any Key BH OP Services	72.9	68.3	**0.00**	74.3	70.6	**0.00**
FEP program	0.00	0.00		0.00	0.01	0.37
ACT	2.04	1.15	**0.00**	1.88	1.21	**0.00**
PROS	4.80	4.30	0.28	5.68	5.15	0.21
CDT	0.21	0.09	0.22	0.29	0.22	0.42
Partial Hospitalization	0.41	0.27	0.29	0.46	0.26	**0.01**
Other Community-Based BH Services	36.6	35.8	0.45	34.5	33.2	0.10
OASAS Opioid Treatment Program	3.40	4.78	**0.00**	3.22	4.41	**0.00**
OMH Outpatient Clinic	46.4	38.6	**0.00**	51.6	44.4	**0.00**
OASAS Outpatient Clinic	11.8	10.9	0.22	13.2	13.3	0.88

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Table E.7. Community-Based BH Specialty Service Access Among HARP Enrollees, Matched Sample Rates (Percent) of Any Annual Utilization, by Post-Period Year and All Years Combined

	2016			**2017**			**2018**		
	HARP	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**
NYC, %	**(N=28,308)**	**(N=1,165)**		**(N=28,308)**	**(N=1,165)**		**(N=28,308)**	**(N=1,165)**	
Any key BH OP services	19.3	24.3	**0.00**	20.5	25.9	**0.00**	27.8	28.7	0.41
FEP program	0.00	0.00		0.00	0.00		0.00	0.00	
ACT	2.79	1.98	0.13	2.79	1.98	0.13	1.58	1.25	0.27
PROS	3.62	3.48	0.83	3.39	2.82	0.34	4.89	5.16	0.60
CDT	1.17	1.60	0.25	0.96	1.22	0.44	0.35	0.24	0.43
Other Community-based BH services	33.3	28.8	**0.01**	33.4	27.9	**0.00**	33.6	33.6	0.99
Partial hospitalization	0.40	0.09	0.13	0.19	0.38	0.23	0.35	0.14	0.13
OASAS opioid treatment program	8.19	5.93	**0.01**	8.45	6.68	**0.05**	4.11	4.48	0.44
OMH OP clinic	62.4	59.4	0.07	60.1	56.8	**0.04**	49.1	45.8	**0.01**
OASAS OP clinic	7.57	6.97	0.49	7.43	6.68	0.39	13.4	12.5	0.30
OASAS residential program	0.00	0.00		0.02	0.09	0.21	0.61	0.58	0.86
Health Home enrollment	36.3	29.2	**0.00**	40.46	29.40	**0.00**	42.23	31.82	**0.00**
ROS, %				**(N=25,579)**	**(N=2,328)**		**(N=25,579)**	**(N=2,328)**	
Any key BH OP services				74.9	74.3	0.60	72.2	71.3	0.41
FEP program				0.01	0.00	0.65	0.00	0.00	
ACT				1.52	1.30	0.45	1.58	1.25	0.27
PROS				6.11	6.24	0.82	4.89	5.16	0.60
CDT				0.41	0.38	0.89	0.35	0.24	0.43
Other Community-based BH services				32.0	30.9	0.31	33.6	33.6	0.99
Partial hospitalization				0.43	0.34	0.56	0.35	0.14	0.13
OASAS opioid treatment program				3.90	4.27	0.42	4.11	4.48	0.44
OMH OP clinic				54.3	51.9	**0.05**	49.1	45.8	**0.01**
OASAS OP clinic				15.1	15.6	0.62	13.4	12.5	0.30
OASAS residential program				0.3	0.3	0.90	0.6	0.6	0.86
Health Home enrollment				39.9	32.3	**0.00**	42.2	31.8	**0.00**

	2019			Overall		
	HARP	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**
NYC, %	**(N=28,308)**	**(N=1,165)**		**(N=113,232)**	**(N=4,660)**	
Any key BH OP services	21.4	27.9	**0.00**	20.7	25.9	**0.00**
FEP program	0.00	0.00		0.00	0.00	
ACT	2.95	2.03	0.10	2.88	1.97	**0.05**
PROS	2.76	2.99	0.68	3.17	3.06	0.82
CDT	0.71	0.48	0.41	0.94	1.19	0.44
Other Community-based BH services	39.3	30.5	**0.00**	35.5	29.5	**0.00**
Partial hospitalization	0.19	0.10	0.50	0.32	0.17	0.12
OASAS opioid treatment program	8.47	6.36	**0.02**	8.43	6.31	**0.01**
OMH OP clinic	54.6	52.5	0.22	58.6	56.0	0.07
OASAS OP clinic	6.72	5.01	**0.04**	7.14	5.98	0.06
OASAS residential program	0.29	0.29	0.99	0.12	0.26	0.14
Health Home enrollment	37.29	24.86	**0.00**	38.61	27.77	**0.00**
ROS, %	**(N=25,579)**	**(N=2,328)**		**(N=76,737)**	**(N=6,984)**	
Any key BH OP services	71.7	69.6	**0.05**	72.9	71.7	0.19
FEP program	0.00	0.00		0.00	0.00	
ACT	1.76	1.17	0.06	1.62	1.24	0.13
PROS	4.21	4.25	0.94	5.07	5.22	0.75
CDT	0.26	0.10	0.16	0.34	0.24	0.33
Other Community-based BH services	35.9	36.6	0.51	33.8	33.7	0.88
Partial hospitalization	0.34	0.29	0.73	0.37	0.26	0.18
OASAS opioid treatment program	4.50	4.79	0.56	4.17	4.51	0.46
OMH OP clinic	44.8	39.7	**0.00**	49.4	45.8	**0.00**
OASAS OP clinic	12.3	10.8	**0.05**	13.6	13.0	0.34
OASAS residential program	0.9	0.9	0.80	0.6	0.6	0.91
Health Home enrollment	41.3	29.4	**0.00**	41.2	31.2	**0.00**

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Table E.8a. HARP Quality of Care, HARP Enrollees vs. Non-HARP Individuals, Unadjusted Rates (Percent) of Quality Measures Met, by Post-Period Year and All Years Combined

	2016			2017			2018		
NYC, %	**HARP**	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**
Adherence To Antipsychotic Medication for People with Schizophrenia	66.4	75.7	0.00	67.2	72.1	0.06	68.0	72.5	0.09
Antidepressant Medication Management, Acute	54.5	52.4	0.74	50.4	46.6	0.57	51.8	47.9	0.60
Antidepressant Medication Management, Any	42.6	36.5	0.33	40.0	44.8	0.46	40.0	35.4	0.52
Cardiovascular Monitoring for People with CD and Schizophrenia	81.8	72.7	0.30	76.3	66.7	0.27	79.2	70.0	0.25
Diabetes Monitoring for People with Diabetes and Schizophrenia	77.6	68.4	0.02	77.4	77.4	0.99	78.6	69.3	**0.01**
Diabetes Screening for People with Schizophrenia and Bipolar Disorder	80.3	76.6	0.10	80.5	77.0	0.12	83.4	78.2	**0.02**
Medication Management for People with Asthma - 50% Compliance	78.4	71.6	0.19	80.2	82.7	0.65	78.4	86.7	0.12
Medication Management for People with Asthma - 75% Compliance	55.8	49.3	0.29	57.4	67.3	0.15	56.6	66.7	0.12
Comprehensive Diabetes Care-Received Hba1c	61.2	75.0	0.43	50.6	66.7	0.34	35.4	20.0	0.47
Comprehensive Diabetes Care - Overall	27.2	50.0	0.16	52.4	66.7	0.39	49.8	60.0	0.65
ROS, %									
Adherence To Antipsychotic Medication for People with Schizophrenia				68.5	73.1	0.06	68.7	72.9	0.08
Antidepressant Medication Management, Acute				49.1	48.9	0.95	49.6	44.7	0.24
Antidepressant Medication Management, Any				36.6	38.1	0.70	36.0	32.7	0.41
Cardiovascular Monitoring for People with CD And Schizophrenia				74.8	87.5	0.42	72.5	60.0	0.39
Diabetes Monitoring for People with Diabetes and Schizophrenia				72.1	66.7	0.28	71.3	67.0	0.35
Diabetes Screening for People with Schizophrenia and Bipolar Disorder				78.0	77.6	0.80	78.2	78.5	0.87
Medication Management for People with Asthma - 50% Compliance				69.0	70.9	0.77	69.2	67.9	0.83
Medication Management for People with Asthma - 75% Compliance				43.7	52.7	0.19	44.9	48.2	0.63
Comprehensive Diabetes Care-Received Hba1c				41.2	39.3	0.78	35.9	39.7	0.56
Comprehensive Diabetes Care - Overall				54.9	52.5	0.71	54.5	55.2	0.92

	2019			Overall		
	HARP	Non-HARP	P-Value	HARP	Non-HARP	P-Value
NYC						
Adherence To Antipsychotic Medication for People with Schizophrenia	69.9	77.1	**0.01**	67.9	74.3	**0.00**
Antidepressant Medication Management, Acute	53.0	40.5	0.13	52.5	47.6	0.23
Antidepressant Medication Management, Any	38.0	37.8	0.99	40.2	38.8	0.71
Cardiovascular Monitoring for People with CD and Schizophrenia	77.5	78.3	0.93	78.7	71.6	0.21
Diabetes Monitoring for People with Diabetes and Schizophrenia	76.9	69.7	0.08	77.6	71.3	**0.02**
Diabetes Screening for People with Schizophrenia and Bipolar Disorder	80.2	81.2	0.66	81.1	78.2	0.06
Medication Management for People with Asthma - 50% Compliance	76.5	76.5	0.99	78.4	79.1	0.82
Medication Management for People with Asthma - 75% Compliance	50.3	60.8	0.14	55.1	60.4	0.20
Comprehensive Diabetes Care - Received Hba1c				44.7	59.1	0.20
Comprehensive Diabetes Care - Overall				47.3	45.5	0.89
ROS						
Adherence To Antipsychotic Medication for People with Schizophrenia	70.8	77.1	**0.01**	69.3	74.3	**0.00**
Antidepressant Medication Management, Acute	48.8	54.0	0.21	49.2	49.3	0.97
Antidepressant Medication Management, Any	36.6	36.8	0.96	36.4	36.0	0.86
Cardiovascular Monitoring for People with CD and Schizophrenia	65.9	76.9	0.42	70.8	74.2	0.70
Diabetes Monitoring for People with Diabetes and Schizophrenia	68.6	62.8	0.27	70.7	65.6	0.15
Diabetes Screening for People with Schizophrenia and Bipolar Disorder	77.0	75.5	0.44	77.8	77.2	0.69
Medication Management for People with Asthma - 50% Compliance	66.4	78.0	0.09	68.3	72.1	0.41
Medication Management for People with Asthma - 75% Compliance	46.1	58.0	0.11	44.8	52.8	0.13
Comprehensive Diabetes Care - Received Hba1c				38.5	39.5	0.84
Comprehensive Diabetes Care - Overall				54.7	53.8	0.86

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Table E.8b. HARP Quality of Care, Sample Ns for Table E.8a

	2016		2017		2018	
	HARP	Non-HARP	HARP	Non-HARP	HARP	Non-HARP
NYC, N						
Adherence To Antipsychotic Medication for People with Schizophrenia	7,387	337	7,385	341	7,315	327
Antidepressant Medication Management, Acute	1,874	63	1,713	58	1,652	48
Antidepressant Medication Management, Any	1,874	63	1,713	58	1,652	48
Cardiovascular Monitoring for People with CD and Schizophrenia	252	22	240	27	307	30
Diabetes Monitoring for People with Diabetes and Schizophrenia	2,166	114	2,310	124	2,392	127
Diabetes Screening for People with Schizophrenia and Bipolar Disorder	8,036	329	7,816	321	7,654	302
Medication Management for People with Asthma - 50% Compliance	1,567	67	1,508	52	1,432	60
Medication Management for People with Asthma - 75% Compliance	1,567	67	1,508	52	1,432	60
Comprehensive Diabetes Care - Received Hba1c	294	8	1,211	9	1,278	5
Comprehensive Diabetes Care - Overall	184	8	1,211	9	1,278	5
ROS, N						
Adherence To Antipsychotic Medication for People with Schizophrenia			4,396	387	4,424	395
Antidepressant Medication Management, Acute			2,113	176	2,027	150
Antidepressant Medication Management, Any			2,113	176	2,027	150
Cardiovascular Monitoring for People with CD and Schizophrenia			143	8	160	10
Diabetes Monitoring for People with Diabetes and Schizophrenia			1,279	87	1,361	103
Diabetes Screening for People with Schizophrenia and Bipolar Disorder			5,806	508	5,854	503
Medication Management for People with Asthma - 50% Compliance			794	55	747	56
Medication Management for People with Asthma - 75% Compliance			794	55	747	56
Comprehensive Diabetes Care - Received Hba1c			1,659	61	1,652	58
Comprehensive Diabetes Care - Overall			1,659	61	1,652	58

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019

	2019		Overall	
	HARP	**Non-HARP**	**HARP**	**Non-HARP**
NYC, N				
Adherence To Antipsychotic Medication for People with Schizophrenia	7,113	310	29,200	1,315
Antidepressant Medication Management, Acute	1,670	37	6,909	206
Antidepressant Medication Management, Any	1,670	37	6,909	206
Cardiovascular Monitoring for People with CD and Schizophrenia	280	23	1,079	102
Diabetes Monitoring for People with Diabetes and Schizophrenia	2,233	109	9,101	474
Diabetes Screening for People with Schizophrenia and Bipolar Disorder	7,384	298	30,890	1,250
Medication Management for People with Asthma - 50% Compliance	1,385	51	5,892	230
Medication Management for People with Asthma - 75% Compliance	1,385	51	5,892	230
Comprehensive Diabetes Care - Received Hba1c	N/A	N/A	2,783	22
Comprehensive Diabetes Care - Overall	N/A	N/A	2,783	22
ROS, N				
Adherence To Antipsychotic Medication for People with Schizophrenia	2,048	163	13,045	1,153
Antidepressant Medication Management, Acute	2,048	163	6,188	489
Antidepressant Medication Management, Any	2,048	163	6,188	489
Cardiovascular Monitoring for People with CD and Schizophrenia	179	13	482	31
Diabetes Monitoring for People with Diabetes and Schizophrenia	1,275	86	3,915	276
Diabetes Screening for People with Schizophrenia and Bipolar Disorder	5,506	473	17,166	1,484
Medication Management for People with Asthma - 50% Compliance	648	50	2,189	161
Medication Management for People with Asthma - 75% Compliance	648	50	2,189	161
Comprehensive Diabetes Care - Received Hba1c	N/A	N/A	3,311	119
Comprehensive Diabetes Care - Overall	N/A	N/A	3,311	119

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Table E.9. HARP Quality of Care Among HARP Enrollees, Matched Sample Rates (Percent) of Quality Measures Met, by Post-Period Year and All Years Combined

	2016			2017			2018		
	HARP	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**
NYC, %									
Comprehensive Diabetes Care - Received Hba1c	69.4	71.4	0.91	50.2	75.0	0.17	34.5	39.3	0.47
Comprehensive Diabetes Care - Overall	25.9	57.1	0.12	49.3	37.5	0.51	52.9	55.4	0.73
ROS, %									
Comprehensive Diabetes Care - Received Hba1c				42.5	41.1	0.84	34.5	39.3	0.47
Comprehensive Diabetes Care - Overall				51.4	53.6	0.75	52.9	55.4	0.72

	2019			Overall		
	HARP	**Non-HARP**	**P-Value**	**HARP**	**Non-HARP**	**P-Value**
NYC, %						
Comprehensive Diabetes Care - Received Hba1c	n/a	n/a	n/a	43.0	60.0	0.16
Comprehensive Diabetes Care - Overall	n/a	n/a	n/a	50.0	50.0	1.00
ROS, %						
Comprehensive Diabetes Care - Received Hba1c	n/a	n/a	n/a	38.6	40.2	0.75
Comprehensive Diabetes Care - Overall	n/a	n/a	n/a	52.1	54.5	0.66

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Table E.10. Total Number of Visits, Unadjusted Estimates, by Post-Period Year and All Years Combined

	2016			2017			2018		
	HARP (N=28,308)	**Non-HARP (N=1,165)**	**P-Value**	**HARP (N=28,308)**	**Non-HARP (N=1,165)**	**P-Value**	**HARP (N=28,308)**	**Non-HARP (N=1,165)**	**P-Value**
NYC, Visits, Mean (SE)									
Acute BH visits	3.50 (0.07)	3.84 (0.40)	0.29	3.51 (0.07)	4.53 (0.49)	**0.01**	3.78 (0.08)	4.15 (0.38)	0.36
BH ED visits	2.92 (0.06)	3.15 (0.39)	0.45	2.94 (0.06)	3.82 (0.47)	**0.01**	3.22 (0.07)	3.67 (0.37)	0.25
BH IP (Medicaid) admissions	1.90 (0.04)	2.05 (0.19)	0.37	1.86 (0.03)	2.13 (0.20)	0.11	1.90 (0.03)	1.89 (0.15)	0.95
MHARS IP admissions	1.07 (0.03)	1.00 (0.00)	0.64	1.13 (0.05)	1.00 (0.00)	0.61	1.11 (0.07)	. (.)	n/a
Acute BH plus visits	3.50 (0.06)	3.94 (0.40)	0.16	3.55 (0.07)	4.60 (0.50)	**0.00**	3.80 (0.08)	4.26 (0.39)	0.26
SUD ancillary visits	1.79 (0.14)	2.50 (0.50)	0.16	1.88 (0.15)	2.33 (0.33)	0.56	1.76 (0.15)	1.00 (0.00)	0.24
Hospital Detox visits	1.69 (0.04)	1.69 (0.16)	1.00	1.77 (0.04)	2.13 (0.28)	0.12	1.92 (0.05)	2.09 (0.23)	0.52
SUD inpatient rehab visits	1.25 (0.02)	1.37 (0.13)	0.32	1.37 (0.03)	1.45 (0.19)	0.63	1.50 (0.04)	1.43 (0.17)	0.72
HCBS respite visits	1.77 (0.16)	. (.)	n/a	2.16 (0.16)	. (.)	n/a	2.17 (0.16)	. (.)	n/a
Acute Non-BH visits	3.37 (0.04)	4.19 (0.35)	**0.00**	3.47 (0.04)	4.28 (0.32)	**0.00**	3.61 (0.04)	3.95 (0.31)	0.12
Any OP BH visits	10.6 (0.04)	9.95 (0.19)	**0.00**	11.0 (0.04)	10.2 (0.20)	**0.00**	11.0 (0.04)	10.5 (0.21)	**0.01**
Any Key BH OP visits	9.85 (0.04)	9.28 (0.18)	**0.01**	10.3 (0.04)	9.50 (0.18)	**0.00**	10.3 (0.04)	9.77 (0.20)	**0.02**
Non-BH OP visits	5.75 (0.03)	5.39 (0.18)	**0.03**	5.65 (0.03)	5.36 (0.17)	0.07	5.08 (0.02)	4.75 (0.13)	**0.01**
Any Cause visits	25.5 (0.09)	23.3 (0.48)	**0.00**	25.7 (0.09)	23.6 (0.48)	**0.00**	23.9 (0.08)	21.3 (0.42)	**0.00**
ROS, Visits, Mean (SE)				**HARP (N=25,579)**	**Non-HARP (N=2,328)**	**P-Value**	**HARP (N=25,579)**	**Non-HARP (N=2,328)**	**P-Value**
Acute BH visits				3.05 (0.05)	2.90 (0.15)	0.35	3.13 (0.06)	3.15 (0.22)	0.93
BH ED visits				2.53 (0.04)	2.45 (0.13)	0.57	2.60 (0.05)	2.64 (0.19)	0.82
BH IP (Medicaid) admissions				1.71 (0.03)	1.57 (0.09)	0.17	1.71 (0.03)	1.89 (0.16)	0.16
MHARS IP admissions				1.11 (0.04)	1.00 (0.00)	0.35	1.03 (0.02)	1.33 (0.33)	**0.02**
Acute BH plus visits				3.06 (0.05)	2.98 (0.15)	0.62	3.18 (0.06)	3.17 (0.21)	0.96
SUD ancillary visits				1.00 (0.00)	. (.)		1.50 (0.50)	. (.)	
Hospital Detox visits				1.60 (0.05)	1.66 (0.15)	0.71	1.67 (0.05)	1.80 (0.22)	0.48
SUD inpatient rehab visits				1.15 (0.02)	1.29 (0.13)	0.06	1.29 (0.03)	1.08 (0.06)	0.06
HCBS respite visits				1.67 (0.33)	. (.)		2.43 (0.19)	. (.)	
Acute Non-BH visits				3.63 (0.03)	3.45 (0.11)	0.15	3.57 (0.03)	3.39 (0.12)	0.14
Any OP BH visits				9.27 (0.04)	8.81 (0.14)	**0.00**	9.84 (0.05)	8.93 (0.14)	**0.00**
Any Key BH OP visits				8.69 (0.04)	8.20 (0.13)	**0.00**	8.74 (0.04)	8.42 (0.13)	**0.02**
Non-BH OP visits				5.17 (0.03)	4.25 (0.09)	**0.00**	4.78 (0.03)	4.26 (0.09)	**0.00**
Any Cause visits				24.2 (0.10)	21.7 (0.31)	**0.00**	23.5 (0.10)	20.1 (0.28)	**0.00**

	2019			**Overall**		
	HARP (N=28,308)	**Non-HARP (N=1,165)**	**P-Value**	**HARP (N=28,308)**	**Non-HARP (N=1,165)**	**P-Value**
NYC, Visits, Mean (SE)						
Acute BH visits	3.72 (0.08)	3.72 (0.39)	0.99	3.62 (0.06)	4.06 (0.36)	0.23
BH ED visits	3.17 (0.08)	3.13 (0.37)	0.93	3.06 (0.06)	3.44 (0.35)	0.29
BH IP (Medicaid) admissions	1.91 (0.04)	2.22 (0.21)	0.12	1.89 (0.02)	2.06 (0.13)	0.20
MHARS IP admissions	1.00 (0.00)	1.00 (0.00)	n/a	1.08 (0.03)	1.00 (0.00)	**0.01**
Acute BH plus visits	3.77 (0.08)	3.84 (0.41)	0.86	3.65 (0.06)	4.16 (0.37)	0.17
SUD ancillary visits	1.74 (0.24)	1.00 (.)	0.50	1.81 (0.11)	2.00 (0.23)	0.44
Hospital Detox visits	1.92 (0.05)	1.73 (0.19)	0.50	1.83 (0.03)	1.92 (0.15)	0.54
SUD inpatient rehab visits	1.62 (0.04)	1.76 (0.28)	0.61	1.45 (0.02)	1.50 (0.11)	0.67
HCBS respite visits	1.77 (0.14)	2.00 (0.00)	0.82	1.99 (0.08)	2.00 (0.00)	0.87
Acute Non-BH visits	3.76 (0.04)	4.05 (0.30)	0.20	3.55 (0.03)	4.12 (0.28)	**0.05**
Any OP BH visits	11.3 (0.05)	10.4 (0.22)	**0.00**	11.0 (0.04)	10.3 (0.16)	**0.00**
Any Key BH OP visits	10.4 (0.04)	9.86 (0.20)	**0.01**	10.2 (0.03)	9.60 (0.16)	**0.00**
Non-BH OP visits	5.63 (0.03)	5.09 (0.14)	**0.00**	5.53 (0.02)	5.14 (0.13)	**0.00**
Any Cause visits	24.6 (0.09)	21.2 (0.43)	**0.00**	24.9 (0.08)	22.4 (0.40)	**0.00**
ROS, Visits, Mean (SE)	**HARP (N=25,579)**	**Non-HARP (N=2,328)**	**P-Value**	**HARP (N=25,579)**	**Non-HARP (N=2,328)**	**P-Value**
Acute BH visits	3.13 (0.05)	3.17 (0.22)	0.87	3.11 (0.04)	3.06 (0.16)	0.76
BH ED visits	2.61 (0.05)	2.63 (0.18)	0.94	2.58 (0.04)	2.56 (0.14)	0.90
BH IP (Medicaid) admissions	1.70 (0.03)	1.82 (0.14)	0.30	1.71 (0.02)	1.74 (0.09)	0.73
MHARS IP admissions	1.09 (0.04)	1.00 (0.00)	0.59	1.08 (0.02)	1.06 (0.06)	0.73
Acute BH plus visits	3.19 (0.05)	3.19 (0.21)	0.99	3.14 (0.04)	3.10 (0.16)	0.80
SUD ancillary visits	1.00 (.)	2.00 (.)		1.20 (0.20)	2.00 (.)	**0.02**
Hospital Detox visits	1.76 (0.05)	1.82 (0.18)	0.72	1.68 (0.04)	1.75 (0.15)	0.63
SUD inpatient rehab visits	1.28 (0.03)	1.26 (0.10)	0.86	1.24 (0.02)	1.23 (0.07)	0.82
HCBS respite visits	2.42 (0.21)	. (.)		2.41 (0.14)	. (.)	
Acute Non-BH visits	3.63 (0.03)	3.35 (0.12)	**0.02**	3.61 (0.03)	3.40 (0.10)	**0.05**
Any OP BH visits	9.91 (0.05)	8.78 (0.14)	**0.00**	9.67 (0.04)	8.84 (0.11)	**0.00**
Any Key BH OP visits	8.59 (0.04)	8.26 (0.13)	**0.03**	8.68 (0.03)	8.29 (0.11)	**0.00**
Non-BH OP visits	4.48 (0.02)	4.19 (0.08)	**0.00**	4.81 (0.02)	4.23 (0.07)	**0.00**
Any Cause visits	22.7 (0.09)	19.1 (0.27)	**0.00**	23.5 (0.09)	20.3 (0.26)	**0.00**

SOURCE: Authors’ analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Table E.11. Per Member Per Month Costs, Unadjusted Estimates, by Post-Period Year and All Years Combined

	2016			2017			2018		
	HARP (N=28,308)	**Non-HARP (N=1,165)**	**P-Value**	**HARP (N=28,308)**	**Non-HARP (N=1,165)**	**P-Value**	**HARP (N=28,308)**	**Non-HARP (N=1,165)**	**P-Value**
NYC, PMPM Costs, Mean (SE)									
Acute BH visits	3,410.3 (66.15)	3,957.6 (349.82)	0.09	3,811.2 (72.28)	3,772.7 (378.33)	0.92	3,600.3 (71.96)	3,401.2 (350.21)	0.59
BH ED visits	483.7 (21.40)	562.0 (84.26)	0.45	478.6 (11.41)	445.1 (36.88)	0.56	537.1 (11.94)	546.2 (100.25)	0.89
BH IP (Medicaid) admissions	8,342.5 (109.43)	8,624.9 (587.54)	0.58	9,745.4 (115.81)	9,304.5 (604.60)	0.44	9,478.6 (124.71)	8,021.4 (578.86)	**0.02**
Acute BH plus visits	3,625.2 (63.70)	4,103.0 (332.24)	0.13	4,028.6 (69.99)	3,891.2 (366.59)	0.71	3,753.7 (67.60)	3,480.9 (343.91)	0.45
SUD ancillary visits	530.7 (86.06)	1,264.3 (359.68)	**0.02**	635.4 (92.63)	629.4 (361.18)	0.99	890.8 (164.74)	433.1 (338.40)	0.51
Hospital Detox visits	1,099.8 (51.60)	1,332.3 (278.54)	0.38	1,003.8 (34.78)	1,011.4 (104.12)	0.97	1,111.4 (30.94)	1,087.5 (255.89)	0.89
SUD inpatient rehab visits	5,330.2 (167.93)	4,576.5 (569.36)	0.36	5,292.2 (181.36)	4,247.3 (787.27)	0.32	4,271.1 (120.82)	2,569.8 (606.93)	**0.01**
HCBS respite visits	2,360.3 (237.70)	. (.)	n/a	2,863.8 (211.19)	. (.)	n/a	2,302.2 (134.90)	. (.)	n/a
Acute Non-BH visits	2,334.8 (44.46)	3,391.5 (316.59)	**0.00**	2,531.6 (47.87)	3,856.5 (354.01)	**0.00**	2,656.0 (52.02)	3,983.7 (349.83)	**0.00**
Any OP BH visits	412.8 (3.39)	379.1 (15.00)	0.06	447.2 (3.91)	431.8 (24.61)	0.46	471.8 (3.53)	453.2 (22.86)	0.32
Any Key BH OP visits	419.2 (3.63)	392.4 (15.86)	0.16	457.8 (4.62)	456.6 (26.87)	0.96	480.1 (3.78)	465.3 (22.58)	0.46
Non-BH OP visits	250.0 (2.82)	228.8 (12.40)	0.15	268.8 (6.37)	288.2 (26.52)	0.57	284.2 (10.80)	281.1 (26.23)	0.96
Any Cause visits	1,291.4 (13.38)	1,668.9 (125.45)	**0.00**	1,403.0 (14.98)	1,777.6 (114.46)	**0.00**	1,431.9 (17.33)	1,600.9 (101.57)	0.06

	2019			Overall		
	HARP (N=28,308)	**Non-HARP (N=1,165)**	**P-Value**	**HARP (N=113,232)**	**Non-HARP (N=4,660)**	**P-Value**
NYC, PMPM Costs, Mean (SE)						
Acute BH visits	3,836.7 (76.27)	3,336.0 (352.53)	0.22	3,662.7 (45.88)	3,640.3 (228.01)	0.92
BH ED visits	532.3 (14.63)	439.1 (32.49)	0.23	507.5 (8.28)	500.6 (37.27)	0.86
BH IP (Medicaid) admissions	10,065.6 (128.62)	9,042.7 (593.01)	0.15	9,383.9 (66.65)	8,734.6 (336.58)	0.06
Acute BH plus visits	4,024.5 (71.55)	3,464.9 (337.37)	0.15	3,856.8 (43.06)	3,759.4 (218.38)	0.66
SUD ancillary visits	1,734.9 (211.32)	597.0 (.)	0.24	758.5 (80.86)	874.6 (255.40)	0.65
Hospital Detox visits	1,162.8 (42.87)	919.4 (93.45)	0.28	1,093.3 (20.55)	1,088.2 (102.77)	0.96
SUD inpatient rehab visits	4,426.6 (112.69)	4,475.2 (441.03)	0.94	4,796.0 (77.89)	3,948.3 (311.74)	**0.01**
HCBS respite visits	2,030.6 (89.12)	0.00 (0.00)	**0.00**	2,353.6 (81.32)	0.00 (0.00)	**0.00**
Acute Non-BH visits	3,025.8 (65.33)	3,999.6 (315.93)	**0.01**	2,640.2 (33.65)	3,805.4 (219.97)	**0.00**
Any OP BH visits	465.3 (3.10)	421.9 (15.07)	**0.01**	449.0 (2.76)	421.2 (15.99)	0.09
Any Key BH OP visits	468.0 (3.08)	444.8 (16.03)	0.16	455.9 (2.92)	439.3 (16.85)	0.33
Non-BH OP visits	308.2 (11.68)	326.6 (33.97)	0.77	278.0 (7.12)	280.7 (18.43)	0.89
Any Cause visits	1,577.3 (22.10)	1,712.9 (111.60)	0.23	1,425.5 (13.16)	1,690.0 (87.53)	**0.00**

	2017			2018		
	HARP (N=25,579)	**Non-HARP (N=2,328)**	**P-Value**	**HARP (N=25,579)**	**Non-HARP (N=2,328)**	**P-Value**
ROS, PMPM Costs, Mean (SE)						
Acute BH visits	2,400.1 (60.90)	2,312.7 (228.34)	0.67	2,466.0 (64.25)	2,346.5 (271.60)	0.62
BH ED visits	412.9 (9.21)	360.3 (21.32)	0.08	413.6 (7.56)	423.2 (23.52)	0.73
BH IP (Medicaid) admissions	6,489.2 (146.32)	6,604.1 (569.29)	0.82	6,608.5 (150.22)	7,324.6 (737.50)	0.24
Acute BH plus visits	2,620.0 (59.76)	2,704.1 (220.38)	0.68	2,733.8 (64.08)	2,612.8 (263.75)	0.61
SUD ancillary visits	354.3 (354.33)	. (.)	n/a	773.4 (433.06)	. (.)	n/a
Hospital Detox visits	1,116.2 (39.65)	816.2 (83.90)	**0.02**	1,064.3 (32.01)	1,027.8 (72.37)	0.75
SUD inpatient rehab visits	4,211.2 (171.66)	4,175.5 (339.65)	0.94	4,623.3 (188.20)	3,817.1 (419.86)	0.21
HCBS respite visits	1,299.4 (407.46)	. (.)	n/a	1,943.2 (222.74)	. (.)	n/a
Acute Non-BH visits	1,697.1 (39.04)	1,907.3 (134.33)	0.14	1,737.1 (38.66)	2,039.0 (134.54)	**0.03**
Any OP BH visits	401.3 (4.31)	372.5 (11.69)	0.05	431.3 (4.42)	381.7 (11.02)	**0.00**
Any Key BH OP visits	423.0 (5.25)	409.6 (14.67)	0.46	436.2 (4.72)	402.3 (11.72)	**0.04**
Non-BH OP visits	230.9 (3.84)	227.6 (10.17)	0.81	235.4 (3.49)	235.6 (11.89)	0.99
Any Cause visits	1,064.8 (11.46)	1,111.7 (50.13)	0.25	1,120.7 (11.74)	1,086.3 (44.72)	0.41

	2019			Overall		
	HARP (N=25,579)	**Non-HARP (N=2,328)**	**P-Value**	**HARP (N=76,737)**	**Non-HARP (N=6,984)**	**P-Value**
ROS, PMPM Costs, Mean (SE)						
Acute BH visits	2,182.2 (55.25)	2,378.1 (186.00)	0.32	2,352.8 (42.36)	2,342.9 (160.99)	0.95
BH ED visits	434.1 (7.58)	440.4 (27.13)	0.82	419.9 (5.72)	403.8 (16.75)	0.36
BH IP (Medicaid) admissions	6,066.3 (131.36)	6,228.2 (389.44)	0.73	6,398.4 (95.68)	6,680.7 (377.09)	0.47
Acute BH plus visits	2,485.0 (55.78)	2,707.3 (182.57)	0.26	2,615.0 (41.60)	2,677.8 (154.30)	0.69
SUD ancillary visits	56.0 (.)	328.8 (.)	n/a	462.3 (224.51)	328.8 (.)	0.61
Hospital Detox visits	1,083.1 (25.91)	1,055.6 (78.86)	0.76	1,087.8 (22.57)	959.4 (55.25)	**0.03**
SUD inpatient rehab visits	4,559.1 (151.41)	4,227.5 (388.40)	0.50	4,467.3 (103.51)	4,093.8 (228.75)	0.14
HCBS respite visits	846.7 (67.15)	. (.)	n/a	1,314.6 (110.30)	. (.)	n/a
Acute Non-BH visits	1,815.7 (35.82)	2,014.5 (147.83)	0.13	1,749.9 (24.80)	1,985.7 (91.81)	**0.01**
Any OP BH visits	407.9 (3.47)	375.7 (10.88)	**0.01**	413.4 (3.26)	376.5 (9.00)	**0.00**
Any Key BH OP visits	412.0 (3.68)	397.3 (11.32)	0.26	423.8 (3.58)	403.3 (10.22)	0.06
Non-BH OP visits	232.6 (3.51)	238.9 (13.70)	0.62	233.0 (2.62)	234.0 (8.40)	0.90
Any Cause visits	1,140.9 (11.98)	1,073.6 (44.61)	0.11	1,108.8 (9.15)	1,090.6 (34.55)	0.61

NOTE: There are no available cost estimates for MHARS visits
SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Table E.12. Total Number of Visits, Matched Sample Estimates, by Post-Period Year and All Years Combined

	2016			2017			2018		
	HARP (N=28,308)	Non-HARP (N=1,165)	P-Value	HARP (N=28,308)	Non-HARP (N=1,165)	P-Value	HARP (N=28,308)	Non-HARP (N=1,165)	P-Value
NYC, Mean (SE)									
MHARS IP admissions	1.07 (0.03)	1.00 (0.00)	0.64	1.13 (0.05)	1.00 (0.00)	0.61	1.11 (0.07)	. (.)	n/a
SUD ancillary visits	1.79 (0.14)	2.50 (0.50)	0.16	1.88 (0.15)	2.33 (0.33)	0.56	1.76 (0.15)	1.00 (0.00)	0.24
Hospital Detox visits	1.69 (0.04)	1.69 (0.16)	1.00	1.77 (0.04)	2.13 (0.28)	0.12	1.92 (0.05)	2.09 (0.23)	0.52
SUD inpatient rehab visits	1.25 (0.02)	1.37 (0.13)	0.32	1.37 (0.03)	1.45 (0.19)	0.63	1.50 (0.04)	1.43 (0.17)	0.72
HCBS respite visits	1.77 (0.16)	. (.)	n/a	2.16 (0.16)	. (.)	n/a	2.17 (0.16)	. (.)	n/a
ROS, Mean (SE)				HARP (N=25,579)	Non-HARP (N=2,328)	P-Value	HARP (N=25,579)	Non-HARP (N=2,328)	P-Value
MHARS IP admissions				1.11 (0.04)	1.00 (0.00)	0.35	1.03 (0.02)	1.33 (0.33)	**0.02**
SUD ancillary visits				1.00 (0.00)	. (.)	n/a	1.50 (0.50)	. (.)	n/a
Hospital Detox visits				1.60 (0.05)	1.66 (0.15)	0.71	1.67 (0.05)	1.80 (0.22)	0.48
SUD inpatient rehab visits				1.15 (0.02)	1.29 (0.13)	0.06	1.29 (0.03)	1.08 (0.06)	0.06
HCBS respite visits				1.67 (0.33)	. (.)	n/a	2.43 (0.19)	. (.)	n/a

