DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop S2-25-26
Baltimore, Maryland 21244-1850

State Demonstrations Group

May 19, 2026

Audrey Frenzel
Director of Medicaid
Indiana Medicaid
State of Indiana, Family and Social Services Administration
402 West Washington Street, Room W461, MS 25
Indianapolis, IN 46204

Dear Director Frenzel:

The Centers for Medicare & Medicaid Services (CMS) completed its review of the Serious Mental Illness (SMI) Interim Evaluation Report, which is required by the Special Terms and Conditions (STCs), specifically STC 15.6 "Interim Evaluation Report" of Indiana's section 1115 demonstration, "Healthy Indiana Plan" (Project No: 11-W-00296/5), for which the Substance Use Disorder (SUD) and SMI demonstration components are effective through December 31, 2026. This Interim Evaluation Report covers the period from January 2020 through December 2023, with baseline data starting from January 2018. CMS determined that the Evaluation Report, submitted on December 18, 2024 and revised on March 13, 2026, is in alignment with the CMS-approved Evaluation Design and the requirements set forth in the STCs, and therefore, approves the state's SMI Interim Evaluation Report.

Findings from the Interim Evaluation Report suggest that overall, the SMI component of the demonstration is achieving the majority of its goals. Regression analyses showed that the participation for mental health-related emergency department visits decreased from 13.2% in 2018 (pre-demonstration) to 7.4% in 2023. The number of beneficiaries with SMI receiving outpatient rehabilitation services increased from 21,290 in 2018 to 27,093 in 2023. The number of crisis stabilization units also increased from 6 in 2020 to 18 in 2023, and crisis stabilization services were delivered to 4,232 beneficiaries in 2023 compared with 2,892 in 2021. However, while the absolute number of psychiatric beds and intensive outpatient/partial hospitalization providers increased, the number of Medicaid-enrolled psychiatrists and mental health practitioners authorized to prescribe decreased, all while the SMI beneficiary population drastically increased (from around 43,000 in 2018 to roughly 203,000 in 2023), partially due to continuous eligibility during the COVID-19 public health emergency. CMS looks forward to future findings on Indiana's efforts to ensure provider capacity remains sufficient to meet beneficiary needs in upcoming monitoring and evaluation deliverables.

In accordance with STC 15.10, the approved Interim Evaluation Report may now be posted to the state's Medicaid website within 30 days. CMS will also post the Interim Evaluation Report on Medicaid.gov.

States are responsible for following all applicable federal law and regulations when they claim and use federal Medicaid funds and must fully comply with all applicable Medicaid statutes and regulations under a section 1115 demonstration, except where specific provisions have been expressly waived or identified as not applicable for that demonstration. This obligation includes all requirements in Title XIX of the Social Security Act and implementing regulations governing provider screening and enrollment activities, pre- and post-payment review claiming, payment methodologies and rate-setting, utilization controls, and program integrity including processes to identify, investigate, and refer suspected fraud, and methods to receive complaints and identify questionable practices. States must maintain effective systems and safeguards to prevent, detect, and address any fraud, waste, or abuse (FWA) in the delivery of and payment for Medicaid services, including referrals to law enforcement when appropriate.

States should have heightened monitoring and oversight mechanisms in place featuring robust internal controls to identify and remediate all vulnerabilities (including, but not limited to, fraud, waste, and abuse and beneficiary access issues) inherent in service areas approved as part of a demonstration. At any time, CMS may request that the state provide a plan detailing the state's systems and safeguards to prevent, detect, and address any FWA relative to this demonstration. Failure to meet program integrity obligations under federal statutes and regulations or under the terms and conditions of this demonstration approval may result in compliance actions or other enforcement measures that could include requirements to develop and implement corrective action plans, withholdings, deferrals, disallowances, and termination of demonstration authority.

We look forward to our continued partnership on the Healthy Indiana Plan section 1115 demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

DANIELLE DALY -S

Digitally signed by DANIELLE DALY -S
Date: 2026.05.19 05:14:22 -04'00'

Danielle Daly
Director
Division of Demonstration Monitoring and Evaluation

cc: Rhonda Gray, State Monitoring Lead, CMS Medicaid and CHIP Operations Group

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Indiana 1115(a) Demonstration Evaluation

Draft Interim Report

HEALTH CARE AND HUMAN SERVICES POLICY, RESEARCH, AND ANALYTICS — WITH REAL-WORLD PERSPECTIVE.

Prepared for: **Indiana Family and Social Services Administration**

***Submitted by*:** **The Lewin Group, Inc.**

March 11, 2026

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Indiana 1115(a) Demonstration Evaluation Interim Report

Draft for CMS Review

Prepared for:

Indiana Family and Social Services Administration

Submitted by:

The Lewin Group, Inc.

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March 11, 2026

The statements contained in this report are solely those of the authors and do not necessarily reflect the views or policies of Indiana Family and Social Services Administration. The Lewin Group assumes responsibility for the accuracy and completeness of the information contained in this report.

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List of Exhibits

Abbreviations

Abbreviation	Meaning	Abbreviation	Meaning
ALOS	Average length of stay	**LCSW**	Licensed clinical social worker
AMHH	Adult Mental Health Habilitation	**LGBTQ+**	Lesbian, gay, bisexual, transgender, and queer
AOD	Adult and other drugs	**LMFT**	Licensed marriage and family therapist
ARPA	American Rescue Plan Act	**LMHC**	Licensed MH counselor
BIPOC	Black, indigenous, and people of color	**LOS**	Length of stay
CCBHC	Certified community behavioral health clinics	**MCE**	Managed Care Entities
CCCRT	Coordinated community crisis response teams	**MCO**	Managed Care Organizations
CCSR	Clinical Classifications Software Refined	**MCU**	Mobile crisis unit
CFR	Code of Federal Regulations	**MDD**	Major depressive disorder
CI	Confidence interval	**MH**	Mental health
CMHC	Community mental health centers	**MHIN**	Michiana Health Information Network
CMS	Centers of Medicare & Medicaid Services	**MHSIP**	Mental Health Statistical Improvement Project
COPD	Chronic obstructive pulmonary disease	**MPA**	Mid-Point Assessment
COVID-19	Coronavirus disease 2019	**MPT**	Mental Health Utilization
CPSP	Certified Peer Support Professional	**MRO**	Medicaid rehabilitation option
CSU	Crisis stabilization units	**MRSS**	Mobile response stabilization services
CY	Calendar year	**MU**	Meaningful use
DCS	Department of Child Services	**NCQA**	National Committee for Quality Assurance
DMHA	Division of Mental Health and Addiction	**NDI**	NeuroDiagnostic Institute
DOC	Department of Corrections	**NPI**	National Provider Identifier
DOH	Department of Health	**OBHP**	Other behavioral health professionals
ED	Emergency department	**OCI**	Organizational conflict of interest
EHR	Electronic health record	**OMPP**	Office of Medicaid Policy and Planning
EPDS	Edinburgh Postnatal Depression Scale	**OR**	Odds ratio
EPSDT	Early and Periodic Screening, Diagnosis, and Treatment	**OUD**	Opioid use disorder
FFS	Fee-for-service	**PA**	Prior authorization
FPL	Federal poverty level	**PAA**	Provider Availability Assessment
FQHC	Federally qualified health center	**PATH**	Projects for Assistance in Transition from Homelessness
FSSA	Family Social Services Administration	**PCBHI**	Primary Care and Behavioral Health Integration
FUA	Follow-Up After ED visit for Alcohol and Other Drug Abuse or Dependence	**PH**	Physical health
FUM	Follow-up After ED Visit for Mental Illness	**PHE**	Public health emergency
HCBS	Home and community-based services	**PHP**	Partial hospitalization program
HCPCS	Healthcare Common Procedure Coding System	**PHQ**	Patient heath questionnaire

Abbreviation	Meaning	Abbreviation	Meaning
HEDIS	Healthcare Effectiveness Data and Information Set	**PIPBHC**	Promoting Integrating of Primary and Behavioral Health Care
HHS	Health and Human Services	**POC**	Plan of care
HIE	Health Information Exchange	**POS**	Place of service
HIO	Health Information Organizations	**PRFT**	Psychiatric residential treatment facilities
HIP	Healthy Indiana Plan	**QDWI**	Qualified Disabled Working Individual
HIT	Health Information Technology	**QI**	Qualified individual
HMO	Health maintenance organization	**QMB**	Qualified Medicare beneficiaries
HSPP	Health services provider in psychology	**RMHT**	Residential mental health treatment
IAC	Indiana Administrative Code	**RQ**	Research question
ICCMHC	Indiana Council of Community Mental Health Centers, Inc.	**RUCC**	Rural Urban Continuum Code
ICD10	10th Edition of International Classification of Diseases	**SAMHSA**	Substance Abuse and Mental Health Services Administration
ICE	Integrated care entity	**SBHC**	School-based health centers
IDOH	Indiana Department of Health	**SBI**	Screening and brief intervention
IEP	Individualized Education Program	**SE**	Supported employment
IET	Initiation and Engagement Treatment	**SED**	Serious emotional disturbance
IHCDA	Indiana Housing & Community Development Authority	**SLMB**	Specified Low Income Medicare Beneficiaries
IHCP	Indiana Health Coverage Programs	**SMHP**	State Medicaid Health Information Technology Plan
IHIE	Indiana Health Information Exchange	**SMI**	Serious mental illness
IMD	Institutions for mental disease	**SOAR**	SSI/SSDI Outreach, Assess, and Recovery
IOP	Intensive outpatient	**SOC**	System of care
IPF	Inpatient psychiatric facility	**SPA**	State plan amendment
IPLA	Indiana Professional Licensing Agency	**SSDI**	Social Security Disability Insurance
IRR	Incidence rate ratio	**SSI**	Supplemental Security Income
ISA	Interoperability Standards Advisory	**STC**	Specific terms and conditions
ITS	Interrupted time series	**SUD**	Substance use disorder
JC	Joint Commission	**VRS**	Vocational rehabilitation services
KII	Key informant interview	**VSD**	Value set directory

Executive Summary

A. Background

In 2018, the Indiana and Family Social Services Administration (FSSA) received authority from the Centers of Medicare & Medicaid Services (CMS) to reimburse institutions for mental diseases (IMD) for Medicaid eligible individuals ages 21-64 with substance use disorders (SUD). In 2019, FSSA received a §1115 waiver amendment to expand this authority and reimburse acute inpatient stays in IMDs for individuals diagnosed with a serious mental illness (SMI). The §1115 waiver amendment, effective on January 1, 2020, and extended through December 31, 2025 is part of broader efforts within the FSSA to ensure a comprehensive continuum of behavioral health services for Indiana residents. Indiana's approved §1115 waiver's Specific Terms and Conditions (STC) requires an independent evaluation to examine the effect of the demonstration on the intended goals. The state hired the Lewin Group (Lewin) to conduct the independent evaluation.[1] This report aims to summarize Interim Report findings (categorized by goal and evaluation question) and provides recommendations for adjustments (when appropriate) to the Section 1115 SMI/Serious Emotional Disturbance (SED) Demonstration Implementation Plan.[2]

B. Summary of the Goals

Demonstration Goals focus on reducing emergency department (ED) utilization and preventing inpatient readmission for SMI populations (Goals 1 and 2) by expanding crisis stabilization services, increasing access to community-based mental health (MH) services, and improving care coordination with special emphasis on continuity of care in the community (Goals 3, 4, and 5). Each Goal is linked to key activities that the state implemented either as part of the demonstration or to ensure a comprehensive continuum of behavioral health services. Given the interdependence of Goals, activities across Goals overlap, and are not mutually exclusive.

C. The Impact of the Coronavirus disease 2019 Public Health Emergency

Indiana is required to conduct an Interim evaluation of the waiver. The Interim evaluation period covers the first three years of the waiver extension (calendar years [CY] 2021-2023). Both the waiver (2020) and the first half of the (2021-2023) waiver extension period (2021-2025) coincided with the coronavirus disease 2019 (COVID-19) public health emergency (PHE). The PHE caused substantial changes to Medicaid policies, service utilization, and provider availability, and will have short- and long-term impacts on Indiana's health care system and specialized populations, such as SMI. Given the timing of the PHE, the state shifted many of the planned implementation action items to accommodate access to and delivery of high-quality MH services for all Indiana residents, particularly given the social distancing and health care resource prioritization required in response to the PHE.

D. The Target Population for the Evaluation

Although the expenditure authority for the demonstration is specific to IMDs, the waiver provides high quality, evidence-based MH treatment services to all Medicaid beneficiaries with a relevant SMI diagnosis. Consequently, all Medicaid enrollees continued to receive services

[1] The Lewin Group is part of Optum Serve Consulting.
[2] The Section 1115 SMI Demonstration Implementation Plan begins on page 179 of the linked document.

through their delivery system and payment methodologies were consistent with those approved in the Medicaid State Plan. The target population (also known as the analytic population or SMI beneficiary roster population) for this evaluation included all Medicaid beneficiaries covered by Indiana Health Coverage Programs (IHCP) aged 21 to 64 years with SMI regardless of their delivery system (i.e., managed care or fee-for-service [FFS]) from January 2020 (the beginning of the demonstration) through December 2023. Beneficiaries were identified to have a SMI diagnosis if they had a at least one Medicaid paid claim with any one of the four diagnosis codes in the primary or secondary diagnosis position: F20.xx (schizophrenia and sub codes up to 2 places), F25.xx (schizoaffective disorder and sub codes up to two places), F31.xx (bipolar disorder and all sub codes up to 2 places), and F33.xx (major depressive disorder [MDD], recurrent, and all sub codes up to two places).

E. Summary of Interim Report Methodology

Evaluation of the program Goals were based on a mixed-methods approach employing quantitative and qualitative analyses to examine the demonstration's impact on Medicaid beneficiaries aged 21-64 years with a SMI diagnosis between 2021 and 2023. Quantitative data was compiled from various sources including administrative data, medical claims/encounter data, Medicaid enrollment data, and survey reports. For all claims and encounter-based measures, we created a roster of SMI beneficiaries: Medicaid-covered individuals aged 21–64 with at least one paid claim containing an SMI diagnosis during the study period. Each person was added to the roster at their first SMI diagnosis and retained in all following years as long as they maintained Medicaid coverage and met age criteria. All annual measures were calculated using this roster.

The "SMI beneficiary roster" was defined cumulatively to reflect the chronic nature of SMI; that is, if a beneficiary was included in the roster in one year, they were included in subsequent years, regardless of whether they had a subsequent SMI diagnosis, as long as they met the Medicaid enrollment eligibility criteria. **Section III** provides further details as to how the "SMI beneficiary roster" was constructed. Analyses used a combination of descriptive statistics (i.e., to summarize population characteristics, annual health care service utilization rates, annual count of providers) and, where appropriate, regression-based approaches to estimate the effect of the demonstration on outcome measures as well as relationships with select beneficiary characteristics.

Qualitative data was compiled from key informant interviews (KII) and captures beneficiary, provider, advocacy organization, state official, and Managed Care Entity (MCE) experiences and perspectives. Interviews were conducted iteratively, and analyses identified themes by topic area.

Since the approval of the Evaluation Plan, Lewin's understanding of the program and available data sources has evolved. Consequently, some research questions (RQ) were not fully addressed because of data limitations. Goal introductions in **Section V** delineate if an RQ was not fully addressed. Findings for the evaluation time-period likely reflect both the impact of COVID-19 related policy changes and activities as well as demonstration impacts. Consequently, any observed changes should be interpreted with caution as findings may be confounded by the PHE.

F. Results

Sociodemographics

During the waiver extension (2021 – 2023), the number of individuals included in the SMI beneficiary roster population (analytic population) were between 191,000 and 263,000 and comprised approximately 22.1% of the Medicaid population (aged 21-64 and having coverage eligible to receive SMI waiver benefits). The SMI beneficiary roster population (analytic population) were mostly female (approximately 64.6%), between the ages of 21-50 (76.3%), White/Caucasian (65.5%), and lived in a metropolitan (metro) area.

Goal 1: Reduced utilization and length of stay (LOS) in EDs among Medicaid recipients with SMI while awaiting MH treatment in specialized settings.

All-cause ED participation and utilization rates declined between 2018 and 2023. For the SMI beneficiary population, participation decreased from 56.6% in 2018 (pre-demonstration) to 53.7% in 2021 and 50.9% in 2023, while the ED utilization rate decreased from 2,096 in 2018 to 1,734 in 2021 (first year of waiver extension) and 1,588 visits per 1,000 beneficiary years in 2023. The ED utilization rate was significantly lower during the waiver extension (2021-2023) compared to those in the pre-demonstration period (2018-2019) after adjusting for select beneficiary characteristics. In addition, both the ED utilization rate and the ED participation rate declined during the waiver extension period. Similar patterns were also observed for MH-related ED visits over time. That is, the participation rate for MH-related ED visits decreased from 13.2% to 7.4%, and the utilization rate decreased from 280 to 144 visits per 1,000 beneficiary years. The decrease in all-cause ED visits or related to MH was consistent across select population subgroups (examined based on gender, race, ethnicity, geographic location). Consistent with findings from the 2018-2020 Summative Evaluation Report and the 2023 Mid-Point Assessment (MPA), 2024 interviewees described broad changes in utilization of health care services during the PHE which likely confounded the impact of the waiver on ED utilization for Medicaid beneficiaries with SMI. Specifically, interviewees in 2024 indicated that the PHE strained overall provider capacity in the ED and across the care continuum. Despite provider capacity challenges, interviewees highlighted state strategies and successes for increasing availability and access to crisis stabilization services that divert admissions from EDs and inpatient psychiatric hospitals.

Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings.

All-cause unplanned readmission rates within 30 days following acute inpatient or observational stays related to MH remained relatively stable between 2018 (readmission rate: 16.9%) and 2023 (readmission rate: 19.3%). Adjusting for select beneficiary characteristics, 30-day readmission rates were not significantly different during the waiver extension period (2021-2023) relative to the pre-demonstration period (2018-2019). MCEs interviewed in 2024 noted discrepant readmission rate patterns throughout the evaluation time-period. MCEs identified several challenges for reducing readmission rates including high no-show rates for follow-up care, insufficient coordination between MCEs and inpatient facilities, and inaccurate individual contact information. Consistent with Goal 1 findings, observations from the MCEs indicate that the PHE (e.g., provider shortages, facility shutdowns, and patient hesitancy for attending in-

person appointments) had a negative impact on care coordination and may suggest that SMI beneficiaries experienced challenges with accessing community-based MH services post-discharge, raising risk for readmission. Interviewees highlighted the use of telehealth as a strategy for mitigating access challenges and reducing readmission.

Goal 3: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state.

Quantitative and qualitative findings demonstrate Indiana's commitment to improving the availability of crisis stabilization services. Since 2020, the state has increased both the number of Medicaid beneficiaries receiving crisis services as well as the number of crisis stabilization units (CSUs), mobile crisis units (MCU)/mobile response stabilization services (MRSS)[3], psychiatric hospital beds, intensive outpatient (IOP) and partial hospitalization services, and community mental health centers (CMHC) satellite sites.[4] Additionally, the state has implemented the 988 Indiana Crisis and Suicide Lifeline and expanded the number of certified community behavioral health clinics (CCBHCs).[5] Although findings are positive and state plans for increasing the availability of crisis stabilization services are in process, opportunities for crisis care expansion across the state exist.

Goal 4: Increase access of recipients with SMI to community-based services to address their chronic MH care needs including through increased integration of primary and behavioral health care.

Throughout the waiver (2020) and waiver extension (2021-2023), Indiana has prioritized actions to increase treatment access and behavioral health integration. For example, Indiana has invested in several programs to increase provider capacity and continue to focus on screening and treatment engagement initiatives for beneficiaries with SMI (e.g., school-based initiatives to increase behavioral health integration, vocational rehabilitation services [VRS], supported employment [SE] opportunities, and stigma reduction programs). The state also increased the number of federally qualified health center (FQHC) and CMHC sites between 2020 and 2023. Survey findings (2020-2022) for beneficiaries receiving care at community mental health centers also indicated that most beneficiaries were satisfied with care received, had access to care, and received quality care. Despite these increases and reported beneficiary satisfaction, state officials, MCEs, providers, and advocacy organizations noted that the adequacy of the provider supply did not meet patient demand.

Analyses of health care utilization, based on claims/encounter data demonstrate that the participation rates in community based services decreased significantly between 2018 and 2023, overall (from 87.9% to 49.4%) and across all types of services (outpatient rehabilitation and targeted case management: decreased from 48.7% to 13.3%; Home and Community-based Services (HCBS) and Long-term Services and Supports (LTSS): decreased from 9.4% to 2.9%; outpatient MH services: decreased from 86.5% to 49.0%). Declines in participation rates were

[3] For this report, MCU and MRSS are used interchangeably.

[4] The number of reported CMHC satellite sites increased from 97 to 231 between 2020 and 2022. Prior to 2023, the state only reported CMHC satellite locations that provided MH-related services. Beginning in 2023, however, the state began reporting all CMHC satellite locations without differentiating among sites providing MH services (n=324). Thus, growth in CMHCs in 2023 cannot be compared to prior years.

[5] FSSA received 2-year SAMHSA CCBHC Expansion grants in FY18-FY21 which allowed facilities to build capacity for crisis services and implement provider training.

unexpected given that SMI is often persistent and chronic, requiring ongoing treatment and support. These findings could be attributable, at least in part, to the cumulative definition of the SMI beneficiary roster, which resulted in large increases in the SMI analytic population over the evaluation period. Notably, while the proportion of beneficiaries receiving services (participation rate) decreased, the total number (absolute counts) of beneficiaries receiving MH-related services more than doubled throughout the evaluation period suggesting that access to MH-related care improved.

Goal 5: Improved care coordination, especially continuity of care in the community following episode of acute care in hospitals and residential treatment facilities.

The proportion of beneficiaries who received care in the community, within 7- and 30- days, following an ED visit related to MH (i.e., follow-up rate) declined over time (7-day follow-up rate: decreased from 45.3% to 36.8%; 30-day follow-up rate decreased from 63.1% to 51.8%). Additionally, the likelihood of MH-related follow-up with a provider in a community setting was significantly lower in the waiver extension period relative to the pre-demonstration period. Similar to overall ED use, rates of ED utilization related to AOD declined over time. However, the likelihood of follow-up with a health care provider in a community setting after ED visit related to AOD was significantly higher in the waiver extension period relative to the pre-demonstration period (7-day follow-up rate: increased from 13.2% in 2018 to 18.6% in 2023; 30-day follow-up rate: increased from 20.1% to 27.8%). Among beneficiaries interviewed in 2024, approximately half reported visiting the ED between 2021 and 2023. Of those interviewees who received care in the ED, less than half indicated that a professional helped coordinate care upon discharge.

The proportion of beneficiaries having an acute inpatient stay (and those related to MH) decreased significantly over time from 27.9% (13.2%) in 2018 to 16.2% (6.2%) in 2023. MH-related follow-up rates post-discharge from an acute inpatient stay was stable (although statistically significantly different for pre- and post-waiver) with the 7-day follow-up rate ranging from 40.8% in 2018 to 38.9% in 2023 and 30-day follow-up rate ranging between 58.2% in 2018 to 60.1% in 2023.

Qualitative findings confirmed that discharge planning during inpatient stays, case management, care coordination, and care transition services were provided by MCEs throughout the waiver extension. Despite MCE care coordination efforts, half of beneficiaries who reported an inpatient stay during the waiver extension indicated that they received care coordination services. MCEs noted several challenges for transitioning care from inpatient to the community including the beneficiary's lack of an established primary care provider (PCP), insufficient support from inpatient facilities, inaccurate patient contact information, and housing insecurity.

G. Recommendations for Adjustments to Section 1115 SMI Demonstration Implementation Plan

Lewin developed 22 recommendations to support the state in achieving its' goals. **Exhibit ES.1** list the recommendations.

Exhibit ES.1: Recommendations by Goal for Potential Modifications to Section 1115 SMI Demonstration Implementation Plan or Other State Activities

Goal	Recommendations for Potential Modifications to Section 1115 SMI Demonstration Implementation Plan or Other State Activities
1	1. Continue to monitor ED participation and utilization during the years following the COVID-19 PHE.
	2. Triangulate ED service utilization data with other data sources (e.g., crisis stabilization services) and implementation activities to better understand and interpret trends.
	3. Track ED average length of stay (ALOS). Require data reporting by MCEs and providers as needed.
	4. Identify strategies to increase workforce capacity in the ED (e.g., investments in care coordinators) for beneficiaries with SMI.
	5. Continue to build on successful strategies for identifying high utilizers and connecting them with appropriate disease management or care management services.
2	6. Expand monitoring ALOS beyond IMD.
	7. Identify strategies to increase workforce capacity (e.g., investments in care coordinators) for beneficiaries with SMI.
	8. Maintain telehealth service options.
	9. Continue to build on successful strategies for identifying high utilizers and connecting them with appropriate disease management or care management services.
3	10. Continue to build crisis stabilization services across the state, particularly in non-metropolitan (non-metro) areas, with consideration for how these services will be sustained in the future.
	11. Identify strategies and resources to manage non-crisis MH events.
	12. Consider conducting surveys with beneficiaries to assess experiences and satisfaction in support of continuous improvement.
4	13. Conduct analyses of community-based and other relevant health care services (e.g., primary care) for MH care in relation to timing of first SMI diagnosis and by the SMI condition.
	14. Conduct studies examining provider capacity in relation to beneficiary demand to determine whether and to what extent gaps may have contributed to lower participation rates.
	15. Continue to build provider capacity across the system of care (SOC) and throughout the state, with special emphasis on increasing the number of Medicaid behavioral health care providers.
	16. Continue to engage peers to support beneficiaries in navigating treatment and encourage engagement.
	17. Meet with providers, advocates, and state agencies (e.g. Department of Health [DOH]; Department of Corrections [DOC]) to identify strategies for increasing collaboration and minimizing barriers for accessing treatment services.
	18. Examine the impact of the state's stigma reducing efforts on engagement.
	19. Address barriers to behavioral health integration (e.g., enhance infrastructures to support care coordination, identify strategies to improve communications between providers and support information sharing).
5	20. Identify and implement strategies for increasing care coordination and supporting care transition.
	21. Build provider capacity, specific to care coordination across the SOC as well as strengthening relationships and workflows between community providers, EDs and inpatient facilities.
	22. Continue to implement strategies to reduce housing insecurities.
	23. Continue to build out more effective data programs to compile and share relevant (real-time) information for care coordination.

I. General Background Information

A. Overview

A 2015 report to the Indiana General Assembly highlighted the need for expanded crisis services, access to inpatient psychiatric beds, and improved coordination for individuals transitioning from inpatient services back into the community. Specifically, the report cited survey results demonstrating Indiana's reliance on EDs to manage individuals in acute crisis and suggested a need for increased options for psychiatric crisis.[6]

Demonstration Name: Healthy Indiana Plan (HIP) - Project Number 11-W-00296/5
Approval Date: 10/26/20 (Waiver extension)
Study Time Frame: Pre-Demonstration Period: 2018-2019; SMI Waiver Implementation Year: 2020; SMI Waiver Extension Years: 2021-2023; see **Exhibit III.1**
Target Population: Medicaid beneficiaries with SMI aged between 21 and 64

Section 1115 of the Social Security Act gives the Secretary of Health and Human Services (HHS) authority to approve experimental, pilot, or demonstration projects that are found by the Secretary to be likely to assist in promoting the objectives of the Medicaid program. The purpose of these demonstrations is to establish and evaluate state-specific policy approaches to better serve Medicaid populations in a budget neutral manner. In 2018, the FSSA received authority from CMS to reimburse IMDs for Medicaid-eligible individuals aged 21-64 years with SUD. In 2019, CMS allowed states to receive authority to pay for short-term acute stays in an IMD for adults with SMI[7] and children with SED. Indiana state leadership elected to focus waiver efforts on adults with SMI. The SED population was not pursued because for those 21 and under, Indiana Medicaid already paid for services if they were delivered in an IMD through the psychiatric residential treatment facility benefit for that age group (405 Indiana Administrative Code [IAC] 5-20-1). Through this demonstration, Indiana will receive federal financial participation for services furnished to Medicaid beneficiaries who are primarily receiving short-term treatment services for an SMI in facilities that meet the definition of an IMD[8] to ongoing chronic care for such conditions in cost-effective community-based settings.

The FSSA §1115(a) demonstration waiver for adults with SMI was approved on December 20, 2019, and effective from January 1, 2020 - December 31, 2020. On October 26, 2020, CMS granted approval for a five-year waiver extension, permitting the waiver to remain in effect through December 31, 2025.

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6 DMHA distributed the Psychiatric and Addiction Crisis Survey in December 2014 and January 2015. Tailored surveys went out to respondent groups including MH and addiction providers, hospital ED staff, first responders, consumer and family advocates, and probation and parole officers.

7 In 2018, 12% of the Indiana Medicaid population were diagnosed with SMI (i.e., had at least one claim with a primary or secondary diagnosis of SMI), suggesting a need for state investments supporting this population.

8 Reimbursement will not be extended to IMDs for residential stays; additionally, state MH hospitals will not be classified as IMDs eligible for reimbursement under this waiver. Facilities with more than 16 beds that are certified as Private Mental Health Institution by the DMHA qualify as IMDs under this waiver.

B. Demonstration Description and State Agency Collaboration

Indiana's publicly funded behavioral health (both MH and SUD) SOC supports access to prevention, early intervention, and recovery-oriented services and supports in all 92 counties, blending federal, state, and local funding streams to a provider network of agencies and individual practitioners. Indiana's FSSA and specifically its Office of Medicaid Policy and Planning (OMPP) and Division of Mental Health and Addiction (DMHA) partners provide policy oversight and primary funding of services and supports for individuals in need of behavioral health services. OMPP includes a robust continuum of behavioral health services as a benefit to enrollees in its FFS and Medicaid managed care programs. DMHA leverages its block grant funding from the Substance Abuse and Mental Health Services Administration (SAMHSA) and state appropriations to complement the Medicaid service array, with a focus on providing SUD/SMI services to all fully eligible beneficiaries of any age, and who are at or below 350% of the federal poverty level (FPL). OMPP and DMHA also partner with the Department of Child Services (DCS), DOC, and county jails in supporting access to and oversight of behavioral health services for Indiana's most vulnerable individuals.

As part of the waiver amendment application Indiana described its current behavioral health SOC, highlighting a sizeable provider network of behavioral health providers including hospitals, psychiatric residential treatment facilities (PRTF), SUD residential providers, community-based agencies (e.g., CMHCs), and individual practitioners. Information specific to the state's current service continuum was also delineated. See **Attachment B** for a complete description of Indiana's current behavioral health SOC.

C. Demonstration Goals and Milestones

Indiana's goals align with those of CMS for the demonstration waiver and are part of broader efforts within the FSSA to ensure a comprehensive continuum of behavioral health services. Demonstration goals include:

- **Goal 1**: Reduced utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings.
- **Goal 2**: Reduced preventable readmissions to acute care hospitals and residential settings.
- **Goal 3**: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state.
- **Goal 4**: Improved access to community-based services to address the chronic MH care needs of beneficiaries with SMI, including through increased integration of primary and behavioral health care.
- **Goal 5**: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.

As described in Indiana's approved Section 1115 SMI Demonstration Implementation Plan, the state's approach to achieving the demonstration goals involves implementing action items to accomplish four key milestones:

- **Milestone 1:** Ensuring quality of care in psychiatric hospitals and residential settings.
- **Milestone 2:** Improving care coordination and transitioning to community-based care.

- **Milestone 3:** Increasing access to the continuum of care, including crisis stabilization services.
- **Milestone 4:** Earlier identification and engagement in treatment, including through increased integration.

Goals and milestones are interrelated, and action items identified in Indiana's Section 1115 SMI Demonstration Implementation Plan overlap. Consequently, a distinct action item could be aligned to multiple goals and/or milestones. Refer to **Sections E.1** and **V.A** for additional details delineating action items which repeat across multiple goals and milestones. Indiana's approved Section 1115 Indiana SMI Demonstration Implementation Plan also includes a financing and Health Information Technology (HIT) plan. The HIT plan describes the state's strategy to improve data sharing and interoperability in support of SMI care delivery. The financing plan focuses on ensuring budget neutrality. Refer to **Sections E.2** and **E.3** for additional details.

D. Interim Assessment Scope and Timeline

Indiana's approved §1115 waiver extension STC requires the Interim Report to be conducted by an independent evaluator. The objective of the evaluation is to examine the effect of the waiver on the intended goals. The state procured Lewin to conduct the independent evaluation. See **Attachment A** for Lewin's "No Conflict of Interest" Statement. The scope and timeline of the assessment is described in the following sections.

Per STC 5 Section XVI - Evaluation of the Demonstration (Page 65) of the State Medicaid Director Letters for the section 1115 Medicaid demonstration, the state is required to conduct an Interim evaluation of the waiver extension that covers the first three years of the waiver (CYs 2021-2023) by December 31, 2024. To fulfill this requirement, the state must submit a comprehensive report that includes methodological limitations (e.g., design, data, and analyses), relevant findings (categorized by goal and evaluation question), interpretations of findings, implications for state policies or other state initiatives, and recommendations to other states interested in implementing a similar approach. The RQs for each goal, outcome measures, and analytic approach are based on the approved Evaluation Plan (March 21, 2023).

E. State Strategies for Addressing Waiver Goals and Milestones

E.1. Key Elements of the Section 1115 SMI Demonstration Implementation Plan

The FSSA submitted its Section 1115 SMI Demonstration Implementation Plan to CMS on August 30, 2019. As stated previously, FSSA received initial approval for the first year of the demonstration on December 20, 2019. On October 26, 2020, CMS granted a five-year waiver extension, permitting the waiver to remain in effect through December 31, 2025. The Section 1115 SMI Demonstration Implementation Plan includes:

- Oversight of IMDs (**Milestone 1**).
- Improved integration and care coordination, including transitions of care (**Milestones 2 and 3**; **Goals 1, 2, and 5**).
- Improved primary care and behavioral health integration (PCBHI) (**Milestones 2 and 3**; **Goals 1, 2, and 4**).

- Behavioral and primary health care coordination service programming (**Milestone 2**; **Goal 4**).
- Implementation of child (MH) wraparound services (**Milestones 3 and 4**; **Goals 4 and 5**).
- Increased access to the care continuum including crisis stabilization services (**Milestone 3**; **Goal 3**).
- Expanded coverage for early identification (**Milestone 4**; **Goals 4 and 5**).
- Increased partnerships for engaging individuals into care (**Milestone 4**; **Goal 5**).

FSSA identified 23 distinct action items in its Implementation Plan. Action items are aligned to demonstration milestones. Findings from the 2023 MPA[9] noted that the state implemented 20 of the 23 action items[10] between January 2020 and December 2023. Of the 20 distinct action items completed, 11 items are aligned to demonstration goals. Given that the focus of the Interim Report is the state's progress on goal achievement, activities aligned to goals were included in programmatic logic models (**Section II**). The state also highlighted nine additional action items that supported goal execution and were completed during the demonstration. These additional actions were also included in the programmatic logic models. As stated previously, goals are interrelated, and action items identified in Indiana's Section 1115 SMI Demonstration Implementation Plan overlap. Consequently, a distinct action item could be aligned to multiple goals. **Section V** of this report describes the state's progress for achieving Goals.

E.2. Key Elements of the Finance Plan

The state's financing plan describes state efforts for increasing the availability of nonhospital, non-residential crisis services, and community-based MH providers for Medicaid beneficiaries. State efforts include:

- Providing mobile crisis teams (20) in addition to the CMHCs mandated 24/7 crisis services.
- Annually monitoring access to non-residential crisis stabilization services through completion of the CMS Template – "Overview of the Assessment of the Availability of MH Services."
- Piloting two CSUs in the northern and southern parts of the state.
- Piloting MCU/MRSS.
- Expanding crisis intervention services, IOP program services, and peer recovery services to all Indiana Medicaid programs.

The state's financing plan also describes a comprehensive continuum of community-based services. The state monitors access to community-based services through an agreed upon methodology. The state specifically monitors any changes to non-CMHC providers and the impact on access to IOP, peer support, and crisis intervention services. Additionally, the state

[9] FSSA anticipates that the MPA will be approved and published on the FSSA website prior to CMS approval of the Interim Report. Consequently, the final version of the Interim Report will include a link to the MPA.

[10] Action items are counted as complete if a distinct action was completed either prior to the demonstration, during the evaluation time-period, post evaluation time-period, or partially completed.

monitors provider enrollment, identifies geographic shortage areas, and conducts targeted outreach to non-Medicaid enrolled providers to encourage enrollment in those areas.

E.3. Key Elements of the Health Information Technology Plan

As outlined in Indiana's State Medicaid Health Information Technology Plan (SMHP), Indiana's HIT environment is active with multi-faceted efforts to support provider HIT capacity and foster the sharing of clinical and administrative data to improve health care and support system improvements. The state has taken an active role through its state health agencies and Medicaid program to promote HIT adoption and Health Information Exchange (HIE) development, building upon its private health care marketplace. As outlined in **Exhibit I.1**, the state has four well-established HIE networks operated by Health Information Organizations (HIOs), each functioning in different capacities for community partners.

Exhibit I.1: Status of Regional HIOs

Regional HIO	Current Status
HealthBridge (includes greater Cincinnati tristate area)[11]	Utilization of the Health Collaborative's HealthBridge Suite (hb/suite): • 58 hospitals • 8,901 providers • 160 million clinical results processed • 15 million monthly messages
HealthLINC[11]	• Delivers more than 175,000 medical results per month among hospitals, office and clinic practices and under-served clinics • Health service directory that includes more than 350 physicians and other providers
Indiana Health Information Exchange (IHIE)[12]	• Connection to 123 hospitals representing 38 health systems • Over 19,000 practices • Over 54,500 providers • Over 20,000,000 patients • Over 16,000,000,000 clinical data elements
Michiana Health Information Network (MHIN)[11]	• Over 576 data sources • 3.9 million transactions inbound per month • 44,582 providers connected

Indiana's HIT plan identifies the following actions:

- Drive improvements for increased electronic documentation and standardization among settings and providers not previously addressed through Meaningful Use (MU), including behavioral health.
- Update the broader State Medicaid HIT Plan and align areas of prioritization with waiver milestones as appropriate.

[11] Data listed in column 2 of **Exhibit I.1** for Health Bridge, HealthLINC, and MHIN reflects status for 2021 and 2022. Health Bridge, HealthLINC, and MHIN data have not changed since the development of the Implementation Plan.

[12] Historical data covering the study time-period for IHIE is unavailable. Consequently, data listed in column 2 of **Exhibit I.1** for IHIE reflects status as of September 2024.

- Review the applicability of standards referenced in the Interoperability Standards Advisory (ISA) and 45 Code of Federal Regulations (CFR) 170 Subpart B for potential inclusion into our contracts.
- Conduct a provider survey to identify the volume of providers utilizing closed loop referrals and e-referrals.
- Determine required steps and timeline for compliance with the CMS Interoperability and Patient Access Final Rule.[13]
- Explore submitting the health homes state plan amendment (SPA) which will include leveraging HIT for enhanced integration and coordination.
- Survey IMDs to identify IMD's plan for complying with the CMS Interoperability and Patient Access Final Rule and options for increasing IMD activity in this area.
- Modernize the electronic health record (EHR) system used collectively by all state psychiatric hospitals.
- Continued operation of managing consent/privacy in a multitude of mechanisms across the Medicaid Health Information Sharing Enterprise.
- Continued utilization of the Relias ProAct Tool.
- Continued operation of the Indiana Telehealth Network and Project ECHO (Extension for Community Healthcare Outcomes).

E.4. Changes to the Demonstration

Renewals, amendments, or major operational changes were not requested or implemented during the waiver or waiver extension. Consequently, the Interim Report does not include information specific to demonstration changes and motivations for change. Given changes were not requested or implemented, the Evaluation Plan (approved March 21, 2023) was not altered or augmented. FSSA will submit a waiver renewal application in December of 2024 to extend the waiver through 2030.

F. Budget Neutrality

Milliman, Inc. (the State's actuary) conducts budget neutrality assessments as part of the SMI monitoring protocol. These assessments include cost analyses to assess whether the SMI demonstration results in higher, lower, or neutral health care spending. Findings are submitted on a quarterly basis to CMS. In addition to budget neutrality assessments, Milliman performed the cost analyses (described in the approved Evaluation Plan) required for the Interim Report. Cost analyses assessed how the demonstration impacted health care spending (increase, decrease, or

[13] The CMS Interoperability and Patient Access final rule is intended to move the health care ecosystem in the direction of interoperability by improving the quality and accessibility of information that patients need in order to make informed health care decisions, including data about health care prices and outcomes, while minimizing reporting burdens on impacted providers and payers. (https://www.federalregister.gov/documents/2020/05/01/2020-05050/medicare-and-medicaid-programs-patient-protection-and-affordable-care-act-interoperability-and)

remain unchanged) during the evaluation time and adhered to CMS guidance. Refer to **Attachment G** for findings related to the impact of the demonstration on health care spending.[14]

G. The Impact of the Coronavirus Disease

As stated in **ES.C**, the FSSA §1115(a) demonstration waiver for adults with SMI was effective from January 1, 2020 - December 31, 2020. On October 26, 2020, CMS granted approval for a five-year waiver extension, permitting the waiver to remain in effect through December 31, 2025. The state is required to conduct an interim evaluation of the waiver extension that covers the first three years of the waiver (CYs 2021-2023). Both the waiver (2020) and the waiver extension (2021-2023) coincided with the COVID-19 PHE, which was determined in January 2020.[15] The PHE caused substantial changes to Medicaid policies, service utilization, and provider availability, and will have short- and long-term impacts on Indiana's health care system and specialized populations, such as SMI. Given the timing of the PHE, the state shifted many of the planned implementation action items to accommodate access to and delivery of high-quality MH services for all Indiana residents, particularly given the social distancing and health care resource prioritization required in response to the PHE. Subsequently, progress for achieving demonstration goals was impacted by COVID-19 related policy changes and activities.[16] Therefore, findings for the evaluation time-period likely reflect both the impact of COVID-19 related policy changes and activities as well as demonstration impacts. Consequently, any observed changes should be interpreted with caution as findings may be confounded by the PHE.

H. Target Population

Although the expenditure authority for the demonstration is specific to IMDs, the waiver provides high quality, evidence-based MH treatment services to all Medicaid beneficiaries with a relevant SMI diagnosis. Consequently, all Medicaid enrollees (**Exhibit I.2** summarizes eligibility groups excluded) continued to receive services through their delivery system and payment methodologies were consistent with those approved in the Medicaid State Plan. Individuals apply for Medicaid services through the Division of Family Resources, which determines eligibility for IHCP. If an individual is determined eligible, beneficiaries will have access to high quality, evidence-based MH treatment services under this demonstration. All enrollees eligible for a mandatory or optional eligibility group approved for full Medicaid coverage, and aged 21-64 years, would be eligible for acute inpatient stays in an IMD under the waiver. The eligibility groups outlined in **Exhibit I.2** are not eligible for stays in an IMD as they receive limited Medicaid benefits only and includes individuals receiving Emergency Only Services, Family Planning Services, PE Family Planning program benefits, PE Pregnant Women, Qualified Medicare Beneficiaries (QMB) only, Specified Low Income Medicare Beneficiaries (SLMB) only, Qualified Disabled Working Individual (QDWI), and Medicare Qualified Individual (QI).

[14] Cost analyses (**Results – Section H**: Impact of the Demonstration on Health Care Spending) were drafted as a separate attachment rather than integrated into the body of the report. FSSA received approval from CMS (September 16, 2024) to produce **Results – Section H** as a separate attachment.

[15] U.S. Department of Health & Human Services. (2020, January 31). *Determination that a Public Health Emergency Exists* [Press release]. Determination that a Public Health Emergency Exists (hhs.gov)

[16] Indiana 1115(a) Demonstration Evaluation Summative Report (https://secure.in.gov/fssa/hip/files/IN-SMI-Summative-Evaluation-Report.pdf)

Exhibit I.2: Eligibility Groups Excluded from the Demonstration

Eligibility Group Name	Social Security Act & CFR Citation
Limited Services Available to Certain Aliens	42 CFR §435.139
Qualified Medicare Beneficiaries (QMB)	1902(a)(10)(E)(i) 1905(p)
Specified Low Income Medicare Beneficiaries (SLMB)	1902(a)(10)(E)(iii)
Qualified Individual (QI) Program	1902(a)(10)(E)(iv)
Qualified Disabled Working Individual (QDWI) Program	1902(a)(10)(E)(ii) 1905(s)
Family Planning	1902(a)(10)(A)(ii)(XXI)

The target population (also known as the analytic population or the SMI beneficiary roster population) for this evaluation included all Medicaid beneficiaries covered by IHCP aged 21 to 64 years with SMI regardless of their delivery system (i.e., managed care or FFS) from January 2020 (the beginning of the demonstration) through December 2023.[17] Beneficiaries were identified to have a SMI diagnosis if they had a at least one Medicaid paid claim with any one of the four diagnosis codes in the primary or secondary diagnosis position: F20.xx (schizophrenia and sub codes up to 2 places), F25.xx (schizoaffective disorder and sub codes up to two places), F31.xx (bipolar disorder and all sub codes up to 2 places), and F33.xx (MDD, recurrent, and all sub codes up to two places).

[17] A comparison group for the target population was considered as part of the development of the evaluation plan and determined to be not feasible based on specific aspects of the Indiana SMI Waiver. See Section **III.A.5** for additional details.

II. Evaluation Questions and Hypotheses

State demonstration goals seek to achieve a comprehensive continuum of behavioral health services (in alignment with the objectives of Titles XIX and XXI). This section summarizes the hypotheses and corresponding RQs identified in the approved Evaluation Plan for each demonstration goal. The RQs were drafted to align with the CMS evaluation design guidance but are specific to Indiana's waiver demonstration which only included the SMI population.[18] Additionally, this section includes a logic model for each goal. Logic models are visual representations that illustrate the shared relationships between a program's activities and its intended effects. These diagrams depict a theory of change that supports evaluation design and promotes the study of measurable outcomes. Logic models are iterative in nature and are refined as the program's context evolves, findings are identified, and implementation lessons are learned. Consequently, adjustments have been made to the logic models that were documented in the 2021-2025 Evaluation Plan to reflect the current state of the program. For example, action items that were paused or suspended (e.g., OpenBeds) were removed and new actions were added. **Exhibit II.1** summarizes logic model refinements.

Exhibit II.1: Logic Model Adjustments

Logic Model Element	Refinements
Arrows	Added to demonstrate the relationship between the activities and the outcomes
Assumptions	Added to harmonize the goals with the action items selected
Action Items	Refined to include actions completed and documented in the Indiana's Section 1115 SMI Demonstration Implementation Plan as well as additional action items identified from KII. As stated previously, goals are interrelated, and action items overlap. Consequently, a distinct action item could be aligned to multiple goals.
Short-Term/Long-Term Outcomes	Refined to reflect the available data
Moderating Factors/Confounding or Contextual Factors	Refined to reflect the evolving context and lessons learned

The Interim Report builds on findings from the 2018-2020 Summative Evaluation Report and 2023 MPA and documents the state's progress in achieving demonstration goals. Findings reflect the state's agility in shifting many of the planned implementation action items during the waiver (2020)[19] and waiver extension (2021-2023) while at the same time implementing additional actions to better serve the needs of SMI beneficiaries navigating a different health care landscape than what was conceived prior to the PHE. When appropriate, findings are identified as consistent or inconsistent with prior reports to reflect changes across the demonstration and support interpretation. The following sections describe the objectives of each goal, hypotheses, and research questions. **Attachment G**: Impact of the Demonstration on Health Care Spending also includes study objectives and evaluation questions.

[18] CMS SMI and SUD Evaluation Design Guidance: https://www.medicaid.gov/medicaid/section-1115-demo/downloads/evaluation-reports/smi-sed-eval-guide-appendix-a.pdf

[19] To accommodate access to and delivery of high-quality MH services for all Indiana residents during the COVID-19 PHE (determined in January 2020).

A. Goal 1: Reduced utilization and LOS[20] in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings.

Although the rates of ED visits per 100,000 persons nationally were stable between 2009 and 2018, visits associated with MH diagnoses continued to rise among Medicaid beneficiaries.[21] Individuals with SMI are more likely to have higher rates of ED utilization than individuals without any MH diagnosis.[22]

Goal 1 assesses the impact of expanding access to high-quality, evidence-based MH treatment services in IMDs on utilization in EDs among Medicaid beneficiaries with SMI awaiting MH treatment in specialized settings. **Exhibit II.2** lists the hypothesis and RQs corresponding to this goal.

Exhibit II.2: Hypothesis and Research Questions for Goal 1

Hypotheses	Research Questions
Hypothesis 1: The SMI demonstration will result in reductions in utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment.	**Primary research question 1.1:** Does the SMI demonstration result in reductions in utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment? **Subsidiary research question 1.1:** How do the SMI demonstration effects on reducing utilization and LOS in EDs among Medicaid beneficiaries with SMI vary by geographic area or beneficiary characteristics? **Subsidiary research question 1.2:** How do SMI demonstration activities contribute to reductions in utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings?

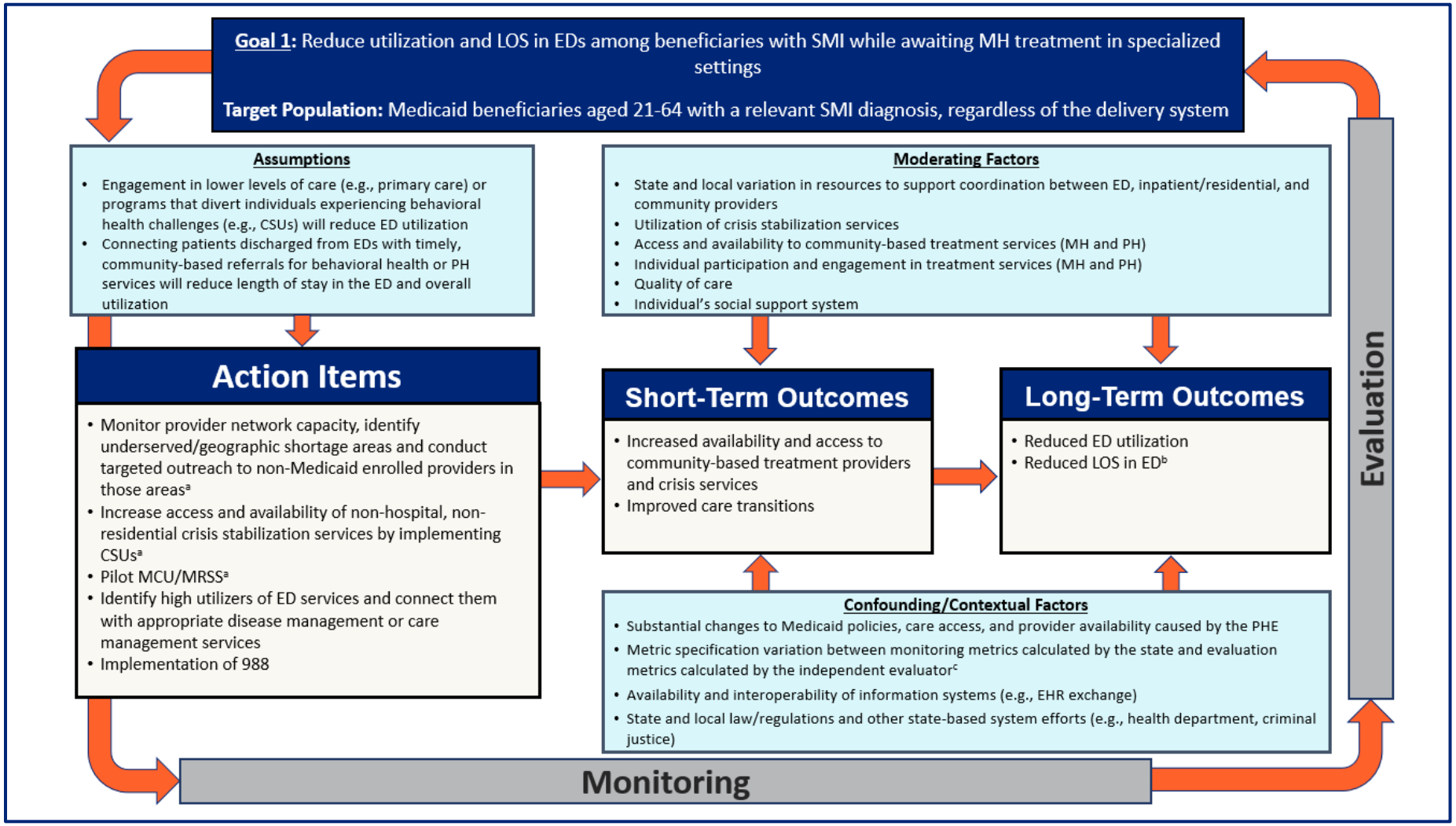
Exhibit II.3 provides the logic model corresponding to this goal.

[20] ED LOS is typically calculated using data from a patient's clinical record. Given that data sources for the evaluation relied on claims/encounter data, which does not contain information specific to time spent in an ED, analyses were restricted to ED utilization only.

[21] Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health & Human Services. Trends in the Utilization of Emergency Department Services, 2009-2018. 2021. https://aspe.hhs.gov/pdf-report/utilization-emergency-department-services

[22] Niedzwiecki MJ, Sharma PJ, Kanzaria HK, McConville S, Hsia RY. Factors Associated With Emergency Department Use by Patients With and Without Mental Health Diagnoses. *JAMA Netw Open.* 2018;1(6):e183528. doi:10.1001/jamanetworkopen.2018.3528

Exhibit II.3: Logic Model for Goal 1



[a] Action items identified in the state's Section 1115 SMI Demonstration Implementation Plan

[b] LOS is measured by the state for IMDs and not specifically for ED. Consequently, this outcome was not examined in the Interim Report.

[c] Metric specifications in monitoring metrics differ from metric specifications used by the evaluator. Consequently, monitoring metric data was not used as comparators for the Interim Report. Monitoring metrics are used by the state to assess progress.

B. Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings.

Patients with SMI may be vulnerable to unplanned hospital readmission.[23] Unplanned hospital readmission is a common but potentially preventable health care outcome and quality indicator associated with considerable health care costs. Recent studies have indicated that 30-day hospital readmissions among Medicaid beneficiaries with SMI are higher than rates of 30-day readmissions after medical hospitalizations than the general population.[24,25]

Goal 2 assesses the impact of expanding access to high-quality, evidence-based MH services in IMDs on reductions to preventable readmissions to acute care hospitals and residential settings. **Exhibit II.4** lists the hypothesis and RQs corresponding to this goal.[26]

Exhibit II.4: Hypothesis and Research Questions for Goal 2

Hypotheses	Research Questions
Hypothesis 2: The SMI demonstration will result in reductions in preventable readmissions to acute care hospitals and residential settings.	**Primary research question 2:** Does the SMI demonstration result in reductions in preventable readmissions to acute care hospitals and residential settings (including short-term inpatient and residential admissions to both IMDs and non-IMD acute care hospitals, critical access hospitals, and residential settings)? **Subsidiary research question 2.1:** How do the SMI demonstration effects on reducing preventable readmissions to acute care hospitals and residential settings vary by geographic area or beneficiary characteristics? **Subsidiary research question 2.2:** How do demonstration activities contribute to reductions in preventable readmissions to acute care hospitals and residential settings?

Exhibit II.5 provides the logic model corresponding to this goal.

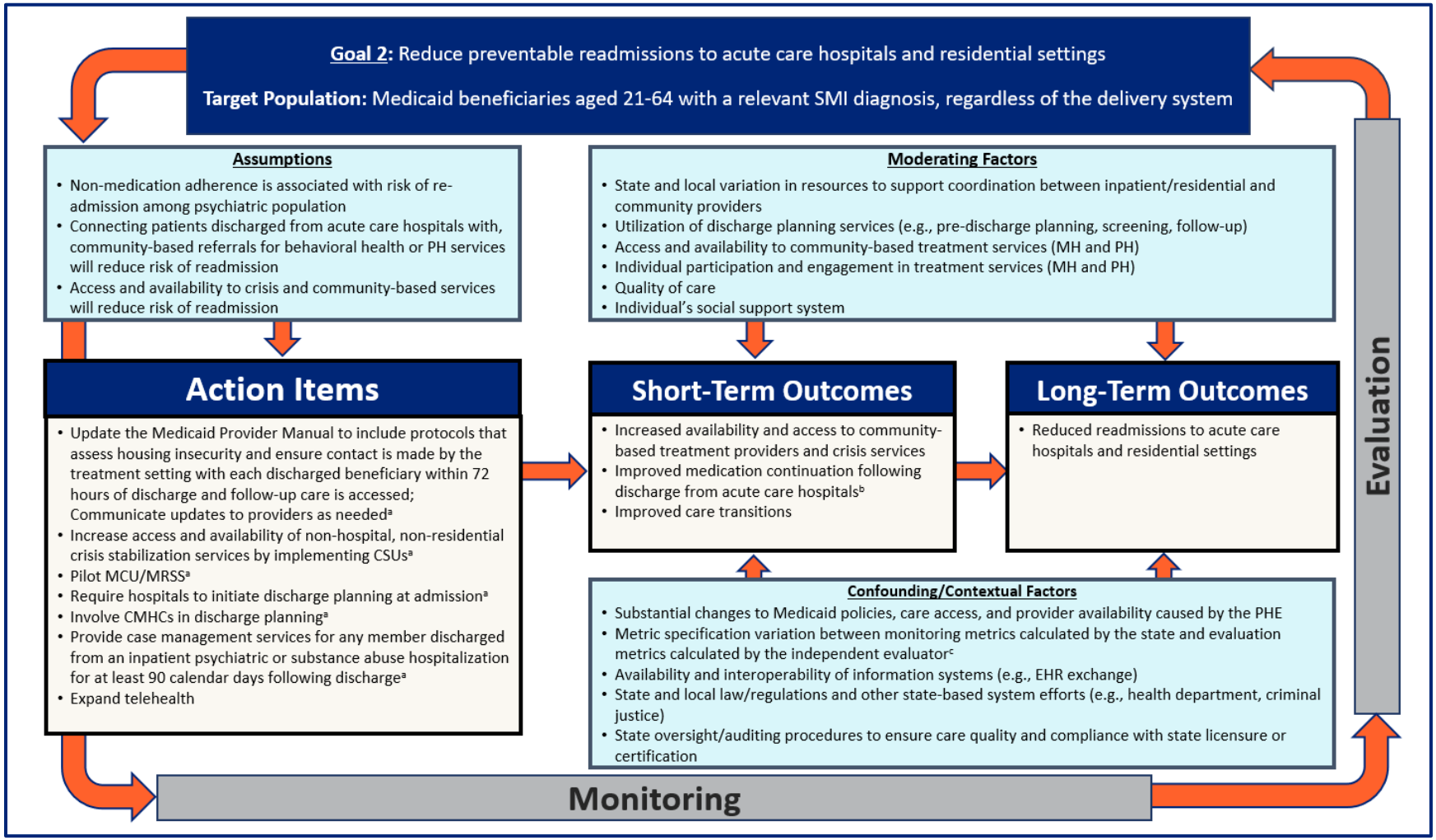
[23] Albrecht, J. S., Hirshon, J. M., Goldberg, R., Langenberg, P., Day, H. R., Morgan, D. J., Comer, A. C., Harris, A. D., & Furuno, J. P. (2012, April 26). *Serious mental illness and acute hospital readmission in diabetic patients*. American journal of medical quality: the official journal of the American College of Medical Quality. Retrieved April 22, 2022, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3677605/

[24] Cook, J. A., Burke-Miller, J. K., Razzano, L. A., Steigman, P. J., Jonikas, J. A., & Santos, A. (2021, February 13). *Serious mental illness, other mental health disorders, and outpatient health care as predictors of 30-day readmissions following medical hospitalization*. General Hospital Psychiatry. Retrieved April 22, 2022, from https://www.sciencedirect.com/science/article/pii/S0163834321000244

[25] Cook, J. A., Burke-Miller, J. K., Jonikas, J. A., Aranda, F., & Santos, A. (2020, September). *Factors associated with 30-day readmissions following medical hospitalizations among Medicaid beneficiaries with schizophrenia, bipolar disorder, and major depressive disorder.* American Psychological Association PsycNet. Retrieved April 22, 2022, from https://psycnet.apa.org/record/2020-66663-001

[26] Indiana determined that Subsidiary Research Question 2.3 (Does the SMI demonstration result in increased screening and intervention for comorbid SUD and PH conditions during acute care psychiatric hospital and residential setting stays and increased treatment for such conditions after discharge?) would not be included in Goal 2 analyses (documented in the Evaluation Plan). Calculation and monitoring of metrics associated with this RQ would require other data sources (e.g., electronic health records) and methods that use substantial resources (e.g., medical reviews).

Exhibit II.5: Logic Model for Goal 2



[a] Action items identified in the state's Section 1115 SMI Demonstration Implementation Plan

[b] Medication continuation following discharge from acute inpatient is monitored by the state (e.g., monitoring metric # 6) and included in quarterly CMS reports. Monitoring metric findings were included in the MPA.

[c] Metric specifications in monitoring metrics differ from metric specifications used by the evaluator. Consequently, monitoring metric data was not used as comparators for the Interim Report. Monitoring metrics are used by the state to assess progress.

C. Goal 3: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state

Crisis response and stabilization (e.g., crisis call centers, crisis mobile team response, crises receiving and stabilization services) is a basic element of MH care and often serves as an access point for connecting individuals to community care resources. Although evidence regarding crisis response programs is emerging, research has indicated that crisis response is associated with improved health outcomes.[27]

Goal 3 assesses the availability of crisis stabilization services utilized across multiple service models. **Exhibit II.6** lists the hypothesis and RQs corresponding to this goal.

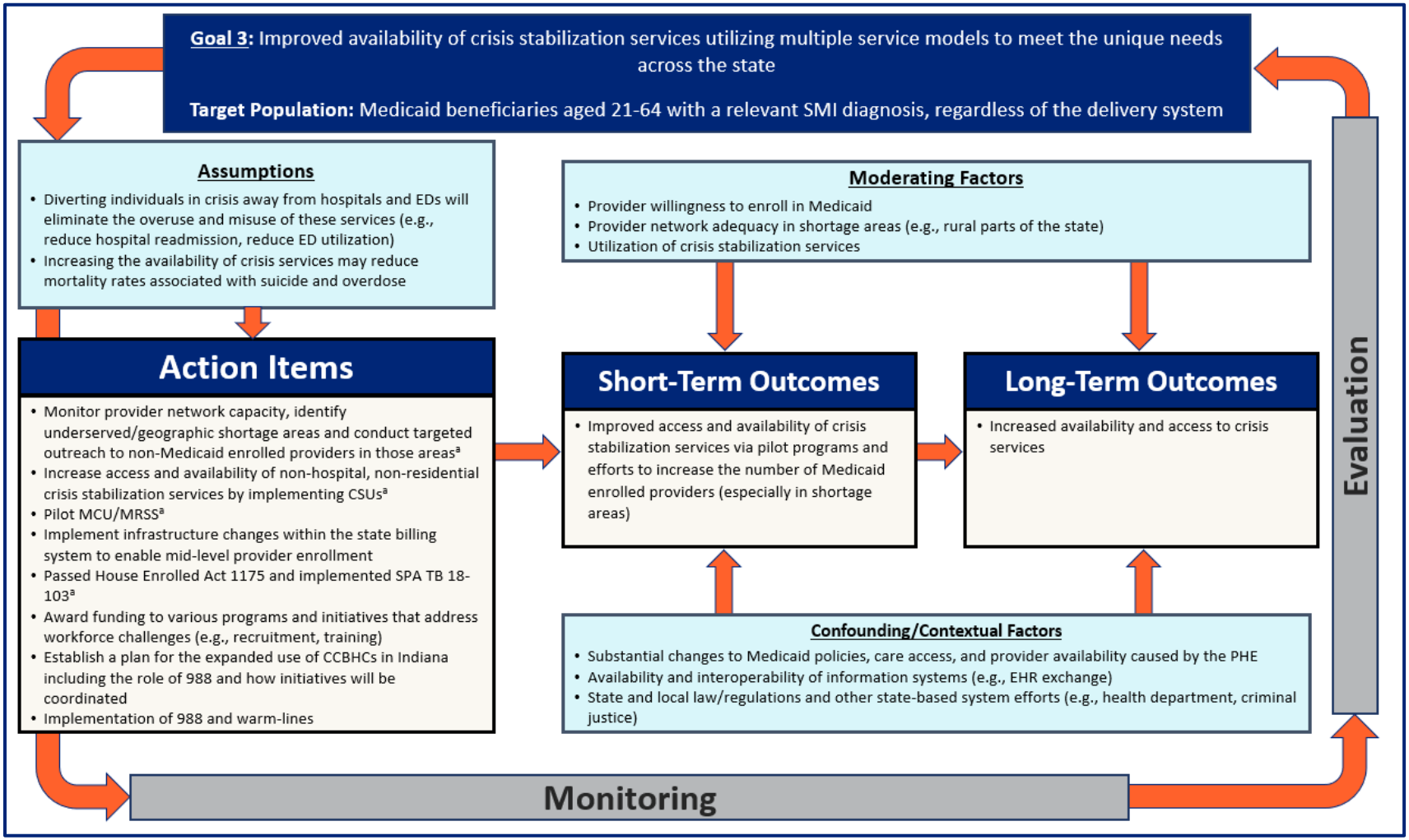
Exhibit II.6: Hypothesis and Research Questions for Goal 3

Hypotheses	Research Questions
Hypothesis 3: The SMI demonstration will result in improved availability of crisis stabilization services throughout the state.	**Primary research question 3.1:** To what extent does the SMI demonstration result in improved availability of crisis outreach and response services (including crisis call centers, MCU/MRSS, crisis observation/assessment centers, and coordinated community crisis response teams [CCCRT]) throughout the state? **Primary research question 3.2:** To what extent does the SMI demonstration result in improved availability of IOP services and partial hospitalization? **Primary research question 3.3:** To what extent does the SMI demonstration improve the availability of crisis stabilization services provided during acute short-term stays in each of the following: public and private psychiatric hospitals; residential treatment facilities; general hospital psychiatric units; and community-based settings (such as residential crisis stabilization programs, small inpatient units in CHMCs, peer-run crisis respite programs, etc.)?

Exhibit II.7 provides the logic model corresponding to this goal.

[27] Vikki, W., & Natasha, C. (2021, May). *Building blocks: How Medicaid can advance mental health and substance use crisis response*. Well Being Trust. Retrieved April 22, 2022, from https://wellbeingtrust.org/wp-content/uploads/2021/05/WBT-Medicaid-MH-and-CrisisCareFINAL.pdf

Exhibit II.7: Logic Model for Goal 3



[a] Action items identified in the state's Section 1115 SMI Demonstration Implementation Plan

D. Goal 4: Improved access to community-based services to address the chronic MH care needs of beneficiaries with SMI including increased integration of primary and behavioral health care.

Approximately 10.4 million adults in the United States had an SMI in 2016, yet only 65% received MH services during that year.[28] Individuals with SMI suffer disproportionately from PH conditions than their non-SMI peers and are at increased risk for a range of acute and chronic diseases (e.g., diabetes, cardiovascular disease, respiratory disease, cancer, and infectious disease). In fact, life expectancy estimates for adults with SMI range from 8 to 30 years lower than for the general population. Disparities have been attributed to modifiable risk factors such as substance use, poor nutrition, lack of exercise, obesity, housing instability, and low socioeconomic status. Fragmentation between the general medical and behavioral health sectors is widely considered to be a significant contributor to the poor overall health outcomes associated with SMI populations.[29] Treatment options that span the entire continuum of care are needed, particularly for those individuals living with a SMI.

Goal 4 assesses access to MH community-based services for beneficiaries with SMI. **Exhibit II.8** lists the hypothesis and RQs corresponding to this goal.[30]

Exhibit II.8: Hypothesis and Research Questions for Goal 4[31]

Hypotheses	Research Questions
Hypothesis 4: Access of beneficiaries with SMI to community-based services to address their chronic MH care needs will improve under the demonstration, including through increased integration of primary and behavioral health care.	**Primary research question 4.1:** Does the demonstration result in improved access of beneficiaries with SMI to community-based services to address their chronic MH care needs? **Subsidiary research question 4.1a:** To what extent does the demonstration result in improved availability of community-based services needed to comprehensively address the chronic MH needs of beneficiaries with SMI? **Primary research question 4.2:** Does the integration of primary and behavioral health care to address the chronic MH care needs of beneficiaries with SMI improve under the demonstration?

Exhibit II.9 provides the logic model corresponding to this goal.

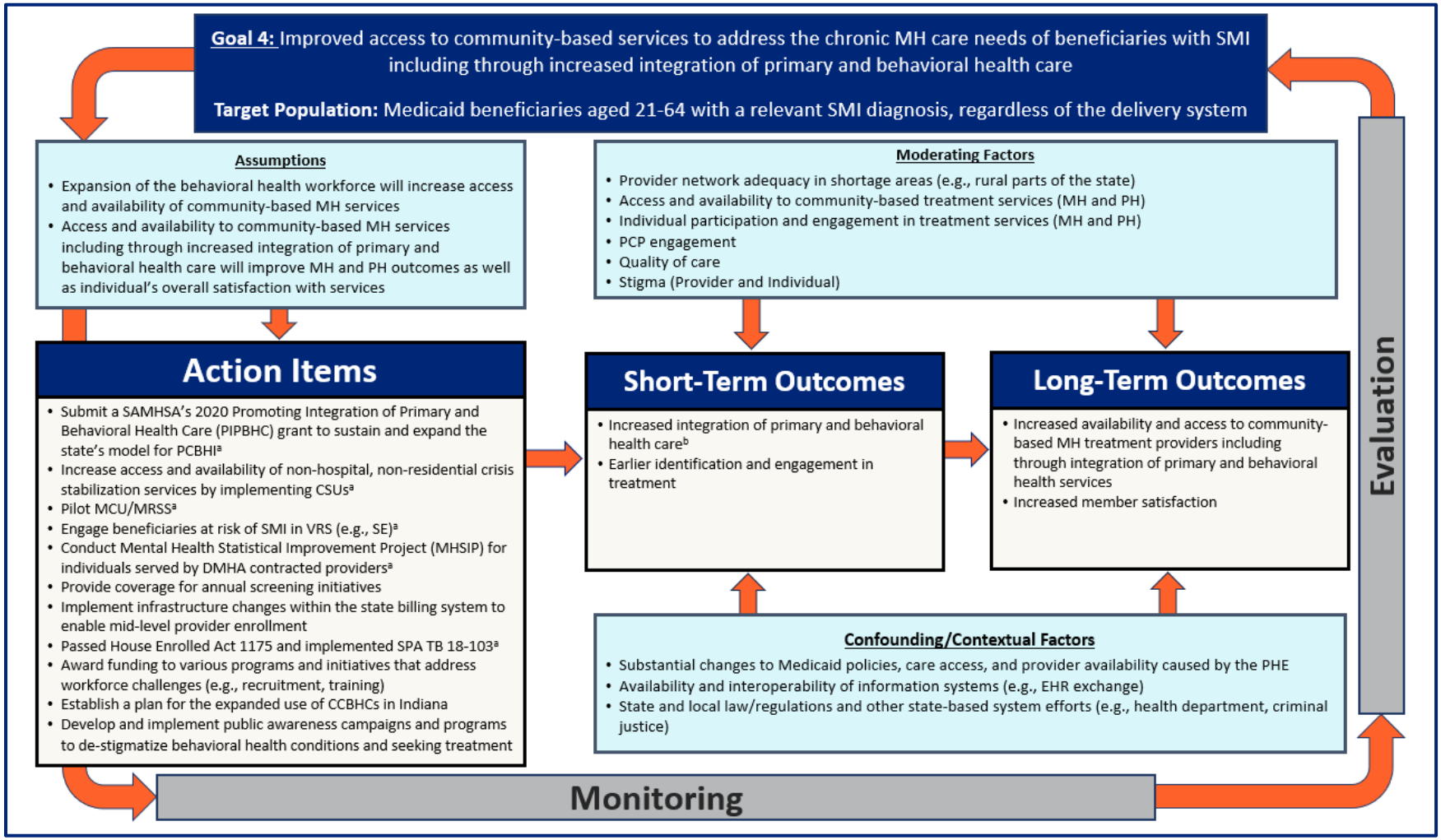
[28] *Facilitating access to mental health services: A look at Medicaid, private insurance, and the uninsured*. Kaiser Family Foundation. (2019, March 14). Retrieved April 22, 2022, from https://www.kff.org/medicaid/fact-sheet/facilitating-access-to-mental-health-services-a-look-at-medicaid-private-insurance-and-the-uninsured/

[29] Breslau, J., Sorbero, M. J., Kusuke, D., Yu, H., Scharf, D. M., Hackbarth, N. S., & Pincus, H. A. (2019, March 28). *Primary and behavioral health care integration program: Impacts on Health Care Utilization, cost, and quality*. Office of the Assistant Secretary for Planning and Evaluation. Retrieved April 22, 2022, from https://aspe.hhs.gov/reports/primary-behavioral-health-care-integration-program-impacts-health-care-utilization-cost-quality-0

[30] Indiana did not include subsidiary RQs 4.1b and 4.1c in the Evaluation Plan (RQ 4.1b: "To what extent does the demonstration result in improved access of SMI beneficiaries to the specific types of community-based services that they need?" and RQ 4.1c: "How do the SMI demonstration effects on access to community-based services vary by geographic area or beneficiary characteristics?"). Provider type findings examined in Goal 3 address RQs 4.1b and 4.1c.