	2019			Overall		
	HARP (N=28,308)	Non-HARP (N=1,165)	P-Value	HARP (N=28,308)	Non-HARP (N=1,165)	P-Value
NYC, Mean (SE)						
MHARS IP admissions	1.00 (0.00)	1.00 (0.00)	n/a	1.08 (0.03)	1.00 (0.00)	**0.00**
SUD ancillary visits	1.74 (0.24)	1.00 (.)	0.50	1.81 (0.11)	2.00 (0.23)	0.44
Hospital Detox visits	1.92 (0.05)	1.73 (0.19)	0.50	1.83 (0.03)	1.92 (0.15)	0.54
SUD inpatient rehab visits	1.62 (0.04)	1.76 (0.28)	0.61	1.45 (0.02)	1.50 (0.11)	0.67
HCBS respite visits	1.77 (0.14)	2.00 (0.00)	0.82	1.99 (0.08)	2.00 (0.00)	0.87
ROS, Mean (SE)	HARP (N=25,579)	Non-HARP (N=2,328)	P-Value	HARP (N=25,579)	Non-HARP (N=2,328)	P-Value
MHARS IP admissions	1.09 (0.04)	1.00 (0.00)	0.59	1.08 (0.02)	1.06 (0.06)	0.73
SUD ancillary visits	1.00 (.)	2.00 (.)	n/a	1.20 (0.20)	2.00 (.)	**0.02**
Hospital Detox visits	1.76 (0.05)	1.82 (0.18)	0.72	1.68 (0.04)	1.75 (0.15)	0.63
SUD inpatient rehab visits	1.28 (0.03)	1.26 (0.10)	0.86	1.24 (0.02)	1.23 (0.07)	0.82
HCBS respite visits	2.42 (0.21)	. (.)	n/a	2.41 (0.14)	. (.)	n/a

Table E.13. Per Member Per Month Costs, Matched Sample Estimates, by Post-Period Year and All Years Combined

	2016			2017			2018		
	HARP (N=28,308)	**Non-HARP (N=1,165)**	**P-Value**	**HARP (N=28,308)**	**Non-HARP (N=1,165)**	**P-Value**	**HARP (N=28,308)**	**Non-HARP (N=1,165)**	**P-Value**
NYC, Mean (SE)									
SUD ancillary visits	405.8	1,264.3		576.8	629.4		350.7	433.1	
	(199.51)	(359.68)	**0.05**	(183.37)	(361.18)	0.91	(117.20)	(338.40)	0.77
Hospital Detox visits	1,182.1	1,383.6		1,120.5	920.5		1,020.8	1,119.6	
	(136.74)	(300.91)	0.56	(98.76)	(79.87)	0.37	(39.18)	(275.04)	0.51
SUD inpatient rehab visits	5,336.9	4,611.0		5,432.7	4,395.3		4,027.1	2,486.1	
	(392.27)	(646.55)	0.41	(373.95)	(932.07)	0.33	(263.97)	(648.85)	**0.03**
HCBS respite visits	3,612.9			2,848.8			2,355.8		
	(540.61)	. (.)	n/a	(425.25)	. (.)	n/a	(276.07)	. (.)	n/a
ROS, Mean (SE)				**HARP (N=25,579)**	**Non-HARP (N=2,328)**	**P-Value**	**HARP (N=25,579)**	**Non-HARP (N=2,328)**	**P-Value**
SUD ancillary visits				0.00			773.4		
				(.)	. (.)	n/a	(433.06)	. (.)	n/a
Hospital Detox visits				1,015.3	833.3		1,077.1	1,050.8	
				(43.40)	(90.84)	0.07	(49.68)	(78.97)	0.83
SUD inpatient rehab visits				3,986.1	4,120.8		4,581.0	3,849.1	
				(212.01)	(369.41)	0.76	(268.45)	(445.87)	0.25
HCBS respite visits				1,268.7			1,883.5		
				(.)	. (.)	n/a	(270.65)	. (.)	n/a

	2019			Overall		
	HARP (N=28,308)	**Non-HARP (N=1,165)**	**P-Value**	**HARP (N=28,308)**	**Non-HARP (N=1,165)**	**P-Value**
NYC, Mean (SE)						
SUD ancillary visits	1,500.0 (.)	597.0 (.)	n/a	499.7 (123.53)	874.6 (255.40)	0.18
Hospital Detox visits	1,171.0 (77.21)	938.3 (100.59)	0.23	1,122.6 (47.55)	1,088.4 (108.63)	0.77
SUD inpatient rehab visits	4,364.1 (232.78)	4,466.8 (477.67)	0.87	4,722.4 (165.38)	3,966.8 (345.43)	**0.05**
HCBS respite visits	1,649.8 (176.93)	0.00 (0.00)	**0.01**	2,294.7 (168.78)	0.00 (0.00)	**0.00**
ROS, Mean (SE)	**HARP (N=25,579)**	**Non-HARP (N=2,328)**	**P-Value**	**HARP (N=25,579)**	**Non-HARP (N=2,328)**	**P-Value**
SUD ancillary visits	56.0 (.)	328.8 (.)	n/a	400.7 (278.72)	328.8 (.)	0.83
Hospital Detox visits	1,071.8 (37.65)	1,067.4 (84.49)	0.96	1,055.3 (30.79)	976.0 (59.90)	0.24
SUD inpatient rehab visits	4,553.0 (194.73)	4201.3 (413.45)	0.44	4,382.1 (136.17)	4,069.8 (244.41)	0.26
HCBS respite visits	2.42 (0.21)	. (.)	n/a	2.41 (0.14)	. (.)	n/a

NOTE: There are no available cost estimates for MHARS visits

SOURCE: Authors' analyses of Medicaid data (2014–2019) and OTNY data (2015–2019)

Table E.14. Characteristics of BH HCBS-Eligible HARP Enrollees, by Post-Policy Year and All Years Combined

	2016 (N=47,867)	2017 (N=59,113)	2018 (N=70,065)	2019 (N=73,920)	Overall (N=250,965)	P-Value
NYC						
Age, Mean (SE)	46.7 (0.21)	46.0 (0.14)	44.8 (0.11)	43.9 (0.09)	44.8 (0.06)	**0.00**
Sex, %						
Male	49.1	49.8	51.5	52.1	51.2	**0.00**
Female	50.9	50.2	48.5	47.9	48.8	
Race/Ethnicity, %						
White	24.9	25.1	25.8	26.6	26.0	**0.04**
Black	48.0	48.4	49.3	49.2	49.0	
Hispanic	15.7	16.1	15.3	14.6	15.2	
Asian/American Indian/Other	11.3	10.4	9.58	9.52	9.9	
Behavioral Health (BH) diagnosis, %						
Schizophrenic disorders	51.1	46.7	48.7	47.5	48.0	**0.00**
Bipolar disorder (severe)	4.43	4.64	4.63	4.83	4.71	0.75
Other Serious Affective/Psychotic Disorders	51.1	54.2	54.1	53.6	53.6	**0.03**
Chronic alcohol abuse	16.7	18.5	22.3	23.5	21.7	**0.00**
Opioid abuse and dependence (OUD)	14.5	17.6	19.9	21.0	19.5	**0.00**
Any Serious Mental Illness (SMI) diagnosis	79.8	77.3	75.4	74.5	75.7	**0.00**
Any Substance Use Disorder (SUD) diagnosis	34.3	39.2	44.1	45.7	43.1	**0.00**
Core Health Status (revised), %						
Healthy to Minor Chronic disease	2.57	3.23	3.19	3.37	3.22	0.51
Moderate to Significant Chronic Disease	68.5	67.6	67.7	67.8	67.8	
Dominant Chronic Disease to Catastrophic Conditions	28.9	29.2	29.1	28.8	29.0	

	2017 (N=41,446)	**2018 (N=51,966)**	**2019 (N=69,862)**	**Overall (N=163,274)**	**P-Value**
ROS					
Age, Mean (SE)	43.2 (0.14)	42.0 (0.10)	40.5 (0.09)	41.6 (0.06)	**0.00**
Sex, %					
Male	42.6	43.6	44.4	43.8	**0.03**
Female	57.4	56.4	55.6	56.2	
Race/Ethnicity, %					
White	56.3	56.4	58.6	57.4	**0.00**
Black	29.9	30.1	28.3	29.2	
Hispanic	11.3	10.9	10.3	10.7	
Asian/American Indian/Other	2.50	2.58	2.84	2.68	
Behavioral Health (BH) diagnosis, %					
Schizophrenic disorders	39.4	37.2	38.5	38.2	**0.01**
Bipolar disorder (severe)	5.53	5.92	5.48	5.64	0.24
Other Serious Affective/Psychotic Disorders	55.9	55.8	56.7	56.2	0.28
Chronic alcohol abuse	20.8	21.9	27.2	24.1	**0.00**
Opioid abuse and dependence (OUD)	13.5	14.4	17.7	15.8	**0.00**
Any Serious Mental Illness (SMI) diagnosis	72.5	71.1	70.7	71.2	**0.02**
Any Substance Use Disorder (SUD) diagnosis	36.5	39.8	45.0	41.6	**0.00**
Core Health Status (revised), %					
Healthy to Minor Chronic disease	5.00	5.69	5.07	5.27	**0.00**
Moderate to Significant Chronic Disease	71.2	72.4	73.4	72.6	
Dominant Chronic Disease to Catastrophic Conditions	23.8	21.9	21.5	22.1	

SOURCE: Authors' analyses of Medicaid data (2014–2019)

NOTE: The p-value describes the statistical significance of the chi-square test that compares all annual periods together.

Table E.15. BH HCBS Utilization by BH HCBS-Eligible HARP Enrollees, Unadjusted Rates (Percent) and Annual Percent Change, by Post-Policy Year and All Years Combined, NYC, ROS and Statewide

	2016	**2017**	**% Change (2016–2017)**	**2018**	**% Change (2017-2018)**	**2019**	**% Change (2018-2019)**	**Overall**	**P-value**
NYC	(N=2,878)	(N=6,257)		(N=9,916)		(N=15,253)		(N=34,304)	
BH HCBS user, %	1.46	5.32	264.4	5.31	-0.19	6.13	15.4	5.36	**0.00**
ROS		(N=7,141)		(N=12,831)		(N=16,909)		(N = 36,881)	
BH HCBS user, %		3.94	N/A	11.1	182.5	16.4	47.2	12.1	**0.00**
Statewide	(N=2,878)	(N=13,398)		(N=22,747)		(N=32,162)		(N=71,185)	
BH HCBS user, %	1.46	4.58	N/A	8.60	87.6	11.5	34.1	8.9	**0.00**

SOURCE: Authors' analyses of Medicaid data (2014–2019)

NOTE: The p-value describes the statistical significance of the chi-square test that compares all annual periods together.

Table E.16. Geographic BH HCBS Utilization by HARP, Unadjusted Rates (Percent), 2016-2019

	2016	2017	2018	2019
Capital Region	0.00	5.49	16.6	17.7
Central NY		4.55	11.3	16.1
Finger Lakes		3.14	17.5	25.6
Long Island		1.28	8.02	12.1
Mid-Hudson	20.0	4.45	5.57	10.5
Mohawk Valley		1.40	5.79	9.06
North Country		11.3	14.2	18.0
NYC		0.00	0.00	0.00
Manhattan	1.23	6.48	6.74	6.28
Bronx	1.08	4.15	3.51	3.79
Brooklyn	2.11	5.32	4.73	7.86
Queens	1.34	5.87	7.00	7.15
State Island	0.87	7.58	9.70	8.65
Southern Tier		5.00	9.45	14.5
Western NY		4.64	12.8	19.6
Missing		0.00	4.55	0.00

SOURCE: Authors' analyses of Medicaid data (2014–2019)

Table E.17. BH HCBS Assessment Rates by Data Source, HARP Enrollees, by Post-Policy Year, NYC and ROS

	2016	2017	2018	2019
NYC				
HARP Enrollee Population*	47,867	59,113	70,065	73,920
Assessed for BH HCBS eligibility (claims data)	1,974	2,270	3,588	8,795
Assessed for BH HCBS eligibility (CMH Screen data)	3,446	4,902	8,101	12,240
Assessed for BH HCBS eligibility (claims or CMH Screen data)	3,664	5,261	8,560	13,404
ROS				
HARP Enrollee Population*		41,446	51,966	69,862
Assessed for BH HCBS eligibility (claims data)		2,954	4,256	6,759
Assessed for BH HCBS eligibility (CMH Screen data)		6,044	9,614	11,797
Assessed for BH HCBS eligibility (claims or CMH Screen data)		7,032	10,631	13,755

* This is the population of HARP enrollees included in our HARP evaluation, open cohort (Goals 2 and 3)
SOURCE: Authors' analyses of Medicaid data (2014–2019)

Table E.18. Population Characteristics, BH HCBS versus Non-BH HCBS, in NYC and ROS

	All	BH HCBS	Non-BH HCBS	P-value
NYC	**(N= 34,304)**	**(N= 1,837)**	**(N= 32,467)**	
Age, Mean (SE)	44.8 (0.06)	43.9 (0.27)	44.8 (0.06)	**0.00**
Sex, %				0.09
Male	51.2	49.3	51.3	
Female	48.8	50.7	48.7	
Race/Ethnicity, %				**0.02**
White	26.0	25.3	26.0	
Black	49.0	51.3	48.9	
Hispanic	15.2	13.4	15.3	
Asian/American Indian/Other	9.86	9.98	9.85	
Behavioral Health (BH) diagnosis, %				
Schizophrenic disorders	48.0	49.0	48.0	0.38
Bipolar disorder (severe)	4.71	3.92	4.75	0.10
Other Serious Affective/Psychotic Disorders	53.6	56.7	53.5	**0.01**
Chronic alcohol abuse	21.7	20.2	21.8	0.10
Opioid abuse and dependence (OUD)	19.5	12.6	19.9	**0.00**
Any Serious Mental Illness (SMI) diagnosis	75.7	78.5	75.6	**0.00**
Any Substance Use Disorder (SUD) diagnosis	43.1	36.7	43.4	**0.00**
Core Health Status, %				0.17
Healthy to Minor Chronic disease	3.19	2.45	3.23	
Moderate to Significant Chronic Disease	67.8	68.6	67.8	
Dominant Chronic Disease to Catastrophic Conditions	29.0	28.9	29.0	

	All	**BH HCBS**	**Non-BH HCBS**	**P-value**
ROS	**(N= 36,881)**	**(N=4,478)**	**(N= 32,403)**	
Age, Mean (SE)	41.6 (0.06)	40.9 (0.17)	41.7 (0.06)	**0.00**
Sex, %				**0.00**
Male	43.8	36.6	44.8	
Female	56.2	63.4	55.2	
Race/Ethnicity, %				**0.00**
White	57.4	57.6	57.4	
Black	29.2	31.0	29.0	
Hispanic	10.7	9.58	10.8	
Asian/American Indian/Other	2.68	1.92	2.79	
Behavioral Health (BH) diagnosis, %				
Schizophrenic disorders	38.2	39.2	38.1	0.17
Bipolar disorder (severe)	5.64	5.55	5.65	0.77
Other Serious Affective/Psychotic Disorders	56.2	65.4	54.9	**0.00**
Chronic alcohol abuse	24.1	20.2	24.7	**0.00**
Opioid abuse and dependence (OUD)	15.8	11.2	16.4	**0.00**
Any Serious Mental Illness (SMI) diagnosis	71.2	78.4	70.2	**0.00**
Any Substance Use Disorder (SUD) diagnosis	41.6	35.1	42.5	**0.00**
Core Health Status, %				**0.00**
Healthy to Minor Chronic disease	5.22	3.80	5.42	
Moderate to Significant Chronic Disease	72.7	72.9	72.6	
Dominant Chronic Disease to Catastrophic Conditions	22.1	23.3	21.9	

SOURCE: Authors' analyses of Medicaid data (2014–2019)

Table E.19. Population Characteristics, PCS vs. No PCS among HARP Enrollees, NYC and ROS

	NYC				**ROS**			
	PCS (N=225)	**No PCS (N=82,369)**	**All (N=82,594)**	**P-Value**	**PCS (N=296)**	**No PCS (N=85,100)**	**All (N=85,396)**	**P-Value**
Age, Mean (SE)	47.2 (0.69)	45.8 (0.04)	45.8 (0.04)	0.09	46.4 (0.57)	39.6 (0.04)	39.7 (0.04)	**0.00**
Sex, %				**0.04**				**0.00**
Male	47.1	53.9	53.9		36.5	53.1	53.1	
Female	52.9	46.1	46.1		63.5	46.9	47.0	
Race/Ethnicity, %				**0.03**				0.06
White	30.2	29.5	29.5		60.1	65.9	65.9	
Black	40.4	44.0	44.0		22.9	21.8	21.8	
Hispanic	22.7	15.6	15.7		14.2	9.26	9.27	
Asian/American Indian/Other	6.67	10.9	10.9		2.78	3.04	3.04	
Behavioral Health (BH) diagnosis, %								
Schizophrenic disorders	47.5	35.7	35.7	**0.00**	32.9	25.4	25.4	**0.00**
Bipolar disorder (severe)	3.69	3.65	3.65	0.98	3.81	3.52	3.52	0.79
Other Serious Affective/Psychotic Disorders	53.9	45.5	45.5	**0.01**	45.7	40.4	40.4	0.07
Chronic alcohol abuse	13.8	21.2	21.1	**0.01**	16.6	25.3	25.3	**0.00**
Opioid abuse and dependence (OUD)	13.8	19.7	19.7	**0.03**	11.1	22.9	22.9	**0.00**
Any Serious Mental Illness (SMI) diagnosis	76.5	62.9	62.9	**0.00**	63.0	51.3	51.3	**0.00**
Any Substance Use Disorder (SUD) diagnosis	31.3	41.3	41.3	**0.00**	31.5	47.7	47.7	**0.00**
Core Health Status (revised), %				**0.00**				**0.00**
Healthy to Minor Chronic disease	4.89	10.6	10.58		3.77	15.2	15.2	
Moderate to Significant Chronic Disease	79.1	68.0	68.0		78.1	73.3	73.3	
Dominant Chronic Disease to Catastrophic Conditions	16.0	21.4	21.4		18.2	11.5	11.5	
Any Utilization of Key Behavioral Health Outpatient Services, %	87.2	76.7	76.7	**0.00**	84.5	73.7	73.8	**0.00**
Health Service Utilization, Per Year, mean (SE)								
Key Behavioral Health Outpatient Visits	10.5 (0.39)	8.81 (0.02)	8.82 (0.02)	**0.00**	9.24 (0.34)	7.48 (0.02)	7.49 (0.02)	**0.00**
Non-Behavioral Health Outpatient Visits	4.87 (0.30)	5.14 (0.02)	5.14 (0.02)	0.43	5.59 (0.31)	4.42 (0.02)	4.43 (0.02)	**0.00**
Acute Behavioral Health Visits	3.22 (0.43)	3.69 (0.04)	3.69 (0.04)	0.54	2.61 (0.28)	3.00 (0.02)	3.00 (0.02)	0.37
Acute Non-Behavioral Health Visits	2.32 (0.20)	3.73 (0.03)	3.73 (0.03)	**0.01**	2.75 (0.20)	3.53 (0.02)	3.53 (0.02)	**0.02**

	NYC				ROS			
	PCS (N=225)	**No PCS (N=82,369)**	**All (N=82,594)**	**P-Value**	**PCS (N=296)**	**No PCS (N=85,100)**	**All (N=85,396)**	**P-Value**
Small Area (County) Characteristics, mean (SE)								
Area Health Resource Files (AHRF): Poverty	0.23 (0.00)	0.21 (0.00)	0.21 (0.00)	**0.00**	0.13 (0.00)	0.12 (0.00)	0.12 (0.00)	**0.01**
Area Health Resource Files (AHRF): Diversity Index	0.67 (0.00)	0.68 (0.00)	0.68 (0.00)	0.37	0.39 (0.01)	0.37 (0.00)	0.37 (0.00)	0.19
Health Professional Shortage Area, Mental health, %				**0.00**				0.91
0 (none)	0.00	0.01	0.01		6.78	7.39	7.39	
1 (whole county)	27.8	15.9	15.9		7.12	6.84	6.84	
2 (partial county)	72.2	84.1	84.1		86.1	85.8	85.8	

SOURCE: Authors' analyses of Medicaid data (2014–2019), OTNY data (2015–2019), and AHRF data (2010–2014, 2014–2018)

Table E.20. Utilization and Costs of BH care, BH HCBS Users vs. Non-BH HCBS Individuals, Matched Sample Estimates, All Post-Period Years Combined, NYC and ROS

	NYC				**ROS**			
	All (N = 34,304)	**BH HCBS (N = 1,837)**	**Non-BH HCBS (N = 32,467)**	**P-Value**	**All (N = 36,881)**	**BH HCBS (N=4,478)**	**Non-BH HCBS (N=32,403)**	**P-Value**
MHARS IP admissions, %	0.15	0.00	0.18	0.07	0.35	0.07	0.42	0.18
SUD ancillary utilization, %	0.19	0.00	0.23	**0.04**	100.0	100.0	100.0	n/a
SUD ancillary PMPM costs, Mean (SE)	623.0 (210.91)	0.0	623.0 (210.91)	n/a	n/a	n/a	n/a	n/a
Hospital detox utilization, %	8.42	7.14	8.68	**0.03**	5.08	5.19	5.05	0.72
Hospital detox PMPM costs, Mean (SE)	1105.3 (67.87)	1071.4 (74.79)	1110.9 (78.14)	0.84	1005.8 (25.58)	1168.8 (74.03)	962.1 (25.45)	**0.00**
SUD inpatient rehab utilization, %	3.22	2.36	3.39	**0.02**	3.89	2.53	4.25	**0.00**
SUD inpatient rehab PMPM costs, Mean (SE)	4706.4 (171.39)	5155.3 (491.44)	4642.9 (182.88)	0.33	4993.9 (175.14)	4676.7 (375.21)	5043.5 (193.86)	0.47
HCBS respite utilization, %	1.23	2.80	0.92	**0.00**	0.30	0.91	0.14	**0.00**
HCBS respite PMPM costs, Mean (SE)	2120.3 (120.06)	1928.3 (244.81)	2238.3 (121.84)	0.21	1216.5 (142.85)	1161.1 (180.22)	1312.2 (238.38)	0.61
Key BH outpatient utilization, %	85.4	85.6	85.3	0.73	84.4	86.1	84.0	**0.00**
Key BH outpatient PMPM costs, Mean (SE)	490.1 (5.63)	471.2 (11.20)	493.9 (6.38)	0.13	485.4 (4.12)	460.5 (8.30)	492.1 (4.73)	**0.00**
Any BH outpatient utilization, %	92.6	100.0	91.1	**0.00**	91.9	100.0	89.8	**0.00**
Any BH OP PMPM costs, Mean (SE)	515.2 (5.74)	588.0 (12.02)	499.2 (6.48)	**0.00**	521.1 (4.21)	634.3 (9.09)	488.2 (4.72)	**0.00**

SOURCE: Authors' analyses of Medicaid data (2014–2019)

PR No. A783-2

Independent Evaluation of the New York State Self-Directed Care (SDC) Pilot Program

Final Interim Evaluation Report

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Executive Summary

Through the New York Medicaid Redesign Team (MRT) Section 1115 Demonstration, the State of New York pursued the goal of improving access to and quality of health care for the Medicaid population through a managed care delivery system. The Demonstration included reforms specifically targeted to Medicaid beneficiaries with behavioral health (BH) needs (hereafter, Behavioral Health Demonstration). These included the creation of the Health and Recovery Plans (HARP) program and authorization of a pilot demonstration of the BH self-directed care (SDC) program funded and managed by the State. The SDC pilot program provides HARP-enrolled individuals also eligible for BH Home and Community-Based Services (HCBS) with authority to use public dollars to purchase self-directed goods and services that contribute towards meeting recovery goals. Non-treatment goods might include a bicycle to use in commuting, and services might include fees for an educational program. Participant enrollment began in January 2018, and current contracts with the two existing pilot site agencies run through June 30, 2022. The expected next phase of the pilot demonstration entails using Medicaid funding and management under the Medicaid Managed Care (MMC) system.

The SDC pilot program evaluation was designed to determine the extent to which three goals of the program were achieved during its first two years (January 1, 2018 to December 31, 2019). These goals are:

1. Implementation of a viable and effective SDC program for HARP enrolled/BH HCBS eligible individuals throughout NYS
2. Improvement in recovery, health, BH, social functioning, and satisfaction with care for SDC participants
3. Maintenance of Medicaid cost neutrality overall and reduction of BH inpatient and crisis service utilization and cost for SDC participants.

The SDC pilot program evaluation used both primary (qualitative) and secondary (quantitative) data in a mixed methods empirical investigation of the program’s impacts. The evaluation examined SDC pilot program research questions related to pilot program implementation and beneficiary and system-level outcomes. Outcomes pertain to enrollment of eligible participants; access to outpatient services (primary and preventive services, BH services); utilization of acute care—namely, inpatient and emergency department (ED) services; Medicaid spending; satisfaction with care; health and wellness, social outcomes (education, employment, community tenure), quality of life, social connectedness; and a variety of qualitatively assessed outcomes.

The SDC Program

The SDC program is grounded in the belief that greater autonomy and choice will permit a better match between individuals' needs and health care and related services; as such, it aims to promote progress toward recovery goals, health, and stability in the community. The SDC pilot program enables HARP enrollees eligible for BH HCBS to use public funds, currently provided entirely by the State, to purchase individual directed goods and services. Participants' annual budgets are set at a maximum of $8,000 if they are eligible for Tier 1 HCBS (Individual Employment Support, Education Support, and Peer Services) or $16,000 if they are eligible for Tier 2 HCBS (Tier 1 services plus additional services for beneficiaries with a higher level of need). Spending decisions are made with the assistance of a support broker. The support broker works with the SDC participant to develop personal recovery goals, with the broader clinical aim of decreasing the need for other Medicaid services, promoting inclusion in the community, and increasing the participant's safety in the home environment. The support broker then assists the participant with the creation and implementation of a budget to purchase the goods and services required to meet the recovery goals. The goods and services eligible for self-direction can be other services, equipment, or supplies that address an identified need in the service plan and are not otherwise available to the beneficiary. Not all goods and services are eligible for self-direction—ineligible items include experimental treatments, room and board in an assisted living or other residential facility, and services or goods that are recreational.

Two agencies, one in NYC and one in Newburgh (a small city close to Poughkeepsie), were chosen as SDC pilot sites. The agencies are responsible for recruiting and enrolling participants and for hiring, training, and supervising support brokers. Support brokers work with a fiscal intermediary based at NYS OMH who provides training, support, and monitoring for the authorization and purchasing of goods and services. Contracts between the agencies and NYS were finalized in July 2017; the two-year SDC pilot program was launched in January 2018 with the expectation that it would serve 200 participants recruited through outreach and advertisement activities (Table ES.1).

Table ES.1. Timeline of SDC Implementation

Year	Date	Event
2014	February	SAMHSA awarded OMH a Transformation Transfer Initiative to fund the design of the SDC program for individuals with serious mental illnesses (SMI)
2015	March	New York State Health Foundation (NYSHF) provided start-up funding to OMH to conduct a preliminary evaluation of the SDC pilot program
	August	Amended Section 1115 Demonstration behavioral health reform initiatives include SDC
	September	OMH conducted preliminary activities for SDC (e.g., site selection, hiring an OMH fiscal intermediary, creating a web-based SDC portal)
2017	July	Contracts finalized with two SDC pilot site agencies
	October	Both sites began advertisement and outreach activities to recruit participants
2018	January	Start of 2-year SDC pilot
	March	Substantive pilot program enrollment begins
2019	May	219 participants enrolled (166 active)
	August	SDC Pilot Program Implementation Evaluation Report Released by OMH
2020	June	Contracts with site agencies are extended through June 30, 2022

TERMS: SAMHSA - Substance Abuse and Mental Health Services Agency

Evaluation Design

RAND conducted an independent evaluation of the SDC pilot program that adhered to the evaluation standards set forth in the Special Terms and Conditions for the Section 1115 Demonstration.[1] Designed as a mixed methods investigation, the structure of the evaluation is built around research questions and testable hypotheses that sought to determine whether the beneficiary- and system-level impacts of the SDC pilot program had been achieved. Quantitative methods were used for descriptive purposes and to assess the outcomes of the program (outcome evaluation), and qualitative methods were used to provide context for the quantitative findings and to gather administrative, provider, and SDC participant perspectives on the SDC pilot program's functioning and effectiveness (process evaluation).

The quantitative component of the evaluation drew on several administrative and clinical databases that were collected through the operation of the program. No new data were collected. The four data sources are summarized in Table ES.2. Medicaid claims data were available on all SDC participants and the larger group of eligible beneficiaries from which they were drawn. Data on care provided in state-operated facilities that were not covered by Medicaid were available from the Mental Health Automated Record System dataset maintained by the state. Data collected directly from participants through surveys and clinical assessments were available from the SDC portal and the HARP Perception of Care Survey.

Table ES.2. Sources of Data for Quantitative Analyses

Data Source	Description
Medicaid Data	Enrollment and use of Medicaid services
SDC Portal Data	Program enrollment, assessments, and activities
Mental Health Automated Record System (MHARS) Data	BH service use in state operated facilities
HARP Perception of Care Survey	Satisfaction with services

A significant limitation of the quantitative analyses, resulting from limitations in the data available for the evaluation, was the lack of a control group against which the SDC participant group could be compared to estimate effects of the program. Data on the SDC participant group was available over time from the Medicaid and MHARS datasets. These data were used to estimate interrupted time series models to test differences in utilization and cost outcomes between the pre-SDC and SDC periods among SDC participants. Other data sources were limited to the SDC group during the period that they were enrolled in the SDC program, and those analyses are useful in providing information on participants but not for assessing the impact of the program. In particular, data on outcomes related to recovery, health status, functioning, and satisfaction with care were limited to SDC participants during the period in which they were enrolled in the SDC program.

The qualitative component of the SDC pilot program evaluation consisted of interviews with key informants and participants in the pilot program, and a review of program-related policy documents. Key informants included stakeholders from the pilot site service provider organizations (e.g., support brokers, program leadership), state agencies (e.g., fiscal intermediary, agency leadership), and advocacy organizations. These interviews focused on understanding how the SDC program was being implemented, the roles of various stakeholders in operating and overseeing the program, the perceived impact of the program, challenges, and factors that might impact potential program scale-up. Interviews were also conducted with SDC participants to understand their perspectives on how the SDC program was being implemented, their satisfaction with the program, and how it has impacted their access to services/resources, progress toward goals, and their health and well-being.

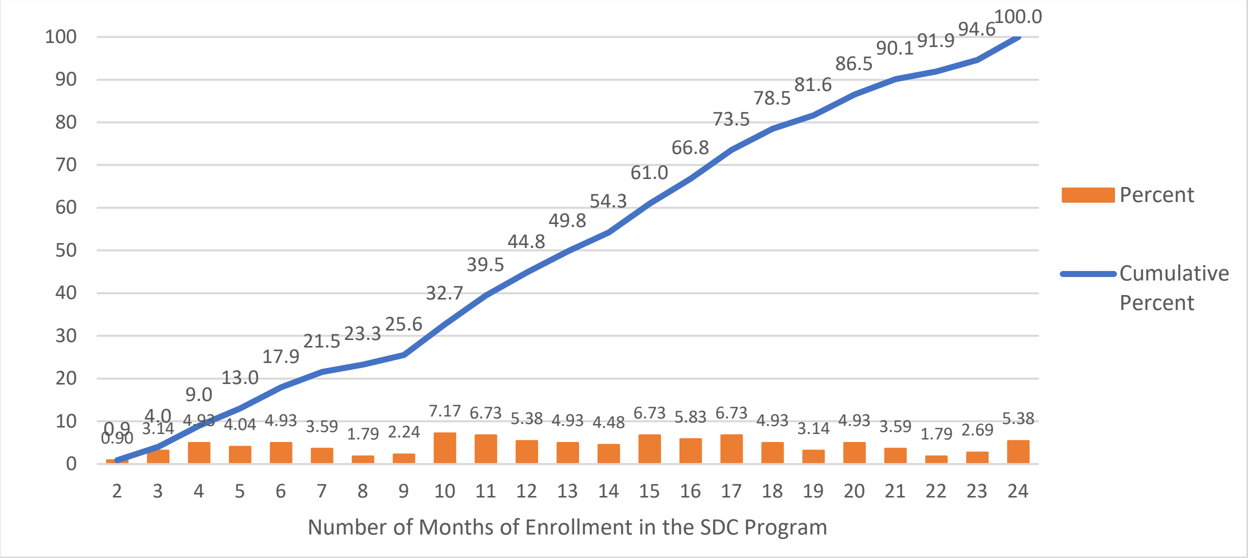
Findings

Program Participation

A total of 223 participants were enrolled in the SDC program for at least one month during the evaluation period. However, duration of enrollment varied widely because recruitment continued throughout the study period and a small number of people dropped out during the study period. Figure ES.1 shows the distribution of months of enrollment for all program participants (orange bars) and the cumulative proportion of the sample with enrollment at or below each number of months (blue line). Total duration of enrollment ranged from 2 to 24 months. Only a small proportion, 5.38 percent, were enrolled for the entire 24-month evaluation period; about half of the participants (49.8 percent) were enrolled for 13 months or fewer. In early phases of the pilot, both SDC pilot sites engaged in recruitment activities to enroll participants in their geographic area. They focused on providing informational material (e.g., brochures) and conducting presentations to other outpatient mental health providers, at community events, and to other programs internal to their organization. As interest in SDC quickly expanded, the pilot sites conducted less active outreach, and referrals or submission of applications to the program more commonly happened through word of mouth.

Formal eligibility criteria for SDC consisted of active HARP enrollment/BH HCBS eligibility, which was confirmed by each site for potential enrollees. While sites described enrolling individuals with confirmed eligibility primarily on a first come, first served basis, stakeholder discussion regarding enrollment processes also indicated informal exploration of participant fit in some cases (see heading Participant Recruitment, Eligibility, and Enrollment for further description). Compared with Medicaid beneficiaries who were eligible for the SDC program but did not participate due to being in an area without access to a program or not enrolling in a program to which they had access, the SDC participants were younger, more likely to have a diagnosis of a serious mental illness, and less likely to use outpatient and acute care services for both physical and behavioral health care. The SDC program located outside of New York City had higher prevalence of substance use disorders than the larger population of eligible beneficiaries.

Figure ES.1. Duration of SDC Participation, Pilot Sites Combined (N=223)



SOURCE: Authors analysis of SDC enrollment data

Perceptions of the SDC Program Among Participants and Staff

SDC programs were located in agencies providing a broad range of services to people with serious mental illnesses. These programs already had a culture of valuing recovery orientation of services, and this orientation was reflected in the individuals selected to be support brokers. The support brokers and their supervisors had experience in mental health services and were committed to fulfilling the role of a support broker. They focused on individualized support for reaching self-identified goals more broadly than simply administering the financial and oversight components of the SDC program, responding to issues raised by clients that went beyond the narrow confines of the program. Support brokers took time to get to know participants individually and develop goals and plans over time.

Early in the program support brokers required regular input from OMH personnel; as norms for practices were developed, these interactions were less frequent. Issues related to approval of participant purchases arose frequently early in the program, but these issues decreased over time as brokers and participants became familiar with the program guidelines that limit expenditures to items directly related to participants' treatment plans. The frequency of incidents of misuse of funds was lower than expected. Most cases of misuse were misunderstandings. For instance, a participant may have planned to buy one pair of shoes and bought two less expensive pairs for the same total price. Brokers believed that the regulations were overly strict. SDC participants had generally very positive perceptions of the program, but they noted several ways in which it could be improved, mostly concerning transparency in decisionmaking about approvals of purchases and more regular meetings with support brokers. SDC program staff had concerns about the processes of administering the system; they highlighted challenges in using the current reporting and monitoring systems and lack of transparency in denials of approval for payment. Staff emphasized the need for a good fit between the person-centered approach of the SDC program and the culture of the agency in which the SDC program was housed.

Participants described overwhelmingly positive experiences with the process of identifying goals and using the SDC program to make purchases that contributed to achieving those goals. The SDC program was perceived as being very different from other services that participants had received, with a focus on their own personal needs and goals that was initially surprising but greatly appreciated. Participants appreciated not only the ability to make purchases that they otherwise would have been unable to do, but the entire process of working with the broker to identify their goals and implementing a plan to achieve those goals. The brokers were perceived to have a different role from traditional service providers in supporting the goals identified by participants and helping them use the SDC resources rather than simply providing direct support, counseling, or advice.

Participants also reported positive impacts of the SDC program on their quality of life, including benefits to their general physical and behavioral health and success with recovery-oriented goals. Participants reported making relatively small but meaningful material changes to their personal space that had powerful impacts on their overall well-being. Purchases funded by the SDC were considered by the participants to have been critical to their careers, relationships with family members, and participation in fulfilling social activities. Staff were concerned that some features of the program, such as the length of tenure in the program and rules regarding misuse of SDC funds remain unclear and should be clarified for future participants. Finally, staff had concerns about some of the technical components of the program, including the debit card system and the data portal used to store participant information.

Recovery, Health, Functioning, and Satisfaction with Care Among SDC Participants

As mentioned, due to unanticipated limitations in the data, we are unable to draw conclusions regarding the impact of the SDC program on recovery, health, functioning, and satisfaction with care. We found one instance of a statistically significant difference across years: an improvement in the total quality of life scale scores. While this improvement may signal a positive impact of the program, without a control group and more robust follow-up of the SDC population, the finding should not be interpreted as a strong indication of an SDC impact. Other measures of program impact generally showed no statistically significant differences over time. It is equally important to point out that the lack of significant differences in the outcomes should not be interpreted as evidence that the program did not have an impact on these findings.

The findings reported here are valuable in identifying some important characteristics of the SDC population that will be useful in future evaluation work. The data provide baseline information on the engagement of SDC participants in employment and educational programs. The proportion of participants who were either in an educational program or completed an academic degree was surprisingly large. It may be that the participants who were selected for the program were likely to be involved in educational pursuits. In future evaluations, selection into SDC programs should be carefully examined in the design of comparison groups.

Changes In Use of Services and Costs of Care

Contrary to the expectation that outpatient behavioral health and primary care utilization would increase, our analyses showed that relative to the pre-period, post-period utilization of outpatient behavioral health and non-behavioral health services was in fact lower (or unchanged, in the case of receipt of primary and/or preventive care). We note, however, that these hypotheses contemplated a longer follow up. On the other hand, our analyses provide partial support for the State’s hypothesis that SDC participation would result in decreased behavioral health inpatient and emergency department utilization: while the probability of that utilization and other forms of acute care utilization (including crisis respite HCBS) all experienced pre-post declines, intensity of outpatient behavioral health utilization did not decline. Although the State’s hypotheses regarding costs of outpatient and acute-care services were not supported by our findings (i.e., the former did not increase and the latter did not decline), our analyses do provide support for the State’s hypothesis that SDC participants’ overall Medicaid spending would not change between baseline and follow up.

Conclusions and Recommendations

The goal of the SDC pilot was to implement a program in which participants work with their representative to control a range of services and supports provided by the Medicaid program. Our interviews with staff and participants at the two sites and OMH staff involved in administering the program for the state showed clearly that the program was successfully implemented largely as intended. Due to unexpected data limitations, the evaluation was unable to examine the impacts of the SDC pilot program on recovery-oriented outcomes or service utilization and costs. However, the qualitative information about perceptions of the program and the analyses of utilization and costs provide a basis for recommendations for the issues to be considered as the state considers whether to scale-up the SDC program and, if so, how the scale up should be done. Based on the findings, the evaluation team suggests the following recommendations:

- Improve data collection for program monitoring and evaluation
- Develop assessment instruments to capture features that participants value about SDC
- Assess fit between agency culture and SDC program goals in identifying new sites
- Review and update SDC program rules related to:
    - Caseload size
    - Consequences of minor misuse of funds
    - Varying levels of support across participants
    - Decisionmaking processes for external review of purchase requests
- Address limitations of current card system used to make purchases
- Upgrade the SDC portal to expand functionality.

The SDC pilot program was well received by both participants and staff at the program level and within the New York State Office of Mental Health. Some of the adverse outcomes that were feared, such as misuse of funds by participants, turned out to be rare events of minor significance to the program according to both participants and staff. Some participants attributed dramatic improvements in their quality of life to the program. Unfortunately, data were not available to conduct a rigorous controlled examination of the impact of the program on many of the outcomes with which the state was concerned. Despite data limitations, the strength of the qualitative data suggests several areas for program improvement that should be considered should the state decide to scale up program implementation in the future.

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Acknowledgments

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This report would not be possible without the input from the many stakeholders and HARP beneficiaries across NYS who shared their experiences and opinions with us. We appreciate their time and candor.

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Abbreviations

ACA	Affordable Care Act
ANOVA	Analysis of variance
BH	Behavioral health
CAHPS	Consumer Assessment of Health Providers and Systems
CCDE	Cash and Counseling Demonstration and Evaluation
CMH	Community Mental Health
CMS	Centers for Medicare & Medicaid Services
CRG	Clinical Risk Groups
DOH	Department of Health
DSRIP	Delivery System Reform Incentive Payment
ED	Emergency Department
EDC	Episode Diagnostic Categories
FFS	Fee for Service
HARP	Health and Recovery Plans
HCBS	Home and Community-Based Services
HEDIS	Healthcare Effectiveness Data and Information Set
HH	Health Home
IP	In Patient
ITS	Interrupted Time Series
MCO	Managed Care Organizations
MHARS	Mental Health Automated Record System
MMC	Medicaid Managed Care
MRT	Medicaid Redesign Team
NYC	New York City
NYS	New York State
NYSHF	New York State Health Foundation

OASAS	Office of Addiction Services and Supports
OMH	Office of Mental Health
OUD	Opioid Use Disorders
PCS	Perception of Care Survey
PMPM/Y	Per Member per Month/Year
POP	Performance Opportunity Project
PPC	Provider Preventable Conditions
PPS	Performing Provider System
PROS	Personalized Recovery Oriented Services
ROS	Rest of the State
SAMHSA	Substance Abuse and Mental Health Services Agency
SDC	Self-Directed Care
SMI	Serious Mental Illness
SNP	Special Needs Plans
SSI	Supplemental Security Income
SUD	Substance Use Disorder
VBP	Value-Based Payment

1. Introduction

1.1 Overview of the Self-Directed Care Pilot

Through the New York Medicaid Redesign Team (MRT) Section 1115 Demonstration, the State of New York pursued the goal of improving access to and quality of health care for the Medicaid population through a managed care delivery system. The Demonstration included reforms specifically targeted to Medicaid beneficiaries with behavioral health (BH) needs (hereafter, Behavioral Health Demonstration). These included the creation of the Health and Recovery Plans (HARP) program and authorization of a pilot demonstration of the BH self-directed care (SDC) program funded and managed by the State. The SDC pilot program provides HARP-enrolled individuals also eligible for BH Home and Community-Based Services (HCBS) with authority to use public dollars to purchase self-directed goods and services. Participant enrollment began in January 2018, and current contracts with the two existing pilot site agencies run through June 30, 2022. The expected next phase of the pilot demonstration entails using Medicaid funding and management under the Medicaid Managed Care (MMC) system.

1.2 Overview of the RAND Evaluation

The RAND Corporation, a private non-profit research organization with a mission to provide policymakers with objective, rigorous, and credible research evidence to inform decisionmaking, was selected to conduct an independent evaluation of the SDC pilot program.[2] The objective of this evaluation is to examine the implementation and impact of the SDC pilot program. This report describes the SDC pilot program and its policy background, the questions the independent evaluation aims to answer, the proposed methodology to conduct the SDC evaluation, and the evaluation findings. This report supersedes the interim report, published in November 2020.[3]

The SDC pilot program evaluation was designed to determine the extent to which three goals of the program were achieved during its first two years (January 1, 2018 to December 31, 2019). These goals are:

1. Implementation of a viable and effective SDC program for HARP enrolled/BH HCBS eligible individuals throughout NYS
2. Improvement in recovery, health, BH, social functioning, and satisfaction with care for SDC participants
3. Maintenance of Medicaid cost neutrality overall and reduction of BH inpatient and crisis service utilization and cost for SDC participants.

The SDC pilot program evaluation used both primary (qualitative) and secondary (quantitative) data in a mixed methods empirical investigation of the program's impacts. The evaluation plan was oriented to research questions that address three goals of the pilot program, as shown in Table 1.1. The research questions concern how the program was implemented in addition to beneficiary and system-level outcomes and were to be addressed using the data sources listed in Table 1.1. Outcomes pertain to enrollment of eligible participants; access to outpatient services (primary and preventive services, BH services); utilization of acute care, which in addition to inpatient and emergency department (ED) services included crisis respite HCBS for acute BH care; Medicaid spending; satisfaction with care; health and wellness, social outcomes (education, employment, community tenure), quality of life, social connectedness; and a variety of qualitatively assessed outcomes.

Table 1.1 SDC Pilot Program Evaluation Goals, Methods, and Research Questions

Goal	Methods	Research Question
1. Implementation of a viable and effective SDC program for HARP enrolled/HCBS eligible individuals throughout NYS.	Analyses of Medicaid claims and encounter data and SDC portal data; interviews with key informants.	1. What are the characteristics of SDC participants and how do they compare to the larger HARP and HCBS eligible population? 2. What was the experience of HARP enrolled/HCBS eligible individuals participating in the SDC Pilot program in relation to satisfaction with the SDC program and its impact on their recovery, quality of life, and benefit from health and BH services? 3. What was the experience of non-participant stakeholders in the SDC Pilot program (e.g., Support Brokers, pilot site agency staff, State program development/ oversight staff, fiscal intermediary) in relation to SDC implementation including State oversight and contracting, fiscal policies and procedures, hiring of SDC staff, recruitment and work with participants, and coordination with the fiscal intermediary? 4. What were the facilitators and challenges to SDC Pilot implementation and how would they impact statewide roll-out?
2. Improvement in recovery, health, BH, social functioning, and satisfaction with care for SDC participants.	Analyses of SDC Assessment and HARP PCS data.	1. Do HARP members have improved quality of life after participating in SDC? 2. Do HARP members show improved indicators of health, BH, and wellness after participating in SDC? 3. Do HARP members show improvement in education and employment after participating in SDC? 4. Do HARP members show improvement in community tenure (i.e., maintaining stable long-term independence in the community) after participating in SDC? 5. Do HARP members show improvement in social connectedness after participating in SDC? 6. Do HARP members report increased satisfaction with health and BH services after participating in SDC?
3: Maintenance of Medicaid cost neutrality overall and reduction of BH inpatient and crisis service utilization and cost for SDC participants.	Analyses of Medicaid claims and encounter data and MHARS data.	1. Does participation in SDC result in increased use and cost of outpatient BH services and primary care? 2. Does participation in SDC result in decreased use and cost of BH inpatient, ED, and crisis services?

TERMS: MHARS - Mental Health Automated Record System

1.3 Report Organization

The remainder of this report is structured as follows:

- Section 2 presents an overview of the SDC Pilot implementation, including the timeline of implementation.
- Section 3 provides an overview of the study design, with the methodology as related to the type of data collection and the related RQs.
- Section 4 presents the findings organized by RQ, along with a summary of findings across the evaluation.
- Section 5 discusses the policy implications, based on the study findings.
- Section 6 reviews the interactions with other State initiatives.
- The appendices follow the body of the report, offering information on study protocols as well as selected data tables.

2. SDC Pilot Description

2.1 Landscape Prior to the SDC Pilot Program

The SDC program is grounded in the belief that greater autonomy and choice will permit a better match between individuals' needs and health care and related services; as such, it aims to promote progress toward recovery goals, health, and stability in the community.

An earlier version of the SDC program began to be offered in the 1990's by state Medicaid programs as part of the optional state plan personal care services benefit. With support from the Robert Wood Johnson Foundation, self-direction of Medicaid services has evolved over the years; currently, states have a number of mechanisms available to finance the self-direction option to Medicaid beneficiaries.[4]

In 2014, the NYS Office of Mental Health (OMH) was awarded a Substance Abuse and Mental Health Services Administration (SAMHSA) Transformation Transfer Initiative grant to fund the design of a self-directed care model to be pilot-tested and eventually scaled-up for delivery to eligible Medicaid beneficiaries with serious mental illnesses in a managed behavioral health delivery system.[5] At that time, the BH benefit for most eligible beneficiaries was carved out of existing managed care arrangements. However, that changed in 2015, first with the MRT Section 1115 Demonstration[1] followed by an amendment to the Demonstration targeted to beneficiaries with BH needs implemented in August 2015, which we refer to as the BH Demonstration.

The BH Demonstration sought to improve health care quality, costs, and outcomes for the State's Medicaid BH population and transform the BH system from an inpatient-focused system to a recovery-focused outpatient system. The BH benefits were made available through all mainstream MMC plans and through a separate coverage product, the HARPs, which are specialty lines of business operated by qualified mainstream MMC plans and available statewide. The HARP program was phased in, launched first in New York City (NYC) in October 2015 and the Rest of the State (ROS) in July 2016. BH HCBS were only available to qualified HARP and HIV Special Needs Plans (SNP) enrollees; the BH HCBS were offered beginning in January 2016 in NYC and in October 2016 for ROS.

BH HCBS are delivered to HARP and HARP-eligible HIV SNP enrollees under a two-level tier structure determined by a person-centered plan of care developed by the Health Homes or other state-designated entities. Tier 1 services include Individual Employment Support, Education Support, and Peer Services. Tier 2 services include all Tier 1 services plus additional services for beneficiaries with a higher level of need. Eligibility for BH HCBS is assessed through the BH HCBS Eligibility Assessment, a standardized clinical and functional assessment tool derived from the interRAI™ CMH Assessment,[6] and also referred to as CMH screen. The CMH screen is required annually for all HARP and HARP-eligible HIV SNP enrollees, including SDC pilot participants.

2.2 The Self-Directed Care Pilot Program

Table 2.1 shows a timeline of implementation of the SDC program. Following an award from SAMHSA in February 2014, OMH began conducting preparatory activities to implement a BH SDC pilot program (e.g., selecting sites, creating a web-based portal) targeted to HARP enrollees in September 2015. Under the Demonstration extension approved December 7, 2016, a program making self-direction services available to eligible individuals was authorized for the period January 1, 2017, through June 30, 2022, as a pilot initiative with the goal of testing the viability and effectiveness of SDC prior to a statewide implementation.

Table 2.1 Timeline of SDC Implementation

Year	Date	Event
2014	February	SAMHSA awarded OMH a Transformation Transfer Initiative to fund the design of the SDC program for individuals with serious mental illnesses (SMI)
2015	March	New York State Health Foundation (NYSHF) provided start-up funding to OMH to conduct a preliminary evaluation of the SDC pilot program
	August	Amended Section 1115 Demonstration behavioral health reform initiatives include SDC
	September	OMH conducted preliminary activities for SDC (e.g., site selection, hiring an OMH fiscal intermediary, creating a web-based SDC portal)
2017	July	Contracts finalized with two SDC pilot site agencies
	October	Both sites began advertisement and outreach activities to recruit participants
2018	January	Start of 2-year SDC pilot
	March	Substantive pilot program enrollment begins
2019	May	219 participants enrolled (166 active)
	August	SDC Pilot Program Implementation Evaluation Report Released by OMH
2020	June	Contracts with site agencies are extended through June 30, 2022

The SDC pilot program enables HARP enrollees eligible for BH HCBS to use public funds to purchase individual directed goods and services. For this pilot implementation phase of the SDC program, the State opted to finance the program entirely with State (OMH) funds; the start-up and maintenance costs included those related to the salaries of the support broker and administrative staff and the purchase of goods and services. SDC participants select a support broker with whom they work to identify recovery goals. The support broker then assists the participant with the creation and implementation of a budget to purchase the goods and services required to meet the recovery goals. SDC participation is voluntary, and participants may opt out at any time. Eligible enrollees wishing to participate after capacity has been exceeded are placed on a waiting list.

Two agencies, one in NYC and one in Newburgh (a small city close to Poughkeepsie), were chosen as SDC pilot sites. The agencies are responsible for recruiting and enrolling participants and for hiring, training, and supervising support brokers. Support brokers work with a fiscal intermediary based at NYS OMH who provide training, support, and monitoring for the authorization and purchasing of goods and services. Contracts between the agencies and NYS were finalized in July 2017, and the two-year SDC pilot program was launched in January 2018 with the expectation that it would serve 200 participants (Table 2.1 provides a timeline).

Although at program launch the expectation was that HARP members would be enrolled in Health Homes and would be assessed for BH HCBS eligibility with the CMH screen at enrollment and annually, Health Home enrollment was low, and even if enrolled, only a fraction of enrollees was administered the CMH screen as planned. To address this barrier, the State deemed SDC pilot participants who had not yet been assessed to be BH HCBS eligible (Tier 1), allowing them an annual budget of $8,000. Access to the higher annual budget of $16,000 did require assessment with the CMH screen and determination of Tier 2 eligibility. (These amounts correspond to caps on annual utilization of HCBS set by the state.) Eligibility for Tier 2 services, higher relative to Tier 1 services, requires evidence of at least "moderate" level of need as indicated by an OMH-designated score on the CMH Screen (see Figure 2.1 for eligibility criteria). The original criteria were more stringent: Until June 2018, eligibility for Tier 2 services required moderate need on at least four domains or extensive need on at least one domain. In addition, a third criterion permitting previously eligible BH HCBS users to continue receiving services was added in June 2019.

Figure 2.1 Determination of BH HCBS Service Eligibility

A. Criterion 1: Tier 1 Services
  i. For Individual Employment Support, person must express desire to receive employment support services.
  ii. For Education Support, person must express desire to receive education support services to assist with vocational goals.
  iii. For Peer Support, person must express desire to receive peer support services.

B. Criterion 2: Tier 2 Services
  i. Meets threshold score for MODERATE need on at least one domain of Functional and Safety Needs* OR
  ii. Meets threshold score for EXTENSIVE need on at least one domain of Functional and Safety Needs.*

C. Criterion 3
  i. Individuals who receive or have previously received BH HCBS in the past six months will maintain their eligibility level for the current assessment (i.e., algorithm will return the higher of the two scores to prevent loss of potentially beneficial services).

* Domains of Functional and Safety needs include employment/education, instrumental activities of daily living (IADLs), cognitive skills, social relations, stress and trauma, co-occurring conditions, engagement, substance use, and risk of harm.

The SDC pilot sites recruit participants through provider or self-referrals following outreach to HARP providers in their areas, informational sessions held at their agencies and others, and advertisements at community events and social media. Potential candidates are asked to participate in individual or group sessions where SDC eligibility criteria, procedures, and benefits are explained, and are eventually recruited if they meet criteria and are willing to participate.

2.3 Services Eligible for Self-Direction

The goods and services eligible for self-direction can be other services, equipment, or supplies that address an identified need in the service plan and are not otherwise available to the beneficiary. These items or services must decrease the need for other Medicaid services, promote inclusion in the community, and increase the participant's safety in the home environment. Not all goods and services are eligible for self-direction—ineligible items include experimental treatments, room and board in an assisted living or other residential facility, and services or goods that are recreational. A non-exhaustive list of goods and services is presented in Table 2.2.

Table 2.2 SDC Non-Treatment Goods and Services

Goal	Resource/Good or Service Purchased
Wellness Activities	Gym/health club membership Wellness coaching Smoking cessation tools/education Dental care Eyeglasses/care Out of network health/BH/specialty services Family planning and sexual health education services Acupuncture/pressure Yoga classes/meditation guidance Massage/reiki /shiatsu/tai chi instruction Pet adoption funds, including appointments/resources related to pet health and maintenance Workout equipment and clothing Nutritional supplements and vitamins
Occupational/Skills Development	Computer literacy Resume development Interview preparation PC/communication technology Personal preparation/resources to prepare for interviews or enhance confidence during employment Resources for entrepreneurial development, including business cards, website development Educational course fees and materials
Transportation	Public transportation costs Car repair/maintenance Bicycle and related costs
In-Home/Social/Community Supports	Training and supports for daily living including nutrition classes and others Housing start-up (down payments), non-recurring housing bills, or costs related to home maintenance Groceries Travel to and from family or social functions Meetings in the community with friends or family members promoting social inclusion Financial contributions at social activities including church services Registration fees for conferences, trainings, community activities Membership dues for groups, societies, guilds, leagues

2.4. Review of the Research Literature

In this section, we provide a summary of our review of the research literature, grey and peer-reviewed, focused on Medicaid-financed SDC programs implemented in the United States; the literature we reviewed includes an evaluation covering the first 18 months of New York's SDC pilot program conducted by OMH.[7] Table 2.3, presented after this section, provides an overview of the literature presented here.

SDC programs are intended to more effectively match the services that participants receive with their needs, thereby enhancing their progress toward recovery and maximizing their opportunities to live independently in the least restrictive community-based setting of their choice.[7,8] Some proponents hypothesize that SDC programs can also reduce the use of high-cost care such as inpatient and emergency care.[9] However, the launch of SDC programs for people with behavioral health needs has evoked concerns about the ability of people with behavioral health needs to effectively direct the services they receive.[10,11]

While the antecedents of SDC have existed since the Second World War, the first large scale, rigorously evaluated SDC program—the Cash and Counseling Demonstration and Evaluation (CCDE)—was not launched until the late 1990's. Early initiatives included a Veterans Administration program to help World War II veterans with disabilities hire personal assistants; the California In-Home Supportive Services program, which was launched in 1973 and originated with a 1953 program to hire personal assistants; and self-directed service model pilots stimulated by the independent living movement in the 1960's and 1970's.[8] CCDE, a randomized controlled trial of SDC with over 6,500 participants that was funded by the U.S. Department of Health and Human Services and the Robert Wood Johnson Foundation and evaluated by Mathematica Policy Research, operated in three states—Arkansas, Florida, and New Jersey—from 1998 to 2003. CCDE served frail elderly adults and adults with physical disabilities in all three states and children with developmental disabilities in Florida. Overall, treatment group members were more likely to receive paid personal care, had increased satisfaction with care, had fewer unmet needs, and were no more likely to experience health problems than control group members.[12] CCDE was continued in all three states and replicated in 12 additional state Medicaid programs.[13] Since CCDE, CMS has supported the use of SDC for people with a broad range of disabilities.[14]

In the 2000's and 2010's, several states launched SDC programs for people with some combination of SMI, SUD, and eligibility for state programs. These states included Florida, Texas, Utah, Michigan, and Pennsylvania.[7] The Supreme Court's 1999 *Olmstead* decision, which emphasized state responsibility to help people live in integrated community environments, and President George W. Bush's New Freedom Commission, which recommended "self-directed services and supports for people with mental illness"[15] stimulated these programs.[7,16] A recent inventory of SDC programs identified 19 programs for adults with serious mental illness across the 50 states and the District of Columbia as of 2019.[17] (According to the inventory's definition, a state could operate more than one SDC program.)

Evidence about SDC Effects on People with Behavioral Health Needs

We summarize evidence relevant to Medicaid beneficiaries with BH needs from 11 studies reporting on SDC and its impacts. This body of research includes three early studies focusing on CCDE and Florida SDC; studies described in a systematic review of the research literature published through April 2013; three studies that focus on kinds of goods and services SDC participants purchased; three more recent studies that provide higher quality evidence about the impacts of SDC; and a study with preliminary findings on New York's SDC pilot program. Table 2.3 presents key information about each study.

Early Studies: CCDE and Florida SDC

Early studies of SDC in the United States focused on the impact of SDC for people with mental illness in the CCDE and the impact of Florida SDC, the nation's oldest and longest running SDC program. Shen et al. evaluated the impact of CCDE programs in Arkansas and New Jersey on measures of participant satisfaction with paid caregiver; satisfaction with the way he or she was spending his or her life; and adverse events, health problems, and health status.[18,19] Participants were elderly Medicaid enrollees with mental illness in Arkansas and nonelderly Medicaid enrollees with mental illness in New Jersey. Shen et al. compared differences in outcomes among participants with mental illness who were randomized into the SDC treatment group and the non-SDC comparison group. On most measures of satisfaction with caregivers, SDC participants experienced better outcomes than non-SDC participants. For example, SDC participants in Arkansas were more than twice as likely as non-participants to say that their caregiver always completed tasks, and SDC participants in New Jersey were more than four times as likely as non-participants to say they were very satisfied with their overall care arrangement. SDC participants in New Jersey were more likely to report satisfaction with the way they were spending their lives, although SDC participants in Arkansas were no more likely to report overall life satisfaction than non-participants. On measures of adverse events, health problems, and health status, there were no significant differences between SDC participants and non-participants in either state. Shen et al. concluded that CCDE had positive effects on caregiving and wellbeing without increased risk of adverse events.

Cook et al. evaluated change in self-reported functioning and days living in a community setting, as opposed to an inpatient or forensic setting, among Florida SDC participants after the program's first 19 months of operation.[16] Participants were adults diagnosed with a mental disorder, current or former recipients of disability income, and residents of a specific geographic area within Florida. On average, participants scored higher on the Global Assessment of Functioning, a standardized assessment of psychological, social, and occupational functioning.[20]

In addition, they spent a higher number of days in the community compared to inpatient or forensic settings.

Webber et al. conducted a systematic review of studies published up to April 2013 on SDC for people aged 18 to 65 with mental health problems.[11] It included 11 studies in the United Kingdom and four studies in the United States, including Cook's work in Florida and Shen's in New Jersey summarized above. The studies included two randomized controlled trials and four quasi-experimental studies that compared change over baseline but lacked comparison groups from random assignment, with the remaining studies cross-sectional or qualitative. Together, the studies covered four domains: choice and control of care and support; quality of life or overall satisfaction; service use, including inpatient and community mental health services; and cost effectiveness. Webber et al. concluded that the studies provide "some evidence that personal budgets [the name for SDC] can have positive outcomes for people with mental health problems." Generally, SDC was associated with positive outcomes in the domains. However, Webber et al. described the overall quality of studies as "moderate at best" and noted that the studies featured "a large number of methodological shortcomings," including small sample sizes, short timeframes, and "less 'complex" patients.

Spending by SDC Participants

Three studies focused on types of goods and services purchased by SDC participants. Spaulding-Givens and Lacasse examined purchases by Florida SDC participants during the 2009–2010 state fiscal year.[21] Croft and Parish examined purchases by participants in two unidentified SDC programs that were established in the early 2000's and funded by a combination of state, local, and Medicaid dollars.[22] Snethen et al. examined spending by participants in a Delaware County, Pennsylvania SDC program within a Medicaid managed care context.[23]

All studies found that participants used a substantial percentage of their budgets to meet basic needs. Common uses of the individualized budget included transportation, groceries, clothing, housing expenses, and dental and eye care. Snethen et al. found that participants with different mental health conditions used their budgets in different ways: those with schizophrenia more often requested items to support fitness, like workout shoes, while those with bipolar disorder and major depression more often requested items to help manage stress, like money to pay an electric bill or divorce fee. Croft and Parish identified barriers to participants using their budgets to meet their needs, including lack of knowledge or confusion about how the budget could be used and limited availability of providers in some geographic areas that limited access to some kinds of mental health treatments. Spaulding-Givens and Lacasse found that most participants did not report severe psychopathology and lived independently in the community; however, almost none worked or earned income. As a result, they posited that Florida SDC could create a disincentive to work and enable dependency. They proposed that program administrators link vocational rehabilitation and supported employment with other services provided by the program to facilitate work.

Recent Studies: Stronger Designs and Data Sources

More recent studies have used experimental or quasi-experimental designs and administrative data to provide stronger evidence about SDC programs for people with behavioral health needs. Cook et al. used a randomized controlled trial of Texas SDC participants to evaluate the program's effects on a variety of mental health and social outcomes, as captured by validated survey instruments; participation in employment and in education; and service use and costs.[14] Compared to the non-SDC control group, the SDC treatment group improved significantly on recovery outcomes, self-esteem, coping mastery, and perceived autonomy. Although general severity of psychiatric symptoms did not decrease significantly among the treatment group, the severity of physical symptoms from psychological distress—such as dizziness, pain, nausea, shortness of breath, and numbness—decreased significantly. In addition, treatment group members were more than twice as likely to be employed and more than four times as likely to be enrolled in formal education as control group members and expressed higher satisfaction with mental health services than control group members. Total service cost per participant did not differ significantly between the treatment and control groups; the treatment group had lower per-person costs for some types of services and higher costs per person for others. Specifically, the treatment group had lower per-person cost for inpatient treatment and higher per-person cost for psychotherapy. Cook et al. concluded that the program achieved superior client outcomes to traditional service delivery system with no added cost and did not lead to fraud or misuse of funds.

Croft et al. compared change in employment and housing outcomes among Florida SDC participants and a matched comparison group with similar demographic characteristics that did not enroll in SDC.[24] They found that treatment group members were significantly more likely than control group members to increase or maintain days worked in the last month and to attain or maintain independent living status versus living with a group or being homeless. However, the program's effect sizes were small: to achieve a positive employment outcome for one participant, 18 participants would need to be enrolled for 3 years; to achieve a positive independent living outcome for one participant, 16 participants would need to be enrolled for three years. Croft et al. noted that most participants enrolled in the program before the baseline assessment that was used to measure change over time in outcomes. As a result, their estimates of the program's effects may not reflect the full effect of the program.

Croft et al. used three years of Medicaid claims data to examine change in service use and costs per month among participants in a continuation of the Delaware County, Pennsylvania program described by Snethen et al.[23,25] Notably, participants could choose to reduce or "bank" some traditional mental health services—such as outpatient clinical services, peer support, and psychiatric rehabilitation—and apply funds saved toward nontraditional services. This differed from most other SDC programs, where the portion of the budget directed by a participant was administered separately from most clinical services. The study included costs per month of crisis and inpatient services, mental health clinical and community support services, and substance use outpatient and community support services. Snethen et al. found no significant difference in the percentage of participants who used any service and no significant difference in total cost per month before and after SDC. Of all services, only cost per month for mental health outpatient services changed significantly, decreasing by about half. The study lacked a comparison group, meaning that external factors that affected costs and were correlated with program implementation may have biased the study's estimates of the program's effects.

Table 2.3 Empirical Evidence on SDC Effects

Study	Program	Participants	N	Study Period	Outcome Measures	Method
Shen 2008a	CCDE Arkansas	Elderly Medicaid enrollees with mental illnesses	203	December–August 1998	Satisfaction with caregiving; overall life satisfaction; adverse events, health problems, and health status	Randomized controlled trial
Shen 2008b	CCDE New Jersey	Nonelderly Medicaid enrollees with mental illnesses	228 (109 treatment, 119 control)	1999	Satisfaction with caregiving; overall life satisfaction; adverse events, health problems, and health status	Randomized controlled trial
Cook 2008	Florida SDC	Current or former disability income recipients 18 or older with mental illnesses	106	Nov 2002–Jun 2004	Functioning, days in community versus inpatient or forensic settings	Pre-post
Spaulding-Givens 2015	Florida SDC	Indigent adults with severe and persistent mental illnesses	136	2009–2010	Types of goods and services purchased	Cross-sectional
Croft 2016	Two SDC programs (unidentified state)	People on Medicare, Medicaid, Veteran's benefits, or uninsured	30	Unknown	Experience with program, types of goods and services purchased	Cross-sectional, qualitative
Snethen 2016	Consumer Recovery Investment Fund SDC (I), PA	Medicaid beneficiaries 18–65 with schizophrenia, major depression, or bipolar disorder	60	2010–2011	Types of goods and services purchased	Cross-sectional
Croft 2018	Two programs within Florida SDC	People 18 or older with serious and persistent mental illnesses receiving publicly funded mental health care	1,370 (271 treatment, 1,099 control)	Program A: 4.8 years beginning July 2010; Program B: 3 years beginning July 2012	Employment, independent living	Matched sample analyses (controlled design)
Cook 2019	Texas SDC	Department of State Health Services clients 18 or older with serious mental illnesses and moderate to severe level of need	216 (114 treatment, 102 control)	24 months (start and end dates unspecified)	Level of recovery from mental illness, psychosocial status, psychiatric and somatic symptoms, participation in employment and education, service use and cost	Randomized controlled trial

Study	Program	Participants	N	Study Period	Outcome Measures	Method
Croft 2019	Consumer Recovery Investment Fund SDC (II), PA	Medicaid beneficiaries 18–65 with schizophrenia, major depression, or bipolar disorder	45	March 2012 to July 2015	Service use and costs	Pre-post
Chung 2019	New York State SDC	HARP enrollees with State-defined serious and persistent mental illnesses or substance use disorders	219	2018–2020	Quality of life, types of goods and services purchased	Pre-post

3. Evaluation Design and Methods

3.1 Overview of the SDC Evaluation

RAND conducted an independent evaluation of the SDC pilot program that adhered to the evaluation standards set forth in the Special Terms and Conditions for the Section 1115 Demonstration.[1] Designed as a mixed methods investigation, the structure of the evaluation is built around research questions and testable hypotheses that sought to determine whether the beneficiary- and system-level impacts of the SDC pilot program had been achieved. Quantitative methods were used for descriptive purposes and to assess the outcomes of the program (outcome evaluation), and qualitative methods were used to provide context for the quantitative findings and to gather administrative, provider, and SDC participant perspectives on the SDC pilot program's functioning and effectiveness (process evaluation).

The data sources included qualitative data collected during the course of the evaluation as well as administrative and survey data previously collected by the New York State DOH, the OMH, and New York State Office of Addiction Services and Supports (OASAS) during the course of health care administrative or clinical operations.

Discussions with Experts to Refine Approach to the Evaluation

To better understand the policy context, objectives, and challenges to the implementation of the SDC pilot program, the evaluation team held calls with SDC subject matter experts to discuss the background and implementation of the program. The evaluation team used the information gathered in these calls and the internal report on OMH's preliminary evaluation of the SDC pilot program (not publicly available) to inform the qualitative component of the evaluation and to revise and enhance the planned quantitative analyses.[7] In addition, the evaluation team held discussions with data experts within DOH, OMH, and the OASAS to review the data available on the SDC population and the feasibility of fully addressing the research questions, given the constraints on data availability. As a result, the evaluation plan was refined to better reflect the information available.

Evaluation Approach

The evaluation used a combination of qualitative and quantitative methods to address the evaluation goals as shown in Table 3.1. Qualitative methods were used to collect data on perceptions of the SDC program by participants, staff within the two pilot programs, and personnel administering the program within OMH. Data for quantitative analyses were drawn from existing administrative and clinical datasets. The available data sources were examined in detail to determine the best uses of the data to address the evaluation goals. Based on preliminary analyses, the evaluation team along with NYS DOH developed the plan described in more detail below.

Goal 1 concerns the implementation of the SDC program. The evaluation is comprised of descriptive data on enrollees in the program and qualitative interviews related to program operations, impacts, facilitators and barriers. Goal 2 concerns the impact of the program on participant recovery-related outcomes and is addressed with data collected by the pilot programs. Based on preliminary examination of available data, the analyses addressing Goal 2 research questions did not include control groups or pre-SDC program data and are therefore descriptive in nature. Goal 3 concerns the impact of the program on use of services and costs of care. After preliminary analyses of the claims data, these analyses were designed as uncontrolled interrupted time series analyses.

Table 3.1. Outcome Measures by Goal and Research Question

Goal	Research Question	Data Source	Outcome Measures
1. Implementation of a viable and effective SDC program for HARP enrolled/BH HCBS eligible individuals throughout NYS	1. What are the characteristics of SDC participants and how do they compare to the HARP and BH HCBS eligible population?	SDC Assessment Data Medicaid Data (Claims and Encounters)	Count of SDC participants stratified by sociodemographics, health status/clinical characteristics, and functional status
	2. What was the experience of HARP enrolled/BH HCBS eligible individuals participating in the SDC Pilot program in relation to satisfaction with the SDC program and its impact on their recovery, quality of life, and benefit from health and BH services?	Interviews with SDC participants	Description of participant perspectives on SDC program, staff, and process; impacts on their recovery, quality of life, health, and BH; satisfaction with services
	3. What was the experience of non-participant stakeholders in the SDC Pilot program (e.g., support brokers, pilot site agency staff, State program development/oversight staff, fiscal intermediary) in relation to SDC implementation including State oversight and contracting, fiscal policies and procedures, hiring of SDC staff, recruitment and work with participants, and coordination with the fiscal intermediary?	OMH administrative documentation OMH administrative staff interviews Pilot site staff interviews	Description of program policies regarding selection, agreements, ongoing monitoring of SDC sites and fiscal intermediary, participant eligibility criteria, budgeting/use of funds, conflict of interest, and complaint/incident handling
		Pilot site documentation on hiring, training, and supervising of support brokers Interviews with support brokers, pilot site agency leadership/supervisory, fiscal intermediary, and State oversight staff	Description of support broker and supervisory staff demographics, credentials, training, supervision, and their perspectives on the pilot program and their relationship with participants and fiscal and State oversight
		Pilot site administrative documents Pilot site staff interviews Interviews with SDC participants	Description of pilot site agencies' process for recruiting participants, educating participants about what SDC is and how they can participate, enrolling participants, and facilitating ongoing participation

Goal	Research Question	Data Source	Outcome Measures
		Fiscal intermediary administrative and technical documents	Description of fiscal intermediary's policy and infrastructure for providing payments, monitoring payments, and supporting customers
		Interviews with fiscal intermediary staff, pilot site staff, State oversight staff	
	4. What were the facilitators and challenges to SDC Pilot implementation and how would they impact statewide roll-out?	Interviews with State oversight, fiscal intermediary, pilot site agency staff	Description of facilitators and challenges to the implementation of the SDC Pilot program
		Interviews with SDC participants	
2. Improvement in recovery, health, BH, social functioning, and satisfaction with care for SDC participants between baseline and three (3) year and subsequent follow-up	1. Do HARP enrollees have improved quality of life after participating in SDC?	SDC Assessment	Risk-adjusted percentage of SDC participants whose quality of life is improved as a result of the program, by annual period when data are available
	2. Do HARP enrollees show improved indicators of health, BH, and wellness after participating in SDC?	SDC Assessment	Risk-adjusted percentage of SDC participants whose BH, overall health, and wellness is improved as a result of the program, by annual period when data are available (i.e., experience reduction in substance abuse/other harmful behaviors, misuse of prescription medications)
	3. Do HARP enrollees show improvement in education and employment after participating in SDC?	SDC Assessment	Risk-adjusted percentage of SDC participants whose employment status/hours worked in competitive employment and educational status/enrollment in educational programs is improved as a result of the program, by annual period when data are available
	4. Do HARP enrollees show improvement in community tenure (i.e., maintaining stable long-term independence in the community) after participating in SDC?	SDC Assessment	Risk-adjusted percentage of SDC participants whose community tenure is improved as a result of the program, by annual period when data are available (i.e., experience improved residential status/housing stability, reduced criminal justice system involvement, are under Assisted Outpatient Treatment order, achieve functional independence)
	5. Do HARP enrollees show improvement in social connectedness after participating in SDC?	SDC Assessment	Risk-adjusted percentage of SDC participants whose social connectedness is improved as a result of the program, as manifested by social relationship strengths and level of social activity, by annual period

Goal	Research Question	Data Source	Outcome Measures
	6. Do HARP enrollees report increased satisfaction with health and BH services after participating in SDC?	HARP PCS	Risk-adjusted percentage of SDC participants who report that quality of care and helpfulness of services are improved as a result of the program, by annual period when data are available
3. Maintenance of Medicaid cost neutrality overall and reduction of BH inpatient and crisis service utilization and cost for SDC participants, between baseline and three (3) year and subsequent follow-up.	1. Does participation in SDC result in increased use (and cost) of outpatient BH services and primary care?	Medicaid Data (Claims and Encounters)	Risk-adjusted percentage of SDC participants receiving BH services and primary care/preventive services, by annual period
	2. Does participation in SDC result in decreased use and cost of acute care services (BH inpatient, ED, and crisis services)?	Medicaid Data (Claims and Encounters) MHARS	Risk-adjusted SDC participant rates of inpatient admissions and days for BH inpatient stays; rates of BH ED use; rates of non-BH ED use; and rates of BH crisis service use, by annual period
	3. How does participation in SDC impact overall Medicaid spending?	Medicaid Data (Claims and Encounters)	Risk-adjusted Medicaid PMPM costs, by annual period (PMPM/Y), for: BH outpatient services; primary care/preventive services; acute care services (ED use, BH inpatient use, and BH crisis services); overall

3.2 Qualitative Methods

The qualitative component of the SDC pilot program evaluation consisted of interviews with key informants and participants in the pilot program and a review of program-related policy documents. Key informants included stakeholders from the pilot site service provider organizations (e.g., support brokers, program leadership), state agencies (e.g., fiscal intermediary, agency leadership), and advocacy organizations. These interviews focused on understanding how the SDC program was being implemented; the roles of various stakeholders in operating and overseeing the program; the perceived impact of the program; and challenges and factors that might impact potential program scale-up. Interviews were also conducted with SDC participants to understand their perspectives on how the SDC program was being implemented; their satisfaction with the program; and how it has impacted their access to services/resources, progress toward goals, and health and well-being. Efforts were made to ensure that a broad range of perspectives were represented in the SDC participant sample, including diversity of demographic and clinical factors, and that diverse geographic areas were represented. The qualitative analysis was also informed by a review of OMH documents that described various aspects of the program's design. These documents included the SDC manual, program overview presentations, policies regarding purchasing and receipts, descriptions of training and support broker and fiscal intermediary roles and responsibilities, and documents provided to participants (e.g., self-assessments, goal worksheets, purchase guidelines).