[31] Indiana §1115(a) SMI Demonstration Evaluation Plan. Approved by CMS December 17, 2020.

Exhibit II.9: Logic Model for Goal 4



[a] Action items identified in the state's Section 1115 SMI Demonstration Implementation Plan

[b] Increased integration of primary and behavioral health care, screening, and health outcomes are monitored by the state (e.g., monitoring metric #23, 26, 29, and 30) and included in quarterly CMS reports. Monitoring metric findings were included in the MPA.

E. Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.

Disparities in health outcomes for individuals with SMI suggest a need for a coordinated, multifaceted approach that goes beyond conventional psychiatric care. In addition to disparities in health outcomes, people with SMI often use the MH care system as their principal setting for access to medical and social care.[32, 33, 34] As such, community MH settings are challenged to address the many demands associated with comorbid chronic medical conditions and related primary and preventive care needs.[35] A key strategy to reducing these disparities requires effective coordination and care integration.

Goal 5 assesses care coordination by examining ED and inpatient follow-up rates. **Exhibit II.10** lists the hypothesis and RQs corresponding to this goal.

Exhibit II.10: Hypotheses and Research Questions for Goal 5[36]

Hypotheses	Research Questions
Hypothesis 5: The SMI demonstration will result in improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.	**Primary research question 5.1:** Does the SMI demonstration result in improved care coordination for beneficiaries with SMI? **Primary research question 5.2:** Does the SMI demonstration result in improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities? **Subsidiary research question 5.2b:** How do demonstration activities contribute to improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities?

Exhibit II.11 provides the logic model corresponding to this goal.

[32] Bartels SJ (2003). Improving the system of care for older adults with mental illness in the United States: Findings and recommendations for the President's new freedom commission on mental health. *American Journal of Geriatric Psychiatry*, 11, 486–497.

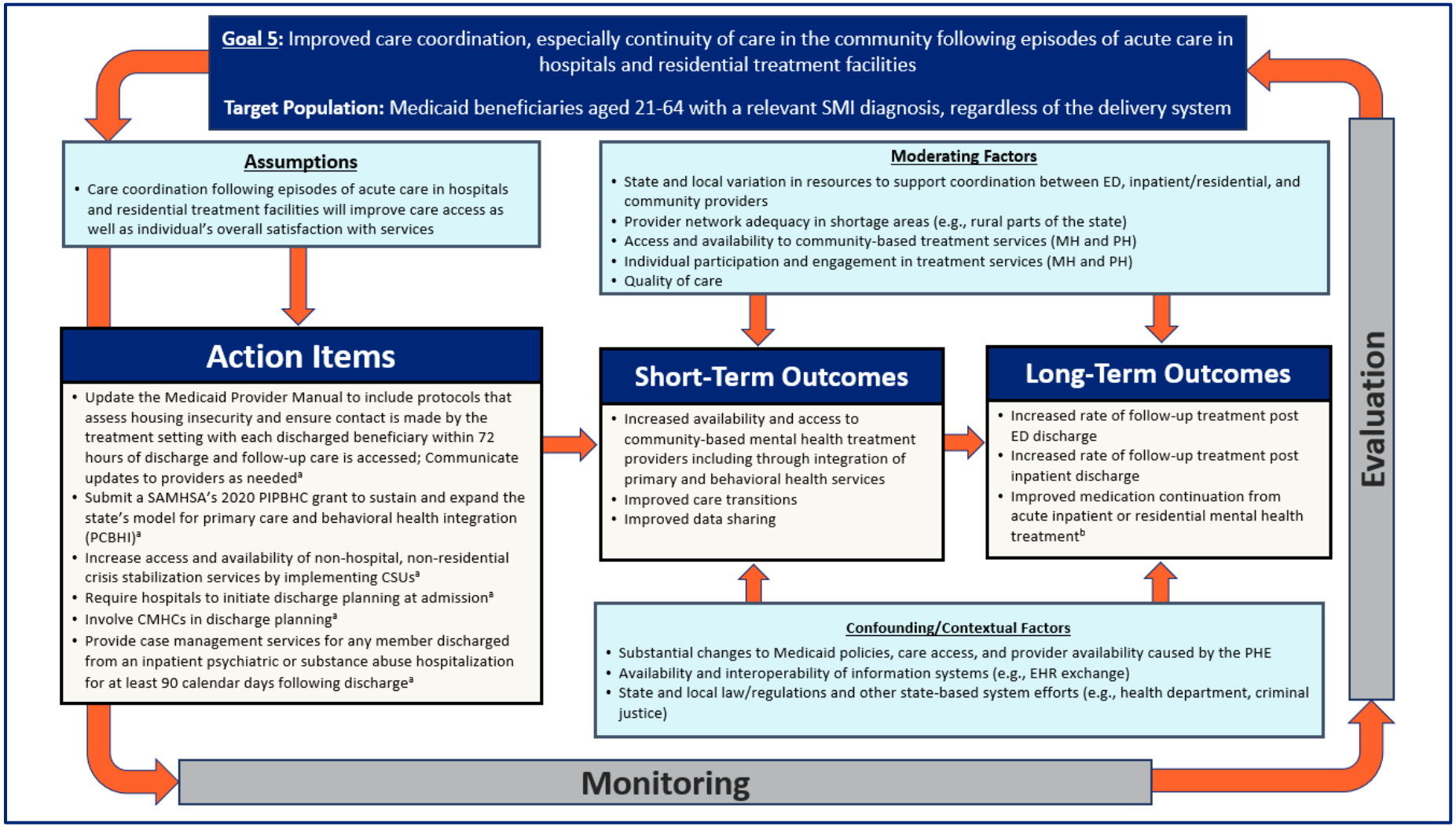
[33] De Hert M, Correll CU, Bobes J, Cetkovich-Bakmas M, Cohen D, Asai I, … Leucht S (2011a). Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care. *World Psychiatry*, 10, 52–77.

[34] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

[35] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

[36] Indiana did not include Subsidiary RQ 5.2a: "Does the SMI demonstration result in improved discharge planning and outcomes regarding housing for beneficiaries transitioning out of acute psychiatric care in hospitals and Residential treatment facilities?" The level of effort needed to obtain and review facility records (e.g., discharge records) is substantial and was deemed to be beyond the scope of the evaluation and state resources.

Exhibit II.11: Logic Model for Goal 5



[a] Action items identified in the state's Section 1115 SMI Demonstration Implementation Plan

[b] Increased integration of primary and behavioral health care, screening medication continuation outcomes are monitored by the state (e.g., monitoring metric #23, 26, 29, and 30) and included in quarterly CMS reports. Monitoring metric findings were included in the MPA.

III. Methodology

Evaluation of the program goals were based on a mixed-methods approach employing quantitative and qualitative analyses to examine the demonstration's impact on Medicaid beneficiaries aged 21 - 64 years with a SMI diagnosis. Quantitative data was compiled from various sources including administrative data, medical claims/encounter data, and Medicaid enrollment data. Qualitative data was compiled from KIIs and captures beneficiary, provider, advocacy organization, state official, and MCE experiences and perspectives.

Since the approval of the Evaluation Plan, Lewin's understanding of the program, available data sources, and monitoring metrics has evolved, yielding adjustments to the initial plan. For example:

- Some RQs were not fully addressed because of data limitations. For example, Primary RQ 1.1 focuses on reductions in ED utilization and LOS in ED. The evaluation relied on claims/encounter data, which contains information about utilization of the services, but does not contain information specific to time spent in an ED. Hence, for RQ1.1, analyses were restricted to ED utilization only (and did not examine LOS). Additionally, RQ 1.1 includes the phrase "while awaiting MH treatment in a specialized setting." Given that claims data does not capture information on whether the services utilized was while waiting for another service; the analysis population for RQ1.1 was not restricted to those awaiting MH treatment in specialized settings. Goal introductions in **Section V** delineate if an RQ was not fully addressed.
- The Evaluation Plan identified several monitoring metrics as benchmarks for select outcomes. Metric specifications in monitoring metrics differ from metric specifications used by the evaluator. Consequently, monitoring metric data was not used as comparators for the Interim Report.

A. Quantitative Methods

A.1. Evaluation Period

The evaluation period for this report was 2021 – 2023 (i.e., the first half of the waiver extension period [2021-2025]). This report assesses the impact of the SMI demonstration during the waiver extension and builds on findings from the 2018-2020 Summative Report, which evaluated the initial waiver implementation year (2020). To assess whether the demonstration has resulted in intended outcomes, we used data from the two years preceding the demonstration (2018 and 2019; referred to as the "pre-demonstration period") and the waiver (2020) implementation year when available and as relevant to examine how outcomes of interest changed over time. **Exhibit III.1** displays the timeline for the relevant pre-demonstration and demonstration periods. Evaluation time periods are further detailed in **Section III.A.5 (Analytic Methods)** and are also specified for each RQ for each Goal in **Exhibits V.12** (Goal 1), **V.33** (Goal 2), **V.44** (Goal 3), **V.62** (Goal 4), and **V.70** (Goal 5).

Exhibit III.1: SMI Demonstration Evaluation Periods

* The COVID-19 PHE was declared in January 2020.
**The COVID-19 PHE ended in May 2023.

As stated in **Section I.G**, due to the COVID-19 PHE, the state shifted many of the planned implementation action items (from the waiver to the waiver extension) to accommodate access to and delivery of high-quality MH services for all Indiana residents, particularly given the social distancing and health care resource prioritization. Subsequently, progress for achieving demonstration goals was impacted by COVID-19 related policy changes and activities. Therefore, findings for the waiver extension likely reflect both the impact of COVID-19 related policy changes and activities as well as demonstration impacts. Consequently, any observed changes should be interpreted with caution as findings may be confounded by the impact of the PHE.

A.2. Data Sources

The following sources were used to evaluate the demonstration goals identified in **Section I.C.**:

- ***Member Eligibility and Enrollment Data:*** This data provides monthly information on beneficiary Medicaid enrollment status, coverage, and socio-demographics for 2018-2023.
- ***Claims/Encounter Data:*** The claims/encounter records provide information about the health care utilization of beneficiaries (based on start date of service) and Medicaid-enrolled providers that are actively providing services between 2018 and 2023.
- ***Administrative Data:*** Program administrative data includes items such as the number of FQHCs that offer behavioral health services and the number of Medicaid-enrolled providers of various types. Administrative data sources used to evaluate demonstration goals include:
  - *Provider Availability Assessment (PAA)* – Conducted annually (starting in 2020 and coinciding with the waiver) by the state to examine changes in provider capacity over time.[37] For each reporting period, the PAA captures providers active as of January 31 in the following year. For example, the PAA provider counts captured for reporting period 2023 were for those providers that were active as of January 31, 2024. The PAA compiles county-level information specific to provider availability for different MH providers including psychiatrists, other practitioners, outpatient, CMHCs, IOP, residential, inpatient, and crisis stabilization services that deliver care to SMI populations. PAA data does not account for an individual provider delivering care across multiple

[37] More specifically, PAA data was used to assess change over time in availability and access to crisis stabilization services (Goal 3) and community-based services (Goal 4).

counties. Only validated data was included in the Interim Report. Data considerations and limitations include the following and are further outlined in **Exhibit III.2**:

- Between 2020 and 2023, the state adjusted definitions for provider types and/or removed provider types from the PAA. For example, crisis observation/assessment centers were included under the CSU provider type and not counted as a unique provider type for 2023 reporting (as Indiana does not organize these types of services separately).
- Indiana's available crisis services do not include CCCRTs; thus, this service type was not evaluated.
- For some provider types (including IOP/partial hospitalization providers, Medicaid-enrolled psychiatric units in acute care and critical access hospitals, and psychiatric hospital beds) the state supplied updated PAA data in September and November 2024 for either the full analytic time-period (2020-2023) or, in some instances, for a subset of evaluation years (e.g., 2022-2023). State officials indicated that the revised data accounted for how the state identifies and counts providers. Data sources for each provider type are detailed in their respective results sections.

Exhibit III.2. PAA Data Limitations By Provider Type

Type of Provider	Assessment Unit	Data Limitations
Crisis Stabilization Services	• CSUs • Crisis observation/assessment centers • MCU/MRSS • CCCRTs • Crisis call centers • CCBHCs • Number of providers providing crisis stabilization services (based on H2011 procedure code)	• Crisis observation/assessment centers were included under the CSU classification beginning in 2023. • Indiana does not have any CCCRTs in the state's portfolio of crisis services; therefore, this measure was not reported.
IOP & Partial Hospitalization Services	Distinct and organized intensive ambulatory treatment program that offers less than 24-hour daily care other than in an individual's home or in an inpatient or residential setting.	None

Type of Provider	Assessment Unit	Data Limitations
Inpatient	Public and private psychiatric hospitals	Exact counts for public and private psychiatric hospitals were unavailable for years 2020 and 2021 and are therefore not reported. However, state officials have indicated that previous year counts were similar to those in 2022 and 2023.
	Psychiatric hospitals that qualify as IMDs	None
	Medicaid-enrolled psychiatric units in acute care hospitals	Psychiatric unit counts were unavailable. Instead, the state provided data for acute care hospitals providing psychiatric services and enrolled as psychiatric facilities with Indiana Medicaid.
	Medicaid-enrolled psychiatric units in critical access hospitals	Psychiatric unit counts were unavailable. Instead, the state provided data for critical access hospitals enrolled as psychiatric facilities with Indiana Medicaid.
	Licensed psychiatric hospital beds	• Exact bed counts for state-operated facilities were not available for years 2020-2023. Therefore, the counts reported for these years only include bed counts among private psychiatric hospitals. • Exact (private) psychiatric hospital bed counts for 2020 were not available via the same counting methodology as later years and are therefore not reported. However, state officials have indicated that bed counts have remained largely consistent over the past several years.
RMHTs	RMHT facilities	Exact RMHT facility counts could not be confirmed for 2021 and are therefore not reported.
	RMHT facility beds	• Exact RMHT bed counts could not be confirmed for 2021 and are therefore not reported. • Exact bed counts were also unavailable for 2023 and are therefore not reported. However, state records confirm that the 2023 list of RMHT facilities included 54 (out of 55) of the same facilities as in the 2022 reporting period, plus two additional RMHT facilities, suggesting that the 2023 bed counts were similar to those for 2022.
CMHCs	Sites/locations providing outpatient MH services, 24-hour emergency care services, day treatment, screenings, consultation, and educational services, as defined at 42 CFR §410.2 (overall and Medicaid-enrolled).	For overall CMHC counts, between 2020 and 2023, the state only reported CMHC satellite locations that provided MH-related services. Beginning in 2023, the state began reporting all CMHC satellite locations without differentiating among sites providing MH services. Thus, growth in CMHCs in 2023 cannot be compared to prior years.

Type of Provider	Assessment Unit	Data Limitations
Practitioners	Psychiatrists or other practitioners who are authorized to prescribe psychiatric medications	Counts for 2020 and 2021 were not available via the same reporting source/using the same counting methodology for 2020-2021. Therefore, counts for these years are not reported.
	Medicaid-enrolled psychiatrists or other practitioners who are authorized to prescribe psychiatric medications	Counts for 2020 and 2021 were not available via the same reporting source/using the same counting methodology for 2020-2021. Therefore, counts for these years are not reported.
	Other practitioners certified and licensed to independently treat mental illness	Validated data was not available for 2020-2023.
	Medicaid-enrolled other practitioners certified and licensed to independently treat mental illness	Validated data was not available for 2020-2023.
FQHCs	Entities that have entered into an agreement with CMS to meet Medicare program requirements under 42 CFR §405.2434 and 42 CFR §405.2401, typically serving underserved areas (or population) providing comprehensive on-site (or by arrangement with another provider) services (e.g., preventative health, dental, MH, substance use, and transportation)	None

- *H2011 Claims/Encounter Data* – Crisis stabilization services provided by behavioral health providers at clinics or hospitals are captured in claims/encounter data using the H2011 Healthcare Common Procedure Coding System (HCPCS) code. To assess the use of crisis stabilization services the state also tracks the number of providers who submitted an H2011 claim and the number of beneficiaries who received crisis stabilization services by provider type. Given that crisis stabilization (H2011 claims) services are paid for any Medicaid beneficiary in crisis (i.e., not constrained to those with a primary or secondary SMI condition) and that the data provided was aggregated, the percentage of SMI beneficiaries who received crisis stabilization services could not be calculated. Nevertheless, H2011 claims provide an overall picture of crisis services utilization within Indiana and changes (to overall utilization and by provider type) over time. It is possible that an individual in crisis may be treated by a provider yet not have a H2011 claim submitted. H2011 data was used to examine utilization of crisis stabilization services at clinic or hospital settings, even though it is not restricted to the SMI waiver population.
- *Monitoring Reports* – The state calculates select metrics identified in the state's CMS-approved SMI Monitoring Protocol on a quarterly or annual (starting in 2020 and coinciding with the waiver) basis using a combination of data sources, including beneficiary enrollment data, claims/encounter data, medical and administrative records, and other state-specific databases. As appropriate and feasible, these reports were used to validate calculations for outcome measures (e.g., ED visits). As stated previously, monitoring metrics were not used as comparators due to variation in specifications applied by the state versus the independent evaluator.

- *Mental Health Statistical Improvement Project (MHSIP)* – Conducted annually by DMHA, the MHSIP survey captures perceptions of health services received in community mental health settings among individuals who received services.

A.3. Target Population – Construction of the SMI Beneficiary Roster

Throughout this report, the term "SMI beneficiary roster" is used to describe the target/analytic population. The SMI beneficiary roster was constructed to support all quantitative analyses that used claims/encounter data. This roster includes all individuals who had Medicaid coverage for at least one month in any year (2018 - 2023) and at least one health care service visit that included a primary and/or secondary diagnosis of SMI. More specifically, initial inclusion criteria for the SMI beneficiary roster were:

- Beneficiary had at least one paid (non-denied) health care service utilization (within the year or in a prior year) that included:
  - A service begin date between January 1 and December 31 of that year, and
  - Any one of the four diagnosis codes in the primary or secondary diagnosis position: F20.xx (schizophrenia and sub codes up to 2 places), F25.xx (schizoaffective disorder and sub codes up to two places), F31.xx (bipolar disorder and all sub codes up to 2 places), and F33.xx (MDD, recurrent and all sub codes up to two places).
- Beneficiary had SMI waiver-eligible Medicaid coverage for at least one month in the year (populations excluded are listed in **Exhibit I.2**). Beneficiary was between ages 21 and 64 as of December 31 in that year.

To reflect the chronic nature of SMI, beneficiaries that met the latter criteria were also included in the SMI beneficiary roster subsequent years – regardless of whether their health care visits in that year were associated with SMI (i.e., regardless of whether the beneficiary had a primary and/or secondary diagnosis of SMI on a claim/encounter in that year), as long as the beneficiary met eligible Medicaid enrollment and age requirements in that year. For example, if a beneficiary was identified for roster inclusion in 2020 (i.e., had Medicaid coverage for at least one month, a health care visit with a SMI condition as the primary and/or secondary diagnosis on the claim, and was between 21 and 64 years of age as of December 31), that individual would remain in the roster in 2021, 2022, and 2023 – even if that individual never sought care related to their SMI condition in 2021, 2022, or 2023.

A.4. Measure Development and Calculation

Claims/encounters related to services for beneficiaries in the roster were used to develop utilization-based outcome measures, overall and for key demographic subgroups. In addition, state administrative data sources (i.e., the PAA) were used to calculate metrics related to provider, facility, and service availability. **Exhibit III.3** summarizes the analytic populations, outcome measures, beneficiary cohorts, and data sources by goal. Detailed specifications for each measure and relevant calculations are included in **Section V** and **Attachment D**.

Exhibit III.3: Analytic Population, Outcome Measures, Cohort, Data Sources, and Time-Period by Goal

Goal	Analytic Population	Outcome Measures	Cohort	Data Sources	Time-period
1	SMI beneficiary roster population, with 10 or more months of (SMI Waiver) Medicaid eligibility within a year.[38]	All-cause ED participation rate and utilization rate.	Gender, age group, race, ethnicity, geographic location (metro/ non-metro), chronic conditions, dual eligibility, and whether the beneficiary is enrolled in a HIP or non-HIP program at the time of the ED visit.	• Enrollment data. • Claims/encounter data - ED visits were identified using procedure codes or revenue codes.	2018 – 2023* **2020 included for descriptive and sensitivity analyses only.* Rationale: See Section III.A.5.
2	SMI beneficiary roster population	All-cause unplanned 30-day readmission rate to acute care hospitals and residential settings following a mental health-related acute inpatient or observation stay.	Gender, age group, race, ethnicity, geographic location (metro/non-metro), chronic conditions, dual eligibility, and whether the beneficiary is enrolled in a HIP or non-HIP program at the time of the index admission.	• Enrollment data. • Claims/encounter data – Psychiatric stays and readmissions were identified using a combination of procedure, revenue, and International Classification of Diseases (ICD10) codes.	2018 – 2023* **2020 included for descriptive and sensitivity analyses only.–* Rationale: See Section III.A.5.
3	Providers as reported in PAA	The number of CSUs, MCU/MRSS, crisis call centers, CCBHCs, IOP/partial hospitalization services, public and private psychiatric hospitals, psychiatric hospitals that qualify as IMDs, Medicaid-enrolled acute care and critical access hospitals, psychiatric hospital beds, RMHT facilities and beds, and CMHCs.	County, metro/non-metro	State administrative data – PAA.	2020 – 2023
	All Indiana Medicaid beneficiaries	The number of providers who submitted claims/ encounters with H2011 procedure code and beneficiaries who received H2011-coded crisis services	Provider type	• State administrative data – H2011 claims/encounter data	2021 – 2023

[38] Counts of Medicaid-eligible months were calculated after a beneficiary's first diagnosis of SMI between 2018 and 2023. For example, if a beneficiary met the roster inclusion requirements for 2018 and had eligible Medicaid coverage from January 2018 to December 2018, but was first diagnosed with SMI in March 2018, they were not included in the analytic population for 2018 (i.e., this beneficiary would not have 10 months of Medicaid enrollment after their first SMI diagnosis date).

Goal	Analytic Population	Outcome Measures	Cohort	Data Sources	Time-period
4	SMI beneficiary roster population, with 10 or more months of (SMI Waiver) Medicaid eligibility within a year [38]	Participation rates for community-based services, overall and by service type (outpatient rehabilitation and targeted case management, HCBS/LTSS, and outpatient MH services).	Gender, age group, race, ethnicity, geographic location (metro/non-metro), chronic conditions, dual eligibility, and whether the beneficiary is enrolled in a HIP or non-HIP program at the time of the ED visit.	• Enrollment data. • Claims/encounter data – services were identified primarily on the FSSA professional fee schedules. Outpatient Rehab and Outpatient MH Service codes were included in the technical specifications but may not be reimbursed by FSSA. Waiver program codes were used to identify outpatient rehabilitation and HCBS waiver programs.	2018 – 2023* **2020 included for descriptive and sensitivity analyses only.* Rationale: See Section III.A.5.
	Providers and facilities certified by DMHA/ Medicaid	The number of psychiatrists and other MH practitioners authorized to prescribe (overall and Medicaid-enrolled), Medicaid-enrolled CMHCs, and FQHCs that offer behavioral health services.	County, metro/non-metro	State administrative data – PAA.	2020 – 2023
	Sample of adults receiving services at CMHCs and additional contracted providers	Patient-reported MH services quality of care satisfaction ratings	All adults receiving services from CMHCs and additional contracted providers	State administrative data – MHSIP.	2020 – 2022
5	SMI beneficiary roster population	Proportion of MH- and AOD-related ED visits with a follow-up visit recorded by any provider within 7 and/or 30 days. Proportion of MH-related inpatient discharges with a follow-up visit recorded by MH providers within 7 and/or 30 days	Gender, age group, race, ethnicity, geographic location (metro/non-metro), chronic conditions, dual eligibility, and whether the beneficiary is enrolled in a HIP or non-HIP program at the time of the ED visit.	• Enrollment data. • Claims/encounter data - ED visits were identified using procedure or revenue codes. Psychiatric stays were identified using a combination of procedure, revenue, and ICD10 codes. Follow-up visits were identified using procedure codes, diagnosis codes, revenue codes, and place of service (POS) codes.	2018 – 2023* **2020 included for descriptive and sensitivity analyses only.* Rationale: See Section III.A.5.

A.5. Analytic Methods

Standard approaches were used to evaluate changes in key outcome measures (identified based on demonstration goals) pre- and post- demonstration implementation. During the development of the Evaluation Plan, strategies for comparative analyses (both within-state and other-state comparison groups who are similar to the target population and not subject to the policies being evaluated) were considered. Ideally, a comparison group used to evaluate the impact of program implementation is a population who has similar demographics and does not have a comparable program or policy changes. Although CMS guidance outlined several possible comparison groups, none were identified as feasible or ideal for this evaluation due to specific aspects of the Indiana SMI waiver (See **Attachment F**: Indiana SMI Evaluation Plan: 2021-2025). As a result (and depending on the research question), this evaluation employed quasi-experimental analyses when adequate data was available before and after policy implementation to examine effects of the demonstration on the target population.

Enrollment and Claims-/Encounter-Based Outcome Measures. Descriptive statistics (e.g., counts and percentages of beneficiaries) were calculated and reported for the pre-demonstration period (2018 - 2019), waiver implementation year (2020), and the waiver extension years (2021 - 2023) to show changes over the pre-demonstration and demonstration periods. Descriptive statistics summarized the characteristics of the SMI beneficiary population across time as well as conduct observational inference on trends for outcome measures (e.g., number of visits, participation rate). Annual participation and utilization rates were also calculated for both the full SMI beneficiary roster as well as selected cohorts (e.g., by gender, age, race, ethnicity, location [metro/non-metro classification], dual eligibility, whether the beneficiaries were in HIP, [39] and the presence of chronic conditions) to examine variation across time and by subgroup.

When appropriate, interrupted time series (ITS) regression models were developed to examine average changes in outcome measures over time controlling for beneficiary characteristics (for Goals 1, 2, 4, and 5). These models included indicators for the pre-demonstration period (2018 - 2019) and demonstration (waiver extension) period (2021 – 2023). Since access to services and care was impacted in 2020 due to the onset of the COVID-19 PHE and implementation for many demonstration activities was delayed, these regressions excluded data from 2020. However, sensitivity analyses were also conducted to examine how these ITS regression results change when including the waiver year (2020) and are detailed in this report. Regression models included beneficiary characteristics as control factors in addition to indicators for the pre- and post-demonstration. Specific analytic approaches are detailed for each goal in its relevant results section (**Results Sections V.C – V.G)** and **Attachment E**. To ensure analytic data used for regression models had a sufficient number of observations to detect an effect, power calculations were conducted (See **Attachment E, H. Power Analyses** for additional details).

Administrative Data – PAA Data-Based Measures. State maps were developed to visually depict the count of providers across Indiana's 92 counties. Changes in the number of providers by

[39] HIP provides Medicaid health insurance coverage for qualified low-income, non-disabled adults ages 19 to 64. Close to 70% of Indiana Medicaid beneficiaries ages 19-64 have coverage through HIP (Source: https://www.in.gov/fssa/ompp/files/IHCP-Monthly-Enrollment-Report-Dec-2020.xlsx, Accessed on 03/11/2022).

county and county geographic designation (i.e., metro/non-metro) across the waiver (2020) and first half of the waiver extension (2021 - 2023) years were also examined.

Administrative Data – MHSIP Survey Satisfaction Ratings. Descriptive statistics from DMHA's MHSIP survey reports were also included and used to detail patient satisfaction and perceptions of MH care received at the CMHCs for Goal 4 analyses. Data were available were available for the waiver (2020) and first two years of the waiver extension (2021 - 2022).

B. Qualitative Methods

As stated previously, the Interim Report builds on findings from the 2018-2020 Summative Evaluation Report and 2023 MPA and documents the state's progress in achieving demonstration goals. Given that the evaluation period (2021 - 2023) overlaps with the MPA evaluation period (2021 - 2022) and included several interviewees from prior interviews, the qualitative approach used in 2024:

- Confirmed findings identified in the 2023 interviews for the 2021 - 2022 evaluation period.
- Identified new insights specific to 2023.
- Assessed the consistency of findings across the full evaluation period (2021 - 2023) as well as the findings delineated in the 2018-2020 Summative Evaluation Report (2021 interviews).

Consequently, qualitative results summarize findings from the 2023 and 2024 interviews. Qualitative methods used for both interview cohorts are the same.[40]

B.1. Sample

- *2023 Interviews*. Between April and October 2023, Lewin conducted 50 KIIs with FSSA state officials (n=8), MCEs (n=5), advocacy organizations (n=3), providers (n=9), and beneficiaries (n=25). **Exhibit III.1** in the MPA[41] provides a brief description of the respondents, interview topics, and relevant milestones addressed.
- *2024 Interviews*. Between April and July 2024, Lewin conducted 50 KIIs with FSSA state officials (n= 7), MCEs (n=5), advocacy organizations (n=6), providers (n=7), and beneficiaries (n=25). **Exhibit III.4** provides a brief description of the respondents, interview topics, and relevant goals addressed.

B.2. Procedures

Lewin worked with the Indiana OMPP federal reporting team to identify appropriate interviewees for FSSA state official, MCE, advocacy organization, and provider interviews. For beneficiary interviews, a random sample of 500 beneficiaries was selected from SMI beneficiaries who had a paid claim/encounter in the fourth quarter of the measurement year. SMI beneficiaries in a measurement year were identified for the sampling population if the individual had at least one paid claim/encounter any time in the year with primary or secondary diagnosis of

[40] Although qualitative methods used across the cohorts are the same, question sets differed to better extract information relevant to goals rather than milestones.

[41] The MPA will be published by FSSA and available on the FSSA website upon approval by CMS. We anticipate approval will be received in 2025 prior to approval and publication of the Interim Report. Upon approval, this footnote will be replaced with a link to the MPA.

SMI (ICD10 diagnosis: F20.xx, F25.xx, F31.xx, F33.xx), were aged 21 - 64, and had waiver eligible Medicaid coverage (refer to **Section I.H** and **Exhibit I.2** for exclusions). Measurement years were January 2022 – December 2022 (2023 interviews) and January 2023 - December 2023 (2024 interviews) respectively. The sampling population was stratified by gender, race and age group. A representative sample for interview outreach was selected from each of the strata. Although the outreach sample was selected to be a representative cohort, the respondent pool was skewed for both interview cohorts:

- *2023 Interviews*: Predominately female, White/Caucasian, not Hispanic or Latino, aged 43 years old, and located in a metro setting and therefore not representative of the Medicaid SMI population (**Attachment D** in the MPA for additional details).
- *2024 Interviews*: Predominately male, White/Caucasian, not Hispanic or Latino, aged 44 years old, and located in a metro setting and therefore not representative of the Medicaid SMI population (**Attachment D** for additional details).

Consequently, findings derived from beneficiary interviews should be interpreted with caution.

KIIs were conducted virtually and lasted 20-60 minutes (depending on interview type). FSSA state officials, MCE, advocacy organization, and provider interviews included one facilitator and one note taker. Member interviews included one facilitator who also took notes. Findings were reported in aggregate by interview type. Facilitators used a structured interview (**Attachment C**) to gather information.

Exhibit III.4: Summary of Qualitative Data Sources

Interview Type	Description	Relevant Goals
FSSA state officials ***Total: 7 interviews***	• The Indiana FSSA federal reporting team identified FSSA state official interviewees representing several roles within FSSA including officials involved in the development, planning, administration, implementation, and/or monitoring of the SMI waiver demonstration. • Interviews lasted approximately 60 minutes. • Lewin asked state officials a standard set of questions to gather information on goal progress in relation to the Indiana SMI Waiver Demonstration, impact of COVID-19 PHE, factors that supported progress, any challenges or barriers encountered, and pertinent follow-up based on insights gathered from previous interviews from the 2018-2020 Summative Evaluation Report and the 2023 MPA.	• Goal 1 • Goal 2 • Goal 3 • Goal 4 • Goal 5
MCEs ***Total: 5 interviews***	• The Indiana FSSA MCE Contract Officers identified MCE interviewees. Interviews included executives and providers from each of the five MCEs. • Interviews lasted approximately 60 minutes. • Lewin asked MCE representatives a standardized set of questions related to their observations on goal progress in relation to the Indiana SMI Waiver Demonstration, impact of the COVID-19 PHE, factors that supported progress, any challenges or barriers encountered, and pertinent follow-up based on insights gathered from previous interviews from the 2018-2020 Summative Evaluation Report and the 2023 MPA.	• Goal 1 • Goal 2 • Goal 3 • Goal 4 • Goal 5

Interview Type	Description	Relevant Goals
Providers ***Total: 7 interviews***	• Lewin worked with the Indiana FSSA Coverage and Benefits Team to identify provider representatives from a variety of settings including CMHCs, CSUs, acute care hospitals, and crisis services. • Interviews lasted approximately 30 minutes. • Most interview questions were specific to each provider type. Common questions related to expanded services made available to SMI beneficiaries with SMI, impact of COVID-19 PHE, challenges or barriers SMI beneficiaries faced during the timeframe, and pertinent follow-up based on insights from the 2018-2020 Summative Evaluation Report and 2023 MPA.	• Goal 1 • Goal 2 • Goal 3 • Goal 4 • Goal 5
Advocacy Organizations ***Total: 6 interviews***	• The Indiana FSSA Federal reporting team identified advocacy organization representatives. Interviews included executive directors and managers from six advocacy organizations. • Interviews lasted approximately 30 minutes. • The Lewin team asked advocacy organization representatives a standardized set of questions related to their perspective on the expanded services made available due to the Indiana SMI waiver, impact of the COVID-19 PHE, and any challenges or barriers SMI beneficiaries faced during the timeframe, and any pertinent follow-up based on insights from the 2018-2020 Summative Evaluation Report and 2023 MPA.	• Goal 1 • Goal 2 • Goal 3 • Goal 4 • Goal 5
Beneficiaries ***Total: 25 interviews***	• Lewin worked with the Indiana FSSA Federal reporting team and support team to develop the SMI population for the waiver. Lewin selected a random sample of SMI beneficiaries to contact for interviews. • Interviews lasted approximately 20 minutes. • Beneficiaries were asked a standardized set of questions related to their experiences of SMI services during the timeframe.	• Goal 1 • Goal 2 • Goal 3 • Goal 4 • Goal 5

Interviews were conducted iteratively, with facilitators reviewing data following each interview and using immediate findings to inform subsequent interviews. For example, if one MCE identified a novel challenge or issue, the facilitator would include additional probes for subsequent interviews to better understand the topic. Lewin used informal thematic analysis, a method for systematically identifying, organizing, and offering insight into patterns of meaning across different interviewees to identify themes and summarize findings by topic area.

IV. Methodological Limitations

The 2021-2025 SMI Evaluation Plan describes the limitations of the overall evaluation including data and methodological challenges of the analyses for subsequent reports. As stated previously, the PHE caused substantial changes to service utilization and provider availability during both the waiver (2020) and waiver extension (2021 - 2023) and will have short- and long-term impacts on Indiana's health care system. For example, due to the PHE, Indiana suspended disenrollment policies and expanded behavioral health telehealth services.[42] Additionally, social distancing and prioritization of health care resources affected utilization of a wide variety of services during the evaluation period.

Exhibit IV.1 describes the known limitations of the Interim Report and approaches to minimize those limitations and/or acknowledgement of where limitations may preclude causal inferences about the effects of the demonstration.

Exhibit IV.1: Methodological Limitations and Approach(es) Used to Minimize Limitations

Issue	Description	Approach to Minimizing Limitations
Impact of COVID-19 PHE	Both the initial waiver year (2020) and the waiver extension (2021-2023) coincided with the COVID-19 PHE. The PHE caused substantial changes to Medicaid policies, service utilization, and provider availability, and will have short- and long-term impacts on Indiana's health care system and specialized populations, such as SMI.	Provided context for interpretation of results.
Distinguishing the impacts of overlapping initiatives	Multiple policy changes were implemented concurrent to the evaluation period. As such, distinguishing the impacts of the individual action items becomes challenging.	Provided context for interpretation of results.
Self-reported qualitative data	KIIs represent qualitative feedback from multiple stakeholders including FSSA state officials, MCEs, providers, advocacy organizations, and beneficiaries. This self-reported information requires participants to recall information at a point in time (CY2021 – CY2023) and may not capture all experiences.	• Tailored interview questions based on role and type of interview. • Emphasized the time-period in both stakeholder communication materials of interview instructions (to help interviewees prepare for interviews) and during the interview.
Claims-/encounter-based data	Claims-/encounter- based data may provide a limited picture of each beneficiary's medical history and does not provide information on other environmental factors that may impact beneficiary health status or access to care. Additionally, overall utilization and participation rates (calculated using claims/encounter data) may not reflect the variability across patient mix.	• KII data was used to supplement claims-based data to contextualize information when appropriate. • Changes in outcome over time were examined using regressions with time and available beneficiary contextual factors as available.

[42] Disenrollment policies were suspended beginning in March 2020. Indiana reinstated Medicaid eligibility redetermination and enrollment/disenrollment policies beginning in April 2023. During the COVID-19 PHE, Indiana expanded payment policies to cover services delivered using telehealth.

Issue	Description	Approach to Minimizing Limitations
Cumulative SMI roster construction	While a cumulative roster reflects the chronic nature of SMI, the criteria used to derive the SMI roster (which was built in part to align with state evaluation measures) only requires one SMI-related paid claim. If an SMI diagnosis was incorrectly listed on a claim or the SMI beneficiary is in remission, that individual would also be included in subsequent roster years. Thus, a cumulative roster could be overcounting the pool of potential SMI beneficiaries, particularly in later evaluation years.	Provided context (e.g., number of roster beneficiaries with MH-related utilization) for interpretation of results.
Count of beneficiary months of Medicaid coverage for annual SMI rosters	The count of beneficiary enrollment months only considers beneficiary months of Medicaid coverage within a calendar year after first SMI diagnosis. For the measures that used a minimum of ten months of enrollment coverage (e.g., all-cause ED in Goal 1 and community-based services in Goal 4), some SMI beneficiaries may not be included because they did not have ten months of coverage in the measurement year (the calendar year).	Provided context for interpretation of results.
Impact of changes in population over time	Changes in the SMI beneficiary composition over time may have an impact on several outcomes, including service utilization, beneficiary enrollment, and access to services.	• Estimated changes over time based on regression models that adjusted for beneficiary composition. • Provided context for interpretation of results.
Comprehensive assessment of provider availability and changes over time	Provider availability data was not available across all years for all provider types identified as key for this evaluation. Additionally, methods for how providers were counted varied across the years.	Reported all available and state-validated data. Identified gaps and recommendations for future monitoring.
Evolving understanding of data availability and impact on answering RQs	Since the approval of the Evaluation Plan, Lewin's understanding of the program and available data sources has evolved. Consequently, some RQs were not fully addressed because of data limitations. Additionally, the Evaluation Plan identified monitoring metrics as benchmarks for select outcomes. However, metric specifications in monitoring metrics differ from metric specifications used by the evaluator.	• Goal introductions in **Section V** delineate if an RQ was not fully addressed. • Monitoring metric data was not used as comparators for the Interim Report.
Certain provider availability measures specified in the Evaluation Plan for Goal 3 were not assessed	Since the approval of the Evaluation Plan, Lewin learned that certain outcomes specified for Goal 3 (e.g., crisis observation centers) are counted as part of other crisis stabilization services and thus do not have distinct counts.	Indicated removal of outcomes effected.

V. Results

A. Demonstration Activity Status

The SMI demonstration aligns with FSSA's aim to ensure a comprehensive continuum of behavioral health services. In this effort, the evaluation was designed to assess the impact of five overarching and interrelated goals (**Section II**). Demonstration Goals focus on reducing ED utilization and preventing inpatient readmission for SMI populations (Goals 1 and 2) by expanding crisis stabilization services, increasing access to community-based MH services, and improving care coordination with special emphasis on continuity of care in the community (Goals 3, 4, and 5). Each Goal is linked to key demonstration activities that the state planned to implement, beginning in January 2020 (prior to the PHE). Given the interdependence of Goals, activities across Goals overlap and are not mutually exclusive. For example, Goal 1: Reducing ED utilization and LOS shares four activities (e.g., monitor provider network capacity, identify underserved/geographic shortage areas and conduct targeted outreach to non-Medicaid enrolled providers in those areas; increase access and availability of non-hospital, non-residential crisis stabilization services by implementing CSUs; pilot MCU/MRSS; and implementation of 988 and warm lines) with Goal 3: Improved Availability of Crisis Stabilization Services.

Exhibit V.1 describes the state's Section 1115 SMI Demonstration Implementation Plan (approved December 20, 2020) completed action items as well as additional action items (i.e., action items that were not documented in the Section 1115 SMI Demonstration Implementation Plan) that the state implemented to further support goal execution.

Exhibit V.1: Section 1115 SMI Demonstration Implementation Plan Actions Items Aligned to Evaluation Goals

Implementation Plan – Completed Action Items	Goals
Monitor provider network capacity, identify underserved/geographic shortage areas, and conduct targeted outreach to non-Medicaid enrolled providers in those areas	1, 3
Increase access and availability of non-hospital, non-residential crisis stabilization services by implementing CSUs	1, 2, 3, 5
Pilot MCU/MRSS	1, 2, 3, 4
Update the Medicaid Provider Manual to include protocols that assess housing insecurity and ensure contact is made by the treatment setting with each discharged beneficiary within 72 hours of discharge and follow-up care is accessed; Communicate updates to providers as needed	2, 5
Require hospitals to initiate discharge planning at admission	2, 5
Involve CMHCs in discharge planning	2, 4, 5
Provide case management services for any beneficiary discharged from an inpatient psychiatric or substance abuse hospitalization for at least 90 calendar days following discharge	2, 5
Implementation of 988 and warm lines	1,3
Submit a SAMHSA's 2020 PIPBHC grant to sustain and expand the state's model for PCBHI	4, 5
Engage beneficiaries at risk of SMI in VRS (e.g., SE)	4
Conduct MHSIP for individuals served by DMHA contracted providers	4
Identify high utilizers of ED services and connect them with appropriate disease management or care management services	1
Expand telehealth	2

Implementation Plan – Completed Action Items	Goals
Implement infrastructure changes within the state billing system to enable mid-level provider enrollment	3, 4
Passed House Enrolled Act 1175 and implemented SPA TB 18-103	3
Award funding to various programs and initiatives that address workforce challenges (e.g., recruitment, training	3,4
Establish a plan for the expanded use of CCBHCs in Indiana including the role of 988 and how initiatives will be coordinated	3, 4
Provide coverage for annual screening initiatives	4
Passed House Enrolled Act 1175 and implemented SPA TB 18-103	4
Develop and implement public awareness campaigns and programs to de-stigmatize behavioral health conditions and seeking treatment	4

B. Population Summary

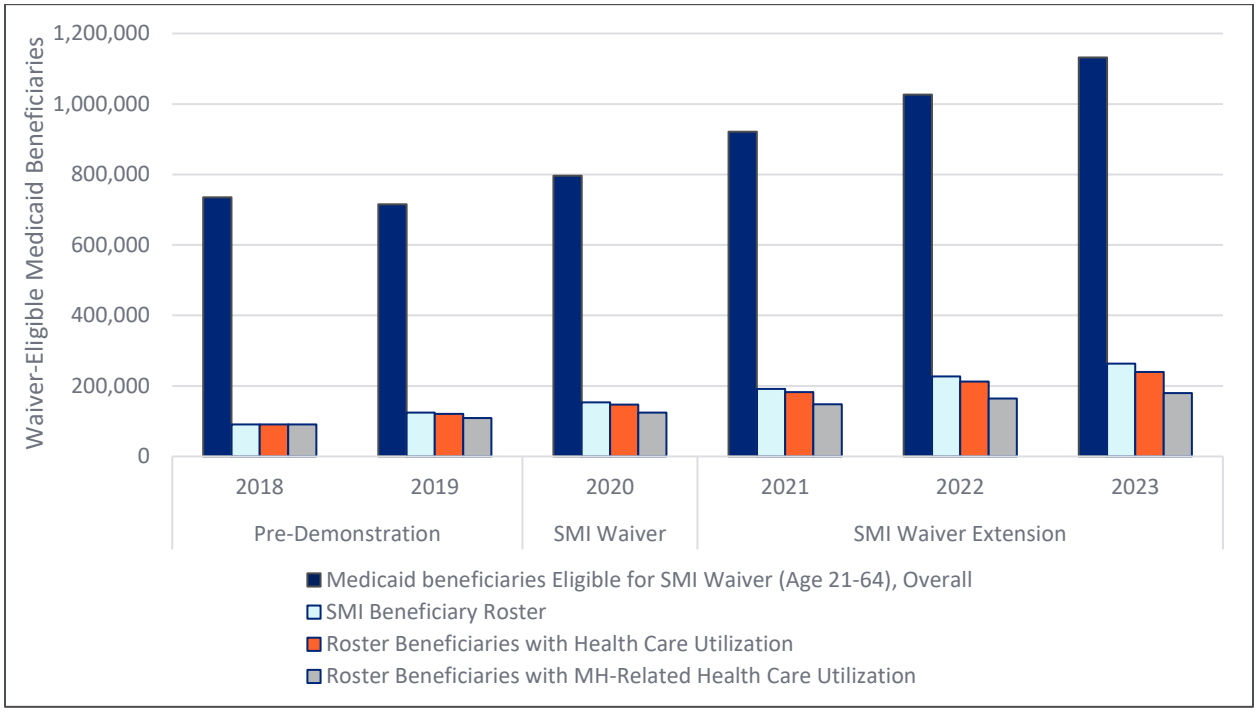
Exhibits V.2 and **V.3** display the number of beneficiaries included in the SMI beneficiary roster. Overall, the number of beneficiaries included in the SMI beneficiary roster increased each year from 90,833 in 2018 to 263,327 in 2023. In 2018, the SMI roster population accounted for 12.4% of the Medicaid population who were eligible to receive SMI waiver benefits and between ages 21 and 64 (refer to **Section III. A.3** for details). Over the years, this proportion steadily increased to 23.3% in 2023. The number of new beneficiaries added to the roster remained stable between 2019 and 2023, with approximately 40,000 new beneficiaries added to the roster each year. Growth in the roster population was expected given that the roster was constructed cumulatively (i.e., beneficiaries were identified based on first occurrence of SMI diagnosis and remained in the roster for subsequent years as long as they had eligible Medicaid coverage). However, growth in the roster population was sizeable and may be a byproduct of several factors that impacted overall Medicaid enrollment nationwide during the COVID-19 PHE. For example, consistent with other states, Indiana guaranteed continuous enrollment (i.e., suspending disenrollment policies) during the COVID-19 PHE and overlapping with both the waiver (2020) and waiver extension (2021-2023).[43] Continuous enrollment (i.e., extending eligibility for individuals already enrolled in Medicaid who, prior to the PHE, would have been determined ineligible) allowed beneficiaries to retain coverage unless they notified the state of changes in circumstances (e.g., moved out of state, death). Changing economic circumstances (i.e., declining employment-sponsored coverage) and coverage expansion (i.e., telehealth services) may have also contributed to increased Medicaid enrollment during the COVID-19 PHE. Consequently, growth rates should be interpreted with caution as the rate may be driven by phenomena other than an increase in beneficiaries with SMI.

The majority of beneficiaries (90% and above) included in the roster population used health care services (excluding dental or pharmacy services) annually from 2018 - 2023, suggesting that those in the roster continued to receive health care in subsequent years (**Exhibit V.2**; **Attachment E, Exhibit E.1**). The proportion of the roster population using MH care services, however, declined from 100.0% in 2018 to 68.4% in 2023. Some decline was expected in later years given construction parameters of the roster. That is, because the roster was defined based on the presence of a MH (SMI)-related claim, all beneficiaries included in the roster had at least

[43] The COVID-19 PHE ended in May 2023. Consequently, disenrollment policies were re-activated and re-determination processes were initiated in April 2023.

one MH claim (and, thus, all had MH related utilization). For later years, some beneficiaries included in the roster may not have had a MH claim and subsequently did not have MH-related utilization (e.g., if they were added to the roster in a previous year). Declining rates could be explained by positive factors (e.g., condition improvement over time) or negative factors (e.g., challenges with accessing care). Additional data sources and or analyses are needed to better understand trends and interpret findings.

Exhibit V.2: Waiver-Eligible Medicaid Beneficiaries and the SMI Roster[44]



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.3 displays the distribution of Medicaid coverage (number of enrollment months within a year) after first SMI diagnosis for the SMI beneficiary roster population.[45] Compared to the pre-demonstration period (2018 - 2019), Medicaid beneficiaries experienced longer coverage periods between 2020 and 2023, likely due to continuous enrollment (e.g., suspension of disenrollment policies). For example, the proportion of roster beneficiaries with 10 months or more of Medicaid coverage increased from approximately 80% in 2018 and 2019, to 85% in 2020, 92% in 2021, and 95% in 2022. As expected, when

Beneficiaries during the pre-demonstration or since May 2023 were at risk for coverage loss due to annual redetermination of eligibility. Eligibility to receive services covered by the SMI waiver were discontinued for beneficiaries who lost Medicaid coverage.

[44] Beneficiaries utilizing health care services (including any MH-related utilization) were identified based on claims/encounter data excluding utilization related to pharmacy or dental care.

[45] Number of months was based on months in a year that a beneficiary had Medicaid coverage eligible to receive SMI waiver covered services since first diagnosis of SMI. Hence if a beneficiary had Medicaid coverage for a full year (12 months) but had their first SMI diagnosis in July of the year, the number of months covered for the year was calculated as 6 (July through December).

disenrollment policies were reinstated (April 2023)[46], the proportion of SMI beneficiaries in the roster population with at least 10 months of Medicaid coverage declined to 85% in 2023. To ensure equivalent "exposure" periods for Goal 1 and Goal 4 participation and utilization rate measures, some measures were subset to only beneficiaries with at least 10 months or more of eligible Medicaid coverage after their first date of SMI diagnosis within the evaluation period (also shown in **Exhibit V.3**, below).

Exhibit V.3: Distribution of Medicaid Coverage[47] (Number of Enrollment Months) After First SMI Diagnosis for SMI Roster Beneficiaries (2018 – 2023)

Year	# of Benes in SMI Roster	Distribution of # of Months of (SMI Waiver-Eligible) Medicaid Coverage After First SMI Diagnosis[48]						% of SMI Roster Beneficiaries with >= 10 Months of Coverage	% of SMI Roster Beneficiaries with >= 10 Months of Coverage After 1st SMI Diagnosis
		Mean	10th Pctl	25th Pctl	Median	75th Pctl	Max.		
2018	90,833	8.1	2	5	9	12	12	79.6%	48.1%
2019	124,131	9.1	3	6	12	12	12	76.7%	61.1%
2020	153,217	9.9	4	9	12	12	12	84.8%	72.4%
2021	191,728	10.6	5	12	12	12	12	92.4%	80.1%
2022	227,466	10.9	6	12	12	12	12	94.6%	84.4%
2023	263,327	10.4	6	10	12	12	12	85.1%	77.1%

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

B.1. Socio-Demographics of Medicaid Beneficiaries Included in the SMI Roster

The SMI roster population in 2023 had the following socio-demographic characteristics (**Exhibits V.4 – V.11; Attachment E, E.2 – E.3**).

The SMI roster population was mostly female, between the ages of 21 - 50, White/Caucasian, and lived in a metro area. When compared to the overall waiver-eligible Medicaid population, the SMI roster population had greater prevalence of MH and PH conditions suggesting a greater need for medical (e.g., behavioral health, PH) resources.

- 64.6% of SMI roster beneficiaries were female as compared to 57.6% of the overall waiver eligible Medicaid population.
- Approximately three quarters (76.3%) of SMI roster beneficiaries were between the ages of 21-50. This is consistent with the waiver eligible Medicaid population (77.3%).
- 65.5% of SMI roster beneficiaries were White/Caucasian, as compared to 10.8% Black, and 0.8% Other. Racial characteristics were not available for 22.9% of the roster.

[46] Disenrollment policies were reinstated in April 2023. Consequently, May 2023 was the earliest individuals (redetermined as ineligible) could lose coverage.

[47] The eligibility groups outlined in **Exhibit I.2** are not eligible for stays in an IMD as they receive limited Medicaid benefits only which includes individuals receiving Emergency Only Services, Family Planning Services (recipient aid category HF), PE Family Planning program benefits (recipient aid category E), PE Pregnant Women (recipient aid category PN), QMB only (recipient aid category L and dual aid Y), SLMB only (recipient aid category J and dual aid Y), QDWI (recipient aid category G and dual aid Y), and Medicare Qualifying Individual (QI) (recipient aid category I and dual aid Y).

[48] First SMI diagnosis was defined as the first SMI diagnosis (from a paid claim with a primary or secondary diagnosis of SMI) between 2018 and 2023.

- 87.5% of SMI roster beneficiaries identified as non-Hispanic versus 3.8% Hispanic.
- 74.2% of beneficiaries live in metro areas versus 25.8% living in non-metro areas.
- Nearly one fifth (16.5%) of SMI roster beneficiaries are dually eligible in 2023 while one tenth (9.0%) of the waiver-eligible Medicaid population was dually eligible.
- More than half (58.4%) of SMI roster beneficiaries had MDD only and approximately one fifth (22.4%) had co-occurring SMI conditions.[49]
- Over two thirds (69.4%) of the SMI roster beneficiaries had one or more co-occurring PH conditions. Metabolic conditions (42.6%), followed by respiratory disease (40.6%) and hypertension (31.1%) were the most prevalent PH conditions.

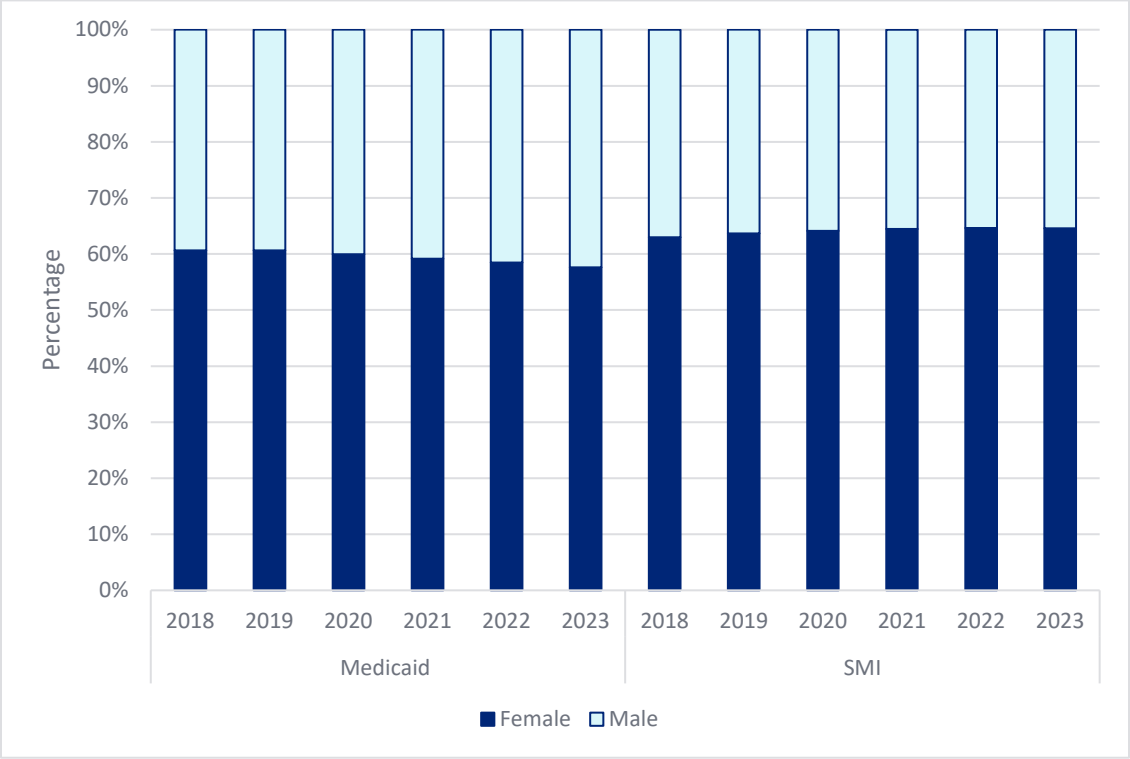
Interim Report findings focus on the waiver extension (2021-2023) as the evaluation period. Data from 2018-2019 was included to assess changes between the pre-demonstration and waiver extension to determine if state Goals (i.e., observed changes for measurable outcomes) were achieved due to activities implemented. Changes in roster population composition may be a result of changes in the Medicaid beneficiary composition (e.g., gender, age, geography) or other factors (e.g., changes in programs). Data from 2020 was included to assess changes between the waiver and waiver extension for Goal 3. Waiver eligible Medicaid population composition was included to assess if there were changes over time in the Medicaid beneficiary composition.

B.2. Gender and Age

Exhibit V.4 provides the percent of male and females for both the total waiver-eligible Medicaid and the SMI beneficiary roster population by year. Almost two thirds (64.6% in 2023) of the roster population were female. This varies slightly from the waiver-eligible Medicaid population (57.6% in 2023) which was more evenly split between males and females. Proportions for both the SMI beneficiary roster population and the waiver-eligible Medicaid population remained stable between 2018 and 2023.

[49] The proportion of SMI roster beneficiaries with more than one type of SMI diagnosis also increased from 12% in 2018 to 22% in 2023. However, this is largely an artifact of how SMI categories were assigned, once a beneficiary had a claim.

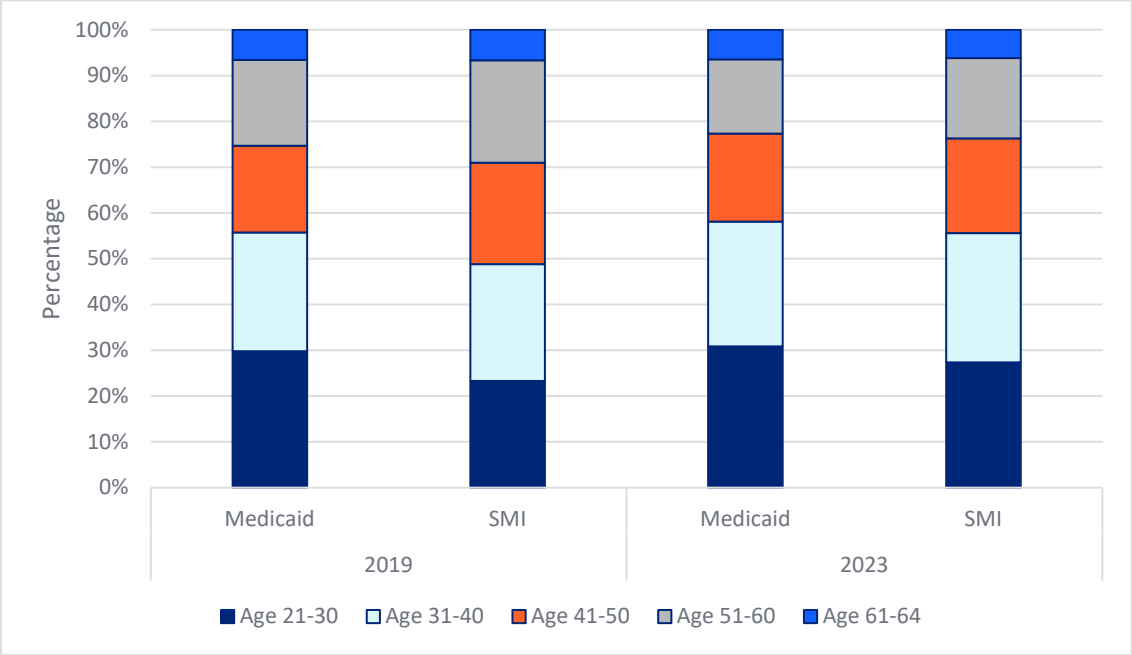
Exhibit V.4: Gender Distribution (Roster vs Waiver-Eligible Medicaid Population) by Year



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.5 provides the age distribution for the total waiver-eligible Medicaid and the SMI beneficiary roster population by year. Approximately three quarters (76.3%) of the roster were between the ages of 21-50. This is consistent with the waiver-eligible Medicaid population (77.3%). Beneficiaries ages 21-40 account for approximately half (55.6%) of the SMI beneficiary roster population. The proportion of beneficiaries in the SMI roster for younger age categories increased from 21.8% (ages 21-30); 24.4% (ages 31-40) in 2018 to 27.4%; 28.2% respectively in 2023. Over the same period, the proportion of older beneficiaries declined from 24.0% (ages 51-60); 7.0% (ages 61-64) to 17.6%; 6.2% respectively. However, the age composition of the waiver-eligible Medicaid population remained stable between 2018 and 2023. Beneficiaries 61-64 accounted for the smallest cohort, having less than 10% (6.2%; 6.5% respectively) of the total population.

Exhibit V.5: Age Distribution (Roster vs Waiver-Eligible Medicaid Population) by Year

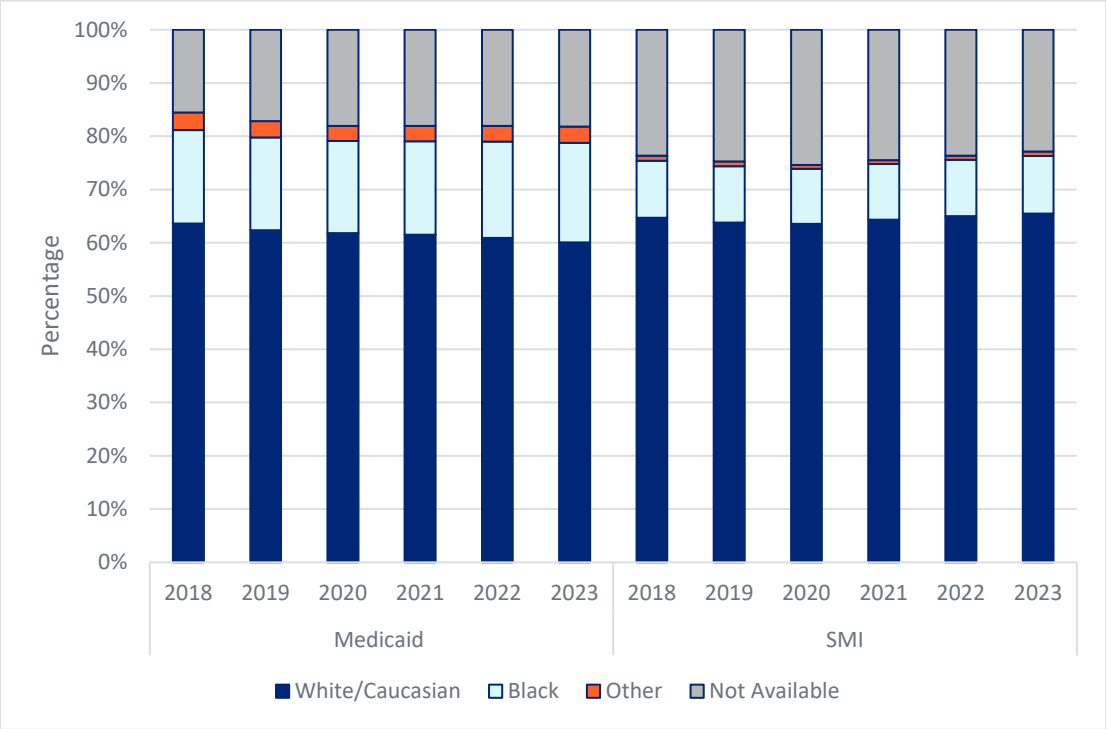


Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

B.3. Race/Ethnicity

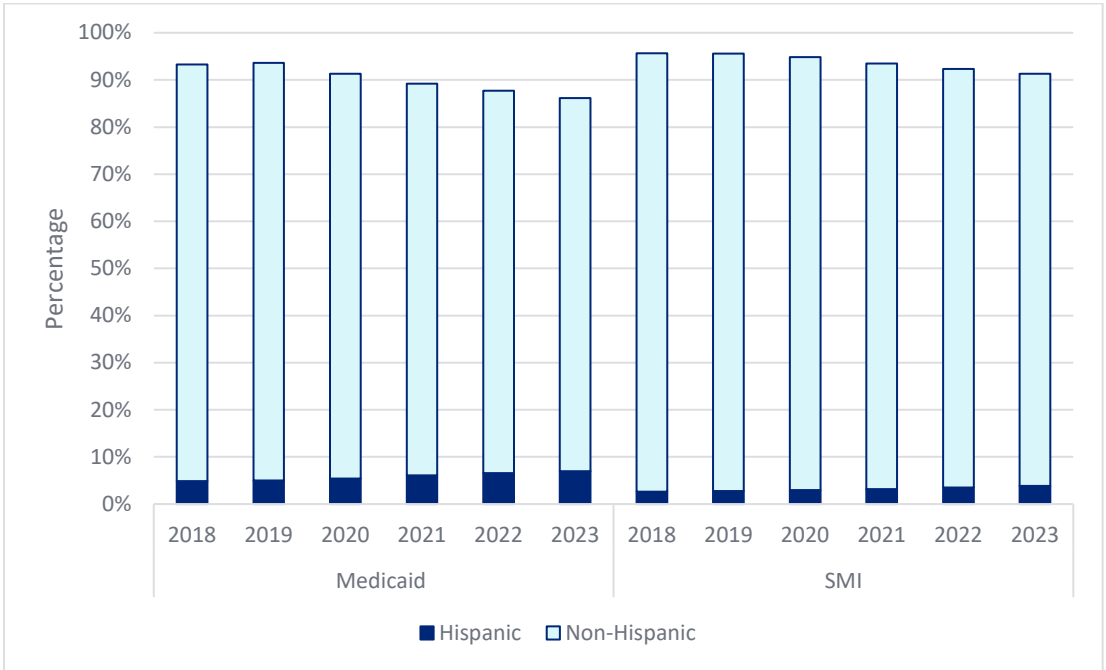
Exhibits V.6 and **V.7** provide the total waiver-eligible Medicaid and the SMI beneficiary roster population by race and ethnicity for 2018-2023. Approximately two thirds of the roster and waiver-eligible Medicaid populations are White/Caucasian, with almost all beneficiaries being non-Hispanic. The SMI beneficiary roster includes lower proportions of Black beneficiaries (10.8% in 2023) than the overall waiver eligible Medicaid beneficiaries (18.7% in 2023). Racial characteristics were not available for 22.9% of the roster and 18.2% of the waiver-eligible Medicaid population. Refer to **Attachment E** for a more granular race/ethnicity breakdown.

Exhibit V.6: Race Distribution (Roster vs Waiver-Eligible Medicaid Population) by Year



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.7: Ethnicity Distribution (Roster vs Waiver-Eligible Medicaid Population) by Year[50]



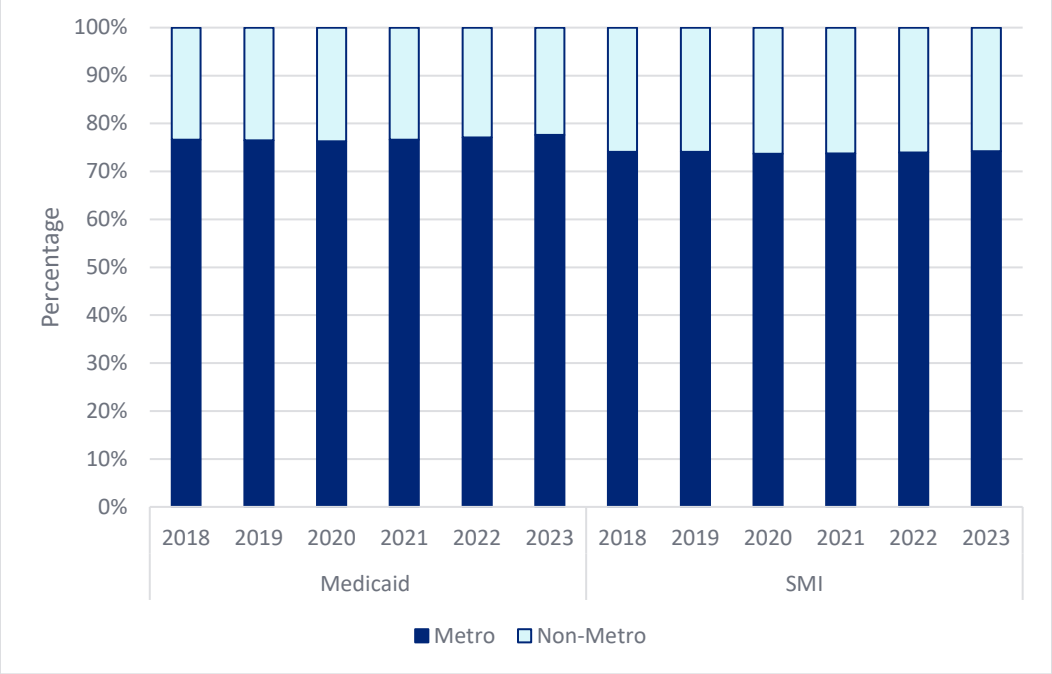
Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

[50] Bars may not sum to 100% due beneficiaries with missing/unknown ethnicity information.

B.4. Metro/Non-Metro Geographical Areas

Exhibit V.8 provides the geographical distribution for the total waiver-eligible Medicaid and the SMI beneficiary roster population by year. The geographical area was identified based on beneficiary county of residence. Each county was mapped using the Rural Urban Continuum Code (RUCC) to a metro or non-metro flag.[51] Based on the RUCC mapping, 44 counties were identified as metro areas, and 48 counties were identified as non-metro areas. In 2023, approximately three quarters (74.2%) of the roster lived in metro areas. The geographical composition of the SMI beneficiary roster is similar to the overall waiver-eligible Medicaid population.

Exhibit V.8: Geographical Distribution (Roster vs Waiver-Eligible Medicaid Population) by Year



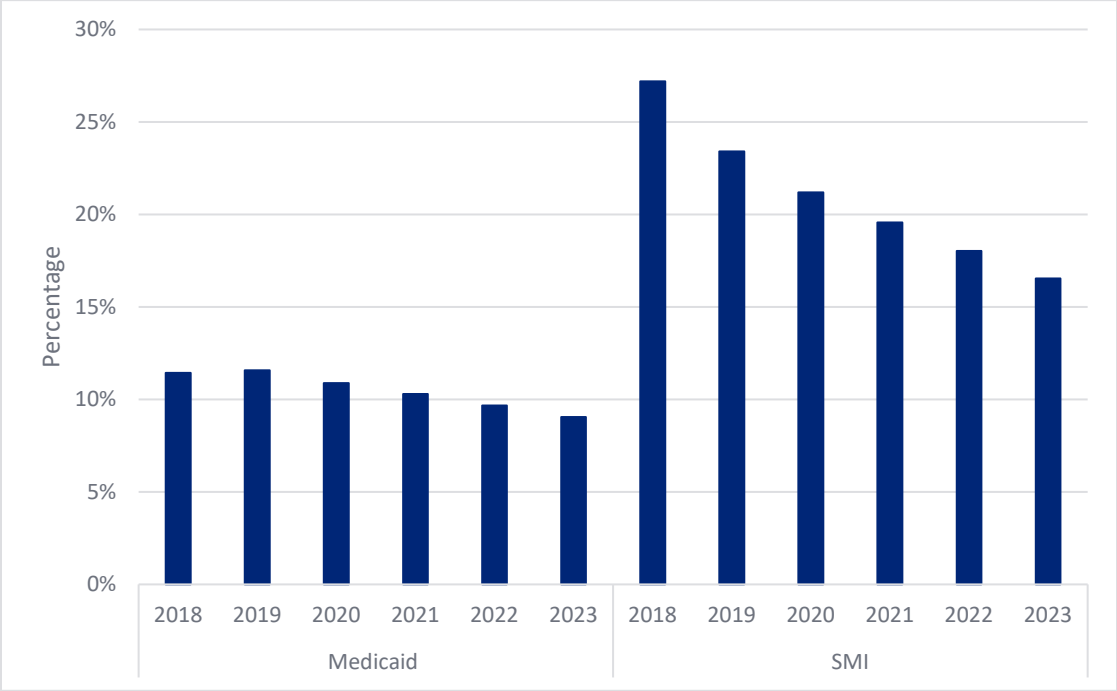
Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

B.5. Dually Eligible

Exhibit V.9 provides the proportion of the total waiver-eligible Medicaid and SMI beneficiary roster populations who are dually eligible (eligible for both Medicare and Medicaid). Nearly one-fifth (16.5%) of the roster were dually eligible in 2023 while one-tenth (9.0%) of the waiver-eligible Medicaid population was dually eligible. The proportion of SMI roster beneficiaries who were dually eligible decreased from 27.2% in 2018 to 16.5% in 2023.

[51] https://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx

Exhibit V.9: Dual Eligibility Distribution (Roster vs Waiver-Eligible Medicaid Population) by Year

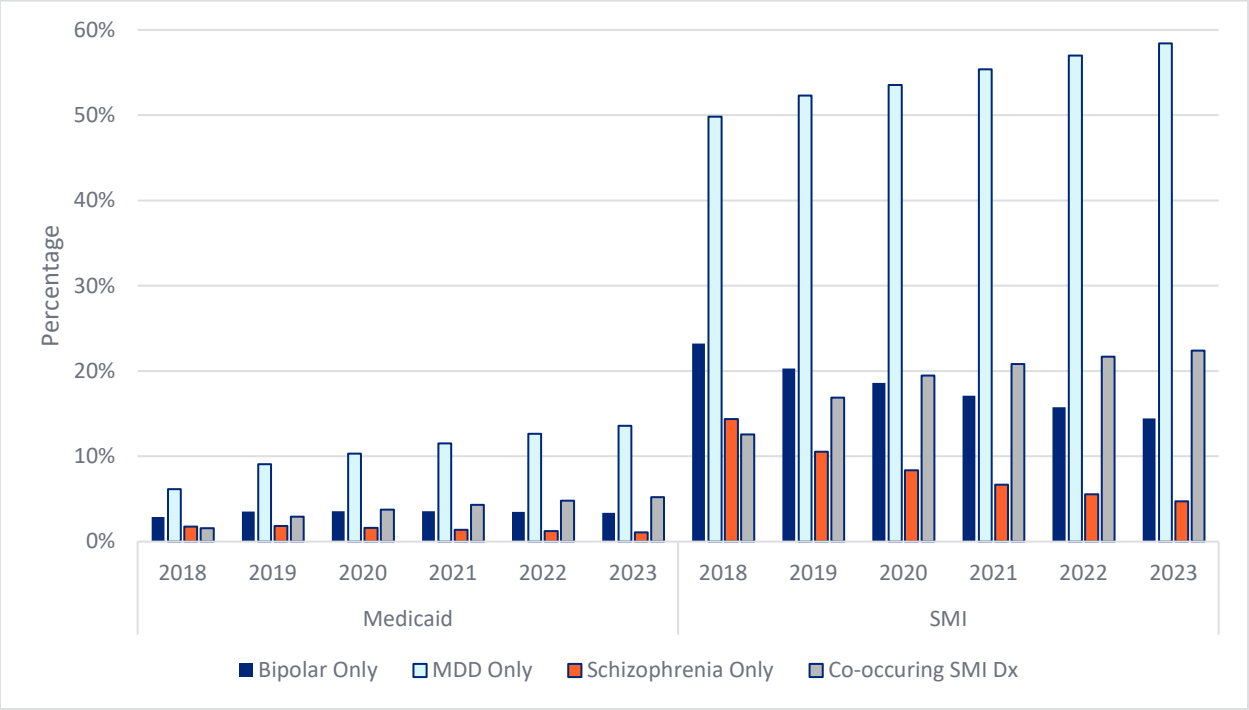


Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

B.6. SMI and Chronic Physical Conditions

Exhibits V.10 and **V.11** and **Attachment E, Exhibits E.2** and **E.3** provide the distribution of SMI conditions for both the total waiver-eligible Medicaid and SMI beneficiary roster populations. For both populations, MDD accounts for the largest proportion of beneficiaries with more than half (58.4%) of the SMI roster having MDD in 2023. As expected, bipolar disorder (14.5%) and schizophrenia (4.7%) account for smaller proportions of both populations in 2023. Approximately one-fifth (22.4%) of the SMI roster population had a co-occurring SMI condition, and more than two-thirds (69.4%) had one or more co-occurring PH conditions.

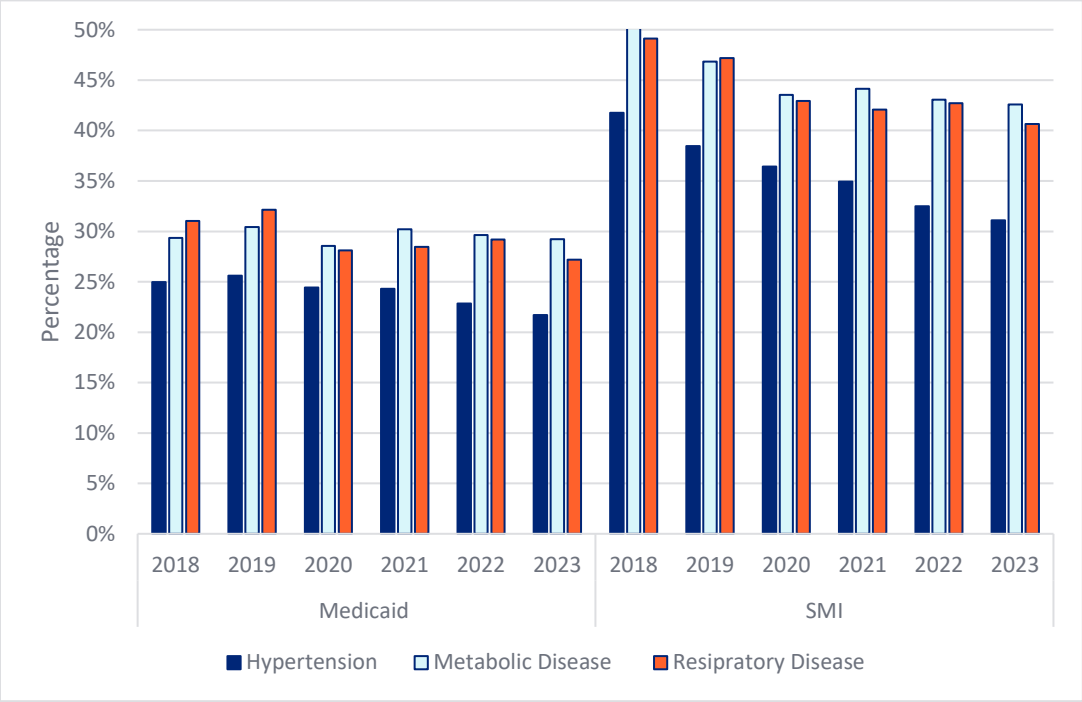
Exhibit V.10: Prevalence Rate of SMI Conditions



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Of the eight PH conditions included in the analysis, metabolic conditions (42.6%; 29.2%), followed by respiratory disease (40.6%; 27.2%) and hypertension (31.1%; 21.7%) had the largest proportions of the roster and waiver-eligible Medicaid populations in 2018 and 2023 (**Exhibit V.11**). The proportion of SMI roster beneficiaries without a chronic condition (among the eight included in this analysis) increased from 20.0% in 2018 to 30.6% in 2023. This increase may be due to the larger proportions of younger cohorts across the years. Among the overall waiver-eligible Medicaid population, slightly less than half (42.9% - 48.7% depending on year) did not have a chronic condition.

Exhibit V.11: Prevalence Rate of Top Three Chronic Conditions[52] Among SMI Population



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

C. Goal 1: Reduced utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings.

As stated in **Section II.A**, individuals with SMI are more likely to have higher rates of ED utilization than individuals without any MH diagnosis.[53] State actions designed to engage beneficiaries with SMI in lower levels of care (e.g., primary care; community-based services) or programs that divert individuals experiencing behavioral health challenges (e.g., CSUs) were implemented during the waiver and waiver extension to reduce ED utilization. Goal 1 examines the changes in all-cause ED utilization between the pre-demonstration and waiver extension for Medicaid beneficiaries with SMI. The evaluation relied on claims/encounter data, which contains information about service utilization, but does not contain information specific to time spent in an ED. Hence, analyses were restricted to all-cause ED utilization only (and did not examine LOS). Additionally, claims data does not capture information on whether the services utilized was "while the beneficiary was awaiting MH treatment in specialized settings." To better understand ED utilization for individuals experiencing behavioral health challenges, MH-related and SMI-related ED utilization were also examined. Qualitative data specific to ED utilization was also incorporated to contextualize quantitative findings and assess the impact of short- and long-term outcomes associated with Goal 1 (**Section II, Exhibit II.3**).

[52] Metabolic disease, respiratory disease, and hypertension are were the most prevalent conditions for both the SMI population and the overall Medicaid population. Prevalence for all conditions for each population are available in **Attachment E, Exhibits E.2 – E.3**.

[53] Niedzwiecki MJ, Sharma PJ, Kanzaria HK, McConville S, Hsia RY. Factors Associated With Emergency Department Use by Patients With and Without Mental Health Diagnoses. *JAMA Netw Open.* 2018;1(6):e183528. doi:10.1001/jamanetworkopen.2018.3528

As stated in **Section I.G.**, the COVID-19 PHE (which began in March 2020) caused substantial changes to state policies, service utilization, and provider availability and will have short- and long-term impacts on Indiana's health care. Social distancing, prioritization of health care resources, and telehealth policy modifications have likely affected emergency visit utilization and demand for behavioral health care services. Given that both the SMI waiver (2020) and the waiver extension (2021 - 2023) coincided with the COVID-19 PHE, findings drawn during this time-period likely reflect both the impact of COVID-19 related policy changes and activities as well as demonstration impacts. Consequently, any observed changes should be interpreted with caution as findings may be confounded by the impact of the PHE.

Exhibit V.12 describes the hypothesis, RQs, outcome measures, data sources, and analytic approach used for evaluating Goal 1.

Exhibit V.12: Goal 1 Research Questions, Outcome Measures, Data Sources, Analytic Approach, and Evaluation Time-Periods

Hypothesis: The SMI demonstration will result in reductions in utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment.				
Research Questions	**Outcome Measure(s)**	**Data Sources**	**Analytic Approach**	**Evaluation Time-Period(s)**
Primary RQ 1.1: Does the SMI demonstration result in reductions in utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment?[54]	• **ED participation rate:** Proportion of SMI beneficiary roster population (with 10 months or more of waiver-eligible Medicaid enrollment after their first SMI diagnosis) with an (all-cause) ED visit[55] • **ED utilization rate:** Number of all-cause ED visits per 1,000 beneficiary-months among SMI beneficiary roster population (with 10 months or more of waiver-eligible Medicaid enrollment after their first SMI diagnosis)[55]	• Claims/encounter data (2018-2023) • Enrollment data (2018-2023)	• Descriptive quantitative analysis of trends over time during the demonstration • Interrupted time series analysis	• **Intervention Period:** Waiver extension (2021-2023) vs. **Reference Period:** Pre-demonstration (2018-2019) • *Descriptive and ITS sensitivity analyses include Waiver (2020) in intervention period.*

[54] The RQs were drafted to align with CMS guidance (https://www.medicaid.gov/medicaid/section-1115-demo/downloads/evaluation-reports/smi-sed-eval-guide-appendix-a.pdf). For each RQ, the state identified one outcome measure for the evaluation. For this RQ, the state is assessing impact of the demonstration based on reduced number of ED visits.

[55] Metrics were subset to only those beneficiaries (SMI beneficiary roster population) with ten or more months of enrollment in waiver-eligible Medicaid coverage within the given year (and after their first SMI diagnosis date within the analytic period, between 2018 and 2023) to allow for more comparable Medicaid coverage exposure periods across all years analyzed.

Hypothesis: The SMI demonstration will result in reductions in utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment.				
Research Questions	**Outcome Measure(s)**	**Data Sources**	**Analytic Approach**	**Evaluation Time-Period(s)**
Subsidiary RQ 1.1: How do the SMI demonstration effects on reducing utilization and lengths of stays in EDs among Medicaid beneficiaries with SMI vary by geographic area or beneficiary characteristics?	• **ED participation rate**[55] by geographic area or select beneficiary characteristics: • **ED utilization rate**[55] by geographic area or select beneficiary characteristics:	• Claims/encounter data (2018-2023) • Enrollment data (2018-2023)	• Descriptive quantitative analysis of trends over time during the demonstration • Interrupted time series analysis	• **Intervention Period:** Waiver extension (2021-2023) vs. **Reference Period:** Pre-demonstration (2018-2019) • *Descriptive and ITS sensitivity analyses include 2020 in intervention period*
Subsidiary RQ 1.2: How do SMI demonstration activities contribute to reductions in utilization LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings?	• Demonstration activities or their components or characteristics that stakeholders identify as most effective in reducing utilization and lengths of stays in EDs among Medicaid beneficiaries with SMI • Obstacles that stakeholders identify as hindering the effectiveness of the demonstration in reducing utilization and LOS in EDs	KIIs with beneficiaries, MCEs, state officials, and providers	Descriptive qualitative analysis of demonstration activities most effective, and obstacles that stakeholders identify, in reducing utilization and lengths of stays in EDs	• **KIIs conducted in:** 2020, 2023, and 2024; discussed topics since the Waiver implementation (2020) and through the first half of the Waiver extension (2021-2023)

Quantitative Analysis Approach

***MH-related* ED** participation and utilization rates and ***SMI-specific* ED** participation and utilization rates were also calculated, to further explore ED participation and utilization patterns over time.

Analytic Population. Utilization of ED service analyses were conducted for beneficiaries in the SMI beneficiary roster population who had at least 10 months of SMI waiver eligible Medicaid coverage in each respective year following their diagnosis. Restricting the analytic population to this subset of beneficiaries allowed for similar "exposure" periods (i.e., periods of time in which beneficiaries may have an ED visit covered by Medicaid) across all measurement years. This is particularly important when comparing years fully covered by the COVID-19 PHE (i.e., 2021 and 2022), during which Medicaid coverage was expanded and no beneficiaries were disenrolled, versus other years (in which Medicaid beneficiaries may have been more likely to have gaps in their Medicaid enrollment).

Metrics. Participation and utilization rates were calculated for beneficiaries with SMI and relevant demographic subgroups. Specifically:

- The *participation rate* is the proportion of beneficiaries receiving a specific service at least once in the year. For example, in 2020, of the 110,857 SMI beneficiaries (roster population) with at least ten months of eligible Medicaid enrollment after their first SMI diagnosis, 58,942 beneficiaries had an ED visit during the year, resulting in a participation rate of 53.2%. This metric reflects that a beneficiary participated in a service; it does not reflect the frequency of service use.
- The *utilization rate* is the count of services or visits per 1,000 beneficiary years. Whereas the participation rate measures whether beneficiaries have used ED services, the utilization rate reflects the frequency that beneficiaries access the service. The formula for the utilization rate is:

$$\frac{\#\ of\ services\ or\ visits\ per\ year}{member\ months} x\ 1{,}000\ x\ 12\ months$$

While the formula uses beneficiary months, a beneficiary year is a more tangible concept for the reader to understand and is a commonly used concept in health care utilization metrics. The use of "beneficiary years" in the utilization rate reflects the number of services used per 1,000 beneficiaries during a year. For example, the ED utilization rate for beneficiaries with SMI decreased from 2,096 visits per 1,000 beneficiary years in 2018 to 1,767 visits per 1,000 beneficiary years in 2020. This indicates that beneficiaries with SMI used ED services less frequently in 2020 compared to 2018.

ED visits were counted if: 1) the beneficiary had SMI waiver-eligible Medicaid coverage in the same month as the ED visit, and 2) the ED visit occurred on or after the first date in which the beneficiary had a claim with a primary or secondary diagnosis of SMI between 2018 and 2023. Only one ED visit was counted per day. If a beneficiary had multiple ED-related claims in a single day, that day was counted as one "visit." In addition to all-cause ED, participation and utilization rates for ED visits related to MH and SMI were also calculated. For detailed specifications, refer to **Attachment D**.

Analysis Methods. Annual participation and utilization rates were calculated to examine trends over time. The metrics were calculated for the analytic population as well as by key beneficiary characteristics for the analytic population. Beneficiary characteristics examined included: SMI diagnosis history, sociodemographic characteristics (i.e., gender, age, race, ethnicity, geographic location [metro/non-metro]), Medicaid coverage status indicators (i.e., participation in HIP, Medicare/Medicaid dually eligible), and other chronic health conditions.

In addition to comparing trends over time using descriptive analyses, ITS analyses were used to estimate changes in ED participation and utilization among the SMI beneficiary roster population before and during the waiver extension while adjusting for beneficiary sociodemographic,

clinical history, and Medicaid enrollment characteristics. More specifically, the following ITS regression models were specified for the all-cause ED participation and utilization rate measures:

- *All-Cause ED Participation Rate*: A logistic regression model was used to examine the likelihood of a beneficiary with SMI visiting the ED at least once during a given year. Estimated odds ratios (OR) were used to examine the likelihood of ED participation.
- *All-Cause ED Utilization Rate*: A negative binomial regression was used to examine change in service utilization per beneficiary per year. Estimated incidence rate ratio (IRR), measuring the change in outcome for one unit of change in the control variable, were used to examine frequency of utilization.

For these regressions, the pre-demonstration (2018 and 2019) was used as a reference period to examine change across the first half of the waiver extension (2021 to 2023) relative to the pre-demonstration period. The regression models controlled for benefit year as well as beneficiary SMI diagnosis and relevant beneficiary sociodemographic characteristics (e.g., gender, age, race, ethnicity, geographic location [metro or non-metro]), Medicaid enrollment characteristics [i.e., identified as Medicare/Medicaid dually eligible], and selected chronic conditions). Sensitivity tests were conducted to examine the effect of including HIP status as a covariate, as well as interactions between the intervention period and select sociodemographic characteristics. Results from the sensitivity analyses are included in **Attachment E**. As stated previously, the PHE caused substantial changes to Medicaid policies, service utilization, and provider availability. Social distancing and health care resource prioritization, particularly in the first year of the PHE significantly impacted health care utilization. Consequently, regression models excluded data from 2020. Sensitivity tests were also conducted to examine if exclusion of data from 2020 (waiver implementation year) impacted the regression-based findings. Results from the sensitivity analyses are included in **Attachment E**.

The findings are organized by RQs and relevant outcome measures identified in the logic model for the Goal (**Section II**). Based on factors including data availability, only select outcomes were identified in the CMS approved Evaluation Plan. Any outcome that was identified in the logic model but was not included in the Evaluation Plan have been noted in the respective sections.

C.1. Does the SMI demonstration result in reductions in utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment (Primary RQ 1.1)?

ED Utilization

All-Cause ED Utilization. All-cause ED participation increased slightly in the pre-demonstration period, from 56.6% in 2018 to 58.0% in 2019 (**Exhibit V.13**). The all-cause ED participation rate decreased to 53.2% in 2020 during the waiver (2020) which coincided with the first year of the PHE. During the waiver extension, the all-cause ED participation rate declined slightly from 53.7% in 2021 to 50.9% in 2023. All-cause ED utilization rates were stable during the pre-demonstration period, with 2,096 visits per 1,000 beneficiaries in 2018 and 2,087 visits per 1,000 beneficiaries in 2019. Similar to ED participation trends, ED utilization rates declined during the waiver (2020) period to 1,767 visits per 1,000 beneficiaries. ED utilization stabilized during the first year of the waiver extension (2021; 1,734 visits per 1,000 beneficiaries). ED utilization declined again in 2022 (1,589 visits per 1,000 beneficiaries) and stabilized in 2023 (1,588 visits per 1,000 beneficiary years).

Changes in participation and utilization rates over time were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time (**Attachment E, Exhibits E.4 – E.5**). Adjusting for beneficiary characteristics, findings indicate that the participation rate during the waiver extension did not differ significantly from that of the pre-demonstration period. However, there was a significant interaction between time and intervention period (OR: 0.97, 95% CI: 0.96-0.97), indicating that there was a declining trend in the participation rates over time. Controlling for beneficiary characteristics, the utilization rate (number of visits) during the waiver extension was significantly lower (IRR: 0.96, CI: 0.94 – 0.98) relative to the pre-demonstration. Additionally, the joint effects of time and the waiver intervention in both regression models indicate that ED participation and utilization increased from 2018 to 2019, then decreased with time during the waiver extension.

Although declines in ED participation and utilization are encouraging, several direct or indirect factors suggest caution for interpretating declines as an effect of the waiver. For example, the COVID-19 PHE coincided with the implementation of the demonstration. Monthly trends in utilization of ED services (**Exhibit V.14**) indicate that the proportion of SMI beneficiaries using ED services decreased significantly in April 2020 (start of the pandemic and implementation of social distancing parameters) and continued to remain low relative to the rates prior to the PHE. Additionally, behavioral health workforce shortages, expansion of telehealth, and state investments in crisis stabilization services implemented during the waiver extension period may also have contributed to declines in beneficiary ED service participation and utilization. However, data were not available to corroborate associations or direct relationships. Future evaluations should consider triangulating ED service utilization data with other data sources (e.g., crisis stabilization service utilization) as well as implementation activities to better understand and interpret trends.

Exhibit V.13: All-Cause ED Participation and Utilization by Year Among Analytic Population (2018 – 2023)[56, 57]

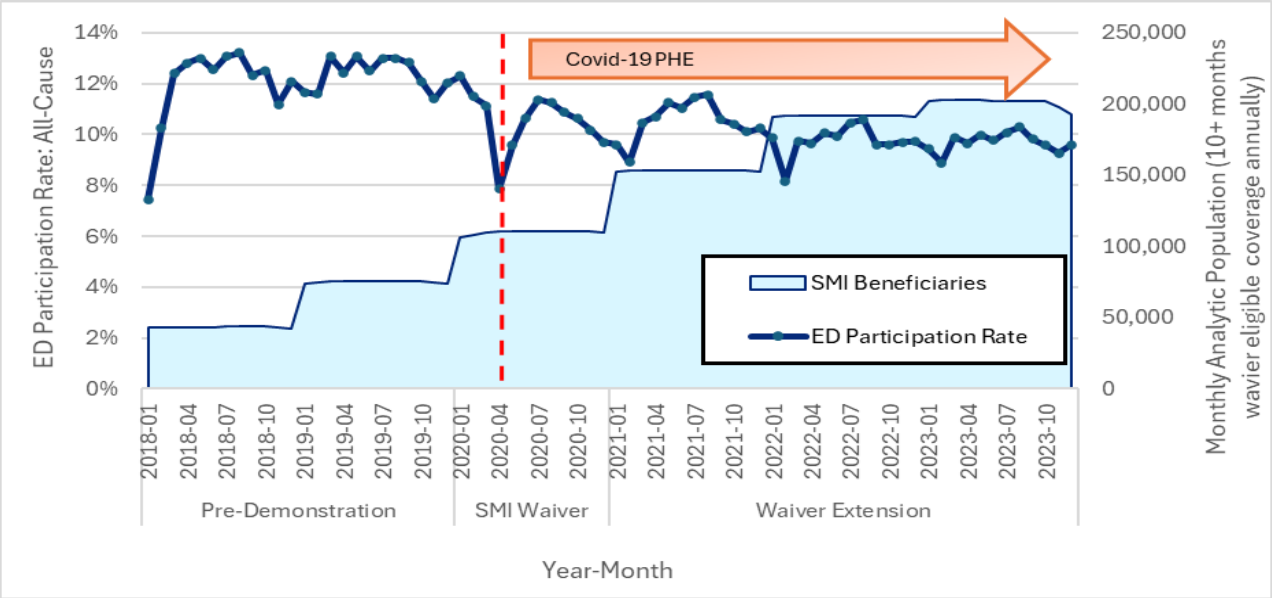
Year	Analytic Population	ED Participation Rate	# of ED Visits	ED Utilization Rate (# of Visits Per 1,000 Member Years)
2018	43,705	**56.6%**	87,455	**2,096**
2019	75,898	**58.0%**	155,501	**2,087**
2020	110,857	**53.2%**	193,424	**1,767**
2021	153,597	**53.7%**	264,301	**1,734**
2022	192,062	**51.6%**	303,464	**1,589**
2023	203,040	**50.9%**	318,450	**1,588**

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

[56] The SMI beneficiary roster population was subset to only those beneficiaries with at least 10 months of SMI waiver-eligible Medicaid coverage within each measurement year after their first SMI diagnosis date within the evaluation period. A beneficiary's "first SMI diagnosis date" was defined as the first date in which the beneficiary had a claim with a primary or secondary diagnosis of SMI within the evaluation period (2018-2023).

[57] All measures (i.e., number of ED visits, ED participation, and beneficiary months) were calculated after a beneficiary's first SMI diagnosis within the evaluation period. In addition, ED visits (and participation rate) were only counted/calculated for months in which the beneficiary was enrolled in (SMI waiver-eligible) Medicaid coverage. Only one ED visit was counted per day (e.g., if a beneficiary had multiple ED-related claims in a single day, that day was counted as one "visit").

Exhibit V.14: All-Cause ED Participation by Month Among Analytic Population (2018 – 2023)[56,57]



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

ED Utilization Related to MH. **Exhibit V.15** summarizes participation and utilization rates for MH-related ED visits among SMI beneficiaries (refer to **Attachment D** for additional details specific to how ED visits were identified). The proportion of SMI beneficiaries using the ED for MH was lower relative to the overall ED use among this population across all years. As with all-cause ED participation and utilization, MH-related ED participation and utilization declined across years (2018 - 2023). For example, MH-related ED participation rates declined from 13.2% of beneficiaries with SMI in 2018 to 7.4% in 2023 while MH-related ED utilization rates declined from 280 visits per 1,000 beneficiary years in 2018 to 199 visits per 1,000 beneficiary years in 2020 to 144 visits per 1,000 beneficiary years 2023.

Exhibit V.15: MH-Related[58] ED Participation and Utilization Among Analytic Population (2018 – 2023)[56, 57]

Year	Analytic Population	ED Participation Rate	# of ED Visits	ED Utilization Rate (# of Visits Per 1,000 Member Years)
2018	43,705	**13.2%**	11,673	**280**
2019	75,898	**11.8%**	17,610	**236**
2020	110,857	**9.9%**	21,780	**199**
2021	153,597	**8.9%**	26,292	**172**
2022	192,062	**7.6%**	28,073	**147**
2023	203,040	**7.4%**	28,868	**144**

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

[58] MH-related visits were identified using the primary diagnoses from all claims in the same day as an ED visit. MH-related diagnoses were identified using a combination of value sets, including the Healthcare Effectiveness Data and Information Set (HEDIS) Value Set Directory (VSD)'s MH Diagnosis and Intentional Self-Harm value sets, as well as the Clinical Classification Software Refined (CCSR) Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis category.

ED Utilization Related to SMI. **Exhibit V.16** summarizes beneficiaries with SMI participation and utilization rates for SMI-related ED visits. Consistent with the findings for all-cause and MH-related ED participation and utilization, SMI-related ED participation and utilization declined across years (2018 - 2023). For example, SMI-related ED utilization declined from 6.3% of beneficiaries with SMI in 2018 to 2.7% in 2023 while SMI-related ED utilization rates declined from 104 visits per 1,000 beneficiary years in 2018 to 70 visits per 1,000 beneficiary years in 2020 to 44 visits per 1,000 beneficiary years 2023.

Exhibit V.16: SMI-Related[59] ED Participation and Utilization Among Analytic Population (2018 – 2023)[56,57]

Year	Analytic Population	Participation Rate	# of ED Visits	ED Utilization Rate (# of Visits Per 1,000 Member Years)
2018	43,705	**6.3%**	4,351	**104**
2019	75,898	**5.0%**	5,961	**80**
2020	110,857	**4.1%**	7,611	**70**
2021	153,597	**3.5%**	8,619	**57**
2022	192,062	**2.8%**	8,578	**45**
2023	203,040	**2.7%**	8,797	**44**

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Average Length of Stay

As stated previously, ED LOS is typically calculated using data from a patient's clinical record. Given that data sources for the evaluation relied on claims/encounter data, which does not contain information specific to time spent in an ED, analyses were restricted to ED utilization only.

C.2. How do the SMI demonstration effects on reducing utilization and lengths of stays in EDs among Medicaid beneficiaries with SMI vary by geographic area or beneficiary characteristics (Subsidiary RQ 1.1)?

ED Utilization

Differences in ED participation and utilization rates over time between select population subgroups defined based on beneficiary sociodemographic characteristics (e.g., gender, race, ethnicity, geography), benefit coverage (e.g., dually eligible) and prevalent MH and PH conditions were examined. Findings are organized by sub-population and integrate annual rates as well as any significant differences based on estimated regressions for each of the outcome measures.

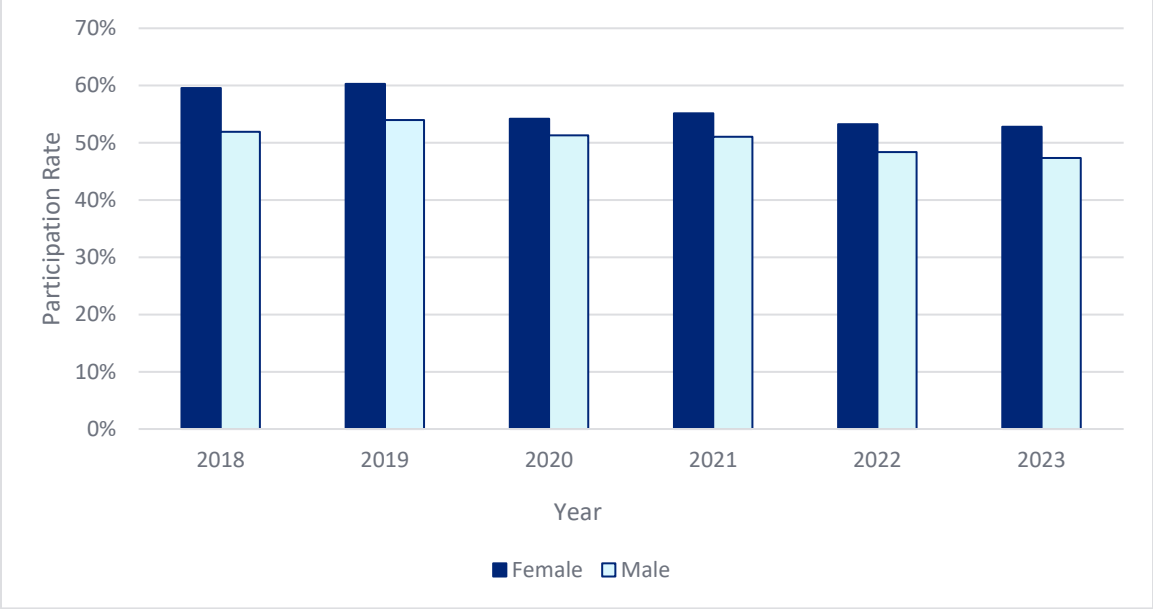
Gender. **Exhibits V.17** and **V.18** summarize participation and utilization rates by gender. Female beneficiaries had consistently higher ED participation rates compared to males during the pre-demonstration (2018 - 2019), the waiver (2020), and the waiver extension (2021-2023). For female beneficiaries, participation rates were stable in the pre-demonstration while male beneficiaries experienced a slight increase in participation rates during this time. Both female

[59] SMI-related visits were identified via the ED visit claim(s) primary diagnosis (or diagnoses) using the same diagnoses using to identify the Indiana SMI population (i.e., those related to schizophrenia, bipolar disorder, and MDD).

and male beneficiaries experienced a decrease in participation rates in 2020. These rates were stable in 2021, decreased in 2022, and stabilized again in 2023. Female beneficiaries had higher ED utilization rates during the pre-demonstration period. Consistent with patterns for overall all-cause ED utilization, rates were stable for both male and female beneficiaries during the pre-demonstration and declined during the waiver. ED utilization stabilized during the first year of the waiver extension, declined again in 2022, and stabilized in 2023.

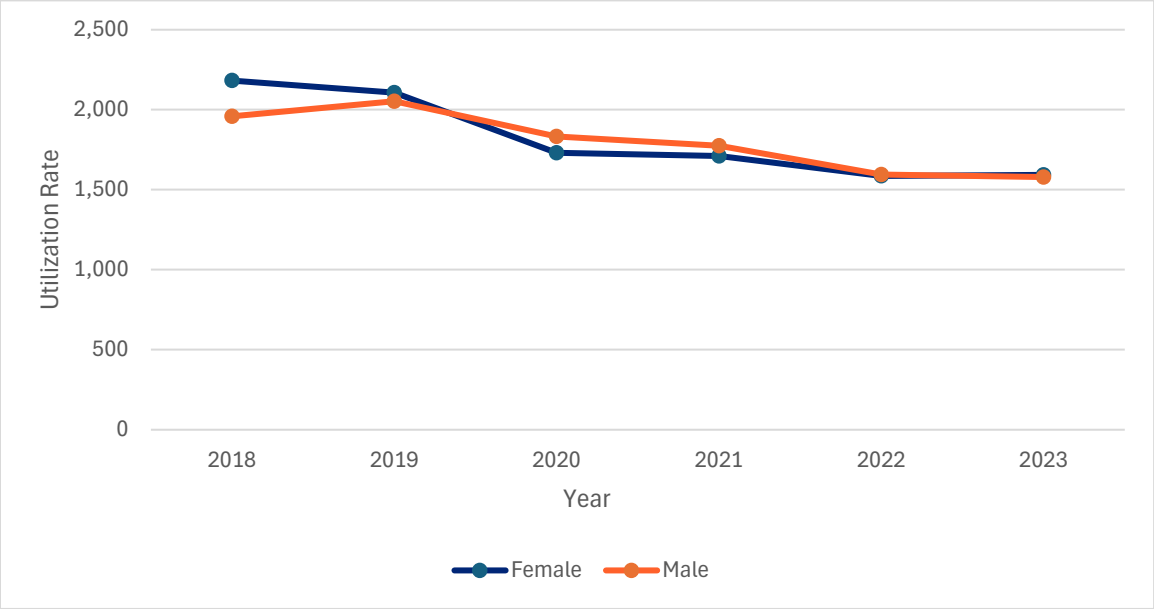
Differences in participation and utilization rates between male and female beneficiaries were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time (**Attachment E, Exhibits E.4 – E.5**). Findings for participation rates indicate males were 5% less likely (OR: 0.95, 95% CI: 0.94 – 0.96) to have at least one ED service visit compared to female beneficiaries. Findings for utilization rates indicate that the ED utilization rate was 10% higher among males (IRR: 1.10, 95% CI: 1.10 – 1.11) compared to females.

Exhibit V.17: ED Participation Rate by Gender (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.18: ED Utilization Rate by Gender (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

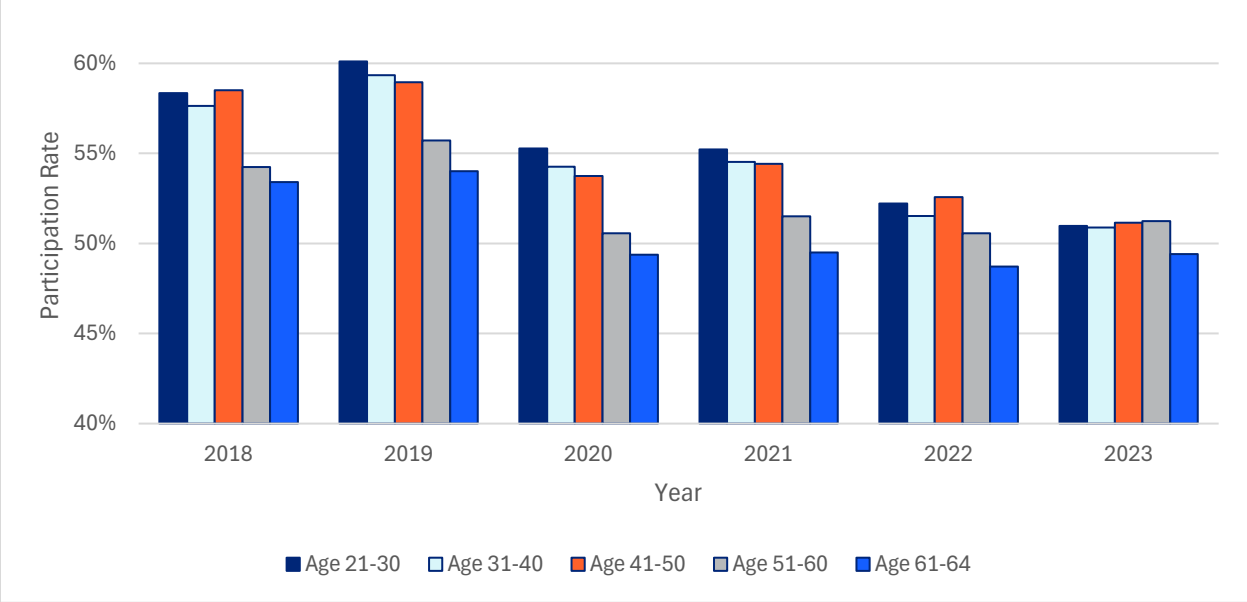
Age. **Exhibits V.19** and **V.20** summarize participation and utilization rates by age. All-cause ED participation rates declined across age groups, with the largest declines for the younger cohorts (21 - 30). In general, participation rates were stable during the pre-demonstration period (2018 - 2019) and declined during the waiver (2020). Participation rates during the waiver extension stabilized in 2021, declined in 2022, and stabilized again in 2023 across all age groups. All-cause ED utilization rates were generally consistent in patterns with participation rates. However, ED utilization rates for beneficiaries with SMI between 21 and 30 were higher compared to other age groups during the pre-demonstration period. By 2023, beneficiaries with SMI between 41 and 60 had the highest ED utilization rates.

Differences in participation and utilization rates between beneficiaries in different age groups were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time (**Attachment E, Exhibits E.4 – E.5**). Findings for participation rates indicate that beneficiaries between 31 and 40 were 0.87 times less likely (OR: 0.87, 95% CI: 0.85 – 0.88) to have at least one ED service visit compared to those between 21 and 30. Beneficiaries between 41 and 50 were 0.70 times less likely (OR: 0.70, 95% CI: 0.69 – 0.71) to have at least one ED service visit compared to those between 21 and 30. Beneficiaries between 51 and 60 were 0.48 times less likely (OR: 0.48, 95% CI: 0.47 – 0.49) to have at least one ED service visit compared to those between 21 and 30. Beneficiaries between 61 and 64 were 0.37 times less likely (OR: 0.37, 95% CI: 0.36 – 0.38) to have at least one ED service visit compared to those between 21 and 30.

Findings for utilization rates indicate that ED utilization rates among beneficiaries between 31 and 40 were 0.88 times lower (IRR: 0.88, 95% CI: 0.87 – 0.88) compared to those between 21 and 30. Beneficiaries between 41 and 50 had ED utilization rates 0.72 times lower (IRR: 0.72, 95% CI: 0.71 – 0.72) than those between 21 and 30. Beneficiaries between 51 and 60 had ED utilization rates 0.53 times lower (IRR: 0.53, 95% CI: 0.52 – 0.54) than to those between 21 and 30. ED

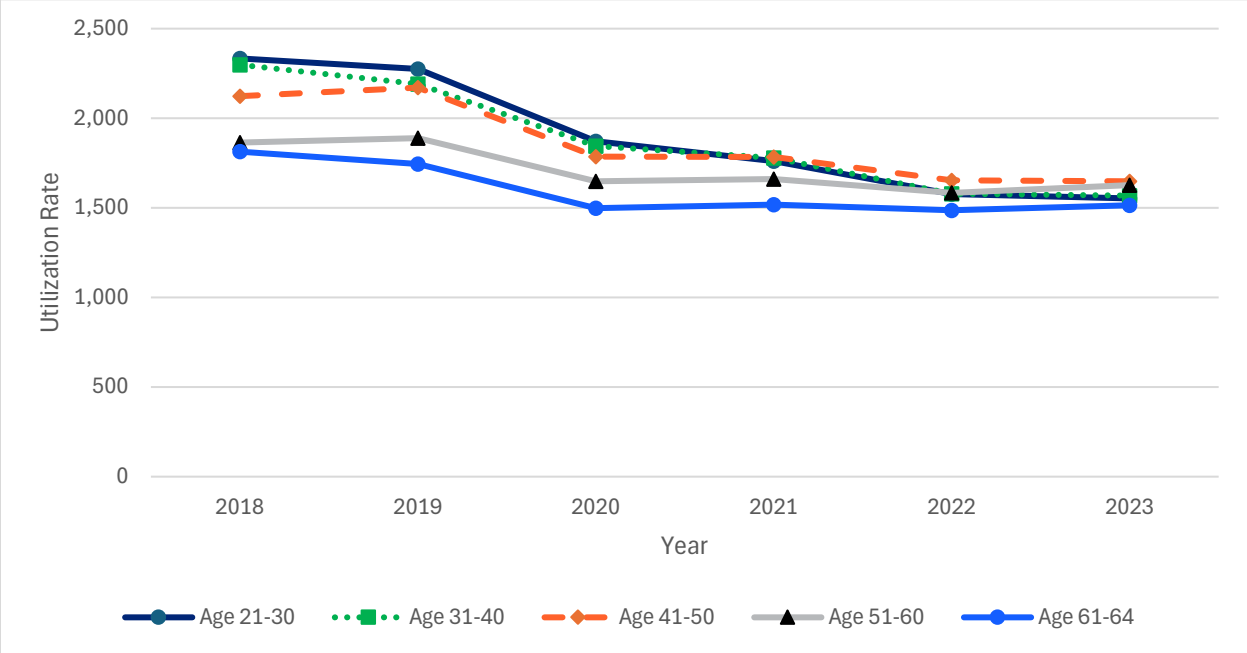
utilization rates were 0.43 times lower among beneficiaries between 61 and 64 (IRR: 0.43, 95% CI: 0.43 – 0.44) compared to those between 21 and 30.

Exhibit V.19: ED Participation Rate by Age (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.20: ED Utilization Rate by Age (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

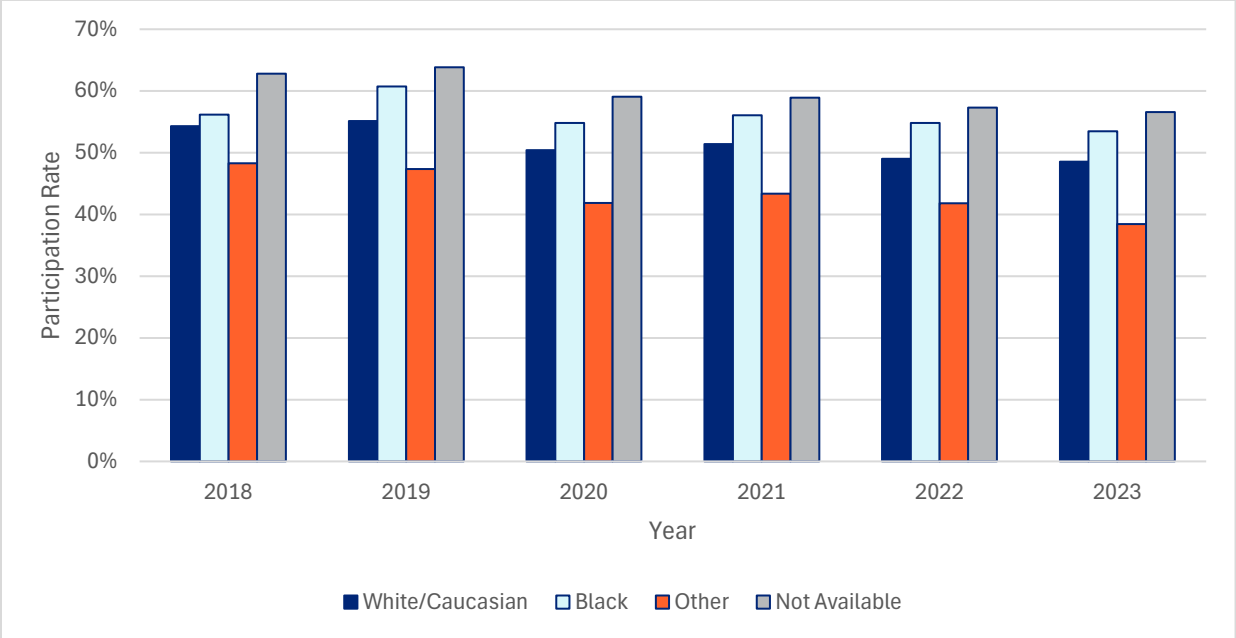
Race. **Exhibits V.21** and **V.22** summarize participation and utilization rates by race. All-cause participation and utilization rates declined between 2018 - 2023 across racial categories. However, trends were inconsistent (increasing, decreasing, stabilizing) across the years and racial categories. Beneficiaries with missing or unavailable race information had the highest ED

participation and utilization rates for each year (2018 - 2023). Compared to Black beneficiaries, White/Caucasian beneficiaries had lower ED participation and utilization rates for each year. White/Caucasian and Black beneficiaries, however, experienced similar decreases in their ED participation (by 5.8 percentage points and 2.7 percentage points, respectively) and ED utilization rates (by 26.5% and 22.0%, respectively) between 2018 and 2023. Among beneficiaries with missing or unavailable race information, the all-cause ED participation rate decreased by 6.2 percentage points, while the all-cause ED utilization rate decreased by 19.5%, between 2018 and 2023. Among beneficiaries with other race information, the all-cause ED participation rate decreased by 9.9 percentage points, and the all-cause ED utilization rate decreased by 25.2%.

Differences in participation and utilization rates between Black beneficiaries, White/Caucasian beneficiaries, and beneficiaries with other or unavailable race information were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time (**Attachment E, Exhibits E.4 – E.5**). Findings for participation rates indicate that Black beneficiaries were 1.34 times more likely (OR: 1.34, 95% CI: 1.31 – 1.36) to have at least one ED service visit compared to White/Caucasian beneficiaries. Beneficiaries with other or unavailable race information were 1.27 times more likely (OR: 1.27, 95% CI: 1.25 – 1.28) to have at least one ED service visit compared to White/Caucasian beneficiaries.

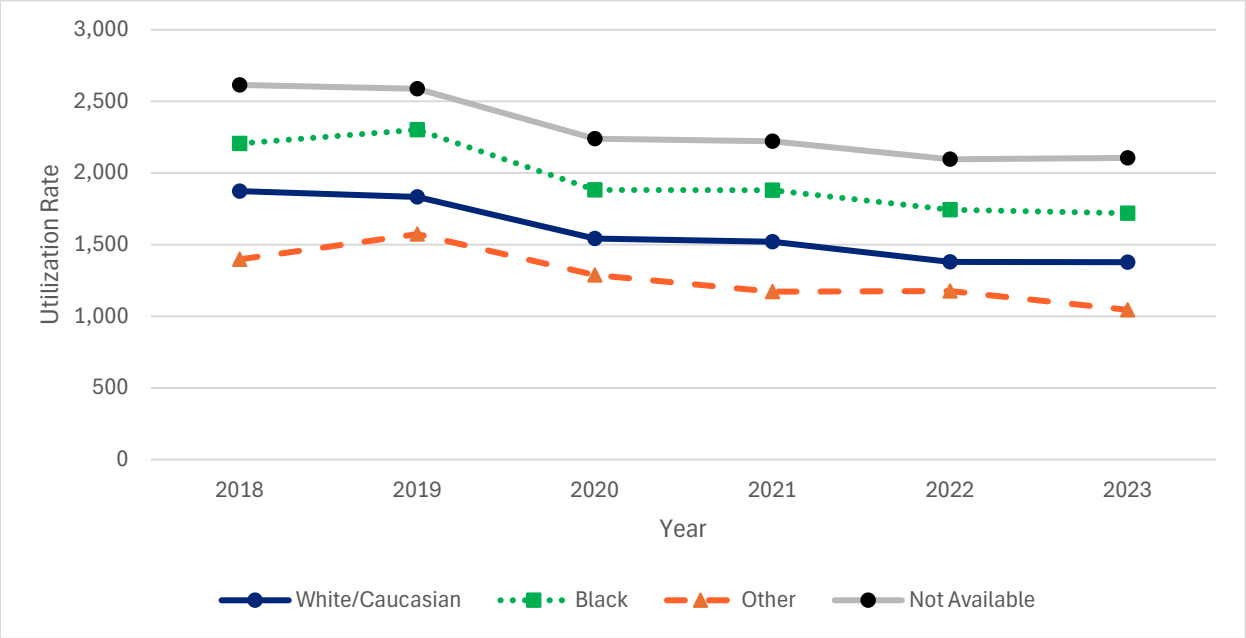
Findings for utilization rates indicate that Black beneficiaries' ED utilization rates were 1.28 times higher (IRR: 1.28, 95% CI: 1.27 – 1.30) compared to White/Caucasian beneficiaries. ED utilization among beneficiaries with other or unavailable race information was 1.27 times higher (IRR: 1.27, 95% CI: 1.26 – 1.28) compared to White/Caucasian beneficiaries.

Exhibit V.21: ED Participation Rate by Race (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.22: ED Utilization Rate by Race (Analytic Population)

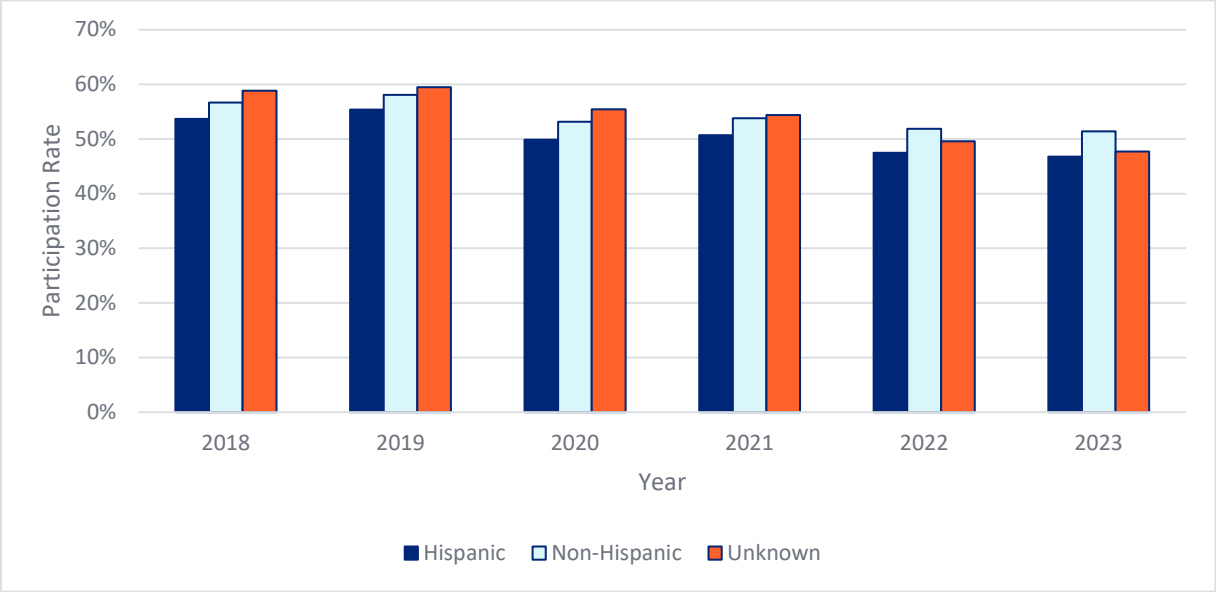


Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Ethnicity. **Exhibits V.23** and **V.24** summarize participation and utilization rates by ethnicity. All-cause participation and utilization rates declined between 2018 - 2023 for Hispanic and non-Hispanic beneficiaries, as well as for those with missing or unavailable ethnicity information. However, trends were inconsistent (increasing, decreasing, stabilizing) across the years and ethnicities. Non-Hispanic beneficiaries had higher ED participation and utilization rates for each year (2018 - 2023) compared to Hispanic beneficiaries. Each group experienced similar decreases in their ED participation (by 6.9 percentage points for Hispanic beneficiaries and 5.3 percentage points for non-Hispanic beneficiaries) and ED utilization rates (by 26.1% for Hispanic beneficiaries and 23.1% for non-Hispanic beneficiaries) between 2018 and 2023. Among beneficiaries with missing or unavailable ethnicity information, the all-cause ED participation rate decreased by 11.1 percentage points, while the all-cause ED utilization rate decreased by 34.1%, between 2018 and 2023.

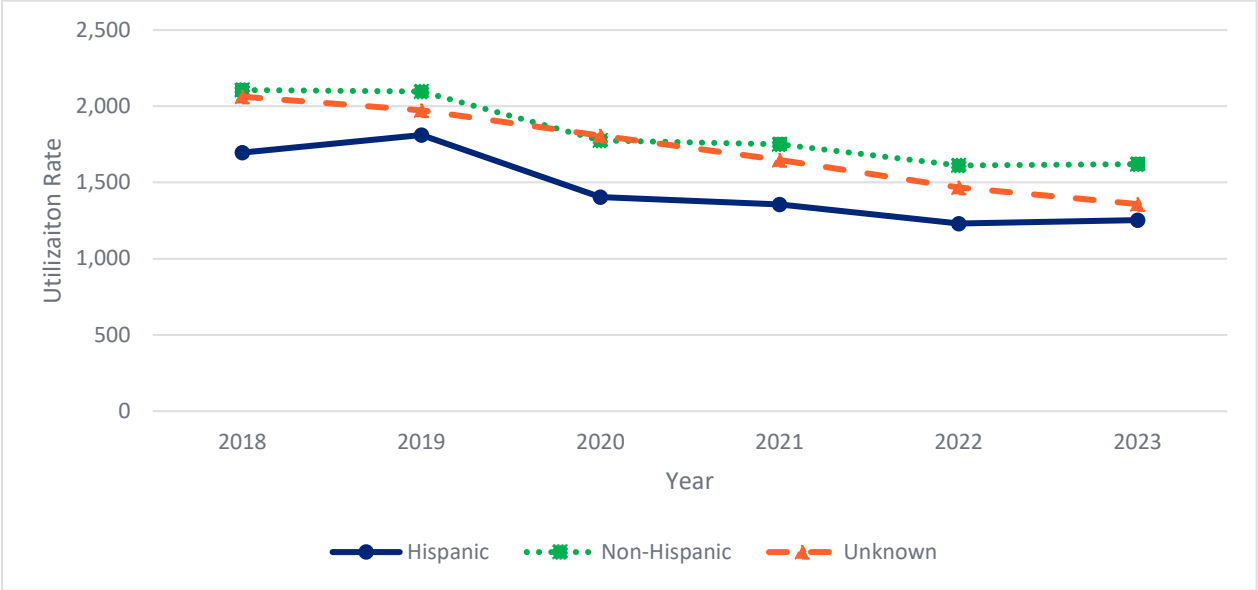
Differences in participation and utilization rates between Hispanic beneficiaries and beneficiaries who were non-Hispanic or had missing or unavailable ethnicity information were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time (**Attachment E, Exhibits E.4 – E.5**). Findings for participation rates indicate that Hispanic beneficiaries were 0.84 times less likely (OR: 0.84, 95% CI: 0.82 – 0.87) to have at least one ED service visit compared to non-Hispanic beneficiaries and beneficiaries with unknown ethnicity information. Findings for utilization rates indicate that ED utilization rates among Hispanic beneficiaries were 0.81 times lower (IRR: 0.81, 95% CI: 0.80– 0.83) compared to non-Hispanic beneficiaries and beneficiaries with unknown ethnicity information.

Exhibit V.23: ED Participation Rate by Ethnicity (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.24: ED Utilization Rate by Ethnicity (Analytic Population)

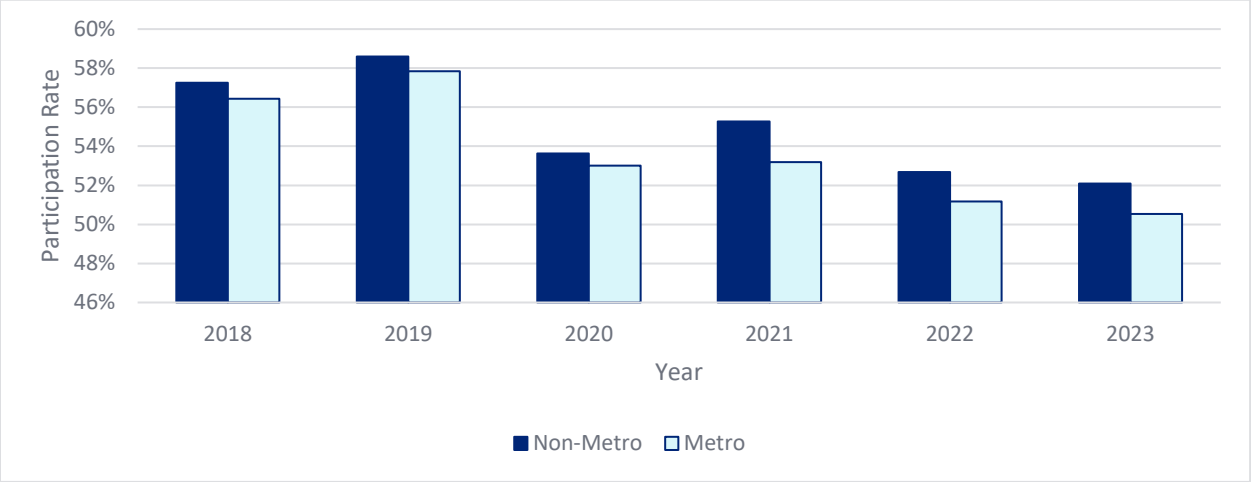


Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Geographical Area. **Exhibits V.25** and **V.26** summarize participation and utilization rates by geographical area. All-cause ED participation and utilization rates were similar for beneficiaries residing in metro and non-metro locations between 2018 and 2023. Consistent with the overall population and other sub-groups participation rates and utilization rates declined over time. Trend patterns for participation and utilization rates generally reflected stability during the pre-demonstration period (2018 - 2019), followed by declines in 2020 (waiver). Participation and utilization rates during the waiver extension stabilized in 2021, declined in 2022, and stabilized again in 2023 across both groups.

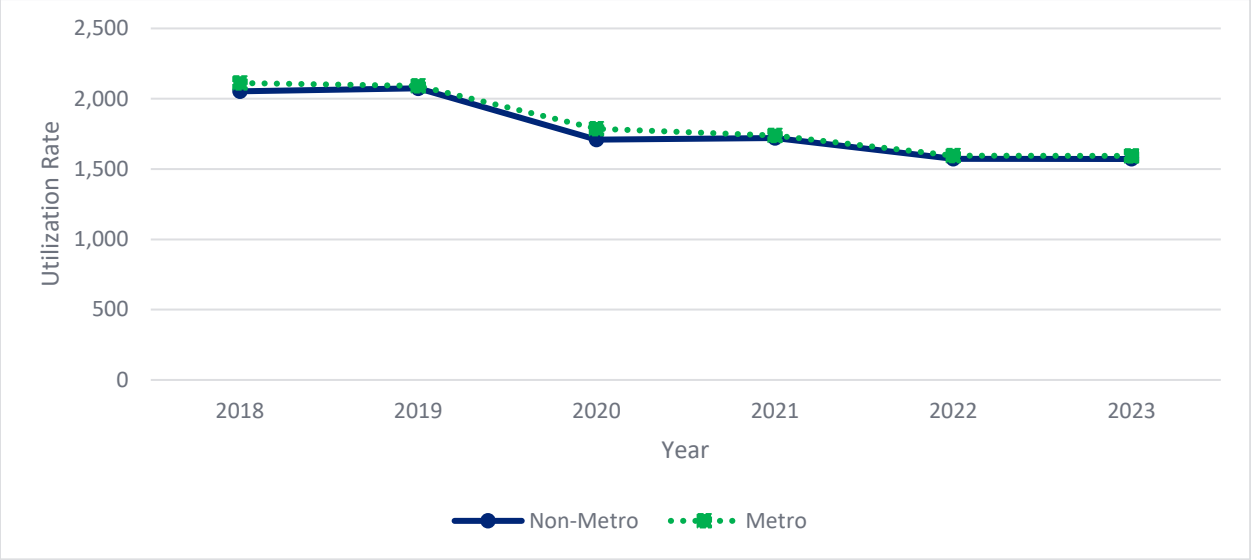
Differences in participation and utilization rates between beneficiaries residing in metro locations and those residing in non-metro locations were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time (**Attachment E, Exhibits E.4 – E.5**). Findings for participation rates indicate that beneficiaries in non-metro locations were 1.05 times more likely (OR: 1.05, 95% CI: 1.04 – 1.07) to have at least one ED visit compared to beneficiaries residing in metro locations. Findings for utilization rates indicate that after adjusting for time and other beneficiary characteristics, residential location was not significantly associated with utilization rates.

Exhibit V.25: ED Participation Rate by Geography (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.26: ED Utilization Rate by Geography (Analytic Population)



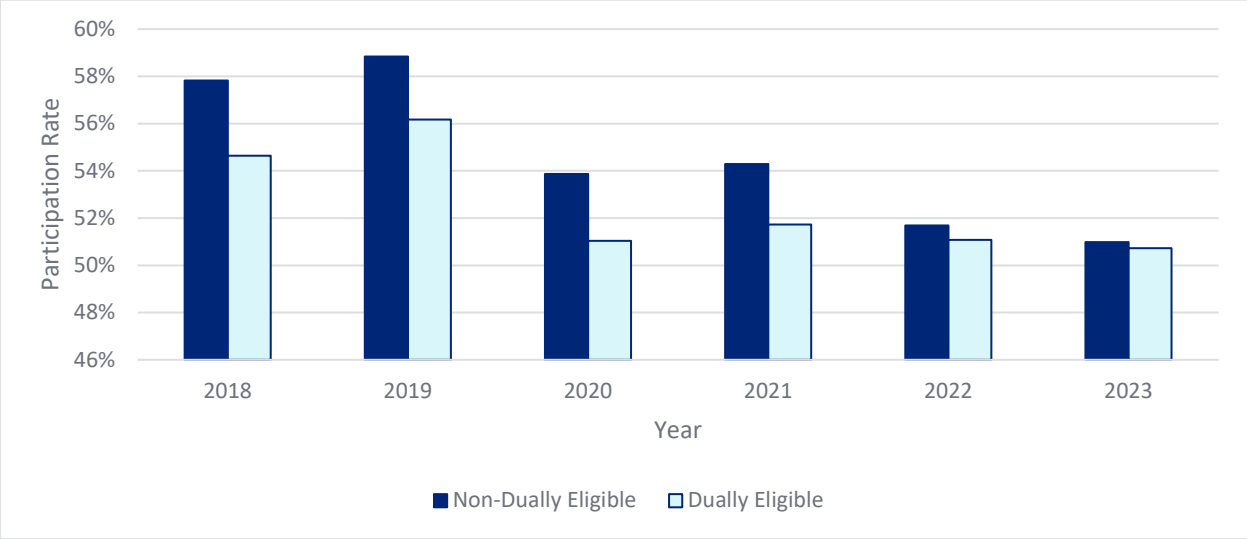
Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Dually Eligible. **Exhibits V.27** and **V.28** summarize participation and utilization rates by dual eligibility. All-cause ED participation rates were similar for dual eligibility and non-dual eligibility between 2018 and 2023. Utilization rates were higher for beneficiaries with non-dual eligibility status during the pre-demonstration period. However, by 2023 utilization rates were

similar for both groups. Consistent with the overall population and other sub-groups participation rates and utilization rates declined over time. Trend patterns for participation and utilization rates generally reflected stability during the pre-demonstration period (2018 - 2019), followed by declines in 2020 (waiver). Participation and utilization rates during the waiver extension stabilized in 2021, declined in 2022, and stabilized again in 2023 across both groups.

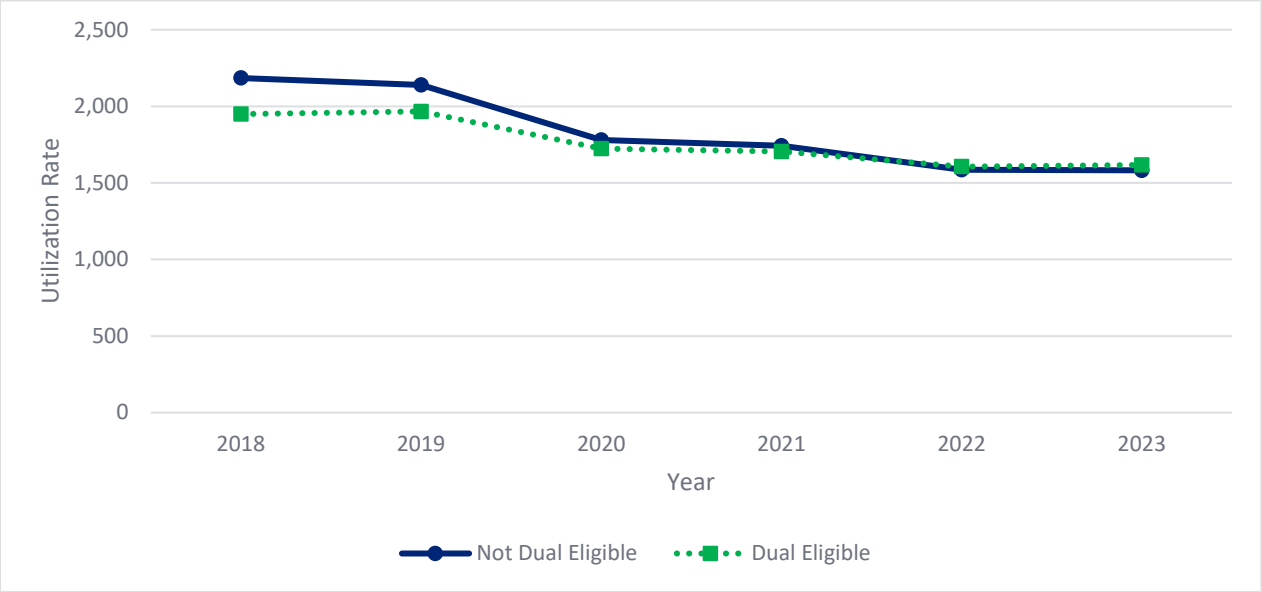
Differences in participation and utilization rates between beneficiaries with dual eligibility status and those without dual eligibility status were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time (**Attachment E, Exhibits E.4 – E.5**). Findings for participation rates indicate that beneficiaries with dual eligibility status were 0.87 times less likely (OR: 0.87, 95% CI: 0.86 – 0.88) to have at least one ED visit compared to those with non-dual eligibility status. Findings for utilization rates indicate that ED utilization rates were 0.91 times lower among beneficiaries with dual eligibility status (IRR: 0.91, 95% CI: 0.90 – 0.92) compared to those with non-dual eligibility status.

Exhibit V.27: ED Participation Rate by Dual Eligibility Status (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.28: ED Utilization Rate by Dual Eligibility Status (Analytic Population)

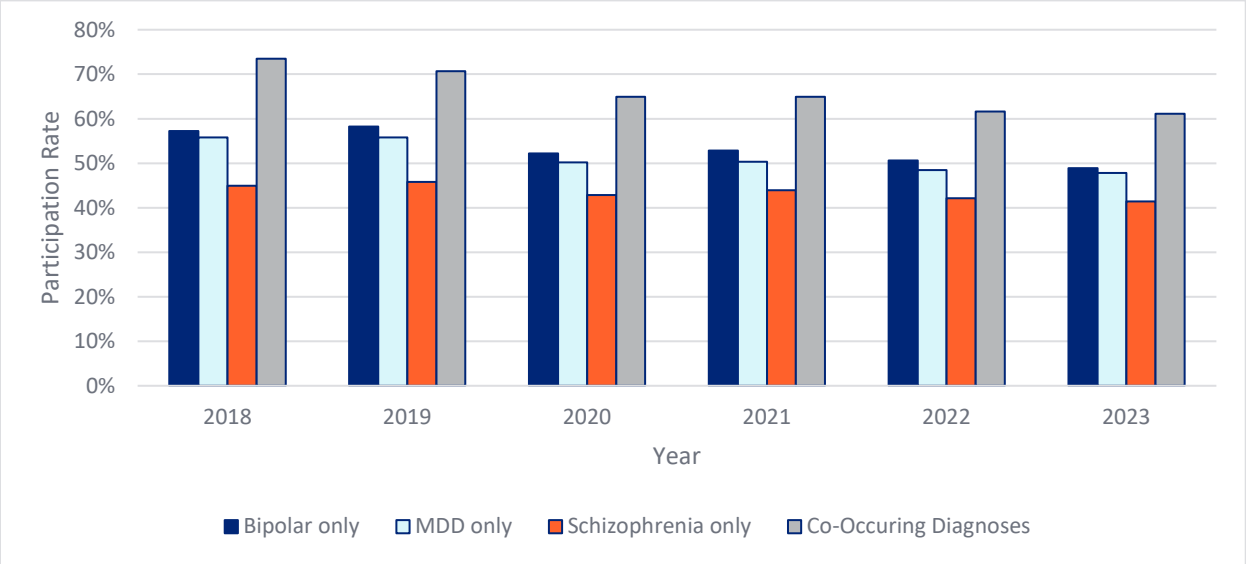


Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

SMI. **Exhibits V.29** and **V.30** summarize participation and utilization rates by beneficiaries with SMI conditions. All-cause ED participation and utilization declined over time for each condition included in the analyses. As expected, beneficiaries with co-occurring SMI conditions had the highest ED participation and utilization rates across all years (i.e., were the most likely to use ED services). Compared to beneficiaries with bipolar disorder or MDD, beneficiaries with schizophrenia experienced the smallest declines in ED participation and utilization rates from 2018 to 2023 (decreased by 3.5 percentage points, compared to 8.4 percentage points for the bipolar only group, 8.0 percentage points for the MDD only groups, and 12.4 percentage points for the co-occurring SMI conditions group). Additionally, the ED utilization rate decreased by 11.9% among the schizophrenia only group, compared to decreases of 29.3% or more among beneficiaries with other SMI conditions.

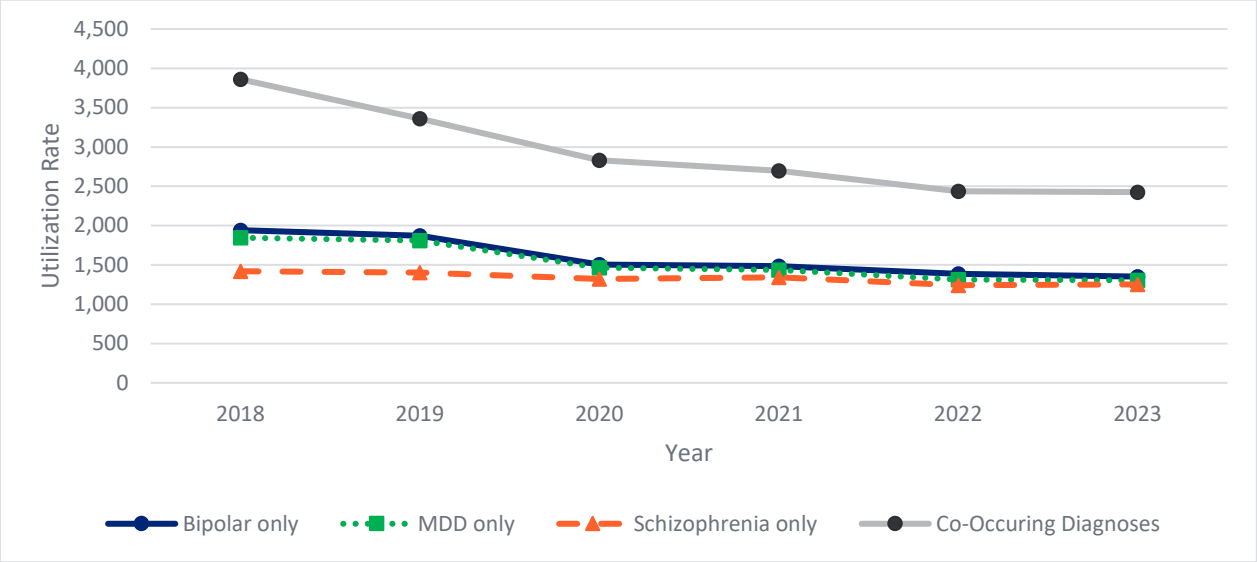
Differences in participation and utilization rates between beneficiaries with only MDD, those with only bipolar disorder, those with only schizophrenia, and those with co-occurring SMI conditions were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time (**Attachment E, Exhibits E.4 – E.5**). Findings for participation rates indicate beneficiaries with bipolar disorder only were 1.13 times more likely (OR: 1.13, 95% CI: 1.11 – 1.14) to have at least one ED service visit compared to those with MDD only. Beneficiaries with schizophrenia only were 0.92 times less likely (OR: 0.92, 95% CI: 0.90 – 0.94) to have at least one ED service visit compared to those with MDD only. Beneficiaries with co-occurring diagnoses were 1.66 times more likely (OR: 1.66, 95% CI: 1.64 – 1.68) to have at least one ED service visit compared to those with MDD only. Findings for utilization rates indicate beneficiaries with bipolar disorder only had ED utilization rates 1.07 times higher (IRR: 1.07, 95% CI: 1.06 – 1.08) than those with MDD only. Beneficiaries with schizophrenia only had slightly higher (IRR: 1.03, 95% CI: 1.02 – 1.05) ED utilization rates compared to those with MDD only. Beneficiaries with co-occurring diagnoses had ED utilization rates 1.64 times higher (IRR: 1.64, 95% CI: 1.63 – 1.65) than those with MDD only.