The interviews and documents were analyzed by the evaluation team to understand how the SDC pilot program was operating and to identify issues that arose in the course of the implementation of the SDC pilot. Analysis of qualitative interviews provided an opportunity to obtain a more nuanced understanding of the barriers and facilitators to program implementation, as well as the impact of SDC on participant recovery, wellness, and quality of life. For instance, the evaluation team asked key informant leadership from state, advocacy, and pilot site agencies whether implementation of the SDC program has gone according to expectations, whether they have concerns about barriers to successful implementation, and whether there are aspects of the implementation that have been particularly promising. SDC participants were asked to describe their experiences with different aspects of the SDC program (e.g., enrollment, goal identification, SDC support broker services, the approval and purchase process) and how participating in the program has impacted an array of life domains (physical health, mental health, empowerment, pursuit of meaningful activity). Finally, analysis of interview data also served to identify aspects of the SDC program's implementation process that would need to be considered were SDC to be scaled-up beyond the pilot program phase, as well as to identify potential suggestions for areas of program improvement. Issues raised by key informants and SDC participants were summarized and compared across categories of informants and stakeholder type throughout the analysis stage.

Protocol Development

A semi-structured interview guide for key informants representing a diversity of SDC pilot program stakeholders was developed (Appendix A). Interview guides were informed by introductory discussions with DOH, policy-related documents, and NYS' prior internal evaluation findings. It covered topics including barriers and facilitators to SDC pilot implementation; clarity of roles and adequacy of training for key personnel (e.g., financial intermediary, support brokers); adequacy of policies, procedures, oversight, and monitoring from agency leadership and NYS; integration of SDC within agency services; coordination between NYS, pilot sites, and the financial intermediary; recruitment and enrollment of SDC participants; provision and receipt of SDC services including experiences developing recovery plans and budgets; and participant outcomes.

A semi-structured interview guide for SDC participants was developed, similarly informed by introductory discussions with DOH, policy-related documents, and NYS' prior internal evaluation findings (Appendix B). It focused on topics including participant perspectives regarding enrollment; the process of identifying goals, developing recovery plans and budgets, and making purchases; relationships between participants and support brokers; satisfaction with the SDC program and other health and BH services; and the impact of SDC on participants' recovery and quality of life.

Key Informant Selection

The evaluation team used a purposive sampling approach to recruit key informants. To capture a range of perspectives, key informants representing various stakeholder organizations were recruited, including the two pilot sites, the NYS Office of Mental Health, and advocacy/provider/trade associations. An initial group of key informants with in-depth knowledge of the SDC program was first identified through state and pilot site-provided lists, and additional informants were selected based on recommendations from stakeholders who completed interviews. Key informants from the two pilot sites included SDC direct provider staff (i.e., support brokers), other pilot site staff serving participants enrolled in SDC (e.g., care coordinators), and SDC program and agency leadership (Table 3.2). Key informants from OMH were recruited from several divisions/departments and generally represented leadership at the program or senior executive management level as well as staff directly involved in administering the program (e.g., fiscal intermediary functions). Key informants from the advocacy/provider/trade associations represented staff from the senior executive leadership level. The evaluation team conducted 18 interviews with 20 key informants.

Table 3.2 SDC Key Informant Participants (N=20)

Key Informant Type	N (%)
Support Broker	6 (30)
Site Leadership	4 (20)
Other Site Staff	2 (10)
OMH Fiscal Intermediary	2 (10)
OMH Leadership	5 (25)
Provider/Advocacy Association	1 (5)

To identify SDC pilot participants for interviews, evaluators utilized maximum variation and convenience sampling strategies resulting in 14 pilot participant interviews conducted by the evaluation team (Table 3.3). To capture a range of perspectives, the evaluation sought to maximize the diversity of SDC participants who completed interviews, considering factors such as the referring pilot site, length of time in SDC, SDC utilization patterns, and a range of demographic characteristics (e.g., gender, race, psychiatric diagnosis).

Table 3.3 SDC Pilot Program Participant Characteristics (N=14)

Participant Characteristics	N (%)
Participants	
Site 1	8 (57.14)
Site 2	6 (42.86)
Time Enrolled in SDC	
Mean years (SD)	2.61 (.56)
>3 years	7 (50.00)
Age: Mean (SD)	45.21 (11.21)
Gender	
Female	7 (50.00)
Male	6 (42.86)
Other	1 (7.14)
Race/Ethnicity	
Hispanic	3 (21.43)
Non-Hispanic Black	4 (28.58)
Non-Hispanic White	5 (35.71)
Multiracial/Other	2 (14.29)
Education	
Some High School	2 (14.29)
High School Graduate or GED	6 (42.86)
Some College	3 (21.43)
College Graduate or Higher	3 (21.43)
Employment	
No	10 (71.43)
Yes, part-time	1 (7.14)
Yes, full-time	3 (21.43)
Currently in School	
No	12 (85.71)
Yes, part-time	2 (14.29)
Yes, full time	0 (0.00)
Self-Reported Physician-Confirmed Behavioral Health Diagnoses*	
Anxiety Disorder	11 (78.57)
Major Depression	9 (64.29)
Bipolar disorder	3 (21.43)
Schizophrenia/Schizoaffective Disorder	2 (14.29)
Alcohol Use Disorder	8 (57.14)
Drug Use Disorder	6 (42.86)

*Participants could report multiple diagnoses

Respondent Recruitment

Potential key informants received an e-mail inviting them to participate in the evaluation interview and subsequently contacted the evaluators if they were interested in participating. An information sheet explaining the evaluation and interview process was e-mailed to key informants in advance of scheduled interviews and reviewed prior to commencing the interview.

SDC pilot site staff identified potential SDC participants and provided them with a flyer and information about the evaluation. SDC participants interested in participating contacted the evaluators directly or informed SDC staff that they consented to having the evaluators contact them. SDC participants were contacted by phone or e-mail and were sent an information sheet explaining the evaluation and interview process in advance of scheduled interviews and reviewed prior to commencing the interview.

Interviewer Training

The interviewers were two qualitative researchers, one a senior investigator and the other a doctoral-level researcher, both with expertise in qualitative interviewing and analysis, particularly within behavioral health. Prior to conducting interviews, the qualitative team received training on the SDC pilot and the context of the state pilot implementation, including relevant Medicaid policies. The training included a review of OMH documents describing the SDC program design, participation in discussions with DOH and OMH subject matter expert staff, and internal discussions with the project leads and technical advisors, who have experience with NYS Medicaid and the SDC program development. The training ensured that the interviewers were aware of issues relevant to the implementation when conducting interviews.

Conducting Interviews

Interviews with key informants representing SDC stakeholders were conducted virtually and lasted one hour, on average. The majority of data collection consisted of individual interviews with one identified key informant; however, informants were able to invite additional individuals to the interviews as needed to cover the relevant expertise and experience. Key informants did not receive reimbursement for participating in the interview. Interviews with SDC pilot program client participants were conducted by phone and lasted one hour, on average. SDC participants were reimbursed with a $25 gift card for participating in the interview.

Interviews were conducted by one qualitative researcher, with an additional researcher taking notes concurrently that then informed a written interview summary. Interviewers covered core topic areas but maneuvered flexibly through the interview guide and probed certain topics more in-depth when appropriate. Interviews were audio-recorded and transcribed verbatim. The institutional review board of the NYS Psychiatric Institute determined that activities conducted for this evaluation did not meet criteria for human subjects research and were thus exempt from review.

Analysis

Analytic methods, aligned with recommendations of Bradley, Curry, and Devers (2007), followed a grounded theory approach by developing coding structures that emphasized inductive codes emerging directly from the data. Consistent with grounded theory, qualitative analysis occurred concurrently with data collection, allowing interviews to be shaped by preliminary concepts and themes that emerged from the data. The analysis proceeded in a series of steps: development of initial codes (i.e., open coding), code validation and refinement (e.g., adding, removing, or modifying codes and how they were applied), use of the codes (i.e., coding transcripts with a final code list), clustering and interpretation of codes and associated excerpts, and development of broader findings and themes. Strategies for rigor included weekly data collection and analysis debrief meetings, development of interview summaries and memos, and the use of multiple coders.

3.3 Quantitative Methods

This evaluation adopted a pre-post analytic approach that combined descriptive statistical analyses with outcome models of the impact of the SDC pilot program. We first describe our data sources and then provide a detailed description of our approach.

Data Sources

A variety of secondary data sources were used to construct study variables (outcome measures and covariates for risk adjustment) for the quantitative component of the SDC pilot program evaluation. The data were provided by the DOH and OMH and included data from Medicaid, SDC Portal, Mental Health Automated Record System (MHARS), and HARP Perception of Care Survey (PCS).

Medicaid Data

This dataset contains information maintained by the NYS Medicaid Data Warehouse that includes Medicaid member demographics, eligibility information, enrollment, and service utilization billing records for all health care services, including pharmacy, regardless of whether the payment arrangement was fee for service (FFS) or managed care (i.e., claims and encounters). These data, available with a six-month lag, were the source of information for Medicaid enrollment status, BH HCBS eligibility status, demographics, health status, service utilization, and cost of health care for all Medicaid beneficiaries. Health status was evaluated with variables capturing BH diagnoses of interest as well as overall health status. The BH diagnoses were based on episode diagnostic categories (EDCs) and included schizophrenic disorders, severe bipolar disorder, other serious affective/psychotic disorders, any of the aforementioned serious mental illnesses (Any SMI), opioid abuse and dependence (opioid use disorders [OUD]), chronic alcohol abuse, and any of the aforementioned substance abuse-related diagnoses or other substance use disorders (Any SUD). Overall health status was evaluated using clinical risk groups (CRGs), specifically the 9-rank core health status variable, which we collapsed into three categories (core health revised): healthy to minor chronic disease, moderate to significant chronic disease, and dominant chronic disease to catastrophic conditions. The 2016–2019 data were used in all three goals of the evaluation to construct variables describing person-level characteristics (used for risk adjustment), and utilization and cost variables (outcome measures).

SDC Portal Data

This OMH dataset, linkable to Medicaid data and collected quarterly through a secure web portal application designed by OMH for use by SDC participants and support brokers, contains information on SDC program clients and enrollment, including demographics; SDC Assessment data, which includes a quality of life scale as well as housing, education, employment, and marital information; and individual-level participant goals and expenditures through the program. The 2018–2019 data were used in Goal 1 to identify SDC participants and in Goal 2 to characterize participant outcomes, which include quality of life, educational and housing status, and social connectedness.

Mental Health Automated Record System (MHARS) Data

This OMH dataset contains information on inpatient, residential, and outpatient utilization in New York Psychiatric Centers. The dataset was used to identify psychiatric admissions falling under the Institutions for Mental Diseases exclusion and thus not captured in the Medicaid data. This dataset permitted a complete assessment of inpatient utilization by Medicaid enrollees. The 2016–2019 data were used in Goal 3 of the evaluation to construct the MHARS inpatient utilization variable (outcome measure).

HARP Perception of Care Survey Data

This dataset contained self-reported information collected through a survey of a randomly selected sample of enrollees in HARPs or HIV SNPs. The survey asked respondents about their perception of access to and quality of behavioral health care, the cultural sensitivity of their providers, their quality of life, activity limitations due to physical health problems and substance use, and social connectedness. The survey was adapted from the Experience of Care and Health Outcomes Survey, the Mental Health Statistics Improvement Program/NYS OMH Consumer Assessment of Care Survey, and others. All SDC participants are administered the HARP PCS survey. These data permit assessment of SDC participant experience and satisfaction with care; satisfaction with BH providers' cultural sensitivity; and satisfaction with wellness, recovery, and degree of social connectedness (outcome measures). As with other survey data, these data are vulnerable to non-response bias.

Cohort Construction and Analytic Considerations

For Goals 1 and 3 of the evaluation, SDC participants were included in the cohort if they met the following evaluation inclusion criteria: had at least two months of SDC enrollment, were not dually eligible Medicaid-Medicare beneficiaries, were eligible for full Medicaid benefits, had continuous enrollment in Medicaid (defined as 11 out of 12 months of Medicaid eligibility), and were 21–64 years of age. For Goal 2, all participants with at least two months of SDC enrollment were included. As a result, the sample sizes were different for Goals 1 and 3 and Goal 2.

Enrollment in the SDC pilot program was not randomized. The participants in the program are likely to differ from people who did not participate both because of who was selected from the pool of eligible individuals and who agreed to participate. Moreover, the participants come from sites that serve patients with different characteristics. In this setting, comparisons of participants with non-participants are confounded by these selection processes. One technique considered in this setting was to create a comparison group with HCBS-eligible HARP enrollees from the same geographic areas where the SDC was implemented who had not participated in SDC. Because we were unable to find a true comparison group at the geographic level due to data limitations, such matching was not feasible. As such, the evaluation team resolved to use an Interrupted Time Series (ITS) approach to provide an *exploratory* assessment of the SDC effects based on observed changes in beneficiary outcomes over time.

Since SDC enrollment is rolling, participants vary in the amount of time spent in the program. To allow for further examination of effects, two post-period timeframes are utilized in the tables presented: post-Period 1, defined as up to the first 12 months after enrollment, and post-period 2, defined as any time in program after the first 12 months up to 24 months (as of December 2019). Because participants enrolled at different times, these post-periods vary by participant. Due to the small sample, only one post-period timeframe is used in the models.

For analyses with very small sample sizes or rates less than 5 percent or more than 95 percent, we refrained from conducting modeling to avoid very small cells and model identification issues. For all analyses, we report estimates, their standard errors where appropriate, and a p-value as a test of significance for the ITS models. In the presentation and discussion of our findings, we only describe results as different when the difference is statistically significant (i.e., p-value of ≤.05).

Analytic Approaches

The quantitative methods employed in the evaluation of the SDC pilot program included descriptive statistics and a pre-post analysis of changes over time (ITS).

Descriptive Statistics

This approach was used in Goals 1–3 for simple population-level descriptions and comparisons. For Goal 1, this approach was used to describe the characteristics of the SDC pilot program population and compare this population with HCBS-eligible HARP enrollees not participating in the SDC pilot program (i.e., non-participants) who also met evaluation inclusion criteria. These analyses were conducted for both sites combined and by site; for the site analyses, SDC participants were compared with non-participants residing in the same region (NYC versus ROS). We conducted a chi-square test and McNemar's chi-square test to compare binary outcomes between SDC participants and non-participants; for continuous variables, we used the Analysis of Variance (ANOVA) F-test.

Interrupted Time Series

This pre-post quasi-experimental approach was used in Goal 3 to assess outcome changes over time for the SDC pilot program group. This model assessed for changes in the trend in the outcome variables from pre- to post-intervention and used the estimates to test hypotheses about program impacts. Because the ITS approach does not employ a control group, observed changes in outcomes may not be attributed to the program but, rather, to other independent events occurring concurrently; however, the confounding effect of other potential drivers of observed effects is minimized if it may be assumed that other drivers have a constant effect over time. Our ITS models included several adjustor variables: demographic characteristics (age, sex, race/ethnicity), BH diagnoses (Any SMI and SMI diagnoses, and Any SUD and selected SUD diagnoses), and overall health status described with the core health status revised variable. For binary outcomes, these models were conducted as logistic regressions as well as linear probability models; however, for interpretability, we only report linear probability models to make direct estimates of the pre-post changes in the outcomes of interest.

4. Findings

4.1 Goal 1. Implementation of a viable and effective SDC program for HARP enrolled/BH HCBS eligible individuals throughout NYS (Process Evaluation)

The process evaluation sought to understand how the SDC pilot program has been implemented, focusing on the elements that are critical to achieving program outcomes according to the logic model, with an eye toward informing broader scale-up of SDC. The evaluation explored issues associated with barriers and facilitators to SDC implementation; clarity of roles and adequacy of training for key personnel (e.g., financial intermediary, support brokers); adequacy of policies, procedures, oversight, and monitoring from agency leadership and NYS; integration of SDC within agency services; coordination between pilot sites and the financial intermediary; recruitment and enrollment of SDC participants; and provision and receipt of SDC services, including experiences developing recovery plans and budgets.

This component of the evaluation used a combination of quantitative and qualitative methods to address the three process-related research questions stated in Goal 1. The first question concerns enrollment in the SDC program, which we addressed through unadjusted analyses of Medicaid data (see Section 3.3, Quantitative Data Sources). The second and third questions of the process evaluation were addressed using qualitative methods, i.e., a combination of focus groups, key informant interviews, site visits, and document reviews. Participants in the qualitative components of the process evaluation included SDC participants, support brokers, pilot site agency leadership, Advisory Council members, fiscal intermediary staff, and OMH program staff, as well as any additional stakeholders identified as having relevant expertise and exposure to the SDC pilot program (e.g., policymakers, members of provider network).

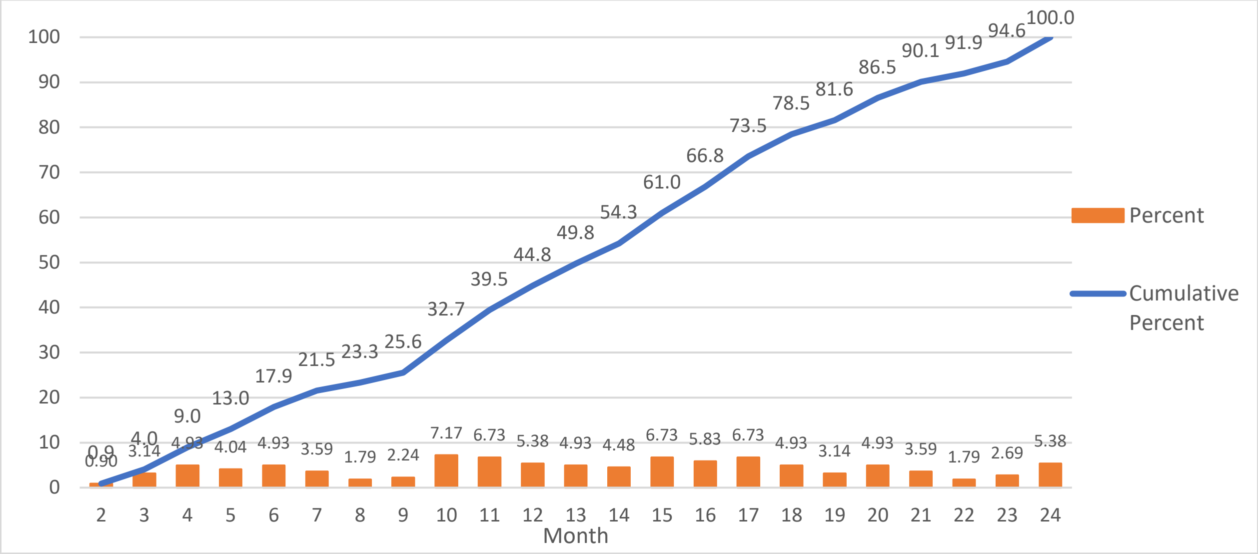
Research Question 1.1: What are the characteristics of SDC participants and how do they compare to the larger HARP and BH HCBS eligible population?

This RQ included one hypothesis:

Hypothesis 1: Members of the HARP/HCBS population will be enrolled for participation in SDC at the two (2) pilot sites.

In this section we describe enrollment in the SDC pilot programs and compare characteristics of the enrollees with the total eligible population. For the reasons described in Chapter 3 (Cohort Construction and Analytic Considerations), the cohort employed to address this RQ included 223 of the total 237 participants (94 percent), 81 of them enrolled at the New York City site and 142 enrolled in the Newburgh site. Duration of enrollment varied widely because recruitment continued throughout the study period and a small number of people dropped out during the study period. Figure 4.1 shows the distribution of months of enrollment for all program participants (orange bars) and the cumulative proportion of the sample with enrollment at or below each number of months (blue line). Total duration of enrollment ranged from 2 to 24 months. Only a small proportion, 5.38 percent, were enrolled for the entire 24-month evaluation period; . The figure shows the distribution of months of enrollment across all program participants. About half of the participants (49.8 percent) were enrolled for 13 months or fewer out of the total 24 months of the evaluation period.

Figure 4.1. Duration of SDC Participation, Pilot Sites Combined (n = 223)



SOURCE: Authors analysis of SDC enrollment data

Table 4.1 compares individual characteristics of SDC participants with HCBS-eligible HARP enrollees not participating in the SDC program. The sample sizes reflect multiple observations per person, which are accounted for in the reported percentages and statistical tests for differences between groups. Participants in the NYC program are compared with the broader population of eligibles in the NYC region, and participants in the Newburgh program are compared with the broader population of eligibles in ROS. Across both sites, relative to all HCBS-eligible HARP enrollees not participating in SDC meeting evaluation inclusion criteria, SDC participants were younger than and had higher rates of Any SMI diagnoses or Other Serious Affective/Psychotic Disorders but had lower intensity of both BH and non-BH outpatient and acute care utilization (Table 4.1). Relative to HCBS-eligible HARP enrollees residing in NYC, the NYC site SDC participants were more female, had higher rates of schizophrenic disorders, other serious affective/psychotic disorders, and Any SMI diagnoses as well as lower rates of OUD, and lower intensity of BH and non-BH outpatient utilization. Relative to HCBS-eligible HARP enrollees residing in ROS, the Newburgh site SDC participants had higher rates of Any SUD and OUD diagnoses, and lower intensity of both BH and non-BH outpatient and acute care utilization.

Table 4.1. Characteristics of SDC Participants Relative to HCBS-Eligible HARP Enrollees Not Participating in SDC (Non-SDC), by SDC Pilot Site

	NYC Pilot Site				Newburgh Pilot Site			
	All (N=34,320)	**SDC (N=235)**	**Non-SDC (N=34,085)**	**P-Value**	**All (N=36,904)**	**SDC (N=272)**	**Non-SDC (N=36,632)**	**P-Value**
Age, Mean (SD)	44.8 (11.67)	42.5 (11.69)	44.8 (11.67)	0.09	41.6 (11.90)	40.1 (11.83)	41.6 (11.90)	0.17
Sex, %								
Male	51.2	39.6	51.3	**0.04**	43.8	51.1	43.7	0.11
Female	48.8	60.4	48.7		56.2	48.9	56.3	
Race/Ethnicity, %								
White	26.0	30.2	25.9	0.22	57.4	57.0	57.4	0.15
Black	49.0	44.7	49.0		29.2	33.8	29.2	
Hispanic	15.2	15.7	15.2		10.7	7.60	10.7	
Asian/American Indian/Other	9.9	9.36	9.9		2.68	1.52	2.69	
Behavioral Health (BH) diagnosis, %								
Schizophrenic disorders	48.0	59.5	48.0	**0.04**	38.2	33.1	38.3	0.23
Bipolar disorder (severe)	4.71	4.31	4.71	0.83	5.65	5.88	5.64	0.91
Other Serious Affective/Psychotic Disorders	53.7	66.0	53.6	**0.02**	56.2	64.3	56.1	0.06
Chronic alcohol abuse	21.7	19.8	21.7	0.66	24.1	30.2	24.1	0.12
Opioid abuse and dependence (OUD)	19.5	6.47	19.6	**0.00**	15.7	28.7	15.6	**0.00**
Any Serious Mental Illness (SMI) diagnosis	75.7	88.4	75.6	**0.00**	71.2	72.8	71.2	0.68
Any Substance Use Disorder (SUD) diagnosis	43.1	35.3	43.1	0.14	41.5	51.5	41.5	**0.03**
Core Health Status, %								
Healthy to minor chronic disease	3.23	4.68	3.22	0.79	5.3	4.78	5.3	0.27
Moderate to significant chronic disease	67.8	68.1	67.8		72.6	78.3	72.6	
Dominant chronic disease to catastrophic conditions	29.0	27.2	29.0		22.1	16.9	22.1	
Health Service Utilization, Per Year, Mean (SD)								
Key Behavioral Health Outpatient Visits	11.0 (1,919.45)	9.52 (144.06)	11.0 (1,913.26)	**0.01**	9.87 (1,694.17)	8.13 (128.36)	9.88 (1,689.24)	**0.00**
Non-Behavioral Health Outpatient Visits	6.13 (1,156.42)	5.29 (85.54)	6.14 (1,153.00)	**0.02**	5.19 (1,046.67)	3.08 (40.34)	5.20 (1,045.35)	**0.00**
Acute Behavioral Health Visits	4.03 (789.36)	2.87 (31.33)	4.04 (788.72)	0.15	3.46 (550.33)	2.28 (24.31)	3.47 (549.77)	**0.01**

	NYC Pilot Site				Newburgh Pilot Site			
	All (N=34,320)	**SDC (N=235)**	**Non-SDC (N=34,085)**	**P-Value**	**All (N=36,904)**	**SDC (N=272)**	**Non-SDC (N=36,632)**	**P-Value**
Acute Non-Behavioral Health Visits	4.28 (1,149.88)	3.40 (52.28)	4.29 (1,148.70)	0.08	3.96 (1,012.08)	2.59 (36.48)	3.97 (1,011.27)	**0.00**

NOTE: SDC participants may be captured more than once but analyses account for repeated measures

Research Question 1.2: What was the experience of HARP enrolled/BH HCBS eligible individuals participating in the SDC Pilot program in relation to satisfaction with the SDC program and its impact on their recovery, quality of life, and benefit from health and BH services?

This RQ included one hypothesis:

Hypothesis 1: Participants will gain experience with budgeting and using funds to meet recovery goals with resulting improvement in satisfaction with services, recovery, quality of life, and health/BH.

Qualitative Findings

Interviews with SDC participants were conducted to identify themes related to their experiences and satisfaction with the SDC program (H1). Findings to address this question are organized in three sections: The first focuses on SDC participants' experiences with enrolling in SDC and working with SDC staff; the second describes participants' perceptions of various SDC processes (e.g., requests, purchasing); and the last section describes participants' perceptions of the SDC pilot program's impact on their recovery, quality of life, health, and behavioral health.

Perspectives on Enrollment in the SDC Pilot Program and Working with SDC Staff

Initially, most participants expressed some hesitancy when first learning about the SDC pilot program. One participant explained, "It sounded too good to be true," (C-6) while another expressed skepticism about the intentions or expectations of the program prior to joining, asking, "What are the issues that may arise later on with receiving this 'free' care?" (C-10) Similarly, another participant described their initial reaction to the novelty of a program such as the SDC pilot as not necessarily concern but rather uncertainty: "I wasn't sure how it was going to work out what was going to happen, but I wasn't concerned. It was unfamiliar." (C-1)

Participant concerns were eased once the mission of the SDC pilot program was further described to them, with providers focusing on getting to know participants, emphasizing the program's voluntary participation, and the goal of helping people self-direct their own wellness and recovery. One participant expressed feeling comforted upon learning more about the program's approach.

> They stressed how our care is very important, our comfort, and that we have the option to opt out of the program at any time…And they explained how whatever funds it's given will be towards education goals, life-living goals…They emphasize the importance of the health of each member…They [SDC] explained in detail that it was completely of your choice, and nothing will be taken from you and it's just there to assist you and I was reassured, and I joined. (C-10)

Participants viewed the purpose of the SDC program "as a means of gaining independence back" as well as a program that facilitated participants' achieving their own wellness goals in a flexible and self-directed manner, which was different from other programs they had been exposed to in the past. When describing how SDC differed from other programs, one participant noted,

> This program really makes me feel like I'm part of a family—that they really care about my goals, not just an administrative "yes" or "no" project. It's really like, "Is this working out for you…?" It's not "Okay, you're approved, or you're not approved…" [In SDC,] you do not feel like you're just a number. You really feel like you're a person. (C-8)

Once initial skepticism of the SDC pilot program subsided, participants most often expressed gratitude and appreciation for the opportunity to be enrolled in a program like SDC and all were in favor of expanding the program so that it could serve more participants. Participants seldomly conveyed significant concerns while describing their participation in the program, but they did offer some suggestions for further improvement, largely focused on aspects of the SDC request and purchasing processes, as described in later sections.

With high consistency, participants reported positive experiences working with their support broker upon enrollment in the SDC pilot program. Participants' initial encounter with their support brokers often focused on developing their own recovery plans and associated goals. Participants generally described support brokers as providers who were open-minded and centered on eliciting participants' perspectives to help formulate goals.

> The people that work there—they're open minded. They are just compassionate. They are very understanding. So it's like they see you, they hear you when you talk about your goals, and they actually advocate for you so that you can achieve it. And even if it's something you want to try, like cooking or something like that, and you find out "Oh I don't like it," but at least you finally have the opportunity to learn and try it. And that's what self-direction gives you—an opportunity that you never had before. (C-7)

Participants described ways in which support brokers approached their roles in the early stages, supporting participants with initial purchase requests that were often more general and deemed more "important" and "necessary" by the support broker, such as a cellphone or clothing. Other times, participants would approach the support broker with an entirely self-identified request (e.g., music lessons, yoga retreats). Most participants reported that goals and purchases reflected their personal desires for areas to focus on and how to progress in their wellness and recovery. "They listen to you. It's individualized—like my goals are not other people's goals and that's OK. So that's big." (C-7) For some, identifying goals and needed goods or services to support those goals was a fairly straightforward process with minimal input from the support broker. However, many participants emphasized that they appreciated input and feedback from the support broker to help identify, prioritize, and expand on goals, or identify resources that could advance their wellness, and felt that the support provided was consistent with self-direction.

> It's difficult sometimes because life moves fast…It's hard to know if I should stick to one budget because [I have] a lot of things going on in my life…and that's why it's great that it's self-directed and not one hundred percent sticking to this one budget. (C-4)

> It's definitely more self-directed than anything…but I've definitely gotten guidance from my support broker. (C-6)

Participants emphasized the nuanced ways in which support brokers would offer input, doing it in a way that was still consistent with a self-directed approach to identifying goals.

> I barely go anywhere… [My support broker] doesn't say, "Hey go outside."…[But] for example, I went to the museum and I'm like, wow, when was the last time I went to a museum? And why haven't I been to the museum? I love museums. It's kind of like forgetting that I should be going outside. He helped me to remember that. He didn't say, "Go outside!" But having that socialization and actually talking to someone… yeah, I probably need that. (C-7)

Participants often noted the various ways in which support brokers assisted them above and beyond their roles. For example, one participant requested SDC to cover the cost of a resource after her parent unexpectedly passed away, only to be initially denied. The participant recounted how their support broker not only successfully advocated to overturn the denial but was also available throughout the participant's grieving process for emotional support.

Overall, participants credited the role of the support broker as essential to the generally smooth functioning of the SDC pilot program, highlighting that they felt that brokers knew them and could be relied upon:

> I just kind of create a list of things and submit it. And they understand the process of how to verbalize with the item of service is intended for…My support broker knows my aptitude. So, it's sort of like everything that I'm doing is kind of like dominoes. It kind of falls into like the career path. (C-9)

> My broker that I work with is just very intuitive…[She] kind of just knows…So I never had the experience of having to really justify something. (C-5)

While most participants valued brokers' input and feedback, a few participants expressed tension regarding requests to meet their own goals versus those recommended by the support broker. For example, one participant described wanting to pursue a certain artistic activity, saying, "It would give me confidence…that would make me feel really good…my age has a lot to do with it…I haven't accomplished much. Now I would just like to feel like I've done something for myself to make me feel better." (C-4) However, her support broker dismissed this goal, leaving the participant wondering whether her goal was not appropriate or whether she had just not been able to adequately articulate her rationale.

> But it's like sometimes, if you don't answer the right way, you're not gonna get it… [The support broker] was asking me if I wanted more important things now

> and that's when we got into the cleaning supplies. And we also talked about clothes...I mean I make myself more nervous because I don't want to screw this up. (C-4)

For some, the nuanced rules of SDC that could lead to unintentional misuse increased anxiety, creating a power dynamic that led to nervousness in requesting purchases later in fear of being seen as taking advantage of the program or not appreciating the value of SDC. Another participant commented on how they were thankful for the program but hesitated to ask about SDC potentially helping to pay for a medication that was no longer being covered by insurance: "They're already doing so much and…I don't wanna take advantage of nobody. I'm just that type of person I guess." (C-11)

The other challenges participants sometimes noted were variable access to their support broker, differences in provider fit, or turnover. While participants were generally satisfied with how often they were in contact with their support brokers, they described varying patterns of interaction. Some participants described that contact with their SDC broker was much more frequent and consistent in early stages of participation but decreased as time went on. Contact frequency was often dependent on participants' level of need, current life stressors, their relationship with the support broker, and the usual practice of the agency and broker themselves but occurred at minimum once a month. One participant noted a challenge as a result of decreased meeting intensity:

> I have to wait for the next meeting to bring it up because if I do bring it over before then, I'm told this is something that we will discuss in the next meeting, and it just takes longer for instance. (C-13)

While this change in meeting structure sometimes resulted in delays in requesting and processing purchases for some participants, it was not consistent across all participants, with many noting that they were in contact with the support broker once a week on-going. Further, almost all participants indicated that their support broker would touch base with them even if there was no open request purchase active at the time. Participants, especially those who were less likely to actively utilize SDC more consistently, appreciated these check ins as they not only allowed them the opportunity to consider new goals or purchase requests that could further the progress of specific goals but also made them feel cared for by their support brokers.

> She's like, "Hey what about this and why don't you do this, so why don't you do that?' Especially if a period of time has gone by and I haven't… she's very helpful that way to get me thinking about those sorts of things. (C-4)

> Well, they'll call and just check up to see how I'm doing, if I haven't called them or texted them and requested to set up a goal or anything…which is nice, because everybody wants to be loved and cared about. (C-1)

Generally, the relationship with the support broker was described as positive, but a few participants who had worked with multiple brokers as a result of staff turnover highlighted differences in relationships with support brokers. Often, more successful relationships with support brokers were those that were there characterized by easier access, higher frequency of contact, being organized, and feeling that their support broker was "in their corner."

> I have had two [support brokers] ...The first one…left the organization…He was supportive. [But] he was a little bit disorganized, more than most, about keeping track of records. I'm on my game when it comes to submitting receipts…And there were times where he would misplace things…my [current] support broker is phenomenal, just out of this world. "What can we do, what do you need, what would help you with nutrition…?" She knows me, she knows my story. She is extremely responsive. (C-5)

Another participant elaborated on the characteristics of a good support broker, which included being diligent with follow-up and having aspects of cultural background in common to facilitate a shared understanding of needs and goals.

> Someone who kind of has a similar…cultural background to understand why you would need certain things and are therefore able to communicate that to OMH or to whoever they have to convince to approve a budget of the need for a certain item or service. Also, someone who is accessible and that I'm able to maintain communication with them concerning the progress we're making towards creating a budget…[somebody] I don't have to be behind and to continue to ask about whether or not an item was submitted for approval. Somebody who is…just action-oriented and understands that some of the goals that I have tend to be, like, not urgent—like I have to [have] them tomorrow. But the fact that [they] are important and would improve my quality of life, right—and they understand that. (C-13)

Under the circumstances in which a participant began with a new support broker, challenges occurred when the support broker was new to the role and learning how to navigate the program, which could sometimes result in lengthier processing times. Additionally, changing support brokers could also lead to participants feeling some frustration at having once again to share personal histories and open up as part of starting over with someone new.

> That was a little frustrating…to start off with a new person now, and also, it's a little difficult for me to give all my personal information about my past life, who I am, and what my goals are. (C-8)

The relationship that emerged with the support broker was considered an integral part of the SDC pilot program; this same participant further explained:

> It's another thing when the person that you're interacting with understands why you need these things in your life. Instead of just saying OK, you've submitted, you've got approved, here's the money. Bye-bye. They understand what the purpose of this stuff is. And that's really important to me because I don't want to

> feel I'm taking advantage and I want them to understand how important it is to being in my life. (C-8)

Perspectives of SDC Process

Once participants worked with their support brokers to develop goals that tied into their recovery plan, they identified similar facilitators and challenges throughout the request, approval, and purchase process. Generally, participants described a standardized process that most often occurred during monthly check ins with their support broker, in which they would identify and prioritize needs to address for that month. Participants emphasized the importance of researching the item or service requested along with providing a thorough justification prior to having the support broker submit it to the fiscal intermediary. Most participants felt the process was manageable and not cumbersome:

> I feel it is pretty great…I research the item or service that I need. Get a copy of the link, the description of the recovery goal, the price, and if it's an item online, I create a PDF of the actual item. If it's a service, I can direct [them] to the website…So some research, document, submit, review, authorization, purchase, and submit the receipt. (C-9)
>
> I [meet with] my broker and she'll set up a goal and it gets sent to the state. And the state has the final say on whether it's approved or not. I have a debit card that they gave me and if it's approved, they load the cash onto the debit card. And you have ten days to make the purchase and you have to give them the receipts…there's a lot of lessons in it—learning to budget is something I'm not, I wasn't familiar with…Honestly, I've never had anything not approved…It's just been great…It's been a blessing…It's really a simple process. (C-1)

Participants rarely described experiences in which a purchase request was denied. Nevertheless, they noted some challenges associated with the request process including budget limits/caps, banned items, and inconsistency in the time it took from the request to approval. Participants felt that budget caps were often unexplained, arbitrary and, at times, rigid (e.g., transportation budget). Participants expressed some frustration with the inconsistency of timing from request to approval, as it could result in delays in purchasing the service or item originally requested. For example, from the time of the original submission to the approval to the receipt of funds, the price of the requested item might have changed or was no longer available, leading participants to begin the request process again. However, participants largely emphasized just not understanding the potential varying timeframes for approval.

> Sometimes a request takes longer to be approved and I think it's the lack of consistency that would be confusing. One time I made a request, and it was submitted, but I didn't get the answer 'til a week and a half later and unfortunately by the time I did get the answer, the thing was no longer in stock…And a previous time before that, a request was accepted within two days. So, if it takes a week and a half, that's fine, as long as it could be more consistent. I'm not like, going crazy over it. It's just that the lack of consistency

> sometimes kind of made scheduling what to buy or when to buy it somewhat of an issue. (C-8)

Participants also expressed some concerns regarding the fairness and rationale of budget caps for certain items and spending categories, such as computers or transportation, or rigid rules (e.g., having to purchase the precise number of items even if a reduced price would allow for more items than originally approved): “The only issue I really had was some of the categories, I felt I should have more of a budget…which was frustrating because that would have helped my goal [but] there was a limit on that category.” (C-8) Despite these concerns, participants also noted exceptions in which OMH would allow for the purchase of some items that exceeded the standardized budget caps. Often, this would result in a compromise between the original higher-level version of a requested item and the more standard version of the item (e.g., computer).

Impact on Recovery, Quality of Life, Health and BH, and Satisfaction with Services

All participants identified how SDC had positively impacted their recovery and led to significant improvements in their quality of life, health, and behavioral health. Participants described the SDC pilot program as a “bridge back to life” and explained that, while other behavioral health programs also encouraged participants to pursue goals, SDC finally gave them the resources needed to actually pursue those goals.

> In programs, they always say, “yYu should do all this stuff, all these activities,” but who has the money to do that? Nobody. So, with self-direction, you actually are able to reach those goals that they talk about in the [other programs] but never have any money to actually do. (C-7)

Many stated that SDC gave them “self-confidence” and a reason to “fight” for themselves or “feel proud” of themselves for the first time in a long time. Participants considered SDC as their first real chance for achieving recovery after having been “stuck in a dark place” for a very long time. One participant described the different ways in which SDC transformed his life, emphasizing how being able to obtain basic household items was connected to a range of life domains and recovery goals, including housing stability, physical health, self-esteem, and overall well-being.

> Things [that] I couldn't afford to have a well-being, to have a mental well-being….At that time, I was living on a blow-up plastic bed… I have back problems... So, the program bought me a bed and they bought me sheets, bought me things to make me feel like I lived in a home there…I really [had] nothing ‘til they help[ed] me to get my self-esteem back in order…Just buying me stuff for a normal life… to be able to get up and feel proud of yourself. And I feel like, you have some integrity and, rugs for my floor and curtains on my window. So, I felt like I lived in a home and not an extension of jail. (C-8)

Many participants commented on how the support of SDC had helped them to have appropriate clothing and an environment in which they were able to function, that felt like a home. This in turn made them "feel norma,l" (C-1) "like I'm living more like a person" (C-6) and feeling "a lot more…like I exist…" (C-4).

With the support of SDC, participants felt that it "made my life less stressful" and that "it takes a lot of pressure off." Many described how, with SDC, they were able to change their perspective to finally focus on pursuits that would promote their mental health and recovery versus mere survival. As one participant who bought a Seasonal Affective Disorder lamp explained,

> $60 is a huge ask. It's not something that I can casually save up for. So to be able to ask [SDC] for something like this, to see if it will help my mental health, and it does, that's an amazing feeling to be able to have money set aside for things that I need that aren't…life or death stuff, like food and rent." (C-6)

Another participant similarly explained how being in SDC facilitated a shift from basic survival toward pursuing higher-level recovery:

> [My goals] have broadened out…I'm writing a book now and they've paid for my writing classes... [When I started the program] I was very damaged and I had just gone through a lot of trauma. And my goal really was just to survive…I was really in a bad place…And my reality was my dark place. That was who I was, and it defined me. And because of the program I would be able to get out of that. (C-8)

Participants also repeatedly highlighted how the overall approach of SDC and the resources purchased increased their independence, including helping them to have something that most people would take for granted, such as a phone, that now helps the participant manage their own appointments and insurance.

> The phone to call my doctor, Medicare... [It's made] a big difference and I know my [other program counselor] is glad 'cause she had to do everything, but this way with the phone, I can do it myself…It's nice to do things on my own. (C-11)
>
> Take the help and help yourself, so you can help yourself again in the future without having to lean on someone to do it for you. And that's what I've been doing. This program taught me how to really stand on my own, to be honest with you. (C-2)

SDC participants described various ways in which SDC directly impacted many domains of their recovery. As highlighted earlier, participants repeatedly explained how a request for a resource may have been made with a specific goal in mind, but that the resource's impact spread across multiple goals and life areas. For example, one participant who experienced chronic pain remarked that purchasing a chair eased his pain; however, the participant further explained that this also finally allowed him to sit comfortably to complete his GED classes and attain his GED. Many participants described how having the funds to purchase specific goods (e.g., bicycles, cleaning supplies, clothes, vitamin supplements, computers) and services (e.g., dental services, acupuncture, chiropractor, biblical counseling, yoga sessions, life-coaching) contributed to their overall wellbeing. Several participants described ways in which SDC allowed them the opportunity to address their physical health (e.g., gym memberships to lose weight, a bed to increase sleep quality) while later also contributing to an improvement in their mental health. Similarly, funds provided through SDC increased access to services to address physical health conditions that they would otherwise not have been able to afford.

> Well it helped me in ways that I would never have been able to help myself. For example, I suffer from lower back pain. And I was seeing a lot of back doctors and getting injections…And the program funded [me] to be able to see an acupuncturist. And now I've been seeing this acupuncturist for a year, and I've never been back to a doctor… The acupuncture really worked...It's changed my posture…It all has been totally interconnected. Once the back issues have greatly improved, I am getting depressed less because I could move around, I could do more physically, which helped with my depression. (C-8)

The ability to utilize funds to address long-standing physical health issues and subsequently improve one's mental health was also described by the following participants:

> I have jaw pain… that I couldn't address right away that was devastating for me. And the fact that the grant was able to cover [a surgery not covered by Medicaid] that could have taken me—if I were able to work to afford it—could have taken me another 10 years to get…. that was [a] profound thing that this grant was able to do for me. It was a huge level of anxiety for me when it came to my physical health, which right there is the mental connection. (C-6)

> The old bed, it was really damaged, and it was affecting my sleep and hurting my back. And so being able to have a mattress that has adequate support has improved the quality of my sleep… [which is] a very important part of regulating my mood. So it's been really helpful. (C-13)

Another participant commented on how SDC had helped them see an autism specialist, not covered by insurance, which allowed them "emotionally to better understand myself and that's something I felt self-direction helped me to do; to be able to understand myself socially or emotionally in relation to society." (C-9) Another participant explained their shift in mental health:

> [When] you're dealing with PTSD to this level of sheer madness, it is a bright light when a program comes along and helps you obtain a goal that you felt so deeply about, or feel so deeply about, that it puts a smile on your face through all of that. (C-2)

In addition to numerous ways in which SDC increased access to resources that helped improve physical and behavioral health, SDC offered participants the ability to make progress with education and employment goals. For example, SDC supported participants interested in pursuing educational or employment goals to purchase textbooks and school materials, or to fund transportation so they could get to school or work.

> I mostly focused on my education, I was in college during this time…with textbooks, transportation… They were able to help me purchase some items that I've used for recording—like I made this short documentary for my thesis film…. I just graduated…last year. I really want to get out there and make more documentaries. It's difficult to not have access to the equipment at the school, but with the help of the program assisting me…it makes it all possible. This has pretty much been the focus of as to why I joined the program, to assist me with education and…pursuing my career. (C-10)

Additionally, participants were able to request funds from SDC to invest in their own businesses and pursue employment opportunities. This included approving the purchase of devices needed to roll out a podcast, covering materials and expenses needed to publish their own book, or financing the cost of equipment related to participants who were trying to be self-employed. Participants expressed how having this opportunity gave them both a source of income and a sense of purpose and direction.

> I wrote a children's book after I graduated and they helped me publish it, self-publish it. Now it's available and I didn't realize that that was like an actual business…Which is good because even though I can't really socialize with other people or leave the house, they're helping me to still find meaning in my life. And without that I'm really suicidal and depressed. So, it's really great that they're helping me find a reason to be here …It's also opened up into a marketing business. So, I'm helping other authors as well [to] market their books. (C-7)

> I ended up going back to school to further my education and to become licensed… [With SDC], I was able to get a [new computer] ...And they recently helped me pay for my licensing exam…also, study materials so that I can pass it. (C-5)

> Self-direction pays for Internet service, which anyone who lives [now] would understand how important that is…I first requested the Internet so that I could be able to do online coursework to get my state certification, because I'm a peer specialist. (C-13)

Several participants described ways in which SDC had helped them to reconnect with others or to integrate into the community in ways that had been limited to them before. One participant described how recurring physical victimization had them living in constant fear and thus isolating from the outside world. SDC provided unique opportunities to address their trauma and regain a fundamental sense of enhanced safety. Participants described how SDC helped increase their quality of life and improved their mental and physical health by covering expenses that increased social connection through meaningful activities.

> I’ve been attacked so many times by men. I really wanted to have martial arts skills… so that I could actually protect myself from attacks…That also came into play with me losing weight and socializing. Because of being attacked so many times out there, I don't go outside too often; I have high anxiety and I'm always afraid…The whole thing (taking self-defense classes) was very beneficial for me. So, it went above and beyond just paying for a class that I couldn’t afford. (C-7)
>
> I have to do things to help people…If I don't do it, the nightmares…will start coming back. [So] I stay involved…SDC bought me [printing equipment] …I remember the first time out, it was [for] cancer patients. They were children [in the hospital] …It’s gut-wrenching…but I’ve noticed those t-shirts and hats make them smile and I guess give them a sense of hope…They look forward to seeing me coming back. (C-2)

Another participant explained how the purchase of simple, tangible things, such as a train ticket and yoga class, create a path that ultimately translates to personal wellness as well as relationship transformation.

> I [hadn’t] seen my father for thirty years [before SDC] …It saved my relationship with my family…Other than buying the [train] ticket, there really wasn't anything that they could [tangibly] supply me with…Other than being able to see him. But again, making me feel better about myself made my relationship with my father better. Because I had a lot of shame about going to jail…So being able to take a writing class or take a yoga class or have a computer to work on, getting a website…made me feel like a real person. So when I spoke to my dad, I wasn't defined by [being] his son that just got out of jail. I was defined by this person who had a life and one who had a direction and a journey. And I could say to him, “Well, I'm taking a writing class and I just took my yoga class.” I didn't have to say, “I have to go see my parole officer.” I felt confident. It gave me confidence. And not only [with] my dad, in society…I'm not trying to be nice because the program has bought me things…This program really helped me and not because of the “things.” (C-8)

Another participant explained how purchasing a bicycle through the program helped them to engage in activities in the community, while also fostering a sense of independence.

> It's easier for me to just go out and take a ride…I can't go out and walk like I used to, cause [of] my [foot problems]. But I can get on my bike and ride around…I'm not just sitting in the same four walls, staring at the wall all day, watching TV…NA meetings, Bible study…it helps me get out to those things. It still gives me a level of independence...I don't have to always search for a ride…Sometimes it just feels good just to do things on my own. (C-1)

Some participants also commented on the intersection of their mental health and spirituality, and that SDC helped them pursue spiritual activities, such as yoga or a spiritual retreat, which helped promote their well-being.

> One of those services that self-direction helps pay for me [is] the spiritual counseling…the biblical counseling that's been really important for me…I still also see a therapist but having a [spiritual] counselor has helped me to identify and work through things that I realized [a therapist] would not be able to counsel me. (C-13)

Finally, participants also explained the significance of SDC in helping them maintain long-term recovery from substance use.

> It is the longest time I have sustained sobriety…in my adult life…The additional supports that SDC was able to help me implement in my recovery absolutely were essential because it also gave me a little bit of motivation—well here's this program that's helping me. I don't want to screw that up…When I think about the number of treatment episodes I had prior to starting since that last period of sustained sobriety—I feel the goal of the program—to keep people from utilizing those crisis service responsibilities…in my case was very successful. I'm not going to say my whole recovery is because SDC helped me. But…it was a big additional support. (C-5)

> This program came along and even like little things…Little things, I couldn't even do that. So without them, I wouldn't have had those things where…I may still be using, if it weren't the case. I'm able to try to do things on my own, like I've always done, and you know it doesn't always work out. It took me a long time to learn that [sometimes you can accept support]. (C-1)

Research Question 1.3: What was the experience of non-participant stakeholders in the SDC Pilot program (e.g., Support Brokers, pilot site agency staff, State program development/ oversight staff, fiscal intermediary) in relation to SDC implementation including State oversight and contracting, fiscal policies and procedures, hiring of SDC staff, recruitment and work with participants, and coordination with the fiscal intermediary?

This RQ included five hypotheses:

Hypothesis 1: OMH administrative staff will develop selection criteria, contract deliverables, and procedures for ongoing monitoring for both pilot site agencies and the fiscal intermediary.

Hypothesis 2: OMH administrative staff will develop fiscal policy and oversee fiscal intermediary and pilot site implementation.

Hypothesis 3: Support brokers will be hired, trained, and supervised by pilot sites and will interact with SDC participants and supervisory, fiscal intermediary, and State oversight to facilitate SDC among participants.

Hypothesis 4: Pilot sites will work within OMH administrative policy to recruit, enroll, and facilitate ongoing participation in SDC.

Hypothesis 5: Fiscal intermediary will develop a web-based system for entering, approving, and monitoring participant spending and will provide customer service to support brokers and SDC participants.

Qualitative Findings

Findings for this question draw from the document reviews (e.g., OMH and fiscal intermediary administrative documentation, pilot site administrative and participant orientation material) and qualitative interviews with informants representing key stakeholders (e.g., Support Brokers, pilot site agency staff leadership, State program development/oversight staff, fiscal intermediary, advocacy organization) across the SDC Pilot Program. Findings for this question are organized into four sections: The first addresses SDC pilot site selection and an overview of OMH oversight; the second focuses on SDC pilot site staff roles and the nature of support provided to SDC participants; the third presents a range of findings associated with key SDC processes including eligibility and enrollment, rapport-building, recovery planning/goal development, budgeting, and purchasing; and the last section further elaborates on OMH oversight including request reviews and approvals, and the role of the fiscal intermediary.

SDC Pilot Site Selection

The two agencies chosen to participate in SDC were purposefully selected by the Office of Mental Health for their knowledge of self-directed care or related expertise but with eye toward distinct differences in their mission, experience, and context. When selecting pilot sites, state agency staff emphasized the need for community-based programs that already had experience with Medicaid and Medicaid Managed Care (given the HARP population to be served) and additionally highlighted both sites being peer-run as beneficial. The sites chosen also offered an opportunity to pilot the program among agencies that differed in geography (e.g., urban, suburban), and operating structure and programmatic expertise, with one site focusing on a wide range of services within mental health and the other offering comprehensive services across a range of disabilities, including prior experience with operating self-directed care for people with developmental disabilities.

> They take slightly different approaches, but we looked to standardize the policies between them and the procedures, but they took a slightly different approach based on the staff and culture, resources that their agencies began with. (OMH-10)

In addition to implementing the SDC pilot, each agency offered a comprehensive array of other services including supportive housing, education and employment, health and wellness, and care coordination. The SDC pilot was generally described as well-integrated into this existing infrastructure and other services, and most participants received other services in addition to SDC. Many referrals to SDC had originated within the client population served by the two respective agencies; other participants, newly affiliated with the agencies through SDC, could also be connected to other services as SDC staff recognized participants' additional needs that could be addressed beyond their program. These high levels of integration into existing agency infrastructure and the close linkages to other support services was beneficial to SDC program operations.

Stakeholders from one site in particular also highlighted how the SDC program being immersed in the agency's culture of person-centered and recovery- and advocacy-oriented services facilitated implementation of SDC operations and processes that promoted the self-directed nature of the program.

> It's a natural fit…The program is self-directed. The pilot program is situated within a grouping of other types of support and services that are very recovery-oriented and I think it has an ethos to it, so to speak. That is something that I think is shared amongst many of the other programs in [the] division so that it's really trying to enhance and highlight the participants' own perspectives on what they need to move forward in their recovery process… So we see some referrals from other programs within the same division…other parts of the agency as well certainly. But I think it's sort of similarities in how we approach participants in these types of programs that make it a smooth integrated part of the rest of the division. (L-2)

SDC Sites and OMH Oversight: Enhanced Communication and Collaboration and Evolving Guidelines

Stakeholders described initial stages of the pilot as a learning process that required extensive communication and coordination from all parties (e.g., participants, staff, leadership, and OMH) while deliberating and developing parameters within which the program would operate. There was broad consensus that a closer and more efficient collaboration between OMH and site staff emerged over time, with reduced need for ongoing meetings and less time and effort needed for clarification regarding various aspects of the approval and purchase process. Stakeholders emphasized that everyone had developed "greater understanding across the board" regarding how to relate purchases to goals, what factors go into approval decisionmaking, and what the overall parameters were for budgets and purchase requests, and that this meant that "things just run smoothly."

> In the beginning…we were meeting with fiscal almost on a daily basis and now I would say it's probably less than 1 percent of the purchases that they have questions on. Most of [the requests], the support broker supervisor approves them, fiscal gets it, looks at it, if they have a question they'll ask us, but very few at this point… I think that there is greater understanding across the board, not only from our folks internally, but from the agencies who were working with the individuals receiving the service, as well as the individuals themselves. (OMH-16)

Stakeholders noted that the process of developing policies was often collaborative and ongoing, taking into account multiple factors and a range of emerging scenarios from different perspectives. For example, stakeholders described this approach within OMH:

> Our guidance comes from the federal guidelines on this program and then the state interprets those guidelines based on leadership feedback. So fiscal and program [divisions] may see eye to eye on the interpretations or have different interpretations of particular parameters of the federal guidance. So, we'll discuss those as they come up in the pilot. We generally have an understanding that fiscal's doing the day-to-day operations of the fiscal work and program is doing day-to-day operations of the program side, and we interface where those two things overlap. (OMH-10)

Overall, stakeholders described the process of developing certain monitoring procedures and fiscal policies as generally geared towards building a sustainable SDC program that would align with Medicaid guidelines.

> [OMH is] really thinking about how we are going to make this viable. How are we going to make this replicable, making sure that it goes through the Medicaid guidelines for the program to move forward, and what would be considered an allowable expense? So that's the lens they're looking at things through. And that's usually the feedback that I would get. (L-3)

The next section reports on pilot staff roles, including support brokers and supervisors, as well as descriptions of how SDC participants are supported within the program.

SDC Pilot Program Staff

While staffing patterns fluctuated at both sites, at later phases, both sites implemented a SDC pilot program staffing structure consisting of three support brokers, a full-time program manager for direct supervision, and a program director for additional oversight.

Support Broker Role. The support broker role was essential to the operation of the SDC pilot program. Almost all support brokers hired had prior experience in behavioral health, with many having experience in case management or care coordination. Stakeholders emphasized that in addition to prior experience in behavioral health, orienting staff to the SDC program and the role of support broker needed to combine both formal training, especially in topics such as motivational interviewing, trauma-informed care, and how to develop SMART goals, as well as on-the-job shadowing of other support brokers. Sites also participated in joint training and technical assistance provided externally by consultants with expertise in SDC or by OMH, particularly in early phases of the program. Given high levels of individualized decisionmaking and tasks that are not usually part of other behavioral health services broadly (e.g., ongoing client budget tracking), this job shadowing allowed staff to see potential challenges that might arise and the range of support that participants might need. Given the self-directed nature of the program, there was a need to ensure that orientation and training helped support brokers to fully embrace and empower participants taking the lead in identifying goals.

> A lot of people [with a history of mental health service use] …have been told what they need by different experts and different clinicians in the context of mental health recovery for so long. [So there's a need to put] a lot of emphasis on self-determination as a core value and thinking about how to even set up a conversation with a participant around what that means for them in the context of

> this program…I think new participants are oftentimes unsure about how to even utilize this program because nobody has ever really asked them these types of questions in this way. So, there's a certain skill set and training that's required, I think, to really approach a participant… around where [they are at], what they would like to be accomplishing. (L-4)

In describing their role within SDC, support brokers referenced many of the tasks stated in their job descriptions:

> [We] assist people with identifying goals related to all different types of wellness…along the 8 Dimensions of Wellness…and getting people to activate on them and make a plan for things, items, or services that they need to achieve that goal and then we assist them in budgeting process, helping make sure that people are getting the things they need to stay on track for recovery. (SB-11)

These ongoing daily tasks included helping participants identify goals and potential resources/services needed; entering goals and purchase requests in the State portal in ways that clearly articulated the specific need and justified the requisite dollar amounts; keeping track of individual participants' budgets; ensuring purchases were made within the required timeframes; requesting receipts from participants and uploading them to the portal; helping to record and mediate grievances and appeals; and keeping supervisory staff appraised of participants' goals, requests, and purchases. However, SDC staff also emphasized that each participant required a highly individualized approach—"You can't cookie cut your approach to everyone; it's just not going to work"—and that some required extra support to ensure successful participation in the program. Factors identified as influencing the extent of support that support brokers needed to provide included participants' ability to identify goals and manage the purchase process and budgeting, as well as how connected participants were with other providers, and the degree to which SDC staff were able to collaborate with those other providers. For example, SDC staff support could be less intense for participants who were closely connected and willing to work with care managers who were also responsive to communication with SDC staff.

> Being connected to other services is helpful, especially when they are internal to the agency as there can be multiple staff to help support a participant going through something… I'll just pick up the phone or send an email or a text like, "Hey, something's going on with [participant], can you give me a call?"…So in-house we work great together. (SB-5)

Supervisor Role. Given the fairly unique role of support brokers within a program focused on behavioral health, as well as the complexities of navigating SDC processes and external partnerships with the State, supervisors played a key role in ensuring daily program functioning. Supervisors described their role as providing support and guidance to support brokers, conducting internal reviews and approvals of goals and purchase requests, providing coverage for support brokers and further addressing participant concerns as needed, and serving as the managing liaison with OMH, including advocating on behalf of participants (e.g., providing additional rationale for OMH to reconsider a purchase request that had been denied). Supervisors also noted that their role included developing the structure of the program to ensure that support brokers had sufficient resources and support to fulfill their roles effectively. As the program matured at each site, supervisors were seen, in particular, as providing essential guidance to support brokers on how to translate potentially ambiguous rules, processes, and individual scenarios into everyday goal planning and purchase requests.

> [My supervisor,] he kind of will do the buffer work where it's like, "I think OMH is also going to push this back. So maybe just add this one thing here, this one thing there." He does a good job of proofreading all of our budget[s]…[If] I entered everything, and he feels I'm missing maybe one more thing…he'll tell me. (SB-12)

Supporting SDC Participants

SDC staff often emphasized their main responsibility was to best support participants in their own self-direction towards wellness and recovery. While the sites shared an overall SDC program manual, each site further developed materials to help support brokers with policies and procedures, and to orient participants to the program and support them with goal exploration (e.g., goal worksheets) and budgeting. As one support broker described, the process of developing goals might look a little different, depending on the degree to which participants themselves already had a clear vision of what they wanted to achieve, but ultimately the process focused on helping the participant to elicit and articulate potential goals.

> The idea is that these people are really guiding their own care and they're coming up with their own wellness goals and they're coming up with their own budgets…I am at large [an] extension to bridge between them and [fiscal]…I think my job becomes much more conversationally involved…with the participants when they're not exactly sure what they want to do in terms of their wellness goals…[so I have to] do that thing where I'm listening to what they say, but maybe guiding it in a certain way…But a lot of participants, they are guiding themselves completely. They come to the meetings with a literal Excel spreadsheet that has "I have this goal in mind and I want to do this, and I want to do this and I'm going to purchase this for this many dollars…" But across the board at the end of the day it is completely self-directed. (SB-6)

Beyond individualized support to help participants deliberate and prioritize goals, staff noted that some participants needed extra support to research and review guidelines regarding what is and is not covered by their Medicaid plan, coaching on how to use technology to identify and purchase goods/resources on the internet, and that brokers also often needed to maintain a listening/supportive presence during times when participants experienced additional stress (e.g., death of parent) or mental health challenges (e.g., increased anxiety). Stakeholders also emphasized that participants sometimes had unmet basic needs (e.g., food), experienced stressful life events, or simply felt lonely. Because "people have so many extra needs that are involved in the program," support brokers had to negotiate how best to prioritize supporting participants with

SDC-specific activities and wellness goals, while also ensuring that they were responding empathically to a range of participant concerns:

> Sometimes my clients are gonna call…They're having a bad day and they might just need to talk to somebody for 10–15 minutes to get whatever off their chest…So just to say that you're going to speak to your client, you're gonna help them with their goals, you're gonna get their budgets made, get their money, get their budgets approved, let them know that the money's ready, get the receipts—that's not it. The role is so much more expansive that just that…We do have a job description we have to adhere to, but sometimes you have to be human, and human does not mean that I'm adhering just to what's black and white. (SB-5)

In navigating the boundaries of their role, support brokers noted they might provide some additional direct support as needed that might "not technically" be within their role (e.g., referral to a food pantry), offer basic guidance on navigating a different benefit system (e.g., housing applications), or connect the participant to other providers whose "primary role" would be to offer the more enhanced and ongoing support outside the scope of SDC. As noted, support brokers having to step beyond a straightforward process of documenting goals, developing budgets, and processing requests was more extensive when other providers' involvement was more limited, whether due to turnover of other providers or participants' comfort level in working with providers outside of SDC:

> It's a unique relationship [participants have with us] and they don't have as much interest in involving other people in the process [even though] they might have multiple supports…So due to that…we had a little more than we expected to take on with some individuals. (L-3)

When discussing SDC broker caseloads, staff weighed the most significant factors that contributed to their perceptions of feasible caseload ratios. This included the extent of support that participants needed, the degree to which participants were connected with other providers, whether participants were newly enrolled or more established with the program, and the time that support brokers needed for administrative tasks and travel to see participants. Given variation across these factors, providers' perceptions of feasibility generally centered around ongoing caseloads between 25 and 30 participants.

> The caseload now for each individual is somewhere around 22 to 25 each, depending on the individual, and we're looking to ramp that up with each person. We're hoping that we can get to about 30…Part of the original structure…was to not just meet people in an office, but to meet people in a place of their choosing… [At this location], it can take an hour and a half to get from one area to another. So as that ramps back up, we'll have to re-evaluate where our caseloads can stand…But right now, we feel we have the capacity to at least get to 30 each. (L-3)

The next section focuses on describing various SDC pilot program processes including eligibility and enrollment and the use of a person-centered approach to developing goals and recovery plans, budgeting, and purchasing.

Participant Recruitment, Eligibility, and Enrollment

A prior evaluation of the SDC pilot reported that referrals came from providers and interested individuals who had heard about the program through advertisements or word of mouth. As before, especially in earlier phases, sites reported that they relied heavily on their internal client population being served by other programs for referrals while also attempting to reach individuals external to their agencies:

> We had done some email blasts to various different HCBS service providers, housing providers, all different types of mental health agencies, clubhouses, PROS programs, and presentations to several of those that we could. Word of mouth seems to be the biggest referral source over time. (L-3)

However, given that the focus of the SDC program was widely well-received but that slots were highly limited to 100 per site for the pilot, there was quickly higher demand than capacity, especially when sites experienced hiring delays and turnover, and the sites had to start waitlists.

> I was a little anxious starting the program…We can only work with 100 people…There's 80,000 people that are technically eligible for this service…We got to [a] waitlist pretty quickly on…First it was referrals and then we just had an application. That's not—there's no denial piece, but we wanted to make sure we knew people's Medicaid numbers to check their HARP because people often didn't know if they were HARP enrolled. (L-3)

While there were minor differences between sites, stakeholders described an enrollment process, especially in later phases, that generally consisted of participants completing an application, attending an information session, confirmation of SDC eligibility (i.e., HARP enrollment), and preliminary engagement and completion of paperwork through individual meetings with support brokers. Both sites developed informational materials to provide to participants, as well as introductory worksheets or forms for purposes of orientation and enrollment. The eligibility and enrollment process was generally estimated to take approximately four to eight weeks, after which participants would receive their card and be able to make purchases.

> It takes about a minimum of…three to four [weeks] before the card is issued. We have our first introductory meeting where it's just one on one…We're just chatting and getting to know them. And then we fill out the basic paperwork of "Who are you, what would you want to start your goals?" …At the second meeting is when we do real paperwork. We're talking about Medicaid numbers, things like that. And then, the third and fourth interview is…where we get down to the nitty gritty of "What have you been through. What do you want? What do you see for yourself…?" [At] about the fourth meeting after that meeting, that's when the card is in-transit and it's getting ready to be theirs. (SB-12)

Overall, stakeholders identified limited staffing and staff turnover as the biggest barrier to SDC enrollment, particularly vacancies in the support broker roles. While both sites were now, generally, fully staffed, stakeholders noted that program stability and capacity had been achieved more recently. Filling support broker vacancies had been particularly challenging during a stretch of time at one of the sites, thus resulting in a pause in enrollment of several months and overall fewer participants served to date.

> The original thoughts on paper were a caseload of 40…Over time, we were recognizing that we actually needed more staff to be able to reach those numbers…We shifted things around [budgetarily] so we would be able to hire an additional staff member…Almost that same time, we lost one of [our] resource consultants…And it took a really long time to hire people…I'd say about six months, maybe longer. It was just me and one other resource consultant holding down the fort. (L-3)

Stakeholders specified that assessing eligibility entailed confirming that applicants were Medicaid Managed Care members who were enrolled in a HARP and that from there, applicants were enrolled "quite literally based on the time they applied for the program, so almost like a first come, first serve." While stakeholders emphasized that a central tenet of the program is that "anyone is able to self-direct with enough support" and, as noted, that enrollment into the program was "first come, first serve" for those HARP members who were interested in joining, there was, nevertheless, also some discussion that signaled possible consideration of potential participants' readiness and "fit"—"If it's not gonna be a good fit…'we'll get back to you…'" Factors that appeared to play a role in potentially thinking through applicant fit with the program included staff perceptions of how applicants were intending to use the program (e.g., to meet recovery goals versus simply to purchase things they desired), how eager/insistent applicants were to begin making purchases, or whether they had significant competing basic needs that might impact their ability to participate in the program as intended (e.g., experiencing homelessness):

> Their ability to "self-direct" kind of makes the determination. There're some people that come in and right away before they even see if they're eligible, they're coming in for their 'check'…You haven't even gotten to what the program is, or what it does, or how it'll help them, but they have a shopping list of things they wanna get. That's a "No, because you're not going to use this program the way it was meant to be used." (SB-5)

While there was some discussion of fit, it was unclear the degree to which these informal deliberations of participants' fit with the program actually resulted in not accepting certain participants perceived as potentially having a "red flag," or whether it resulted in a more extended and enhanced enrollment process, with staff adopting a more cautious approach to initial purchases for certain participants. Additionally, stakeholders indicated that though the pilot site agencies maintained databases of participants referred and enrolled in SDC, there was currently no process built in for systematic tracking and reporting of flow into the program that would allow for a complete accounting, for example, of the number of participants referred or who applied, how many were eligible and of those eligible, how many were not enrolled, and reasons why. Nevertheless, non-participant stakeholders overwhelmingly emphasized that, from their perspective, applicants choosing to not continue with the intake process was the most common reason for eligible individuals not enrolling.

Building Rapport, Goal Development, Budgeting, and Purchasing

Building Rapport. Upon enrollment, site staff described a phased approach to supporting participants with identifying goals, developing recovery plans, and managing budgets and purchases. They noted that in the early phases of a participant's tenure in the program, support brokers focus on building rapport with the participant, clarifying the purpose and parameters of the program, helping participants to prioritize goals, and testing out the purchase process with participants.

During the first several weeks upon enrollment, staff described spending time to try to get to know each participant by having "open and honest dialogue," with conversations that focus on understanding different aspect of participants' lives: what "they want to [do] and what exactly is preventing them from doing some other things," and "what they want to get out of the program." In addition to getting a better understanding of participants, staff also dedicated time and effort to ensure that participants developed a clear understanding of the program and what it entailed, underscoring that "you just don't get a bank account full of money."

> When we first start the process with an individual and we're getting to know them, self-direction is very new…It takes a while to get everyone on board with what specifically we can do and what we won't do, and how we operate. And we want to spend some time getting to know them, really understanding all of their wellness goals. (L-3)

Goal Development. Much of the initial (as well as ongoing) work within SDC involved supporting participants with developing wellness goals that reflected participants "really guiding their own care." Particularly for participants starting the program, there were differences with respect to how well they were able to identify and articulate goals. For those with multiple ideas for goals, site staff explained that part of their support involved assisting participants to prioritize goals that they may want to work on. In the beginning, this often meant helping participants to identify one immediate goal—frequently centered around addressing a basic need (e.g., cellphone to maintain contact with SDC staff, adequate clothing, furniture that allowed the participant to function with less pain, or supplies for maintaining a more home-like environment)—that would allow participants to experience the purchasing steps required, give staff a sense of the participant's ability to adhere to program guidelines, and help participants secure some fundamental resources before moving along to more higher-order or long-term goals.

> A trend with people in the beginning with us is getting basic needs met…just making sure their housing and life at home is stable and comfortable. [For] some people, mattresses is a big one…Things that a lot of people get: transportation…[to] be able to baseline get around. And then a lot of clothing and things like laptops, just to have an equal opportunity to present themselves confidently and hygienically and then also have the tools to seek things like classes or trying very actively to get back into work in some situations. (SB-11)

Stakeholders discussed the SDC budgeting process, which would occur in tandem as SDC participants and their support broker would identify one or more measurable goals, and the services and goods required to help achieve each goal. During the process of developing budgets, support brokers helped participants to understand certain limits on maximum allowable amounts for certain categories or certain items, while also explaining there is a need to develop budgets that can keep pace with someone's participation in the program. For example, support brokers would encourage participants to think of their participation in the program long-term and that their budgets would need to last for multiple goals that they may have now, as well as goals that they develop in the future. Program budgets were, therefore, generally structured in quarterly breakdowns to help participants pace their spending, and most SDC participants did not reach the annual maximum spending caps (i.e., \$8,000 or \$16,000).

> The program is about goals related to your recovery in relation to those eight dimensions of wellness…Just because you can use up to \$16,000…you can't just go out and buy \$16,000's worth of stuff. Every purchase has to relate back to a goal and usually the goals are foundational. So they will hopefully build towards another goal. (L-2)

As participants' tenure in the program increased, they were then more likely to pursue more long-term goals, have more goals related to maintaining their wellness, manage multiple goals simultaneously.

> We would help them prioritize where they want to start…we always kind of start with one thing first. And as we move along in the program, and as they've maybe started the first goal, made that first purchase, [they were] able to get us that first receipt. Then we start to add more and more items. And then we'll see people have some goals that might be more of a maintenance goal over time that they can do—a goal about maintaining their lower stress levels by utilizing a gym at the same time as an education goal…Our participants will [often] have about maybe five goals active at one time if they've been in the program for a while, because some of those might be maintenance, and it's regular acupuncture, and some of them might be more education or I'm trying a new hobby... (L-3)

Staff noted that there were also participants who entered the program with few ideas for goals and uncertainty about how they could move forward in their recovery. For these participants, staff had to assume a more proactive role in further exploring possible goals, engaging in more in-depth conversations to help kindle and create a sense of hope and possibility for clients, while being careful not to compromise the self-directed nature of the program:

> I think with some clients who have been frequent users of the system—there's been a little bit of learned helplessness that has come about, and the clients will… say, "Oh well, I don't know what to do, I can't do anything." And it is like, "Okay, well now we have got plenty of time, we can work on this with you...I can help navigate, but you are in the driver seat. You need to kind of direct everything," and with a lot of clients that can be a challenge sometimes. (SB-9)

> With certain individuals, it will take some time to understand and help them articulate what they're going to see out of some of the things that they want to do with their time. And we found that working on goals related to experiencing joy is an important part of the program. We want to make sure that goals aren't just about reducing negative symptoms or reducing stress or reducing depression or sadness, but we want to frame things in a positive way as well. And we want people to…try to experience things that is going to put a smile on their face, which inherently is going to relax them and make them feel stress free as well. (L-3)

Further, most SDC staff explained that they would generally try to minimize the degree to which they would decline to move forward with an individual's purchase request internally, and that they would instead try and spend additional time and effort to help the participant further articulate their goal and how the requested resource was actually connected to it.