Exhibit V.29: ED Participation Rate by SMI Diagnosis (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.30: ED Utilization Rate by SMI Diagnosis (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

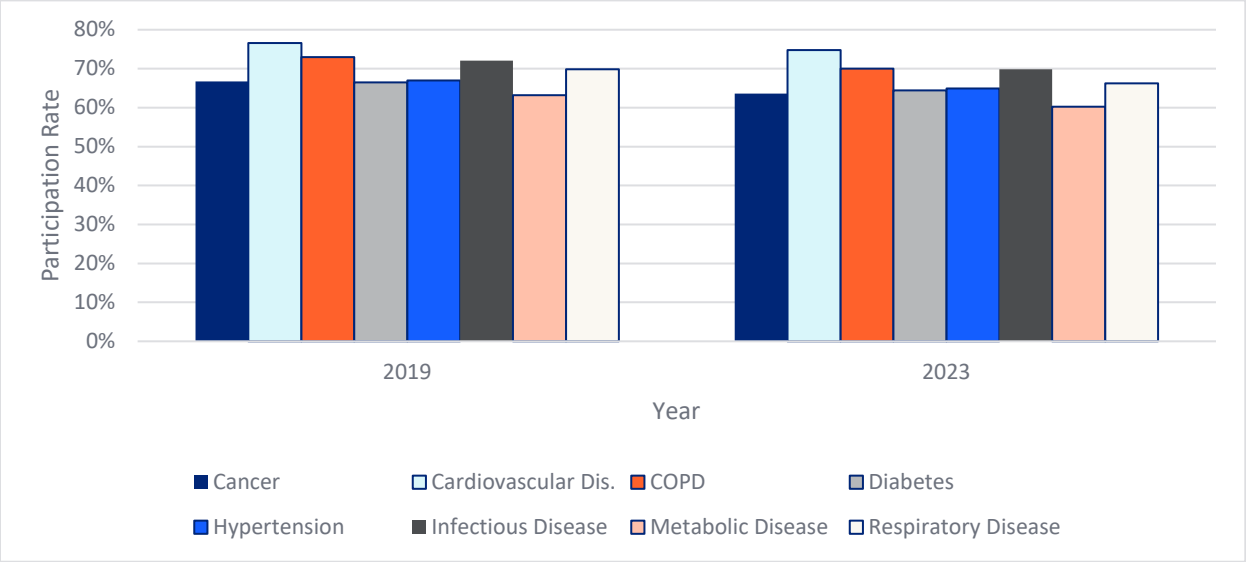
Chronic Conditions. **Exhibits V.31** and **V.32** summarize participation and utilization rates by chronic physical conditions. Beneficiaries with cardiovascular disease had the highest ED participation and utilization rates across the years (2018 - 2023), compared to beneficiaries with the other chronic conditions examined. ED participation rates were stable between 2018 and 2023 for each chronic condition group (i.e., by 1 percentage point or less), except among beneficiaries with cancer (who experienced a 1.8-percentage point decline in their ED participation rate between 2018 and 2023), beneficiaries with chronic obstructive pulmonary disease (COPD) (who experienced a 1.9-percentage point decline in their ED participation rate between 2018 and 2023), and beneficiaries with respiratory disease (who experienced a 2.2-percentage point decline in their ED participation rate between 2018 and 2023). Additionally,

beneficiaries with respiratory disease and cancer experienced a larger decline in their ED utilization rate between 2018 and 2023 (a 16.2% and 15.4% decrease respectively) compared to beneficiaries with other chronic conditions (decreases ranging from 7.2% to 12.4%). Beneficiaries with more chronic conditions had a greater likelihood of having higher ED participation and utilization rates.

Differences in participation and utilization rates between beneficiaries with and without chronic physical conditions were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time (**Attachment E, Exhibits E.4 – E.5**). Findings for participation rates indicate beneficiaries with cancer were 1.19 times more likely (OR: 1.19, 95% CI: 1.15 – 1.22) to have at least one ED service visit compared to those without cancer. Beneficiaries with cardiovascular disease were 1.87 times more likely (OR: 1.87, 95% CI: 1.83 – 1.92) to have at least one ED service visit compared to those without cardiovascular disease. Beneficiaries with COPD were 1.64 times more likely (OR: 1.64, 95% CI: 1.61 – 1.67) to have at least one ED service visit compared to those without COPD. Beneficiaries with diabetes were 1.09 times more likely (OR: 1.09, 95% CI: 1.07 – 1.10) to have at least one ED service visit compared to those without diabetes. Beneficiaries with hypertension were 1.82 times more likely (OR: 1.82, 95% CI: 1.79 – 1.84) to have at least one ED service visit compared to those without hypertension. Beneficiaries with infectious disease were 2.18 times more likely (OR: 2.18, 95% CI: 2.16 – 2.21) to have at least one ED service visit compared to those without infectious disease. Beneficiaries with metabolic disease were 1.11 times more likely (OR: 1.11, 95% CI: 1.10 – 1.13) to have at least one ED service visit compared to those without metabolic disease. SMI beneficiaries with respiratory diseases were more than twice as likely (OR: 2.06, 95% CI: 2.04-2.08) to have at least one ED visit, compared to those without a respiratory disease.

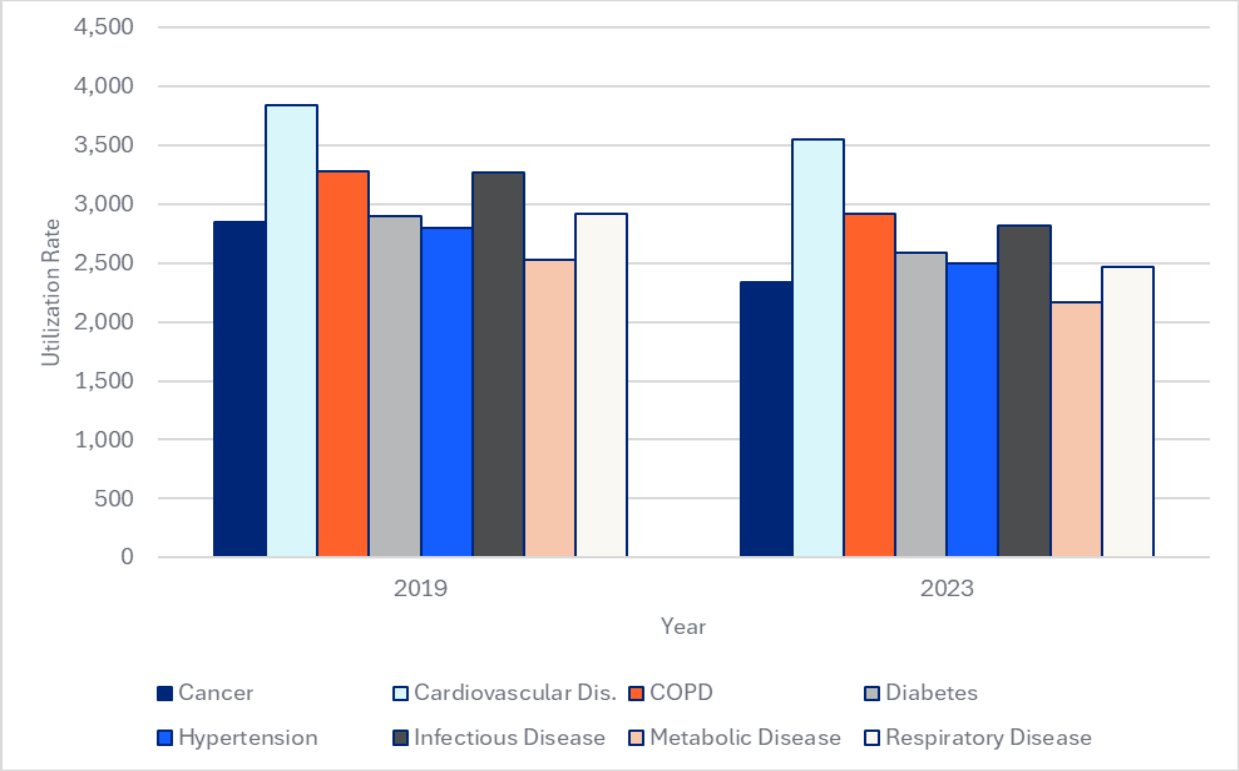
Findings for utilization rates indicate that ED utilization rates among beneficiaries with cancer were 1.13 higher (IRR: 1.13, 95% CI: 1.10 – 1.15) compared to those without cancer. Beneficiaries with cardiovascular disease had ED utilization rates 1.54 times higher (IRR: 1.54, 95% CI: 1.52 – 1.56) compared to those without cardiovascular disease. Beneficiaries with COPD had ED utilization rates 1.37 times higher (IRR: 1.37, 95% CI: 1.36 – 1.39) compared to those without COPD. Beneficiaries with diabetes had ED utilization rates 1.07 times higher (IRR: 1.07, 95% CI: 1.06 – 1.08) compared to those without diabetes. Beneficiaries with hypertension had ED utilization rates 1.61 times higher (IRR: 1.61, 95% CI: 1.59 – 1.62) compared to those without hypertension. Beneficiaries with infectious disease had ED utilization rates 1.87 times higher (IRR: 1.87, 95% CI: 1.86-1.88) compared to those without infectious disease. Beneficiaries with metabolic disease had ED utilization rates 1.17 times higher (IRR: 1.17, 95% CI: 1.16 – 1.18) compared to those without metabolic disease. Beneficiaries with respiratory disease had ED utilization rates 1.80 times higher (IRR: 1.80, 95% CI: 1.79-1.81) compared to those without the condition.

Exhibit V.31: ED Participation Rate by Prevalent Chronic Condition (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit V.32: ED Utilization Rate by Prevalent Chronic Condition (Analytic Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Average Length of Stay

As stated previously, ED LOS is typically calculated using data from a patient's clinical record. Given that data sources for the evaluation relied on claims/encounter data, which does not contain information specific to time spent in an ED, analyses were restricted to ED utilization only.

C.3. How do SMI demonstration activities contribute to reductions in utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings (Subsidiary RQ 1.2)?

ED Utilization

Consistent with findings from the 2018-2020 Summative Evaluation Report and the 2023 MPA[9] Report, state officials, MCE representatives, and providers described broad changes in utilization of health care services during the PHE, which likely confounded the impact of the waiver on ED utilization and LOS for Medicaid beneficiaries with SMI. Findings from 2020 interviews indicated that individuals seeking behavioral health care in the ED decreased from March – May and increased dramatically in June 2020, noting historically high levels of utilization for behavioral health related incidents (e.g., suicide; overdose) during the summer. MCE representatives and providers interviewed in 2024 described inconsistent ED utilization trends between 2021 and 2023. For example, four MCEs indicated that ED utilization increased in 2021 with mixed findings in 2022 (e.g., two MCEs reported continued increase in ED utilization while three MCEs noted declines) and 2023 (e.g., two MCEs reported that ED utilization stabilized as the PHE ended, two MCEs indicated continued increases, and one MCE indicated a decline). Three providers noted that they tracked ED utilization.[60] Of these providers, two indicated that ED utilization declined in 2023 while one provider noted that ED utilization remained the same in 2023. Additionally, two providers asserted that crisis stabilization services are reducing ED utilization by diverting care. For example, one provider described the Stride Diversion Center and indicated that Stride helped one county reduce ED admissions by 80%. This provider also noted that Anthem data for their patients who used Stride between 2021 and 2023 revealed a 30% reduction in ED visits. The provider asserted that Stride's success is likely due to their ability to deescalate crises, coordinate care, and provide support resources (e.g., transportation) to beneficiaries. Although state officials and advocacy organizations did not directly comment on ED utilization rates, one state official noted that telehealth options diverted individuals from the ED while more robust staffing improved hospital's ability to serve individuals with behavioral health conditions. Advocacy organizations noted several policies (e.g., Senate Enrolled Act 1006 and Senate Enrolled Act 1) that focused on strategies to reduce ED utilization including redefining how MH systems respond to crisis, diverting individuals from the ED to treatment, and reducing assessment time frames to accelerate care coordination.

Average Length of Stay

Consistent with findings from the 2018-2020 Summative Evaluation Report and the 2023 MPA, state officials, MCE representatives, and providers highlighted various emergency authorizations which were implemented to increase access to care by streamlining authorization and approval and decreasing wait times prior to admission. Interviewees mentioned that these changes, particularly the API virtual approval and automatic 7-day authorization, temporarily decreased LOS in ED for many patients during 2020 as they were more quickly admitted.

Although state officials indicated that they had not yet developed a report to monitor the ALOS for all Medicaid programs including ED, they stated that they internally review ALOS for all IMDs that receive federal match and report this information in quarterly SMI waiver

[60] Providers noted that tracking ED utilization and LOS required the ability to access hospital data. The majority of the providers interviewed did not have that capability.

demonstration monitoring reports. Findings from the 2023 MPA indicate that the ALOS for beneficiaries with SMI at an IMD receiving FFP only (monitoring metric #19b) decreased from 7.9 days to 7.4 days while ALOS for stays at an IMD (considering all IMD irrespective of receipt of FFP) decreased from 10.1 to 9 (monitoring metric #19a) during the demonstration period (**Exhibit IV.18**). The majority beneficiaries (99%) with an inpatient stay at an IMD had stays of less than 60 days,[61] with an ALOS of 7.3 days in 2022. In 2023, the state released an updated version of the ALOS report for inclusion in the MCE quarterly reports to more accurately collect data specified by the STCs. The majority of providers and advocacy organizations did not comment on ED ALOS. One provider noted that ED LOS peaked in the spring of 2023 with an average of 300 - 315 minutes and began to decline in October of 2023 (average 248 minutes). This provider indicated that ED LOS continued to improve through the end of 2023. Another provider noted that peer resources focused on care coordination (implemented in the ED during 2022) have contributed to reducing time spent in the ED.

Availability and Access to Community-Based Treatment Providers and Crisis Services

Provider Capacity. Consistent with findings from the 2018-2020 Summative Evaluation Report and the MPA, interviewees in 2024 indicated that the PHE strained overall provider capacity in the ED and across the care continuum. One state official noted that reimbursement, high patient loads, and staff turnover are ongoing challenges for maintaining the state's behavioral health workforce. To increase behavioral health provider capacity the state will provide cross-state licensure options during 2024.[62] Findings associated with availability and access to community-based treatment providers are also delineated in **Section V.F.**

Crisis Stabilization Services. Consistent with findings from the 2018-2020 Summative Evaluation Report and the MPA, Interviewees highlighted state strategies and successes for increasing availability and access to crisis stabilization services that divert admissions from EDs and inpatient psychiatric hospitals. Findings associated with crisis stabilization successes and strategies are delineated in **Section V.E.**

Care Transitions

High Utilizers of ED Services. MCEs are required to identify high utilizers of ED services and ensure beneficiaries are coordinated and participating in the appropriate disease management or care management services. Consistent with the 2018-2020 Summative Evaluation Report and the MPA, MCE representatives interviewed in 2024 described efforts to identify high utilizers of ED services and connect them with appropriate disease management or care management services. Strategies include:

- Conducted "diversion assessments" with high ED utilizers.
- Coordinated regular provider meetings to review high utilizers of ED services, assess follow up care after an ED visit, and identify strategies which leverage MCEs to reduce ED utilization.

[61] Monitoring report data specifications for metric #19 defines a short term stay as 60-days.

[62] Please note that this applies to MH counselors due to the compact licensure agreement. For other behavioral health professionals (OBHP), compact licensure agreements have yet to be approved.

- Utilized peers to engage high ED utilizers and support them in following their treatment plan.
- Identified and conducted outreach to high ED utilizers and providing education on ED alternatives (e.g., urgent care, primary care).
- Implemented a value-based agreement (i.e., structured incentives for meeting performance goals) with providers to encourage reductions in ED utilization.

Providers also noted the importance of identifying high utilizers of ED services and emphasized continued collaboration with the MCEs and access to real-time data as opportunities for reducing ED utilization.

C.4. Findings and Recommendations

This section provides a summary of the findings by short- and long-term outcomes identified in the Goal 1 logic model. Summaries integrate quantitative and qualitative findings (when appropriate) to provide evidence in support of the hypothesis. Recommendations for additional actions or data are also listed.

Hypothesis
The SMI demonstration will result in reductions in utilization LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment.

ED Utilization

Quantitative findings illustrate overall declines in all-cause ED participation and utilization rates between 2018 and 2023 for the SMI beneficiary population and select population subgroups examined. Regression models controlling for beneficiary characteristics indicate that that beneficiaries' all-cause ED utilization rates were significantly lower in the waiver extension period (2021-2023) relative to the pre-demonstration period (2018 - 2023), and there was a statistically significant decline in beneficiaries' ED utilization rates over time. In addition, regression model findings indicate that there was also statistically significant decline in SMI roster beneficiaries' ED participation rates over time. Additionally, findings also demonstrate declines in MH-related and SMI-related ED participation and utilization rates over time.

Consistent with findings from the 2018-2020 Summative Evaluation Report and the 2023 MPA, state officials, MCE representatives, and providers described broad changes in utilization of health care services during the PHE which likely confounded the impact of the waiver on ED utilization for Medicaid beneficiaries with SMI. Findings from 2020 interviews indicated that individuals seeking behavioral health care in the ED decreased from March – May and increased dramatically in June 2020, noting historically high levels of utilization for behavioral health related incidents during the summer. Monthly all-cause ED participation and utilization data demonstrates a similar trend. MCE representatives and providers interviewed in 2024 described inconsistent ED utilization trends between 2021 and 2023.

Declines in ED participation and utilization may be due to several direct or indirect factors related to the waiver. For example, state investments in crisis stabilization services and increases in community-based services (including telehealth) were implemented during the waiver extension to better service Indiana residents in crisis and divert them from the ED. Two providers interviewed in 2024 asserted that crisis stabilization services initiated between 2021 and 2023 contributed to reductions in ED utilization. Additionally, policies enacted during the waiver extension, such as the Senate Enrolled Act 1006 and Senate Enrolled Act 1 focused on

strategies to reduce both ED utilization and assessment time frames to accelerate care coordination. Although these trends are promising, findings at this time cannot be corroborated to suggest causal associations or direct relationships. For example, crisis stabilization service data were not available to assess if individuals in crisis were using these services at increased rates or if they used these services rather than visiting the ED. Additionally, the COVID-19 PHE may also have contributed to ED participation and utilization rate declines. For example, social distancing and health care resource prioritization required in response to the PHE reduced ED capacity and limited the number of individuals served. Consequently, any observed changes should be interpreted with caution.

Average Length of Stay

Since quantitative analyses relied on claims/encounter data, which does not contain information specific to time spent in an ED, ALOS for ED was not calculated. State officials indicated that they had not yet developed a report to monitor ED ALOS for Medicaid programs. The majority of providers and advocacy organizations did not comment on ED ALOS. Given the paucity of available ALOS data for ED, changes in ALOS for this service cannot be evaluated.

Availability and Access to Community-Based Treatment Providers and Crisis Services

Quantitative findings specific to availability and access to community-based treatment providers and crisis services are included in Goals 3 and 4. Consistent with findings from the 2018-2020 Summative Evaluation Report and the MPA, interviewees in 2024 indicated that the PHE strained overall provider capacity in the ED and across the care continuum. Interviewees highlighted state strategies and successes for increasing availability and access to crisis stabilization services that divert admissions from EDs and inpatient psychiatric hospitals. Findings associated with crisis stabilization successes and strategies are delineated in **Section V.E**.

Care Transitions

MCEs are required to identify high utilizers of ED services and ensure that beneficiary care is coordinated. Consistent with the 2018-2020 Summative Evaluation Report and the MPA, MCE representatives interviewed in 2024 described efforts to identify high utilizers of ED services and connect them with appropriate disease management or care management services. Providers also noted the importance of identifying high utilizers of ED services and emphasized continued collaboration with the MCEs and access to real-time data as opportunities for reducing ED utilization.

Recommendations

- Continue to monitor ED participation and utilization during years following the COVID-19 PHE.
- Triangulate ED service utilization data with other data sources (e.g., crisis stabilization services) and implementation activities to better understand and interpret trends.
- Track ED ALOS. Require data reporting by MCEs and providers as needed.
- Identify strategies to increase workforce capacity (e.g., investments in care coordinators) in the ED for beneficiaries with SMI.

- Continue to build on successful strategies for identifying high utilizers and connecting them with appropriate disease management or care management services.

D. Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings.

As stated in **Section II.B**, individuals with SMI may be vulnerable to unplanned hospital readmission.[63] State actions designed to connect patients discharged from acute care hospitals with community-based referrals or access and availability to crisis services were implemented during the waiver and waiver extension to reduce readmission rates. Goal 2 for the SMI demonstration calculates readmission rates following mental health-related acute inpatient and observational stays for Medicaid beneficiaries with SMI. These stays include admissions to both IMDs and non-IMD acute care hospitals, critical access hospitals, and residential settings. Preventable readmissions are typically defined as a readmission (return hospitalization) to an acute care hospital following a prior acute care admission within a specified time interval for a reason that is clinically related to the initial hospitalization. Given that data sources for the evaluation relied on claims/encounter data, which does not contain information specific to the clinical reason for hospitalization and whether it was related to the initial hospitalization, analyses were restricted to any (all-cause) readmission. Qualitative data specific to inpatient readmission was incorporated to contextualize quantitative findings and assess the impact of short- and long-term outcomes associated with Goal 2 (**Section II, Exhibit II.5**).

As stated in **Section I.G.**, the PHE (which began in March 2020) caused substantial changes to state policies, service utilization, and provider availability and will have short- and long-term impacts on Indiana's health care. Social distancing, prioritization of health care resources, and workforce capacity have likely affected readmission rates by impacting factors, such as LOS, access and availability of community-based care, and care coordination. Given that both the waiver (2020) and the waiver extension (2021 - 2023) coincided with the COVID-19 PHE, findings during this time-period likely reflect both the impact of COVID-19 related policy changes and activities as well as demonstration impacts. Consequently, any observed changes should be interpreted with caution as findings may be confounded by the impact of the PHE.

Exhibit V.33 describes the hypothesis, RQs, outcome measures, data sources, and analytic approach used for the evaluation of Goal 2.

[63] Albrecht, J. S., Hirshon, J. M., Goldberg, R., Langenberg, P., Day, H. R., Morgan, D. J., Comer, A. C., Harris, A. D., & Furuno, J. P. (2012, April 26). *Serious mental illness and acute hospital readmission in diabetic patients*. American journal of medical quality: the official journal of the American College of Medical Quality. Retrieved April 22, 2022, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3677605/

Exhibit V.33: Goal 2 Research Questions, Outcome Measures, Data Sources, Analytic Approach, and Evaluation Time-Periods

Hypothesis: The SMI demonstration will result in reductions in preventable readmissions to acute care hospitals and residential settings.				
Research Questions	**Outcome Measure(s)**	**Data Sources**	**Analytic Approach**	**Evaluation Time-Period(s)**
Primary RQ 2: Does the SMI demonstration result in reductions in preventable readmissions to acute care hospitals and residential settings (including, short-term inpatient and residential admissions to both IMDs and non-IMD acute-care hospitals, critical access hospitals, and residential settings)?	**Rate of 30-day, all-cause unplanned readmissions** following a MH-related acute inpatient or observational stay among the SMI beneficiary roster population	• Claims/encounter data (2018-2023) • Enrollment data (2018-2023)	• Descriptive quantitative analysis of trends over time during the demonstration • Interrupted time series analysis	• **Intervention Period:** Waiver extension (2021-2023) vs. **Reference Period:** Pre-demonstration (2018-2019) • *Descriptive and ITS sensitivity analyses include Waiver (2020) in intervention period.*
Subsidiary RQ 2.1: How do the SMI demonstration effects on reducing preventable readmissions to acute care hospitals and residential settings vary by geographic area or beneficiary characteristics?	**Rate of 30-day, all-cause unplanned readmissions** following a MH-related acute inpatient or observational stay among the SMI beneficiary roster population	• Claims/encounter data (2018-2023) • Enrollment data (2018-2023)	• Descriptive quantitative analysis of trends over time during the demonstration • Interrupted time series analysis	• **Intervention Period:** Waiver extension (2021-2023) vs. **Reference Period:** Pre-demonstration (2018-2019) • *Descriptive and ITS sensitivity analyses include Waiver (2020) in intervention period.*

Hypothesis: The SMI demonstration will result in reductions in preventable readmissions to acute care hospitals and residential settings.				
Research Questions	**Outcome Measure(s)**	**Data Sources**	**Analytic Approach**	**Evaluation Time-Period(s)**
Subsidiary RQ 2.2: How do demonstration activities contribute to reductions in preventable readmissions to acute care hospitals and residential settings?	• Demonstration activities or their components or characteristics that stakeholders identify as most effective in reducing preventable readmissions to acute care hospitals and residential settings • Obstacles that stakeholders identify as hindering the effectiveness of the demonstration in reducing preventable readmissions to acute care hospitals and residential settings	KIIs with beneficiaries, state officials, MCEs, providers, and advocacy organizations	Qualitative analysis to identify themes associated with the effectiveness of demonstration activities for reducing preventable readmissions to acute care hospitals and residential settings	• **KIIs conducted in:** 2020, 2023, and 2024; discussed topics since the Waiver implementation (2020) and through the first half of the Waiver extension (2021-2023)

Quantitative Analysis Approach

Analytic Population. Changes in all-cause, unplanned 30-day readmission rates before and after the waiver extension were calculated for the SMI beneficiary roster population.[64]

Metrics. Claims/encounter data was used to identify and compute the all-cause, unplanned 30-day readmissions following MH-related acute inpatient and observation stays for beneficiaries with SMI. The National Committee for Quality Assurance (NCQA) Plan All-Cause Readmission measure was adapted to compute the readmission rate.[65] The readmission rate was calculated as:

$$\frac{\#\text{ of "}D\text{" with all-cause acute inpatient or observation stay (readmission) within 30 days of discharge}}{\#\text{ of (eligible) acute inpatient or observation stays related to MH (D)}}$$

- **Identifying the denominator:** Stays were combined into a single stay if they were identified as a direct transfer (i.e., if one stay was followed by another stay on the same day or day after discharge, the stays were combined into a single stay). Acute inpatient or observational stays were included as "eligible" stays for the measure denominator (D) if:[66]

[64] The analytic population excludes those who received hospice services at any time during the measurement year.

[65] Based on findings from the MPA as well as Interim Report Goal 3 and 4, few facilities in Indiana are identified as an inpatient psychiatric facility (IPF). Given that beneficiaries can receive acute care from facilities that are not identified as an IPF, the measure captures readmissions for all acute care and observational stays across a broader range of facilities. Consequently, the adapted NCQA measure was used instead of the 30-day All-Cause Unplanned Readmission Following Psychiatric Hospitalization in an IPF measure (SMI Evaluation Metric #4, based on NQF measure #2860).

[66] The NCQA measure also excludes "outlier beneficiaries" (i.e., those with four or more inpatient stays in the same measurement year). Given that this definition of "outlier beneficiaries" was derived for the broader NCQA measure (i.e., for all inpatient stays), rather than for readmission following MH-related stays specifically, this

- The acute inpatient or observation stay discharge was between January 1 and December 1 of the measurement year,
- The beneficiary had a LOS of at least one day (i.e., admission date was not the same as the discharge date),
- The beneficiary had waiver-eligible Medicaid coverage at the time of the discharge and during the 30 days after the discharge date,
- The beneficiary did not have a recorded date of death during the stay,
- The stay claim/encounter was not related to pregnancy or perinatal care, and
- The stay claim/encounter had a primary or secondary diagnosis related to MH.

MH-related diagnoses were identified using a combination of value sets, including the HEDIS VSD's MH Diagnosis and Intentional Self-Harm value sets, as well as the CCSR Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis category. For additional details regarding the data processing steps used to identify the stays for the 30-day all-cause, unplanned readmission metric, see **Attachment D**.

- **Identifying the numerator:** For the numerator, all-cause inpatient readmissions within 30 days of discharge were identified using the following criteria:
  - Any acute inpatient or observational stay with an admission date between January 3[67] and December 31 of the measurement year,
  - Did not include any pregnancy or perinatal-related claims, and
  - Were not related to pre-planned inpatient stays (i.e., stays for maintenance chemotherapy, rehabilitation, organ transplants, or other potentially planned procedures).

If a readmission stay was within 30 days of more than one denominator stay, the readmission was only counted for the latest denominator stay. For more detailed technical specifications regarding the calculation of the 30-day all-cause inpatient readmission measure overall, see **Attachment D**.

Analysis. Annual 30-day all-cause readmission rates were calculated to examine trends over time for the analytic population and by key beneficiary characteristics. Beneficiary characteristics examined included: sociodemographic characteristics (i.e., gender, age, race, ethnicity, geographic location [metro/non-metro]), Medicaid coverage status indicators (i.e., Medicare/Medicaid dually eligible), and clinical history (e.g., SMI diagnosis, other chronic health conditions).

restriction was not applied for the adapted evaluation measure. To understand how readmission rates were impacted by high utilizers of inpatient services, readmission rates excluding beneficiaries with four or more denominator stays were also examined.

[67] The numerator consists of readmission stays after an initial stay. Any stays within 1 day of a discharge are considered to be "direct transfers" rather than a readmission, therefore, the numerator stays must begin on January 3rd. For example, if a beneficiary is discharged from a stay on January 1st, the earliest this individual could be "readmitted" would be January 3rd. Conversely, if a beneficiary was admitted on January 2nd, this would be considered a direct transfer of the original stay, not a readmission.

In addition to comparing trends over time using descriptive analyses, a two-stage ITS analysis was used to estimate changes in the 30-day all-cause readmission rate before and during the SMI waiver extension while adjusting for beneficiary sociodemographic (including gender, age, race, ethnicity, geographic location [metro or non-metro]),clinical history, and Medicaid enrollment characteristics. For the first stage, the probability of a beneficiary having a MH-related acute inpatient or observation stay within a given year was estimated using a logistic ITS model. For the second stage, a logistic ITS model was used to assess change in likelihood of readmissions during the waiver extension period (2021-2023) relative to pre-demonstration (2018-2019). As stated previously, the PHE caused substantial changes to Medicaid policies, service utilization, and provider availability. Social distancing and health care resource prioritization, particularly in the first year of the PHE significantly reduced the number of beds available. Consequently, regression models excluded data from 2020. Sensitivity tests were conducted to examine if exclusion of data from 2020 impacted the regression-based findings. Results for 30-day all-cause readmission rate regression analyses were similar when including 2020 data; results from the sensitivity analyses are included in **Attachment E**.

The findings are organized by research questions and relevant outcome measures identified in the logic model for the Goal (**Section II**). Based on factors including data availability, only select outcomes were identified in the CMS approved Evaluation Plan. Any outcomes that were identified in the logic model but were not included in the Evaluation Plan have been noted in the respective sections.

D.1. Does the SMI demonstration result in reductions in preventable readmissions to acute care hospitals and residential settings (including, short-term inpatient and residential admissions to both IMDs and non-IMD acute-care hospitals, critical access hospitals, and residential settings) (Primary RQ 2)?

Exhibit V.34 summarizes the count of beneficiaries who had a MH-related acute inpatient or observational stay "eligible" for inclusion in the Goal 2 readmission metric denominator (refer to inclusion/exclusion criteria described in the quantitative analysis approach for eligible stays). Although the number of beneficiaries with an eligible MH-related acute inpatient or observational stay increased over the study period, the proportion of beneficiaries on the SMI beneficiary roster having at least one MH-related stay decreased from 13.6% in 2018 to 7.0% in 2023. The decrease aligns with the observed declines in overall MH-related utilization among SMI beneficiaries (refer to **Section V.B: Population Summary**). Across years, irrespective of the number of beneficiaries who had an eligible stay, at least 75% of beneficiaries (with at least one MH-related stay) had only one stay in a year.

Exhibit V.34: Distribution of MH-Related Acute Inpatient or Observational Denominator Stays Among the SMI Beneficiary Roster Population with at Least One Eligible Inpatient Stay (2018 – 2023)

Year	Total # of Roster Benes	# of Roster Benes with (at Least 1) MH-related Stay	% of Roster with (at Least 1) MH-related Stay	Distribution of # of MH-Related Stays per Beneficiary					
				Avg. # of stays	75th Pctl	90th Pctl	95th Pctl	99th Pctl	Max.
2018	90,833	12,343	13.6%	1.4	1	2	3	5	12
2019	124,131	14,556	11.7%	1.4	1	2	3	6	19

Year	Total # of Roster Benes	# of Roster Benes with (at Least 1) MH-related Stay	% of Roster with (at Least 1) MH-related Stay	Distribution of # of MH-Related Stays per Beneficiary					
				Avg. # of stays	75th Pctl	90th Pctl	95th Pctl	99th Pctl	Max.
2020	153,217	15,752	10.3%	1.4	1	2	3	6	19
2021	191,728	17,720	9.2%	1.4	1	2	3	6	20
2022	227,466	17,619	7.7%	1.4	1	2	3	6	17
2023	263,327	18,350	7.0%	1.4	1	2	3	6	22

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Among beneficiaries who had at least one MH-related acute inpatient or observational stay, approximately 16% had a readmission within 30-days between 2018 and 2023, with little variation by year (**Exhibit V.35**). Similarly, the proportion of acute inpatient or observational stays with a readmission increased slightly over time. More specifically, the 30-day readmission rates during the waiver extension (2021 - 2023) were slightly higher (2021: 18.8%, 2022: 18.4%, 2023: 19.3%) relative to pre-demonstration (2018: 16.9%. 2019: 18.2%). Although there is a paucity of research examining 30-day all-cause readmissions among Medicaid populations, the limited research available[68] suggests that the 30-day all-cause readmission rate among Medicaid beneficiaries with SMI is 15.9%. These findings are slightly lower than those calculated for this evaluation.

In addition, 30-day all-cause readmission rates were also examined when excluding "outlier" beneficiaries (defined as beneficiaries with four or more (denominator) MH-related stays within a given year). As shown in **Attachment E, Exhibit E.20.**, the exclusion of these outliers resulted in notable decreases (i.e., ranging from 5.2 to 7.5 percentage points) in 30-day all-cause readmission rates within each year, suggesting that readmission rates may be driven, in part, by utilization among a smaller subset of beneficiaries who are high utilizers of MH-related inpatient/observational services.

Changes in readmission rates over time were also examined using an ITS regression-based approach. This model controlled for intervention period (i.e., pre-demonstration or during the waiver extension), time (year), and beneficiary characteristics including beneficiary propensity to have an acute inpatient or observation stay (**Attachment E**, **Exhibit E.22**). Although annual 30-day all-cause readmission rates were slightly higher during the demonstration, regression-based findings indicate that (adjusting for the different factors) readmission rates did not differ significantly in the first half of the waiver demonstration period (2021-2023) relative to the pre-demonstration when accounting for beneficiary characteristics.

[68] Cook, J., Burke-Miller, J., Razzano, L., Steigman, P., Jonikas, J., & Santos, A. (2021). Serious mental illness, other mental health disorders, and outpatient health care as predictors of 30-day readmissions following medical hospitalization. General Hospital Psychiatry, Volume 70 (10-17). https://doi.org/10.1016/j.genhosppsych.2021.02.004.

Exhibit V.35: 30-Day All-Cause, Unplanned Readmission Rates Following MH-Related Acute Inpatient and Observation Stays, Among SMI Beneficiaries (2018 – 2023)

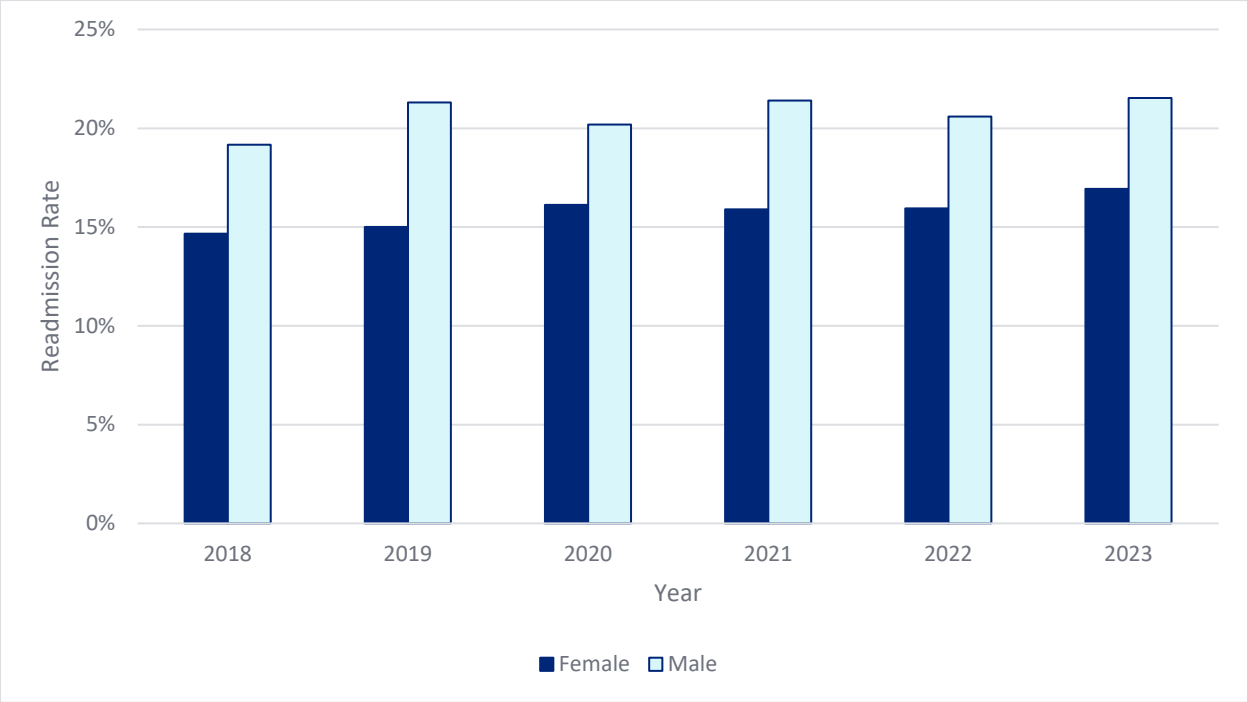
Year	# of SMI Benes with at Least 1 MH-Related Stay	# of SMI Benes with a 30-day Readmission	% of SMI Benes (with at Least 1 MH-Related Stay) with a 30-day Readmission	# of MH-Related Stays Among SMI Benes (Denom.)	# of MH-Related Stays with All-Cause 30-Day Readmission (Numer.)	30-Day All-Cause Readmission Rate
2018	12,343	1,894	15.3%	16,904	2,850	16.9%
2019	14,556	2,368	16.3%	20,503	3,733	18.2%
2020	15,752	2,534	16.1%	22,553	4,118	18.3%
2021	17,720	2,943	16.6%	25,604	4,808	18.8%
2022	17,619	2,752	15.6%	25,387	4,663	18.4%
2023	18,350	2,981	16.2%	26,388	5,091	19.3%

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

D.2. How do the SMI demonstration effects on reducing preventable readmissions to acute care hospitals and residential settings vary by geographic area or beneficiary characteristics (Subsidiary RQ 2.1)?

Gender. **Exhibit V.36** summarizes 30-day all-cause, unplanned readmission rates by gender. Overall, readmission rates remained stable over time (2018 to 2023). Compared to male beneficiaries, female beneficiaries had lower rates of readmissions (within 30 days) following acute inpatient and observational stays in each year (i.e., readmission rates ranged between 14.7% to 16.9% for females and 19.2% and 21.5% for males). Controlling for time, beneficiary characteristics, and beneficiary propensity of having a MH-related stay, findings indicate that male beneficiaries were 62% more likely than female beneficiaries to have a readmission within 30 days of discharge from a MH-related acute inpatient or observation stay (OR: 1.62, 95% CI: 1.54 – 1.71; **Attachment E, Exhibit E.22**).

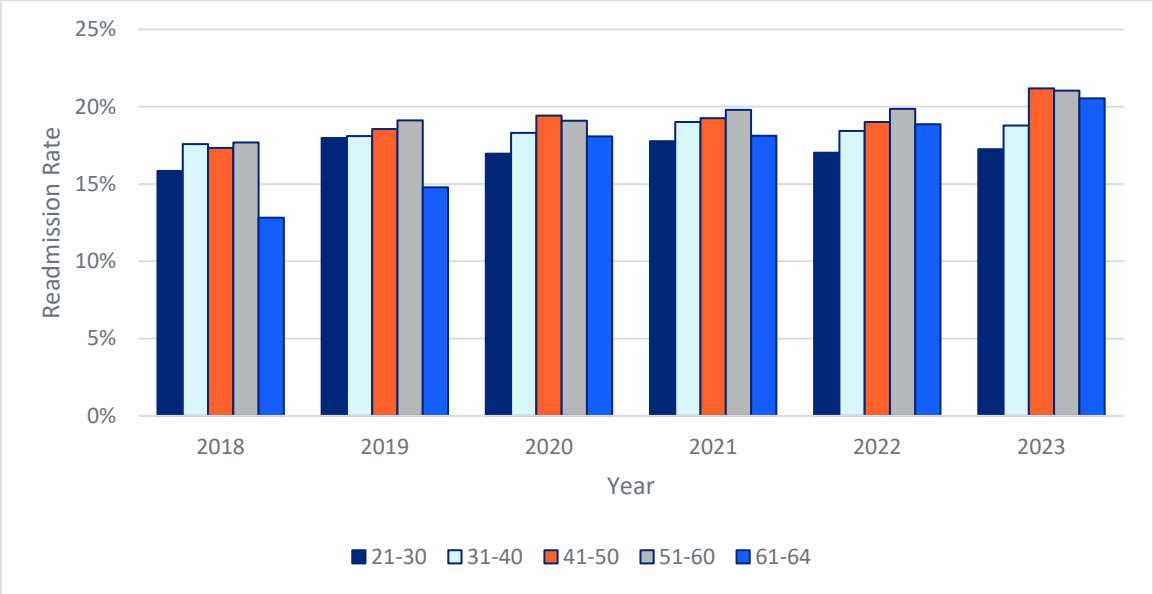
Exhibit V.36: All-Cause, Unplanned 30-day Readmission Rates by Gender (Roster Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Age. Trends in readmission rates by age group were similar to the overall trend (i.e., slight increases in the readmission rate by year), although the rates varied across each age group (**Exhibit V.37**). Between 2018 and 2023, readmission rates increased by approximately 1 percentage point for beneficiaries in the 21 - 30 and 31 - 40 age groups, by 3 to 4 percentage points among beneficiaries in the 41 - 50 and 51 - 60 age groups, and by approximately 8 percentage points among beneficiaries aged 61 to 64. When adjusting for other beneficiary characteristics (e.g., chronic conditions) across the study period, beneficiaries ages 41 - 64 were significantly less likely to have an all-cause readmission within 30 days compared to beneficiaries in the 21 to 30 age group (**Attachment E**, **Exhibit E.22**)

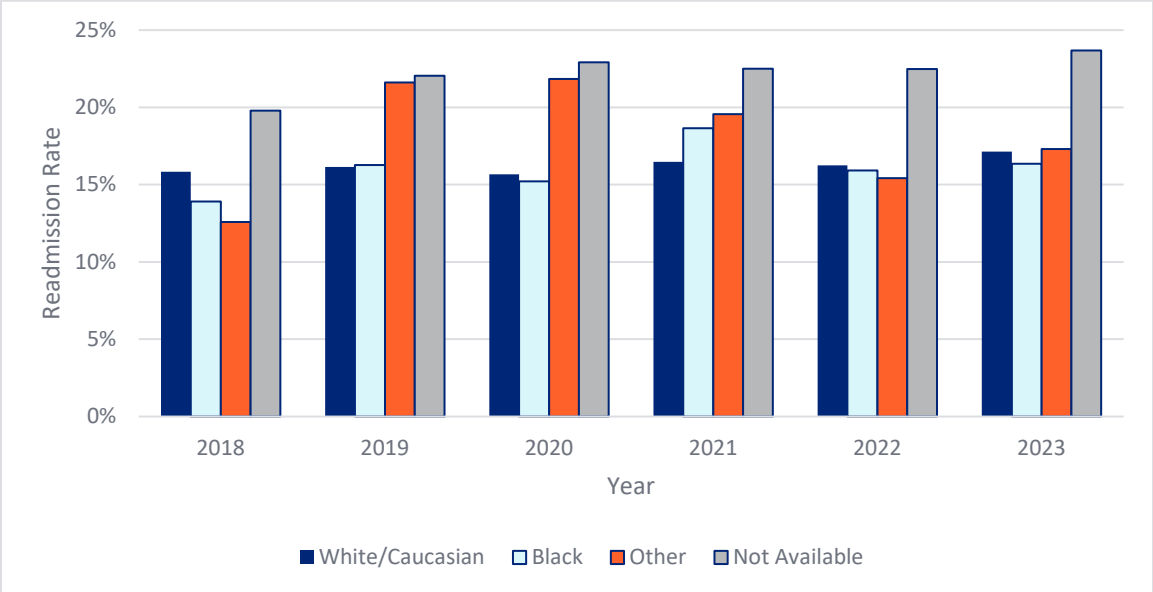
Exhibit V.37: All-Cause, Unplanned 30-day Readmission Rates by Age (Roster Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Race. **Exhibit V.38** summarizes 30-day all-cause, unplanned readmission rates by race. Readmission rates for White/Caucasian and Black beneficiaries remained stable across time (2018 - 2023). Controlling for time, beneficiary characteristics, and beneficiary propensity of having a MH-related stay, findings indicated that readmission rates did not differ significantly between White/Caucasian and black beneficiaries; however, beneficiaries with Other/unknown race were 19% more likely to have a readmission (OR: 1.19, 95% CI: 1.15 – 1.24) compared to White/Caucasian beneficiaries (**Attachment E, Exhibit E.22**).

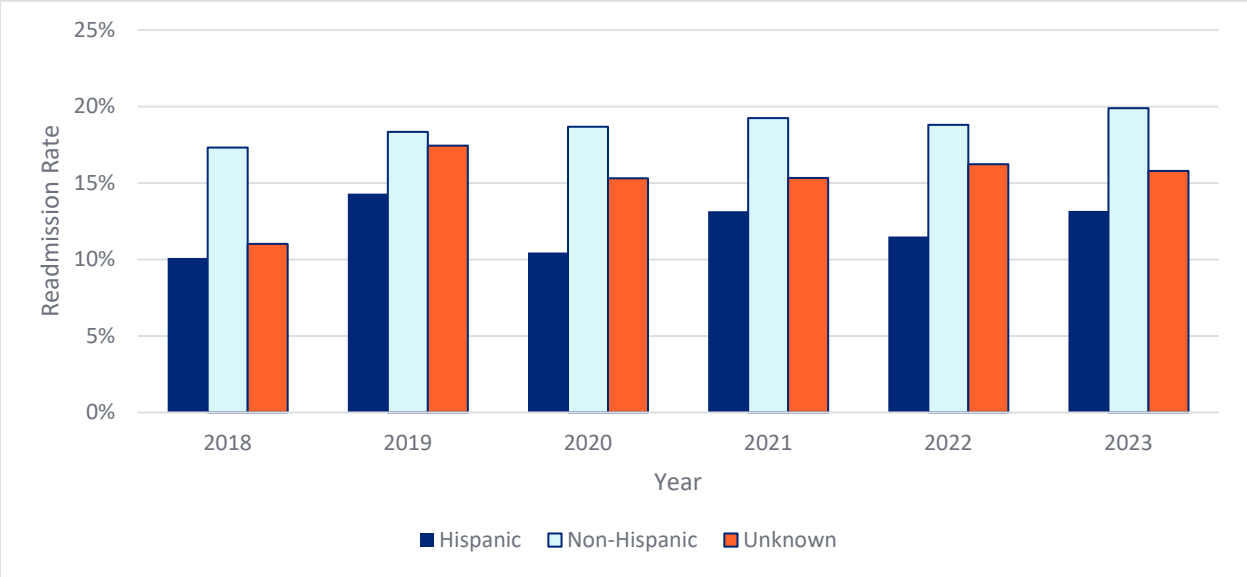
Exhibit V.38: All-Cause, Unplanned 30-day Readmission Rates by Race (Roster Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Ethnicity. All-cause, unplanned 30-day readmission rates also remained stable among both Hispanic and non-Hispanic beneficiaries between 2018 and 2023 but were somewhat higher among non-Hispanic beneficiaries in each year (**Exhibit V.39**). Controlling for time, beneficiary characteristics, and beneficiary propensity of having a MH-related stay, findings indicated that Hispanic beneficiaries were significantly less likely to have a readmission (OR: 0.65, 95% CI: 0.58 – 0.72) compared to non-Hispanic beneficiaries/beneficiaries with unknown ethnicity (**Attachment E, Exhibit E.22**).

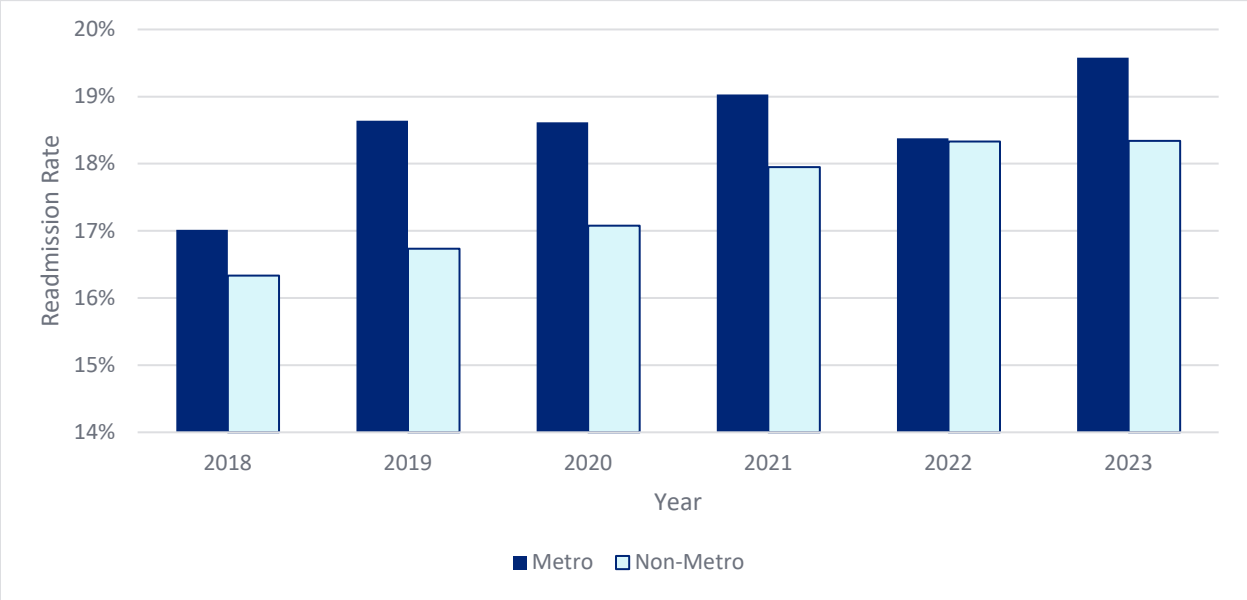
Exhibit V.39: All-Cause, Unplanned 30-day Readmission Rates by Ethnicity (Roster Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Geographic Location. **Exhibit V.40** summarizes 30-day all-cause, unplanned readmission rates by geographic location. Beneficiaries in non-metro areas had slightly lower rates of readmission compared to those living in metro areas in most years (i.e., except for 2022). Controlling for time, beneficiary characteristics, and beneficiary propensity of having a MH-related acute inpatient or observation stay, regression model findings indicated that beneficiaries living in non-metro areas were 6% less likely to have a readmission within 30 days of a discharge from a MH-related acute inpatient or observation stay compared to beneficiaries living in metro areas (OR: 0.94, 95% CI: 0.91 – 0.98; **Attachment E, Exhibit E.22**).

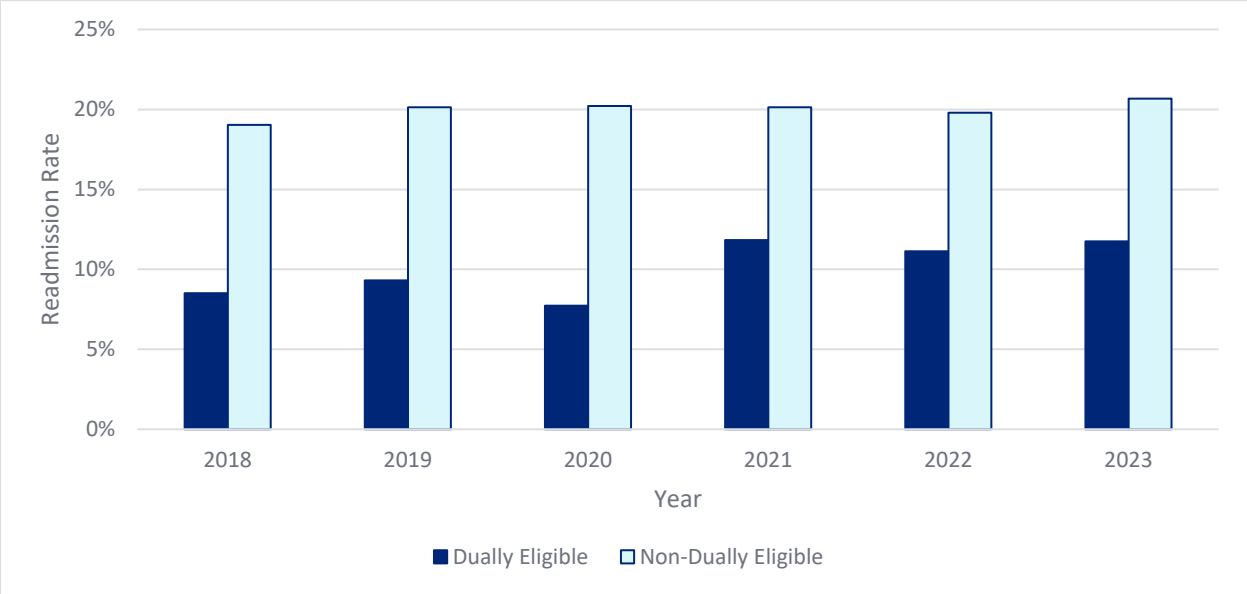
Exhibit V.40: All-Cause, Unplanned 30-day Readmission Rates by Geographic Location (Roster Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Dually Eligible. **Exhibit V.41** summarizes 30-day all-cause, unplanned readmission rates by dual eligibility (for Medicare and Medicaid) status. Readmission rates remained stable for beneficiaries who were not dually eligible. However, readmission rates increased slightly during the waiver extension among dually eligible beneficiaries. Dually eligible beneficiaries had lower readmission rates compared to those without dual eligibility over time – although the rates were higher during the waiver period relative to during pre-demonstration. The descriptive findings were also supported by findings from the ITS regression model, which indicated dually eligible beneficiaries were 63% less likely to have readmission compared to non-dually eligible beneficiaries (OR: 0.37, 95% CI: 0.35 – 0.39; **Attachment E, Exhibit E.22**). Lower readmission rates were expected for dually eligible beneficiaries, given that Medicare is typically the primary payer for similar covered services and these analyses only used Medicaid paid claims/encounters.

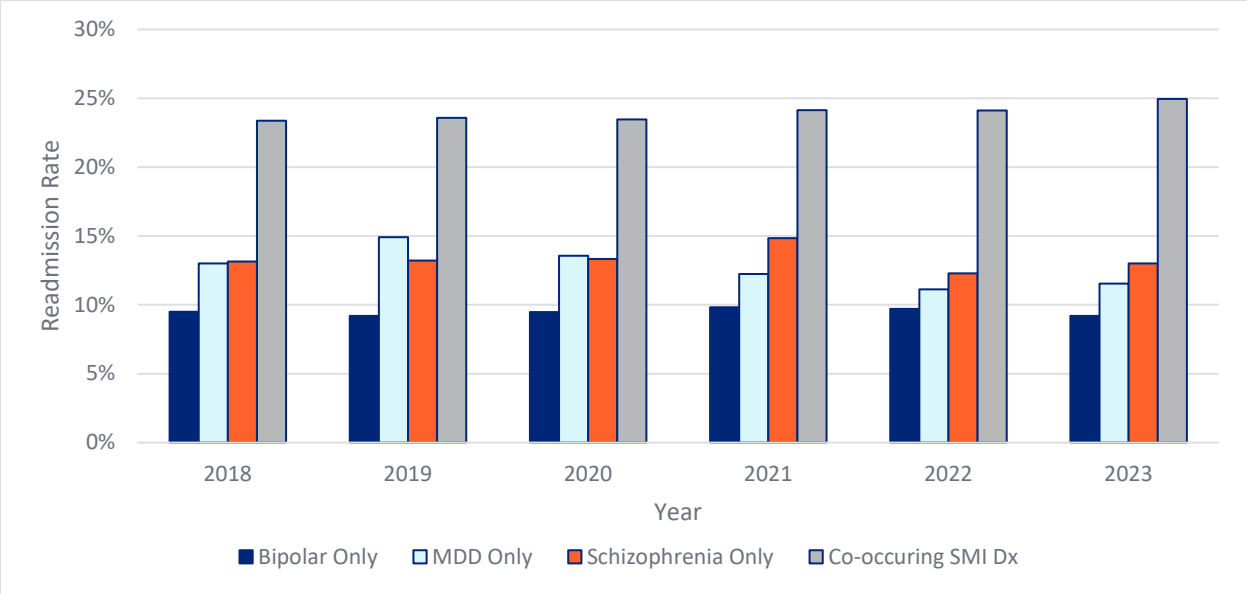
Exhibit V.41: All-Cause, Unplanned 30-day Readmission Rates by Dual Eligibility (Roster Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

SMI Diagnosis. **Exhibit V.42** summarizes 30-day all-cause, unplanned readmission rates by type of SMI diagnoses. Beneficiaries with co-occurring SMI diagnoses (e.g., MDD and schizophrenia, bipolar and schizophrenia, etc.) had the highest rate of readmission (more than 23%) while beneficiaries with bipolar disorder had the lowest rate (averaging around 10%) across all years. Readmission rates within each group were stable between 2018 and 2023. Compared to beneficiaries with MDD only, beneficiaries with bipolar disorder only were significantly less likely to have a readmission (OR: 0.83, 95% CI: 0.77 – 0.89), while beneficiaries with schizophrenia only or co-occurring SMI diagnoses were significantly more likely (schizophrenia, OR: 1.37, 95% CI: 1.27 – 1.47; co-occurring, OR: 2.27, 95% CI: 2.06 – 2.50) to have a readmission when controlling for time, other beneficiary characteristics, and beneficiary propensity for having a MH-related acute inpatient or observation stay (**Attachment E, Exhibit E.22**).

Exhibit V.42: All-Cause, Unplanned 30-day Readmission Rates by SMI Diagnosis (Roster Population)



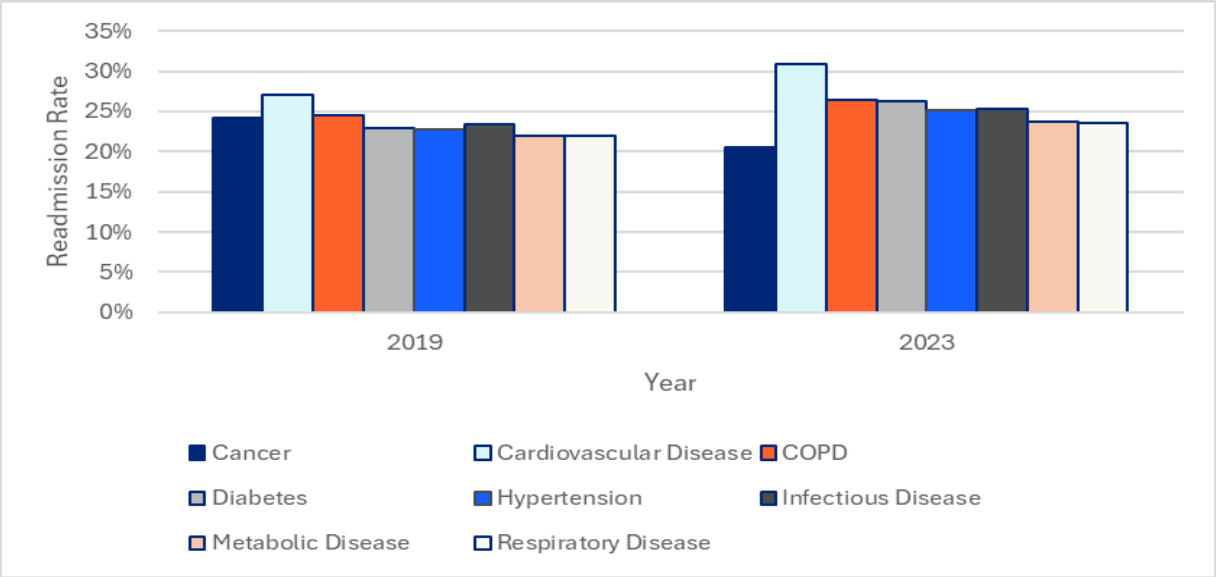
Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Chronic Conditions. **Exhibit V.43** summarizes readmission rates by beneficiaries with chronic physical conditions. Readmission rates differed among beneficiaries with each type of chronic condition over time (2018 - 2023). For example, the 30-day all-cause, unplanned readmission rate generally increased over time for beneficiaries with cardiovascular disease, COPD diabetes, and hypertension. In contrast, the readmission rate among beneficiaries with cancer varied across time (e.g., with a notable increase between 2018 and 2019 and decrease between 2021 and 2022).

Beneficiaries with cardiovascular disease had the highest readmission rates among all chronic condition groups. Beneficiaries with diabetes and those with COPD also were among those with the highest readmission rates in most years.

Beneficiaries with each type of chronic condition had higher rates of 30-day all-cause, unplanned readmission compared to those without the respective condition within each year. Moreover, when controlling for time and other beneficiary characteristics in the ITS regression model, beneficiaries with each chronic condition (cardiovascular disease, COPD, diabetes, hypertension, infectious disease, metabolic disease, and respiratory disease) were significantly more likely to have an all-cause readmission within 30 days of discharge from an acute inpatient or observation stay compared to those without the respective conditions, except for those with cancer (who did not differ significantly from those without cancer in terms of their likelihood of readmission) (**Attachment E, Exhibit E.22**).

Exhibit V.43: All-Cause, Unplanned 30-day Readmission Rates by Chronic Condition for 2019, 2023 (Roster Population)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

D.3. How do demonstration activities contribute to reductions in preventable readmissions to acute-care hospitals and residential settings (Subsidiary RQ 2.2)?

Availability and Access to Community-Based Treatment Providers and Crisis Services

Telehealth. Effective March 1, 2020 and through the duration of Indiana's PHE, an executive order authorized the OMPP to expand the use of telehealth to include the following allowances: 1) voice-only modalities (e.g., telephones) could be utilized for telehealth purposes, 2) telehealth services were no longer limited to procedure codes on IHCP Telemedicine Services Code Set, and 3) the set of providers who could use telehealth was no longer limited by licensure restrictions defined under the Indiana Professional Licensing Agency (IPLA) section of Indiana Code.

Unsurprisingly, these changes in policy led to an increase in the number of Medicaid claims billed for telehealth services during the first year of the PHE. In 2019, there were only 63,844 paid claims for telehealth services, versus 2,673,241 claims in 2020, an increase of over 4000%.[69] However, as access for in-person appointments increased, telehealth service utilization began to decline. For example, in 2021, there were 2,023,959 paid claims for telehealth services, versus 1,249,839 claims in 2022 (a decrease of 38.2% compared to 2021) and 1,195,543 claims in 2023 (a decrease of 4.3% compared to 2022). The majority of these telehealth claims (approximately 60.6% for all three years [2021 - 2023]) were submitted by behavioral health providers. Group psychotherapy, psychotherapy (1 hour), psychotherapy (30 minutes), and

[69] Baywol, Lindsay. Telehealth & the COVID 19 Public Health Emergency: Update Claim Utilization and Results. [PowerPoint Presentation]. 2021 Medicaid Advisory Committee Meeting. February 26, 2021. https://www.in.gov/fssa/ompp/files/MAC-Telehealth-presentation-Feb-2021.pdf

psychotherapy (45 minutes) were the most frequent behavioral health care service used in each year of the waiver extension (2021 – 2023).

Findings from the 2018-2020 Summative Evaluation Report and MPA[9] Report acknowledged that telehealth is a good alternative for SMI beneficiaries who have difficulties accessing transportation or live in areas with high wait times for MH providers. Although interviewees described limitations associated with expanded telehealth services (e.g., not all beneficiaries are able to effectively utilize remote services due to limited mental capacity and technology issues [e.g., limited bandwidth, access to the Internet]), all noted that the modality increased access to care. State officials (n=3), MCE representatives (n=3), and advocacy organizations (n=3) in 2024 reaffirmed telehealth's impact on care access, (particularly for behavioral health) and noted the innovation as a contributing factor for reducing overall readmission rates. Despite these findings, MCEs (n=3) noted discrepant readmission rate patterns, with two MCEs indicating inconsistent trends and one MCE reporting readmission rate declines. MCEs identified several challenges for reducing readmission rates including high no-show rates for follow-up care, insufficient coordination between MCEs and inpatient facilities, and inaccurate individual contact information.

Average Length of Stay. Findings from the MPA indicated that the state collects LOS data from MCEs and shares that information with DMHA. MCEs interviewed in 2023 varied in their perceptions of the COVID impact on LOS. Of the three MCEs that reported on COVID impact, one indicated an increase in LOS, one indicated a decrease in LOS, and one stated LOS remained the same. Inpatient providers (n=4) interviewed in 2024 also tracked LOS (range reported from 3.5 days to 4 days). One inpatient provider indicated that LOS remained the same while another indicated that LOS declined.

MCE representatives interviewed during 2024 continued to describe inconsistent trends in ALOS. For example, two MCEs reported declines in ALOS during 2021 - 2022, and an increase in 2023; one reported that ALOS decreased between 2021 - 2023; and one reported ALOS remained stable between 2021 - 2023. MCE representatives indicated that ALOS was impacted by provider shortages, access to crisis stabilization services, coordination of follow-up care, limited housing options, financial insecurities, and patient preferences.

Crisis Stabilization Services. Two providers noted that crisis stabilization services have reduced psychiatric admissions and readmissions to inpatient hospitals. For example, one provider asserted that their organization had a 24% reduction in inpatient bed utilization for 2021 - 2023. As stated previously, all interviewees in 2024 highlighted state strategies and successes for increasing availability and access to crisis stabilization services that reduce readmissions to psychiatric hospitals. Findings specific to crisis stabilization successes and strategies are delineated in **Section V.E.**

Medication Continuation Following Discharge from Acute Inpatient or RMHT

Non-adherence to SMI treatment, including medication continuation is associated with readmission.[70] Consequently, Indiana actively monitors medication continuation following

[70] Owusu E, Oluwasina F, Nkire N, Lawal MA, Agyapong VIO. Readmission of Patients to Acute Psychiatric Hospitals: Influential Factors and Interventions to Reduce Psychiatric Readmission Rates. Healthcare (Basel). 2022 Sep 19;10(9):1808. doi: 10.3390/healthcare10091808. PMID: 36141418; PMCID: PMC9498532.

discharge from acute inpatient or residential MH (monitoring metric # 6) and reports quarterly and annual findings to CMS. As stated in **Section III**, metric specification varies between monitoring metrics calculated by the state and evaluation metrics calculated by the independent evaluator. For example, the population definition used for the evaluation differs from population definitions used to calculate monitoring metrics. Given that the Evaluation Plan does not include re-calculating Monitoring Metric # 6 for the evaluation target population, the Interim Report does not include quantitative findings for this short-term outcome. Interviewees did not comment on medication continuation.

Care Transitions

High Utilizers of Inpatient Services. Consistent with Goal 1 findings for high utilizers of ED services, MCEs and providers described efforts to identify high utilizers of inpatient services and support care transitions. Strategies include:

- Delivered provider and beneficiary education focused on reducing preventable readmissions.
- Implemented a value-based agreement (i.e., structured incentives for meeting performance goals) with providers to encourage reductions in inpatient utilization.
- Utilized the Reducing Readmissions through Collaborative Intervention program. This program identifies individuals with high inpatient utilization, assesses the individual's current needs, and provides real-time referrals.

Additional findings associated with care transition specific to inpatient care are delineated in **Section V.G.2**, which includes results related to Goal 5: Primary RQ 5.2 (Does the SMI demonstration result in improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities?).

D.4. Findings and Recommendations

This section provides a summary of the findings by short- and long-term outcomes identified in the Goal 2 logic model. Summaries integrate quantitative and qualitative findings (when appropriate) to provide evidence in support of the hypothesis. Recommendations for additional actions or data are also listed.

Hypothesis
The SMI demonstration will result in reductions in preventable readmissions to acute care hospitals and residential settings.

Reduced Readmissions

Due to restrictions in the availability of adequate data to identify "preventable readmissions," quantitative analyses focused on examining changes in 30-day, all-cause unplanned readmission rates following acute inpatient or observational stays related to MH. Findings indicated that: (1) the proportion beneficiaries on the SMI beneficiary roster having a MH-related acute inpatient or observational stay decreased over time, from 13.6% in 2018 to 7.0% in 2023, and (2) the rate of all-cause unplanned readmissions within 30 days remained stable for the overall population and most subgroups during the pre-demonstration (16.9% - 18.2% in 2018 - 2019) and waiver extension (18.4% - 19.3% in 2021 - 2023).

MCEs interviewed in 2024 noted discrepant readmission rate patterns, with two MCEs indicating inconsistent trends and one MCE reporting readmission rate declines. Additionally, MCEs

(interviewed in 2023 and 2024) described inconsistent trends in LOS. MCE representatives indicated that ALOS was impacted by provider shortages, access to crisis stabilization services, coordination of follow-up care, limited housing options, financial insecurities, and patient preferences. MCEs identified several challenges for reducing readmission rates including high no-show rates for follow-up care, insufficient coordination between MCEs and inpatient facilities, and inaccurate individual contact information.

Factors related to the COVID-19 PHE may also have impacted readmission rates, limiting reductions as initially desired. For example, provider shortages, facility shutdowns, and patient hesitancy for attending in-person appointments may have increased risk for readmission, despite ongoing state improvement activities.

Availability and Access to Community-Based Treatment Providers and Crisis Centers

Estimates of readmission rates for individuals admitted to psychiatric hospitals vary and depend on numerous factors including age, condition, time to readmission, and country.[70] Receiving outpatient MH services after hospital discharge has often been a strategy for reducing readmission rates in SMI populations. In addition to in-person, outpatient MH services, telehealth was expanded to increase access to care. In fact, approximately 60.6% of claims were submitted by behavioral health care providers during the waiver extension (2021 – 2023). Findings from the 2018-2020 Summative Evaluation Report and MPA acknowledged that telehealth is a good alternative for SMI beneficiaries who have difficulties accessing transportation or live in areas with high wait times for MH providers. State officials, MCEs, and advocacy organizations interviewed in 2024 reaffirmed telehealth's impact on care access, (particularly for behavioral health) and noted the innovation as a contributing factor for reducing overall readmission rates.

Additionally, observations from the MCEs indicate that the PHE had a negative impact on care coordination and may suggest that SMI beneficiaries experienced challenges with accessing community-based MH services post-discharge (e.g., provider shortages, facility shutdowns, and patient hesitancy for attending in-person appointments), raising risk for readmission.

Care Transitions

Consistent with Goal 1 findings for high utilizers of ED services, MCEs and providers described efforts to identify high utilizers of inpatient services and support care transitions as a strategy for reducing readmission rates. Strategies included education, value-based agreements, and real-time referrals.

Recommendations

- Expand monitoring ALOS beyond IMD.
- Identify strategies to increase workforce capacity (e.g., investments in care coordinators) for beneficiaries with SMI.
- Maintain telehealth service options.
- Continue to build on successful strategies for identifying high utilizers and connecting them with appropriate disease management or care management services.

E. Goal 3: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state.

As stated in **Section II.C**, crisis response and stabilization (e.g., crisis call centers, crisis mobile team response, crises receiving and stabilization services) is a basic element of MH care and often serves as an access point for connecting individuals to community care resources. Goal 3 assesses the availability of crisis stabilization services utilized across multiple service models using the PAA data collected and reported by the state. As stated in **Section III.A: Data Sources**, data for certain provider types originally defined in the PAA and included in the evaluation design were unavailable or unable to be validated (e.g., other practitioners certified and licensed to independently treat mental illness) or their definitions adjusted (e.g., crisis observation/assessment centers; CCCRTs) during the waiver extension. Hence, these provider types were excluded from Goal 3 analyses. Qualitative data specific to crisis stabilization services were incorporated to contextualize quantitative findings and assess the impact of short and long-term outcomes associated with Goal 3 (**Section II, Exhibit II.7**).

As stated in **Section I.G.**, the COVID-19 PHE (which began in March 2020) caused substantial changes to state policies, service utilization and provider availability, and will have short- and long-term impacts on Indiana's health care. Prioritization of health care resources (particularly during the first year of the PHE) and workforce capacity have likely slowed efforts to increase crisis stabilization services. Given that both the waiver (2020) and the first half of the waiver extension (2021-2023) coincided with the COVID-19 PHE, findings during this time-period likely reflect both the impact of COVID-19 related policy changes and activities as well as demonstration impacts. Consequently, any observed changes should be interpreted with caution as findings may be confounded by the impact of the PHE.

Exhibit V.44 describes the hypothesis, RQs, outcome measures, data sources, and analytic approach used for the evaluation of Goal 3.[71]

Exhibit V.44: Goal 3 Research Questions, Outcome Measures, Data Sources, Analytic Approach, and Evaluation Time-Periods

Hypothesis: The SMI demonstrations will result in improved availability of crisis stabilization services throughout the state.				
Research Questions	**Outcome Measure(s)**	**Data Sources**	**Analytic Approach**	**Evaluation Time-Period(s)**
Primary RQ 3.1: To what extent does the SMI demonstration result in improved availability of crisis outreach and response services (including crisis call centers, MCUs, crisis observation/assessment centers, and CCCRTs) throughout the state?	• Number of CSUs • Number of MCU/MRSS • Number of crisis call centers	State administrative data (2020-2023) collected via the PAA and additional updates received in September 2024	Descriptive quantitative analysis of trends over time during the demonstration	• **PAA:** Waiver implementation (2020) and Waiver extension (2021-2023); examined change in provider availability over each year in which data were available

[71] The evaluation time frame for Goal 3 includes the waiver (2020) and waiver extension (2021-2023).

Hypothesis: The SMI demonstrations will result in improved availability of crisis stabilization services throughout the state.				
Research Questions	**Outcome Measure(s)**	**Data Sources**	**Analytic Approach**	**Evaluation Time-Period(s)**
Primary RQ 3.2: To what extent does the SMI demonstration result in improved availability of IOP services and partial hospitalization?	• Number of IOP and partial hospitalization services • Demonstration activities or their components or characteristics that stakeholder identify as most effective in improved availability of IOP services and partial hospitalization • Obstacles that stakeholders identify as hindering the effectiveness of the demonstration in improved availability of IOP services and partial hospitalization	• State administrative data (2020-2023) collected via the PAA and additional updates received in September and November 2024 • KII with beneficiaries, state officials, MCEs, providers, and advocacy organizations	• Descriptive quantitative analysis of trends over time during the demonstration • Qualitative analysis to identify themes associated with the effectiveness of demonstration activities for improved availability of IOP services and partial hospitalization	• **PAA:** Waiver (2020) and Waiver extension (2021-2023); examined change in provider availability over each year in which data were available • **KIIs conducted in:** 2020, 2023 and, 2024; discussed topics since the Waiver implementation (2020) and through the first half of the Waiver extension (2021-2023)
Primary RQ 3.3: To what extent does the SMI demonstration improve the availability of crisis stabilization services provided during acute short-term stays in each of the following: public and private psychiatric hospitals; residential treatment facilities; general hospital psychiatric units; and community-based settings (such as residential crisis stabilization programs, small inpatient units in CMHCs, peer-run crisis respite programs, and so on)?	Number of: • Public and private psychiatric hospitals • Psychiatric hospitals that qualify as IMDs • Medicaid-enrolled psychiatric units in acute care and critical access hospitals • Licensed psychiatric hospital beds • RMHT facilities and beds • CMHCs	State administrative data (2020-2023) collected via the PAA and additional updates received in September and November 2024	Descriptive quantitative analysis of trends over time during the demonstration	• **PAA:** Waiver (2020) and Waiver extension (2021-2023); examined change in provider availability over each year in which data were available

Quantitative Analysis Approach

Analytic Population. Analyses focused on Medicaid providers who delivered crisis stabilization services. The state first implemented the PAA during the waiver (2020); thus, crisis service provider availability is only available from 2020 to 2023.[72] Additionally, the number of

[72] In instances when provider types or services were changed (e.g., definition of counting providers based on site location instead of business entities), added or unavailable reported findings have been marked as applicable.

providers who delivered any crisis intervention services at a clinic or hospital setting (identified by the H2011 HCPCS code in claim/encounter data) was also included.

Metrics. The primary metrics used for assessing provider type and crisis stabilization services were the total number of providers (for key provider types) or services across the state, including:

- Total number of crisis stabilization services, by service type:
  - CSU
  - MCU/MRSS
  - Crisis call centers
  - CCBHCs
- Total number of IOP and partial hospitalization services
- Total number of facilities/providers/programs that offer crisis stabilization services during acute short-term stays, by facility/provider/program type:
  - Public and private psychiatric hospitals
  - Psychiatric hospitals that qualify as IMDs
  - Acute care hospitals enrolled as psychiatric hospitals
  - Critical access hospitals enrolled as psychiatric hospitals
  - Psychiatric hospital beds
  - RMHT facilities
  - RMHT beds
  - CMHCs

Analysis Methods. Descriptive statistics (e.g., total number of providers and number of counties having specific services) were calculated to understand behavioral health provider workforce and spread. Each county was also designated as metro or non-metro using the RUCC, and provider availability was examined by the RUCC metro/non-metro designation. County-level data was further transformed into county maps to identify potential geographic service gaps.

Additionally, counts of providers (by provider type) who submitted a claim with the H2011 service code and the number of beneficiaries who received these H2011 crisis stabilization services were provided by the state for inclusion in crisis service availability analyses. However, these data were only available at an aggregate level for the overall Medicaid population – and not specifically for the SMI population. These counts, therefore, represent crisis services for the broader Indiana Medicaid population. Conversely, it is possible that an individual in crisis may be treated by a provider yet not have a H2011 claim. Thus, these counts may underrepresent the number of providers or beneficiaries served.

The findings are organized by research questions and relevant outcome measures identified in the logic model for the goal (**Section II**). Based on factors including data availability, only select

outcomes were identified in the CMS approved Evaluation Plan. Any outcomes that were identified in the logic model but were not included in the Evaluation Plan have been noted in the respective sections.

E.1. To what extent does the SMI demonstration result in improved availability of crisis outreach and response services throughout the state (Primary RQ 3.1)?

Indiana provides comprehensive crisis stabilization services statewide. Services include:

- Outpatient behavioral health services currently delivered by providers across the state.
- Medicaid rehabilitation option (MRO)[73] delivered by the state's 24 CMHCs. Of the 92 counties in Indiana, 87 have at least one CMHC site delivering care in the geographical area, and most counties in the state, other than very rural ones, have more than one CMHC offering services within a county. Although some counties do not have a CMHC, the residents of those counties may be served by CMHC sites in neighboring counties. IAC and DMHA contracts require CMHCs to provide a defined continuum of care directly, or through subcontract.
- Three §1915(i) programs serving individuals with behavioral health needs.
- Expanded SUD services in accordance with the state's approved SUD waiver.
- Partial hospitalization programs (PHP), which are time-limited medical services intended to provide a transition from inpatient psychiatric hospitalization to community-based care or, in some cases, substitute for an inpatient admission.

Increased Availability and Access to Crisis Services[74]

CSUs. On March 18, 2019, CMS approved a SPA that expands crisis intervention services, IOP program services, and peer recovery services to all Indiana Medicaid programs. Previously, these services were limited to the MRO program. This change expands the potential number of providers eligible to deliver these services to Indiana enrollees. This SPA became effective July 1, 2019.

This expansion of the crisis continuum began in 2014. DMHA partnered with the National Alliance on Mental Illness of Indiana, MH America of Indiana, the Indiana Hospital Association, Key Consumer, and the Indiana Council on CMHCs to conduct a review of Indiana's MH and substance use crisis services. The review was in response to Indiana Senate Enrolled Act No. 248 of 2014, which mandated DMHA to conduct a psychiatric crisis intervention study ("crisis study") and report the results to the legislative council by September 2015. The crisis study included a review of psychiatric and addiction crisis services available in Indiana, a survey of professionals and individuals in Indiana who have experience with the current state of Indiana's

[73] Only those with certain mental health and/or substance use disorder diagnoses are able to access MRO services. For a list of ICD-10 Diagnoses Codes that are MRO-eligible, please reference this website (updated October 1, 20204): MRO Codes

[74] The Goal 3 logic model includes "Improved access and availability of crisis stabilization services via pilot programs and efforts to increase the number of Medicaid enrolled providers (especially in shortage areas)." The CSU pilot was completed in 2022 and discussed in greater detail in the MPA. Efforts for increasing the number of Medicaid enrolled providers are detailed in Goal 4. Consequently, findings for this short-term outcome are not included in Goal 3.

crisis response, and a review of crisis services and models implemented by other states that could improve outcomes for individuals who experience psychiatric or addiction crises.

House Enrolled Act 1006 – (passed in 2023) has streamlined the process for individuals accessing crisis stabilization and required insurance providers to reimburse for any CSU service under "emergency detention."

In response to recommendations from the report, DMHA supported two CMHCs – Centerstone Indiana and Four County[75] – with their CSU pilots. The goals for these units were to provide an alternative to crisis evaluations within EDs and divert admissions to inpatient psychiatric units. Findings from the MPA[9] indicated that pilots were completed in June 2022. State officials interviewed in 2024 noted that since 2022, the state expanded CSU implementation.

Exhibit V.45 summarizes PAA data for CSUs from 2020 to 2023. Findings indicate that the total number of counties with a CSU provider increased from 3 in 2020 to 16 in 2023. As expected, the largest increase of CSUs occurred between 2022 (n=4) and 2023 (n=18) after the completion of the CSU pilot.

Exhibit V.45 Distribution of Crisis Services Per County by Year – CSUs

Provider	Year	Total # of CSUs	# of Counties with CSUs			# of Counties with No CSUs		
			Total	Metro	Non-Metro	Total	Metro	Non-Metro
CSUs	2020	6	3	2	1	89	42	47
	2021	4	4	2	2	88	42	46
	2022	4	4	2	2	88	42	46
	2023[76]	18	16	11	5	76	33	43

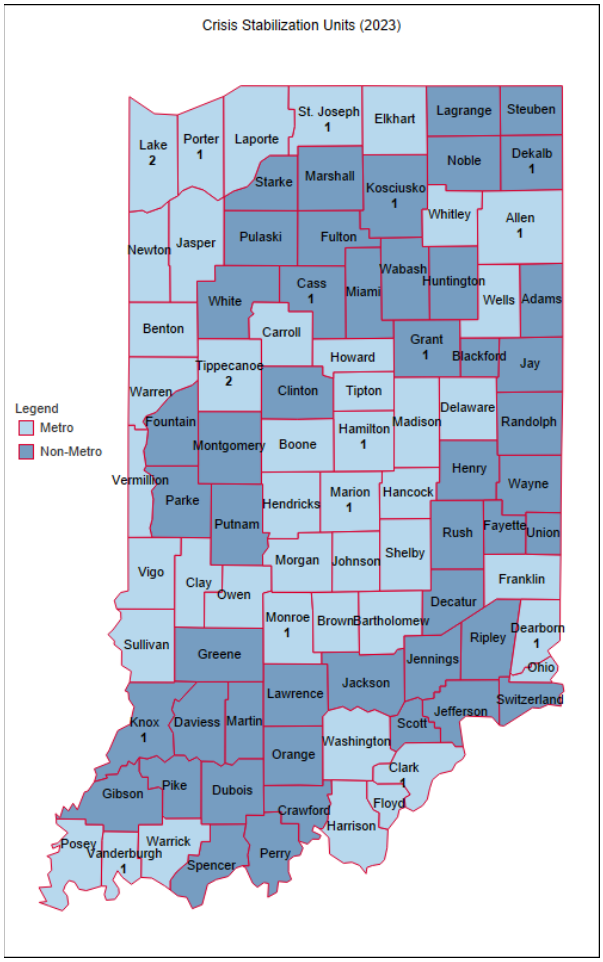
Source: Annual PAA, 2020 – 2023.

Between 2022 and 2023, one county (Vigo) reported disbanding their CSU, while 13 counties added a CSU (**Exhibit V.46**; **Attachment E, Exhibit E.25**). The 13 counties that added a CSU included: Allen, Clark, Dearborn, Dekalb, Grant, Hamilton, Knox, Lake (added two CSUs), Marion, Monroe, Porter, St. Joseph, and Tippecanoe (added two CSUs). Of these counties, three (Dekalb, Grant, and Knox) were designated as non-metro. Of the 16 counties with a CSU in 2023, most were designated as metro (n=11).

[75] As of 2024 Four County changed its name to 4C Health.

[76] Beginning in 2023, PAA counts reported in the CSU measure represent a broader classification of crisis stabilization services, which include crisis observation/assessment centers. Prior to 2023, the state reported two crisis observation/assessment centers operating in 2020, and three were reported in 2022. Crisis observation/assessment centers were unavailable for 2021.

Exhibit V.46: Number of Crisis Services by County – CSUs (2023)



Source: Annual PAA, 2023.

Of the seven providers interviewed in 2024, five noted that the CMHC expansion[77] contributed to the increase of crisis services during the waiver extension. Of these providers, three launched CSUs in 2023 and two launched CSUs in 2024.

Advocacy organizations highlighted the importance of CSUs and the need for these services across all 92 counties. One advocacy organization acknowledged that the state prioritized CSUs launched during the waiver extension to maximize Indiana resident reach, limiting the average distance travelled for receiving care. This advocacy organization stated that the CMHC expansion aims to limit beneficiary travel for crisis services to one hour (across all counties) by 2027.

[77] The state's CMHC expansion plan includes embedding CSUs within CMHCs to increase crisis stabilization service access for Indiana residents.

Providers and advocacy organizations noted several challenges related to the implementation and operation of CSUs. Issues include:

- Limited use and allowance of psychiatric advanced directives (PAD).[78] Although some SMI beneficiaries have a PAD with their psychiatrist, system-level barriers (i.e., consistent provider recognition or compliance) is an impediment for fully realizing patient-centered care.
- Funding for continued CSU sustainment efforts.
- Limited provider capacity.

Advocacy organizations identified the following opportunities for the state to bolster CSU efforts including:

- Incorporate peer advocates[79] as part of the CSU care team.
- Expand Certified Peer Support Professional (CPSP) certification training.
- Inform beneficiaries of CSU services and benefits for using the CSU.

MCU/MRSS. MCU/MRSS consists of multidisciplinary teams of trained providers who are positioned to respond quickly to behavioral health crises in the community 24 hours a day, 7 days a week. The purpose of a mobile crisis response team is to divert individuals in crisis from hospitals, EDs, and jails to better service individuals in crisis and prevent fatalities from suicide, drug overdose, and other MH and substance use emergencies. Intended to be immediate and short term, MCU/MRSS uses evidence-based practices to screen, assess, stabilize, and refer persons in need to CSUs, inpatient hospitals, certified respite facilities, or an individual's established provider. Indiana received approval from CMS (approved on 9/19/23; effective date of 7/1/2023) for a SPA which implemented MCU/MRSS, staffed by an ED team (comprised of behavioral health professionals and a physician or an advanced practice registered nurse to oversee an individual in crisis with the goal of avoiding the ED) and dispatched through 988.[80] The state added the crisis service benefit (direct reimbursement by Indiana Medicaid) in July 2023. The crisis service benefit is available to providers with a mobile crisis designation. One FSSA official (2024 interviews) indicated that although providers are slow to update their profiles, DMHA will continue to designate MCU/MRSS in 2024 to increase availability and access across the state. Although it is premature to determine the impact of MCU/MRSS on all-cause ED utilization, one MCE (2024 interviews) referenced preliminary CMHC findings that suggested overall reductions in ED utilization. Specifically, the MCE noted that the CMHC had: "240 admissions to their CSU and deployed mobile crisis services 1,346 times in 2023 with a 63% success rate of crisis stabilization."

Exhibit V.47 summarizes PAA data for MCU/MRSS from 2020 to 2023. In 2023, statewide, there were 20 MCU/MRSS. The number of counties with available MCU/MRSS increased

[78] A PAD is a legal tool that allows a person with a MH condition to state their preferences for treatment in advance of a crisis.

[79] Peer advocates are individuals with SMI lived experience who provides support to others experiencing similar challenges.

[80] The 988 Suicide and Crisis Lifeline aims to create a sustainable infrastructure to coordinate crisis care for MH, substance use, and suicidal crisis. This plan adopts SAMHSA's Crisis Now Model and includes a statewide 24/7 call center that is centrally deployed and operated 24 hours a day, 7 days a week.

steadily from 6 in 2020 to 19 in 2023. Of the 19 counties in 2023 with an MCU/MRSS, most (n=13) were designated as metro.

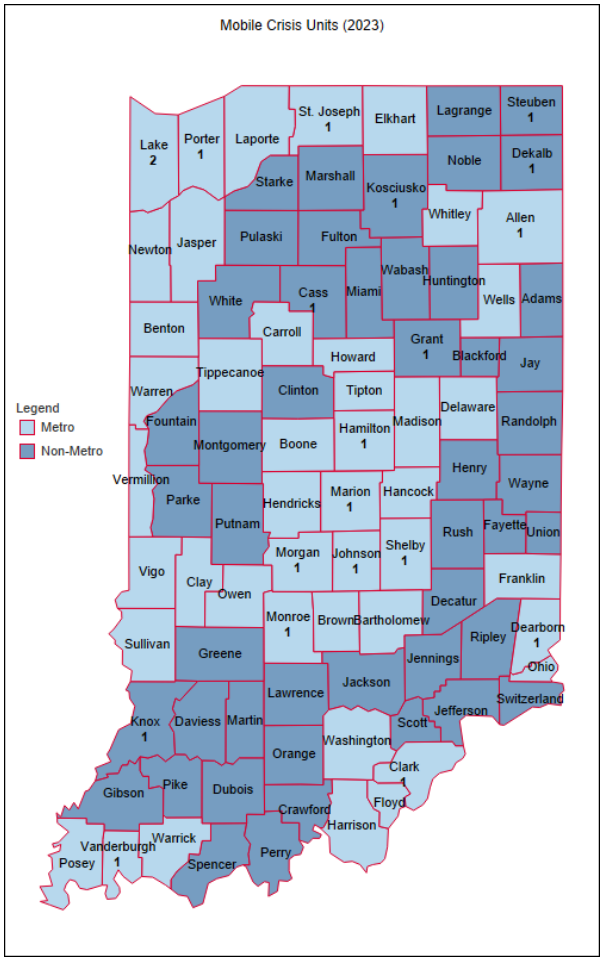
Exhibit V.47 Distribution of Crisis Services Per County by Year – MCU/MRSS

Provider	Year	Total # of MCU/MRSS	# of Counties with MCU/MRSS			# of Counties with No MCU/MRSS		
			Total	Metro	Non-Metro	Total	Metro	Non-Metro
MCU/MRSS	2020	6	6	3	3	86	41	45
	2021	12	10	5	5	82	39	43
	2022	16	16	8	8	76	36	40
	2023	20	19	13	6	73	31	42

Source: Annual PAA, 2020 – 2023.

Between 2022 and 2023, seven metro counties added at least one MCU/MRSS (Allen, Dearborn, Hamilton, Lake [added two MCU/MRSS], Marion, Morgan, and St. Joseph); none of these counties had an MCU/MRSS in 2022 (**Exhibit V.48; Attachment E, Exhibit E.27**). In addition, two non-metro counties (Dekalb, Knox) that did not have an MCU/MRSS in 2022 also added one MCU/MRSS, respectively, in 2023. Conversely, two metro counties (Hendricks, Vigo) and four non-metro counties (Fulton, Miami, Pulaski, and Starke) reported having an MCU/MRSS in 2022 but did not report having an MCU/MRSS in 2023.

Exhibit V.48: Number of Crisis Services by County – MCU/MRSS (2023)



Source: Annual PAA, 2023.

988 Indiana Crisis and Suicide Lifeline. The 988 initiative was spearheaded by a partnership between DMHA and the 988 coalition (including stakeholders, such as law enforcement agencies, Indiana hospital association, CMHC association, etc.). Designed as a broad crisis response system, the 988 initiative includes:

- A simple, short number for anyone experiencing MH-related distress.
- The establishment of mobile crisis teams who are trained and skilled in responding to anyone experiencing MH-related distress and are comprised of peers and behavioral health professionals skilled in providing specialized crisis care to people on site in their community.
- A greater ability to refer Indiana residents in crisis to a network of local crisis specialists who are familiar with the community and better equipped to provide culturally competent support and referrals to local resources and other lifesaving follow-up care.

One advocacy organization interviewed in 2024 asserted that a proportion of individuals who call 988 are not in crisis yet need support. This organization noted that 988 is not designed to support individuals who are not in crisis. Several advocacy organizations interviewed in 2024 acknowledged operating "warm" lines or referenced 211 to provide non-crisis support to those in

need. One advocacy organization noted that the "Be Well" line (connected to 211) lost funding[81] and indicated concerns specific to 988's ability to absorb non-crisis calls. This organization stated that from July 2020 to August 2022, "Be Well" received 58,000 calls in which 29% were provided with referrals. State officials noted that the state recently conducted a landscape review assessing behavioral health crisis and warm line resources. Findings from the review indicated that "Be Well" was duplicative to other crisis call and warm line efforts (e.g., 988; CMHC crisis lines, 211) across the state. For example, similar to "Be Well", CMHC crisis lines support non-crisis calls and connect individuals to local resources when needed. State officials emphasized that call line answer rates are monitored monthly to ensure that they are appropriately resourced to support communities served.

Of the 25 beneficiaries interviewed in 2024, only two reported using crisis services (both beneficiaries used 988) between 2021 and 2023. Interviewee satisfaction was mixed with one reporting somewhat satisfied and the other reporting very dissatisfied. Both beneficiaries indicated that 988 did not provide care coordination services. As crisis service expansion efforts continue, the state should consider surveying beneficiaries to better understand their experiences across crisis services (e.g., CSUs, 988) and support service improvement.

Information specific to crises call centers was not available for 2020 and 2021. Three counties had 988 affiliated crisis call centers in 2022 while 4 counties had 988 affiliated crisis call centers in 2024. Although only 4 call centers were identified in 2023, these call centers provided statewide coverage for all 92 counties (**Attachment E, Exhibit E.28**). State officials in 2024 acknowledged the reach of 988 and indicated use has increased since 988 was established in 2022. One state official noted that March 2024 (although outside of the Interim Report evaluation time-period), had the highest volume of calls (approximately 6,000) to date.

CCBHC Medicaid Demonstration Program

In 2024, the state of Indiana was chosen as one of 10 new states across the US for the CCBHC Medicaid Demonstration Program, which provides states with sustainable funding in order to expand access to MH and substance use services.

Certified Community Behavioral Health Clinic Expansion. The House Enrolled Act 1222 required DMHA to establish a plan for the expanded use of CCBHCs in Indiana including the role of 988 and how care will be coordinated for individuals in crisis seeking services across the SOC. Findings from the 2018-2020 Summative Evaluation Report noted that 17 organizations (15 CCBHCs and 2 hospitals) received 2-year SAMHSA CCBHC Expansion grants in FY18-FY21 which allowed facilities to build capacity for crisis services and implement provider training.

Providers Delivering Crisis Stabilization Services. **Exhibit V.49** summarizes counts of providers who delivered crisis intervention services and the number of beneficiaries who received the services (among all Medicaid beneficiaries[82]) in Indiana between 2021 and 2023 (identified based on the H2011 procedure code in paid claims/encounters). Findings indicate that the number of providers who submitted claims for crisis intervention services increased from 28 in 2021 to 35 in 2022, decreasing slightly to 32 in 2023. The number of unique beneficiaries served

[81] Funding for "Be Well" ended on June 30, 2024.

[82] Excluding Medicaid beneficiaries with the following classifications: 1) Emergency Services Only, 2) Family Planning, 3) PE Family Planning, 4) QI, 5) QMB, 6) QDWI, and 6) SLMB.

by these providers also increased (by 46.3%) between 2021 (n=2,892) and 2023 (n=4,232). Although behavioral health providers delivered crisis stabilization services to the largest number of beneficiaries from 2021-2023, the proportion of beneficiaries served by behavioral health providers declined over this period (from 77.0% to 48.8%). Thus, in 2023, physicians/physician groups (39.2%) and hospitals (10.1%) combined served half of beneficiaries who had claims/encounter with an H2011 procedure code.

Exhibit V.49: Counts of Providers who Delivered Crisis Stabilization Services and Beneficiaries with H2011 Claims in Indiana, 2021-2023.

Year	Provider Type	Billing Provider National Provider Identifier (NPI)[83]		Number of Beneficiaries	
		N	%	N	%
2021	Behavioral Health Provider	20	71.4%	2,228	77.0%
	Clinic	2	7.1%	49	1.7%
	Hospital	2	7.1%	321	11.1%
	Physician	1	3.6%	278	9.6%
	Provider Type Not Specified	3	10.7%	16	0.6%
	Total	28	100.0%	2,892	100.0%
2022	Behavioral Health Provider	21	60.0%	1,918	58.8%
	Clinic	6	17.1%	54	1.7%
	Hospital	3	8.6%	469	14.4%
	Physician	3	8.6%	819	25.1%
	Provider Type Not Specified	2	5.7%	3	0.1%
	Total	35	100.0%	3,263	100.0%
2023	Behavioral Health Provider	21	65.6%	2,067	48.8%
	Clinic	5	15.6%	77	1.8%
	Hospital	4	12.5%	428	10.1%
	Physician	1	3.1%	1,659	39.2%
	Provider Type Not Specified	1	3.1%	1	0.0%
	Total	32	100.0%	4,232	100.0%

Source: State-provided H2011 claims data, 2021-2023.

[83] The number of beneficiaries served per billing provider NPI ranged from: 1 to 653, with a median of 6 beneficiaries served in 2021; 1 to 817, with a median of 4 beneficiaries served in 2022; and 1 to 1,659, with a median of 5 beneficiaries served in 2023. Additionally, Eskenazi Health was the only "physician/physician group" represented in 2021 and 2023 and served the largest number of beneficiaries compared to all other providers for all three years.

E.2. To what extent does the SMI demonstration result in improved availability of IOP services and partial hospitalization? (Primary RQ 3.2)

Increased Availability and Access to Crisis Services

Exhibit V.50 summarizes the number of counties and providers who delivered IOP and partial hospitalization services between 2020 and 2023.[84] IOP and partial hospitalization services availability increased from 2020 (20 IOP and partial hospitalization providers) to 2023 (47 providers). Approximately two-thirds of the 19 counties in which IOP or partial hospitalization services were delivered were designated as metro (n=13 vs n=6 for non-metro) in 2023.

Exhibit V.50: Distribution of Crisis Services Per County by Year – IOP and Partial Hospitalization Services

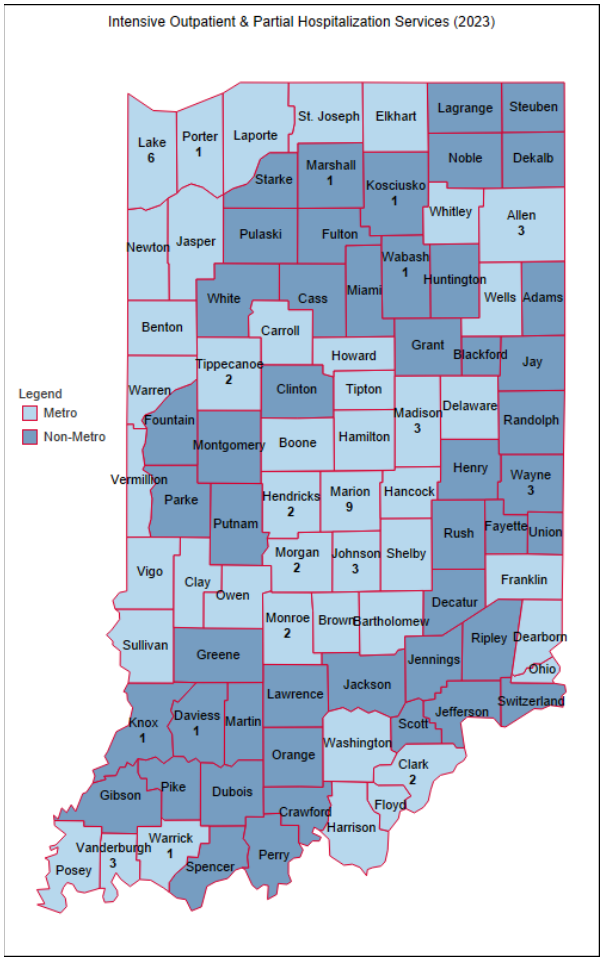
Provider	Year	Total # of IOP/Partial Hospitalization Services	# of Counties with Available IOP/Partial Hospitalization Services			# of Counties with No Available IOP/Partial Hospitalization Services		
			Total	Metro	Non-Metro	Total	Metro	Non-Metro
IOP & Partial Hospitalization Services	2020	20	12	9	3	80	35	45
	2021	38	17	12	5	75	32	43
	2022	41	16	12	4	76	32	44
	2023	47	19	13	6	73	31	42

Source: State-provided administrative data, 2020-2023 (Updated November 2024).

Between 2022 and 2023, three non-metro counties (Daviess, Kosciusko, and Wabash) added an IOP or partial hospitalization provider during this period, and one metro county (Morgan) added two IOP or partial hospitalization providers. One county (Montgomery (designated as non-metro) reported discontinuing IOP services in 2023 (**Exhibit V.51**; **Attachment E, Exhibit E.30**).

[84] Updated IOP provider data for years 2020 to 2023 were provided by state officials in November 2024. The state provided updated data because of concerns related to data accuracy in previously reported PAA data. Consequently, updated data were used for analyses.

Exhibit V.51: Number of Crisis Services by County – IOP and Partial Hospitalization Services (2023)



Source: State-provided administrative data, 2023 (Updated November 2024).

E.3. To what extent does the SMI demonstration improve the availability of crisis stabilization services provided during acute short-term stays in each of the following: public and private psychiatric hospitals; residential treatment facilities; general hospital psychiatric units; and community-based settings (such as residential crisis stabilization programs, small inpatient units in CMHCs, peer-run crisis respite programs, and so on)? (Primary RQ 3.3)

Increased Availability and Access to Crisis Services

Public and Private Psychiatric Hospitals. In 2022, 24 counties had at least one psychiatric hospital (public or private), with a total of 40 hospitals statewide (**Exhibit V.52**).[85] In 2023, the number of psychiatric hospitals remained at 40; however, between 2022 and 2023, St. Joseph County added one (private) psychiatric hospital, while one (private) psychiatric hospital was no

[85] Updated public and private psychiatric hospitals data provider data for years 2021 to 2023 were provided by state officials in September 2024. The state provided updated data because of concerns related to data accuracy. Consequently, updated data were used for analyses.

longer available in Morgan County. In each year, there were 6 state operated psychiatric hospitals (in Cass, Marion, Vanderburgh (n=2), Jefferson, and Wayne).[86] Of the 23 counties in 2023 with a psychiatric hospital, most (n=16) were metro counties. The southwestern part of the state had the most regional availability gaps for psychiatric hospitals, followed by the western part of the state – particularly in non-metro counties (**Exhibit V.53**; **Attachment E, Exhibit E.32**).

Psychiatric Hospitals That Qualified as IMDs. The number of counties that had at least one psychiatric hospital that qualified as an IMD remained stable between 2020 and 2023 (ranging from 14 to 15) (**Exhibit V.52**). The number of facilities increased from 19 in 2020 to 22 in 2022, decreasing to 21 in 2023 (with one IMD psychiatric hospital removed from Morgan). Four counties (Cass, Jefferson, Vanderburgh, and Wayne) reported having a psychiatric hospital that qualified as an IMD in 2020 (with Vanderburgh reporting two facilities). However, these counties did not report having any psychiatric hospitals that qualified as IMDs during the waiver extension period (2021-2023) (**Exhibit V.53**; **Attachment E, Exhibit E.33**). Of the 14 counties with psychiatric hospitals that qualified as IMDs in 2023, most (n=12) operated in metro counties.

Exhibit V.52: Distribution of Crisis Services Per County by Year – Psychiatric Hospitals

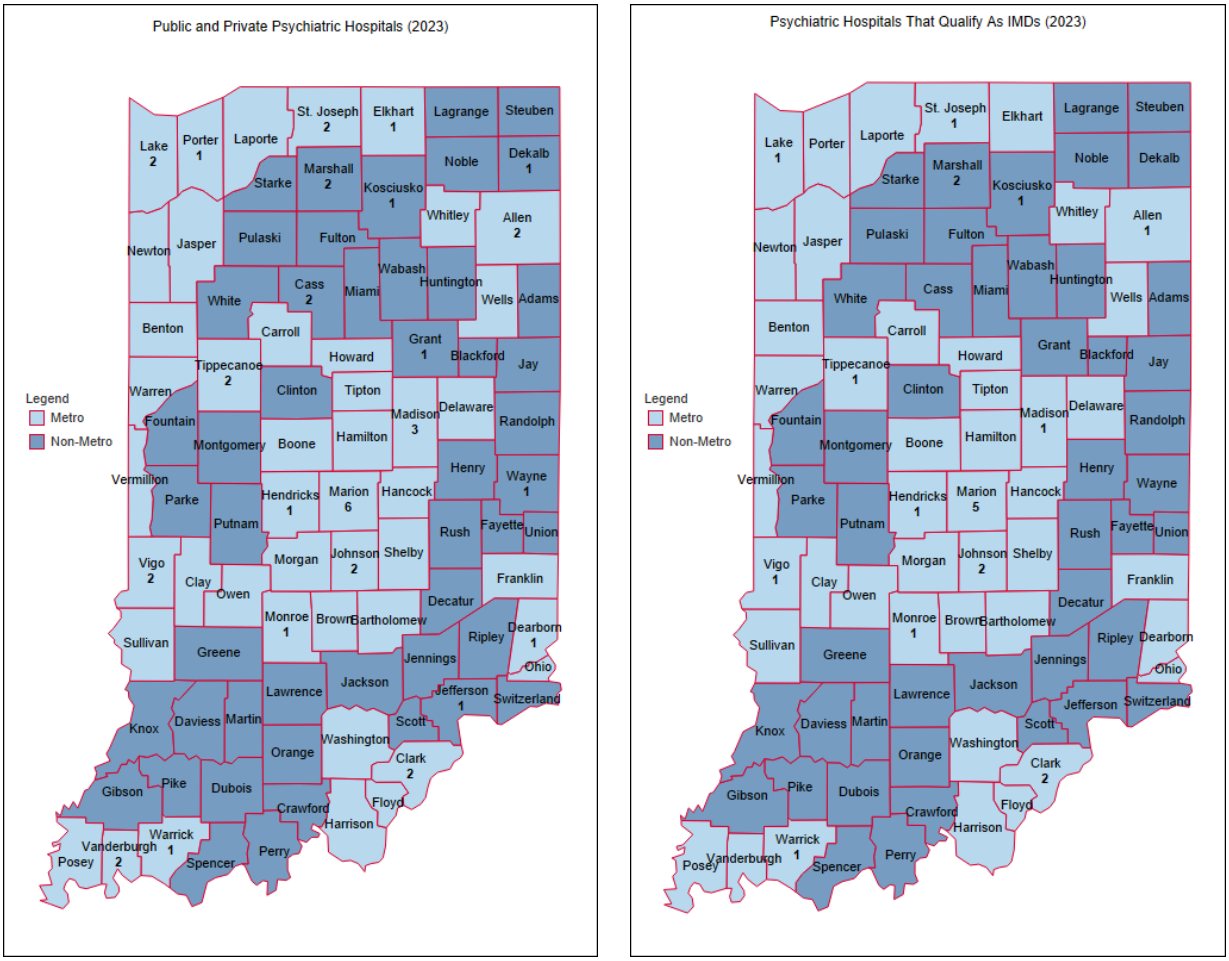
Provider	Year	Total # of Providers	# of Counties with Available Provider			# of Counties with No Provider		
			Total	Metro	Non-Metro	Total	Metro	Non-Metro
Public and Private Psychiatric Hospitals	2020	*	*	*	*	*	*	*
	2021	*	*	*	*	*	*	*
	2022	40	24	17	7	68	27	41
	2023	40	23	16	7	69	28	41
Psychiatric Hospitals That Qualify as IMDs	2020	19	14	10	4	78	34	44
	2021	20	14	12	2	78	32	46
	2022	22	15	13	2	77	31	46
	2023	21	14	12	2	78	32	46

* Exact counts for Public and Private Psychiatric Hospitals were unavailable for years 2020 and 2021. However, state officials have indicated that the counts of public and private psychiatric hospitals in these years were similar to those in 2022 and 2023.

Source: Public and Private Psychiatric Hospitals: State-provided administrative data, 2022-2023 (Updated September 2024). Psychiatric Hospitals That Qualify as IMDs: Annual PAA, 2020 – 2023.

[86] *State Psychiatric Hospitals and Community Mental Health Centers.* Division of Mental Health and Addiction, Indiana Family & Social Services Administration. 2024. Retrieved from https://www.in.gov/fssa/dmha/files/DMHA_SOFs_and_CMHCs.pdf

Exhibit V.53: Number of Crisis Services by County – Public and Private Psychiatric Hospitals and Psychiatric Hospitals That Qualify as IMDs (2023)



Source: Public and Private Psychiatric Hospitals: State-provided administrative data, 2023 (Updated September 2024). Psychiatric Hospitals That Qualify as IMDs: Annual PAA, 2023.

Medicaid-enrolled Psychiatric Units in Acute Care Hospitals. PAA data did not capture the number of Medicaid-enrolled psychiatric units in acute care hospitals for all years. Hence the metric was not examined for the evaluation. However, certain Medicaid-enrolled acute care hospitals were enrolled as psychiatric hospitals with Medicaid, and the state provided data for these hospitals (counts by county) as a proxy. Findings indicate that the number of Medicaid-enrolled psychiatric acute care hospitals decreased over time – from 33 hospitals (across 19 counties) in 2019 to 22 hospitals (across 16 counties) in 2023 (**Exhibit V.54**). Of the 16 counties with Medicaid-enrolled acute care hospitals offering psychiatric services, approximately two-thirds (n=11) were designated as metro counties.

Exhibit V.55 displays counties with acute care hospitals enrolled as psychiatric hospitals within Medicaid for 2023. In terms of counties with the most acute care hospitals offering psychiatric services, Marion County (designated as metro) and Dubois County (designated as non-metro) each had three Medicaid-enrolled psychiatric acute care hospitals, and Daviess County (designated as non-metro) and LaPorte County (designated as metro) each reported two hospitals offering psychiatric services. Between 2020 and 2023, eight counties lost Medicaid-enrolled psychiatric acute care hospitals. Allen (designated as metro) lost three hospitals, Lake

(designated as metro) lost two hospitals, and the following counties each lost one hospital: Clark, Daviess, Elkhart, Hendricks, Jay, and Vigo (**Attachment E**, **Exhibit E.35**).

Medicaid-enrolled Psychiatric Units in Critical Access Hospitals. PAA data for Medicaid-enrolled psychiatric units in critical access hospitals was also unavailable for 2020 to 2023. Thus, the state provided data (i.e., counts by county) for critical access hospitals that were enrolled as psychiatric with Medicaid to be used as a proxy. The number of Medicaid-enrolled psychiatric critical access hospitals remained the same (n=2) in each year (**Exhibit V.54**). As shown in **Exhibit V.55**, the counties with these psychiatric critical access hospitals were Adams (designated as non-metro) and Warrick (designated as metro).[87]

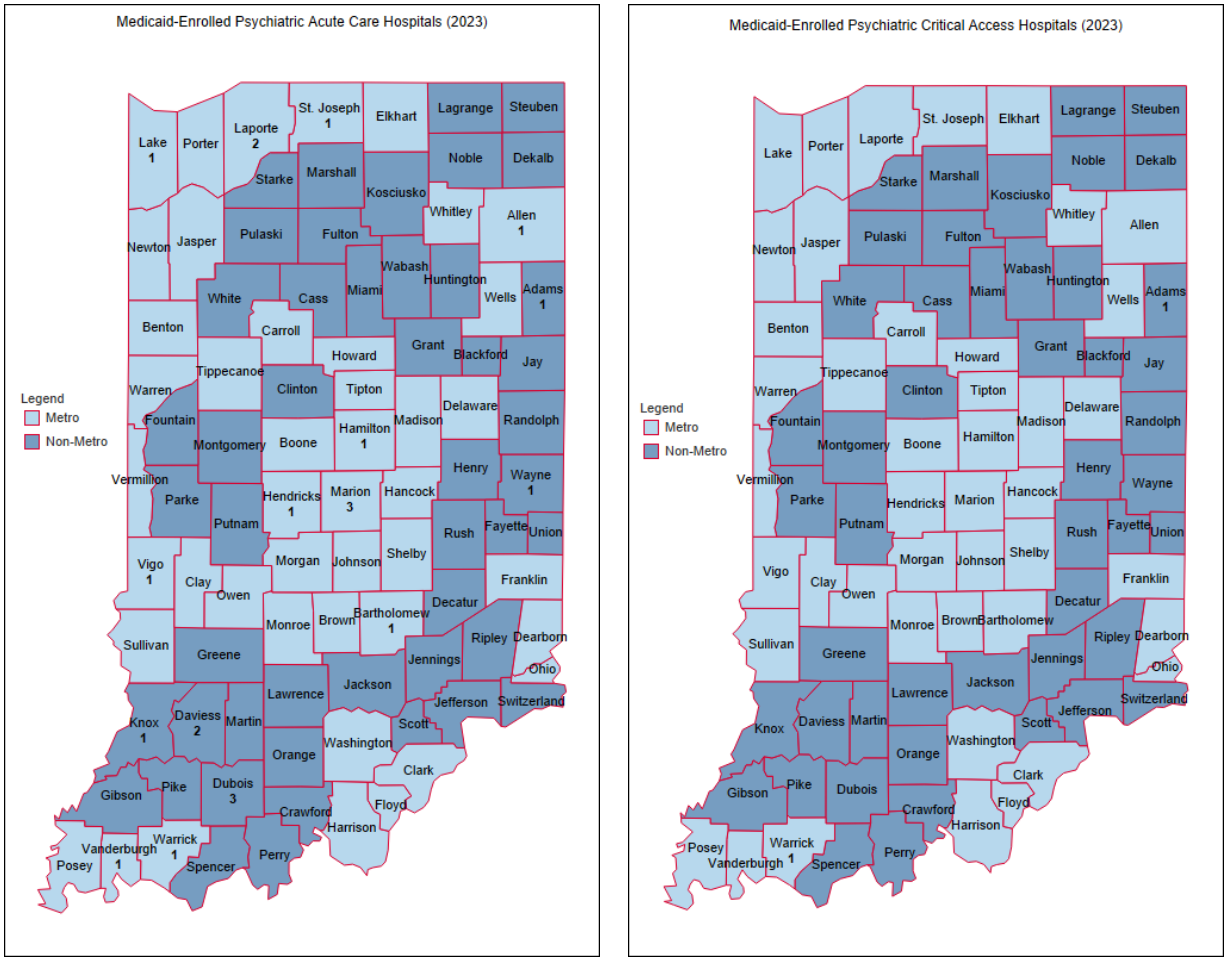
Exhibit V.54: Distribution of Crisis Services Per County by Year – Medicaid-enrolled Psychiatric Acute Care and Critical Access Hospitals

Provider	Year	Total # of Providers	# of Counties with Available Provider			# of Counties with No Provider		
			Total	Metro	Non-Metro	Total	Metro	Non-Metro
Medicaid-enrolled psychiatric acute care hospitals	2020	33	19	13	6	73	31	42
	2021	25	18	12	6	74	32	42
	2022	24	17	12	5	75	32	43
	2023	22	16	11	5	76	33	43
Medicaid-enrolled psychiatric critical access hospitals	2020	2	2	1	1	90	43	47
	2021	2	2	1	1	90	43	47
	2022	2	2	1	1	90	43	47
	2023	2	2	1	1	90	43	47

Source: State-provided administrative data, 2020 – 2023 (Updated November 2024).

[87] These psychiatric acute care hospitals were also operational in Adams County and Warrick County in prior years (i.e., 2020 to 2021).

Exhibit V.55: Number of Crisis Services by County – Medicaid-enrolled Psychiatric Acute Care and Critical Access Hospitals (2023)



Source: State-provided administrative data, 2023 (Updated November 2024).

Psychiatric Beds. In 2021, 12 counties reported having psychiatric beds (private psychiatric hospitals), and this number increased to 13 counties in 2022 and 14 in 2023 (**Exhibit V.56**).[88] Over this period (2021 - 2023), the total number of psychiatric beds in the state increased from 819 to 1,227. Most counties (n=12 in 2023) that reported counts for psychiatric beds were designated as metro counties.

[88] Updated psychiatric hospital bed data provider data for years 2021 to 2023 were provided by state officials in September 2024. The state provided updated data because of concerns related to data accuracy. Consequently, updated data were used for analyses.

Exhibit V.56: Distribution of Crisis Services Per County by Year – Licensed Psychiatric Hospital Beds

Provider	Year	Total # of Beds	# of Counties with Available Psychiatric Hospital Beds			# of Counties with No Psychiatric Hospital Beds		
			Total	Metro	Non-Metro	Total	Metro	Non-Metro
Licensed Psychiatric Hospital Beds[89]	2020	*	*	*	*	*	*	*
	2021	819	12	10	2	80	34	46
	2022	1,137	13	11	2	79	33	46
	2023	1,227	14	12	2	78	32	46

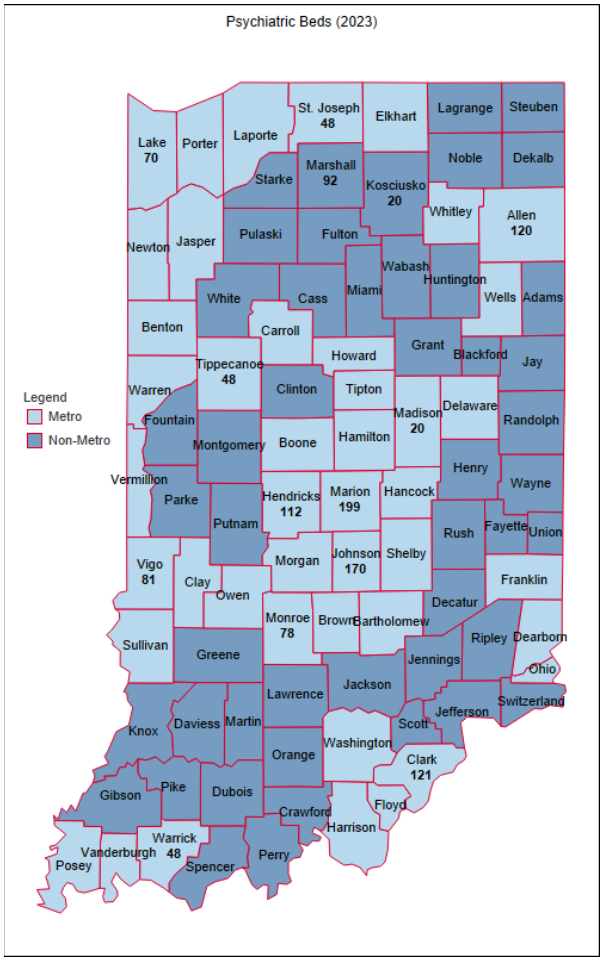
* Exact bed counts for 2020 were not available via the same counting methodology as later years. However, state officials have indicated that bed counts have remained largely consistent over the past several years.

Source: State-provided administrative data, 2021 – 2023 (Updated September 2024).

Exhibit V.57 visualizes counts of psychiatric hospital beds by counties in 2023. The total number of beds varied across the counties, ranging from 20 in Kosciusko and Madison Counties, respectively, to 199 in Marion County. Between 2021 and 2023, four counties reported adding psychiatric beds (i.e., Marion County added 176 beds, Allen County added 120 beds, Johnson County added 64 beds, and Tippecanoe County added 48 beds); no counties reported decreases in their bed counts (**Attachment E, Exhibit E.37**). The southwestern, eastern, and non-metro parts of the state had the most regional availability gaps for psychiatric beds.

[89] Exact bed counts for state-operated facilities were not available for years 2020-2023. Therefore, counts reported only include bed counts among private psychiatric hospitals.

Exhibit V.57: Number of Crisis Services by County – Licensed Psychiatric Hospital Beds (2023)



Source: State-provided administrative data, 2023 (Updated September 2024).

RMHT Facilities and Beds. Data for RMHT facilities was available for 2020, 2022, and 2023. In 2020, 59 RMHTs were available (in 28 counties), and this number increased slightly to 55 RMHTs (in 29 counties) in 2022 (**Exhibit V.58**). In 2023, 56 RMHTs were available in 28 counties. In 2020, 610 RMHT beds were reported across 28 counties; the total bed count decreased to 565 RMHT beds across 29 counties in 2022. Of the 28 counties in 2023 with RMHT facilities, approximately 60% (n=17) were designated as non-metro. A similar pattern was observed for RMHT beds in 2022.

Exhibit V.58: Distribution of Crisis Services Per County by Year – RMHT Facilities and Beds

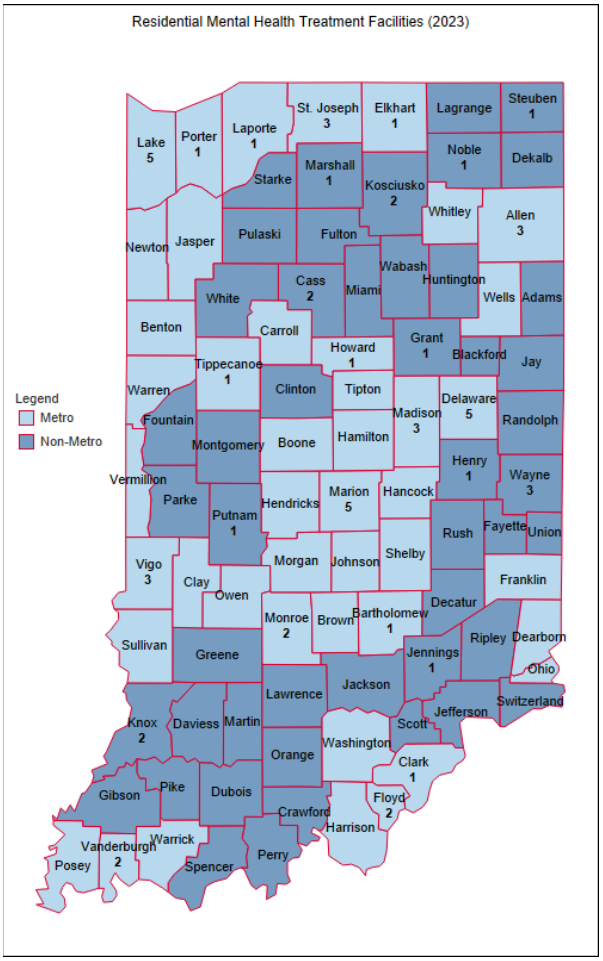
Provider	Year	Total # of Providers	# of Counties with Available Provider			# of Counties with No Provider		
			Total	Metro	Non-Metro	Total	Metro	Non-Metro
RMHT Facilities	2020	59	28	16	12	64	28	36
	2021	*	*	*	*	*	*	*
	2022	55	29	18	11	63	26	37
	2023	56	28	17	11	64	27	37
RMHT Facility Beds	2020	610	28	16	12	64	28	36
	2021	*	*	*	*	*	*	*
	2022	565	29	18	11	63	26	37
	2023	*	*	*	*	*	*	*

* Exact RMHT facility and bed counts could not be confirmed for 2021. Exact bed counts were also unavailable for 2023. However, state records confirm that the 2023 list of RMHT facilities included: 54 of the same facilities as in the 2022 reporting period, plus two additional RMHT facilities, suggesting that the 2023 bed counts were similar to those for 2022.

Source: RMHT Facilities: State-provided administrative data, 2020 (Updated November 2024); Annual PAA, 2022 – 2023. RMHT Facility Beds: State-provided administrative data, 2020, 2022 (Updated November 2024)

The map in **Exhibit V.59** illustrates RMHT facility availability by county in 2023. Between 2022 and 2023, Cass County and Lake County each added one RMHT, while Shelby County reported no longer having an RMHT (see **Exhibit E.39** in **Attachment E** for 2022 provider map). In both years, the counties with the most RMHTs included Delaware County (5 RMHTs in both 2022 and 2023), Marion County (5 RMHTs in both 2022 and 2023), and Lake County (4 RMHTs in 2022 and 5 RMHTs in 2023). As in previous years, the southwestern part of the state continued to have the most regional availability gaps for RMHT in 2023.

Exhibit V.59: Number of Crisis Services by County – RMHT Facilities (2023)



Source: RMHT Facilities: State-provided administrative data, 2020 (Updated November 2024); Annual PAA, 2022 – 2023.

CMHCs. In 2022 and 2023 there were 24 CMHCs statewide. The PAA counts CMHCs by location (i.e., CMHCs typically have satellite sites to support service provision). **Exhibit V.60** summarizes the number of CMHC satellite sites by year. Between 2020 and 2022, the state captured only MH-specific CMHC sites. The total number of mental-health specific CMHC satellite sites increased from 97 in 2020 to 231 in 2022. Beginning in 2023, the state began capturing all CMHC locations in its PAA (i.e., not only those that provide MH treatment). Using this broader measure definition, the state identified 324 CMHC satellite sites in 2023 across 87 counties.

Exhibit V.60: Distribution of Crisis Services Per County by Year – CMHCs

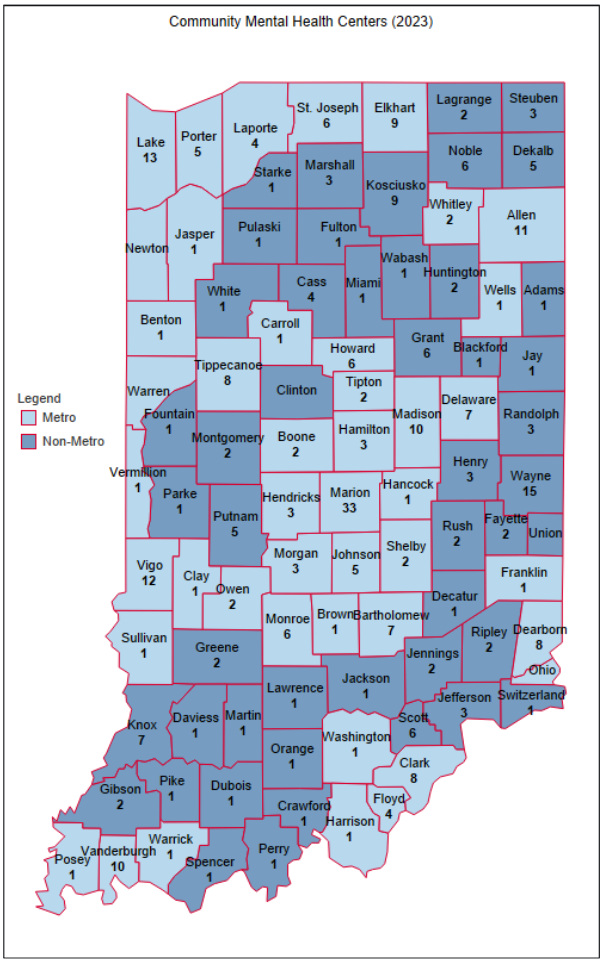
Provider	Year	Total # of CMHC Satellite Sites	# of Counties with Available CMHC Satellite Sites			# of Counties with No CMHC Satellite Sites		
			Total	Metro	Non-Metro	Total	Metro	Non-Metro
CMHC (Satellite Sites)	2020	97	92	44	48	0	0	0
	2021	220	87	40	47	5	4	1
	2022	231	87	40	47	5	4	1
	2023[90]	324	87	41	46	5	3	2

Source: Annual PAA, 2020 – 2023.

Exhibit V.61, below, visualizes the number of CMHC satellite sites across the state. Marion County reported the largest number of CMHC in 2023 (33 sites). Non-metro counties tended to have fewer CMHC satellite sites, although some non-metro counties were outliers (e.g., Wayne, which reported 15 sites, and Kosciusko, which reported nine CMHC sites). The five counties that did not have a CMHC site in 2023 included Newton, Ohio, and Warren (counties designated as metro) and Clinton and Union (counties designated as non-metro). Between 2022 and 2023, Monroe County began reporting 6 CMHC sites (compared to none in 2022). Conversely, Clinton County reported one CMHC location in 2022 but reported none in 2023 (see **Exhibit E.42** in **Attachment E** for 2022 provider map). Newton, Ohio, Union, and Warren reported no CMHC sites in both 2022 and 2023.

[90] Prior to 2023, the state only reported CMHC satellite locations that provided MH-related services. Beginning in 2023, the state reported all CMHC satellite locations without differentiating among sites providing MH services. Thus, growth in CMHCs in 2023 cannot be compared to prior years.

Exhibit V.61: Number of Crisis Services by County – CMHC Satellite Sites (2023)



Source: Annual PAA, 2023.

E.4. Findings and Recommendations

This section provides a summary of the findings by short- and long-term outcomes identified in the Goal 3 logic model. Summaries integrate quantitative and qualitative (when appropriate) to provide evidence in support of the hypothesis. Recommendations for additional actions or data are also listed.

Hypothesis
The SMI demonstration will result in improved availability of crisis stabilization services throughout the state.

Increased Availability and Access to Crisis Services

Quantitative and qualitative findings demonstrate Indiana's commitment to improving the availability of crisis stabilization services. Since 2020, the state has increased both the number of Medicaid beneficiaries receiving crisis services as well as the number of CSUs, MCU/MRSS, IOP and partial hospitalization services, psychiatric hospitals that qualify as IMDs, and CMHC satellite sites. Additionally, the state has implemented the 988 Indiana Crisis and Suicide Lifeline and expanded the number of CCBHCs.[91] Despite these promising findings, opportunities to

[91] FSSA received 2-year SAMHSA CCBHC Expansion grants in FY18-FY21 which allowed facilities to build capacity for crisis services and implement provider training.

increase crisis care across the state exist. For example, geographical gaps in availability of crisis services (CSU, MCU/MRSS, and RMHT) largely occur in non-metro counties and impact the southwestern and eastern areas of the state. Similarly, psychiatric hospitals tend to be concentrated in metro counties.

Increasing availability and access to crisis stabilization services across the state is a multi-year strategy, and state officials noted continued action in 2024 (e.g., increasing CSUs, designating more MCU/MRSS, expanding CCBHCs). As crisis stabilization services are implemented, state efforts to monitor ED diversion and ensure sustainment will be important to assess goal achievement. Additionally, given the elimination of the Be Well line, state efforts for absorption of non-crisis MH events should be considered to minimize burden on 988 resources. Further, as 988 evolves, evaluating beneficiary experiences may support further improvements to statewide crisis care efforts.

Recommendations

- Continue to build crisis stabilization services across the state, particularly in non-metro areas, with consideration for how these services will be sustained in the future.
- Identify strategies and resources to manage non-crisis MH events.
- Consider conducting surveys with beneficiaries to assess experiences and satisfaction in support of continuous improvement.

F. Goal 4: Improved access to community-based services to address the chronic MH care needs of beneficiaries with SMI including increased integration of primary and behavioral health care.

As stated in **Section II.D**, fragmentation between the general medical and behavioral health sectors is widely considered to be a significant contributor to the poor overall health outcomes associated with SMI populations.[92] Treatment options that span the entire continuum of care are needed for individuals living with SMI. Indiana implemented several activities to increase community-based services for MH during the waiver extension. As stated previously, many of these activities overlap with other demonstration goals and findings derived were aligned as appropriate. Goal 4 examines access to community-based services for MH and behavioral health integration. Quantitative analyses focused on three community-based services: outpatient rehabilitation services (including targeted case management), HCBS/LTSS, and/or outpatient MH services. Qualitative data specific to provider capacity, state-based strategies to increase access and behavioral health integration, and efforts to reduce stigma as well as increase early engagement were incorporated to contextualize quantitative findings and assess the impact of short- and long-term outcomes associated with Goal 4 (**Section II, Exhibit II.9**).

As stated in **Section I.G**, the PHE (which began in March 2020) has caused substantial changes to state policies, service utilization and provider availability, and will have short- and long-term

[92] Breslau, J., Sorbero, M. J., Kusuke, D., Yu, H., Scharf, D. M., Hackbarth, N. S., & Pincus, H. A. (2019, March 28). *Primary and behavioral health care integration program: Impacts on Health Care Utilization, cost, and quality*. Office of the Assistant Secretary for Planning and Evaluation. Retrieved April 22, 2022, from https://aspe.hhs.gov/reports/primary-behavioral-health-care-integration-program-impacts-health-care-utilization-cost-quality-0

impacts on Indiana's health care. Social distancing, prioritization of health care resources, and workforce capacity have likely affected treatment access. Given that both the waiver (2020) and the first half of the waiver extension (2021-2023) coincided with the COVID-19 PHE, findings likely reflect both the impact of COVID-19 related policy changes and activities as well as demonstration impacts. Consequently, any observed changes should be interpreted with caution as findings may be confounded by the impact of the PHE.

Exhibit V.62 describes the hypothesis, RQs, outcome measures, data sources, and analytic approach used for the evaluation of Goal 4.

Exhibit V.62: Goal 4 Research Questions, Outcome Measures, Data Sources, Analytic Approach, and Evaluation Time-Periods

Hypothesis: Access of beneficiaries with SMI to community-based services to address their chronic MH care needs will improve under the demonstration, including through increased integration of primary and behavioral health care.				
Research Questions	**Outcome Measure(s)**	**Data Sources**	**Analytic Approach**	**Evaluation Time-Period(s)**
Primary RQ 4.1: Does the demonstration result in improved access of beneficiaries with SMI to community-based services to address their chronic MH care needs?	Proportion of beneficiaries with SMI who use mental-health-related (1) outpatient rehabilitation and targeted case management services, (2) HCBS/LTSS services, and (3) outpatient MH services.	• Enrollment data (2018-2023) • Claims/encounter data (2018-2023)	• Descriptive quantitative analysis of trends over time during the demonstration • Interrupted time series analysis	• **Intervention Period:** Waiver extension (2021-2023) vs. **Reference Period:** Pre-demonstration (2018-2019) • *Descriptive and ITS sensitivity analyses include Waiver (2020) in intervention period.*
Subsidiary RQ 4.1a: To what extent does the demonstration result in improved availability of community-based services needed to comprehensively address the chronic MH needs of beneficiaries with SMI?	• Number of: ▪ Psychiatrists and other MH practitioners authorized to prescribe (overall and Medicaid-enrolled) ▪ Medicaid-enrolled CMHCs ▪ FQHCs that offer behavioral health services. • Satisfaction Ratings: MH quality of care	• State administrative data (2020-2023) collected via the PAA and additional updates received in 2024. • DMHA-conducted MHSIP Survey (2020-2022; data unavailable for 2023)	Descriptive quantitative analysis of trends over time during the demonstration	• **PAA:** Waiver (2020) and Waiver Extension (2021-2023); examined change in provider availability over each year in which data were available • **MHSIP Survey:** Waiver (2020) and Waiver extension (2021-2022)

Hypothesis: Access of beneficiaries with SMI to community-based services to address their chronic MH care needs will improve under the demonstration, including through increased integration of primary and behavioral health care.				
Research Questions	**Outcome Measure(s)**	**Data Sources**	**Analytic Approach**	**Evaluation Time-Period(s)**
Primary RQ 4.2: Does the integration of primary and behavioral health care to address the chronic MH care needs of beneficiaries with SMI improve under the demonstration?	• Demonstration activities or their components or characteristics that stakeholders identify as most effective in the integration of primary and behavioral health care to address the chronic MH care needs of beneficiaries with SMI. • Obstacles that stakeholders identify as hindering the effectiveness of the demonstration in the integration of primary and behavioral health care to address the chronic MH care needs of beneficiaries with SMI.	KII with beneficiaries, state officials, MCEs, providers, and advocacy organizations	Qualitative analysis to identify themes associated with the effectiveness of demonstration activities for the integration of primary and behavioral health care to address the chronic MH care needs of beneficiaries with SMI.	• **KIIs conducted in:** 2020, 2023, and 2024; discussed topics since the Waiver implementation (2020) and through the first half of the Waiver extension (2021-2023)

Quantitative Analysis Approach

Claims/Encounter-Based Analyses (Primary RQ 4.1)

Analytic Population. Analyses were conducted for beneficiaries in the SMI beneficiary roster population who had at least 10 months of SMI waiver eligible Medicaid coverage in each respective measurement year following their diagnosis. Restricting the analytic population to this subset of beneficiaries allowed for similar "exposure" periods (i.e., periods of time in which beneficiaries may have received community-based services covered by Medicaid) across all measurement years. This is particularly important when comparing years fully covered by the COVID-19 PHE (i.e., 2021 and 2022) during which Medicaid coverage was expanded and no beneficiaries were disenrolled, versus other years (in which Medicaid beneficiaries had chances of having gaps in their Medicaid enrollment).

Metrics. The *participation rate* is the proportion of beneficiaries receiving a specific service at least once in the year. Participation rates were calculated for three community-based services: outpatient rehabilitation (including targeted case management services); HCBS/LTSS, and outpatient MH using the analytic population. Participation rates measured the proportion of SMI beneficiaries in the roster population that used one of the latter community-based services. Specifically:

- *Outpatient rehabilitation services (including targeted case management services*): The proportion of SMI beneficiaries in the measurement year who had at least one paid claim for outpatient rehabilitation services related to MH with a service start date within the year.

- *HCBS/LTSS*: The proportion of SMI beneficiaries in the measurement year who had at least one paid claim for MH related HCBS or LTSS services with a service start date in the measurement year.
- *Outpatient MH services*: The proportion of SMI beneficiaries in the measurement year who had at least one paid claim for MH related outpatient MH services with a service start date in the measurement year.

Additionally, the *overall community-based services participation rate* was calculated. The *overall community-based services participation rate* is the proportion of the analytic population that had at least one paid claim in the measurement year related to any of the community-based service types listed above. Starting in 2020, with the COVID-19 PHE, the state expanded access to services by allowing care delivered using telehealth services.[93] Hence participation rates calculated for 2020 – 2023 include telehealth claims/encounters. Community-based services were identified based on the outpatient and professional fee schedules used by the FSSA with MH-related diagnoses for the evaluation period (2018 - 2023). MH-related diagnoses were identified using the HEDIS VSD's MH Diagnosis value sets. For additional details regarding metric specification and identification of the services, see **Attachment D**.

Analysis Methods. Annual participation rates were calculated to examine trends over time. Participation rates were calculated for the analytic population as well as by key beneficiary sociodemographic characteristics (e.g., SMI diagnosis history, gender, age, race, ethnicity, geographic location [metro/non-metro], Medicaid coverage status indicators [i.e., participation in HIP and Medicare/Medicaid dually eligible], and other chronic health conditions). In addition to comparing trends over time, ITS models were used to estimate changes in beneficiaries' community-based service participation rates between the pre-demonstration time-period (2018 and 2019) and the waiver extension (2021 - 2023) while adjusting for beneficiary characteristics. These logistic regression models, one for each metric (outpatient rehabilitation services, HCBS/LTSS, outpatient MH services, and any community-based services, respectively), estimated the likelihood of a beneficiary with SMI utilizing the community-based service at least once during a given year. The pre-demonstration time-period (2018 and 2019) was used as a reference period to examine change across the waiver extension (2021 - 2023) relative to the pre-demonstration. The regression models also controlled for benefit year as well as beneficiary SMI diagnosis and relevant beneficiary sociodemographic characteristics (e.g., gender, age, race, ethnicity, geographic location [metro or non-metro]), Medicaid enrollment characteristics (i.e., identified as Medicare/Medicaid dually eligible), and selected chronic conditions. Subsequently, the estimated ORs for each of the factors from the estimated models provided the relative likelihood of participation.

The findings are organized by research questions and relevant outcome measures identified in the logic model for the Goal (**Section II**). Based on factors including data availability, only select outcomes were identified in the CMS-approved Evaluation Plan. Any outcome that was identified in the logic model but was not included in the Evaluation Plan have been noted in the respective sections.

[93] https://provider.indianamedicaid.com/ihcp/Publications/providerCodes/Telehealth_Services_Codes.pdf

Provider Availability Assessment Analyses (Subsidiary RQ 4.1a)

Analytic Population. Analyses focused on Medicaid providers who delivered community-based MH services. The state first implemented the PAA during the waiver (2020), and data are, therefore, only available from 2020 to 2023.[94]

Metrics. The primary metrics used for assessing community-based mental health provider availability were the total number of providers across the state, including:

- Practitioners authorized to prescribe (overall and Medicaid-enrolled)
- Medicaid-enrolled CMHCs
- FQHCs that offer behavioral health services.

Analysis Methods. Descriptive statistics (e.g., total number of providers and number of counties having specific providers) were calculated to understand the state's behavioral health provider workforce and spread. Each county was also designated as metro or non-metro using the RUCC, and provider availability was examined by the RUCC designation. This data was transformed into county maps to identify potential service gaps.

The findings are organized by research questions and relevant outcome measures identified in the logic model for the goal (**Section II**). Based on factors including data availability, only select outcomes were identified in the CMS-approved Evaluation Plan. Any outcomes that were identified in the logic model but were not included in the Evaluation Plan have been noted in the respective sections.

F.1. Does the demonstration result in improved access of beneficiaries with SMI to community-based services to address their chronic MH care needs? (Primary RQ 4.1)

Increased Availability and Access to Community-Based MH Treatment Providers, Including Integration of Primary Care and Behavioral Health Services

The participation rate, or proportion of beneficiaries receiving any MH-related community-based services, decreased between 2018 and 2023 (**Exhibit V.63**). During the pre-demonstration (2018 – 2019) the participation rate for MH-related community-based services declined considerably – by 18.0 percentage points (from 87.9% to 69.9%). The declining trend continued but slowed during the waiver and waiver extension. In 2020 (waiver), over half (60.4%) of the SMI beneficiary roster population was receiving a MH-related community-based service – a decrease of 9.5 percentage points from 2019. During the waiver extension (2021 – 2023), the participation rate continued to decline over time: 56.0% in 2021 (decrease of 4.4 percentage points from 2020), 51.0% in 2022 (decrease of 5.1 percentage points from 2021), and 49.4% in 2023 (1.5 percentage points decrease from 2022).

Declines in participation rates were unexpected given that SMI is often persistent and chronic, requiring ongoing treatment and support. These findings could be attributable, at least in part, to

[94] In instances when provider types or services were changed (e.g., definition of counting providers based on site location instead of business entities), added, or unavailable, findings have been caveated or otherwise marked as not available.

the cumulative definition of the SMI beneficiary roster, which resulted in large increases in the SMI analytic population over the evaluation period – i.e., increasing more than 4 times from 43,705 beneficiaries in 2018 to 203,040 beneficiaries in 2023. Notably, while the proportion of beneficiaries receiving services (participation rate) decreased, the total number (absolute counts) of beneficiaries receiving MH-related services more than doubled (i.e., increased by 161.3%) throughout the evaluation period (**Attachment E, Exhibit E.43**). For example, in 2018, during the pre-waiver period, 38,412 beneficiaries received MH-related community-based services. The number of beneficiaries receiving MH-related community-based services increased to 66,955 in 2020 – the first year of the waiver and also the first year in which the State expanded coverage to include telehealth claims/encounters – and increased further, to 100,355 beneficiaries, in 2023. Hence, access to community-based mental health services improved as the demonstration evolved.

Additional analyses may be warranted to better understand observed decreases in the participation rate for MH-related community-based services. It is possible, that a proportion of beneficiaries in the roster may have experienced improvement in and/or stabilization of their symptoms and consequently not required either the same level of care or treatment intensity over time (e.g., a beneficiary could have completed more intensive MH treatment within a year after their initial SMI diagnosis and no longer required outpatient MH services).