> We don't do as many [rejections] of those internally…if we feel it's not super approvable, we're almost trying to get a better understanding of how it relates to someone's goal. But if it isn't relating to a goal, you're going to have to let someone know, "We need a better understanding or we're not going to be able to move forward." …There's one individual that was talking about wanting [an item] for quite some time, and it ended up being something that we could see how it related to their goals, but it did take several meetings to understand. So, we were really trying to work with them to figure out how they were going to utilize this… [to further] a goal in a goal-related fashion… It didn't come out right away, but [over time working with them] they were…going to be going to school…and we're like, well, that makes sense now, that we understand. Like, this is also related to education. (L-3)

Finally, providers noted that they also needed to help participants formulate goals in ways that would be measurable and [theoretically] achievable, citing that it was important to be able to conceptualize how benchmarks and progress could be identified along the way. They explained that this explicitly did not mean asking participants to abandon goals that others might perceive as unrealistic but helping them to tailor the language to better align with potential indicators of progress.

> When we're saying it's achievable, we're talking about taking a goal and figuring out what are the steps that are required to get from [A to B]. It is to think about framing those steps in a way that it is, in principle, actually something that can be

> accomplished. Because sometimes people could write goals in ways where the language is such that it's something like how would you even know if that was achieved? (SB-4)

Purchasing. Most stakeholders noted that there were some enhanced parameters regarding making purchases in the very beginning, allowing staff to get a sense of how the participant would be able to identify and research purchases, manage making requests, and follow-through with purchases and receipts within required timeframes. While there were some differences in how stringently site staff approached this early phase, overall, this meant that initial purchases were generally formulated to be of more modest cost and, as noted, to meet a more immediate short-term wellness goal that did not involve multiple open requests at one time. Once participants developed familiarity with request and purchase processes, they were then able to explore resources/goods that may involve more substantial cost and—as appropriate—make multiple requests and have access to higher card balances.

> We start out a bit more modestly assisting in that direction [of their goal], and if they actually are successful and they need help to move to the next level, we could provide that help. But we don't make a very large expenditure on the front end until the person demonstrates their willingness to pursue it and their ability to pursue it. (OMH-16)

Importantly, while SDC used some of this phased approach, there was still a focus on aligning program operations with participants' goals by strategizing creative ways to facilitate access to needed resources.

> In the case of the photographer…the camera that he requested was really expensive. So, we weren't going to pay for that, but what we did is we allowed him to rent a camera and then we rented some studio time for him to take some pictures and again to start to get his business to come back. And then after I would say six months, he requested a more modest camera that we did pay for. (OMH-16)

Misuse of Funds. Misuse of funds was defined as instances wherein participants spent SDC funds on resources for which they were not approved, whether in terms of a mismatch between the type of resource approved versus purchased, or by exceeding the number or allotted dollar amounts of the resource that were originally approved. The most consistent finding regarding misuse was that almost all stakeholders reported that participant misuse of funds occurred far less than had been initially expected and that, overall, misuse was fairly infrequent.

> It was next to none. I was surprised how few abuses there were, but I think the critical part of that is we had real time data through (the card company) and we had a fiscal intermediary. As soon as something was purchased that was sort of outside of the line, they would immediately suspend all the funds on the card, pull the funds off the card, inform the agency, the agency would contact the individual… It was immediately flagged. (OMH-16)

Stakeholders elaborated on the different types of misuse and procedures for addressing them. Misuse was described as primarily unintentional or accidental, reflecting instances where the participant neglected to request permission for additional, but legitimate, fees associated with a purchase (e.g., tax, shipping, etc.), stayed within their budget limit but bought different quantities of an item than they were approved for (e.g., purchased two pairs of shoes at a lower price instead of one more expensive pair), or used the funds approved for one item to buy another item that had not been requested (e.g., not noticing the SDC card had been set as the default payment on an online platform when completing a purchase unrelated to SDC).

> If we're buying clothes and we want to say, "You're buying three pairs of pants and two shirts" and you buy five pairs of pants and two shirts, technically even that is considered misspending because…you want to buy exactly this amount. (SB12)

The other form of misuse, described as more intentional misuse or abuse of funds, was even less common, but occurred when participants were approved for one item but bought another item, knowingly exceeded the budget limit of their purchase, or purchased an explicitly prohibited item:

> [There's] been small, repeated times [of misuse], where it seems without my support with every purchase, the person was not completing it correctly. And there are some cases where people did buy things like alcohol or cigarettes, but that's also pretty rare. (SB-11)

Program staff differed in the degree to which they described adopting a standardized and firm stance toward participant misuse of funds versus a more individualized and flexible approach. Nevertheless, most noted that there was a moment of taking a step back or a pause in response to misuse, but that the nature of the misuse and a participant's prior purchase history also influenced how the misuse was addressed. Some described a more automatic pause in response to any form of misuse, with the participant being placed on a hold from making purchases, followed by possible discharge if misuse recurs: "When it's a misuse, whatever the case may be, they go on a 30-day hold…They're informed the next misuse is a potential discharge…" Others described a more individualized response that factored in the type of misuse and the context in which it occurred:

> We try to understand where the misspending came from…Were they being honest when we asked them questions or did they purposely kind of lie about how the money was spent…We want to work with people throughout their challenges…and we look at discharge as the last resort. (L-3)

Many staff recognized the extensive challenges that made it difficult for some participants to fully comprehend budgeting and purchasing rules. For participants who experienced these struggles, staff described implementing a series of strategies to provide greater safeguards on participants' spending and assumed more control over the actual purchasing process, while still supporting the participant to maintain self-direction. These strategies included only allowing the participant to have one approved purchase at a time, having the program directly supervise or complete the actual item purchase, or temporarily further limiting the amount of money that a participant could have on their card.

> There's a couple different ways that misuse of funds comes up and it just depends on from participant to participant…There's one participant where, for example, we try to go as many times as far as we can, before we move to the stage of removing the card from the possession of the participant and…we just complete the purchase ourselves online or only during a meeting with the participant…[Other] participants will kind of get moved to a slower system of approvals, where those participants won't have three things approved at the same time. They'll have one thing approved. And after they submit that receipt…then they'll move on to the next thing. (SB-12)

Staff also noted the importance of not only reminding participants of program rules and imposing consequences, but also engaging them in conversations to troubleshoot how and why the misuse happened, which would inform strategies to try and prevent misuse in the future.

> We have sort of used a strike system and it involves a rich conversation behind it: why [did] this situation happen, what happen[ed] leading up to it, were there any barriers they felt like they couldn't discuss beforehand with me or another program staff member to explain what might be happening. And then, if we've done a pause on spending, "Okay, you might have purchased this thing that was not approved, so for a month we're going to check in, but we can budget it again next month." (SB-11)

Differences in staff approaches to misuse were partially influenced by the philosophical perspective of the staff member with respect to participants' misuse. Some staff were generally more skeptical of participants' intentions in using the program and were more likely to perceive misuse as participants "taking advantage" of the program, whereas others were more likely to view misuse as arising from the challenging circumstances of extreme financial hardship in which participants lived. Another factor contributing to differing perceptions of misuse was the more recent hiring of staff who were still gaining experience and supervision on the job:

> We have tried to make a system for [misuse] so it doesn't feel arbitrary, but it is difficult when working with a few new staff members and taking in new participants. Some of that gets lost, especially as we hired some of the staff right before the pandemic shutdown…so it's difficult to get everyone on the same page. (SB-11)

The next section further expands on OMH oversight and the role of the fiscal intermediary, including the process for reviewing requests and purchases, factors involved in approval decisionmaking, and use of the portals.

Review, Approval, and Monitoring of Requests and Purchases

When discussing what reviews of purchase requests entailed, stakeholders identified several factors that fiscal intermediaries considered, such as if the requested item was allowable under the guidelines of categories and items that were explicitly prohibited; if it was cost appropriate (e.g., the average cost of such an item, was it considered a reasonable cost given its intended use), and the degree to which the request was connected to the participant's wellness goal.

> We have the parameters of the program; we do have some prohibitions on certain types of purchases. You're not supposed to pay for people's rent or [most] ongoing [costs]. So, if we get a request that does not fit into the parameters, [the] approved categories of requests…there are limitations, so, we look to make sure that the purchases and the goals are appropriate to the program. I mean that's probably the first major pass. (OMH-10)

Stakeholders highlighted that in later phases of the SDC implementation, reviews of purchase requests became more straightforward, with both the sites and OMH having developed a better understanding over time of what may or may not be approved. Nevertheless, stakeholders also noted that there was still a more complex and nuanced decisionmaking process for certain purchase requests. There was also a lack of consensus regarding whether budget limits for certain items were to be interpreted merely as guidelines or as stringent caps. Factors that could make decisionmaking more complicated was when there were deliberations regarding the appropriateness of costs for a certain item, the reasonableness of the request given participants' prior purchases or goals, greater scrutiny of whether a request was perceived to be the most appropriate way of achieving a particular goal, and a range of other factors (e.g., how will participants prevent a costly item from being stolen). This meant that questions would arise such as in what amounts or with what frequency should individual participants be allowed to purchase similar items, could there be potential safety concerns (e.g., what would otherwise be a valid and fundable transportation cost being reconsidered during COVID-19), or which category might a particular service or good fall under (e.g., calm app subscription falling under the entertainment category versus kindle app subscription falling under education).

> There are finer levels of discretion…if it seems like it's an appropriate category, but we have concerns about the request for [a] particular item… [for example, if something] is not FDA approved, if it's like some kind of supplement or something that might run afoul of the law…. (OMH-10)

> It's really nice to be clear with the participants about what they can expect. Like there just are some parameters around this…And that said, we also recognize, and I think OMH does too, that there are always exceptions, but that makes sense…I think the difficulty…arises out of situations where sometimes an exception has been made and then you're stuck in the future being like is this similar enough to a situation where we made an exception, or we want to make it again? (SB-4)

Stakeholders also acknowledged that, given that the SDC pilot relied on state public funds, there were inherent challenges to approving resources that were arguably credibly connected to participants' wellness but were perhaps more controversial.

> There's the politics around whether or not the state government wants to deal with, is it an appropriate purchase based on using state money to spend on those types of things? So those are questions that would get run up the flagpole and leadership…would have an opinion. So, there's definitely specific requests that might seem to be within an approvable category, but for some reason there may be objections to it… (OMH-10)

Given the range of potential factors that were sometimes considered in the decisionmaking process, stakeholders noted that there was still not necessarily consistency in reviews and approvals.

> There's been a lot of back and forth sometimes and kind of personal bias when it comes to things that get approved versus things that don't get approved… There's been a couple of times… [intermediary staff] would disapprove something that we advocated for…They would say "no" and then we would resubmit that same exact thing and maybe ask for it to just get pushed to a higher up. And when it does, it gets approved because they're like, "Oh we don't see why this wouldn't get approved in the first place." So a lot of times, there's been instances of the fiscal intermediary themselves just deciding what is wellness for the participant. (SB-12)
>
> There is a significant disconnect between who we are and who we serve and our knowledge about the demographics [of the people] we serve and the fiscal people at OMH…I submitted the budget [for an item], it's under the threshold… [I'm] thinking it's going to be an easy thing. I got the pushback saying that "Oh well, we bought him [something similar] a year ago…" I fought the fight. I advocated. And they still did not want to…I think they finally approved [it], but it was a month…there's a little too much scrutinization, where[as] if we had clearly defined parameters and if the parameters [are] met, [it] should be an approval…So then they started giving us some parameters…We've kind of grooved to them as they've come down and change a little bit here and there, but sometimes it just doesn't seem there's a rhyme or reason…Sometimes there's, I think, there's a little more personal opinion…that might cloud the process. (L-2)

However, stakeholders also credited more nuanced decisionmaking processes with significant advantages as well, because they created the space and opportunity for participants to have their unique needs and circumstances addressed, as would be needed in order to align with the program's self-directed premise.

> I am happy to see that, in certain circumstances, we're still able to look at things on an individual basis, which I think the program really strives for. (L-3)

Beyond reviewing and approving requests, one of the primary roles of the fiscal intermediary consisted of monitoring spending and the status of purchase requests using both the SDC portal and the credit card portal. Through these mechanisms and generating custom monthly reconciliation reports they were able to identify any potential card misuse or leftover funds. The fiscal intermediary was then responsible for notifying pilot site staff and/or OMH oversight of any potential issues that may have arisen during this process.

> [I had] a custom report that we had [OMH division] create…. I wanted the ID number, [the pilot site], the purchase ID, the budgeted cost, when it was submitted, when it was approved by a supervisor, when it was approved by me, if it was approved by me. It's blank on there if I haven't approved it yet, which immediately flags me to the fact that I didn't approve it. And then if a receipt has been uploaded and if it's been completed or dropped. (OMH-17)

> I do like to review if there is a lot of money left on a person's card…[and] identify whether or not all of the purchases have been made, if all of the receipts are there, so that I know whether or not I need to take money off the card before I go ahead and add more money…[Then I] check with the provider to see if there's a reason that something hasn't been purchased or if that money can be removed…[For] the purchase itself—if it's a cell phone, Wi-Fi, something like that—those are easily identified whether or not it's a normal amount of money or if there's something strange with it. There are things that have been approved in the past for specific clients that you would also approve unless the money is an outstanding amount of money. If normally acupuncture is coming in at less than five hundred dollars and this particular request is for more than five hundred dollars for acupuncture, I would send it to the next level and say, "This is more than we would normally approve… What are your thoughts?" So then at the next level they can review it and they can say, "Yeah it's fine because it has this additional reason why they need this extra." (OMH-18)

Research Question 1.4: What were the facilitators and challenges to SDC Pilot implementation and how would they impact statewide roll-out?

This RQ included one hypothesis:

Hypothesis 1: State oversight, pilot site agencies, and SDC participants will encounter both opportunities and barriers in the SDC process.

Qualitative Findings

Interviews with State oversight, fiscal intermediary, pilot site agency staff, and focus groups with participants revealed facilitators and challenges to the implementation of the SDC pilot program that would impact state-wide roll-out. Specifically, areas that need to be addressed when considering potential scale-up of the SDC program statewide included: balancing program flexibility/personalization versus standardization (clarifying factors that are considered in approval decisionmaking), streamlining some routine purchase requests while expanding communication regarding denials, ensuring fit between organizational/staff philosophies and the person-centered approach of SDC, exploring sustainability of current budget allocations/limits, clarifying participant tenure in the program, and increasing administrative efficiency (e.g., upgrading the portal).

Given high levels of satisfaction from participants' perspective, they noted generally minor areas where the program could improve. This included wanting to have greater understanding of why certain purchases are not allowed (e.g., education-related debt); greater consistency of purchase approval times; more routine monthly meetings where brokers systematically review participants' available budget, spending, and purchases; and minimizing challenges associated with making purchases on the card (e.g., vendors reject the card, zip code issues).

Balancing Program Flexibility/Personalization vs. Standardization

While all stakeholders reported that the SDC program operated within certain parameters, they also acknowledged there were some grey areas that allowed the program to operate more flexibly, which generally contributed to the program's success. This flexibility allowed for decisions to be tailored to individual circumstances, providing participants the opportunity to secure key resources that truly matched their needs and goals. When deemed appropriate, this flexibility allowed for purchases that may have exceeded certain pricing guidelines (e.g., a more expensive laptop with the advanced functionality needed to match the participant's use of it for their particular work goal), exceptions to the general prohibition on certain item categories (e.g., allowing payment for a subscription service because it was needed for accessing school books or make-up for a participant enrolled in cosmetology school), and developing creative solutions to facilitate a goal while avoiding an outright purchase denial (e.g., paying for supplies but not labor in making car repairs so a participant would have transportation to get to work). As noted, while having this grey area was generally viewed favorably and as being responsive to the unique context of each participant's wellness needs and goals, the downsides included that it introduced some inherent subjectivity to decisionmaking and was more labor-intensive and time-consuming. Having grey areas, for example, meant that it was not always clear whether similar factors were being considered consistently in decisions to submit and approve purchase requests.

> There're differences in how cases are considered depending on which people in which office are reviewing it…This [has] lessened as time has gone on. But in the past, there was a clear difference between a sort of financial office versus the office of the recovery programs, which is a reflection I think of training and perspective. (SB-4)

Further, this type of individualized decisionmaking required greater time investment as well as a significant amount of communication between support brokers, supervisors, fiscal intermediaries, and a range of other State personnel.

> It's a lot of conversation and back and forth. It's looking at an average cost of things that are out on the market and going middle of the road. A lot of times we've consulted our [other division] staff… "OK you have a sense of what the state pays…What would be sort of, not cheap, but not the most expensive. And what would you expect on it?" …And then it's a meeting of the minds—program

> and fiscal sit down, ”OK, well we think this is a reasonable threshold. What do you think?” …At some point…everybody agrees. (OMH-15)

As mentioned, stakeholders reported that over time, the program had become more standardized with clearer understanding of various parameters and decisionmaking processes, while still maintaining a high level of individualized decisionmaking and flexibility. A key question that emerged when considering program expansion was how to minimize instances where decisions felt more arbitrary, and perhaps even more importantly, how to balance this individualized and flexible approach with the possible need for greater efficiency that might be achieved through more robust standardization if more people needed to be served.

> Hopefully, as these opportunities expand for other people in New York, that there would be a lot of work to be done there to both keep the flexibility that makes this program successful in place, while also having enough structure set so that there's not just sort of constant back and forth about interpretation of the policies. (SB-4)

> You lose some flexibility. You lose that potential to tailor something to an individual who just needs another $25 on this…We have that flexibility right now, which is great, because we can address specific situations in a reasonable way. But that kind of flexibility doesn't lend itself to scale. (OMH-15)

However, most acknowledged the inherent difficulty of putting “a cut and dry directive out” and standardizing a program that is centered around self-direction.

> That's sort of [the] tricky part that there may be work to do, to make some more robust policy statements around that because it's hard to make policy around these sort of ambiguous grey areas…Hopefully as these opportunities expand for other people in New York that there would be a lot of work to be done there to both keep the flexibility that makes this program successful in place while also having enough structure set so that there's not just sort of constant back and forth about interpretation of the policies. (SB-4)

Managing Purchase Requests

SDC staff perceived the current timeline of enrollment as acceptable and were uncertain whether it could or should be further streamlined or expedited so that participants can start the request process sooner. Potential suggestions, nevertheless, included having slightly longer but fewer sessions or having participants—who are able—preliminarily complete some of the more routine paperwork that does not relate to goal development on their own.

Though drastically reduced from earlier stages, providers explained that there were still times when more information or context from fiscal intermediaries would be helpful, particularly regarding certain purchase denials or request approval times that extended beyond the usual two to five days. While longer approval times and request denials were much rarer in later phases of the pilot, there were still instances when providers noted having more “adequate information” would be helpful to fully understand the process behind a lengthier review or the rationale for a denial, particularly so that they could then relate this to participants. While OMH stakeholders articulated several steps that would often occur "behind the scenes" to try and facilitate review, there may have been times when providers on the ground were less aware of the steps involved for more nuanced reviews and consultations across various departments.

> A better understanding for those few times things are not approved, we need to let [participants] know why someone might have been waiting a really long time…So just a little more context sometimes to know why this wouldn't be something that's approvable by the program. (L-3)
>
> We used to have meetings with the staff in Albany— the program managers, director, and the brokers as well and then it just went to the program managers and the staff in Albany. I think the brokers need to be inclusive of those meetings again. We're getting information trickled down from the program manager and that's absolutely wonderful, but we're kind of on the front lines and the lines of communication need to be open with everyone. (SB-5)

While providers noted that they were able to request that a denial be reconsidered, staff suggested that potentially outlining a "more formalized process of review [for things that are new or a little bit unusual] could be helpful…[a] policy around how this all works, and somebody can sort of appeal something and ask for a more detailed explanation and things like that."

Stakeholders also deliberated whether it was feasible to streamline certain purchase requests, especially those that were recurring in nature (e.g., phone and internet bills) or those that were almost universally recognized as acceptable and appropriate, thus minimizing some of the administrative burden across all parties and potentially reducing lag times for approvals—for example, having a recurring expense request approved for as long as the goal is still active, and the treatment plan does not need to be reviewed.

> Especially if it's an easy thing and it's something recurring…Give us some guidance and parameters and if it's close and it's under the threshold of whatever, it should be an easy approval. And sometimes I think things have gotten, kind of, taking more time to look over the budget. "And what about this one, what about that." And I think that kind of creates a cumbersome flow. (L-2)

Finally, because the role of the fiscal intermediary was so essential and yet also unique, requiring much nuanced program knowledge and understanding, stakeholders emphasized the need to ensure adequate coverage of the role.

> We had a three-week, almost month-long pause in approvals…And just having to go on for almost a month telling participants, "As soon as we figure stuff out, we'll let you know." We had people's recurring purchases like bills and Wi-Fi things and phone bill things that weren't able to get paid because there weren't precautions. (SB-12)

Ensuring Philosophical Fit

Stakeholders identified organizational and staff fit with the philosophy underlying self-direction as key to expansion. This included selecting agencies that have person-centered approaches as part of their organizational mission/culture, providing training on person-centered services, and ensuring staff buy-in for person-centered approaches and self-direction.

> I feel the staff that's hired…need to have a mentality of radical person-centered approach. Because if you're questioning people, like, "Why do you really need that?" or "What do you mean by this?," it's kind of taking away from the experience of self-directed care… Sometimes I can see when other providers are involved, I can see hints of a different model in their mind that we're trying to work against. (SB-11)

The emphasis on ensuring philosophical fit allows for agencies to implement an SDC program that supports each participant's individualized path of recovery and wellness goals while still following parameters placed by OMH. Agencies that embrace person-centered approaches and empowerment of participants can appropriately apply the flexibility inherent within the SDC program to stay true to the mission of self-direction.

> There's nuts and bolts that are just there—the workflow procedures that are just part of doing this. But then the rest is really up to us. So, [it's really central] to define and to understand…what kind of relationship with the participant would need to be there in order for this to be effective…How are we going to communicate [things] to the participants…and framing goals…in ways that [are] understandable from the perspective of somebody sitting in a separate office in a different part of the state for the final approval process…The values of self-determination that are so central to what we do…outside of just nuts and bolts… What [gets] emphasize[d]…a lot of it is up to….interpretation of how things should go, including the kind of relationship that you need to have with clients. (SB-4)

> If it's an agency that's not person-centered…it could become, in my personal opinion, more clinical rather than more self-directed or [a] non-medical model… There has to be buy-in and not like this medical-model, clinical ideology and it really should be at agencies who value person-centeredness, person first… You have to have the mentality that's all about the person. [OS-8]

Sustainability of Current Budget Allocation

While acknowledging that most participants did not reach budget spending thresholds, there was concern, particularly among state-affiliated stakeholders, whether current allocations were sustainable if the program was to be available more broadly. It was suggested that if the SDC program were to be scaled up, the budget allocation may need to be "scaled down," so that it would increase the feasibility of such a program.

> I think that's way too much money. Personally, for two different reasons: one being, that's a lot of money to hand over to somebody to spend and it's taxpayer dollars and [two], the fiscal realities are there's just not enough money at those two price points to take it statewide. Given the potential pool of people who

> would qualify… the eight and 16 thousand price points are way too high even based on that amount being available. You really have to scale it down. (OMH-15)

Program Duration and Participant Tenure

Another area that stakeholders highlighted with implications for program implementation and expansion was the nature of participants' tenure in the program. Stakeholders noted that most participants continued to stay in the program, and that there were only a few participants who had moved on or "graduated." Those who graduated tended to have very limited and specific goals that they had achieved and felt comfortable moving on from the program, while others had utilized the program more extensively and had successfully obtained employment and become more "financially independent."

Most stakeholders were uncertain whether the program could be available to individual participants indefinitely as long as they continued to meet eligibility criteria or whether there was an expectation of graduation. On the one hand, stakeholders noted that individual goals could be achieved and wondered whether an overarching goal of the SDC program should explicitly include helping to "get [participants] to a point where they didn't need the program." On the other hand, stakeholders also acknowledged that the majority of participants enrolled would likely face chronic financial challenges impacting their wellness and recovery long-term, and, of course, further emphasized that the whole concept of wellness is ongoing: "Wellness is a lifetime thing. [Individual] wellness goals, of course, are achieved…but wellness is an eternity."

SDC participants also deliberated how to conceptualize program tenure, with most offering that decisions regarding program tenure should be individualized.

> I think that depends on the individual circumstances because I know there's those who may need life-long assistance. [Others may] use self-direction for occupational—the schools where you train in a field and start working. And if you become financially [stable]—when you start working…That would be a reason for graduating from the program…being able to afford the services on your own and not needing it…It really depends on what the wellness goals of the participants is…It can work both ways. (C-10)

There was also some concern on the part of state agency staff as to whether participants receiving support for repeat, ongoing purchases, such as Wi-Fi or gym memberships, might create long-term dependence on the program versus promote participants' ability to develop alternate means of covering those costs in a more independent way.

> This program could pay for money management courses… I think that there should be some things that are automatically available to help them become independent and not be dependent on this program. Why pay for cell phones all the time? Help them to work towards being able to pay for their cell phones on their own. (OMH-17)

Nevertheless, most stakeholders acknowledged that the significant financial constraints that characterized participants' lives made it challenging to identify how best to ensure participants' ongoing needs for critical resources were being met while promoting more financial independence from the SDC program.

Addressing Infrastructure and Administrative Efficiency: Tracking, Managing, and Accessing Budgets, Requests, and Purchase Activities

There was near universal consensus among non-participant stakeholders that the most significant challenge to operating the program was the process of tracking and managing participant budgets and purchases. Stakeholders emphasized that complicating factors included pilot site staff not having direct access to participants' transaction history and card balances; lack of database integration such that purchase requests and goals were in a different portal from actual transaction histories and card balances; and that the portal into which detailed information was entered had highly limited functionality, with neither site staff nor fiscal intermediaries being able to run reports directly. These limitations created extra steps for all program-related staff, required more vigilance and communication, involved extra personnel, and resulted in administrative redundancy and inefficiency. Because support brokers could not access participants' transaction histories directly, they had to rely on participants to report that they had made a purchase or request a transaction report from OMH staff. Not having direct access was somewhat cumbersome since brokers might have to reach out to participants to inquire if a purchase was made several times, especially for those participants who may not be as diligent at initiating communication or submitting receipts immediately after completing a purchase. Having direct access to participants' transaction history could allow support brokers to monitor purchases in real-time, validate whether they were within the appropriate parameters, and only send reminders to participants about completing a purchase or submitting a needed receipt within required timeframes as appropriate.

> Giving us that receipt is our acknowledgement that [participants] have completed the purchase. And if they don't give that to us, then we don't know if they've completed a purchase…[If] it's been 10 days…I would give them a quick call to find out if they have completed the purchase and if they could give me the receipt… If it's a specific situation where we need to find out if the participant has completed a purchase, then I can actually reach out to OMH and they can send me the ledger for the participant….[But] it would be very helpful if we also have access to the transactional history…It would be much more efficient if we were able to just have it on access. (SB-6)

While there was consensus that it would be beneficial for pilot site staff to have access to participants' transaction history, stakeholders differed in whether it would be appropriate for participants to have direct access as well. Some emphasized the importance of prohibiting participants' access to their own card balances, partially as a safeguard against potential inclinations to make non-approved purchases with unspent balances, while others indicated that participants having access to their own transaction history could be helpful.

> The card system we use doesn't give them access to their ledger ballots, so they rely on just us telling them how much is on the card and how much they have spent with their receipts to be able to know what's left…[When] it's multiple little items, it does get tricky…Like literally they have to ask us. We don't have access. We have to ask fiscal at OMH. So, it's not a live process where someone can instantly know what's left on their card…And I really wish that was something that they had live access to…where they could easily go into their phone or the web and be, like, I was approved for these five items. And it shows I've already spent this…So, this is what's left or whatnot, or even to submit their receipts independently to make it easier in the moment. (L-3)

Stakeholders universally appreciated the ability of the program to use alternate forms of payment for purchase requests when there were problems with card acceptance, such as having checks issued, but they also identified the need to address some on-going issues regarding the cards used by participants to make purchases. Some challenges identified were somewhat smaller issues, such as to try and resolve “glitches” related to participants having to enter credit card zip codes that didn’t match their own address, and others noted a range of factors that could be improved.

> The big problem is that zip code…just because of the zip code, they were going to send the [purchase] to the [State address]. We had a big thing with that. So that's one thing that needs to get fixed. That zip code really does need to get fixed, it’s gonna get a person jammed up. (C-2)

> The way that it works with the cards is tricky…It would be nice if there was a way to make the cards not work for certain things…They don't work perfectly. Some places don't take them…It's very difficult to control the card in general, people use Amazon Prime a lot. So, this card gets stored on their Prime and then they go to buy something for personal use, and it accidentally goes on this card…That's the biggest pain part is the card. Plus (the card company) people are not nice, and they don't like us, and I feel it's very difficult to work with them. I'm still waiting on a December report from them that I've asked for so many times. (OMH-17)

Overwhelmingly, however, stakeholders identified challenges with the current system used for inputting, tracking, and managing purchase requests and budgets as the most significant barrier to effective program operation.

> The portal doesn't necessarily work all that well…I can't run reports out of the portal so that would be helpful if I could. I have to ask IT to run them for me because they don't work properly… There’re also times when the emails don't generate properly that alert me that there's something for me to approve…I said, “Is there a way that we can get a weekly report showing outstanding purchases?” So, we did start getting that report, and then we ended up pushing that to twice a week because we do sometimes not get those emails or there’re some times

> where we get a ton…It would be helpful [to be able to generate it whenever I want it]. But this is a custom report that we had them create. It's not one that I can just pull out of the portal myself… (OMH-17)

> The one thing that has been a real challenge for us…The database, the portal okay, needs some updating…For example…my manager and then also the fiscal manager say, "Hey, which kind of budgets are outstanding at the moment for your client list? Let us know who's pending, what the status is, and what's going on." At the moment, we have no way to generate a report or to sort our client lists by the date that the budget was submitted, or the date of the budget was approved by OMH…We have to literally go through our client roster. (SB-9)

Because the functionality of the portal was highly limited and there were challenges to developing a centralized system for tracking information, there was administrative inefficiency. For example, in addition to entering and tracking information in the portal, both pilot site staff and fiscal intermediaries described creating and manually maintaining their own spreadsheets to track and manage participant purchases and budgets, which, while somewhat less cumbersome than initially, was still time-consuming and introduced redundancy, with both providers and staff entering the same data in multiple databases.

> I have a lovely Excel spreadsheet…I think all of the resource consultants have this, actually. It's a template that we all use that pretty much includes a rundown of what participants we have, and which ones have open purchases, what purchases are open, and when they were approved, and the column also that explains whether or not they've given receipts… (SB-6)

> I just keep a lot of notes for myself, and I have a spreadsheet of all my consumers…I'll put a little dot…Once the budget is approved, I make one line through it…Once the client gives me the receipt, and I upload the receipt into the portal…it'll create an X letting me know that budget is done. (SB-7)

> I created myself a spreadsheet to try to keep track of things and what's outstanding, so I used to spend a lot more time per day than I do now…(OMH-18)

Stakeholders emphasized that upgrading the portal and improving administrative efficiency would be essential to allow for capacity of program scale-up.

> The portal is not very user-friendly, and I think there's a lot of functionality that's missing. I don't even think it's even consistently accurate, in terms of the data we get pulled out or the data that is pushed to us through automatic notification…It is not an effective portal and software platform, and if it does move beyond this initial demonstration or pilot, it really would need to be significant improvements to support the programs…the State…and the fiscal intermediaries that are managing the program. (OMH-10)

> We need the portal to be upgraded…It would be ideal if the current configuration of the OMH portal would allow us to do sorting capabilities for either our respective client loads and our client rosters under the broker's name, or just if we were to look at everybody who's currently an SDC client and sorted by SDC

> client number or name or something but we don't have that capacity…The other thing that would be helpful would be being able to create or generate reports or print a client list of our respective rosters. (SB-9)
>
> From the perspective of running a program, [it] would be great if the staff and [key personnel] could run reports in the portal…We can really only put information into [it] and we can view what we put in. But it's not set up to run reports. I think it'd be incredibly beneficial for understanding trends, following up on practical things, receipts and things like that, [if] we were able to more adequately run reports. I think that we can run some reports and then we can request them and have them send them to us… (SB-4)

Expanding Access to SDC

Finally, the most common response from both SDC pilot program staff and participants for suggestions to further improve the program was to make it available more broadly to others. Recommendations included to expand capacity beyond the pilot to serve more individuals, and other areas of the state, as well as to expand the populations that might be eligible—for example, those on Medicare.

> The one main improvement would be to open it up to other people. (C-9)
>
> I would recommend it be expanded so more people can benefit from it. (OS-8)
>
> I know this program is not for Medicare participants but that would be great for them...I don't think that should limit a client being accepted into the program because they're on Medicare. 'Cause I think a lot of Medicare recipients need this program as well as Medicaid. (SB-7)

Summary of Findings

Participants described overwhelmingly positive experiences with the process of identifying goals and using the SDC program to make purchases that contributed to achieving those goals. The SDC program was perceived as being very different from other services that participants had received, with a focus on their own personal needs and goals that was initially surprising but greatly appreciated. Participants appreciated not only the ability to make purchases that they otherwise would not have been able to do, but the entire process of working with the broker to identify their goals and implementing a plan to achieve those goals. The brokers were perceived to have a different role from traditional service providers in supporting the goals identified by participants and helping them use the SDC resources rather than simply providing direct support, counseling, or advice.

Participants also reported positive impacts of the SDC program on their quality of life, including benefits to their general physical and behavioral health and success with recovery-oriented goals. Participants reported making relatively small but meaningful material changes to their personal space that had powerful impacts on their overall wellbeing. Purchases funded by the SDC were considered by the participants as having been critical to their careers, relationships with family members, and participation in fulfilling social activities.

SDC programs were located in agencies providing a broad range of services to people with SMI. These programs had a culture of valuing recovery orientation of services, and this orientation was reflected in the individuals selected to be support brokers. The support brokers and their supervisors had experience in mental health services and were committed to fulfilling the role of a support broker. They focused their work on individualized support for reaching self-identified goals more broadly than simply administering the financial and oversight components of the SDC program, responding to issues raised by clients that went beyond the narrow confines of the program. Support brokers took time to get to know participants individually and develop goals and plans over time.

Early in the program support brokers required regular input from OMH personnel; as norms for practices were developed, these interactions were less frequent. Issues related to approval of participant purchases arose frequently early in the program, but these issues decreased over time as brokers and participants became familiar with the program guidelines. The frequency of incidents of misuse of funds was lower than expected, and most cases were misunderstandings, including instances where the brokers themselves believed the regulations were overly strict. SDC participants had generally very positive perceptions of the program, but they noted several ways in which it could be improved, mostly concerning transparency in decisionmaking about approvals of purchases and more regular meeting with support brokers. SDC program staff had concerns about the processes of administering the system, focusing on challenges in using the current reporting and monitoring systems, including the highly limited functionality of the SDC portal and challenges associated with not being able to directly access participants' transaction histories through the current card system. They also expressed concerns about the lack of transparency and consistency in certain aspects of intermediary decisionmaking and denials of approval for payment. Staff emphasized the need for a good fit between the person-centered approach of the SDC program and the culture of the agency in which the SDC program was housed. Finally, staff were concerned that some features of the program, such as the length of tenure in the program, remain unclear and should be clarified for future participants.

4.2 Goal 2. Improvement in Recovery, Health, BH, Social Functioning, and Satisfaction with Care for SDC Participants (Outcome Evaluation)

The outcome evaluation addressed several research questions related to person-and system-level outcomes associated with the implementation of the SDC pilot program. Goal 2 concerns improvement over time among SDC participants with respect to recovery, physical and behavioral health status, social functioning, and satisfaction with care. The evaluation was initially designed to address these questions using data from the HARP PCS assessments, which were expected to be available for a large portion of SDC participants at multiple time points so that trends within individuals over time could be examined. However, due to the low frequency of completion of HARP PCS assessments, the initially planned analyses could not be conducted.

The HARP PCS data were only used for one research question (Goal 2 Research Question 6) where other data sources were unavailable.

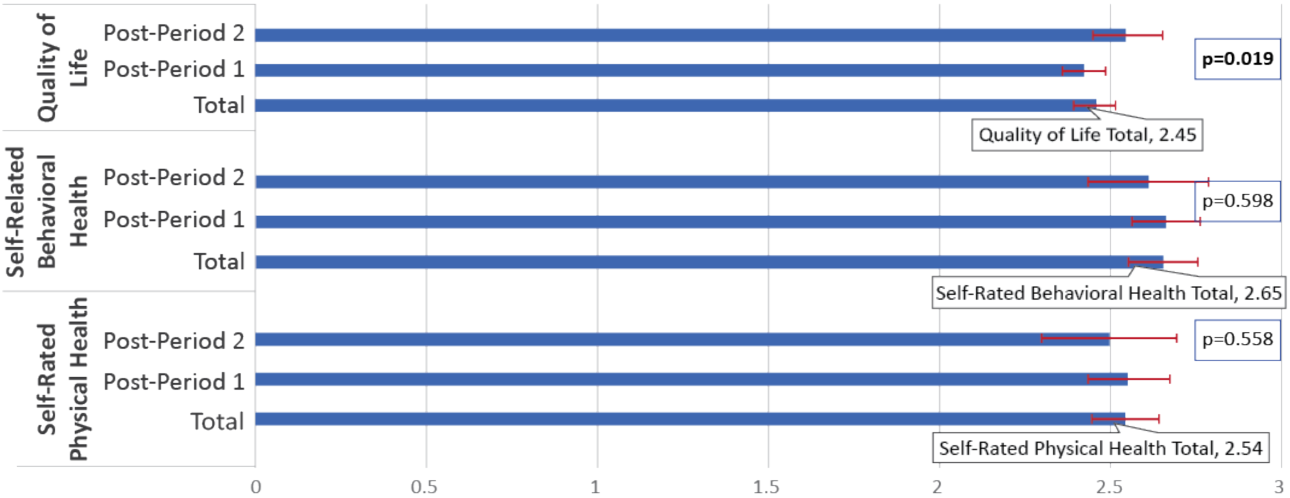
Given the lack of data from the HARP PCS assessments, the evaluation team examined the potential for using an alternative data source recommended as a substitute by NYS DOH and OMH. The alternative data source is the SDC portal, which includes assessments of SDC participants that overlap in some domains with the HARP PCS assessments. The evaluation team determined that the SDC portal data could be used to address some of the Goal 2 research question, though significant limitations of the data were also noted. The data portal includes assessments on 236 SDC participants from post-period 1 (defined as the first 12 months in program) and 69 SDC participants from post-period 2 (defined as all time in program after first 12 months). Data from the two time periods could be compared to provide evidence of change over time in the outcomes covered by the SDC assessment. However, limitations of these analysis should be noted. We are not able to adjust the comparisons for differences in the characteristics of the samples across the two time periods, which is a concern given that the sample in post-period 2 is much smaller than that in post-period 1. Second, we are not able to examine within-person change because of the small number of SDC participants with assessments in both periods, and we do not have a control group of non SDC participants to compare our sample with. Third, the small sample size provides weak power to detect differences across time periods. For this reason, the analyses are limited to group-level comparisons over time within the SDC portal data.