Additionally, beneficiaries with SMI may receive care in other treatment settings (e.g., primary care). For example, patients with MDD, commonly receive treatment in primary care treatment settings managing their conditions solely with pharmacological treatment[95, 96] Given that beneficiaries with MDD accounted for the largest proportion of those included in the SMI beneficiary roster, ranging from 49.8% in 2018 to 58.4% in 2023 (**Attachment E, Exhibit E.3**), participation rates for MH-related community services (defined as outpatient rehabilitation services, HCBS/LTSS, outpatient MH services) may provide an incomplete assessment of access to community-based MH-related services. As noted previously, the majority of beneficiaries (90% and above) included in the roster population used health care services (excluding dental or pharmacy services) annually from 2018 - 2023, suggesting that those in the roster continued to receive health care in subsequent years (**Exhibit V.2**; **Attachment E, Exhibit E.1**). Additional analyses could, therefore, examine the relationship between first SMI diagnosis (and type of SMI condition), utilization of services using an expanded definition of care setting to include primary care, and treatment modality (e.g., pharmacologic treatment only versus other nonpharmacologic treatment) over time. Such analyses may help to explain decreases in observed MH-related community-based services participation rates and help the state understand whether and to what extent beneficiaries with SMI use various treatment settings and modalities to manage their conditions.

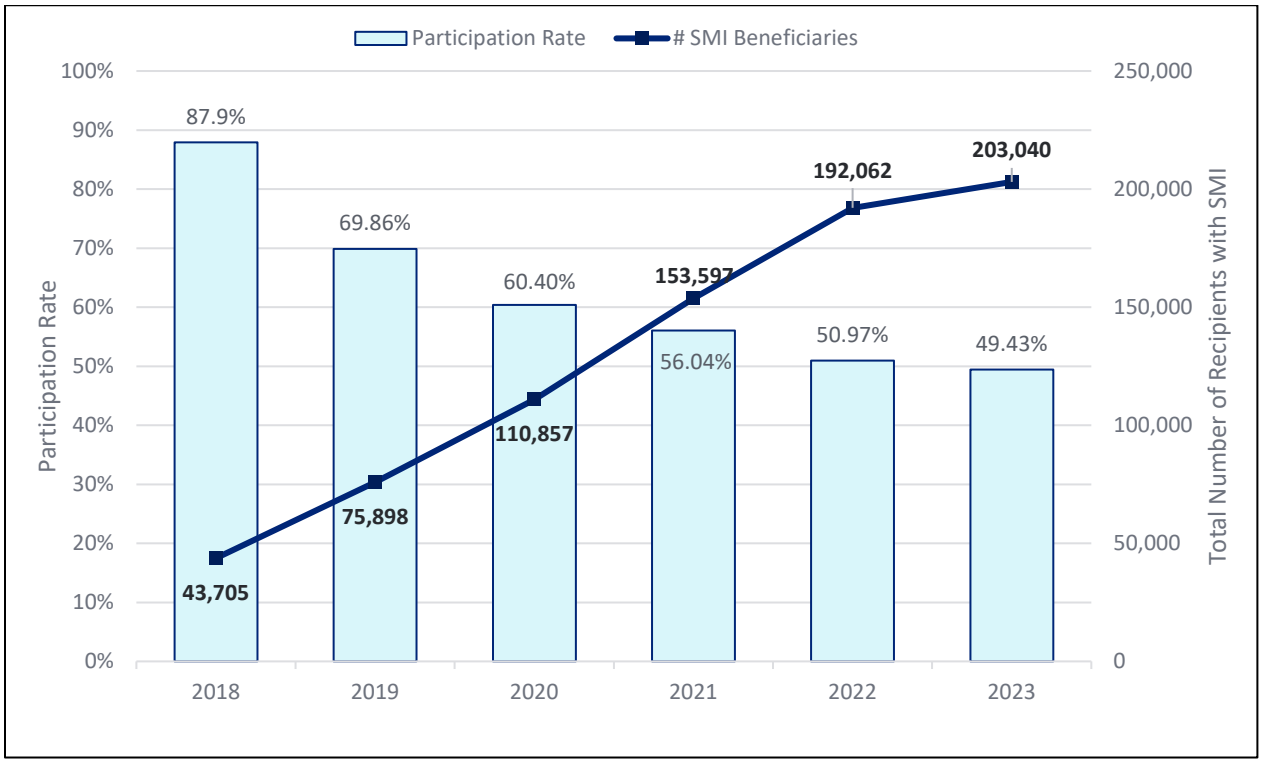
It is also possible that work force shortages impacted the availability of community-based services yielding lower participation rates. The state could consider additional workforce studies

95 Williams, M.D., Shah, N.D., Wagie, A.E., Wood, D.L., & Frye, M.A. (2011). Direct costs of bipolar disorder versus other chronic conditions: An employer-based health plan analysis. *Psychiatric Services*, *62*(9), 1073-1078. https://doi.org/10.1176/ps.62.9.pss6209_1073

96 Pizzicato, L.N., Xie, R.Z., Yang, Y., Grabner, M., Chapman, R.H. (2023). Real-world treatment modalities, health care resource utilization, and costs among commercially insured patients with newly diagnosed major depressive disorder in the United States. *Journal of Managed Care & Specialty Pharmacy*, *29*(6), 614-625. https://doi.org/10.18553/jmcp.2023.29.6.614

to examine how provider capacity (e.g., number of providers, waiting time, staff turnover) in relation to beneficiary demand changed over time and whether gaps contributed to lower participation rates.

Exhibit V.63: Participation Rate for MH Related Community-Based Service Among Beneficiaries with SMI and 10+ Months of Waiver-eligible Medicaid Enrollment After First SMI Diagnosis (2018 – 2023)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

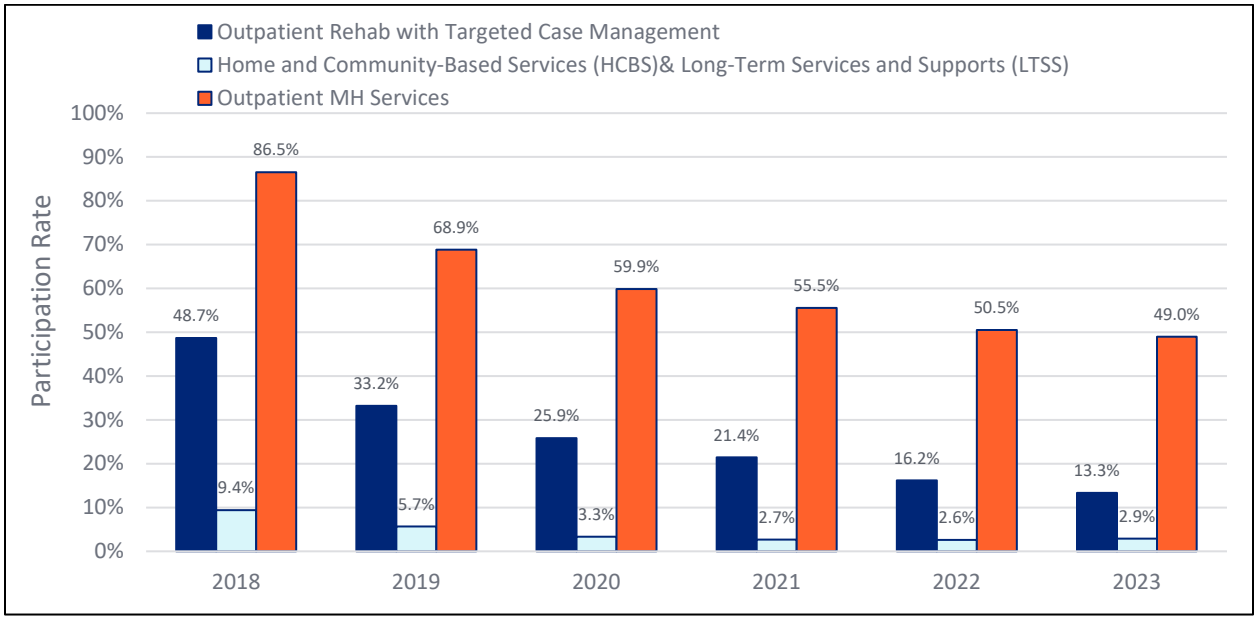
Between 2018 and 2023, outpatient MH services had the highest participation rate (i.e., of the beneficiaries who received community-based services, 99.0% used outpatient MH services) followed by outpatient rehabilitation services. The proportion of beneficiaries receiving outpatient rehabilitation services decreased from 48.7% in 2018 to 13.3% in 2023. A smaller proportion of beneficiaries used HCBS or LTSS during the evaluation period compared to the other types of community-based MH services. Across the years, the participation rate for each of these service types followed similar patterns to those observed for overall MH-related community-based services (**Exhibit V.64**):

- Outpatient rehabilitation services (including targeted case management services): In 2018, 48.7% of beneficiaries received rehabilitation services. In 2019, the rate decreased by 15.5 percentage points. During the waiver period, the participation rates declined across the years (from 21.4% in 2021 to 13.3% in 2023). In contrast, the total number of beneficiaries who received outpatient rehabilitation services increased between the pre-wavier period (from 21,290 beneficiaries in 2018) to 2021 (n = 32,903 beneficiaries) but decreased thereafter (n = 31,050 in 2022 and n = 27,093 in 2023).

  - Declines were expected as services, such as crisis intervention, IOT, and peer recovery were available (starting in 2018) for all beneficiaries rather than only those that had a diagnosis which qualified for MRO services.

- HCBS/LTSS: Participation rates were lower (i.e., under 10% in each year) in comparison to the other services. The participation rate for HCBS/LTSS decreased by 3.8 percentage points between 2018 and 2019 (pre-demonstration) and 2.4 percentage points between 2019 and 2020 (waiver). Participation rates remained relatively stable between 2021 and 2023. The total number of beneficiaries receiving HCBS/LTSS increased over time from 4,121 beneficiaries in 2018 to 5,865 beneficiaries in 2023.
- Outpatient MH services: In 2018, 86.5% of beneficiaries received rehabilitation services. In 2019, this participation rate decreased by 17.7 percentage points. During the waiver extension, the participation rate continued to decline across the years (from 55.5% in 2021 to 49.0% in 2023). The total number of beneficiaries with SMI receiving outpatient MH services, however, increased each year during the evaluation period, from 37,814 beneficiaries in 2018 to 99,522 beneficiaries in 2023 (a 163% increase).
  - Between 2018 and 2023, outpatient MH services had the highest participation rate among the SMI beneficiary roster population (ranging from 86.5% in 2018 to 49.0% in 2023) followed by outpatient rehabilitation and targeted case management services.

Exhibit V.64: Participation Rate Across Types of MH-Related Community-Based Service Among and 10+ Months of Waiver-eligible Medicaid Enrollment After First SMI Diagnosis (2018 – 2023)



Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Changes in participation rates were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time (see **Attachment E, Exhibit E.48**). Findings indicated that beneficiaries were significantly less likely to use services during the waiver extension relative to the pre-demonstration (all services = OR: 0.27, CI: 0.26 – 0.28; outpatient rehabilitation = OR: 0.75, 95% CI: 0.72 – 0.78; HCBS/LTSS = OR: 0.23, 95% CI:

0.21 – 0.26; outpatient MH = OR: 0.30, 95% CI: 0.28 – 0.31). In addition, there was a significant interaction between the intervention period indicator and time, which indicated that participation rates continued to decline over time. for all services (except HCBS/LTSS).[97] However, the rate of decline slowed during the waiver extension period, as indicated by the estimated ORs of the joint effect of time and the waiver intervention for all community-based services and individual community-based services. [98]

Although claims/encounter data-based analyses indicated that participation rates for overall MH-related community-based services (and subtypes) decreased between 2018 and 2023, of the beneficiaries interviewed in 2024, most reported receiving MH or SUD care in an outpatient setting (88%; n=22 out of 25) during the waiver extension (2021 - 2023).[99] Of those who received MH or SUD care, three-quarters reported satisfaction (77%; n=17) with care (i.e., very satisfied or somewhat satisfied). Interviewees indicated that provider support and access to medication contributed to their satisfaction. Some interviewees (n=3) indicated that insurance coverage issues (e.g., insufficient number of allowed therapy sessions) impacted their satisfaction.

Sociodemographic Subgroups. In addition to overall trends, differences in participation rates and trends by select beneficiary subgroups were also examined. The participation rates in overall MH-related community-based services, as well as in specific services such as outpatient rehabilitation with targeted case management, HCBS & LTSS, and outpatient MH services, generally exhibited similar trends across most sociodemographic subgroups (**Attachment E**, **Exhibit E.47**). Notable findings include:

- Male beneficiaries had slightly higher participation rates (1.3 percentage points higher in 2019) than female beneficiaries during pre-demonstration period but had slightly lower rates during waiver extension (between 3.1 and 4.5 percentage points). Controlling for time and other factors, males were 17% less likely (OR: 0.83, 95% CI: 0.82 – 0.84) to receive at least one community-based service compared to females. This effect was primarily driven by utilization of the outpatient MH services; males were 18% less likely to receive outpatient MH services compared to females (OR: 0.82, 95% CI: 0.81 – 0.83).
    - In contrast, males, were 8% more likely (OR: 1.08, 95% CI: 1.06 – 1.09) to receive outpatient rehab and targeted case management services compared to females

[97] OR for all services (relative to 2018): decreased from 0.32 in 2019 to 0.14 in 2023; OR for outpatient rehabilitation services decreased from 0.55 in 2019 to 0.19 in 2023; OR for outpatient MH services decreased from 0.35 in 2019 to OR: 0.16 in 2023.

[98] For all community-based MH services (overall and for each service type), the participation rate OR for the pre-intervention*time interaction was smaller than that of the post-intervention*time interaction. For all services, the pre-intervention*time interaction OR was 0.32 (95% CI: 0.31-0.33), compared to 0.88 (95% CI: 0.87-0.89) for the post-waiver intervention period. For outpatient rehabilitation services, the OR for the pre-intervention*interaction was 0.55 (95% CI: 0.53-0.56), compared to 0.76 (95% CI: 0.75-0.76). For HCBS/LTSS services, the declining trend also significantly slowed down during the waiver extension years, with OR 1.05 (95% CI: 1.03-1.07), compared to 0.58 (95% CI: 0.55-0.60) before the waiver intervention. Similarly, the estimated OR of receiving outpatient MH services was 0.88 (95% CI: 0.88-0.89) during the waiver extension period, compared to during the pre-waiver period (OR: 0.35, 95% CI: 0.34-0.36).

[99] Beneficiaries interviewed in 2024 were asked to reflect on services utilized (rather than participation) across the waiver extension (2021-2023) rather than services each year. Consequently, recall bias should be considered when interpreting beneficiary interview findings.

(differences in participation rates ranged between 8.7 and 3.5 percentage points across the years).

- Black beneficiaries had slightly higher participation rates during pre-demonstration compared with White/Caucasian beneficiaries. However, during the waiver extension, Black beneficiaries had lower rates and experienced larger decreases in their participation rates. Between 2018 and 2023, the overall participation rate for community-based MH services decreased by 48.5 percentage points for Black beneficiaries compared to 38.1 percentage points for White/Caucasian beneficiaries. This trend was primarily driven by utilization of outpatient MH services (OR: 0.76, 95% CI: 0.74 – 0.77).
  - Black beneficiaries, however, tended to have slightly higher outpatient rehabilitation service participation rates compared to White/Caucasian beneficiaries (OR: 1.03, 95% CI: 1.01 – 1.06) – although the difference decreased over time.
- Beneficiaries with reported Hispanic ethnicity had lower participation rates compared to other beneficiaries (including non-Hispanic and individuals with unknown ethnicity). Overall, Hispanic beneficiaries were 18% less likely (OR: 0.82, 95% CI: 0.80 – 0.84) to receive MH-related community-based services, 43% less likely (OR: 0.57, 95% CI: 0.55 – 0.60) to receive rehabilitation services, and about 18% less likely to receive HCBS/LTSS (OR: 0.82, 95% CI: 0.75 – 0.89) or outpatient MH services (OR: 0.83, 95% CI: 0.80 – 0.85) compared to non-Hispanic beneficiaries and those with unknown ethnicity.
- A slightly higher proportion of beneficiaries residing in counties identified as non-metro areas received MH-related community-based services relative to those in counties identified as metro areas (on the average, around 2.3 percentage points lower across years). Controlling for the factors discussed previously, beneficiaries in non-metro areas were 12% more likely to receive any community-based services or outpatient MH services (all services, OR: 1.12, 95% CI: 1.10 – 1.13; outpatient MH services, OR: 1.11, 95% CI: 1.10 – 1.12) and 34% more likely to receive rehabilitation services (OR: 1.34, 95% CI: 1.32 – 1.36).
- Beneficiaries who were dually eligible had higher community-based services participation rates (overall and by service types) compared to non-dually eligible beneficiaries. Controlling for time and other factors (discussed above), dually eligible beneficiaries were 24% more likely to use any community-based services (OR: 1.24, 95% CI: 1.22 – 1.25), 66% more likely to use rehabilitation services (OR: 1.66, 95% CI: 1.64 – 1.69), 38% more likely to use HCBS/LTSS (OR: 1.38, 95% CI: 1.33 – 1.42), and 21% more likely to use outpatient MH services (OR: 1.21, 95% CI: 1.19 – 1.23).
- Beneficiaries with a diagnosis of schizophrenia only or with co-occurring SMI diagnoses had higher participation rates (overall and by each service type) for all years compared to other diagnosis groups (bipolar only, MDD only). As expected, beneficiaries with no chronic conditions tended to have the lowest participation rates (overall and by service type) and experienced the highest decline in participation over the years.

F.2. To what extent does the demonstration result in improved availability of community-based services needed to comprehensively address the chronic MH needs of beneficiaries with SMI? (Subsidiary RQ 4.1a)

Increased Availability and Access to Community-Based MH Treatment Providers, Including Integration of Primary Care and Behavioral Health Services

Psychiatrists and Other MH Practitioners Authorized to Prescribe. The number of psychiatrists and other MH practitioners authorized to prescribe remained similar between 2022 (1,265 total providers) and 2023 (1,274 total providers) (**Exhibit V.65**). However, the number counties with a psychiatrist or other MH practitioner authorized to prescribe decreased from 81 in 2022 to 73 in 2023. Additionally, the number of Medicaid-enrolled psychiatrists and other MH practitioners authorized to prescribe decreased from 1,080 to 842 between 2022 and 2023, and the number of counties with a Medicaid-enrolled provider decreased from 80 to 70.

The proportion of psychiatrists and other MH practitioners authorized to prescribe who were Medicaid-enrolled decreased from 85.3% (or 1,080 out of 1,265) in 2022 to 66.1% (or 842 out of 1,274) in 2023. In 2023, 70 counties (out of 92 overall and out of 73 with at least one provider) had at least one Medicaid-enrolled psychiatrist or other MH practitioner authorized to prescribe.

Exhibit V.65: Distribution of Community-based Services Providers Per County by Year – Psychiatrists and Other MH Practitioners Authorized to Prescribe, Overall and Medicaid-enrolled

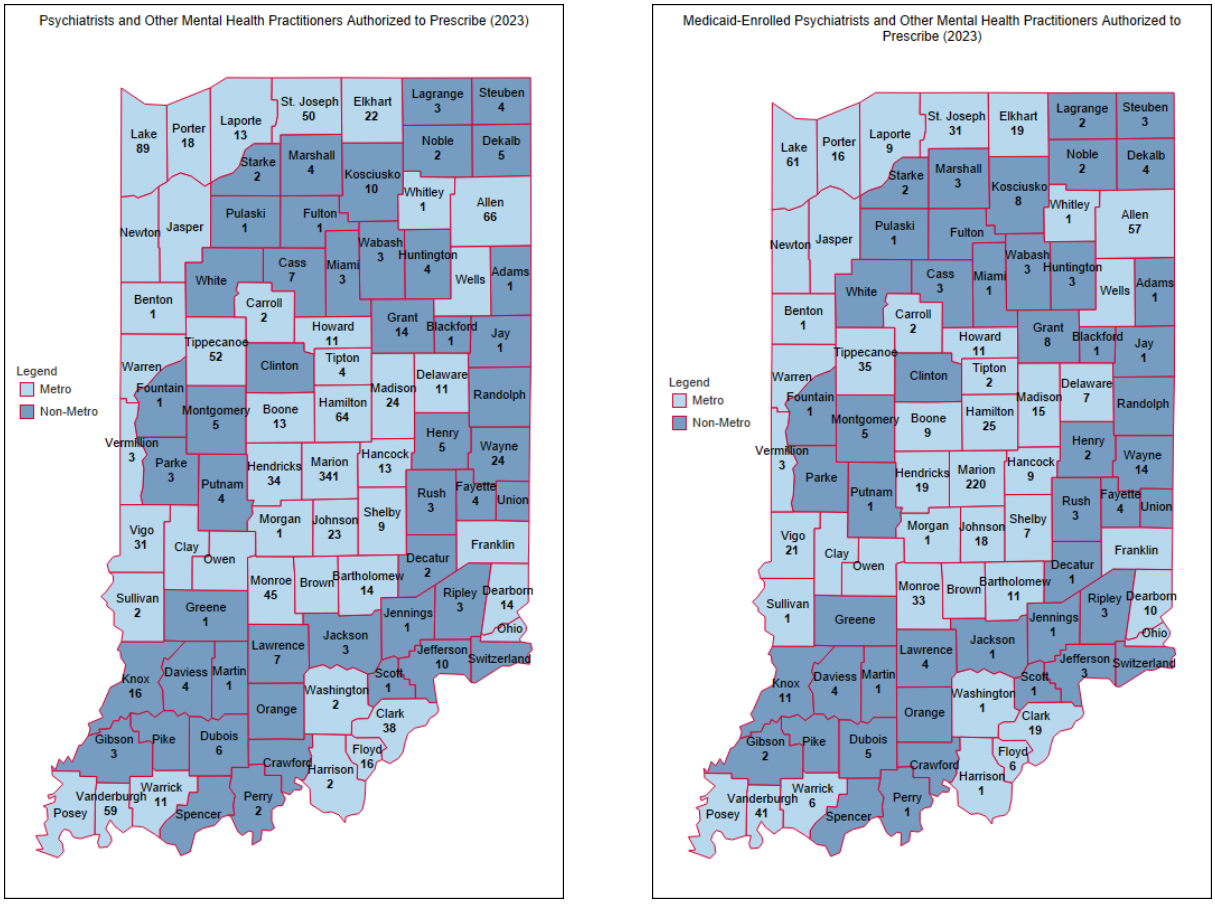
Provider	Year	Total # of Providers Across Counties	# of Counties with Available Provider			# of Counties with No Provider		
			Total	Metro	Non-Metro	Total	Metro	Non-Metro
Psychiatrists and Other MH Practitioners Authorized to Prescribe	2020	*	*	*	*	*	*	*
	2021	*	*	*	*	*	*	*
	2022	1,265	81	37	44	11	7	4
	2023	1,274	73	34	39	19	10	9
Medicaid-enrolled Psychiatrists and Other MH Practitioners Authorized to Prescribe	2020	*	*	*	*	*	*	*
	2021	*	*	*	*	*	*	*
	2022	1,080	80	37	43	12	7	5
	2023	842	70	34	36	22	10	12

* Counts for 2020 and 2021 were not available via the same reporting source/using the same counting methodology for 2020-2021. Therefore, counts for these years are not reported.

Source: Psychiatrists and Other MH Practitioners Authorized to Prescribe: Annual PAA, 2022 – 2023.
Medicaid-enrolled Psychiatrists and Other MH Practitioners Authorized to Prescribe: State-provided administrative data, 2022 (Updated November 2024); Annual PAA, 2023.

Metro counties tended to report more psychiatrists and other practitioners authorized to prescribe (overall and among those enrolled in Medicaid) compared to non-metro counties, although some non-metro counties were outliers with higher numbers of providers (e.g., Wayne; **Exhibit V.66**; **Attachment E, Exhibits E.51, E.53**). Among the 19 counties without a psychiatrist or other practitioner authorized to prescribe in 2023, 9 were non-metro counties, and ten were metro counties. Additionally, 22 counties (12 non-metro counties and ten metro counties) reported no Medicaid-enrolled psychiatrists or other practitioners authorized to prescribe.

Exhibit V.66: Number of Community-Based Service Providers – Psychiatrists and Other Practitioners Authorized to Prescribe, Overall and Medicaid-Enrolled (2023)



Source: Annual PAA, 2022 – 2023.

Medicaid-enrolled CMHCs. All CMHCs reported in **Section E.3** were also Medicaid-enrolled. Thus, as previously noted in **Section E.3**, the total number of (Medicaid-enrolled) CMHCs (n=24) remained the same between 2022 and 2023. Five counties did not have a Medicaid-enrolled CMHC location; these counties included Clinton (which previously had a CMHC location in 2022), Newton, Ohio, Union, and Warren.

FQHCs. The total number of FQHC sites offering behavioral health services increased from 245 in 2020 to 302 in 2022 and 300 in 2023 (**Exhibit V.67**). Although the total number of FQHC sites decreased slightly between 2022 and 2023, the number of counties with an FQHC increased from 56 to 60.

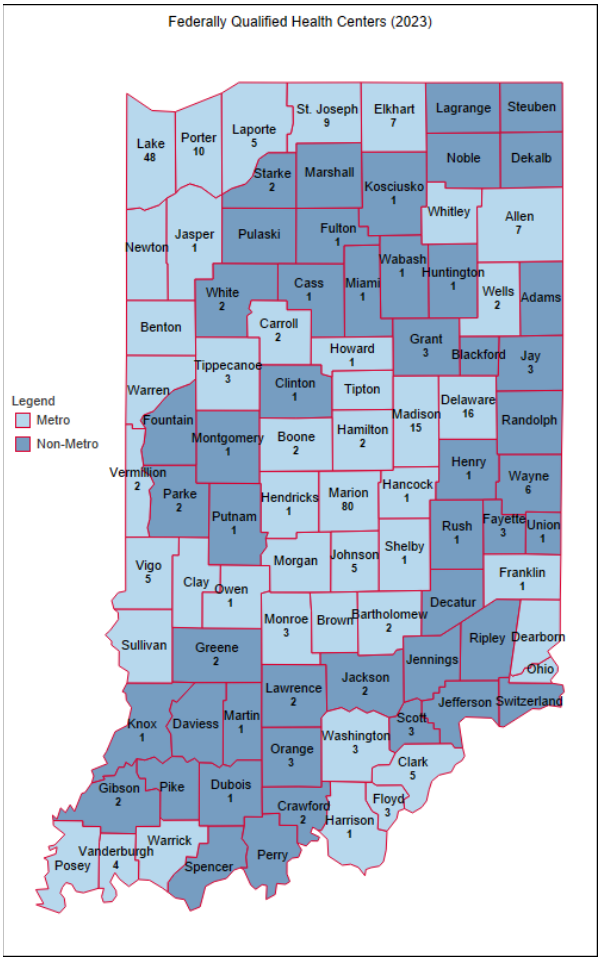
Exhibit V.67: Distribution of Community-based Services Providers Per County by Year – FQHCs

Provider	Year	Total # of Providers Across Counties	# of Counties with Available Provider			# of Counties with No Provider		
			Total	Metro	Non-Metro	Total	Metro	Non-Metro
FQHCs That Offer Behavioral Health Services	2020	245	48	28	20	44	16	28
	2021	275	51	29	22	41	15	26
	2022	302	56	31	25	36	13	23
	2023	300	60	31	29	32	13	19

Source: State-provided administrative data, 2020-2023 (Updated November 2024).

Exhibit V.68 visualizes FQHCs by county in 2023. Although the availability of FQHCs increased between 2020 (**Attachment E**, **Exhibit E.53**) and 2023, some areas (e.g., in the western and southeastern regions) continued to have gaps in FQHC availability.

Exhibit V.68: Number of Community-Based Service Providers by County – FQHCs (2023)



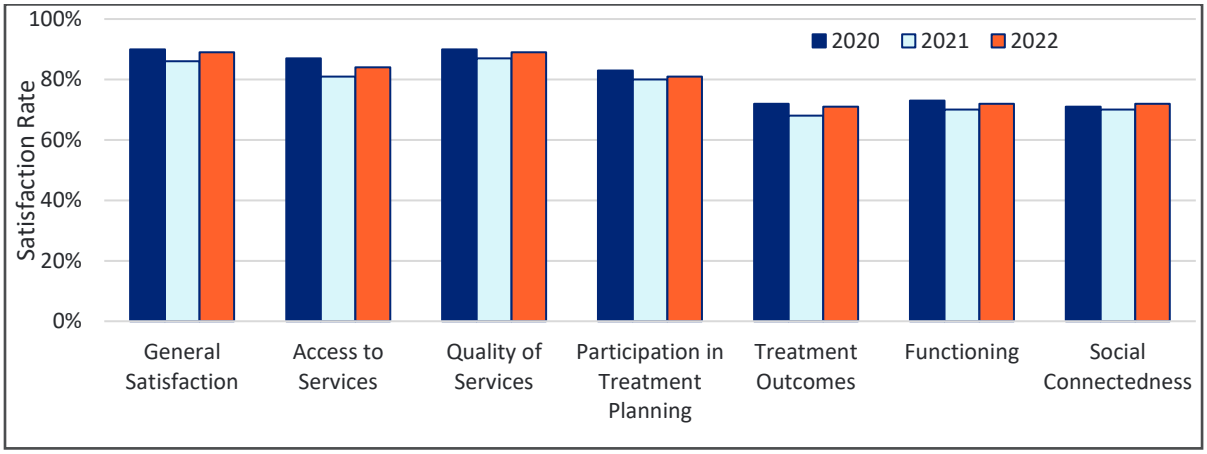
Source: State-provided administrative data, 2020-2023 (Updated November 2024).

Satisfaction

In addition to stakeholder feedback, findings from reports developed by DMHA based on data collected from the MHSIP survey were also examined.[100] The MHSIP survey is fielded annually to a sample of adults receiving services at each of the 24 CMHCs and 7 additional contracted providers in Indiana. The survey instrument captures patient perceptions of MH care received at the CMHCs using 36 questions (each question utilizes a Likert scale of possible responses from (1) Strongly Agree to (5) Strongly Disagree) grouped into 7 quality of care related performance domains – general satisfaction, access to services, quality of services, participation in treatment planning, treatment outcomes, functioning, and social connectedness. Refer to the MPA[9] for additional details on MHSIP survey convenience sampling methodology, instrument questions, and calculation of percentage of respondents reporting satisfaction for each domain.

The Interim Report used findings from the 2022 survey report.[101] The majority of respondents were White/Caucasian (80%), indicated ethnicity as not Hispanic (64%), identified as women (55%), and had received in-person care (87%). Respondent age varied, with most respondents ages 30 and older (69%). Approximately two thirds (63%) of respondents reported receiving services related to MH only, while half (48%) reported receiving treatment for one year or less. Findings for the waiver (2020) and most of the waiver extension (2021-2022), (**Exhibit V.69**) indicated that more than 80% of respondents reported being satisfied with care received, had access to care, and received quality care. Additionally, 85% of respondents indicated "I was able to get all the services I thought I needed," and 72% indicated "being able to see a psychiatrist when I wanted to." Findings were stable across the years studied and compared to the first SMI waiver implementation year (2020).

Exhibit V.69: Percentage of MHSIP Respondents Reporting Satisfaction with Quality of Care Measured Across 7 Domains: Satisfaction, Access to Care, Quality of Care, Treatment Planning, Outcomes, Functioning, and Social Connectedness



Source: MHSIP Adult Consumer Survey Reports 2020-2022

[100] DMHA conducts the MHSIP Survey for Adults and Youth, an annual consumer satisfaction surveys for all individuals who have been served by DMHA contracted providers.

[101] "Adult Individual Served Perception of Care MHSIP Survey 2022", prepared by InteCare, Inc. for Indiana FSSA DMHA. The "Adult Individual Served Perception of Care MHSIP Survey 2023" report will not be available until January 2025 and consequently was not included in the Interim Report.

F.3. Does the integration of primary and behavioral health care to address the chronic MH care needs of beneficiaries with SMI improve under the demonstration? (Primary RQ 4.2)

Increased Integration of Primary and Behavioral Health Care

Provider Capacity. Consistent with the 2018-2020 Summative Evaluation Report and MPA, state official interviewees confirmed that behavioral health provider network capacity is monitored annually and used to identify provider deficiencies and build provider recruitment plans. For example, in accordance with the state's approved §1915(b)(4) waivers for MRO services and §1915(i) programs, FSSA utilizes information gathered from analysis of Indiana's Medicaid Management Information System, site reviews, and beneficiary reports and complaints to evaluate the need to expand provider agencies and/or provide training and/or corrective actions to assist provider agencies in increasing efficiencies for timely access to services. When "timely access" is identified as a provider agency issue, the state uses a request for corrective action and provides technical assistance and training to assist the agency in correcting the issue. If the issue is not remediated satisfactorily, further sanctions are applied, up to and including decertification of the agency as an MRO or §1915(i) provider. Further, OMPP's Provider Relations contractor identifies underserved areas by calculating the ratio of providers to beneficiaries by county. Recruiting efforts are intensified in counties that are identified as not meeting Health Resources and Services Administration provider-to-beneficiary ratio standards. Utilizing the results of this analysis, the Provider Relations team outreaches to behavioral health providers who are not currently Medicaid enrolled. Additionally, FSSA collaborates with DMHA and the Indiana Department of Health (IDOH) to collect data on various provider settings to fully capture provider availability via the PAA (see **Sections V.E** and **V.F** for additional findings specific to provider capacity). Furthermore, MCEs are contractually required to meet network adequacy standards for behavioral health providers in accordance with 42 CFR §438.68. All MCEs stated that they met network adequacy standard requirements during CY2021 and CY2022.[102]

*Statewide strategies for increasing provider capacity, including integration of primary and behavioral health care***.** Consistent with findings from the 2018-2020 Summative Evaluation Report and MPA, Indiana recognized that the state's provider supply did not meet patient demand. Expanding the pool of available behavioral health providers is foundational for efforts to increase access, coordination, and integration with primary care. Consequently, since the demonstration began, Indiana initiated several key actions to increase provider supply (see bulleted list below). MCEs, providers, and advocacy organizations in 2024 noted that the supply of providers within Indiana is still inadequate and state officials continue to identify additional solutions for minimizing the gaps between supply and demand while maintaining best practices in care.

Indiana actions for increasing provider capacity across the waiver and waiver extension include:

- **Legislation and Billing System Infrastructure Changes**. To increase the state's capacity of MH Medicaid providers, the House Enrolled Act 1175 passed in the 2019 legislative session expanded access to behavioral health providers for Medicaid enrollees. Under this law, licensed clinical social workers (LCSW), licensed MH counselors (LMHC), licensed clinical addiction counselors, and licensed marriage and family therapists (LMFT) are eligible

[102] MCEs were not asked if they met network adequacy standards during the 2024 interviews.

providers and can certify a MH diagnosis and supervise a patient's treatment plan in outpatient MH or substance use treatment settings. Prior to this legislation, mid-level behavioral health practitioners were not eligible to independently enroll in Indiana Medicaid and were required to bill under the supervision of a health services provider in psychology (HSPP) or a psychiatrist.

With the enactment of the latter legislation, Indiana implemented infrastructure changes within their billing systems to enable mid-level provider enrollment. Enrollment began in Q1 of 2021. The enrollment of mid-level providers allows Indiana to reimburse and monitor the full scope of providers who offer MH services, populations served, location, and service type provided. This action positions FSSA to better identify gaps in service and address ongoing training and support needs.

- **Diversifying the Provider Pool.** Providers and advocacy organizations interviewed in 2024 noted that the provider pool has limited numbers of peers and bachelor level staff who have experience supporting SMI populations. One advocacy organization discussed the imbalance between peer advocates specializing in SUD versus peer advocates specializing in MH, stating: "There are over 20 peer organizations for SUD in Indiana. For MH peers, there are only two organizations." Given these challenges, the state sought to further expand the provider pool to include peers, small MH organizations, grassroots community organizations, and OBHPs. For example, the CPSP credential (issued and monitored by DMHA) was approved in 2023. Starting in 2024, the state will train 100 peers per month.
- **Workforce Initiatives Focused on Expansion and Retention.** The state offered funding for workforce initiatives through the Workforce Recruitment and Retention Innovation grant via American Rescue Plan Act (ARPA) funding. Through this funding, Indiana has awarded $14.25 million dollars to various programs and initiatives that address recruitment, training, workforce wellness, leadership, scholarships, apprenticeships, incentives for new hires, hiring and training peer workforce, inclusive hiring, supervisor training, money for interns, etc. Additional efforts pursued by the state include:
  - Focusing on early workforce development initiatives (talent pipeline expansion to better engage K-12 and higher education) to increase capacity.
  - Promoting and mapping of behavioral health workforce at the local level to better engage those with lived experience.
  - Implementing "workforce wellness" strategies to improve retention and support for existing workforce.
  - Prioritizing provider-driven skills development to improve retention and quality of care.
  - Improving compensation strategy to offset the high costs of higher education and improve pay equity for the workforce.

  Providers interviewed in 2024 noted several strategies for recruitment and maintaining staff including: used professional websites (e.g. LinkedIn, Indeed) to post provider opportunities; increased pay for hard to fill positions; partnered with universities to expand recruitment of bachelor level or higher providers; and expanded staff specific trainings.
- **PIPBHC Grant.** The purpose of the PIPBHC program is to: (1) promote full integration and collaboration in clinical practice between primary and behavioral health care; (2) support the

improvement of integrated care models for primary care and behavioral health care to improve the overall wellness and PH status of adults with SMI; and (3) promote and offer integrated care services related to screening, diagnosis, prevention, and treatment of MH and SUD, co-occurring PH conditions and chronic diseases. Indiana applied for the PIPBHC grant December 10, 2019, however the award was not granted to the state until March 23, 2021.

State officials in 2024 highlighted the challenges inherent to integrating primary care and behavioral health. Challenges identified include lack of alignment between the PIPBHC program and CCBHC grant, insufficient workflows for screening primary care conditions within MH settings, reticence for including the proposed list of primary care condition screens (e.g., tobacco-breath screening, waist circumference), and limited provider expertise for integrated care.

Of the beneficiaries interviewed in 2024, seven (28%) reported receiving integrated care in a primary care setting or preventative care setting. Interviewees indicated that care in one setting or provider coordination contributed to their satisfaction. Interviewees noted that including additional specialists into the integrated model would improve their care experience.

- **PCBHI and Integrated Care Entities.** FSSA, in partnership with IDOH, launched an initiative in 2012 to develop a statewide strategic plan to integrate primary and behavioral health care services in Indiana. Indiana's PCBHI efforts include the formation of a statewide stakeholder group, formalized definition for integration for Indiana, and the original creation of five subcommittees that spearheaded research and collaboration.

In addition, FSSA and IDOH established a process by which CMHCs, FQHCs, community health centers, and rural health clinics could become a state-certified, integrated care entity (ICE). ICE providers are required to provide care coordination that includes partnering with physicians, nurses, social workers, discharge planners, pharmacists, representatives in the education system, representatives of the legal system, representatives of the criminal justice system and others during any transition of care. The goals of this coordination include reducing unnecessary inpatient and ED use and increasing consumer and family beneficiaries' ability to manage their own care and live safely in the community.

- **The Behavioral and Primary Health Care Coordination Program.** Conceived under a separate §1915(i) SPA, the Behavioral and Primary Health Care Coordination program offers a service that consists of the coordination of health care services to manage MH, SUD, and PH care needs of eligible beneficiaries. This includes logistical support, advocacy, and education to assist individuals in navigating the health care system, and activities that help beneficiaries gain the access necessary to manage their physical and behavioral health conditions.

State Monitoring Metrics. Increased integration of primary and behavioral health care, screening, and health outcomes are monitored by the state (e.g., monitoring metric #23, 26, 29, and 30) and included in quarterly/annual CMS reports. As noted in **Section III**, metric specification varies between monitoring metrics calculated by the state and evaluation metrics calculated by the independent evaluator. For example, the population definition used for the evaluation differs from population definitions used to calculate monitoring metrics. Given that the evaluation design does not include re-calculating monitoring metrics 23, 26, 29, and 30 to use the evaluation population, the interim report does not include quantitative findings for this short-term outcome.

Early Identification and Engagement in Treatment

In October 2016, OMPP began coverage for annual depression screening. Providers are expected to use validated standardized tests for screening. These tests include, but are not limited to, the Patient Health Questionnaire (PHQ), Beck Depression Inventory, Geriatric Depression Scale, and Edinburgh Postnatal Depression Scale (EPDS). Coverage applies to all IHCP under Medicaid. The state has also focused on school-based initiatives to increase behavioral health integration. Indiana Medicaid allows enrolled school corporations reimbursement for Medicaid-covered services in an Individualized Education Program (IEP) or Individualized Family Service Plan. Medicaid-covered IEP services include occupational, physical, speech and applied behavior analysis therapy, hearing, nursing and behavioral health evaluation and treatment services as well as IEP-required specialized transportation. In addition, CMHCs across the state work in close collaboration with Indiana schools and school districts have memorandums of understanding with local CMHCs for the provision of behavioral health services. Through these partnerships behavioral health staff are co-located within the schools and provide behavioral health services to youth and their families.

Findings from the MPA noted that four of the five MCEs had strategies in place (e.g., screening initiatives to identify youth at risk for suicide; data reviews using the IHIE) to identify beneficiaries with a serious MH condition. All MCEs indicated that they have relationships with school-based health centers (SBHCs) either through a connection via an FQHC or through school-based administrators. Examples of engagement includes:

- Continued development of a team of school outreach specialists.
- A partnership to place emergency medication boxes in schools, including Naloxone.
- Behavioral health telehealth initiatives and various mobile offerings for school-aged, enrolled beneficiaries.

Vocational Rehabilitation Services and Supportive Employment. VRS are available statewide, in all regions of the state. Eligibility for VRS is determined in accordance with federal requirements at 34 CFR 361.42(a). Additionally, all applicants determined eligible for Social Security Disability or Supplemental Security Income are presumed eligible for VRS. Individuals receiving VRS have an Individualized Plan for Employment based on the requirements at 34 CFR 361.45, following an assessment for determining vocational rehabilitation needs. SE is available as a VRS. Through this service, individuals with the most severe disabilities are placed in competitive jobs with qualified job coaches/trainers to provide individualized, ongoing support services. Several of Indiana's CMHCs provide SE services for persons with SMI. These programs use a team approach for treatment, with employment specialists responsible for carrying out all vocational services from intake through follow-up. Job placements are community-based (i.e., not sheltered workshops, not onsite at SE or other treatment agency offices), competitive (i.e., jobs are not exclusively reserved for SE clients, but open to public), in normalized settings, and utilize multiple employers. The SE team has a small client to staff ratio.

Findings from the MPA described VRS and SE opportunities for beneficiaries. Opportunities highlighted included:

- Increased the number of programs that focused on skill development, job attainment, and financial autonomy. These programs were designed to increase socialization and enhance quality of life.
- Referred beneficiaries to external VRS and SE services.
- Developed public education efforts specific to individuals with first episode psychosis (e.g., assessment and referral strategies).
- Used an internal accredited clubhouse. The clubhouse focused on individual skill building and enabled individuals to gain employment opportunities and transition to independent living.

Stigma Reduction. All advocacy organizations interviewed in 2023 asserted stigma as a significant barrier for early identification and engagement for SMI beneficiaries. Advocacy organizations interviewed in 2024 noted that since COVID-19 Indiana residents have been more candid with topics related to MH (particularly among the younger generations) and are seeking treatment at greater rates. Advocacy organizations interviewed in 2023 and 2024 recommended that the state invest in the following strategies to support early identification and engagement in treatment for SMI beneficiaries:

- Build capacity for CCBHCs.
- Increase crisis response teams and build systems of care that focus on the whole person.
- Develop and implement public awareness campaigns to de-stigmatize behavioral health conditions and seeking treatment.
- Increase MH literacy specific to SMI and chronic conditions.

Although the Section 1115 SMI Demonstration Implementation Plan did not highlight action items focused on stigma reduction, the state has prioritized stigma reduction initiatives as an overarching strategy to encourage Indiana residents (rather than SMI beneficiaries) to engage in treatment. Several stigma reduction initiatives were started in the fall of 2022 and ended in the fall of 2023. These initiatives were initially constructed for broader populations between 9/2022 and 2/2023) and narrowed to SMI populations between 3/2023 and 9/2023.

- **Council for Youth Bartholomew County** (9/1/2022 to 2/28/2023): Increased MH awareness for youth and their families by decreasing the MH stigma and promoting family well-being. The Council trained 168 youth and 168 adults (Hispanic/Latino as well as Black, indigenous, and people of color (BIPOC)) in MH first aid. From 3/1/2023 – 9/30/2023, the Council provided MH services and resources to 325 Hispanic/Latino youth with SMI and 44 BIPOC youth with SMI.
- **Intouch Outreach** (9/1/2022 to 2/28/2023): Provided community outreach and educational resources to educate and raise awareness of MH stigma among Black communities. This 6-part speaker series reached a total of 575 individuals and covered a diverse population. From 3/1/2023 to 9/30/2023, InTouch Outreach and SMI Enterprise continued to provide community outreach and education (focused on MH stigma) and engaged a total of 249 persons with an SMI diagnosis.

- **Affiliated Service Providers (ASPIN)** (9/1/2022 to 2/28/2023): Provided a five-part webinar speaker series focused on addressing stigma for beneficiaries of the Black, Latinx, and lesbian, gay, bisexual, transgender, and queer (LGBTQ+) communities. From 3/1/2023 to 9/30/2023, ASPIN expanded the webinar series to nine parts and focused on addressing SMI stigma for beneficiaries of the Black/African American, Latinx, and LGBTQ+ communities, as well as immigrant and refugee populations.
- **Marion County Commission on Youth (MCCOY)** (9/1/2022 to 2/28/2023): Created community conversations and projects that addressed MH stigma while simultaneously addressing the disparity that BIPOC individuals face in relation to MH access, services, and stigma. MCCOY leveraged partnerships with Thrival Indy Academy and Allies of Indiana to provide evidence based best practices to youth and families, focused on stigma reduction in BIPOC communities. From 3/1/2023 to 9/30/2023, MCCOY expanded their target population to include youth and families impacted by SMI. Programs and services include resources for parents/caregivers focused on MH, as well as connections to clinicians who specialize in SMI.

F.4. Findings and Recommendations

This section provides a summary of the findings by short and long-term outcomes identified in the Goal 4 logic model. Summaries integrate quantitative and qualitative (when appropriate) to provide evidence in support of the hypothesis. Recommendations for additional actions or data are also listed.

Hypothesis

Access of beneficiaries with SMI to community-based services to address their chronic MH care needs will improve under the demonstration, including through increased integration of primary and behavioral health care.

Increased Availability and Access to Community-Based MH Treatment Providers, Including Integration of Primary Care and Behavioral Health Services

Throughout the waiver (2020) and waiver extension (2021 - 2023), Indiana has pursued several actions to increase treatment access and care coordination. Quantitative findings indicate that the state has increased CMHC satellite locations (from 220 to 324) and FQHC sites (from 275 to 300) between 2021 and 2023. However, while the total count of psychiatrists and other MH practitioners authorized to prescribe remained stable between 2022 (n=1,265) and 2023 (n=1,274), the number of counties with a psychiatrist or other MH practitioner authorized to prescribe decreased from 81 in 2022 to 73 in 2023. Moreover, the number of Medicaid-enrolled psychiatrists and other MH practitioners authorized to prescribe decreased from 1,080 to 842. The proportion of these practitioners who were Medicaid-enrolled decreased notably between 2022 and 2023. Of the 1,274 psychiatrists and other MH practitioners authorized to prescribe in 2023, 66.1% were Medicaid-enrolled, compared to 85.3% in 2022. A recent report by the HHS office of the Inspector General (2024) highlighted deficits in the numbers of behavioral health providers who actively serve Medicaid enrollees,[103] suggesting Indiana Medicaid-enrolled provider rates magnify a nationwide problem.

[103] Grimm, C.A. (March 2024). A Lack of Behavioral Health Providers in Medicare and Medicaid Impedes Enrollees' Access to Care. *Department of Health and Human Services Office of Inspector General*. https://oig.hhs.gov/documents/evaluation/9844/OEI-02-22-00050.pdf

Although the number of beneficiaries with SMI included in the roster increased from 2018 - 2023, the participation rate for overall MH-related community-based services declined. Declines in participation rates may be due to numerous factors including but not limited to: beneficiaries experiencing improvements and consequently not requiring either the same level of care or treatment intensity and/or using other treatment services (e.g., primary care) to manage their condition. Additionally, workforce shortages may also explain declines in participation rates, reducing the availability of community-based services. Qualitative findings compiled throughout the demonstration suggest that the supply of providers in Indiana continues to be inadequate for meeting the patient demand. These findings are not surprising and further reinforce nationwide priorities to improve access and availability by bolstering the behavioral health workforce.[104] Further research to better understand what is driving the declines is needed to further support the state in refining their strategy for goal achievement.

Satisfaction

Approximately two-thirds (63%) of respondents for the 2022 MHSIP survey report indicated receiving services related to MH only, while half (48%) reported receiving treatment for one year or less. Findings for the waiver (2020) and most of the waiver extension (2021 - 2022), (**Exhibit V.69)** indicated that more than 80% of respondents reported being satisfied with care received, had access to care, and received quality care. Additionally, 85% of respondents indicated "I was able to get all the services I thought I needed" and 72% indicated "being able to see a psychiatrist when I wanted to." Findings were stable across the years studied and compared to the waiver implementation year (2020). Beneficiaries with SMI interviewed in 2024 who reported receiving MH or SUD care in an outpatient setting during the waiver extension (2021 - 2023) also largely reported satisfaction (77%) with care.

Increased Integration of Primary and Behavioral Health Care

Throughout the waiver (2020) and waiver extension (2021 - 2023), Indiana has prioritized actions that focus on increasing provider capacity (e.g., applying legislation and billing system infrastructure changes, diversifying the provider pool, identifying underserved areas and conducting outreach efforts to increase the number of Medicaid enrolled providers, implementing workforce retention strategies, obtaining funds to support state-wide provider expansion [CMHCs, CCBHCs, and FQHCs]), reducing stigma (e.g., campaigns, training), and improving behavioral health integration (PIPBHC, PCBHI, The Behavioral and Primary Health Care Coordination Program). Increasing availability and access to community-based services including integration of MH and physical care is a multi-year strategy and dependent on several factors including a robust workforce, infrastructure, and seamless care coordination processes. As noted, many demonstration activities were delayed in 2020 and 2021 due to the COVID-19 PHE, and consequently, although most activities were implemented during the waiver extension, the time needed to detect an effect in long-term outcomes may not have been sufficient. Additional years of data are necessary to assess goal achievement.

[104] Biden-Harris Administration Launching Initiative to Build Multi-state Social Worker Licensure Compact to Increase Access to Mental Health and Substance Use Disorder Treatment and Address Workforce Shortages. *U.S. Department of Health and Human Services*. Retrieved from https://www.hhs.gov/about/news/2024/07/16/biden-harris-administration-launching-initiative-build-multi-state-social-worker-licensure-compact-increase-access-mental-health-substance-disorder-treatment-address-workforce-shortages.html

Early Identification and Engagement

Qualitative findings indicated that screening and engagement in treatment continue to be prioritized for beneficiaries with SMI during the waiver extension (2021 - 2023). Key actions include school-based initiatives to increase behavioral health integration, VRS and SE opportunities, and stigma reduction programs. Similar to other state activities, the latter actions are part of a multi-step strategy that is dependent on factors, such as partnerships, programmatic funding sustainment, and workforce capacity. Consequently, and consistent with other activities which experienced implementation delays due to the COVID-19 PHE, time needed to detect an effect in long-term outcomes may not have been sufficient.

Recommendations

- Conduct analyses of community-based and other relevant health care services (e.g., primary care) for MH care in relation to timing of first SMI diagnosis and by the SMI condition.
- Conduct studies to examine provider capacity (e.g., number of providers, waiting time, staff turnover) in relation to beneficiary demand to determine whether and to what extent gaps may have contributed to lower participation rates.
- Continue to build provider capacity across the SOC and throughout the state, with special emphasis on increasing the number of Medicaid behavioral health care providers.
- Continue to engage peers to support beneficiaries in navigating treatment and encourage engagement.
- Meet with providers, advocates, and state agencies (e.g. DOH; DOC) to identify strategies for increasing collaboration and minimizing barriers for accessing treatment services.
- Examine the impact of the state's stigma reducing efforts on engagement.
- Address barriers to behavioral health integration (e.g., enhance infrastructures to support care coordination, identify strategies to improve communications between providers and support information sharing).

G. Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.

As stated in **Section II.E**, individuals with SMI often use the behavioral health SOC as their principal setting for access to medical and social care.[105, 106, 107] As such, effective care coordination and integration in the community, following an acute care episode (e.g., care received in an ED, acute stays at hospitals) is a key strategy for improving health outcomes. Goal 5 assesses care coordination by examining ED and inpatient follow-up rates (i.e., the proportion

[105] Bartels SJ (2003). Improving the system of care for older adults with mental illness in the United States: Findings and recommendations for the President's new freedom commission on mental health. *American Journal of Geriatric Psychiatry*, 11, 486–497.

[106] De Hert M, Correll CU, Bobes J, Cetkovich-Bakmas M, Cohen D, Asai I, … Leucht S (2011a). Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care. *World Psychiatry*, 10, 52–77.

[107] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

of beneficiaries who received care in the community following an acute care episode calculated from claims/encounter data). Qualitative data specific to care coordination for acute care hospitals (e.g., EDs, short-term inpatient stays) and residential treatment facilities were incorporated to contextualize quantitative findings and assess the impact of short- and long-term outcomes associated with Goal 5 (**Section II, Exhibit II.11**). As stated in **Section I.G**, the PHE (which began in March 2020) has caused substantial changes to state policies, service utilization and provider availability and will have short- and long-term impacts on Indiana's health care. Social distancing, prioritization of health care resources, telehealth policy modifications, and workforce capacity have likely affected emergency visit utilization and care coordination for behavioral health care services. Given that both the waiver (2020) and the waiver extension (2021 - 2023) coincided with the COVID-19 PHE, findings for this time-period likely reflects both the impact of COVID-19 related policy changes and activities as well as demonstration impacts. Consequently, any observed changes should be interpreted with caution as findings may be confounded by the impact of the PHE.

Exhibit V.70 describes the hypothesis, RQs, outcome measures, data sources, and analytic approach used for the evaluation of Goal 5.

Exhibit V.70: Goal 5 Research Questions, Outcome Measures, Data Sources, Analytic Approach, and Evaluation Time-Periods

Hypothesis: The SMI demonstration will result in improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.				
Research Questions	**Outcome Measure(s)**	**Data Sources**	**Analytic Approach**	**Evaluation Time-Period(s)**
Primary RQ 5.1: Does the SMI demonstration result in improved care coordination for beneficiaries with SMI?	• Percentage of MH-related ED visits with a follow-up visit (with any provider) and a corresponding diagnosis of MH within 7 and 30 days of visit • Percentage of AOD dependence-related ED visits with a follow-up visit (with any provider) and a corresponding diagnosis of MH within 7 and 30 days of discharge • Percentage of MH-related inpatient stays with a follow-up visit (with any provider) and a corresponding diagnosis of MH within 7 and 30 days of discharge	• Claims/encounter data (2018-2023) • Enrollment data (2018-2023)	• Descriptive quantitative analysis of trends over time during the demonstration • Interrupted time series analysis	• **Intervention Period:** Waiver extension (2021-2023) vs. **Reference Period:** Pre-demonstration (2018-2019) • *Descriptive and ITS sensitivity analyses include Waiver (2020) in intervention period.*

Hypothesis: The SMI demonstration will result in improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.				
Research Questions	**Outcome Measure(s)**	**Data Sources**	**Analytic Approach**	**Evaluation Time-Period(s)**
Primary RQ 5.2: Does the SMI demonstration result in improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities? **Subsidiary RQ 5.2b**: How do demonstration activities contribute to improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities?	• Demonstration activities or their components or characteristics that stakeholders identify as most effective in improving continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities • Obstacles that stakeholders identify as hindering the effectiveness of the demonstration in improving continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities	KIIs with beneficiaries, state officials, MCEs, providers, and advocacy organizations	Qualitative analysis to identify themes associated with the effectiveness of demonstration activities for improving continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities	• **KIIs conducted in:** 2020, 2023, and 2024; discussed topics since the Waiver implementation (2020) and through the first half of the Waiver extension (2021-2023)

Quantitative Analysis Approach

Analytic Population. Changes in care coordination before and after the waiver extension period were calculated for the SMI beneficiary roster population.[108]

Metrics. Claims/encounter data was used to calculate the following 7-day and 30-day follow-up measures for each measurement year (2018 - 2023):

- 7- and 30-day follow-up rates after ED visit related to:
  - MH: Proportion of ED visits with a primary diagnosis related to MH during the measurement year for which the beneficiary had at least one follow-up visit with any provider within 7 days (or 30 days) of discharge. Metric referred hereafter as ED-FUM 7-days (or 30-days) for ED follow-up.
  - AOD Dependence: Proportion of ED visits with a primary diagnosis related to AOD dependence during the measurement year for which the beneficiary had at least one follow-up visit with any provider within 7 days (or 30 days) of discharge. Metric referred hereafter as ED-FUA 7-days (or 30-days) for ED follow-up.
- 7- and 30-day follow-up rates after acute inpatient stay related to MH:

[108] The analytic population excludes any SMI roster beneficiaries who 1) received hospice services at any time during the measurement year, or 2) died during the measurement year.

- Proportion of acute inpatient discharges with a primary diagnosis related to MH during the measurement year for which the beneficiary had at least one follow-up visit with a mental health provider within 7 days (or 30 days) of discharge. Metric referred hereafter as IP-FUH 7-days (or 30-days) for inpatient discharge follow-up.

NCQA HEDIS measures Follow-Up After ED Visit for Mental Illness (ED-FUM) and AOD (ED-FUA) and Follow-Up After Hospitalization for Mental Illness (IP-FUH)[109] were adapted for the analytic population to calculate the follow-up rates for this goal. **Attachment D** provides detailed specifications for the development of these measures, and a summary is included in **Exhibit V.71**.

Exhibit V.71: Goal 5 Metric Specification Summary

Metrics	Denominator (D)				Numerator (N)	
	Number of index [ED visits/inpatient stays] in a year among SMI roster beneficiaries with primary diagnosis related to [MH/AOD]				Number of "D" with a follow-up visit with any provider within:	
	ED visit	Inpatient Stay	MH	AOD	7-days	30-days
ED-FUM 7-days	X		X		X	
ED-FUM 30-days	X		X			X
ED-FUA 7-days	X			X	X	
ED-FUA 30-days	X			X		X
IP-FUH 7-days		X	X		X	
IP-FUH 30-days		X	X			X

The *annual ED follow-up rate* was calculated as:

$$\frac{\#\ of\ index\ visits\ with\ follow\ up\ visit\ to\ any\ provider\ within\ [7\ or\ 30\ days]}{\#\ of\ index\ ED\ visits\ related\ to\ [MH/AOD\ dependence]}$$

- **Identifying the denominator:** For measure calculation, ED visits were identified as "index visits" and were counted toward the denominator for each measure if:
  1. The visits that occurred between January 1 and December 1 of the measurement year:
     a. did not have an inpatient admission within 30 days of the ED visit, and
     b. were on or after the first date in which the beneficiary had a claim/encounter with primary or secondary diagnosis of SMI between 2018 and 2023
  2. The beneficiary was enrolled with SMI waiver-eligible Medicaid coverage in the same month as the ED visit,
  3. The beneficiary had waiver eligible Medicaid coverage in the 30 days following the ED visit, and

[109] https://www.ncqa.org/hedis/measures/. The state calculates similar measures for monitoring reports (metrics #8 [IP-FUH], #9 [ED-FUA] and #10 [ED-FUM]).

4. The ED visit had a relevant primary diagnosis (MH, AOD dependence).

If a beneficiary had multiple claims/encounters related to an ED visit in a single day, then only one "visit" was counted for the day and, if eligible, in the measure denominator. In addition, if the beneficiary had more than one eligible ED visit in a 30-day period, the earliest ED visit was counted towards the denominator.

MH-related diagnoses were identified using a combination of value sets, including the HEDIS VSD's MH Diagnosis and Intentional Self-Harm value sets, as well as the CCSR Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis category. AOD-related visits were identified using the HEDIS VSD's Alcohol and Other Drug Abuse and Dependence value sets.

- **Identifying the numerator:** Eligible follow-up visits with a principal diagnosis related to MH (or AOD dependence) within 7 days and 30 days of the index date (i.e., for the measure numerators) were identified using several criteria and included: outpatient visits, IOP encounters or partial hospitalizations, CMHC visits, electroconvulsive therapy, observation visits, telehealth visits, and other virtual visits.

The *annual inpatient stay follow-up rate* was calculated as:

$$\frac{\#\ of\ index\ stays\ with\ followup\ visit(s)\ with\ a\ MH\ provider\ within\ [7\ or\ 30\ days]}{\#\ of\ index\ stays\ with\ a\ principal\ diangosis\ of\ MH}$$

- **Identifying the denominator:** For measure calculation, acute inpatient stays were identified as "index stays" and were counted toward the denominator if:
  1. An acute inpatient discharge with a principal diagnosis of MH between January 1 and December 1 of the measurement year for an SMI roster beneficiary
     a. did not have readmissions or direct transfers for any other principal diagnosis during the 30-day follow-up period.
     b. did not have readmissions or direct transfers to nonacute inpatient care setting within the 30-day follow-up period.
  2. The beneficiary was enrolled with SMI waiver-eligible Medicaid coverage in the month of the index discharge,
  3. The beneficiary had waiver eligible Medicaid coverage in the 30 days following the index discharge.

If a beneficiary had acute inpatient readmissions or direct transfers for a principal diagnosis of MH within the 30-day follow-up period, only the latest discharge was counted as the index discharge.

- **Identifying the numerator:** Eligible follow-up visits with a MH provider within 7 days and 30 days of the index discharge date were identified using criteria that included outpatient visits, IOP encounters or partial hospitalizations, CMHC visits, electroconvulsive therapy, observation visits, telehealth visits, and other virtual visits.

Analysis Methods. Annual 7-day and 30-day follow-up rates were calculated to examine trends over time for the analytic population and by key beneficiary characteristics. Beneficiary characteristics included: SMI diagnosis history, sociodemographic characteristics (i.e., gender, age, race, ethnicity, geographic location [metro/non-metro]), Medicaid coverage status indicators (i.e., participation in HIP, and Medicare/Medicaid dually eligible), and other chronic health conditions.

In addition to comparing trends over time using descriptive analyses, a two-stage ITS analysis was used to examine changes in the 7-day and 30-day ED or inpatient follow-up rates before and during the SMI waiver extension period (2021 - 2023) while adjusting for select available beneficiary sociodemographic, clinical history, and Medicaid enrollment characteristics. For the first stage, a logistic ITS model was used to generate the estimated probability of a beneficiary having a qualifying ED visit or inpatient discharge in a year. For the second stage, a logistic ITS model was used to estimate the likelihood of follow-up visits within 7 or 30 days after a qualifying ED visit or inpatient discharge. The pre-demonstration (2018 and 2019) was used as a reference period to examine change across the waiver extension (2021 to 2023). The regression model controlled for benefit year as well as beneficiary SMI diagnosis, propensity of an SMI beneficiary having an ED visit or inpatient discharge, beneficiary sociodemographic characteristics (including gender, age, race, ethnicity, geographic location [metro or non-metro]), Medicaid enrollment characteristics (i.e., Medicare/Medicaid dually eligible), and selected chronic conditions.

The findings are organized by research questions and relevant outcome measures identified in the logic model for the Goal (**Section II**). Based on factors including data availability, only select outcomes were identified in the CMS-approved Evaluation Plan. Any outcome that was identified in the logic model but was not included in the Evaluation Plan have been noted in the respective sections.

G.1. Does the SMI demonstration result in improved care coordination for beneficiaries with SMI? (Primary RQ 5.1)

Follow-up Treatment Post-ED Discharge – MH

Annually, less than 15% of the SMI beneficiary roster population had ED visits with a primary diagnosis related to MH (declining from 12.0% in 2018 to 6.9% in 2023), and on average, 10% of ED visits (between 10.5% in 2018 to 9.0% in 2023) were related to MH (**Attachment E, Exhibit E.54**).[110] Approximately 2.9% of ED visits (or 29.3% of ED visits related MH) were included in the denominator for calculating 7- and 30-day follow-up rates after ED visits related to MH.

Follow-up rates for 30-day were greater than the 7-day rates (between 34% to 42% higher) across all years. The 7-day rates ranged between 45.8% and 36.8% while the 30-day follow-up rates ranged between 63.1% and 51.8%. Overall, both rates were lower during the waiver extension (2021 - 2023) relative to pre-demonstration (2018, 2019). Seven-day and 30-day follow-up rates

[110] The counts and rates are slightly different compared to Goal 1 tables for two reasons. The Goal 1 analysis was restricted to the SMI beneficiary population with at least 10 months of waiver-eligible coverage in each year. For Goal 5, the base population for measure calculation was all SMI roster beneficiaries, and ED service use was calculated for all ED utilization (after first SMI diagnosis) between 1/1 and 12/1 for each year.

after MH-related ED visits (**Exhibit V.72**) decreased between 2018 and 2019 by 4.6 percentage points and 5.3 percentage points, respectively (from 45.8% to 41.3% and 63.1% to 57.7%). The 7-day rate was slightly higher in 2020 compared to 2019 and increased by 0.5 percentage points while the 30-day rate continued to decline from 2019 to 2020. During the waiver extension (2021 – 2023) the rates decreased. The 7-day follow-up rate declined by 2.4 percentage points from 38.9% in 2021 to 36.5% in 2022, while the 30-day follow-up rate declined by 1.5 percentage points from 53.3% to 51.8% over the same period. Rates for both the 7-day and 30-day follow-up were similar between 2022 and 2023. Comparing to published national rates, these 7-day and 30-day rates for the SMI beneficiary roster population and observed trends were similar to rates of FUM among Medicaid health maintenance organization (HMO).[111]

Exhibit V.72 Follow-up (with Any Provider) After ED Visits for MH (2018 – 2023)[112, 113]

Year	# of ED Visits for MH (Denominator)	# of ED Visits for MH with 7-Day Follow-up[a] (Numerator)	# of ED Visits for MH with 30-Day Follow-up[a] (Numerator)	7-Day MH ED Follow-up Rate	30-Day MH ED Follow-up Rate
2018	5,297	2,428	3,340	45.8%	63.1%
2019	7,015	2,894	4,050	41.3%	57.7%
2020	7,405	3,090	4,148	41.7%	56.0%
2021	8,499	3,308	4,529	38.9%	53.3%
2022	9,141	3,335	4,733	36.5%	51.8%
2023	9,536	3,509	4,935	36.8%	51.8%

[a] Follow-up visits were visits with any practitioner, with a primary diagnosis of a MH disorder or with a primary diagnosis of suicidal ideation, attempt, and intentional self-harm and any diagnosis of MH.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Changes in ED follow-up rates over time were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time and excluded data from 2020 (**Attachment E, Exhibit E.56**). Findings indicate that the annual 7-day follow-up rate was not significantly lower during waiver extension relative to pre-demonstration when controlling for beneficiary characteristics. The 30-day follow-up rate was significantly lower during the waiver extension relative to pre-demonstration (OR: 0.75, 95% CI: 0.66 – 0.86). However, the joint effect of time and the waiver intervention reveal higher ORs for the waiver extension period compared to the pre-demonstration (0.12 percentage points higher for 7-day follow-up, and 0.17 percentage points higher for 30-day follow-up rate), suggesting that even though follow-up rates experienced a downward trend in both periods, the declining trend slowed during the waiver extension period.

[111] https://www.ncqa.org/hedis/measures/follow-up-after-emergency-department-visit-for-mental-illness/

[112] MH-related visits were identified using the primary diagnoses from all claims in the same day as an ED visit. MH-related diagnoses were identified using a combination of value sets, including the VSD's MH Diagnosis and Intentional Self-Harm value sets, as well as the CCSR Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis category.

[113] ED visits were calculated after a beneficiary's first SMI diagnosis within the evaluation period. In addition, ED visits were only counted if the beneficiary had (SMI waiver-eligible) Medicaid coverage in the same month as the ED visit service date and during the following 30 days. Only one ED visit was counted per day (e.g., if a beneficiary had multiple ED-related claims in a single day, that day was counted as one "visit").

Follow-Up Rates by Sociodemographic Subgroups. 7-day and 30-day follow-up rates MH-related ED visits for most sociodemographic subgroups (**Attachment E, Exhibit E.55**) followed similar patterns as the annual averages. Notable findings include:

- On average, female beneficiaries had higher 30-day follow-up rates (ranging between 2.9 and 5.6 percentage points higher) compared to male beneficiaries consistently across the years (2018: 64.5% compared to 61.3%, 2023: 54.2% compared to 48.6%) and this difference was statistically significant (OR: 0.81, 95% CI: 0.77 - 0.85).
- Beneficiaries who were dually eligible for Medicare and Medicaid had significantly higher 7-day (between 7.9 and 4.7 percentage points annually; OR: 1.20, 95% CI: 1.14 – 1.26) and 30-day (between 11.5 and 7.6 percentage points annually; OR: 1.40, 95% CI: 1.33 - 1.48) follow-up rates compared to those who were not dually eligible.
- Follow-up rates were marginally lower for beneficiaries residing in counties identified as metro areas relative to those in non-metro areas before the waiver period. During the waiver extension, the 7-day follow-up was slightly higher among those residing in metro areas (although not statistically significant) while slightly higher for those residing in non-metro areas. The 30-day follow-up decreased for beneficiaries residing in metro areas during the waiver extension while the rate decreased from 2021 to 2022 and increased in 2023. The 30-day follow-up rates were not significantly different among beneficiaries with different residential location.
- Beneficiaries with diabetes, metabolic conditions, and respiratory disease had significantly higher rates of 7-day and 30-day follow-up rates compared to those without the respective condition. Conversely, beneficiaries with cardiovascular disease, COPD, hypertension, and infectious diseases had significantly lower 7-day and 30-day follow-up rates compared to those without the respective condition.

Follow-up Treatment Post-ED Discharge – AOD

Annually, less than 4% of the SMI beneficiary roster population had an ED visit with a primary diagnosis related to AOD (ranging between 3.8% and 2.7%), and less than 5% of ED visits were related to AOD (**Attachment E, Exhibit E.59**). Approximately 1.6% of all ED visits (or 39.6% of the ED visits related to AOD) were included in the denominator for calculating 7-day and 30-day follow-up rates after AOD-related ED visits.

Follow-up rates within 30 days were greater than the 7-day rates (on average 49.4% higher) across all years. Overall, both rates were lower compared to the follow-up rates after ED visit related to MH (compare **Exhibits V.72** and **V.73**); the 7-day rates ranged between 13.2% and 18.6% while the 30-day follow-up rates ranged between 20.1% and 27.8%. Follow-up rates after ED visits related to AOD were higher during the waiver extension (2021 - 2023) relative to pre-demonstration (2018, 2019). Between 2018 and 2023, the 7-day follow-up rate increased from 13.2% to 18.6%, while the 30-day follow-up rate increased from 20.1% to 27.8%. Comparing to published national rates, the 7-day and 30-day rates for the SMI beneficiary roster population and observed trends were similar to those for follow-up after ED visits for substance use among Medicaid HMO.[114]

[114] https://www.ncqa.org/hedis/measures/follow-up-after-emergency-department-visit-for-substance-use/

Exhibit V.73: Follow-up (with Any Provider) After ED Visits for AOD (2018 – 2023)[115,113]

Year	# of ED Visits for AOD (Denominator)	# of ED Visits with 7-Day Follow-up[a] (Numerator)	# of ED Visits with 30-Day Follow-up[a] (Numerator)	7-Day AOD ED Follow-up Rate	30-Day AOD ED Follow-up Rate
2018	1,965	260	394	13.2%	20.1%
2019	3,316	474	734	14.3%	22.1%
2020	4,295	703	1,050	16.4%	24.4%
2021	5,371	892	1,340	16.6%	24.9%
2022	5,469	945	1,334	17.3%	24.4%
2023	5,622	1,047	1,562	18.6%	27.8%

[a] Follow-up visits were visits with any practitioner, with a primary diagnosis of AOD.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Changes in the follow-up rates over time were also examined using regression-based approaches. These models controlled for beneficiary characteristics and time and excluded data from 2020 (**Attachment E, Exhibit E.62**). Findings indicate that although the annual follow-up rates were higher during the waiver extension relative to pre-demonstration, controlling for beneficiary characteristics, the change was not significant for either the 7-day or 30-day follow-up rates. However, there was a significant interaction between time and intervention period for both the 7-day and 30-day follow-up regression models, suggesting that follow up rates increased over time (7-day rates: OR: 1.08 95% CI: 1.02 – 1.13; 30-day rates: OR: 1.08 95% CI: 1.03 – 1.13).

Follow-Up Rates by Sociodemographic Subgroups. 7-day and 30-day follow-up rates for AOD-related ED visits for most sociodemographic subgroups (**Attachment E, Exhibit E.60**) followed similar patterns as the annual averages (discussed above). Some findings include:

- Beneficiaries ages 31 to 40 had the largest increase in 30-day follow-up rates (by 9.3 percentage points) between 2018 and 2023 and the highest likelihood to have follow-up after 7 days and 30 days compared to the other age groups.
- 7-day and 30-day follow-up rates for AOD-related ED were considerably higher among White/Caucasian beneficiaries (7-day rates: 15.2% - 20.2% ;30-day rates: 22.3% - 30.6%) compared to Black beneficiaries (the 7- and 30-day rates ranged between 7.0% - 15.5% and 11.5% - 19.6%, respectively) across all years.
- Beneficiaries who were dually eligible for Medicare and Medicaid had significantly lower 7-day (OR: 0.70, 95% CI: 0.61 – 0.82) and 30-day (OR: 0.72, 95% CI: 0.64 – 0.81) follow-up rates compared to those who were not dually eligible.
- The follow-up rates for beneficiaries residing in non-metro counties were significantly lower (OR: 0.91, 95% CI: 0.83-1.00 for 7-day follow-up, OR: 0.90, 95% CI: 0.83-0.98 for 30-day follow-up) compared to those in metro areas. However, both 7-day and 30-day rates increased more for beneficiaries residing in non-metro areas relative to those residing in counties identified as metro areas. For beneficiaries in non-metro areas, the 7-day rate increased by 6.6 percentage points from 10.7% in 2018 to 17.4% in 2023, and 30-day rate increased by 9.9 percentage points from 16.7% in 2018 to 26.6% in 2023, compared to an

[115] AOD-related ED visits were identified using the primary diagnosis of AOD from all claims in the same day as an ED visit. AOD diagnoses were identified using the HEDIS VSD's Alcohol or Other Drug value sets.

increase of 5.2 percentage points and 7.3 percentage points in 7-day and 30-day rates, respectively, among those in metro areas.

- Beneficiaries with co-occurring SMI diagnoses experienced the largest increases in their 7-day follow-up rate for AOD-related ED visits between 2018 and 2023 (by 7.0 percentage points, compared to 1.1 to 3.4 percentage points among the other groups), as well as their 30-day ED follow-up rate (an increase of 8.6 percentage points, compared to 2.1 to 6.3 percentage points among the other SMI diagnosis groups). Beneficiaries with MDD only or co-occurring diagnoses tended to have the higher ED follow-up rates in each year compared to beneficiaries with bipolar disorder only or schizophrenia only.
- ED follow-up rates tended to increase with number of chronic conditions. Beginning in 2021, beneficiaries with hypertension, infectious disease, and metabolic disease had somewhat higher 7-day and 30-day follow-up rates for AOD-related ED visits compared to those without their respective chronic conditions.

Follow-up Treatment Post-Inpatient Discharge – MH

Annually, less than 30% of the SMI beneficiary roster population had at least one acute inpatient stay between 2018 and 2023. The proportion of beneficiaries with acute inpatient stay decreased from 27.9% in 2018 to 16.2% in 2023 (**Attachment E, Exhibit E.64)**. Across years 9.1% of the SMI beneficiary roster population (or 41.7% of the SMI beneficiaries with acute inpatient stays) had an acute inpatient stay with a principal diagnosis related to MH. The MH-related acute inpatient stay rate decreased from 13.7% in 2018 to 6.2% in 2023. After applying the measure specification restrictions (described previously), approximately three-quarters (73.0%) of acute inpatient stays with principal diagnoses of MH (representing 7.9% of the SMI beneficiary roster population) were identified as "index stays" and were used for examining post-inpatient discharge follow-up.

The annual follow-up rates were relatively stable for both 7-day and 30-day rates (**Exhibit V.74**). The average annual 7-day follow-up rate was 40.6% (ranging from 38.9% to 42.6%), while the average annual 30-day follow-up rate was 59.9% (ranging from 57.5% to 61.6%). During the pre-demonstration period, both follow-up rates increased slightly between 2018 and 2019 (7-day rate: from 40.8% in 2018 to 42.6% in 2019, 30-day rate: from 58.2% in 2018 to 61.3% in 2019). During the waiver extension (2021 - 2023), both rates decreased from 2021 (7-day rate: 41.5%, 30-day rate: 60.9%) to 2022 (7-day rate: 37.2%, 30-day rate: 57.5%), and then increased from 2022 to 2023 (7-day rate: 38.9%, 30-day rate: 60.1%). Observed 7-day and 30-day follow-up rates were similar to the published national average rates of FUH among Medicaid HMO[116], and the trends of the rates were also consistent with that of the national average rates.

[116] https://www.ncqa.org/hedis/measures/follow-up-after-hospitalization-for-mental-illness/

Exhibit V.74 Follow-up (with MH Providers) After Inpatient Stays for MH (2018 – 2023)[117]

Year	# of IP Stays[a] for MH (Denominator)	# of IP Stays with 7-Day Follow-up[b] (Numerator)	# of IP Stays with 30-Day Follow-up[b] (Numerator)	7-Day MH IP Follow-up Rate	30-Day MH IP Follow-up Rate
2018	12,625	5,154	7,350	40.8%	58.2%
2019	13,428	5,721	8,233	42.6%	61.3%
2020	14,566	6,176	8,966	42.4%	61.6%
2021	16,495	6,845	10,046	41.5%	60.9%
2022	16,727	6,220	9,611	37.2%	57.5%
2023	17,419	6,784	10,475	38.9%	60.1%

[a] All inpatient stays are acute inpatient stays.

[b] Follow-up visits were eligible visits with MH providers.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Changes in follow-up rates were also examined using regression-based approaches. Regression models controlled for time and beneficiary sociodemographic characteristics and excluded data from 2020 (**Attachment E, Exhibit E.66**). Findings suggest that after controlling for time and beneficiary characteristics, on average, both 7-day (OR: 1.16, 95% CI: 1.05 – 1.28) and 30-day (OR: 1.14, 95% CI: 1.03 – 1.26) follow-up rates were significantly higher during the waiver extension period relative to pre-demonstration. The joint effect of time and the waiver intervention supports the observed annual rate trends.

Follow-Up Rates by Sociodemographic Subgroups. 7-day and 30-day follow-up rates MH-related inpatient stays for most sociodemographic subgroups (**Attachment E, Exhibit E.65**) followed similar patterns to the overall annual rates. Notable findings include:

- On average, both 7-day and 30-day follow-up rates for MH-related inpatient stays were significantly lower among male beneficiaries (7-day rates: 4.8 to 8.5 percentage points lower, 30-day rates: 7.3 to 10.8 percentage points lower) than female beneficiaries across the years (OR: 0.79, 95% CI: 0.76 – 0.82 for 7-day rates, OR: 0.72, 95% CI: 0.69 – 0.75 for 30-day rates).
- Black beneficiaries had consistently lower rates across years, relative to beneficiaries of other racial groups. Compared to White/Caucasian beneficiaries, 7-days rates were 7.8 to 11.1 percentage points lower for Black beneficiaries (OR: 0.69, 95% CI: 0.65 – 0.73), and 30-day rates were 7.3 to 11.8 percentage points lower (OR: 0.68, 95% CI: 0.64 – 0.71).
- Beneficiaries residing in non-metro areas had significantly higher follow-up rates than those living in metro areas (OR: 1.19, 95% CI: 1.15 – 1.23 for 7-day rates, OR: 1.22, 95% CI: 1.18 – 1.27 for 30-day rates), although the differences decreased over time (7-day rate: from 8.9 percentage points in 2018 to 2.4 percentage points in 2023; 30-day rate: from 8.8 percentage points in 2018 to 3.5 percentage points in 2023).
- Beneficiaries who were dually eligible for Medicare and Medicaid had significantly higher 7-day (between 13.8 [in 2018] and 4.5 [in 2023] percentage points higher annually; OR: 1.23,

[117] MH-related inpatient stays were identified using the primary diagnosis of MH in acute inpatient claims. MH-related diagnoses were identified using a combination of value sets, including the VSD's MH Diagnosis and Intentional Self-Harm value sets, as well as the CCSR Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis category.

95% CI: 1.18 – 1.29) and 30-day (between 17.7 and 5.1 percentage points higher annually; OR: 1.34, 95% CI: 1.28 - 1.40) follow-up rates compared to those who were not dually eligible. The differences decreased over time.

- Both 7-day and 30-day follow-up rates were consistently higher among beneficiaries with co-occurring SMI diagnoses, compared to those with bipolar only or MDD only.
- Among the chronic conditions examined, beneficiaries with diabetes, metabolic disease and respiratory disease had significantly higher rates of both 7-day and 30-day follow-up rates compared to those without the respective condition.

Medication Continuation Following Discharge from Acute Inpatient or RMHT

The Evaluation Plan for this demonstration does not include assessing this short-term outcome. Refer to **Section V.D.4** (i.e., results related to Goal 2: RQ 2.2: How do demonstration activities contribute to reductions in preventable readmissions to acute-care hospitals and residential settings?) for information relevant to this outcome.

G.2. Does the SMI demonstration result in improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities? (Primary RQ 5.2)

Increased Availability and Access to Community-Based MH

Provider Capacity. Findings from the 2018-2020 Summative Evaluation Report and MPA[9] highlighted limited provider capacity as an overarching system challenge and specified its negative impact on care planning and coordination. Most MCEs interviewed in 2023 reported that staffing challenges (e.g., large caseloads, provider shortages, lengthy appointment wait times) continued to impact facilities providing care to SMI beneficiaries and emphasized difficulties with care coordination and connecting beneficiaries to community-based care.

Care Transitions

Discharge Planning and Case Management. The IAC (440 IAC 1.5-3-10) outlines minimum requirements for discharge planning. Hospitals are required to initiate discharge planning at admission that facilitates the provision of follow-up care and transfers or refers consumers to appropriate facilities, agencies, or outpatient services for follow-up or ancillary care. Additionally, in accordance with the Indiana Medicaid Medical Policy Manual, all plans of care must document a post-discharge plan and a plan for coordination of inpatient services with partial discharge plans, including appropriate services in the beneficiaries' community to ensure continuity of care when the consumer returns to his or her family and community upon discharge. CMHCs are required, as codified in IAC (440 IAC 9-2-4), to be involved in the planning of treatment for and the discharge of consumers during the time a consumer is in inpatient care, to maintain continuity of care. CMHCs are also required, in accordance with IAC 440 IAC 9-2-10, as a component of case management, to provide advocacy and referrals including helping individuals access entitlement and other services, such as Medicaid, housing, food stamps, educational services, recovery groups, and vocational services.

MCEs are required to provide case management services for any beneficiary at risk for or discharged from an inpatient psychiatric or SUD hospitalization, and to beneficiaries discharged from an inpatient psychiatric or SUD hospitalization for no fewer than 90 calendar days

following discharge. Given these requirements, it was not surprising that all MCEs confirmed providing case management services during CY2021, CY2022, and CY2023 to all beneficiaries discharged from an inpatient psychiatric or substance abuse hospitalization. Findings from the MPA indicated that MCEs offered the following case management services (available for at least 90 calendar days post-discharge):

- Outreach to beneficiaries while in an inpatient facility.
- Comprehensive assessments and screening for other conditions, which supported development of care plans for the beneficiary upon discharge.
- Coordination with the beneficiary's PCP and behavioral health provider upon beneficiary discharge.
- Peer engagement.

One MCE interviewed in 2024 credited the *Giva medical management system* for automating referrals and promoting consistent case management between 2021 and 2023. One state official interviewed in 2024 emphasized the importance of case management in preventing readmissions and noted how the state has facilitated conversations between MCEs and providers to identify areas of improvement.

Care Coordination Policies. MCEs are responsible for ensuring enrollees access follow-up care post-discharge. In fact, MCEs are required to schedule an outpatient follow-up appointment to occur no later than seven calendar days following an inpatient behavioral health hospitalization discharge. If a beneficiary misses an outpatient follow-up appointment, the MCEs must ensure that a behavioral health provider or the MCE's case manager contacts the beneficiary within three business days of notification of the missed appointment. Additionally, Indiana Medicaid provides coverage for bridge appointments, which are follow-up appointments after inpatient stays for behavioral health issues, when no outpatient appointment is available within seven days of discharge. Findings from the MPA confirmed that MCEs contact beneficiaries within three business days of a missed appointment and use workflows to ensure this outreach happens, followed by specific protocols to re-engage the beneficiary. Overall, MCEs interviewed in 2023 believed that reaching out within 3 days is helpful to improving community care.

Interviews conducted in 2024 did not focus on care coordination policies. Providers interviewed in 2024 noted that relationships with MCEs progressed throughout the waiver extension, consequently improving care coordination. One provider noted that the CCBHC ACT teams (which will be implemented as part of the CCBHC model) is another strategy that will increase care coordination and support beneficiaries with SMI.

Care Transition Services. Findings from the MPA articulated that inpatient and CMHC case managers provide a myriad of services (i.e., housing services, skills development, appointment coordination, and referrals) delivered by certified recovery specialists or individuals with at minimum an associate or bachelor level degree. Of the three inpatient providers interviewed in 2023, two indicated that CMHCs were not involved in SMI beneficiary treatment planning and the discharge process. One CMHC assisted beneficiaries with accessing supportive housing services including determining eligibility. Another CMHC assisted with connecting beneficiaries to nutritional support, PH education via an evidence-based practice called "In-Shape," and accessing vocational services. Advocacy organizations interviewed in 2023 reinforced the

importance of providing case management services following inpatient discharge and noted several improvements that if executed may benefit SMI beneficiaries. Improvements included:

- Focusing on individualized processes (employment support, housing, connection to VR, food security, etc.).
- CMHCs increasing capacity to better serve beneficiaries with SMI.
- Decreasing case manager workload to ensure quality interactions and ability to devote undivided attention to SMI beneficiaries.

Housing Insecurity. Two MCEs interviewed in 2024 emphasized housing insecurity as a key challenge for transitioning care from inpatient facilities to other levels of care. For example, one MCE noted that many group homes have closed during the PHE, yielding fewer options with longer wait lists. Consequently, beneficiaries experience increased LOS, as they await placement in a group home. Most providers (n=6) and advocacy organizations (n=5) interviewed in 2024 concurred that housing is a key challenge for SMI beneficiaries, with four providers and two advocacy organizations noting that housing insecurity has increased over time. Advocacy organizations highlighted state preemption of local housing laws and tenant protections as primary contributors to housing insecurity. Additionally, advocacy organizations emphasized that landlords frequently perceive individuals with SMI negatively, misinterpreting an individual's interpersonal communication style or inappropriate behavior as contentious. Consequently, individuals with SMI are at risk for eviction.

Providers identified several strategies to combat housing insecurity including using grants (e.g., United States Department of Housing and Urban Development, Supportive Housing), facilitating group homes, and engaging with community partnerships and resources (e.g., Housing First, Lafayette Transitional Housing Center). Additionally, state officials identified several ongoing initiatives including:

- **Projects for Assistance in Transition from Homelessness (PATH).** The PATH program is a federally funded, supplemental housing program with a focus on individuals (18+) with SMI/SUD who are also chronically unhoused or at imminent risk of being unhoused. Services provided through the PATH program include outreach; habilitation/rehabilitation; case management services; enrollment in Supplemental Security Income (SSI)/SSDI through SSI/SSDI Outreach, Assess, and Recovery (SOAR); and trainings. The PATH program includes 10 funded providers across the state.
- **Low-Barrier Shelters.** Low-barrier shelters serve individuals with SMI by limiting requirements for entry (e.g., sobriety, strict curfews). Funded by ARPA (October 1, 2022 - December 31, 2026), two agencies in Indiana (Our Lady of the Road and Mental Health America of West Center Indiana) operate low-barrier shelters.
- **Indiana PathWays for Aging.** The "PathWays for Aging" program will launch in 2024 and target housing security among Indiana residents aged 60 and over who receive Medicaid (or Medicaid and Medicare) benefits.
- **Indiana Council of Community Mental Health Centers, Inc. (ICCMHC).** ICCMHC works directly with CMHCs[118] to support group home renovations and repairs. ICCMHC

[118] CMHCs operate 56 group homes in the state of Indiana.

assists with acquisition and renovations of existing structures, additions to existing homes, or building new facilities (state funding: July 1, 2023 - June 30, 2026).

- **Indiana Housing & Community Development Authority (IHCDA).** IHCDA provides supportive services such as, outreach, case management, tenancy supports, employment assistance and job training, MH and SUD treatment services, insurance application assistance, life skills training, legal service referrals, and SOAR (ARPA Block Grant funding: September 1, 2021 - September 30, 2025).

Providers and advocacy organizations identified additional opportunities for the state to pursue to reduce housing insecurity including:

- Increase funding for supportive housing, housing development, short-term rentals, or corporate owned housing.
- Expand the number of group homes or fund per diems for supervised group living.
- Intervene with landlords on behalf of the SMI population.
- Add additional pathways for transitional housing.

Additional challenges noted by MCEs for transitioning care from inpatient to the community include the beneficiary's lack of an established PCP, insufficient support from inpatient facilities, inaccurate patient contact information, and food insecurity.

Care Transition Experience. Beneficiaries interviewed in 2024 that received care in acute inpatient or residential services during the waiver extension (2021 - 2023) reflected on their experience with care coordination.

- *ED Services*: Approximately half of beneficiaries (52%; 13/25) reported visiting the ED between 2021 and 2023. Of those interviewees who received care in the ED (n=13), less than half (38%, n=5) indicated that a professional helped coordinate care upon discharge. Despite this finding, 64% (n=8) reported being satisfied (i.e., very satisfied or somewhat satisfied) and four out of the five interviewees who received care coordination indicated that it was helpful.
- *Inpatient Services*: Almost half of beneficiaries (48%; n=12/25) had at least one inpatient stay between 2021 and 2023, with 25% (n=3) reporting 3 or more inpatient stays. Despite efforts of MCEs to ensure continuity of care, only half of interviewees who reported an inpatient stay (50%; n=6/12) indicated that they received care coordination support from a health care professional during discharge. Although about half of the interviewees (58%, n=7/12) were satisfied (i.e., very satisfied, somewhat satisfied), 17% (n=2) indicated dissatisfaction.
- *Residential Services*: 20% of beneficiaries (n=4) had at least one stay in a residential setting between 2021 and 2023. LOS ranged from less than one month to seven months. Of the beneficiaries that utilized residential services during the time frame (n=4), satisfaction varied: one indicated they were very satisfied with their MH or SUD treatment in the residential setting, one beneficiary noted they were somewhat satisfied, and 2 indicated they were very dissatisfied. Interviewees noted that the facilities could be improved, that the experience was stressful, and felt infantilized. Of the four individuals who received residential treatment, one indicated that they received care coordination.

Consistent with findings from the 2018-2020 Summative Evaluation Report, most MCEs interviewed in 2024 stated that the PHE impacted care coordination for individuals with SMI, noting observations such as provider shortages, facility shutdowns, and patient hesitancy for attending in-person appointments.

Improved Data Sharing System, Processes, or Policies that Support Care Coordination

Indiana accomplished several HIT action items focused on improving data sharing and interoperability**. Exhibit V.75** provides a summary of the HIT action items completed to date as well as actions in progress through the demonstration time-period (i.e., through 2025).

Exhibit V.75: Indiana Section 1115 SMI Demonstration Implementation Plan Status of HIT Action Items Completed

HIT Implementation Actions	Actions In Progress/Completed
Drive improvements for increased electronic documentation and standardization among settings and providers not previously addressed through MU, including behavioral health.	FSSA continues to work toward achievement of the HIT for Economic and Clinical Health goals and objectives under the Medicaid MU.
Update the broader State Medicaid HIT Plan and align areas of prioritization with waiver milestones as appropriate.	The Implementation Advance Planning Document and SMHP progress on initiatives include: • Continued administration and expansion of HIT- Enabled Community-Wide Approach to Opioid Treatment and the Quality Care for Indiana Medicaid Long-Term Care Patients. • Completed an HIE Assessment/Maturity Model analysis to establish current and target HIE states. • Continued collaboration with Purdue Healthcare Advisors at Purdue University to guide Medicaid eligible, Indiana health care providers toward the promoting interoperability standards associated with EHR systems. • Continued collaboration with the Indiana DOC to implement HIE and enhance coordination of care for offenders entering and exiting the correction system for the health and success of the person, decreasing duplication of services, and creating efficiency with the Medicaid MCEs.
Review the applicability of standards referenced in the ISA and 45 CFR 170 Subpart B for potential inclusion into our managed care organization (MCO) contracts.	The following interoperability standards are included in the MCO contracts: 42 CFR 438.242, 42 CFR 457.1233; 42 CFR 457.760, 42 CFR 438.62, and 42 CFR 438.10, 42 CFR 438.242(b)(5) and 42 CFR 457.1233(d)(2), 42 CFR 438.242(b)(3)(i)-(iii).
Conduct a provider survey to identify the volume of providers utilizing closed loop referrals and e-referrals.	Information for this action item is not currently available.

HIT Implementation Actions	Actions In Progress/Completed
Determine required steps and timeline for compliance with the CMS Interoperability and Patient Access Final Rule.[119]	Implementation of Patient Access and Provider Directory Application Programming Interface for FFS per the CMS Interoperability and Patient Access Final Rule was completed in 2022. The state will include any remaining requirements from the interoperability and patient access final rule in the next contract amendments.
Submit the health homes SPA which will include leveraging HIT for enhanced integration and coordination.	Although the health homes SPA was suspended indefinitely, the state is leveraging HIT for enhanced integration and coordination via the CCBHC initiative. For example, DMHA collaborated with the Indiana Council of CMHCs to independently review business requirements of the Population Health Management Platform in the context of CCBHC and has aligned the platform with the updated CCBHC clinic and state required quality measures.
Survey IMDs to identify plans for complying with the CMS Interoperability and Patient Access Final Rule and options for increasing IMD activity in this area.	Information for this action item is not currently available.
Modernize the EHR system used collectively by all state psychiatric hospitals.	Adopted Cerner's Information Technology platform to improve Indiana's network of state psychiatric hospitals and connect other MH providers in the state. Initiated interface development and implementation across the six state psychiatric hospitals in 2021.
Continued operation of managing consent/privacy in a multitude of mechanisms across the Medicaid Health Information Sharing Enterprise.	Information for this action item is not currently available.
Continued utilization of the Relias ProAct Tool.	Information for this action item is not currently available.
Continued operation of the Extension for Community Healthcare Outcomes.	Continued to progress

MCEs interviewed in 2024 noted several challenges specific to data sharing including misinformation among providers regarding sharing privileged information with MCEs, limited interoperability, and availability of updated information. For example, one MCE stated that information specific to bed availability is often missing since IMDs do not use IHIE. State officials described several ongoing efforts for improving data sharing.

- Implementation of a pilot program to examine the feasibility, acceptability, and utility of a software package that integrates crisis service data and Medicaid claims to assess population health. The pilot program will target CMHCs.
- Continued efforts to build out more effective data programs, including the ability to batch upload Comma Separate Values (CSV) files.

[119] The CMS Interoperability and Patient Access final rule is intended to move the health care ecosystem in the direction of interoperability by improving the quality and accessibility of information that patients need in order to make informed health care decisions, including data about health care prices and outcomes, while minimizing reporting burdens on impacted providers and payers. (https://www.federalregister.gov/documents/2020/05/01/2020-05050/medicare-and-medicaid-programs-patient-protection-and-affordable-care-act-interoperability-and)

- Software program updates for CCBHCs to facilitate record sharing and generate data dashboards for informing insights.

G.3. How do demonstration activities contribute to improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities? (Subsidiary RQ 5.2b)

Findings for this RQ were incorporated into RQ 5.2 (Does the SMI demonstration result in improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities?). Please refer to **Section V.G.2**.

G.4. Findings and Recommendations

This section provides a summary of the findings by short and long-term outcomes identified in the Goal 5 logic model. Summaries integrate quantitative and qualitative (when appropriate) to provide evidence in support of the hypothesis. Recommendations for additional actions or data are also listed.

Hypothesis

The SMI demonstration will result in improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.

Follow-up Treatment Post-ED Discharge – MH and AOD

Quantitative findings indicate that follow-up rates for beneficiaries with an ED visit related to MH declined over time (7-day: 45.8% - 36.8%; 30-day: 63.1% - 51.8%). In 2023, approximately one third of beneficiaries visited a provider within 7-days while half visited a provider within 30-days. Although follow-up rates for beneficiaries with an ED visit related to AOD dependence increased over time, less than one-fifth of beneficiaries visited a provider within 7-days and less than one third visited a provider within 30 days. Among beneficiaries interviewed in 2024, approximately half of beneficiaries (52%; 13/25) reported visiting the ED between 2021 and 2023. Of those interviewees who received care in the ED (n=13), less than half (38%, n=5) indicated that a professional helped coordinate care upon discharge.

Consistent with findings from the 2018-2020 Summative Evaluation Report, most MCEs stated that the PHE impacted care coordination for individuals with SMI, noting observations such as provider shortages, facility shutdowns, and patient hesitancy for attending in-person appointments. Although the state has implemented several actions to improve care coordination (discussed in **Sections V.C.4, V.F, V.G.2**), findings suggest the need for additional efforts which focus on care coordination for following ED visits related to MH or AOD.

Follow-up Treatment Post-Inpatient Discharge – MH

Quantitative findings indicate that the proportion of beneficiaries having an acute inpatient stay (and those related to MH) decreased significantly over time. The likelihood of a beneficiary receiving care with a MH provider post-acute inpatient discharge was higher during the waiver extension relative to pre-demonstration (adjusted for beneficiary characteristics) although the observed rates were relatively stable (7-day: between 40.8% and 38.9%; 30-day: between 58.2% and 60.1%). Based on findings from beneficiary interviews, 50% of respondents did not receive follow-up post-discharge from an inpatient facility despite MCE care coordination efforts specific to discharge planning. Qualitative findings from MCEs highlighted several challenges related to care transitions from inpatient to the community-2020.

Increased Availability and Access to Treatment Providers

Findings from the 2018-2020 Summative Evaluation Report and MPA highlighted limited provider capacity as an overarching system challenge and specified its' negative impact on care planning and coordination. Most MCEs interviewed in 2023 reported that staffing challenges (e.g., large caseloads, provider shortages, lengthy appointment wait times) continued to impact facilities providing care to SMI beneficiaries and emphasized difficulties with care coordination and connecting beneficiaries to community-based care. State efforts to bolster workforce capacity are described in goal four and was a priority for Indiana throughout the waiver extension.

Care Transitions

Qualitative findings confirmed that discharge planning during inpatient stays, case management, care coordination policies, and care transition services were provided by MCEs throughout the waiver extension. Despite MCE care coordination efforts, only half of beneficiaries (interviewed in 2024) who reported ED, inpatient or residential stays during the waiver extension indicated that they received care coordination services. MCEs noted several challenges for transitioning care from inpatient to the community including the beneficiary's lack of an established PCP, insufficient support from inpatient facilities, inaccurate patient contact information, and food insecurity. MCEs, providers, and advocacy organizations interviewed in 2024 emphasized housing insecurity as a key challenge for transitioning care from inpatient facilities to other levels of care. Interviewees noted that housing insecurity has declined over time due to limited funding, fewer group homes (especially after the PHE), and state preemption of local housing laws and tenant protections. Providers and state officials are actively implementing strategies to reduce housing insecurity.

Improved Data Sharing System, Processes, or Policies that Support Care Coordination

Indiana accomplished several HIT action items focused on improving data sharing and interoperability. MCEs interviewed in 2024 noted several challenges specific to data sharing including: misinformation among providers regarding sharing privileged information with MCEs; limited interoperability; and availability of updated information. State officials described several efforts for improving data sharing.

Recommendations

- Identify and implement strategies for increasing care coordination and supporting care transition.
- Build provider capacity, specific to care coordination across the SOC as well as strengthening relationships and workflows between community providers, EDs and inpatient facilities.
- Continue to implement strategies to reduce housing insecurities.
- Continue to build out more effective data programs to compile and share relevant (real-time) information for care coordination.

H. Impact of Demonstration on Health Care Spending

As stated previously, Milliman, Inc. (the State's actuary) conducts budget neutrality assessments as part of the SMI monitoring protocol. In addition to budget neutrality assessments, Milliman performed the required Interim Report cost analyses to assess the impact of the demonstration on health care spending. Refer to **Attachment G** for findings related to the impact of the demonstration on health care spending.[120]

[120] Cost analyses (Results – Section H: Impact of the Demonstration on Health Care Spending was drafted as a separate attachment rather than integrated into the body of the report. FSSA received approval from CMS (September 16, 2024) to produce Results – Section H as a separate attachment.

VI. Conclusions

The SMI demonstration aligns with FSSA's aim to ensure a comprehensive continuum of behavioral health services. In this effort, the evaluation was designed to assess the impact of five overarching and interrelated goals. Demonstration Goals focus on reducing ED utilization and preventing inpatient (e.g., acute care hospitals) readmission for SMI populations (Goals 1 and 2) by expanding crisis stabilization services, increasing access to community-based MH services, and improving care coordination with special emphasis on continuity of care in the community (Goals 3, 4, and 5). Each Goal is linked to key demonstration activities.

The Interim evaluation examines the state's effectiveness of achieving their demonstration goals during the waiver extension (2021 - 2023). The waiver extension coincided with COVID-19 PHE which caused substantial changes to Medicaid policies, service utilization, and provider availability. Given the timing of the PHE, the state shifted many of the planned implementation action items to accommodate access to and delivery of high-quality MH services for all Indiana residents, particularly given the social distancing and health care resource prioritization required in response to the PHE. Subsequently, progress for achieving demonstration goals was impacted by COVID-19 related policy changes and activities.

In general, the state is on track for achieving their demonstration goals. Findings illustrate overall declines in all-cause ED participation and utilization rates between 2018 and 2023 for the SMI beneficiary population and select population subgroups. Additionally, findings indicate an increase in the availability of crisis stabilization services as well as several community-based provider types (e.g., CMHC satellite clinics, FQHCs). However, provider capacity, particularly those providers coordinating care were strained during the PHE, impacting access and care availability (which underpins each goal). Although state investments in workforce expansion, care coordination processes, and infrastructure are a state priority, time is needed for effects to be realized. Opportunities for continued improvement in capacity building, care integration, and care coordination that reach Indiana residents across the state will be important for demonstration goals to be fully achieved.

VII. Interpretations, Policy Implications, and Interactions with Other State Initiatives

Indiana's §1115 waiver amendment enabled the state to reimburse acute inpatient stays in IMDs for individuals diagnosed with a SMI. The §1115 waiver amendment is part of broader efforts within the FSSA to ensure a comprehensive continuum of behavioral health services for Indiana residents. In this effort, the demonstration focused on reducing ED utilization and preventing inpatient readmission for SMI populations (Goals 1 and 2) by expanding crisis stabilization services, increasing access to community-based MH services, and improving care coordination with special emphasis on continuity of care in the community (Goals 3, 4, and 5). As stated throughout this report, the waiver extension (2021 - 2023) coincided with the PHE, which began in March 2020. The PHE caused substantial changes to Medicaid policies, service utilization, and provider availability and will have short- and long-term impacts on Indiana's health care system and specialized populations, such as SMI. Given the need to accommodate access to and delivery of high-quality MH services for all Indiana residents, particularly given the social distancing and health care resource prioritization required in response to the PHE, the state implemented the following initiatives in addition to those activities outlined in the Section 1115 SMI Demonstration Implementation Plan to improve overall service delivery for Medicaid beneficiaries:

- **Telehealth.** Effective March 1, 2020, an executive order authorized the OMPP to expand the use of telehealth. Unsurprisingly, these changes in policy led to an increase in the number of Medicaid claims billed for telehealth services. The majority of these claims were submitted by behavioral health providers (60.6%) for services such as group or individual psychotherapy. Findings from the 2018-2020 Summative Evaluation Report and MPA acknowledged that telehealth is a suitable alternative for SMI beneficiaries who have difficulties accessing transportation or live in areas with high wait times for MH providers. State officials, MCEs, and advocacy organizations interviewed in 2024 reaffirmed telehealth's impact on care access (particularly for behavioral health) and noted the innovation as a contributing factor for reducing overall readmission rates.
- **MH Workforce Capacity**. Starting in 2020, FSSA has invested in several efforts (e.g., enrollment of mid-level providers; diversifying the provider pool by including peers, small MH organizations, grassroots community organizations, and OBHPs; workforce development and sustainment programs) to improve provider capacity and identify actions that will further close the gap between demand and supply. Interviewees were optimistic about reintroducing efforts to increase integration of behavioral health and primary care once the supply of providers was adequate and stabilized. Additionally, effective July 1, 2019, in accordance with CMS approval of SPA TN 18-012, Indiana Medicaid expanded crisis intervention services, IOP program services, and peer recovery services to all Indiana Medicaid programs. This change expanded the available provider base from Indiana's CMHCs to all Medicaid-enrolled providers meeting the applicable criteria. Providers interviewed in 2024 noted several strategies for recruitment and maintaining staff including: used professional websites (e.g. LinkedIn, Indeed) to post provider opportunities; increased pay for hard-to-fill positions; partnered with universities to expand recruitment of bachelor level or higher providers; and expanded staff specific trainings.
- **Stigma Reduction.** Although the IN Section 1115 SMI Demonstration Implementation Plan did not highlight action items focused on stigma reduction, the state has prioritized stigma

reduction initiatives as an overarching strategy to encourage Indiana residents (rather than SMI beneficiaries) to engage in treatment. Several stigma reduction initiatives were started in the fall of 2022 and ended in the fall of 2023. These initiatives were initially constructed for broader populations between 9/2022 and 2/2023) and narrowed to SMI populations between 3/2023 and 9/2023.

Progress for achieving demonstration goals was impacted by COVID-19 related policy changes and activities.[121] Therefore, findings likely reflect both the impact of these COVID-19 related policy changes and activities as well as demonstration impacts. Moreover, many implementation activities were delayed and although completed during the waiver extension may not have had sufficient time to result in a detectable effect. Additionally, increased access and care availability (which underpins each goal) is dependent on several factors including a robust workforce, infrastructure, and seamless care coordination processes (e.g., availability of beds, data sharing software, care management protocols, relationships between providers) and can be slow to evolve (even more so in the context of a pandemic) to reach the level of saturation needed to impact statewide capacity, utilization, and readmission outcomes. Thus, such factors should be considered when interpreting the findings of this Interim evaluation. Key take-aways for each Goal are summarized below:

- **Reducing ED Utilization and Improving Care Coordination (Goals 1 & 5).** Quantitative findings illustrate overall declines in all-cause ED participation and utilization rates between 2018 and 2023 for the SMI beneficiary population and select population subgroups examined. Additionally, findings also indicated declines in MH-related ED participation and utilization rates over time. Follow-up rates for beneficiaries with an ED visit related to MH, however, also declined over time. For example, among beneficiaries with a mental health-related ED visit, almost half visited a provider within seven days, and nearly two-thirds visited a provider within 30 days after their ED discharge in 2018, compared to one-third and half, respectively, in 2023. In contrast, 7-day and 30-day follow-up rates after AOD-related ED visits increased over time but nevertheless remained low.

  Declines in ED participation and utilization may be due to several direct or indirect factors related to the waiver. For example, state investments in crisis stabilization services and increases in community-based services (including telehealth) were implemented during the waiver extension period to better service Indiana residents in crisis and divert them from the ED. Additionally, policies enacted during the waiver extension, such as the Senate Enrolled Act 1006 and Senate Enrolled Act 1 focused on strategies to reduce ED utilization. Although reduced ED utilization is promising, findings at this time cannot be corroborated (i.e., crisis service utilization data was not available to assess if individuals were using these services at an increased rate) to suggest causal associations or direct relationships with implementation activities. Additionally, the COVID-19 PHE may also have contributed to ED participation and utilization rate declines as well as follow-up declines. Consistent with findings from the 2018-2020 Summative Evaluation Report, most MCEs stated that the PHE impacted care coordination for individuals with SMI, noting observations such as provider shortages, facility shutdowns, and patient hesitancy for attending in-person appointments. Although the

[121] Indiana 1115(a) Demonstration Evaluation Summative Report (https://secure.in.gov/fssa/hip/files/IN-SMI-Summative-Evaluation-Report.pdf)

state has implemented several actions to improve care coordination, findings suggest the need for additional efforts which focus on care coordination following ED visits.

- **Reducing Readmission and Improving Care Coordination (Goals 2 & 5).** Quantitative findings indicate that, in general, utilization of acute inpatient care related to mental health reduced significantly across time. Nevertheless, findings indicate that the proportion of MH-related acute inpatient or observational stays with an all-cause, unplanned readmission within 30 days remained relatively stable for the overall population and for most population subgroups during the waiver extension (2021-2023). Additionally, the rates for follow-up with a mental health provider post-discharge from an acute inpatient stay related to MH was relatively stable. Qualitative findings confirmed that discharge planning during inpatient stays, case management, care coordination policies, and care transition services were provided by MCEs throughout the waiver extension. Despite MCE care coordination efforts, half of beneficiaries (interviewed in 2024) who reported inpatient or residential stays during the waiver extension indicated that they received care coordination services. MCEs noted several challenges for transitioning care from inpatient to the community including the beneficiary's lack of an established PCP, insufficient support from inpatient facilities, inaccurate patient contact information, housing insecurity, and food insecurity. Continued focus on actions specific to improve care coordination from inpatient to the community should be considered.
- **Improving Availability of Crisis Stabilization Services (Goal 3).** Since the initial waiver (2020), the state has increased both the number of Medicaid beneficiaries receiving crisis services as well as the number of crisis stabilization services (including CSUs and MCUs/MRSS). Additionally, the state has implemented the 988 Indiana Crisis and Suicide Lifeline and expanded the number of CMHC satellite sites and CCBHCs. Despite these promising findings, crisis stabilization services remain limited across Indiana with the largest gaps in the southwestern and eastern parts of the state (particularly in non-metro counties). Increasing availability and access to crisis stabilization services across the state is a multi-year strategy, and state officials noted continued action in 2024. As crisis stabilization services are implemented, state efforts to monitor ED diversion and ensure sustainment will be important to support goal achievement.
- **Improving availability and access to community-based services, including increased integration of primary and behavioral health care (Goal 4).** Throughout the waiver (2020) and waiver extension (2021 - 2023), Indiana has prioritized actions to increase treatment access and behavioral health integration during the waiver extension. For example, quantitative findings indicate that the state increased CMHC satellite and FQHC sites between 2022 and 2023. Despite these increases, findings from claims/encounter data suggest that participation rates in community-based mental health services decreased between the pre-demonstration and waiver extension among beneficiaries included in the SMI beneficiary roster. Notably, however, the total number of beneficiaries receiving MH-related community-based services did increase over the evaluation period. Although the observed decreases in participation rates in community-based services could be attributable to several factors outside of provider capacity (e.g., roster beneficiaries experiencing improvements and consequently not requiring either the same level of care or treatment intensity, receipt of care from alternative sources, such as primary care), state officials, MCEs, providers, and advocacy organizations noted that the adequacy of the provider supply

did not meet patient demand. Subsequently, Indiana has invested in several actions to increase provider capacity. As noted above, increasing provider capacity takes time, and although activities were implemented during the waiver extension, the time needed to detect an effect in long-term outcomes (e.g., readmissions) may not have been sufficient.

VIII. Lessons Learned and Recommendations

This section describes lessons learned and recommendations from the SMI demonstration. **Exhibit VIII.1** summarizes each lesson learned and recommendation(s) for the demonstration.

Exhibit VIII.1: Lessons Learned and Recommendations

Lessons Learned	Recommendations For Other States
Demonstration activities required more time for implementation due to the PHE and subsequently may not have had sufficient time to produce a detectable effect.	• Reassess your state's Implementation Plan to reflect the PHE realities. • As appropriate, revise your state's Implementation Plan to reflect the short- and long-term impacts of the PHE on the health care system and SMI populations.
Insufficient provider capacity (e.g., lack of beds, staff, crisis stabilization services, CSUs; care coordination) limits access to behavioral health services and consequently impacts interdependent demonstration goals.	• Although network adequacy of the behavioral health workforce is a nationwide challenge, continue to invest in initiatives that focus on building network provider capacity (e.g., beds, staff, crisis stabilization services, CSUs, care coordinators). Examples of initiatives to consider include enrolling more providers and/or mid-level providers in Medicaid, diversifying the provider pool, and implementing workforce programs that focus on expansion and retention efforts. • Continue to focus on education and training for providers.
Individuals with SMI face additional barriers (e.g., affordability, discrimination) for accessing and maintaining stable housing.	• Increase awareness of existing funding and infrastructure to support beneficiaries with housing among relevant program stakeholders. • Increase funding for housing (e.g., short-term rentals, group homes, corporate owned housing) and awareness campaigns (i.e., directed at landlords) to support individuals with SMI. • Increase coordination efforts between internal state agencies and divisions to minimize barriers and increase policy alignment.
Telehealth is a good alternative for SMI beneficiaries who have difficulties accessing transportation or live in areas with high wait times for MH providers.	• Sustain COVID-19 PHE telehealth policy modifications and allow some services to be rendered in an audio-only modality. • Provide technical assistance support for both providers and patients to increase effective use of remote services and identify best practices for patient engagement.
There is an imbalance between peer advocates specializing in SUD versus peer advocates specializing in MH. Peer advocates are vital for engaging the SMI population and supporting care coordination.	• Diversify and expand the provider pool by including peers who have experience supporting SMI populations. • Increase the use of peer advocates in the ED.
Successful programs require a strategy for continued funding and resources	• Monitor opportunities for continued funding to sustain pilot efforts. • Meet with providers, advocates, and state agencies (e.g. DOH; DOC; Department of Education) to identify strategies for increasing collaboration, minimizing barriers for accessing treatment services, and program sustainment.

IX. Attachments

Attachment A: Independent Assessor Description and Attestation (e.g., COI)

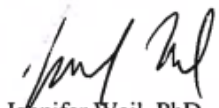
The Lewin Group (Lewin) serves as the Independent Evaluator of Indiana's SMI waiver (HIP - Project Number 11-W-00296/5). Lewin's scope of work includes:

1. Developing the evaluation design;
2. Conducting tasks related to the development of and drafting of the Summative Evaluation;
3. Conducting tasks related to the development of and drafting of the MPA; and
4. Conducting tasks related to the development of and drafting of the Interim Evaluation.

FSSA Collaboration and Objective Assessment: Lewin met with the FSSA SMI Leadership Team to review the elements required in the Interim Report; the approach for conducting the Interim Report, and the schedule for completing requirements. Throughout the evaluation time frame, FSSA provided Lewin with data (e.g., beneficiary eligibility and enrollment data, claims/encounter data, administrative data, PAA), materials (e.g., reports, provider bulletins), and stakeholder (e.g., state officials, providers, advocacy organizations, MCEs) outreach support. Additionally, FSSA was available to answer questions pertaining to data, programmatic activities, and state policies or initiatives. FSSA reviewed three drafts of the report. Report reviews provided FSSA with an opportunity to confirm or deny information as well as answer additional evaluator questions. At no time did FSSA direct Lewin in the execution of the Interim Report approach or in how findings were reported or interpreted. Hence, Lewin confirms that the Interim Report is a fair, impartial and objective assessment of Indiana's performance in carrying out the Section 1115 SMI Demonstration Implementation Plan.

Conflict of Interest. As the Professional Services Contractor for the "Health Indiana Plan 1115 Waiver Evaluation" Services contract, Lewin confirms herein that it adheres to stringent organizational conflict of interest ("OCI") policies and procedures that are aligned with the requirements of Federal Acquisition Regulation Part 9.5. As such, Lewin continuously monitors its work for actual or potential OCI. To date, Lewin has not found any facts or circumstances associated with performing its assigned work that create an actual or potential OCI or adversely affect or impact FSSA. If Lewin becomes aware of any circumstances that could present an actual or potential conflict of interest (COI) as it continues its work under this Contract, Lewin will engage with the FSSA Contracting Officer to ensure that appropriate and mutually agreed upon mitigation measures are put in place to address any such OCI prior to Lewin continuing the work.

Sincerely,



Jennifer Weil, PhD
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Attachment B: Indiana's Current Behavioral Health System

A. Overview

Indiana's publicly funded behavioral health (both MH and addiction) SOC supports access to prevention, early intervention and recovery-oriented services and supports in all 92 counties, blending federal, state and local funding streams to a provider network of agencies and individual practitioners. Indiana's FSSA and specifically its OMPP and DMHA partner to provide policy oversight and primary funding of services and supports for individuals in need of behavioral health services. OMPP includes a robust continuum of behavioral health services as a benefit to enrollees in its fee-for service and Medicaid managed care programs. DMHA leverages its block grant funding from SAMHSA and state appropriations to compliment the Medicaid service array, with a focus on serving adults with SMI, youth with SED, and individuals with SUD of any age, and that are at or below 350% of the FPL. OMPP and DMHA also partner with the DCS and DOC in supporting access to and oversight of behavioral services for Indiana's most vulnerable Hoosiers.

B. Provider Network

OMPP maintains a large network of behavioral health providers including hospitals, PRTFs, SUD residential providers, and community-based agencies and individual practitioners. Individual practitioners are certified and/or licensed by the IPLA. While IPLA is a separate and independent agency from FSSA, both OMPP and DMHA maintain a strong collaborative relationship. DMHA is responsible for certification and licensure for SUD provider agencies, free-standing psychiatric hospitals, and CMHCs. IAC outlines provider requirements that assist in assuring quality and program integrity. Addiction residential, CMHC, and Clubhouse providers participating within the Medicaid program must be certified/licensed by DMHA prior to provider enrollment with OMPP.

C. Community MH Centers

There are currently 24 certified CMHCs in Indiana. DMHA is responsible for certification and CMHC requirements under the IAC and/or contracts include responsibility for a geographic service area that ensures coverage of a continuum of services statewide. The CMHCs are required to provide a defined continuum of care that includes:

- Individualized treatment planning
- Access to twenty-four (24) hour a day crisis intervention
- Case management
- Outpatient services, including IOP services, substance abuse services, and treatment
- Acute stabilization services including detoxification services
- Residential services
- Day treatment, partial hospitalization, or psychosocial rehabilitation
- Family support
- Medication evaluation and monitoring

- Services to prevent unnecessary and inappropriate treatment and hospitalization and the deprivation of a person's liberty

Many of these services are part of the state plan MRO services under which service need is identified through an assessment that confirms need for services with an eligible diagnosis and level of care determination using the Child and Adolescent Needs and Strength/Adult Needs and Strengths Assessment.

D. Current Service Continuum

Prevention/early intervention. Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program services are available to Medicaid beneficiaries from birth through the month of the beneficiary's 21st birthday. Beneficiaries eligible for EPSDT services may be enrolled in HIP, Hoosier Care Connect, Hoosier Healthwise, or Traditional Medicaid. A psychosocial/behavioral assessment is required at each EPSDT visit. This assessment is family centered and may include an assessment of child's social-emotional health, caregiver depression, as well as social risk factors.

The IHCP also provide coverage for annual depression screenings and screening and brief intervention (SBI) services. Providers are expected to use validated, standardized tests for the depression screening. These tests include, but are not limited to, the PHQ, Beck Depression Inventory, Geriatric Depression Scale, and EPDS. SBI identifies and intervenes with individuals who are at risk for substance abuse related problems or injuries. SBI services use established systems, such as trauma centers, emergency rooms, community clinics, and school clinics, to screen patients who are at risk for substance abuse and, if necessary, provide the patients with brief interventions or referrals to appropriate treatment.

The IHCP covers outpatient MH services provided by a licensed medical doctor, doctor of osteopathy, psychologist endorsed as a HSPP, psychiatric hospitals, psychiatric wings of acute care hospitals, and outpatient MH facilities. To increase the State's capacity of MH Medicaid providers, the House Enrolled Act 1175 passed in the 2019 legislative session expanded access to behavioral health providers for Medicaid enrollees. Under this law, LCSWs, LMHCs, licensed clinical addiction counselors, and LMFTs are eligible providers and can certify a MH diagnosis and supervise a patient's treatment plan in outpatient MH or substance abuse treatment settings. Prior to this legislation, mid-level behavioral health practitioners were not eligible to independently enroll in Indiana Medicaid and were required to bill under the supervision of a HSPP or psychiatrist.

E. Adult MH Habilitation Services.

Effective November 1, 2014, Indiana implemented the §1915(i) Adult MH Habilitation (AMHH) services program. The AMHH services program was adopted by Indiana to provide community-based opportunities for the care of adults with SMI who may most benefit from keeping or learning skills to maintain a healthy safe lifestyle in the community. AMHH services are provided for individuals and their families, or groups of adult persons who are living in the community and who need help on a regular basis with SMI or co-occurring mental illness and addiction disorders. AMHH services are intended for individuals who meet all of the following core target group criteria: enrolled in Medicaid, age 19 or older, reside in a setting which meets federal setting requirements for HCBS and has an AMHH-eligible, DMHA-approved diagnosis.

An eligible AMHH enrollee will be authorized to receive specific requested AMHH services, according to an individualized care plan, approved by the State Evaluation Team. The following are the AMHH services:

- Adult day services
- Home- and Community-Based Habilitation and Support Services
- Respite care
- Therapy and behavioral support services
- Addiction counseling
- Supported community engagement services
- Care coordination
- Medication training and support Initial eligibility in the program is for one year and can be extended if medical need remains.

Inpatient (acute). Prior Authorization (PA) is required for all inpatient psychiatric admissions, rehabilitation, and substance abuse inpatient stays. Each Medicaid-eligible patient admitted to an acute psychiatric facility or unit must have an individually developed plan of care (POC). For beneficiaries 21 and older, a POC must be developed by the attending or staff physician. For beneficiaries under 21 years old, POCs must be developed by a physician and interdisciplinary team. All POCs must be developed within 14 days of the admission date, regardless of the beneficiary's age. For a patient who becomes eligible for Medicaid after admission to a facility, the POC must be prepared to cover all periods for which Medicaid coverage is claimed. The following components must be documented in each beneficiary's POC:

- Treatment objectives and goals, including an integrated program of appropriate therapies, activities, and experiences designed to meet the objectives; and
- A post-discharge plan and a plan for coordination of inpatient services with partial discharge plans, including appropriate services in the beneficiary's community to ensure continuity of care when the patient returns to his or her family and community upon discharge.

The POC is based on a diagnostic evaluation that includes an examination of the medical, psychological, social, and behavioral aspects of the beneficiary's presenting problem and previous treatment interventions. The POC is reviewed by the attending or staff physician to ensure that appropriate services are being provided and that they continue to be medically necessary. The attending or staff physician also recommends necessary adjustments in the plan, as indicated by the beneficiary's overall adjustment as an inpatient. The POC must be in writing and must be part of the beneficiary's record.

State Hospital (longer term stays/forensic). Indiana's six state psychiatric hospitals provide intermediate and longer-term inpatient psychiatric stays for adults who have co-occurring MH and addiction issues, who are deaf or hearing impaired, and who have forensic involvement; as well as youth with SED. Individuals are admitted to a state hospital only after a screening by a CMHC. CMHCs, as the State hospital gatekeepers, are responsible for providing case management to the individual in both the hospital and their transition to the community following discharge. The State psychiatric hospitals are accredited by the Joint Commission (JC).

To maintain JC accreditation, all hospitals are required to participate in a performance measurement program. This is accomplished through participation in the National Research Institute Performance Measurement System, which provides a framework within which the State psychiatric hospitals can identify and implement consistent measures of performance and outcomes.

On March 15, 2019, Indiana opened the doors to the NeuroDiagnostic Institute (NDI) and Advanced Treatment Center located on the campus of Community East Hospital in Indianapolis. Operated in partnership with Community Health Network, NDI delivers advanced evaluation and treatment for patients with the most challenging and complex neuropsychiatric illnesses and transitions them more efficiently into the most appropriate treatment settings within the community or state operated inpatient SOC. The NDI is a key component of FSSA's initiative to modernize and reengineer Indiana's network of state-operated inpatient MH facilities, including reducing lengths of stay. The NDI also serves as a teaching hospital by partnering with local universities for medical and nursing students, as well interns of other disciplines such as social work and psychology, gain hands-on experience helping NDI patients in their recovery.

Attachment C: Qualitative Data Collection Tools

Attachment C includes the "master" data collection tools utilized for Interim Report KIIs. Interviewees had varied areas of experience and expertise. As such, topics and items asked were tailored to the interviewee and thus a single interviewee was not asked every question.

A. Indiana 1115(a) SMI Demonstration Evaluation: State Officials Interim Report KII Guide

1. Introduction:

This interview is part of a series of KIIs that will provide a better understanding of the state's progress in meeting the five goals of the Indiana's 1115 SMI Demonstration Evaluation. Lewin, as the independent evaluator of the Indiana SMI Waiver, will be conducting a series of 30–60-minute interviews (with State officials, MCE representatives, providers, advocacy organizations, and beneficiaries) to gather information on goal progress in relation to the Indiana SMI Waiver Demonstration, impact of the COVID-19 PHE, factors that supported progress, any challenges or barriers encountered, and pertinent follow-up based on insights gathered from previous interviews.

This interview guide is organized by topic area. For each topic area, we have included background information for context prior to each question. In preparation for the interview, please be sure to read all background information as well as the questions. See topic areas below:

- Background
- Goal 1
- Goal 2
- Goal 3
- Goal 4
- Goal 5

Please note: You were chosen for this interview based on your expertise. We fully expect that you do not have answers to each question listed in the guide. If you are not sure of an answer to a question- that is OK. Please indicate as such, and we will move on to the next question.

2. Background Information

Background	Question(s)
Attendee Name and Role at FSSA	• Please state your name and please describe your current role at FSSA. • How long have you been in this role?
Role in respect to the implementation and monitoring of Indiana SMI Demonstration Waiver	• What has been your role in relation to the Indiana SMI Waiver?

3. Goal 1: Reduced utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings

Although the rates of ED visits per 100,000 persons nationally have remained stable between 2009 and 2018, visits associated with MH diagnoses continued to rise among Medicaid

beneficiaries during this time-period.[122] Individuals with SMI are more likely to have higher rates of ED utilization than individuals without any MH diagnosis. A key goal of the evaluation is to understand how demonstration activities have contributed to reductions in ED utilization and ED LOS among Medicaid beneficiaries with SMI. Demonstration activities identified in the state's Implementation Plan associated with this goal include:

- Developing a report to monitor ALOS for all Medicaid programs.
- Expanding the use of Open Beds beyond SUD to include tracking availability of psychiatric inpatient and crisis stabilization beds.
- Annually identifying geographic shortage areas and conducting targeted outreach to non-Medicaid enrolled providers in those areas. (*Goals 1 & 3*)
- Piloting 2 CSUs in the northern and southern parts of the state. (*Goals 1, 2, and 3*)
- Piloting MCU/MRSS. (*Goals 1, 2, and 3*)

Lewin interviewed state officials in 2020 as well as 2023, and compiled insights specific to these demonstration activities and their impact on ED utilization and ED LOS. For today's interview, we are interested in compiling insights, as well as confirming our understanding of activity progress, for the time-period of 2021-2023.

#	Background	Question(s)
1	State officials interviewed in 2020 described how the PHE impacted implementation activities and likely confounded the impact of the waiver on ED utilization and LOS for Medicaid beneficiaries with SMI waiting for MH treatment. State officials described broad changes in utilization of health care services. For example, interviewees noted that utilization of health care services, particularly inpatient services, decreased at the beginning of Spring of 2020 and then "skyrocketed" starting in June of 2020 to historically high levels.	• Please describe ED utilization (i.e., trends) during CY2021-2023. How has ED utilization changed since 2020 (e.g., increased, decreased, wavered, etc.)? • How has LOS changed since 2020 (e.g., increased, decreased, stayed the same)? • What factors (e.g. hospital closures, wait times; environmental factors such as crime, provider availability) have contributed to changes in ED utilization? ED LOS? • During the timeframe, how did the PHE impact ED utilization? ED LOS? • What types of barriers/challenges did the state face in reducing ED utilization and/or ED LOS during the timeframe?

[122] Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health & Human Services. Trends in the Utilization of Emergency Department Services, 2009-2018. 2021. https://aspe.hhs.gov/pdf-report/utilization-emergency-department-services

#	Background	Question(s)
2	It is our understanding (from the last iteration of interviews) that since 2020, MCEs have reported ALOS to the state, as it is required in their contracts, as well as quarterly reports with LOS data. Additionally, state officials internally review the ALOS for all IMDs that receive federal match and report this information in quarterly SMI waiver demonstration monitoring reports.	Is this information still correct? • IF YES: ▪ What has the state observed regarding ALOS, particularly for IMDs and EDs, during the timeframe (CY2021-2023) (e.g., increase, decrease, stayed the same)? ▪ During the timeframe, how has the report supported the state in compiling accurate data and informing actions? ▪ What improvements or changes could be made to support ALOS monitoring? • IF NO: ▪ During the timeframe, how did the state monitor ALOS for all Medicaid programs?
3	We also learned from the last iteration of interviews that the state annually identifies geographic shortage areas and conducts targeted outreach to non-Medicaid enrolled providers in those areas by annually monitoring provider network capacity, which is used to identify provider deficiencies and build provider recruitment plans. (Goals 1 and 3)	Is this information still correct? • IF YES: ▪ Describe the state' provider network capacity (e.g., differences across geographic areas, areas in particular need, provider type needed) during CY2021-CY2023? ▪ How has annual identification of geographic shortage areas and targeted outreach to non-Medicaid enrolled providers expanded access to high-quality, evidence-based MH treatment services for SMI populations? How has annual identification of geographic shortage areas and targeted outreach to non-Medicaid enrolled providers impacted ED utilization and LOS in EDs? ▪ How can monitoring provider capacity and outreach be improved? • IF NO: ▪ During the timeframe, how did the state annually identify geographic shortage areas and conduct targeted outreach to non-Medicaid enrolled providers in those areas?
4	In 2020, state officials described efforts to pilot two CSUs across the state to provide an alternative to crisis evaluations within EDs and divert admissions to inpatient psychiatric units. (CSUs serve as an alternative to an ED or jail for patients experiencing MH issues.) While initial implementation was delayed due to the COVID-19 PHE, two certified MH clinics, Centerstone Indiana and Four County, were awarded contracts to operate CSU pilots which began on July 1, 2020. From the last iteration of interviews in 2023, we learned that the state completed the CSU pilot in June of 2022. (Goals 1, 2, and 3)	• During the timeframe, how did the CSU pilot impact utilization and LOS in EDs for beneficiaries with SMI while awaiting MH treatment in specialized settings (e.g., diverted beneficiaries from EDs)? • Between CY2021 and CY20023, were CSUs added across the state beyond the pilot? • IF YES: ▪ Please describe CSU expansion. ▪ How have CSUs impacted ED utilization and LOS in EDs among Medicaid beneficiaries with SMI? • IF NO: ▪ Why was this initiative not expanded? ▪ Are there plans to expand CSUs? ▪ Are there other initiatives in place to increase crisis services?

#	Background	Question(s)
5	We also learned from the last iteration of KIIs, that the state was no longer utilizing OpenBeds and that the MCU/MRSS pilot had been suspended. (Goals 1, 2, and 3)	• Is this information still correct? • IF YES: ▪ Is there another initiative that the state has focused on during the time frame that would replace the efforts initially allocated to the MCU/MRSS pilots? If so, what are those efforts? • Regarding OpenBeds, are there other tools being considered to support SMI populations in finding beds when needed.
6	Now we will discuss any additional strategies or activities the state implemented during the timeframe to reduce ED LOS that was not identified in the Demonstration Implementation Plan.	• What other activities or strategies did the state implement during CY2021-CY2023 to reduce ED utilization or ED LOS among SMI Medicaid beneficiaries? • For each activity, please describe its impact on ED utilization or ED LOS among SMI Medicaid beneficiaries. • What challenges/barriers have been encountered with implementing these strategies? • For both activities identified as part of the Demonstration Implementation plan and other activities noted: ▪ Which of the strategies have been most successful? Why? ▪ What has helped support success?

4. Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings

Patients with SMI may be vulnerable to unplanned hospital readmission.[123] Unplanned hospital readmission is a common but potentially preventable health care outcome and quality indicator associated with considerable health care costs. Recent studies have indicated that 30-day hospital readmissions among Medicaid beneficiaries with SMI are higher than rates of 30-day readmissions after medical hospitalizations than the general population.[124, 125]

A key goal of the evaluation is to understand how demonstration activities have contributed to reductions in preventable readmissions to acute care hospitals and residential settings. Demonstration activities identified in the state's Implementation Plan associated with this goal include:

- Updating the Indiana Provider Manual to explicitly require psychiatric hospitals have protocols in place to (*Goals 2 and 5*):

[123] Albrecht, J. S., Hirshon, J. M., Goldberg, R., Langenberg, P., Day, H. R., Morgan, D. J., Comer, A. C., Harris, A. D., & Furuno, J. P. (2012, April 26). *Serious mental illness and acute hospital readmission in diabetic patients*. American journal of medical quality: the official journal of the American College of Medical Quality. Retrieved April 22, 2022, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3677605/

[124] Cook, J. A., Burke-Miller, J. K., Razzano, L. A., Steigman, P. J., Jonikas, J. A., & Santos, A. (2021, February 13). *Serious mental illness, other mental health disorders, and outpatient health care as predictors of 30-day readmissions following medical hospitalization*. General Hospital Psychiatry. Retrieved April 22, 2022, from https://www.sciencedirect.com/science/article/pii/S0163834321000244

[125] Cook, J. A., Burke-Miller, J. K., Jonikas, J. A., Aranda, F., & Santos, A. (2020, September). *Factors associated with 30-day readmissions following medical hospitalizations among Medicaid beneficiaries with schizophrenia, bipolar disorder, and major depressive disorder.* American Psychological Association PsycNet. Retrieved April 22, 2022, from https://psycnet.apa.org/record/2020-66663-001

  - Assess for housing insecurity as part of the social work assessment and discharge planning processes and to refer to appropriate resources.
  - Ensure contact is made by the treatment setting with each discharged beneficiary within 72 hours of discharge and follow-up care is accessed.
- Piloting 2 CSUs in the northern and southern parts of the state. (*Goals 1, 2, and 3*)
- Piloting MCU/MRSS. (*Goals 1, 2, and 3*)

Lewin interviewed state officials in 2020 as well as 2023, and compiled insights specific to these demonstration activities and their impact on readmissions to acute care hospitals and residential settings. For today's interview, we are interested in compiling insights, as well as confirming our understanding of activity progress, for the time-period of 2021-2023.

#	Background	Question(s)
7	During the last iteration of interviews, interviewees stated that the expansion of telehealth services likely reduced readmissions.	• Please describe readmission rates during 2021-CY2023. How have readmission rates changed since 2020 (e.g., increased, decreased, stayed the same etc.)? • What has contributed to the change in readmission rates (e.g., PHE, telehealth)? • What types of barriers/challenges did the state face in reducing preventable readmissions to acute care hospitals and residential settings during the timeframe?
8	From the last iteration of interviews, we learned that the provider manual modules are updated on a rolling basis and that those updates are communicated via bulletins. It was also noted that the next full update will incorporate all of the requirements outlined in the Indiana SMI Implementation Plan (including assessing for housing insecurity and ensuring contact is made within 72 hours of discharge) and that this update is targeted to occur in CY2024 as part of the Behavioral Health Services module.	• Is this information still correct? • IF NO: ▪ Please clarify. unannounced site visits during CY 202 and 2022?
9	We've discussed the CSU pilot in the context of ED utilization. (*Goals 1, 2, and 3*)	• During the timeframe, how did the CSU pilot contribute to reduced preventable readmissions to acute care hospitals and residential settings?

#	Background	Question(s)
10	Now, let's discuss any additional strategies or activities that are not documented in the Indiana SMI Implementation Plan that the state implemented to reduce preventable readmissions to acute care hospitals and residential settings.	• What other activities or strategies did the state implement during CY2021-CY2023 to reduce preventable readmissions to acute care hospitals and residential settings among SMI Medicaid beneficiaries? • For each activity, please describe its impact on reduced preventable readmissions to acute care hospitals and residential settings from SMI Medicaid beneficiaries. • What challenges/barriers have been encountered with implementing these strategies? • For both activities identified as part of the Implementation Plan and other activities noted: ▪ Which of the strategies have been most successful? Why? ▪ What has helped support success?

5. Goal 3: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state

Crisis response and stabilization (e.g., crisis call centers, crisis mobile team response, crises receiving and stabilization services) is a basic element of MH care and often serves as an access point for connecting individuals to community care resources. Although evidence regarding crisis response programs is emerging, research has indicated that crisis response is associated with improved health outcomes.[126]

A key goal of the evaluation is to understand how demonstration activities have contributed to improving availability of crisis stabilization services. Demonstration activities identified in the state's Implementation Plan associated with this goal include:

- Annually identifying geographic shortage areas and conducting targeted outreach to non-Medicaid enrolled providers in those areas. (*Goals 1 and 3*)
- Expanding use of OpenBeds beyond SUD to include tracking availability of psychiatric inpatient and crisis stabilization beds. (*Goals 1, 2, and 3*)
- Piloting 2 CSUs in the northern and southern parts of the state. (*Goals 1, 2, and 3*)
- Piloting MCU/MRSS. (*Goals 1, 2, and 3*)

Lewin interviewed state officials in 2020 as well as 2023, and compiled insights specific to these demonstration activities and their impact on crisis stabilization services. For today's interview, we are interested in compiling insights, as well as confirming our understanding of activity progress, for the time-period of 2021-2023.

[126] Vikki, W., & Natasha, C. (2021, May). *Building blocks: How Medicaid can advance mental health and substance use crisis response*. Well Being Trust. Retrieved April 22, 2022, from https://wellbeingtrust.org/wp-content/uploads/2021/05/WBT-Medicaid-MH-and-CrisisCareFINAL.pdf

#	Background	Question(s)
11	For Goal 3, we are interested in understanding activities or strategies that have improved crisis stabilization across the state, particularly during acute short-term stays in: • Hospitals: ▪ Public and private psychiatric hospitals, ▪ General hospital psychiatric units, and ▪ Partial hospitalization. • Community-based: ▪ Residential treatment facilities, ▪ IOP services, and ▪ Community-based settings (i.e., residential crisis stabilization programs, small inpatient units in CMHCs, peer-run crisis respite programs, etc.).	• Please describe the availability of crisis stabilization services provided during acute short-term stays (particularly in the settings mention) during the timeframe (CY2021-2023). • How have crisis stabilization services changed (e.g., increased, decreased, stayed the same) from 2020? • Please describe challenges or obstacles for improving the availability of crisis stabilization services for SMI Medicaid beneficiaries.
12	In 2020, interviewees mentioned the expanded use of CCBHCs in Indiana including the role of 988. State officials described how 17 organizations (15 CCBHC's and 2 hospitals) received 2-year SAMHSA CCBHC Expansion grants in FY18-FY21 which require participation in crisis response efforts.	• Please elaborate on how the SAMHSA CCBHC expansion grants supported crisis response efforts.
13	We've discussed CSU pilots previously (*Goals 1, 2, and 3*).	• During the timeframe, how did the CSU pilot contribute to increased availability of crisis services to SMI beneficiaries?
14	As noted from the last iteration of interviews, the state annually identifies geographic shortage areas and conducts targeted outreach to non-Medicaid enrolled providers in those areas by annually monitoring provider network capacity, which is used to identify provider deficiencies and build provider recruitment plans. (*Goals 1 and 3*)	• Describe the state's provider network capacity (e.g., differences across geographic areas, areas in particular need) in relation to crisis stabilization services during CY2021-CY2023. • How has the number of crisis stabilization services across the state of Indiana changed from 2020? • What contributed to that change during the timeframe? • Did the state encounter any challenges or barriers in annually identifying crisis stabilizations services across the state during the timeframe? • How could the annual identification of crisis stabilization services across the state of Indiana improve?

#	Background	Question(s)
15	Over the course of the timeframe, the state may have implemented other strategies or initiatives to support the availability of crisis stabilization services for SMI Medicaid beneficiaries.	• What other activities or strategies did the state implement during CY2021-CY2023 to improve the availability of crisis stabilization services for SMI Medicaid beneficiaries? • For each activity, please describe its impact on improved availability of crisis stabilization services for SMI Medicaid beneficiaries. • What challenges/barriers have been encountered with implementing these strategies? • For both activities identified as part of the Implementation Plan and other activities noted: ▪ Which of the strategies have been most successful? Why? ▪ What has helped support success?

6. Goal 4: Improved access to community-based services to address the chronic MH care needs of beneficiaries with SMI including through increased integration of primary and behavioral health care

Individuals with SMI suffer disproportionately from PH conditions than their non-SMI peers and are at increased risk for a range of acute and chronic diseases (e.g., diabetes, cardiovascular disease, respiratory disease, cancer, and infectious disease). [127]

A key goal of the evaluation is to understand how demonstration activities have contributed to improving access to community-based services to address the chronic MH care needs of Medicaid beneficiaries with SMI. Demonstration activities identified in the state's Implementation Plan associated with this goal include:

- Expansion of the State's model for PCBHI. (*Goals 4 and 5*)
- Implementation of a health homes SPA. (*Goals 4 and 5*)

Lewin interviewed state officials in 2020 as well as 2023, and compiled insights specific to these demonstration activities and their impact on access to community-based services. For today's interview, we are interested in compiling insights, as well as confirming our understanding of activity progress, for the time-period of 2021-2023.

[127] Breslau, J., Sorbero, M. J., Kusuke, D., Yu, H., Scharf, D. M., Hackbarth, N. S., & Pincus, H. A. (2019, March 28). *Primary and behavioral health care integration program: Impacts on Health Care Utilization, cost, and quality*. Office of the Assistant Secretary for Planning and Evaluation. Retrieved April 22, 2022, from https://aspe.hhs.gov/reports/primary-behavioral-health-care-integration-program-impacts-health-care-utilization-cost-quality-0

#	Background	Question(s)
16	From previous interviews, we learned that the state submitted an application for SAMHSA's (FY) 2020 PIPBHC grant. The purpose of the PIPBHC program is to: (1) promote full integration and collaboration in clinical practice between primary and behavioral health care; (2) support the improvement of integrated care models for primary care and behavioral health care to improve the overall wellness and PH status of adults with SMI; and (3) promote and offer integrated care services related to screening, diagnosis, prevention, and treatment of MH and SUD, and co-occurring PH conditions and chronic diseases. The state applied and received the PIPBHC grant in March of 2021.	• During the timeframe, how has the PIPBHC grant improved access to community-based services (that address chronic MH care needs) for beneficiaries with SMI? What initiatives did the state implement due to this funding? • Has the state developed a report or findings from the implementation of the activities related to the PIPBHC grant?
17	From our last iteration of interviews, we learned that the health homes SPA was suspended indefinitely, as the PHE had put significant stress on the primary care and behavioral health systems and emphasized the potential for increased provider burden if new strategies were implemented. Instead, state officials indicated that the health homes initiative would be explored as part of the expansion and designation of CCBHCs in Indiana.	• Is this information still correct? • IF YES: ▪ Describe how the health homes initiative is being integrated into the CCBHCs? • IF NO: ▪ Are there future plans to explore the health homes initiative (e.g., SPA)?
18	Another key action for Goal 4 (and Goal 5) is related to the expansion of Indiana's model for PCBHI.	• Could you please elaborate on Indiana's model for PCBHI? How has this model expanded during the timeframe? Have there been particular strategies that have been most effective in the integration of primary and behavioral health care? • How was the expansion of integration of primary and behavioral health care addressed the chronic MH needs of SMI beneficiaries. How has this integration increased access to community-based services for SMI beneficiaries? • What barriers/obstacles have impacted the expansion of Indiana's model for PCBHI during the timeframe?
19	From the 2020 interviews, interviewees had noted that a key barrier to achievement of Goal 4 was the limited supply of qualified MH providers. Interviewees had noted the importance of the House Enrolled Act 1175 which passed in the 2019 legislative session and expanded access to behavioral health providers for Medicaid enrollees. State officials had indicated that they would continue to look at additional solutions to the provider shortage while maintaining best practices in care.	• How have the number of providers changed across the state of Indiana from 2020 to the timeframe? • What strategies or solutions did the state implement to address provider needs across the state? • Are there additional plans to address any provider shortages across the state? If so, please elaborate. • What challenges/barriers does the state face in addressing the provider shortage?