Research Question 2.1: Do HARP enrollees have improved quality of life after participating in SDC?

Hypothesis 1: Quality of life will improve between baseline and three (3) year and subsequent follow-up for SDC participants.

To address RQ1, the evaluation team used data from a 16-item quality of life scale included in the SDC portal. Each item was answered on a 1 to 4 scale, with higher numbers indicating higher quality of life. The quality of life indicator, calculated as the mean across the 16 quality of life items, increased significantly (p=.019) from 2.42 (SE=.03) in post-period 1 to 2.55 (SE=.05) in post-period 2 (Figure 4.2).

Figure 4.2. SDC Self-Reported Quality of Life



Post-Period 1: First 12 months in program; Post-Period 2: All time in program after first 12 months.
SOURCE: Authors' analysis of SDC Assessment data, 2018-2019

Research Question 2.2: Do HARP enrollees show improved indicators of health, BH, and wellness after participating in SDC?

Hypothesis 1. Indicators of BH will improve between baseline and three (3) year and subsequent follow-up for SDC participants.

Hypothesis 2. Health indicators will improve between baseline and three (3) year and subsequent follow-up for SDC participants.

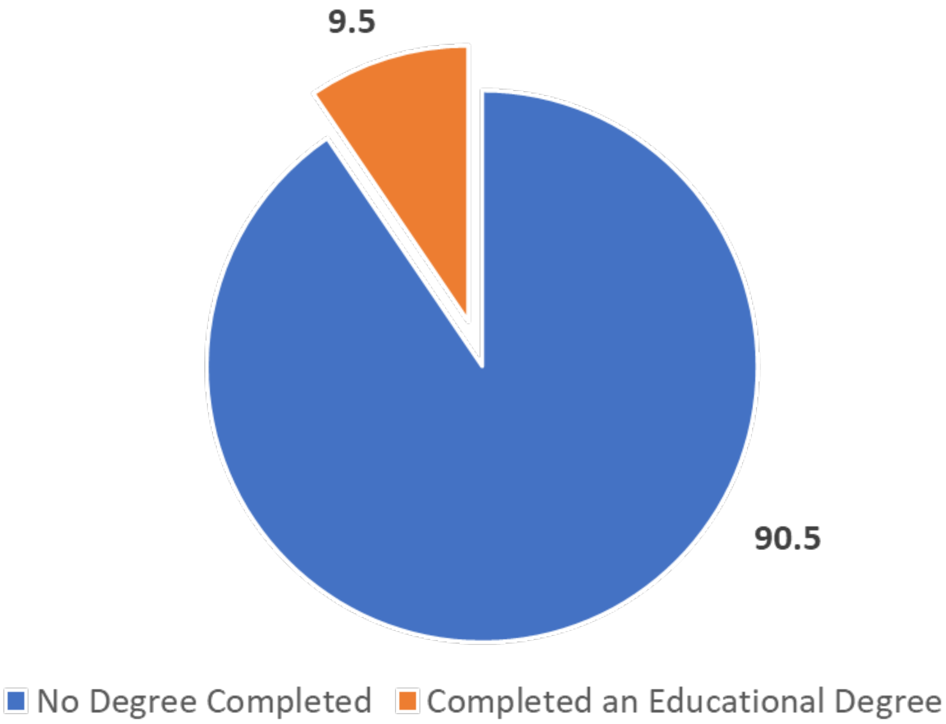
To address RQ2, the evaluation team used two items from the quality of life scale described above, one measuring self-rated mental health and one measuring self-rated physical health (Figure 4.2). Differences between the time periods do not reach statistical significance for either measure. The average for self-rated mental health was 2.66 (SE=0.05) in post-period 1 and 2.61 (SE=0.09) in post-period 2 (p=0.598), and the average for self-rated physical health was 2.55 (SE=0.06) in post-period 1 and 2.49 (SE=0.10) in post-period 2 (p=0.558).

Research Question 2.3: Do HARP enrollees show improvement in education and employment after participating in SDC?

Hypothesis 1: Participation in employment and/or educational activities will increase between baseline and three (3) year and subsequent follow-up for SDC participants.

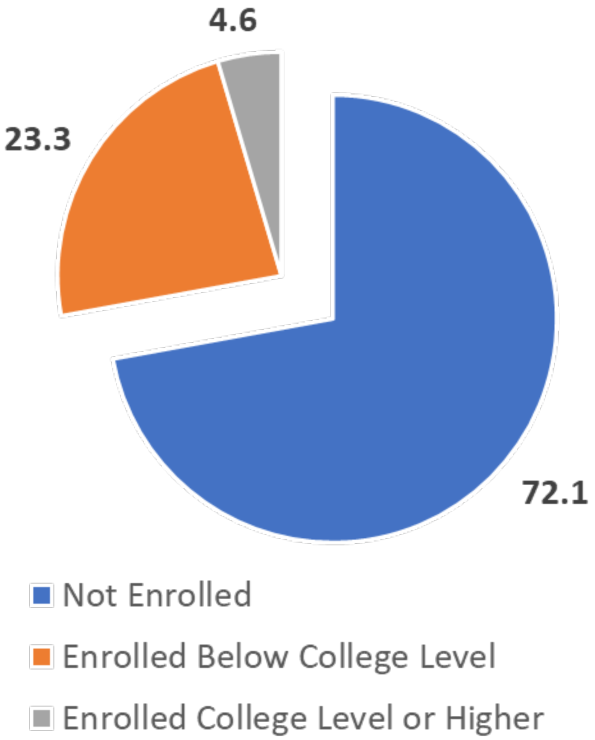
Educational attainment: The SDC portal data include information on the number of participants who completed an educational degree in the past year, whether the participant is enrolled in an educational program, and the type of educational program they are enrolled in. Over the entire post-period, 9.5 percent of participants completed an educational degree (Figure 4.3). The percentage enrolled in an educational program did not differ between the periods, with 27.9 percent enrolled in post-period 1 and 28.4 percent enrolled in post-period 2 (p=0.679). Of those enrolled in a degree program during the entire post-period, 16.5 percent (4.6 percent of the total) were enrolled in a college degree program and 83.5 percent (23.3 percent of the total) were enrolled in a non-college degree program (Figure 4.4). The type of degree programs in which SDC participants were enrolled did not differ across the time periods (p=0.677).

Figure 4.3. SDC Self-Reported Educational Attainment



SOURCE: Authors' analysis of SDC Assessment data, 2018-2019

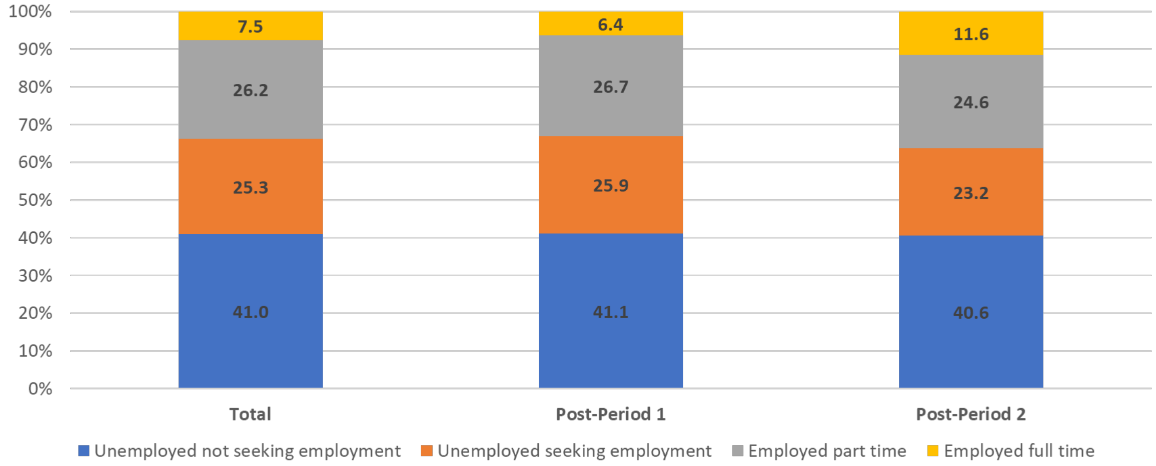
Figure 4.4. SDC Self-Reported Educational Enrollment



SOURCE: Authors' analysis of SDC Assessment data, 2018-2019

Employment: The SDC portal data include information on whether participants are unemployed and not seeking employment, unemployed and seeking employment, employed part-time, or employed full-time. Employment status did not differ across the two periods (p=.546) (Figure 4.5). In the combined sample, 41 percent were unemployed and not seeking employment, 25.3 percent were unemployed and seeking employment, 26.2 percent were employed part-time and 7.5 percent were employed full-time.

Figure 4.5. SDC Self-Reported Employment



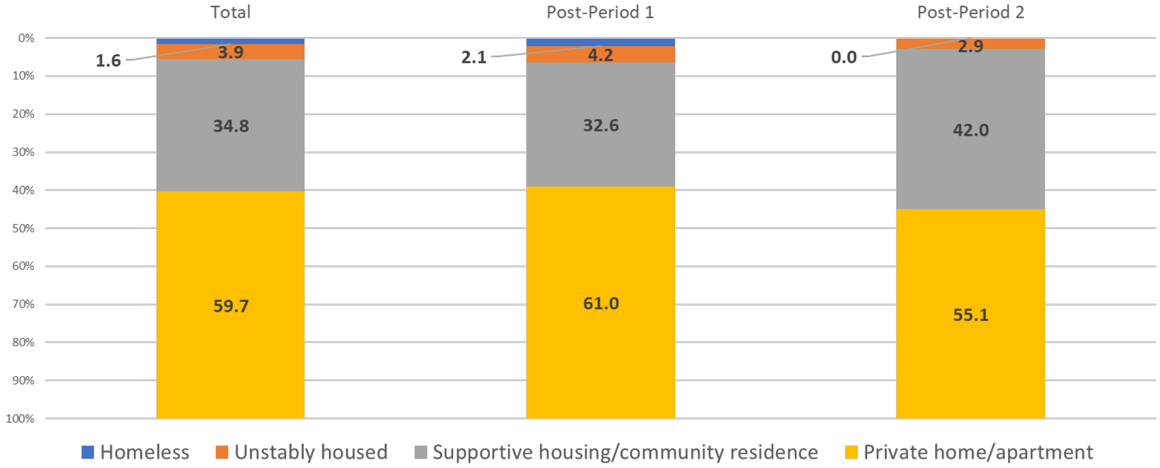
Post-Period 1: First 12 months in program; Post-Period 2: All time in program after first 12 months.
SOURCE: Authors' analysis of SDC Assessment data, 2018-2019

Research Question 2.4: Do HARP enrollees show improvement in community tenure (i.e., maintaining stable long-term independence in the community) after participating in SDC?

Hypothesis 1: Stability in the community will improve between baseline and three (3) year and subsequent follow-up for SDC participants.

Residential status: The SDC portal data include information on whether participants were homeless, otherwise unstably housed, living in supported housing, or living in a private home. The majority of SDC participants, 59.7 percent, were living in a private home, and a large portion, 34.8 percent were living in supported housing. 3.9 percent were unstably housed and 1.6 percent were homeless (Figure 4.6). Since there were no participants who were homeless in post-period 2, we were unable to conduct a test for change over time using all the housing categories. When the four categories were grouped into three by collapsing homeless and unstably housed into a single category, the difference over time was not statistically significant (p=.2443).

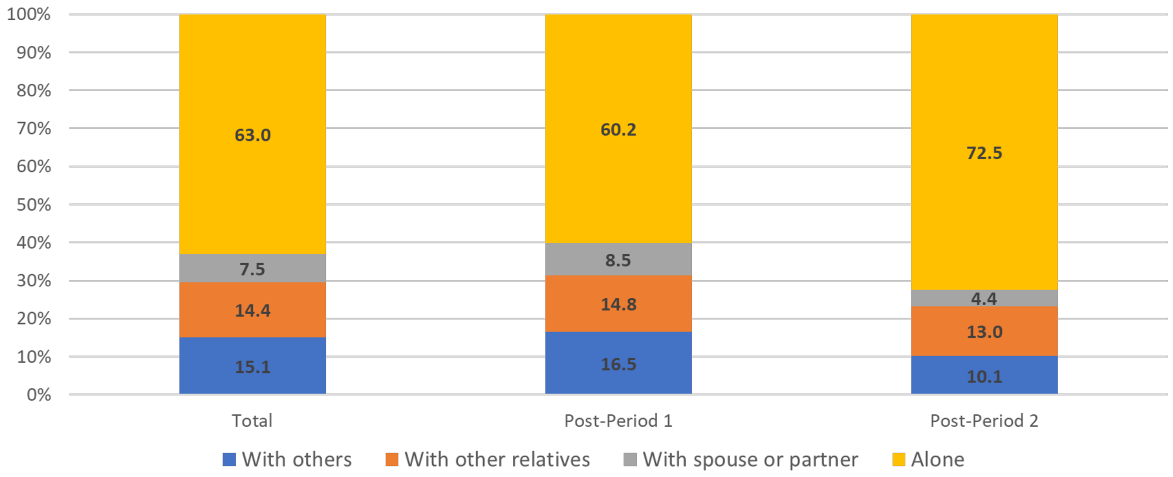
Figure 4.6. SDC Self-Reported Residential Status



Post-Period 1: First 12 months in program; Post-Period 2: All time in program after first 12 months.
SOURCE: Authors' analysis of SDC Assessment data, 2018-2019

Living Arrangements: The SDC portal data include information on whether participants were living with non-relatives, with relatives, with a spouse or partner, or alone. Living arrangement did not change significantly across the periods (p=.093). The majority of participants were living alone (63.0 percent). 7.5 percent were living with a spouse or partner, 14.4 percent were living with relatives, and 15.1 percent were living with non-relatives.

Figure 4.7. SDC Self-Reported Living Arrangements



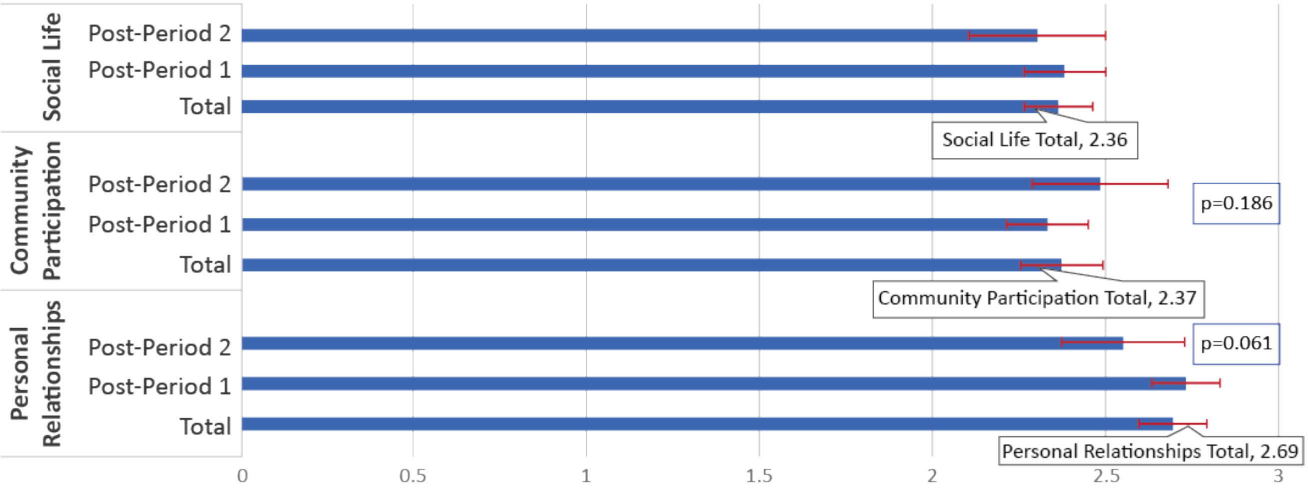
Post-Period 1: First 12 months in program; Post-Period 2: All time in program after first 12 months.
SOURCE: Authors' analysis of SDC Assessment data, 2018-2019

Research Question 2.5: Do HARP enrollees show improvement in social connectedness after participating in SDC?

Hypothesis 1: Social connectedness will increase between baseline and three (3) year and subsequent follow up for SDC participants.

Data to address social connectedness were drawn from items in the quality of life measure presented above that assess personal relationships, community participation, and social life. There were no differences in any of these items across the study periods (Figure 4.8).

Figure 4.8. SDC Self-Reported Social Connectedness



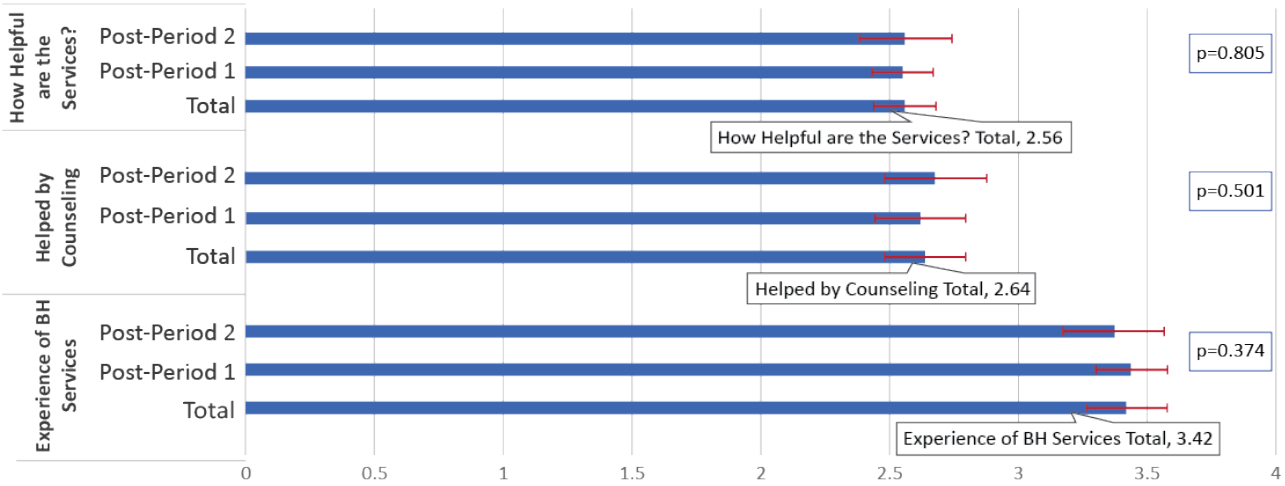
Post-Period 1: First 12 months in program; Post-Period 2: All time in program after first 12 months.
SOURCE: Authors' analysis of SDC Assessment data, 2018-2019

Research Question 2.6: Do HARP enrollees report increased satisfaction with health and BH services after participating in SDC?

Hypothesis 1: Satisfaction with care for BH services will improve between baseline and three (3) year and subsequent follow up for SDC participants.

Measures of satisfaction with care came from the HARP PCS and were available on a small number of SDC participants, ranging from 67 to 77 over the three items reported below. The items addressed participants' perceptions of the helpfulness of the services they receive and their overall satisfaction with the behavioral health services they received. There were no significant differences in these measures across the study periods (Figure 4.9).

Figure 4.9. SDC Self-Reported Satisfaction with Care



Post-Period 1: First 12 months in program; Post-Period 2: All time in program after first 12 months.
SOURCE: Authors' analysis of SDC Assessment data, 2018-2019

Summary of Findings

Due to unanticipated limitations in the data available to address the Goal 2 research questions, we are unable to draw conclusions regarding the impact of the SDC program on the listed outcomes. We found one instance of a statistically significant difference across years: an improvement in the total quality of life scale scores. This is a robust difference over time that may signal a positive impact of the program, but without a control group and more robust follow-up of the SDC population, the finding should not be interpreted as a strong indication of an SDC impact. Other measures of program impact generally showed no statistically significant differences over time. Again, the lack of a significant difference here should not be interpreted as evidence that the program did not have an impact on these findings.

The findings reported here are valuable in identifying some important characteristics of the SDC population that will be useful in future evaluation work. The data provide baseline information on the engagement of SDC participants in employment and educational programs. The proportion of participants who were either in an educational program or completed an academic degree was surprisingly large. These findings provide some context for interpreting other aspects of the program, but they should not be interpreted as effects of the program. It may be the case that the participants who were selected for the program were likely to be involved in educational pursuits. In future evaluations, selection into SDC programs should be carefully examined in the design of comparison groups.

4.3 Goal 3. Maintenance of Medicaid Cost Neutrality Overall and Reduction of BH Inpatient and Crisis Service Utilization and Cost for SDC Participants (Outcome Evaluation)

The outcome evaluation was used to address several research questions and related hypotheses related to person- and system-level outcomes associated with the implementation of the SDC pilot program. Goal 3 includes three RQs concerned with service utilization and Medicaid costs—outcomes of high policy significance for any new publicly financed program, more so when the ultimate goal is to expand and scale up. As described in Chapter 3, although our approach was quasi-experimental, we may not draw causal conclusions from our findings because we do not empirically control for the effects of concurrent initiatives.

For the reasons described in Chapter 3 (Cohort Construction and Analytic Considerations), the cohort employed to address all Goal 3 RQs included 223 of the total 237 participants (94 percent). Our analyses estimated changes in outcomes from the two-year pre-period (pre-SDC time) to the post-period of up to two years (post-SDC time). Our outcomes were *annual rates of any utilization* of multiple forms of outpatient and acute care, depending on the RQ, as well as *annual per member per month (PMPM) costs* associated with the utilization of each of these service categories estimated as total annual mean costs paid by Medicaid divided by the number of months of utilization.[1] We report linear regression estimates as mean changes in the percent probability of utilization (a binary outcome) or mean changes in costs associated with the utilization of those services and expressed as dollar amounts (a continuous outcome), and their respective standard errors (see Section 3.3 for adjustor variables). Our sole data source was the Medicaid data.

Research Question 3.1: Does participation in SDC result in increased use and cost of outpatient BH services and primary care?

This RQ included two hypotheses:

Hypothesis 1: Outpatient BH service use will increase between baseline and follow up for SDC participants.

Hypothesis 2: Use of primary care will increase between baseline and follow up for SDC participants.

Our main outcomes were utilization of *Any OP BH services*, a composite measure capturing all outpatient BH care, and receipt of *primary and/or preventive care*, assessed with the Provider Preventable Conditions (PPCs) measure created by the NYS DOH. For adults, PPCs captures

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[1] When interpreting costs for the acute care composite measures, the reader should bear in mind that the PMPM costs of the less expensive and/or more frequently utilized services will have an important effect on mean cost estimates calculated on a larger population; thus, there should not be an expectation that the components will add to the composite, e.g., BH IP and BH ED may not add to the composite Acute BH care, since their sample sizes are different (this concern is also valid for utilization outcomes).

information collected as part of the Healthcare Effectiveness Data and Information Set (HEDIS) measure "Adults' Access to Preventive/Ambulatory Health Services" (AAP), which defines such access based on evidence of office-based evaluation and management and preventive care visits with a physician or physician extender.[26] Because the PPCs measure is constructed to report lack of receipt of primary and/or preventive care, we inverted it so that we could report receipt of such care. We report two additional composite measures of outpatient utilization: *Any Key OP BH Services,* a measure that captures utilization of any of several BH specialty services of potential interest to the State due to their relevance for individuals with BH needs,[2] and *Any OP Non-BH services*, a measure that captures utilization of PH care encompassing primary and/or preventive care and all other forms of outpatient PH care.

We also assessed PMPM cost outcomes for each of these utilization categories except for utilization of *primary and/or preventive care,* as cost data were not available for this outcome.

Adjusted Findings (Interrupted Time Series Model Results)

These analyses were conducted for all SDC participants in our cohort and compared their rates of any utilization and PMPM costs in the post-period relative to the pre-period (Table 4.2).

In both sites combined and relative to the pre-period, SDC participants had a 6.4 (1.66) percent lower post-period probability of utilization of Any OP BH services and a 10.2 (2.15) percent lower post-period probability of utilization of Any Key OP BH services. However, mean post-period costs of these services were unchanged relative to the pre-period.

While no pre-post differences were observed for receipt of primary/preventive care, SDC participants had a 16.8 (3.11) percent lower post-period probability of utilization of Any OP non-BH services relative to the pre-period. However, post-period costs of Any OP non-BH services were unchanged relative to the pre-period.

Table 4.2. SDC Impacts on Utilization and Costs of Outpatient BH and Non-BH Services, Post-period Relative to Pre-period, SDC Participants (both Sites Combined)

Service Category	Any Utilization			Total Costs Among Users		
	Sample Size	Estimate@ (SE)	p-value	Sample Size	Estimate@ (SE)	p-value
Receipt of Primary or Preventive Care	737	-1.00 (1.49)	0.50			
Receipt of Any OP BH services	866	-6.38 (1.66)	**0.00**	808	-52.1 (53.75)	0.33
Receipt of Any Key OP BH services	866	-10.2 (2.15)	**0.00**	758	-79.8 (50.50)	0.11
Receipt of Any OP Non-BH services	866	-16.8 (3.11)	**0.00**	747	22.5 (23.48)	0.34

@ Linear regression estimates represent mean changes in the percent probability of utilization (a binary outcome) or mean changes in costs paid by Medicaid associated with that utilization and expressed as dollar amounts (a continuous outcome), and their respective standard errors.

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[2] Assertive Community Treatment (ACT), Personalized Recovery Oriented Services (PROS), OMH Outpatient Clinic and other OMH services, OASAS Outpatient Clinic and other OASAS services, Partial Hospitalization, BH HCBS, with the exception of crisis respite services, etc.

Research Question 3.2: Does participation in SDC result in decreased use and cost of BH inpatient, ED, and crisis services?

This RQ included two hypotheses:

Hypothesis 1: Inpatient stays for BH will decrease between baseline and follow up for SDC participants.

Hypothesis 2: ED and BH crisis service use will decrease between baseline and follow-up for SDC participants).

Our main outcomes were utilization of inpatient psychiatric services (*BH IP*), which for utilization analyses was captured separately as Medicaid and MHARS IP admissions; psychiatric ED services (*BH ED*); crisis respite HCBS; and Non-BH ED care. Additional outcomes were *Any Acute BH Care*, a composite measure of acute BH care capturing BH IP or BH ED care; several high-acuity SUD services (SUD ancillary withdrawal services, hospital-based detoxication (detox) services, and SUD inpatient rehabilitation (rehab) services); *Any Acute BH Care Plus*, a composite measure capturing acute BH care as well as crisis respite HCBS and the high-acuity SUD services; Non-BH IP; and *Any Acute Non-BH Care*, a composite measure capturing Non-BH IP or ED care. An additional acute care outcome was BH IP inpatient days, a measure of utilization intensity. We also assessed PMPM cost outcomes for each of these utilization categories. We note that we were unable to model MHARS IP admissions or crisis respite HCBS outcomes due to these services' low utilization rates (see Section 3.3, Cohort Construction and Analytic Considerations), but these outcomes were captured in the acute BH care composite measures.

Adjusted Findings (Interrupted Time Series Model Results)

These analyses were conducted for all SDC participants in our cohort and compared their rates of any utilization (and for BH IP, days of utilization) and PMPM costs in the post-period relative to the pre-period (Table 4.3).

In both sites combined and relative to the pre-period, SDC participants had a lower probability of post-period utilization of all forms of acute care, although no differences were observed for BH IP days. For instance, relative to the pre-period, SDC participants had a 10.2 (1.93) percent and 17.8 (2.64) percent lower post-period probability of BH IP and BH ED utilization, respectively, and a 21.8 (2.82) percent lower post-period probability of Any Acute BH Care Plus Utilization. A similar pattern was evident for non-BH acute care utilization; for instance, the probability of non-BH ED utilization was 16.7 (3.29) percent lower in the post-period relative to the pre-period. However, post-period costs of these services were unchanged relative to the pre-period.

Table 4.3. SDC Impacts on Utilization and Costs of Acute Care and Total Medicaid Spending, Post-period Relative to Pre-period, SDC Participants (both Sites Combined)

Service Category	**Any Utilization**			**Total Costs Among Users**		
	Sample Size	Estimate@ (SE)	p-value	Sample Size	Estimate@ (SE)	p-value
BH IP (Medicaid) admissions	866	-10.2 (1.93)	**0.00**	87	11.2 (1974.04)	1.00
BH IP (Medicaid) admissions (days)	87	1.92 (5.06)	0.71			
BH ED visits	866	-17.8 (2.64)	**0.00**	195	64.0 (53.24)	0.23
Acute BH care	866	-19.1 (2.68)	**0.00**	209	-481.5 (726.64)	0.51
Acute BH care plus	866	-21.8 (2.82)	**0.00**	248	-238.2 (670.64)	0.72
Non-BH IP admissions	866	-7.23 (2.08)	**0.00**	101	-91.8 (2575.29)	0.97
Non-BH ED visits	866	-16.7 (3.29)	**0.00**	446	48.9 (37.16)	0.19
Acute Non-BH care	866	-17.0 (3.29)	**0.00**	450	93.6 (479.64)	0.85
All non-pharmacy services (Total Medicaid costs)				864	83.4 (172.07)	0.63

NOTE: We were not able to model Crisis Respite HCBS separately due to low utilization, but the services are captured by the Any acute BH Care Plus measure.

@ Linear regression estimates represent mean changes in the percent probability of utilization (a binary outcome) or mean changes in costs paid by Medicaid associated with that utilization and expressed as dollar amounts (a continuous outcome), and their respective standard errors.

SOURCE: Authors' analyses of Medicaid data (2014–2019)

Research Question 3.3: How does participation in SDC impact overall Medicaid spending?

This RQ included four hypotheses:

Hypothesis 1: Spending on BH outpatient services (including non-traditional services) will increase between baseline and follow up for SDC participants.

Hypothesis 2: Spending on primary care will increase between baseline and follow up for SDC participants.

Hypothesis 3: Spending on ED and BH inpatient and crisis service use will decrease between baseline and follow up for SDC participants.

Hypothesis 4: Overall Medicaid spending will stay the same between baseline and follow up for SDC participants.

Because hypotheses 1–3 have already been addressed in the previous RQs, in this RQ we focus on the last hypothesis (Overall Medicaid spending will stay the same between baseline and follow up for SDC participants).

Our only outcome was total costs borne by Medicaid (overall Medicaid spending), a measure that captured PMPM costs of all non-pharmacy services.

Adjusted Findings (Interrupted Time Series Model Results)

These analyses were conducted for all SDC participants in our cohort and compared their total costs in the post-period relative to the pre-period (Table 4.3).

In both sites combined and relative to the pre-period, SDC participants' total costs were unchanged relative to the pre-period.

Summary of Goal 3 Findings

Our analyses do not support the State's hypotheses that OP BH and primary care utilization would increase; in fact, our analyses showed that relative to the pre-period, post-period utilization of OP BH and non-BH services was in fact lower (or unchanged, in the case of receipt of primary and/or preventive care). We note, however, that these hypotheses contemplated a longer follow up. On the other hand, our analyses provide partial support for the State's hypothesis that SDC participation would result in decreased BH IP and ED utilization: While the probability of that utilization and other forms of acute care utilization, one of them including crisis respite HCBS, all experienced pre-post declines, intensity of BH IP utilization did not decline. Although the State's hypotheses regarding costs of outpatient and acute-care services were not supported by our findings (i.e., the former did not increase and the latter did not decline), our analyses do provide support for the State's hypothesis that SDC participants' overall Medicaid spending would not change between baseline and follow up. We note that these costs do not include start-up and maintenance costs including those related to the purchase of self-directed goods and services, which as described in Section 2.2 (The Self-Directed Care Pilot Program), were borne by the State in this pilot implementation phase. Finally, we also note that the two tiers of SDC participation differed in the amounts to which participants had access, \$8,000 vs. \$16,000, but we were not able to investigate differential impacts of these amounts on study outcomes.

5. Policy Implications

The goal of the SDC pilot was to implement a program in which participants work with their representative to control a range of services and supports provided by the Medicaid program. Our interviews with staff and participants at the two sites and OMH staff involved in administering the program for the state showed clearly that the program was successfully implemented largely as intended. Program participants were selected and enrolled and were successful in completing the processes required to identify goals and purchases and in executing those purchases using the system implemented by the state. Beyond the implementation of the program, our evaluation was also concerned with how the program was perceived by both participants and staff at the program and state levels, with impacts of the program on recovery-oriented outcomes, and with impacts on service utilization and costs. Due to unexpected data limitations, the evaluation was unable to examine the impacts of the SDC pilot program on recovery-oriented outcomes or service utilization and costs. However, the qualitative information about perceptions of the program and the analyses of utilization and costs provides a basis for recommendations for the issues to be considered as the state considers whether to scale-up the SDC program and, if so, how the scale up should be done.

5.1 Improve Data Collection for Program Monitoring and Evaluation

One of the reasons for the lack of robust data for evaluating the impact of the SDC program on recovery outcomes was that the original evaluation plan relied on external data from the HARP PCS assessment. That assessment system turned out to be ineffective for reasons completely unrelated to the SDC implementation. Data were collected more effectively through the SDC portal, but since those data are collected only on the SDC participants they are not useful for comparison with a control group. For purposes of future evaluations, identification of a control group with data on relevant recovery outcomes will be important. For purposes of monitoring of program outcomes over time, the current SDC portal system could be improved to (1) ensure more consistent data collection and recording; (2) expand outcomes to assess outcomes more directly relevant to the SDC program, including information on brokers as well as participants, and (3) include larger numbers of participants.

Other improvements to data collection systems should also be considered. The utility of the system could be enhanced by additional tracking of eligibility for the SDC program, outreach to potential participants, enrollment in the program, and reasons that eligible participants give for declining to participate. These data could help over time in better characterizing the population that benefits most from the program and would improve overall program transparency. In addition, if SDC staff had direct access to participants' transaction histories and card balances and were able to run reports on the data portal directly, they would be in a better position to track and manage budgets, requests, and purchases at the agency level.

5.2 Develop Assessment Instruments to Capture Features That Participants Value About SDC

In addition to the lack of participant and control individual level data on recovery-oriented outcomes, there are other outcome domains that were found in the qualitative interviews to be important to participants for evaluating the impact of the program. Many of the highly positive perceptions that respondents shared may not have been reflected in the measures that were originally designed to assess impact. In particular, assessments of the experience of care in the program should focus explicitly on the participants' perceptions that the program is helping them identify and achieve personal recovery goals and perceptions that the support broker in particular has helped them identify through this process.

5.3 Assess Fit Between Agency Culture and SDC Program Goals in Identifying New Sites

Qualitative data highlighted the importance of an agency's commitment to patient-centered care and recovery-oriented outcomes to implementation of the SDC program. In addition to providing a broad range of services that are available to participants, the program should embrace the goals of empowering participants to exercise self-determination and engage in self-direction consistent with program design. The SDC program will rely on referrals from the broader agency into the SDC program and on integration of the SDC program with other services that participants are receiving. For this purpose, agencies could be required to demonstrate their commitment to the program goals by documenting a history of patient-centered care before being able to offer an SDC program. Prior SDC participants and/or peer support specialists could also be involved in assessing the readiness of programs for implementing SDC.

5.4 Provide Appropriate Training and Support for Support Brokers

The qualitative interviews with SDC participants and support brokers revealed that the role of a support broker is complex. The support broker role is not limited to managing the funds designated by the SDC program. Rather, the broker takes on a large role in the participants' lives as a support in the participants' self-definition of life goals and development of strategies for using the SDC resources to achieve those goals. This role is different in important ways from more traditional roles of care managers or supportive counselors, and these differences were extremely important to the participants. Most of the brokers in the pilot program were individuals with long work experience in mental health services, and they were apparently able to adapt effectively to their new role. However, as the program expands, this level of experience and adaptability cannot be assumed. A full understanding of the support broker role is important for identifying the skills and experiences that should be required for new hires and for orientation and training of these new brokers.

Brokers should have an understanding of the reactions that people with SMI may have to the SDC program, including reticence to ask for help or advocate for their own goals. Brokers should be prepared to support participants through major life stressors, acute episodes of illness, and other difficulties that are not directly related to the SDC program itself. Brokers should also have training in motivational interviewing and skills in clear communication. Training for brokers in new programs could take advantage of the pilot program by involving brokers and participants in creating educational materials. A learning collaborative style system, where new programs have access to experts with more experience from established programs, could also be considered.

Brokers should also be trained to recognize the potential varying levels of support that participants need to identify goals, complete purchasing, and cope with life stressors, as well as supervisor support for broker negotiation of role tasks and boundaries and coordination with other providers. Given the unique responsibilities of the support broker role, minimizing staff turnover and hiring delays while maintaining training and fit with SDC is key to sustaining capacity. Further, given that SDC supervisors are familiar with participants across the caseload, greater involvement of these supervisors during periods of turnover may help facilitate support broker transition, offering participants some continuity of contact while also passing along to support brokers prior knowledge of participants and their goals to help them better orient to a new caseload.

5.5 Review and Update SDC Program Rules

SDC participants and brokers reported areas of uncertainty about some SDC program rules and how they were applied. One of the challenges of the program that may become more acute with scale-up is the lack of clarity regarding approvals for use of program funds. To some extent approvals involve subjective assessments of whether a proposed purchase is or is not justified by the participant’s treatment plan. These issues could be partially resolved through the development of greater transparency and consistency, which might develop over time as OMH and the agencies gain experience. The procedures for communicating between the agencies and OMH and communicating program expectations and decisionmaking to participants should be carefully reviewed with input from staff and participants. Some aspects of communication between agencies and OMH could be automated to decrease the amount of time needed to make decisions. Revisions should focus on strategizing how best to balance maintaining a flexible and individualized decisionmaking approach that is conducive self-directed care while having a transparent, consistent, and standardized process that lends itself to scale. Other areas where rules and guidelines should be reviewed include caseload size, consequences of minor misuse of funds, and support for participants.

Caseload Size

One of the agencies reported a plan to increase caseload size from 22 to 25 to about 30 per support broker. The ideal size or the maximum size that a broker can effectively manage while providing quality care is not known but should be carefully examined. It is likely that future programs may tend to increase caseload size given the difficulty of hiring staff and the high level of demand for the program. Developing evidence-based standards for caseload size will be important for maintaining quality as the program expands.

Consequences of Minor Misuse of Funds

Many of the cases of misuse of SDC funds were accidental or based on misunderstandings. According to the support brokers who manage the spending, when misuse was intentional, it was frequently very small in scale. Having a range of less severe consequences for minor cases of misuse of funds could prevent unnecessary dismissal from the program. Additionally, developing more formalized processes for appealing decisions or procedures for enhanced review may be warranted.

Varying Levels of Support Across Participants

Future programs may be more effective in targeting support and levels of oversight to the needs or stage of participation by individual participants. More experienced brokers and more experienced participants could have additional flexibility with respect to monitoring of purchases. Some reoccurring purchases could receive pre-approvals to streamline processes.

5.6 Support Ongoing Communication Between Programs

There was a desire among both participants and program staff for increased clarity and consistency regarding factors that should be considered in the decisionmaking about purchase approvals. As innovative programs the two pilot programs and any programs added in a future expansion would benefit from sharing information about implementation strategies and skills on an ongoing basis. Communication across programs could contribute to development of consensus about program guidelines and applications of program rules. Involvement of OMH in these networks could provide a forum for communicating about reasons for denials and other issues that have emerged as concerns during the pilot. Any steps that can be taken towards achieving greater consensus on issues such as participant tenure and program duration, including criteria or processes regarding program graduation, would also be helpful.

5.7 Scale up Slowly

If the SDC program is to be expanded to additional sites, we recommend scaling up slowly in a way that enables maintenance of fidelity to the program with necessary tailoring to new agencies and settings. The two pilot sites are geographically diverse, lending initial support to the generalizability of the program to additional sites. However, the small scale of the pilot suggests that caution is still warranted and that unanticipated implementation issues may arise. Moreover, rapid expansion may outstrip the ability of personnel involved in the initial pilot program to provide needed expertise and support to new programs. Finally, given that the two pilot site programs were selected for their demonstrated commitment to the principles of SDC, this requirement should be maintained for selection of agencies for new SDC programs. The state could benefit from developing criteria through which agencies can demonstrate their commitment to these principles, perhaps involving prior SDC participants or other peer advocates in these assessments.

5.8 Strengths and Limitations

The major strength of the evaluation lies in the consistency of the qualitative findings with respect to the overall positive assessment of the program's impact on participants and relatively minor implementation challenges. Although the qualitative data were collected on a non-random sample of the participants, the results were remarkably consistent not only with respect to the outcomes but also with respect to the mechanism, which are likely to be more generalizable. The range and consistency of findings across these in-depth participant reports suggests that a high degree of saturation may have been reached and that new content was not likely to emerge without significantly altering the sampling design (further commented on below). Reports from the SDC staff, who have experiences with most, if not all, of the participants in the two pilot programs, were also consistent, reinforcing the strength of the findings. These respondents are in positions where they directly observe individuals participating in the program and would have direct knowledge of adverse effects or missed opportunities. Qualitative interviews with SDC participants, pilot site staff, and OMH also offer extensive findings that inform broader scale-up of SDC, including suggestions for improving the program and factors to consider when planning for expansion.

Given that recruitment for SDC participant qualitative interviews relied on referrals from SDC pilot sites, there is a possibility that those who participated in the process evaluation were more likely to have positive views of the program. While there was a diversity of participants in the qualitative sub-sample that broadly reflected the SDC participant population as a whole, future evaluations should expand efforts to recruit individuals who are Black and who have schizophrenia spectrum diagnoses, as their perspectives may have been under-represented. As we have noted, the evaluation was limited in its ability to produce causal effect estimates of the impacts of the SDC program on the recovery-oriented outcomes in Goal 2 and the service utilization and cost outcomes in Goal 3. Hence, observed differences may not be attributable to SDC but rather to policies or other factors independent of SDC that are happening concurrently over the course of the evaluation period. In addition, the length of follow-up for SDC participants was highly variable across individuals, with a large share of participants having less than one full year of participation during the study period. The maximum time of follow-up was two years. The results may be different with a longer period of follow-up. In the short term, participants' behavioral health conditions and overall health status are unlikely to show dramatic changes. The changes that the SDC program enables participants to make may have impacts on service utilization and, potentially, also costs over a longer period of time through their impact on self-management skills, quality of life, and social determinants of health.

Another potentially important issue that we were not able to address is the impact of having a larger or smaller amount to spend through the SDC program. The two levels differed dramatically in the amounts that were made available for participants to spend—$8,000 versus $16,000. It is reasonable to expect that there might be some difference between them, and it may be important for the design of future SDC programs to understand the impact of the program with different amounts. For instance, evidence that the impact of the program was similar for the two groups, adjusting for differences between them, might suggest that the higher level is not necessary to achieve the policy goals. In the current study, we did not have access to complete information on the amounts that participants qualified for or information on their individual characteristics that would enable us to investigate this question.

6. Interactions with Other State Initiatives

This section describes health care delivery policies, payment policies, and other initiatives that were launched around the time the SDC Pilot was launched or that reached maturity during the SDC Pilot timeframe, since the effects of these initiatives may have affected outcomes for SDC Pilot participants. A variety of major health care initiatives were implemented within this timeframe, including other components of New York's Medicaid Redesign Team Section 1115 Demonstration and specific provisions of the Affordable Care Act. These initiatives may have affected outcomes targeted by the SDC Pilot, such as rates of BH and non-BH service use; indicators of BH, PH, and wellness; and social outcomes, such as education and employment, community tenure, and social connectedness. While it would be impossible to disentangle the effects of these initiatives from the SDC Pilot in our analysis, this section describes the initiatives and their potential effects to help readers interpret our results.

We identified the five initiatives listed below through a scan of publicly available documents and meetings with state officials to discuss background and implementation of the SDC Pilot. Two of the initiatives were included in the April 2014 amendment to the Demonstration, two other initiatives were provisions of the Affordable Care Act (ACA), and the remaining initiative was a State-initiated quality improvement project. We then conducted nine 60-minute interviews with state key informants with the goal of eliciting their opinions on the likely effects of these initiatives on SDC Pilot participants. In addition, we expanded our document review to achieve a greater understanding of these initiatives.[27-33]

We describe five initiatives in this section:

- April 2014 amendment to the Medicaid Redesign Team Section 1115 Demonstration
    - Delivery System Reform Incentive Payment (DSRIP) Program
    - Value-Based Payment (VBP) Roadmap
- Patient Protection and Affordable Care Act (ACA)
    - Health Homes (HHs)
    - Medicaid eligibility expansion under the ACA
- Performance Opportunity Project (POP).

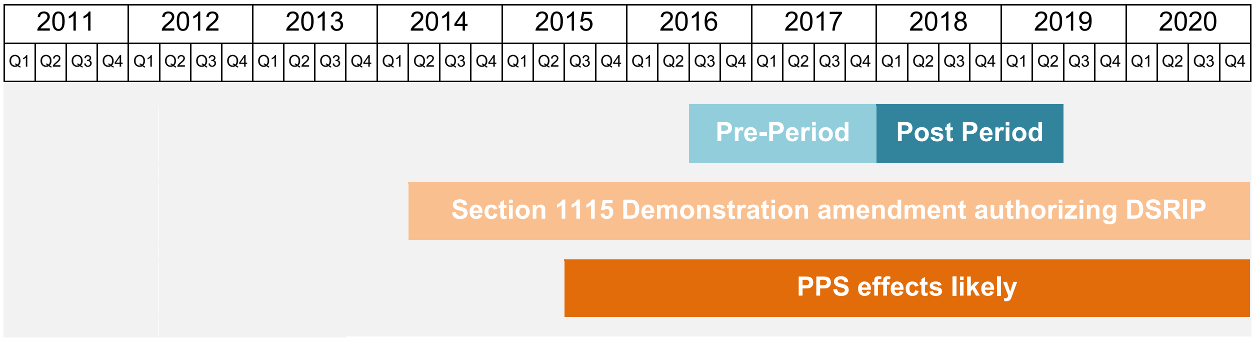
For each initiative, we provide a timeline that compares the timing of its launch and operation with the time periods of the *data* we used to evaluate the SDC Pilot. As described in Section 3 of this report, our evaluation covers a three-year period that includes a July 2016 to December 2017 pre-program period and a January 2018 to June 2019 post-program period. The timeline for each initiative shows how the initiative might have affected the data for the evaluation.

6.1 April 2014 Amendment to New York State's Medicaid Redesign Team Section 1115 Demonstration

The April 2014 amendment to the Demonstration included two components that may have affected outcomes for the MMC BH carve-in and HARP populations: the Delivery System Reform Incentive Payment (DSRIP) program and the Value-Based Payment (VBP) Roadmap.[34]

Delivery System Reform Incentive Payment (DSRIP) Program

Figure 6.1. Overlap of SDC and DSRIPs in NYC and ROS



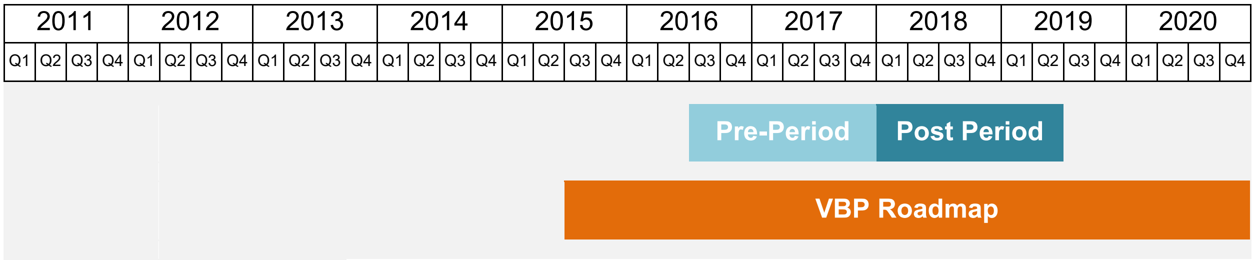
NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and the SDC Program.

The DSRIP program was aimed at reducing avoidable inpatient hospital and emergency department use, using incentives to drive system transformation, and improving clinical management and population health. DSRIP enabled the state to create 25 Performing Provider Systems (PPSs), coalitions of safety net hospitals, clinics, and other eligible providers that were tasked with carrying out health improvement projects in four domains.[35] PPSs were required to select health improvement projects from a menu of options provided by the state and could earn incentive payments based on improvement in performance metrics associated with each project. The menu included multiple projects with the potential to improve outcomes targeted by the SDC Pilot, including projects to integrate primary and BH care, improve care coordination, and connect different care settings. PPSs were required to select at least one behavioral health project from a menu of five projects, and 15 of 25 PPSs selected more than one behavioral health project. The first performance measurement year for awarding incentive payments to PPSs began one year before the pre-period for the SDC Pilot began, and PPSs could earn incentive payments throughout the SDC pre- and post-periods.

State informants for our evaluation reported that PPSs targeted clinical quality improvement activities to people with co-occurring physical and behavioral health conditions to help achieve the goal of reducing inpatient use. They also reported that provision of integrated physical and behavioral health care by primary care providers and federally qualified health centers increased because of PPS efforts. Consistently with these reports, the federally required summative evaluation of PPSs[35] conducted by an independent external evaluator, found that nearly all PPSs reduced potentially preventable hospital admissions, and most PPSs reduced potentially avoidable emergency department visits, overall and for behavioral health populations. Except for initiation of alcohol and drug treatment, most PPSs improved performance on BH utilization measures, although improvement varied among PPSs. Thus, it appears likely that PPSs improved outcomes targeted by the SDC Pilot. However, PPSs would have started working on their health improvement projects a year before the pre-period for SDC evaluation data. As a result, it appears likely that the effects of PPSs were evident during the pre-period, the baseline for our analysis, and it is unlikely that they biased our estimates of the SDC Pilot's effects.

Value-Based Payment (VBP) Roadmap

Figure 6.2. Overlap of SDC and VBP in NYC and ROS



NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and the SDC Program.

In addition to authorizing the creation of PPSs, the April 2014 amendment to New York's Section 1115 Medicaid Demonstration[34] required the State to create a VBP Roadmap that set forth the state's goals for increasing the use of VBP arrangements in Medicaid and described requirements for Medicaid managed care organizations (MCOs) to include VBP arrangements in their contracts with health care providers.[27] CMS approved the Roadmap in July 2015 and updated it in each waiver year. The Roadmap committed New York to achieving the goal of channeling 80 percent of MCO spending through VBP arrangements—including 35 percent in FFS arrangements with upside and downside risk sharing or prospective payment with a quality component—by 2020 and described payment arrangements that would qualify as VBP arrangements for the purpose of meeting the target. These included payment arrangements for the general population of Medicaid enrollees and payment arrangements for special needs populations, including HARP enrollees, people with HIV/AIDS, people with intellectual or developmental disabilities, and people eligible for Medicaid long term care. Qualifying payment arrangements exposed providers to some level of financial risk (i.e., potential savings or losses) and included a set of quality measures that MCOs could use to adjust savings or losses (i.e., to reduce savings to providers that performed poorly on quality or reduce losses incurred by providers that performed well on quality). The Roadmap required New York State to create financial incentives for MCOs that executed VBP arrangements with providers and impose financial penalties on MCOs that fell behind Roadmap goals for VBP contracting.

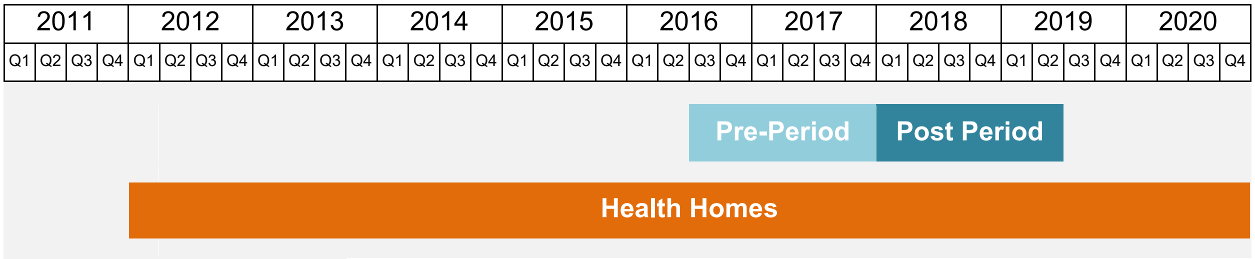
Informants for our evaluation reported that most MCOs adopted VBP arrangements for general Medicaid populations, rather than for special needs populations, to meet the Roadmap's targets. In most of these arrangements, MCOs targeted performance incentives to primary care providers, who were not always equipped to provide or arrange for the full complement of services needed by people with high levels of BH needs and who were less well connected than BH providers to this population. Moreover, MCOs chose quality measures for their VBP arrangements that were generally less relevant to beneficiaries with SMI. Thus, it appears unlikely that New York State's VBP Roadmap meaningfully affected health care outcomes for people with significant BH need, including HARP enrollees participating in the SDC Pilot.

6.2 Affordable Care Act (ACA)

The Affordable Care Act (ACA) of 2010 included a variety of provisions to increase health care coverage, contain health care costs, and improve the performance of the health care delivery system.[36] We focus on the potential effects of two of them among MMC BH carve-in and HARP populations: the option for states to establish a Health Home program and the Medicaid eligibility expansion.

Health Homes (HHs)

Figure 6.3. Overlap of SDC and HHs in NYC and ROS



NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and the SDC Program.

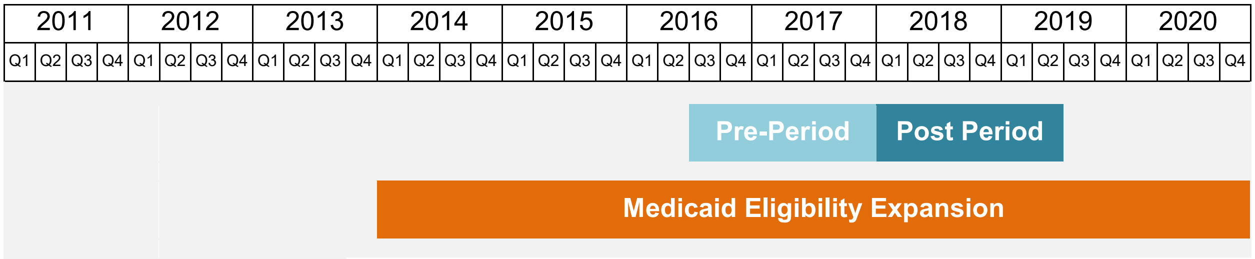
The ACA enabled states to establish organizations called Health Homes (HHs) for the purpose of coordinating health care and health-related services for people with chronic conditions, including physical health, mental health, and substance use conditions.[37] An HH provider could be an individual health care provider, a team of providers, or a provider organization. The ACA provided enhanced federal matching funds for services provided by HHs and allowed states to tailor the populations targeted by their HH programs. Through its HH program, New York merged existing care management programs for specific populations into one initiative that served a broader population.[37] New York's Health and Recovery Plans

(HARPs) were directed to work with HHs to enroll and develop a person-centered plan of care for eligible Medicaid enrollees although HARP enrollees could opt out of HH enrollment.

State informants for our evaluation described HHs as positively impacting populations with BH needs and as an important component of the HARP program for the HARP enrollees who enrolled in HHs. Consistent with these reports, a recent study indicated that New York's HHs improved care for people with SUD.[38] It found that that New York's HHs were associated with reduced acute care service use and increased outpatient medical visits among HH enrollees with SUD relative to a matched comparison group. It is very likely that SDC participants benefited from any improvements in access to health care services—and any consequent improvements in health, wellness, and social outcomes—resulting from their engagement in HH services. However, the HH program launched over four years before the pre-period for the SDC Pilot began. Thus, it is unlikely that HHs affected our estimates of the Pilot's impact.

Medicaid Eligibility Expansion

Figure 6.4. Overlap of SDC and Medicaid Eligibility Expansion in NYC and ROS

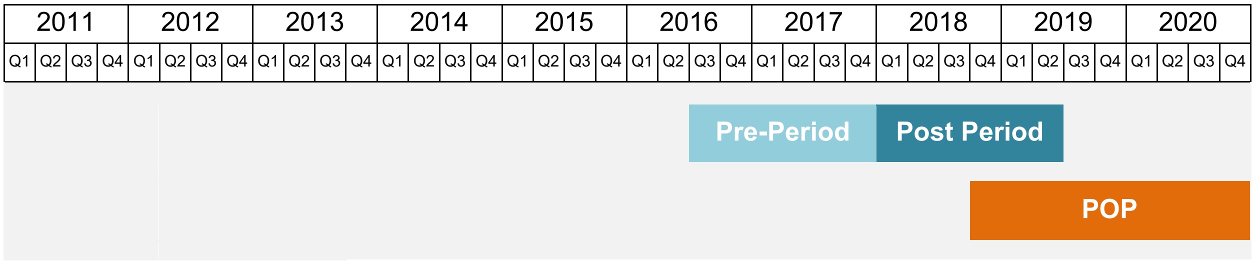


NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and the SDC Program.

Starting in 2014, the ACA provided states with the opportunity to expand Medicaid eligibility to all non-Medicare-eligible people under age 65, including adults without dependent children, with incomes up to 133 percent of the federal poverty level.[36] New York State chose to expand its Medicaid program in 2014. Medicaid expansion could have negatively impacted access to care for SDC Pilot participants if a sufficiently large population gained health care coverage through expansion and used their new coverage to access health care services, thereby "crowding out" SDC Pilot participants. However, the increase in New York State's Medicaid enrollment following expansion was modest relative to other states,[39] and state informants did not believe that expansion substantially impacted access to care or quality of care received by NYS's Medicaid beneficiary population. Thus, it is unlikely that the ACA-related Medicaid expansion affected health care outcomes attributed to the SDC Pilot in our analysis.

6.3 Performance Opportunity Project (POP)

Figure 6.5. Overlap of HARP and POP in NYC and ROS



NOTE: Light shaded bars indicate time periods for pre-program data used in the evaluation. Dark shaded bars indicate launch and operation of mainstream MMCs and the SDC Program.

The Performance Opportunity Project (POP) was a New York State program that awarded incentive payments to Medicaid MCOs for increasing the use of two interventions among high users of acute mental health services: Intensive Care Transition Services, a nine-month program of care management aimed at helping members transition from a psychiatric hospital to community-based care; and treatment with clozapine, an antipsychotic drug for treatment-resistant and severe schizophrenia, among members with a diagnosis of schizophrenia or schizoaffective disorder.[40] In its initial phase, which spanned October 2018 to September 2020, POP targeted members age 16 to 64 with four or more mental health emergency department (ED) visits or inpatient visits per year. An analysis conducted by OMH found that inpatient costs, mental health inpatient costs, and mental health ED costs decreased substantially among POP enrollees who reached milestone four, five, or six of the program's six milestones for contacts with care managers.[40] However, only 12 percent of POP-eligible members enrolled in the program (i.e., had an episode of care initiated) and less than one-fifth of enrolled members reached more than two of six milestones. Interviews with state informants indicated that a lack of teams with expertise in a specific care transition model may have impeded the scaling up of POP.

While POP had the potential to improve outcomes for SDC Pilot participants, it is unlikely that the program would have affected our analysis because it enrolled relatively few eligible members and began relatively late in the post- period for our analysis.

6.4 Conclusion

Evidence from our key informant interviews and recent studies indicates that New York's HH program and PPSs positively impacted several outcomes targeted by the SDC Pilot, including access to care and integration of BH and PH services. However, these initiatives were launched before the pre-period for our evaluation, which serves as baseline for assessing the SDC Pilot's effects. Thus, the impact of these initiatives is likely "baked in" to baseline outcomes and unlikely to affect our estimates of the SDC Pilot's effects. In contrast, PPSs would have started working on their health improvement projects around the time of the SDC Pilot launch, and their efforts may have upwardly biased our estimates of the SDC Pilot’s effects. Other initiatives described in this section are unlikely to have affected our estimates of the SDC Pilot’s effects since the available evidence indicates that they did not widely impact outcomes for people with BH needs, the target population for the SDC Pilot.

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Appendix A. Key Informant Interview Protocol

Interview Guide: Non-Client Agency Leadership Stakeholder

Participant ID: ________________ Interview Date: __________________

Region: NYC ___ Beacon ____

Stakeholder Type: _____________________________

Agency Type: ____

Interviewer: ____________________________

The purpose of this interview is to explore your perspective and experience with the Self-Directed Care pilot program. The Self-Directed Care program allows individuals with behavioral health needs who are participating in the pilot program to use State funds to purchase goods and services and/or to hire service providers that can facilitate the person's recovery. The SDC pilot seeks to increase autonomy and choice over benefits in order to enhance participants' progress toward recovery goals and improve health for individuals with behavioral health needs. The SDC pilot is being implemented at two behavioral health agencies in New York State.

Before we begin, I want to discuss the process of this interview. The interview will take approximately 60 minutes to complete. Again, the goal of this interview is to learn about your views and experiences regarding the implementation of the SDC Pilot Program. There are no right or wrong answers to these questions. We are only interested in your honest opinion. Any questions before we begin?

<< BEGIN RECORDING >> << BEGIN RECORDING >> << BEGIN RECORDING >>

Role:

1. What is your current role at [organization]?
   Probe: How do your responsibilities relate to the SDC pilot?

SDC Pilot

2. How would you describe the mission and goals of the SDC pilot?
3. What has been your experience with the SDC program?
4. How were participants enrolled in the program?
    a. How was eligibility assessed? Were there any challenges?
    b. To what degree is it reaching the target population?
    c. What were the most common reasons that participants were not eligible? Would this need to be changed if the program were to scale-up?
    d. What motivated participants to join the SDC program?
    e. How many participants were eligible but did not enroll? Why?

5. What have been some of the benefits of implementing SDC?
    a. What has gone well with SDC? For participants? For the organizations? For the overall system of care?
    b. How would you define success for SDC?

6. How has the SDC program impacted SDC participants?
    a. How has it impacted the paperwork they have to do (e.g., purchase requests) regarding managing their benefits?
    b. How has it impacted their access to services?
    c. How has it impacted their access to goods?
    d. How has it impacted participants' sense of autonomy and choice?
    e. How has it impacted participant outcomes (e.g., recovery, quality of life, health/wellness, community integration, functioning)?
    f. For whom does the program work well?
    g. For whom does it not work as well? Can you give an example?

7. What services or goods has SDC increased access to the most?
    a. How do these services or goods meet participants' needs?

8. What services or goods have been more challenging for SDC participants to utilize?
    a. What has been challenging about accessing these services or goods?

9. How does access to goods and use of services differ between SDC participants and other people with behavioral health needs served by [organization(s)]?
    a. What goods/services are SDC participants more likely to use/access?
    b. What goods/services are SDC participants less likely to use/access?

10. How well has the process of SDC participants identifying goals and needs, requesting funds, and having them reviewed been going?
    a. Developing participant goals? Developing budgets?
    b. Participants identifying goods/services needed?
    c. Participants requesting funds?
    d. Review/approval of funding requests?
    e. Placing funds on participants' cards?
    f. Which parts of the process do participants need the most support with?

11. What are some of the most common reasons that participants' purchase requests are denied?
    a. How is it determined whether requests are an appropriate use of SDC funds?
    b. How is it determined whether requests are related to goals?
    c. Can participants appeal request denials?

12. What is the process for identifying misuse of funds?
    a. What are the most common ways in which funds have been misused?
    b. Do any changes need to be made to the types of oversight that are now in place?

13. What have been some of the challenges of providing SDC services?
    a. Engaging participants?
    b. Staff delivering the services? Staff retention?
    c. Communicating/coordinating across staff/agencies?
    d. Reviewing/approving purchases?
    e. Timeliness with which requests/purchases are completed?
    f. Funding for SDC?
    g. Administrative burden for organizations/agencies?
    h. Any dilemmas or ethical issues that arise?
    i. What could be improved? What would help address some of these challenges?

14. What changes would you suggest to the program?
    a. What changes would be needed to help scale-up the program to other organizations and participants throughout the state?

Support Brokers

15. What is the role of the support broker within the organization?
    a. To what degree does the work of the support broker match how the role was planned?
    b. What aspects of the role have had to be clarified or negotiated over time?
    c. What changes might need to be made to the role of the support broker?

16. How did the organization select a support broker to work with participants?
    a. Were there any challenges to hiring the support broker?
    b. Any challenges to integrating this role into the agency?
    c. To what extent do support brokers work with other staff at the organization?

17. How were support brokers oriented and trained in the SDC program?
    a. How are they introduced to participants?
    b. What additional training might be needed for support brokers?

18. How are support brokers supervised?

    a. Who provides supervision?
    b. Do supervisors receive any specialized SDC training?
    c. What type of issues are discussed in supervision/with supervisors?

19. What are the benefits of having the support broker role compared to folding this into other staff roles?

20. What are the challenges of having the support broker role?

21. How does the SDC pilot fit in with other types of behavioral health services that are delivered by the [organization(s)]?

Fiscal Intermediary Role:

22. What is the role of the fiscal intermediary?
    a. To what degree does the work of the fiscal intermediary match how the role was planned?
    b. What aspects of the role have had to be clarified or negotiated over time?
    c. What changes might need to be made to the role of the fiscal intermediary?

23. What is communication/coordination like between the fiscal intermediary as part of SDC?

24. What are the benefits specifically of having the fiscal intermediary role?

25. What are the challenges of having the fiscal intermediary role?

Overall Program Evaluation

26. How would you evaluate the overall success of the program?

27. Do you believe the program should be expanded?
    a. Probe: Why or why not?

28. Any thoughts on how to improve the program?

29. What are the next steps for SDC?
    a. Probe: Do you believe that SDC is an effective and viable program for HARP enrollees across NYS?
    b. Long-term sustainability?

30. Is there something we didn't ask that you would like to add?

Appendix B. Client Interview Protocol

SDC Pilot Interview Guide: Client Stakeholder

Participant ID: ________________ Interview Date: __________________

Region: Site 1 ___ Site 2 ____

Stakeholder Type: _____________________________

Interviewer: ____________________________

The purpose of this interview is to learn about your thoughts and experience with the Self-Directed Care pilot program. The Self-Directed Care program allows individuals who are participating in the program to use State funds to purchase goods and services and/or to hire service providers that can help them meet their wellness and recovery goals.

Before we begin, I want to discuss the process of this interview. The interview will take approximately 60 minutes to complete. Again, the goal of this interview is to learn about your views and experiences with the SDC Pilot Program. There are no right or wrong answers to these questions. We are only interested in your honest opinion. Any questions before we begin?

Enrollment

31. How long have you been in the SDC program?

32. How did you hear about SDC?
    a. How did you get connected to the SDC program?
    b. Do you receive any other services at [site] other than SDC?

33. How would you describe the SDC program?
    a. How would you describe the mission and goals of the SDC program?
    b. Was the program what you expected it to be?

34. What made you want to join the SDC program?
    a. Did you have any concerns about joining the program? If so, what were those concerns?
35. What was the process like to join the SDC program?
    a. Can you walk me through the steps?
    b. How long did it take?
    c. What were some of the things that were good/helpful about the process?
    d. What were some of the things that were hard about the process?
    e. How did you feel about the paperwork you had to complete?
    f. Was there ever a time when you were discouraged during the enrollment process?

    g. Would you change anything about the process of joining the program?
    h. Did your needs or goals change from when you heard about the program to when you started making purchases?

36. What do you have to do to stay in the program?
    a. What are the rules or requirements?
    b. Any requirement or rule that you didn't understand?

Goals, Purchases, Support Broker

37. How do you work with your support broker/resource consultant?
    a. What does the support broker help you with?
    b. How often do you talk with the support broker?
    c. Does the support broker ever work with other service providers that support you (e.g., care manager)?
    d. Are there any challenges working with the support broker?

38. What are some of the goals that you've had while in the SDC program?
    a. How did you come up with those goals?
    b. What kind of input does the support broker/resource consultant have in terms of the goals you work on?
    c. Have you ever had trouble coming up with a goal?
    d. What happens if you and the support broker disagree about your goals?
    e. What happens if you want to change a goal?

39. Tell me about some of the goals that you've achieved or made progress on while in the SDC program?
    a. What helped you to make progress on those goals?

40. What's the process like from identifying a goal to being able to completing a purchase?
    a. Can you walk me through some of the steps? How long does it usually take?
    b. Developing budgets?
    c. Identifying goods/services needed?
    d. Requesting funds?
    e. Having funding requests approved?
    f. Submitting receipts?

41. What are some of the things that you have purchased while in the program?
    a. What types of services have you purchased?
    b. How did you figure out what things or services to purchase?
    c. What kind of input does the support broker have in terms of the things or services you purchase?
    d. What happens if you and the support broker don't agree about the things or services you should purchase?

42. What have been some of the benefits of being in the SDC program?

    a. Tell me about some goals you've been able to achieve or make progress on?
    b. What has changed for you since you've been in the program?
    c. How has the program helped you?
    d. Has it made it easier to get the services or things you need?
    e. What are you able to do and have now that you could not have or do before SDC?

43. Tell me about some of the goals that you've had a harder time achieving or making progress on?
    a. What has made it hard to move forward with those goals?
    b. Any specific goods or services that would help you with those goals?
    c. Have there been any services or things that would help with your goals, but you've had a harder time accessing or purchasing them?

44. What kinds of things are you not allowed to buy with SDC funds?
    a. Have staff ever told you that one of your requests was denied or a purchase was not allowed?
    a. Can you give me some examples of when that happened?
    b. How did the program explain why it was not allowed?
    c. If a request is denied, what are your options?
        i. Did you change the request, or did you drop it all together?
    d. Has there ever been a time you were not allowed or not able to purchase goods/services at all? Have you ever been on hold from purchasing things?
        i. If so, why?
    e. What might get someone removed from the program?

Overall and Suggestions

45. How is SDC different from other types of behavioral health services you use?

46. How has SDC impacted your ability to make choices or have a say in your wellness and recovery?
    a. Has it impacted how you think about behavioral health services in general?

47. What changes would you make to the SDC program?
    a. Would you make any changes to how you work with the support broker?
    b. Any suggestions for improvement?

48. Is there anything else that you would like to add?

THANK YOU FOR YOUR PARTICIPATION!

Appendix C. Client Interview Survey

Self-Directed Care Pilot Evaluation
Client Interview Survey

To be completed by Research Staff

Today's Date: _____/______/_______ **Subject ID: _________**

Site ID: __1___________2______

Instructions: Please **check or fill** in the appropriate answers. Please note that all information provided will be kept confidential and not linked to your name.

1. **What is your age? ________**

2. **How long have you been a participant in the SDC program? ___________**

3. **How long have you been a client/member of this agency? ________**

4. **Do you receive any services from this agency other than the services you get from the SDC program? (Check One)**
   - ☐ Yes
   - ☐ No

5. **What is your gender?** (Check One)
   - ☐ Male
   - ☐ Female
   - ☐ Other (Specify): ____________________

6. **What is your ethnicity?** (Check One)
   - ☐ Hispanic/Latino (Specify): ____________________
   - ☐ Non-Hispanic/Non-Latino

7. **What is your race?** (Check One)
   - ☐ Asian
   - ☐ Black/African American
   - ☐ Native American/Alaskan Native
   - ☐ Native Hawaiian/Pacific Islander
   - ☐ White
   - ☐ Multiracial/multiethnic

- ☐ Other (Specify): ______________________________

8. **What is the last grade you completed / your highest level of education?** (Check One)
    - ☐ Grammar school or middle school
    - ☐ Some high school
    - ☐ High school graduate or GED
    - ☐ Post high school technical training
    - ☐ Some college/university
    - ☐ College graduate or higher

9. **A. Are you currently school? Full-time or part-time?** (Check One)
    - ☐ Yes, full-time
    - ☐ Yes, part-time
    - ☐ No

10. **A. Are you currently employed?** (Check One)
    - ☐ Yes, full-time
    - ☐ Yes, part-time
    - ☐ No

11. **A. Have you ever been told by a doctor or mental health provider that you have any of the following mental health conditions?** (Check all that Apply)
    - ☐ Major Depression
    - ☐ Bipolar disorder
    - ☐ Schizophrenia
    - ☐ Schizoaffective Disorder
    - ☐ Schizophreniform
    - ☐ Delusional Disorder
    - ☐ Other Psychotic Disorder
    - ☐ Borderline personality disorder
    - ☐ Autism Spectrum Disorder
    - ☐ Anxiety disorder (Panic Disorder, Phobia, etc.)
    - ☐ Substance abuse or dependence
    - ☐ Other (Specify):___________

SDC CLIENT SATISFACTION QUESTIONAIRE (CSQ):

Source: Larsen et al. (1979). Assessment of Client/Patient Satisfaction: development of a general scale. Evaluation and Program Planning, 2, 197-207. Roberts et al. (1984). Assessing the Client Satisfaction Questionnaire in English and Spanish. *Hispanic Journal of Behavioral Science, 6*, (4), 385-395.

We are interested in what you think of the services and help you have received from the Self-Directed Care Program. We are interested in your honest opinion.

CSQ I1	How would you rate the SDC program in assisting you with your wellness and recovery goals? Code: 1 = Poor, 2 = Fair, 3 = Good, 4 = Excellent	____	CSQI1b
CSQ I2	Did the SDC program assist you in achieving your health and wellness goals? Code: 1= No, definitely not, 2 = No, not really, 3 = Yes, really, 4 = Yes, definitely	____	CSQI2b
CSQ I3	To what extent did the SDC program meet your needs? Code: 1 = None of my needs have been met, 2 = Only few of my needs have been met, 3 = Most of my needs have been met, 4 = Almost all of my needs have been met	____	CSQI3b
CSQ I4	If a friend were in need of similar help, would you recommend the SDC program to them? Code: 1 = No, definitely not, 2 = No, I don't think so, 3 = Yes, I think so, 4 = Yes, definitely	____	CSQI4b
CSQ I5	How satisfied are you with the amount of help you received from the support broker and other SDC staff? Code: 1 = Quite dissatisfied, 2 = Indifferent or mildly dissatisfied, 3 = Mostly satisfied, 4 = Very satisfied	____	CSQI5b

CSQI6 Has SDC helped you deal more effectively with your wellness and recovery?

____ CSQI6b

Code: 1 = No, they seemed to make things worse, 2 = No, they really didn’t help, 3 = Yes, they helped somewhat, 4 = Yes, they helped a great deal

CSQI7 In a general sense, how satisfied are you with the SDC program?

____ CSQI7b

Code: 1 = Quite dissatisfied, 2 = Indifferent or mildly dissatisfied, 3 = Mostly satisfied, 4 = Very satisfied

CSQI8 If you were to seek help again with your wellness and recovery goals, would you come back to the SDC program?

____ CSQI8b

Code: 1 = No, definitely not, 2 = No, I don’t think so, 3 = Yes, I think so, 4 = Yes, definitely