#	Background	Question(s)
20	There may be other strategies or initiatives that the state has implemented during the timeframe that have assessed beneficiary access to community-based services in order to address their chronic MH care needs, including through increased integration of primary and behavioral health care.	• What other activities or strategies did the state implement during CY2021-CY2023 to improve access to community-based services for beneficiaries with SMI to address chronic MH needs (including through increased integration of primary and behavioral health care)? • For each activity, please describe its impact on improved access to community-based services for beneficiaries with SMI to address their chronic MH needs. • What challenges/barriers have been encountered with implementing these strategies? • For both activities identified as part of the Implementation Plan and other activities noted: ▪ Which of the strategies have been most successful? Why? ▪ What has helped support success?

7. Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities

Lastly, we will discuss Goal 5, factors that supported progress towards Goal 5, any challenges or barriers encountered, and future plans. Goal 5 focuses on improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities. In addition to disparities in health outcomes, people with SMI often use the MH care system as their principal setting for access to medical and social care.[128, 129, 130] As such, community MH settings are challenged to address the many demands associated with comorbid chronic medical conditions and related primary and preventive care needs.[131] Please consider the timeframe of CY 2021-2023 specifically for this discussion. Demonstration activities identified in the state's Implementation Plan associated with this goal include:

- Indiana Medicaid Provider Manual will be updated to explicitly require psychiatric hospitals have protocols in place to (*Goals 2 and 5*):
  - Assess for housing insecurity as part of the social work assessment and discharge planning processes and to refer to appropriate resources.

[128] Bartels SJ (2003). Improving the system of care for older adults with mental illness in the United States: Findings and recommendations for the President's new freedom commission on mental health. *American Journal of Geriatric Psychiatry*, 11, 486–497.

[129] De Hert M, Correll CU, Bobes J, Cetkovich-Bakmas M, Cohen D, Asai I, … Leucht S (2011a). Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care. *World Psychiatry*, 10, 52–77.

[130] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

[131] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

  - Ensure contact is made by the treatment setting with each discharge beneficiary within 72 hours of discharge and follow-up care is accessed.
- Expansion of the State's model for PCBHI. (*Goals 4 and 5*)
- Implementation of a health homes SPA. (*Goals 4 and 5*)

Lewin interviewed state officials in 2020 as well as 2023, and compiled insights specific to these demonstration activities and their impact on care coordination. For today's interview, we are interested in compiling insights, as well as confirming our understanding of activity progress, for the time-period of 2021-2023.

#	Background	Question(s)
21	From the 2020 interviews, we learned that through the SAMHSA PIPBHC grant that the State is working on creating a platform that combines individual health data from multiple sources including Medicaid claims data to better track patient care needs. The platform would include a visual alert displayed when certain items are due (or past-due), which would allow the prescribing doctor to see the MH notes/concerns and vice-versa.	• During the timeframe, was the state able to build the platform outlined? • IF YES: ▪ How has that platform improved care coordination for SMI beneficiaries? ▪ Have there been any challenges with this platform? If so, how is the state addressing those challenges? • IF NO: ▪ Are there plans to build out this platform or something similar? If so, what do those plans look like? ▪ What were some of the challenges encountered that led to delaying the build out of this platform?
22	Data sharing systems, particularly those that allow coordination of services among treatment team beneficiaries, clinical supervision, medication and medication management, psychotherapy, case management, coordination with primary care, family/caregiver support and education, and SE and supported education, may impact care coordination for beneficiaries with SMI.	• During the timeframe, what other changes or demonstration activities were implemented to data sharing systems, processes, or policies that impacted care coordination for SMI beneficiaries? • What were the goals of these changes? • What factors supported implementation of these strategies? What has helped support success? Why were these strategies successful? • What challenges have been encountered with implementing these strategies? How has the PHE impacted achievement of this goal?
23	We have already touched on the expansion of the state's model for PCBHI related to Goal 4.	• How has the expansion of the state's model for PCBHI improved care coordination for SMI beneficiaries (especially following acute care in hospitals and residential treatment facilities)?
24	One key action related to Goal 5 (*and Goal 4*) is the implementation of the health homes SPA. As stated previously, it is our understanding that the health homes initiative would be explored as part of the expansion and designation of CCBHCs in Indiana.	• How will the expansion and designation of CCBHCs in Indiana improve care coordination for SMI beneficiaries, particularly following episodes of acute care in hospitals and residential treatment facilities?

#	Background	Question(s)
25	The state may have implemented other strategies or initiatives during the timeframe that have improved care coordination of beneficiaries with SMI, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.	• What other activities or strategies did the state implement during CY2021-CY2023 to improve care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities for beneficiaries with SMI? • For each activity, please describe its impact on improved care-coordination for beneficiaries with SM, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities. • What challenges/barriers have been encountered with implementing these strategies? • For both activities identified as part of the Implementation Plan and other activities noted: ▪ Which of the strategies have been most successful? Why? ▪ What has helped support success?

B. Indiana 1115(a) SMI Demonstration Evaluation: MCE KII Guide

1. Introduction:

This interview is part of a series of key informant interviews that will provide a better understanding of the state's progress in meeting the five goals of the Indiana's 1115 SMI Demonstration Evaluation during the timeframe of CY2021-CY2023. Lewin, as the independent evaluator of the Indiana SMI Waiver, will be conducting a series of 30–60-minute interviews (with state officials, MCE representatives, providers, advocacy organizations, and beneficiaries) to gather information on goal progress in relation to the Indiana SMI Waiver Demonstration, impact of the COVID-19 PHE, factors that supported progress, any challenges or barriers encountered, and pertinent follow-up based on insights gathered from previous interviews.

This interview guide is organized by topic area. For each topic area, we have included background information for context prior to each question. For this interview, we will focus on understanding the MCE experience of, and perspective on, Indiana's progress towards meeting the five goals of the Indiana SMI Waiver***. In preparation for the interview, please be sure to read all background information as well as the questions.*** See topic areas below:

- Interviewee Background Information
- Goal 1: Reduced utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings
- Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings
- Goal 3: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state
- Goal 4: Improved access to community-based services to address the chronic MH care needs of beneficiaries with SMI including through increased integration of primary and behavioral health care

- Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities

This interview will be 60 minutes in length.

Please note: You were chosen for this interview based on your expertise. We fully expect that you do not have answers to each question listed in the guide. If you are not sure of an answer to a question- that is OK. Please indicate as such, and we will move on to the next question.

2. Background Information

Background	Question(s)
Attendee Name and Role at [MCE]	• Please describe your current role at [MCE]. • How long have you been in this role?
Role in respect to the Indiana SMI Waiver	• What has been your role, if any, in relation to the Indiana SMI Waiver?

3. Goal 1: Reduced utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings

Although the rates of ED visits per 100,000 persons nationally have remained stable between 2009 and 2018, visits associated with MH diagnoses continued to rise among Medicaid beneficiaries during this time-period.[132] Individuals with SMI are more likely to have higher rates of ED utilization than individuals without any MH diagnosis. A key goal of the evaluation is to understand how demonstration activities have contributed to reductions in ED utilization and ED LOS among Medicaid beneficiaries with SMI.

Lewin interviewed MCEs in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on ED utilization and ED LOS among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on ED utilization and ED LOS among the SMI population, focusing on the time-period of 2021-2023.

[132] Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health & Human Services. Trends in the Utilization of Emergency Department Services, 2009-2018. 2021. https://aspe.hhs.gov/pdf-report/utilization-emergency-department-services

	Background	Question(s)
1	MCEs interviewed in 2021 described how the PHE impacted implementation activities and likely confounded the impact of the waiver on LOS for Medicaid beneficiaries with SMI waiting for MH treatment. MCEs described the 7-day instant authorization as a major change resulting from the COVID-19 PHE. Additionally, MCEs noted that it was difficult to track LOS related to SMI as opposed to LOS courtesy of the 7-day instant authorization. Overall, MCEs noted that all changes in LOS have been conflated.	• Please describe ED utilization (i.e., trends) during CY2021-2023. How has ED utilization changed since 2020 (e.g., increased, decreased, stayed the same, etc.)? • How has LOS changed since 2020 (e.g., increased, decreased, stayed the same)? • What factors (e.g. hospital closures, wait times; environmental factors such as crime, provider availability) have contributed to changes in ED utilization? ED LOS? • During the timeframe (CY2021-2023), how did the PHE impact ED utilization? ED LOS? (e.g., social distancing parameters, anxiety around in-person services, etc.) • What types of barriers/challenges did [MCE] face in reducing ED utilization and/or ED LOS during the timeframe? How did [MCE] overcome barriers or mitigate challenges?
2	It is our understanding (from the last iteration of interviews) that since 2021, MCEs have reported ALOS to the state, as it is required in their contracts, as well as quarterly reports with LOS data.	• Is this information still correct? • IF YES: ▪ What has [MCE] observed regarding ALOS, particularly for EDs, during the timeframe (CY2021-2023) (e.g., increase, decrease, stayed the same)? ▪ What improvements or changes could be made to support ALOS monitoring? • IF NO: ▪ During the timeframe, how did [MCE] monitor ALOS in EDs?
3	[MCE] may have other policies or procedures in place to ensure reduced utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings.	• What other activities or strategies did [MCE] implement during CY2021-CY2023 to reduce ED utilization or ED LOS among SMI Medicaid beneficiaries? • For each activity, please describe its impact on ED utilization or ED LOS among SMI Medicaid beneficiaries. • What challenges/barriers have been encountered with implementing these strategies? • For both activities identified as part of the Demonstration Implementation plan and other activities noted: ▪ Which of the strategies have been most successful? Why? ▪ What has helped support success?

4. Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings

Patients with SMI may be vulnerable to unplanned hospital readmission.[133] Unplanned hospital readmission is a common but potentially preventable health care outcome and quality indicator associated with considerable health care costs. Recent studies have indicated that 30-day hospital readmissions among Medicaid beneficiaries with SMI are higher than rates of 30-day readmissions after medical hospitalizations than the general population.[134, 135]

A key goal of the evaluation is to understand how demonstration activities have contributed to reductions in preventable readmissions to acute care hospitals and residential settings.

Lewin interviewed MCEs in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on readmissions to acute care hospitals and residential settings among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on preventable readmissions to acute care hospitals and residential settings among the SMI population, focusing on the time-period of 2021-2023.

	Background	Question(s)
4	In 2020, [MCE] indicated that they were unsure about whether readmission rates had been reduced.	• Please describe readmission rates during 2021-CY2023. How have readmission rates changed (by year) since 2020 (e.g., increased, decreased, stayed the same etc.)? • What has contributed to the change in readmission rates (e.g., PHE, telehealth)? • What types of barriers/challenges did [MCE] face in reducing preventable readmissions to acute care hospitals and residential settings during the timeframe? • How did [MCE] overcome barriers or mitigate challenges?

[133] Albrecht, J. S., Hirshon, J. M., Goldberg, R., Langenberg, P., Day, H. R., Morgan, D. J., Comer, A. C., Harris, A. D., & Furuno, J. P. (2012, April 26). *Serious mental illness and acute hospital readmission in diabetic patients*. American journal of medical quality: the official journal of the American College of Medical Quality. Retrieved April 22, 2022, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3677605/

[134] Cook, J. A., Burke-Miller, J. K., Razzano, L. A., Steigman, P. J., Jonikas, J. A., & Santos, A. (2021, February 13). *Serious mental illness, other mental health disorders, and outpatient health care as predictors of 30-day readmissions following medical hospitalization*. General Hospital Psychiatry. Retrieved April 22, 2022, from https://www.sciencedirect.com/science/article/pii/S0163834321000244

[135] Cook, J. A., Burke-Miller, J. K., Jonikas, J. A., Aranda, F., & Santos, A. (2020, September). *Factors associated with 30-day readmissions following medical hospitalizations among Medicaid beneficiaries with schizophrenia, bipolar disorder, and major depressive disorder.* American Psychological Association PsycNet. Retrieved April 22, 2022, from https://psycnet.apa.org/record/2020-66663-001

	Background	Question(s)
5	In 2020 and 2023, [MCE] did not provide information regarding readmission rates for beneficiaries with SMI. However, Goal 2 of the waiver is focused solely on reduced preventable readmissions to acute care hospitals and residential settings regarding SMI beneficiaries.	• Please describe readmission rates during 2021-CY2023. How have readmission rates changed (by year) since 2020 (e.g., increased, decreased, stayed the same etc.)? • What has contributed to the change in readmission rates (e.g., PHE, telehealth)? • What types of barriers/challenges did [MCE] face in reducing preventable readmissions to acute care hospitals and residential settings during the timeframe? • How did [MCE] overcome barriers or mitigate challenges?
6	In 2021, [MCE] indicated that they saw no difference in readmission rates to acute care hospitals and residential settings but could not attribute that to the SMI waiver. However, in 2023, [MCE] noted that any beneficiary admitted to an IMD facility tended to have longer lengths of stay and higher readmission rates after being initially admitted to the facilities, compared to other facilities.	• Is this information still correct? • Please describe readmission rates during 2021-CY2023. How have readmission rates changed (by year) since 2020 (e.g., increased, decreased, stayed the same etc.)? • What has contributed to the change in readmission rates (e.g., PHE, telehealth)? • What types of barriers/challenges did the [MCE] face in reducing preventable readmissions to acute care hospitals and residential settings during the timeframe? • How did [MCE] overcome barriers or mitigate challenges?
7	In 2020, [MCE] indicated that they observed a reduction in overall readmissions. One strategy that made this possible was that the regional care managers oversee both medical and behavioral health. This decreases the communication barrier between MCE and provider and makes it easier to coordinate care for beneficiaries. Other strategies related to reduced readmissions included: • Quarterly meetings between health providers and CMHCs • Utilizing a platform called 'Aunt Bertha' to connect beneficiaries with resources and allows for real-time referrals.	• Is this information still correct? • Please describe readmission rates during 2021-CY2023. How have readmission rates changed (by year) since 2020 (e.g., increased, decreased, stayed the same etc.)? • What has contributed to the change in readmission rates (e.g., PHE, telehealth)? • What types of barriers/challenges (e.g., COVID, limited office hours, reduced workforce) did [MCE] face in reducing preventable readmissions to acute care hospitals and residential settings during the timeframe? • How did [MCE] overcome barriers or mitigate challenges?
8	From the 2023 interviews, [MCE] indicated that they provided case management services to all beneficiaries discharged from an inpatient psychiatric or substance abuse hospitalization (for no fewer than 90 calendar days), as well as case management to beneficiaries during an inpatient hospitalization, or immediately upon receiving notification of a beneficiary's inpatient behavioral health hospitalization. (*Milestone 2*)	• Is this information still correct? • How has case management changed since 2020 (e.g., increase/decrease in beneficiaries, increase/decrease in complexity, stayed the same; type of case management services/activities; how case management is delivered - telehealth etc.)? • What has contributed to the growth or decline in case management (e.g., PHE, telehealth)? • What types of barriers/challenges did [MCE] face in providing case management services during the timeframe? ▪ How did [MCE] overcome barriers or mitigate risk?

	Background	Question(s)
9	From the 2023 interviews, [MCE] shared about a report that includes all high utilizers and high readmissions. Since March of 2012, a case manager has been assigned to the top 50 high utilizers and re-admitters. [MCE] noted that many of those beneficiaries are unable to reach (UTR), (particularly during COVID-19 PHE) making it challenging to engage. In this process, [MCE], providers, and facilities are all working together to ensure that the beneficiary gets the support they need.	• Is this information still correct? • Since 2020, describe (by year: 2021, 2022, and 2023) how providing case management to the top 50 utilizers and re-admitters has impacted preventable readmissions to acute care hospitals and residential settings? • What types of barriers/challenges did [MCE] face in providing case management services to the top 50 utilizers and re-admitters during the timeframe? • How did [MCE] overcome barriers and mitigate risk?
10	From the 2023 interviews, [MCE] described how they identified high ED utilizers, including, received an ADT alert (which they did not receive until late 2021). This information is pulled daily and used to identify beneficiaries who need outreach and care coordination. [MCE] also mentioned that there is state reporting on ED utilization, and they were able to identify beneficiaries that have had a certain number of ED visits within a certain timeframe.	• Is this information still correct? • During the timeframe (by year: 2021, 2022, and 2023), describe how identifying high utilizers has impacted preventable readmissions to acute care hospitals and residential settings? • What types of barriers/challenges did [MCE] face in identifying high utilizers and re-admitters during the timeframe? • How did [MCE] overcome barriers and mitigate risk?
11	From the 2023 interviews, [MCE] shared that they utilize a very robust dashboard that utilizes ER utilization for emergent and non-emergent conditions. [MCE] also has a team that prioritizes beneficiaries who are presenting to the ED for behavioral health related conditions. Additionally, monthly, [MCE] looks at the top ten beneficiaries and reviews treatment history, engagement, care management, etc.	• Is this information still correct? • Since 2020, describe (by year: 2021, 2022, and 2023) how providing case management has impacted preventable readmissions to acute care hospitals and residential settings? • What types of barriers/challenges did [MCE] face in providing case management services during the timeframe? • How did [MCE] overcome barriers and mitigate risk?
12	From the 2023 interviews, [MCE] shared their process for identifying high ED utilizers with SMI. The process included: • A pre-call review • Review of claims • Utilizing diagnosis codes to flag ED utilization • An SMI flag	• Is this information still correct? • Since 2020, describe (by year: 2021, 2022, and 2023) how providing case management to high ED utilizers has impacted preventable readmissions to acute care hospitals and residential settings? • What types of barriers/challenges did [MCE] face in providing case management services to high ED utilizers during the timeframe? • How did [MCE] overcome barriers and mitigate risk?

	Background	Question(s)
13	In 2021, [MCE] indicated that the sickest individuals are often not housed, and that housing situations are very challenging to "fit into a patient's well-being." In 2023, [MCE] noted that this continued to be a barrier, however, some internal strategies supported beneficiaries' in reducing housing insecurity (e.g., changes to flex funds and beneficiary access to a housing specialist).	• Is this information still correct? • How has housing insecurity changed (e.g. PHE) since 2020? Please describe each year during the timeframe: 2021, 2022, and 2023. • What strategies were successful during the timeframe that may have helped in addressing beneficiary housing needs? How did reducing housing insecurity impact readmissions? Please provide any examples you may have that illustrate this impact. • What types of barriers/challenges did [MCE] face in addressing housing insecurity for SMI beneficiaries during the timeframe? • How did [MCE] overcome barriers or mitigate challenges? • Based on [MCE] experience, please provide suggestions for how the State can improve access to housing, particularly for SMI beneficiaries?
14	In 2023, [MCE] indicated that part of improving access to beneficiaries with SMI to community-based services was to connect beneficiaries to stable housing.	• How has housing insecurity changed (e.g. PHE) since 2020? Please describe each year during the timeframe: 2021, 2022, and 2023. • What strategies were successful during the timeframe that may have helped in addressing beneficiary housing needs? How did reducing housing insecurity impact readmissions? Please provide any examples you may have that illustrate this impact. • What types of barriers/challenges did [MCE] face in addressing housing insecurity for SMI beneficiaries during the timeframe? • How did [MCE] overcome barriers or mitigate challenges? • Based on MCE experience, please provide suggestions for how the State can improve access to housing, particularly for SMI beneficiaries?
15	In 2021 and 2023, MCEs identified that one of the biggest challenges to the SMI waiver (due to the PHE) was that some provider facilities faced staffing shortages, large caseloads, burnout, etc.	• How have staffing issues changed since 2020 (e.g., improved, worsened, stayed the same)? • What strategies have been put into place to mitigate staffing issues? • How have staffing issues impacted care coordination and connecting beneficiaries to community-based services during the timeframe?

	Background	Question(s)
16	In 2021, MCEs noted a number of additional strategies to reduce preventable readmissions to acute care hospitals and residential settings including: • Relying more on case management and community health workers to track/engage with individuals. ([MCE] had noted that there was a group of community health workers and certified recovery specialists that are certified and personally track down individuals (in-person) and engage them with care.) • Working with facilities to find other treatment plans to help beneficiaries (i.e., working to get beneficiaries help with residential services). • Creating rounds for sickest beneficiaries, building personal relationships. • And an increased, focused outreach to the sickest individuals	• During the timeframe, has [MCE] continued to utilize these activities/strategies? What other activities or strategies did [MCE] implement during the timeframe to reduce preventable readmissions to acute care hospitals and residential settings among SMI Medicaid beneficiaries? • For each activity, please describe its impact on reduced preventable readmissions to acute care hospitals and residential settings among SMI Medicaid beneficiaries. • What challenges/barriers have been encountered with implementing these strategies? • How has [MCE] overcome barriers or mitigated challenges? • For both activities identified as part of the Demonstration Implementation plan and other activities noted: ▪ Which of the strategies have been most successful? Why? ▪ What has helped support success?

5. Goal 3: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state

Crisis response and stabilization (e.g., crisis call centers, crisis mobile team response, crises receiving and stabilization services) is a basic element of MH care and often serves as an access point for connecting individuals to community care resources. Although evidence regarding crisis response programs is emerging, research has indicated that crisis response is associated with improved health outcomes.[136]

Lewin interviewed MCEs in 2020 as well as 2023, and compiled insights specific to demonstration activities and their impact on the availability of crisis stabilization services among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on improved availability of crisis stabilization services among the SMI population, focusing on the time-period of 2021-2023.

	Background	Question(s)
17	From the 2023 interviews, we learned that the OpenBeds software was not pursued for a renewal contract during 2022. Additionally, the impact of no longer using OpenBeds was minimal, as providers use other strategies to connect beneficiaries to care.	• Is this information still correct? • Please describe the strategies [MCE] used in 2021-2023 to connect beneficiaries to beds. • What challenges/barriers have been faced? How were barriers overcome or challenges mitigated? • Based on [MCE] experience, what can the state do to improve access for SMI Medicaid beneficiaries in need of beds?

[136] Vikki, W., & Natasha, C. (2021, May). *Building blocks: How Medicaid can advance mental health and substance use crisis response*. Well Being Trust. Retrieved April 22, 2022, from https://wellbeingtrust.org/wp-content/uploads/2021/05/WBT-Medicaid-MH-and-CrisisCareFINAL.pdf

	Background	Question(s)
18	In 2020 and 2023, [MCE] shared that they have quarterly meetings with CMHCs.	• During the timeframe, did [MCE] continue to have quarterly meetings with the CMHCs? • Since 2020, how have these meetings improved the availability of crisis stabilization services throughout the state for SMI beneficiaries? During the timeframe, specifically? • What challenges or barriers has [MCE] observed with the implementation of these meetings? • What has helped support success of this strategy?
19	In 2021, [MCE] shared a number of strategies that had been implemented to improve the availability of crisis stabilization services throughout the state, including: • The 998 initiative, • CMHC's MCU/MRSS, and • CSUs It was also noted in 2020 that [MCE] had been working with NAMI to expand their Crisis Intervention Team (CIT) programs in ten counties. Additionally, [MCE] had a goal to have all frontline staff trained in MH first aid.	• Since 2020, how has the implementation of these strategies improved availability of crisis stabilization services throughout the state for SMI beneficiaries? During the timeframe, specifically? • What challenges or barriers has [MCE] observed with the implementation of these strategies? • Which of these strategies has been most successful? Why? • What has helped support success?
20	In 2020, [MCE] shared that the CSU pilot was a strategy that had been identified to improve the availability of crisis stabilization services throughout the state. Though the implementation was delayed due to COVID, two certified MH clinics were awarded contracts to operate CSU pilots which began on July 1, 2020. From the last iteration of interviews, we learned that the CSU pilot was completed in June of 2022.	• Since 2020, how has the implementation of the CSU pilot improved availability of crisis stabilization services throughout the state for SMI beneficiaries? During the timeframe, specifically? • What challenges or barriers has [MCE] observed with the implementation of these strategies? • What has helped support the success of the CSU pilots?
21	[MCE] may have or know of other policies or procedures in place to ensure improved availability of crisis stabilization services to meet the unique needs across the state.	• What other activities or strategies were implemented during the timeframe to improve access to crisis stabilization services for SMI beneficiaries? • For each activity, please describe its impact on access to crisis stabilization for SMI Medicaid beneficiaries. • What challenges/barriers have been encountered with implementing these strategies? • Which of the strategies have been most successful? Why? • What has helped support success?

6. Goal 4: Improved access to community-based services to address the chronic MH care needs of beneficiaries with SMI including through increased integration of primary and behavioral health care.

Individuals with SMI suffer disproportionately from PH conditions than their non-SMI peers and are at increased risk for a range of acute and chronic diseases (e.g., diabetes, cardiovascular disease, respiratory disease, cancer, and infectious disease).[137]

Lewin interviewed MCEs in 2020 as well as 2023, and compiled insights specific to demonstration activities and their impact on access to community-based services among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on access to community-based services among the SMI population, focusing on the time-period of 2021-2023.

[137] Breslau, J., Sorbero, M. J., Kusuke, D., Yu, H., Scharf, D. M., Hackbarth, N. S., & Pincus, H. A. (2019, March 28). *Primary and behavioral health care integration program: Impacts on Health Care Utilization, cost, and quality*. Office of the Assistant Secretary for Planning and Evaluation. Retrieved April 22, 2022, from https://aspe.hhs.gov/reports/primary-behavioral-health-care-integration-program-impacts-health-care-utilization-cost-quality-0

	Background	Question(s)
22	SBHC provide on-site comprehensive preventative and primary health services including behavioral health, oral health, ancillary and enabling services. MCEs are encouraged to plan for, develop, and or/enhance relationships with SBHCs with the goal of providing accessible services to school-aged, enrolled beneficiaries. From the last iteration of interviews, we learned that [MCE] engaged with school behavioral health services in partnership with their contracted behavioral health providers (i.e., large hospital systems, CMHCs (Adult & Child), or FQHCs). From the last iteration of interviews, we learned that [MCE] engaged with school behavioral health services, though it was difficult during COVID. [MCE] has a school-based health administrator who has a great relationship with the schools. They also coordinate with schools and the Executive Director of the School Nurses Association to place emergency medication boxes (with naloxone) in the schools. From the last iteration of interviews, we learned that [MCE] engaged with school behavioral health services in partnership with their contracted behavioral health providers (i.e., large hospital systems or FQHCs). From the last iteration of interviews, we learned that [MCE] engaged with school behavioral health services via the school-based administrator at [MCE]. Some of the activities completed in CY2021-2022 included: • Utilization of telehealth in the Morrisville Clinic's school-based behavioral health center • Partnering with Community Health Net. From the last iteration of interviews, we learned that [MCE] engaged with school behavioral health services via the FQHCs.	• Is this information still correct?

	Background	Question(s)
23	In 2021, [MCE] provided a number of challenges that had been encountered related to improved access of beneficiaries with SMI to community-based services to address their chronic MH care needs including through increased integration of primary and behavioral health care, including: • Closed facilities, • Staffing shortages, • Increased number of individuals with SMI • COVID-19 depleted community resources, • Differing intake processes, • Long wait lists for housing for sickest individuals, • Sober living facility shortages, • Challenges with CMHC communication, • Going home to an environment not conducive to recovery.	• During the timeframe, do these challenges continue to impact SMI beneficiaries? How so? • Based on [MCE] experience, how can the state improve access to Medicaid beneficiaries with SMI to community-based services to address their chronic MH needs?
24	In 2021, [MCE] had not identified any strategies that had been implemented to improve access of beneficiaries with SMI to community-based services to address chronic MH care needs through increased integration of primary and behavioral health care. In 2020, [MCE] noted a few strategies that improved access to community-based services for beneficiaries with SMI, including: • Encouraging coordination between primary and behavioral health providers. • PCPs located in the CMHCs. • Expansion of 211 and Aunt Bertha.	• During the timeframe, were there any other activities or strategies that were implemented to improve access of beneficiaries with SMI to community-based services to address chronic MH care needs through increased integration of primary and behavioral health care? • IF YES: ▪ For each activity, please describe its impact on improved access to community-based services to address chronic MH care needs through increased integration of primary and behavioral health care. ▪ What challenges/barriers have been encountered with implementing these strategies? ▪ Which of the strategies have been most successful? Why? ▪ What has helped support success? • IF NO: ▪ What challenges/barriers have been encountered with trying to implement any new strategies?

7. Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities

Lastly, we will discuss Goal 5, factors that supported progress towards Goal 5, any challenges or barriers encountered, and future plans. Goal 5 focuses on improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities. In addition to disparities in health outcomes, people with SMI often use the

MH care system as their principal setting for access to medical and social care.[138, 139, 140] As such, community MH settings are challenged to address the many demands associated with comorbid chronic medical conditions and related primary and preventive care needs.[141]

Lewin interviewed MCEs in 2020 as well as 2023, and compiled insights specific to demonstration activities and their impact on improved care coordination among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities among the SMI population, focusing on the time-period of 2021-2023.

	Background	Question(s)
25	In 2020, [MCE] shared that with the utilization of telehealth, treatment that had not been previously utilized via this route was now being utilized and had potentially improved continuity of care. However, some beneficiaries did not feel comfortable with utilizing telehealth.	• Is this information still correct? • How has telehealth continued to impact continuity of care for beneficiaries with SMI (during the timeframe)? How does that differ from 2020? • What challenges has telehealth offered during the timeframe?
26	In 2020, [MCE] noted that as a result of the 7-day instant authorization, providers were only allowing for walk-in appointments, therefore creating long wait times for beneficiaries. Additionally, due to lack of admission information (SMI beneficiaries may struggle to provide all relevant details) the discharge summaries for beneficiaries may not capture the breadth of support needed, making it challenging to provide the proper care coordination.	• Is this information still correct? • How has this information changed since 2020? • During the timeframe, how has [MCE] addressed challenges with discharge summaries for beneficiaries with SMI?
27	In 2021, [MCE] shared that they advocate for their beneficiaries, in order to execute better care coordination. Care managers have been essential in moving this strategy forward. However, provider engagement continued to be an issue. This same sentiment was noted during the 2023 interviews with [MCE] as well, stating that there have been challenges with provider engagement, as providers may not understand the value of this relationship.	• During the timeframe, what strategies have you used to improve provider engagement? How have those strategies been successful? • Based on [MCE] experience, how can the state support the MCE/provider relationship?

[138] Bartels SJ (2003). Improving the system of care for older adults with mental illness in the United States: Findings and recommendations for the President's new freedom commission on mental health. *American Journal of Geriatric Psychiatry*, 11, 486–497.

[139] De Hert M, Correll CU, Bobes J, Cetkovich-Bakmas M, Cohen D, Asai I, … Leucht S (2011a). Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care. *World Psychiatry*, 10, 52–77.

[140] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

[141] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

	Background	Question(s)
28	Data sharing systems, particularly those that allow coordination of services among treatment team beneficiaries, clinical supervision, medication and medication management, psychotherapy, case management, coordination with primary care, family/caregiver support and education, and SE and supported education, may impact care coordination for beneficiaries with SMI. In 2020, [MCE] noted that, though not a change but rather an update to the system, they have access to PA systems, so they can easily find utilization/care management information in the systems. In the 2020 interviews, [MCE] noted that the MCEs had created an IMD tracking sheet, which the IMDs filled out with pertinent information. [MCE] then created an internal tracked in an effort to "audit" the accuracy of the beneficiary capture. This is then used internally to create an IMD quarterly report that is shared with the state.	• Is this information still correct? • Have there been additional changes through the demonstration (since 2020) to data sharing systems, processes, or policies? • How have these changes impacted data sharing systems during the timeframe? • What challenges/barriers has [MCE] experience with these data sharing changes?
29	In the 2021 interviews, [MCE] noted that IMDs send [MCE] monthly reports, which allows [MCE] to easily follow beneficiaries. Additionally, the UM Team and [a doctor] keep a close eye on LOS for their beneficiaries (via data sharing with providers) in order to ensure that beneficiaries do not surpass the days that they can spend in facilities as well as receive necessary treatment.	• What challenges/barriers has [MCE] experienced with these data sharing changes?
30	[MCE] may have or know of other policies or procedures in place to ensure improved care coordination, especially continuity of care in the community following episodes of acute care in hospital and residential treatment facilities. In 2020, [MCE]noted that the state did a good job of encouraging providers and the MCEs to communicate with one another. [MCE] noted that MCEs were included to participate in the Indiana Council for CMHC meetings, as well as monthly on-sites with the state. These strategies improved care coordination for SMI beneficiaries.	• What strategies during the timeframe did [MCE] utilize to improve care coordination for beneficiaries with SMI? • Did [MCE] experience any barriers or challenges in implementing these strategies? • Which of the strategies was most successful and why? • What has helped support success? • How did COVID-19 impact these strategies?

C. Indiana 1115(a) SMI Demonstration Evaluation: Provider KII Guide

1. Introduction:

This interview is part of a series of KIIs that will provide a better understanding of the state's progress in meeting the five goals of the Indiana's 1115 SMI Demonstration Evaluation.

Lewin, as the independent evaluator of the Indiana SMI Waiver, will be conducting a series of 30–60-minute interviews (with State officials, MCE representatives, providers, advocacy organizations, and beneficiaries) to gather information on goal progress in relation to the Indiana SMI Waiver Demonstration, impact of the COVID-19 PHE, factors that supported progress, any challenges or barriers encountered, and pertinent follow-up based on insights gathered from previous interviews.

This interview guide is organized by topic area. For each topic area, we have included background information for context prior to each question. For this interview, we will focus on understanding the provider experience of, and perspective on, Indiana's progress towards meeting the five goals of the Indiana SMI Waiver***. In preparation for the interview, please be sure to read all background information as well as the questions.*** See topic areas below:

- Interviewee Background Information
- Goal 1: Reduced utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings
- Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings
- Goal 3: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state
- Goal 4: Improved access to community-based services to address the chronic MH care needs of beneficiaries with SMI including through increased integration of primary and behavioral health care
- Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities

This interview will be 30 minutes in length.

Please note: You were selected for this interview based on your expertise. We fully expect that you do not have answers to all of the questions listed in the guide. If you are not sure of an answer to a question- that is OK. Please indicate as such, and we will move on to the next question.

2. Background Information

Background	Question(s)
Attendee Name and Role at [provider name]	• Please describe your current role at [provider name]. • How long have you been in this role?
Awareness/involvement with the Indiana SMI Waiver	• What has been your role, if any, in relation to the Indiana SMI Waiver?

3. Goal 1: Reduced utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings

Although the rates of ED visits per 100,000 persons nationally have remained stable between 2009 and 2018, visits associated with MH diagnoses continued to rise among Medicaid beneficiaries during this time-period.[142] Individuals with SMI are more likely to have higher rates of ED utilization than individuals without any MH diagnosis. A key goal of the evaluation is to understand how demonstration activities have contributed to reductions in ED utilization and ED LOS among Medicaid beneficiaries with SMI.

[142] Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health & Human Services. Trends in the Utilization of Emergency Department Services, 2009-2018. 2021. https://aspe.hhs.gov/pdf-report/utilization-emergency-department-services

Lewin interviewed providers in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on ED utilization and LOS among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on ED utilization and LOS among the SMI population, focusing on the time-period of 2021-2023.

#	Background	Question(s)
1	Research indicates that between 2009 and 2018, ED visits associated with MH diagnoses continued to rise among Medicaid beneficiaries.	• What did ED utilization for Medicaid beneficiaries with SMI in 2020 look like (Prompts: Were Medicaid beneficiaries with SMI high or low utilizers? Was utilization consistent across the year? Impact of COVID?)? During the timeframe? • What has contributed to this change? • What has been successful in reducing ED utilization with the SMI beneficiaries?
2	It is our understanding from previous interviews that [provider] has two CSUs. In 2023, [provider] noted that they cultivated relationships with law enforcement in order for the CSUs to operate as intended with almost 50% of the individuals who were brought in, coming back multiple times (20% SMI, 20% SUD, and 40% co-occurring). [Provider] had also noted that there had been success in decreased ED utilization as well as minimizing police time concerning crisis episodes.	• What did ED utilization for Medicaid beneficiaries with SMI in 2020 look like (Prompts: Were Medicaid beneficiaries with SMI high or low utilizers? Was utilization consistent across the year? Impact of COVID?)? During the timeframe? • How have the CSUs been successful in reducing ED utilization with the SMI beneficiaries? What else has been successful in reducing ED utilization with SMI beneficiaries. • Were there any challenges with reducing ED utilization for this population during the timeframe? How did that differ from 2020?
3	It is our understanding from previous interviews that [provider] has a CSU. It was noted in 2023 that the [provider] was a 23-hour crisis observation and receiving center with five adult crisis chairs for 18+ and that 50-60% of those that utilized the CSU were individuals with SMI.	• What did ED utilization for Medicaid beneficiaries with SMI in 2020 look like (Prompts: Were Medicaid beneficiaries with SMI high or low utilizers? Was utilization consistent across the year? Impact of COVID?)? During the timeframe? • How has the CSU been successful in reducing ED utilization with the SMI beneficiaries? What else has been successful in reducing ED utilization with SMI beneficiaries? • Were there any challenges with reducing ED utilization for this population during the timeframe? How did that differ from 2020?
4	From interviews completed in 2021 and 2023, we heard from various stakeholders that the LOS for Medicaid beneficiaries had been conflated over the years due to the COVID-19 PHE and the 7-day instant authorization.	• Describe any observations specific to LOS for Medicaid beneficiaries with SMI during the timeframe (Prompts: ALOS; Changes to LOS across the time frame; COVID)? • How did LOS differ from 2020?
5	In 2021, [provider] had noted that the overall capacity within the acute care hospital had gone down as people stopped utilizing the ED (due to COVID-19) in 2020. Then in July, August, and September of 2020, ED utilization increased (particularly for overdose and behavioral-health related matters). There was even a point in January and February of 2021 where the hospital was setting ED all-time high wait time records.	• Describe any observations specific to LOS for Medicaid beneficiaries with SMI during the timeframe (Prompts: ALOS; Changes to LOS across the time frame; COVID)? • How did LOS differ from 2020?

#	Background	Question(s)
6	From previous interviews, we learned that during CY2021-2022, [provider] serviced 230 individuals in the CSU and that the ALOS for individuals in the CSU was 8.5 hours.	• Describe any observations specific to LOS for Medicaid beneficiaries with SMI during the timeframe (Prompts: ALOS; Changes to LOS across the time frame; COVID)? • How did LOS differ from 2020?
7	From our interview in 2021, [provider] noted that they had lasting partnerships with local FQHCs and focused on staff workflows to ensure SMI population is connected with their PCP. Additionally, [provider] offered regular skills training regarding proper utilization of the ER, when to call 911, when to call the nurse care manager at their PCP etc. It was also noted that this training had been a result of the Certified Community Behavioral Health Clinic (CHBC) Expansion Grant that [provider] was awarded.	• Is this information still correct? • During the timeframe, how have these strategies diverted SMI beneficiates from the ED? How has that differed from 2020? Please describe challenges and successes.
8	From interviews in 2023, [provider] noted a policy for daytime hours where any walk-in is treated by the receiving location. This way, individuals can walk in or call at any time of the day (during business hours) and receive emergency care.	• During the timeframe, how has the policy outlined impacted ED utilization for SMI beneficiaries? • Describe any observations specific to LOS for Medicaid beneficiaries with SMI during the timeframe (Prompts: ALOS; Changes to LOS across the time frame; COVID). How did LOS differ from 2020? • Describe any observations related to ED utilization for Medicaid beneficiaries with SMI during the timeframe. How did ED utilization differ from 2020?
9	In 2023, [provider} stated that the ALOS for someone with SMI in an inpatient facility was 3.5 days.	• Describe any observations specific to LOS for Medicaid beneficiaries with SMI during the timeframe (Prompts: ALOS; Changes to LOS across the time frame; COVID)? • How did LOS differ from 2020?
10	Other policies, initiatives, or procedures	• Can you describe any state policies, initiatives, or processes that impacted utilization and LOS in EDs among SMI beneficiaries during CY2021 – CY2023? • Are there policies, initiatives, or procedures that the state could implement to reduce utilization and LOS in EDs for SMI beneficiaries? If yes, please describe.

4. Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings

Patients with SMI may be vulnerable to unplanned hospital readmission.[143] Unplanned hospital readmission is a common but potentially preventable health care outcome and quality indicator associated with considerable health care costs. Recent studies have indicated that 30-day hospital readmissions among Medicaid beneficiaries with SMI are higher than rates of 30-day

[143] Albrecht, J. S., Hirshon, J. M., Goldberg, R., Langenberg, P., Day, H. R., Morgan, D. J., Comer, A. C., Harris, A. D., & Furuno, J. P. (2012, April 26). *Serious mental illness and acute hospital readmission in diabetic patients*. American journal of medical quality: the official journal of the American College of Medical Quality. Retrieved April 22, 2022, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3677605/

readmissions after medical hospitalizations than the general population.[144, 145] A key goal of the evaluation is to understand how demonstration activities have contributed to reductions in preventable readmissions to acute care hospitals and residential settings.

Lewin interviewed providers in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on readmissions among the SMI population to acute care hospitals and residential settings. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on readmissions among the SMI population, focusing on the time-period of 2021-2023.

#	Background	Question(s)
11	In 2021, [provider] noted that readmission rates for those that accessed [provider's] acute care hospital did not increase and likely remained between 3%-9% in a 30-day period.	• Is this information still correct? • Describe readmission rates to acute care hospitals and residential settings during the timeframe. How did that differ from 2020?
12	In 2020, there was an effort to pilot two CSUs across the state to provide an alternative to crisis evaluations within EDs and divert admissions to inpatient psychiatric units. We learned that legislation passed in 2023 (house enrolled act 1006) helped to streamline the process of getting people into crisis stabilization because it required insurance providers to reimburse for any service for someone who is brought into a CSU under "emergency detention."	• Were you aware of the CSU pilots? • How have the CSUs contributed to reduced preventable readmissions during the timeframe? How does that differ from readmission rates in 2020 for SMI beneficiaries? What was the impact of COVID? • What strategies/activities have you implemented to reduce preventable readmissions for SMI beneficiaries during the timeframe? Describe successes and challenges.
13	It was noted in interviews in 2023 that [provider] had a CSU in partnership with Franciscan Health.	• Is this information regarding a partnership with Franciscan Health still correct? • How have the CSUs contributed to reduced preventable readmissions during the timeframe? How does that differ from readmission rates in 2020 for SMI beneficiaries? What was the impact of COVID? • What strategies/activities has [provider] implemented to reduce preventable readmissions for SMI beneficiaries during the timeframe? Describe successes and challenges.
14	We have already discussed the CSUs in relation to ED utilization.	• How have the CSUs impacted preventable readmissions during the timeframe? Please describe any observations re: trends in readmission rates (during the timeframe; in 2020. What was the impact of COVID on readmission rates? • What strategies or activities did [provider] implement to impact readmission rates? Please describe successes and challenges.

[144] Cook, J. A., Burke-Miller, J. K., Razzano, L. A., Steigman, P. J., Jonikas, J. A., & Santos, A. (2021, February 13). *Serious mental illness, other mental health disorders, and outpatient health care as predictors of 30-day readmissions following medical hospitalization*. General Hospital Psychiatry. Retrieved April 22, 2022, from https://www.sciencedirect.com/science/article/pii/S0163834321000244

[145] Cook, J. A., Burke-Miller, J. K., Jonikas, J. A., Aranda, F., & Santos, A. (2020, September). *Factors associated with 30-day readmissions following medical hospitalizations among Medicaid beneficiaries with schizophrenia, bipolar disorder, and major depressive disorder.* American Psychological Association PsycNet. Retrieved April 22, 2022, from https://psycnet.apa.org/record/2020-66663-001

#	Background	Question(s)
15	In 2023, it was noted that the CSUs most likely diverted beneficiaries from inpatient psychiatric services.	• How have the CSUs impacted preventable readmissions during the timeframe? Please describe any observations in readmission rates during the timeframe as well as 2020. What was the impact of COVID on readmission rates? • What strategies or activities did [provider] implement to impact readmission rates? Please describe successes and challenges.
16	Other policies, initiatives, or procedures	• Can you describe any state policies, initiatives, or processes that impacted readmissions to acute care hospitals and residential settings among SMI beneficiaries during CY2021 – CY2023? • Are there policies, initiatives, or procedures that the state could implement to reduce preventable readmissions to acute care hospitals and residential settings for SMI beneficiaries? If yes, please describe.

5. Goal 3: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state

Crisis response and stabilization (e.g., crisis call centers, crisis mobile team response, crises receiving and stabilization services) is a basic element of MH care and often serves as an access point for connecting individuals to community care resources. Although evidence regarding crisis response programs is emerging, research has indicated that crisis response is associated with improved health outcomes.[146] A key goal of the evaluation is to understand how demonstration activities have contributed to improving availability of crisis stabilization services.

Lewin interviewed providers in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on the availability of crisis stabilization services among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on the availability of crisis stabilization services among the SMI population, focusing on the time-period of 2021-2023.

#	Background	Question(s)
17	In 2021, [provider] noted that it was one of the first adopters of mobile crisis stabilization services in the state of Indiana, and that there were plans to expand these services.	• Is this information correct? • What did mobile crisis stabilization services look like at [provider] during the time frame? How did that differ from 2020? • Please describe successes/challenges during the timeframe.
18	We also learned in 2021 that [provider] had expanded ACT services, including expanded emergency services to increase the reach of MCU/MRSS.	• Is this information correct? • Please elaborate on the types of services provided to Medicaid beneficiaries with SMI. • What did these expanded services look like during the timeframe? How did this differ from 2020?

[146] Vikki, W., & Natasha, C. (2021, May). *Building blocks: How Medicaid can advance mental health and substance use crisis response*. Well Being Trust. Retrieved April 22, 2022, from https://wellbeingtrust.org/wp-content/uploads/2021/05/WBT-Medicaid-MH-and-CrisisCareFINAL.pdf

#	Background	Question(s)
19	In 2021, [provider] noted that they were trying to pilot a direct drop off by local law enforcement either directly through mobile crisis services OR that law enforcement would directly drop off patient at a CSU.	• During the timeframe, was [provider] able to begin this pilot? • What were the outcomes of this pilot, particularly as it pertains to getting SMI beneficiaries access to crisis stabilization services during the timeframe? • Please describe any successes/challenges.
20	In the 2023 interviews, [provider] described MRO services, noting that: • The focus is on individuals who are uninsured or receiving government insurance. • Services are for those (with SMI or persistent mental illness) who have lost life skills functioning (e.g., ability to decide, ability to manage daily care, etc.), so, they are in need of ongoing coaching/care/monitoring to relearn or reinforce those skills again and again. • There is some benefit from these services for months or years, depending upon need.	• Is this information still correct? • What have MRO services looked like during the timeframe? How does that compare to 2020? • Please describe successes/challenges in providing these services.
21	We also learned that legislation passed in 2023 (house enrolled act 1006) helped to streamline the process of getting people into crisis stabilization because it required insurance providers to reimburse for any service for someone who is brought into a CSU under "emergency detention."	• How has this legislation contributed to the improved availability of crisis stabilization services across the state during the timeframe? How does that differ from 2020?
22	In 2021, [provider] noted that care coordination lacked "actionable data." It was also noted that at one point, DMHA had an alliance with ProAct which allowed providers to see who went to the ER, and who had seen their primary provider, all based on claims data.	• Could you please elaborate on what is meant by "actionable data?" Did the lack of "actionable data" continue to impact care coordination for SMI beneficiaries during the timeframe? • Regarding ProAct, is this alliance with DMHA still active? How has this alliance impacted care coordination for SMI beneficiaries during the timeframe? • Please describe successes/challenges with care coordination during the timeframe.
23	There are a number of crisis response and stabilization services offered in the state of Indiana including crisis call centers, crisis mobile team response, crisis receiving and stabilization services. [Provider] may have interacted with some of these services during the timeframe. From interviews completed in 2021, [provider] noted they had a mobile crisis team that started a couple months prior to opening the CSU and that the mobile crisis team had reduced the number of times [provider] has needed to use the CSU.	• Has [provider] seen a change in the availability of crisis stabilization services during the timeframe? How does this differ from 2020? • How has the change in the availability of crisis stabilization services impacted SMI beneficiaries? • What challenges has [provider] observed that are specific to crisis stabilization services for SMI beneficiaries (prompt: access challenges; treatments; workforce) • What actions can the state take to help mitigate these challenges?
24	Other policies, initiatives, or procedures	• Can you describe any state policies, initiatives, or processes that impacted the availability of crisis stabilization services for SMI beneficiaries during CY2021 – CY2023? • Are there policies, initiatives, or procedures that the state could implement to help improve the availability of crisis stabilization services for SMI beneficiaries? If yes, please describe.

6. Goal 4: Improved access to community-based services to address the chronic MH care needs of beneficiaries with SMI including through increased integration of primary and behavioral health care

Individuals with SMI suffer disproportionately from PH conditions than their non-SMI peers and are at increased risk for a range of acute and chronic diseases (e.g., diabetes, cardiovascular disease, respiratory disease, cancer, and infectious disease).[147] A key goal of the evaluation is to understand how demonstration activities have contributed to improving access to community-based services to address the chronic MH care needs of Medicaid beneficiaries with SMI.

Lewin interviewed providers in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on the availability of crisis stabilization services among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on the availability of crisis stabilization services among the SMI population, focusing on the time-period of 2021-2023.

#	Background	Question(s)
25	In 2023, inpatient providers noted that each had a comprehensive screening protocol in place, which included a full medical history, medication use, and treatment history. If a patient did endorse physical or co-morbid conditions that needed attention, there were medical providers on staff ready to treat, in addition to the MH services. Inpatient providers emphasized that applying a wholistic or integrated approach was essential for positive outcomes.	• During the timeframe, how has [provider] addressed the chronic MH care needs of beneficiaries with SMI (e.g., increased integration of primary and behavioral health care)? How does that differ to 2020? • Did [provider] continue to experience challenges with piecing together beneficiary medical history during the timeframe? If so, how were those challenges mitigated? • What was the impact, if any, of telehealth on addressing the chronic health care needs of SMI beneficiaries during the timeframe? How did that differ from 2020?
26	In 2021, [provider] indicated that they expanded primary care services, specifically the Harmony Health integrated care program in Lawrenceburg, Indiana. The Harmony Health clinic provides all types of primary care services including youth and family practice, vaccinations, and referrals to specialized care.	• Is this information correct? • During the timeframe, has [provider] continued to expand primary care services?
27	As mentioned, in 2021, we learned that [provider] had expanded ACT services to include: • Expanded medication assisted treatment • Increasing provider involvement • Investing in evidence-based practices	• Is this information correct? • How have the expanded ACT services contributed to improved access to community-based services for SMI beneficiaries during the timeframe?

[147] Breslau, J., Sorbero, M. J., Kusuke, D., Yu, H., Scharf, D. M., Hackbarth, N. S., & Pincus, H. A. (2019, March 28). *Primary and behavioral health care integration program: Impacts on Health Care Utilization, cost, and quality*. Office of the Assistant Secretary for Planning and Evaluation. Retrieved April 22, 2022, from https://aspe.hhs.gov/reports/primary-behavioral-health-care-integration-program-impacts-health-care-utilization-cost-quality-0

#	Background	Question(s)
28	In 2023, CMHCs had noted that they provide services with a wholistic approach to aid patients effectively (i.e., housing services, skills development, appointment coordination and referrals). In 2021, [provider] noted that to address SMI beneficiary chronic MH care needs, they focus on existing partnerships and try to be a presence at community meetings so that their services are well-communicated.	• During the timeframe, how has [provider] addressed the chronic MH care needs of beneficiaries with SMI (e.g., increased integration of primary and behavioral health care)? How does that differ from 2020? • Has [provider] built any additional relationships with community-based service providers during the timeframe? If so, how have those relationships impacted access to community-based services for SMI beneficiaries?
29	[Provider] had noted that wait times for patients could be up to 6 hours to see a provider.	• What was the average wait time during the timeframe? • If increase/decrease is identified, what contributed to the increase or decrease. • If wait time remained the same, how can this lengthy wait time be mitigated?
30	In 2023, several stakeholders had indicated that part of improving access to care for beneficiaries with SMI to community-based services was to connect beneficiaries to stable housing. [Provider] even noted that at the CSU in Monroe County, 82% of the individuals served were unhoused.	• How has [provider] addressed the housing needs to SMI beneficiaries during the timeframe? How has connecting beneficiaries to stable housing changed since 2020 (increased, decreased, stayed the same)? • Please describe challenges related to connecting SMI beneficiaries to stable housing. What actions can the state take to help mitigate housing challenges?
31	In 2023, several stakeholders highlighted a few challenges regarding access and availability of treatment services for SMI beneficiaries, including: • Providers noted that there was a workforce shortage. • Beneficiaries had a difficult time finding appointments. • Telehealth services were difficult for some individuals (i.e., difficulty focusing, feeling less connected, etc.)	• How have these challenges continued to impact [provider] as well as SMI beneficiaries during the timeframe? • Are there additional challenges that should be highlighted? • What initiatives have been successful in improving access and availability of treatment services to SMI beneficiaries (e.g. MCU/MRSS, 988)? • What actions can the state take to help mitigate these challenges?
32	Other policies, initiatives, or procedures	• Can you describe any state policies, initiatives, or processes that impacted access of beneficiaries with SMI to community-based services during CY2021 – CY2023? • Are there policies, initiatives, or procedures that the state could implement to help improve access for beneficiaries with SMI to community-based services? If yes, please describe.

7. Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities

Goal 5 focuses on improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities. In addition to disparities in health outcomes, people with SMI often use the MH care system as their principal

setting for access to medical and social care.[148, 149, 150] As such, community MH settings are challenged to address the many demands associated with comorbid chronic medical conditions and related primary and preventive care needs.[151]

Lewin interviewed providers in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on care coordination among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on care coordination among the SMI population, focusing on the time-period of 2021-2023.

#	Background	Question(s)
33	From the 2023 interviews, inpatient providers had indicated that there were a variety of challenges when working with MCEs including the use of non-user-friendly portals, expectations for treating and discharging patients quickly despite need, and inconsistent messaging or communications specific to PA. Inpatient providers emphasized that increasing collaboration is beneficial and identified increased meetings as a strategy for improving relationships.	• Please describe [provider] working relationships with MCEs during the timeframe. Please provide examples of success or challenges. • How has working with the MCEs impacted care coordination for Medicaid beneficiaries with SMI? • Please describe care coordination strategy for connecting patients in inpatient/residential to community care.
34	In 2021, [provider] noted that they partnered with the Stride Coalition (a group of public, private, and not-for-profit organizations in Monroe County that [provider] helped form in 2017) to keep track of which law enforcement officers are utilizing their referrals.	• Could you please elaborate on this process. • During the timeframe, how has this process impacted care coordination for SMI beneficiaries? How does this differ from 2020? • During the timeframe, what challenges or barriers has [provider] encountered with care coordination? • What can mitigate those challenges? • What has been successful regarding care coordination for SMI beneficiaries during the timeframe?
35	In 2021 and 2023, [provider] noted that the rates for reimbursement (for example, rates for case management) are based on rates from 2010 and 2011, and therefore, it is challenging to compete with large corporations in keeping frontline workers. [Provider] indicated that the rates needed to be addressed in order to address the staffing shortages and continue to improve programing for SMI beneficiaries.	• Is this information still correct? • Have the rates for reimbursement changed during the timeframe? • What actions can the state take to help mitigate these reimbursement challenges?

[148] Bartels SJ (2003). Improving the system of care for older adults with mental illness in the United States: Findings and recommendations for the President's new freedom commission on mental health. *American Journal of Geriatric Psychiatry*, 11, 486–497.

[149] De Hert M, Correll CU, Bobes J, Cetkovich-Bakmas M, Cohen D, Asai I, … Leucht S (2011a). Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care. *World Psychiatry*, 10, 52–77.

[150] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

[151] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

#	Background	Question(s)
36	In 2023, CMHCs had noted that one of the biggest challenges they faced was understanding what a beneficiary needed when they walked through the door.	• During the timeframe, did [provider] continue to experience this challenge? How did this challenge impact SMI beneficiaries? • How was this challenge mitigated during the timeframe?
37	In 2023, CMHCs had noted that one of the biggest challenges they faced was understanding what a beneficiary needed when they walked through the door.	• During the timeframe, did [provider] continue to experience this challenge? How did this challenge impact SMI beneficiaries? • How was this challenge mitigated during the timeframe?
38	Other policies, initiatives, or processes	• From your perspective, were there state policies, initiatives, or processes that impacted care coordination for beneficiaries with SMI during CY2021 – CY2023? • Are there policies, initiatives, or procedures that the state could implement to help improve care coordination for beneficiaries with SMI? If yes, please describe.

D. Indiana 1115(a) SMI Demonstration Evaluation: Advocacy Organization KII Guide

1. Introduction:

This interview is part of a series of KIIs that will provide a better understanding of the state's progress in meeting the five goals of the Indiana's 1115 SMI Demonstration Evaluation.

Lewin, as the independent evaluator of the Indiana SMI Waiver, will be conducting a series of 30–60-minute interviews (with State officials, MCE representatives, providers, advocacy organizations, and beneficiaries) to gather information on goal progress in relation to the Indiana SMI Waiver Demonstration, impact of the COVID-19 PHE, factors that supported progress, any challenges or barriers encountered, and pertinent follow-up based on insights gathered from previous interviews.

This interview guide is organized by topic area. For each topic area, we have included background information for context prior to each question. For this interview, we will focus on understanding the advocacy organization experience of, and perspective on, Indiana's progress towards meeting the five goals of the Indiana SMI Waiver***. In preparation for the interview, please be sure to read all background information as well as the questions.*** See topic areas below:

- Interviewee Background Information
- Goal 1: Reduced utilization and LOS EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings
- Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings
- Goal 3: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state

- Goal 4: Improved access to community-based services to address the chronic MH care needs of beneficiaries with SMI including through increased integration of primary and behavioral health care
- Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities

This interview will be 30 minutes in length.

Please note: You were chosen for this interview based on your expertise. We fully expect that you do not have answers to each question listed in the guide. If you are not sure of an answer to a question- that is OK. Please indicate as such, and we will move on to the next question.

2. Background Information

Background	Question(s)
Attendee Name and Role at [advocacy organization]	• Please describe your current role at [advocacy organization]. • How long have you been in this role?
Role in respect to the Indiana SMI Waiver	• What has been your role, if any, in relation to the Indiana SMI Waiver?

3. Goal 1: Reduced utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings

Although the rates of ED visits per 100,000 persons nationally have remained stable between 2009 and 2018, visits associated with MH diagnoses continued to rise among Medicaid beneficiaries during this time-period.[152] Individuals with SMI are more likely to have higher rates of ED utilization than individuals without any MH diagnosis. A key goal of the evaluation is to understand how demonstration activities have contributed to reductions in ED utilization and ED LOS among Medicaid beneficiaries with SMI.

Lewin interviewed advocacy organizations in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on ED utilization and ED LOS among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on ED utilization and ED LOS among the SMI population, focusing on the time-period of 2021-2023.

[152] Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health & Human Services. Trends in the Utilization of Emergency Department Services, 2009-2018. 2021. https://aspe.hhs.gov/pdf-report/utilization-emergency-department-services

#	Background	Question(s)
1	From interviews completed in 2021 and 2023, we have heard from various stakeholders that the LOS for Medicaid beneficiaries with SMI waiting for MH treatment has been conflated over the years due to the COVID-19 PHE and the 7-day instant authorization.	• Describe ED utilization for Medicaid beneficiaries with SMI in 2020 (Prompts: Were Medicaid beneficiaries with SMI high or low utilizers? Was utilization consistent across the year?). During the timeframe. • Describe any observations specific to LOS for Medicaid beneficiaries with SMI during the timeframe (Prompts: ALOS; Changes to LOS across the time frame). How did LOS differ from 2020?
2	There may be policies or procedures implemented by the state that have helped to reduce utilization and LOS in EDs among Medicaid beneficiaries with SMI while awaiting MH treatment in specialized settings.	• Were there state policies, initiatives, or processes that reduced utilization and LOS in EDs among SMI beneficiaries during CY2021 – CY2023? If yes, please describe? • Are there policies, initiatives, or procedures that the State could implement to reduce utilization and LOS in EDs for SMI beneficiaries? If yes, please describe.

4. Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings

Patients with SMI may be vulnerable to unplanned hospital readmission.[153] Unplanned hospital readmission is a common but potentially preventable health care outcome and quality indicator associated with considerable health care costs. Recent studies have indicated that 30-day hospital readmissions among Medicaid beneficiaries with SMI are higher than rates of 30-day readmissions after medical hospitalizations than the general population.[154, 155] A key goal of the evaluation is to understand how demonstration activities have contributed to reductions in preventable readmissions to acute care hospitals and residential settings.

Lewin interviewed advocacy organizations in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on readmissions among the SMI population to acute care hospitals and residential settings. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on readmissions among the SMI population, focusing on the time-period of 2021-2023.

[153] Albrecht, J. S., Hirshon, J. M., Goldberg, R., Langenberg, P., Day, H. R., Morgan, D. J., Comer, A. C., Harris, A. D., & Furuno, J. P. (2012, April 26). *Serious mental illness and acute hospital readmission in diabetic patients*. American journal of medical quality : the official journal of the American College of Medical Quality. Retrieved April 22, 2022, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3677605/

[154] Cook, J. A., Burke-Miller, J. K., Razzano, L. A., Steigman, P. J., Jonikas, J. A., & Santos, A. (2021, February 13). *Serious mental illness, other mental health disorders, and outpatient health care as predictors of 30-day readmissions following medical hospitalization*. General Hospital Psychiatry. Retrieved April 22, 2022, from https://www.sciencedirect.com/science/article/pii/S0163834321000244

[155] Cook, J. A., Burke-Miller, J. K., Jonikas, J. A., Aranda, F., & Santos, A. (2020, September). *Factors associated with 30-day readmissions following medical hospitalizations among Medicaid beneficiaries with schizophrenia, bipolar disorder, and major depressive disorder.* American Psychological Association PsycNet. Retrieved April 22, 2022, from https://psycnet.apa.org/record/2020-66663-001

#	Background	Question(s)
3	In the 2021 interviews, [advocacy organization] indicated that "using hospitalization" was a key method for reducing readmissions.	• Can [advocacy organization] elaborate on the strategy "using hospitalization" to impact readmissions? When was this strategy implemented? • During the timeframe, how has this strategy helped to reduce preventable readmissions to acute care hospitals and residential settings? Is this consistent or different for 2020?
4	In 2021, [advocacy organization] had noted that the PHE was a barrier to reducing readmissions to acute care in hospitals and residential settings for SMI beneficiaries	• During the timeframe, did the PHE continue to impact the ability to reduce preventable readmissions to hospitals and residential settings for SMI beneficiaries? How so?
5	In the 2021 interview, [advocacy organization] indicated that they were not actively aiming to reduce readmissions to acute care hospitals, but more so, support a beneficiary in whatever level of support they may need.	• Is this information still correct? • During the timeframe, how has this strategy impacted preventable readmissions to acute care hospitals and residential settings? Is this consistent or different for 2020?
6	From the 2021 interviews, [advocacy organization] noted that though they do not consider themselves a crisis stabilization service, in instances of adverse MH scenarios, they would advise a beneficiary on reaching out to the Suicide Hotline or 911.	• Is this information still correct?
7	In 2020, there was an effort to pilot two CSUs across the state to provide an alternative to crisis evaluations within EDs and divert admissions to inpatient psychiatric units. (CSUs serve as an alternative to an ED or jail for patients experiencing MH issues.) Advocacy organizations interviewed in 2023 described how CSUs prevented unnecessary visits to the ED for patients with SMI. We learned that legislation passed in 2023 (house enrolled act 1006) helped to streamline the process of getting people into crisis stabilization because it required insurance providers to reimburse for any service for someone who is brought into a CSU under "emergency detention."	• How did the implementation of the CSUs impact SMI beneficiaries during the timeframe?
8	In 2021 and 2023, we talked with stakeholders around the impact of telehealth on readmission rates, continuity of care, etc.	• During the timeframe, what have you observed around the use of telehealth services amongst Medicaid beneficiaries?
9	There may be other policies or procedures implemented by the state that have helped to reduce preventable readmissions to acute care hospitals and residential settings among Medicaid beneficiaries with SMI.	• Were there state policies, initiatives, or processes that reduced preventable readmissions to acute care hospitals and residential settings among SMI beneficiaries during CY2021 – CY2023? If yes, please describe? • Are there policies, initiatives, or procedures that the State could implement to reduce preventable readmissions to acute care hospitals and residential settings for SMI beneficiaries? If yes, please describe.

5. Goal 3: Improved availability of crisis stabilization services utilizing multiple service models to meet the unique needs across the state

Crisis response and stabilization (e.g., crisis call centers, crisis mobile team response, crises receiving and stabilization services) is a basic element of MH care and often serves as an access point for connecting individuals to community care resources. Although evidence regarding crisis response programs is emerging, research has indicated that crisis response is associated with improved health outcomes.[156] A key goal of the evaluation is to understand how demonstration activities have contributed to improving availability of crisis stabilization services.

Lewin interviewed advocacy organizations in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on the availability of crisis stabilization services among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on the availability of crisis stabilization services among the SMI population, focusing on the time-period of 2021-2023.

#	Background	Question(s)
10	From the 2021 interviews, we learned that [advocacy organization] Indiana had a number of initiatives focused on supporting crisis stabilization services including: • The Technical Assistance Center for crisis intervention teams (CITs) in Indiana. • Help line, which connects individuals to resources in the community (i.e., housing, criminal justice support, children's insurance, etc.). Interviewees noted that the number of calls, as well as the intensity of the calls to the help line, had increased since the onset of the PHE.	• During the timeframe, has [advocacy organization] continued to implement these initiatives? • How have these initiatives impacted the availability of crisis stabilization services for SMI beneficiaries? • Describe SMI beneficiary utilization and satisfaction of these initiatives during the timeframe?
11	In 2021, [advocacy organization] spoke at length regarding a warm line answered by peers (with MH lived experience). Peers speak to individuals and try to connect them to 211, CMHCs, and/or CSUs. [Advocacy organization] had noted that during the PHE, there was an influx of phone calls to the warm line, with one month having over 515 calls (average is about 400).	• Is this information still correct? • How has the warm line impacted connecting SMI beneficiaries to crisis stabilization services? • Describe SMI beneficiary utilization and satisfaction of the warm line during the timeframe?
12	In 2023, advocacy organizations highlighted a few challenges regarding access and availability of treatment services for SMI beneficiaries, including: • Providers noted that there was a workforce shortage. • Beneficiaries had a difficult time finding appointments. • Telehealth services were difficult for some individuals (i.e., difficulty focusing, feeling less connected, etc.)	• Is this information still correct? Are there additional challenges that should be highlighted? • What initiatives have been successful in improving access and availability of treatment services to SMI beneficiaries (e.g. MCU/MRSS, 988)? • What actions can the state take to help mitigate these challenges?

[156] Vikki, W., & Natasha, C. (2021, May). *Building blocks: How Medicaid can advance mental health and substance use crisis response*. Well Being Trust. Retrieved April 22, 2022, from https://wellbeingtrust.org/wp-content/uploads/2021/05/WBT-Medicaid-MH-and-CrisisCareFINAL.pdf

#	Background	Question(s)
13	There may be other policies or procedures implemented by the state that have helped to improve availability of crisis stabilization services for SMI beneficiaries throughout the state.	• Were there state policies, initiatives, or processes that helped to improve the availability of crisis stabilization services for SMI beneficiaries during CY2021 – CY2023? If yes, please describe? • Are there policies, initiatives, or procedures that the state could implement to help improve the availability of crisis stabilization services for SMI beneficiaries? If yes, please describe.
14	Additionally, [advocacy organization] had noted in 2021 that a common occurrence was that individuals will approach the ER for assistance, but that the ER was unable to meet their needs and therefore, end up prematurely discharged while still withstanding a crisis.	• During the timeframe, has [advocacy organization] continued to see this? • Are there policies, initiatives, or procedures that the State could implement to better support SMI beneficiaries in crisis while at the ER? If yes, please describe.

6. Goal 4: Improved access to community-based services to address the chronic MH care needs of beneficiaries with SMI including through increased integration of primary and behavioral health care

Individuals with SMI suffer disproportionately from PH conditions than their non-SMI peers and are at increased risk for a range of acute and chronic diseases (e.g., diabetes, cardiovascular disease, respiratory disease, cancer, and infectious disease).[157] A key goal of the evaluation is to understand how demonstration activities have contributed to improving access to community-based services to address the chronic MH care needs of Medicaid beneficiaries with SMI.

Lewin interviewed advocacy organizations in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on access to community-based services among the SMI population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on access to community-based services among the SMI population, focusing on the time-period of 2021-2023.

#	Background	Question(s)
15	From the 2021 interview, [advocacy organization] noted that they coordinated support groups and education initiatives in order to widen accessibility and pivot services online.	• During the timeframe, has [advocacy organization] continued to coordinate support groups and education initiatives? • How have support groups and education initiatives impacted access of SMI beneficiaries to community-based services during the timeframe? (Prompt: Examples of support groups or educational initiatives that were successful or unsuccessful).

[157] Breslau, J., Sorbero, M. J., Kusuke, D., Yu, H., Scharf, D. M., Hackbarth, N. S., & Pincus, H. A. (2019, March 28). *Primary and behavioral health care integration program: Impacts on Health Care Utilization, cost, and quality*. Office of the Assistant Secretary for Planning and Evaluation. Retrieved April 22, 2022, from https://aspe.hhs.gov/reports/primary-behavioral-health-care-integration-program-impacts-health-care-utilization-cost-quality-0

#	Background	Question(s)
16	From the 2023 interviews, [advocacy organization] noted that, due to COVID, there was an effort to discharge beneficiaries from inpatient facilities to community-based care, and that this had a domino effect on the entire behavioral health system. [Provider] had noted that access to care from CY2021-CY2022 had worsened due to COVID.	• Is this information still correct? • In 2023, had you continued to see this domino effect? What was the impact? • In CY2023, has access to care improved for SMI beneficiaries? • How can access be improved?
17	From the 2021 interview, [advocacy organization] had noted that they saw an increase in peer run organizations, like Empowerment Center. Additionally, the state of Indiana was suffering from a lack of MH peer support.	• Is this information still correct? • How have these organizations impacted access of SMI beneficiaries to community-based services during the timeframe? Impacted the number of MH peer support for SMI beneficiaries?
18	In 2023, several stakeholders had indicated that part of improving access to care for beneficiaries with SMI to community-based services was to connect beneficiaries to stable housing.	• Is this information still correct? • Has access to housing improved during the timeframe? • What actions can the state take to help mitigate these challenges?
19	There may be policies or procedures implemented by the state that have helped to improve access of beneficiaries with SMI to community-based services to address their chronic MH care needs.	• Were there state policies, initiatives, or processes that helped improve access of beneficiaries with SMI to community-based services during CY2021 – CY2023? If yes, please describe? • Are there policies, initiatives, or procedures that the state could implement to help improve access for beneficiaries with SMI to community-based services? If yes, please describe.

7. Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities

Goal 5 focuses on improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities. In addition to disparities in health outcomes, people with SMI often use the MH care system as their principal setting for access to medical and social care.[158, 159, 160] As such, community MH settings are challenged to address the many demands associated with comorbid chronic medical conditions and related primary and preventive care needs.[161]

Lewin interviewed advocacy organizations in 2021 as well as 2023, and compiled insights specific to demonstration activities and their impact on care coordination among the SMI

[158] Bartels SJ (2003). Improving the system of care for older adults with mental illness in the United States: Findings and recommendations for the President's new freedom commission on mental health. *American Journal of Geriatric Psychiatry*, 11, 486–497.

[159] De Hert M, Correll CU, Bobes J, Cetkovich-Bakmas M, Cohen D, Asai I, … Leucht S (2011a). Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care. *World Psychiatry*, 10, 52–77.

[160] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

[161] Bao Y, Casalino LP, & Pincus HA (2013). Behavioral health and health care reform models: Patient-centered medical home, health home, and accountable care organization. *Journal of Behavioral Health Services & Research*, 40, 121–132.

population. For today's interview, we hope to continue prior discussions specific to demonstration activities and their impact on care coordination among the SMI population, focusing on the time-period of 2021-2023.

#	Background	Question(s)
20	From the 2023 interviews, [advocacy organization] had noted that there was a lack of capacity and training available for case managers as well as a lack of flexibility built into the system (Allowing flexibility when case managers performance measures are tied to these objective outcomes, as opposed to being able to give them the time to truly do the individualized planning that is necessary for some folks.)	• Is this information still correct? • What specific actions can the state take to help mitigate these challenges?
21	There may be policies or procedures implemented by the state that have impacted care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities for SMI beneficiaries.	• From your perspective, were there state policies, initiatives, or processes that impacted care coordination for beneficiaries with SMI during CY2021 – CY2023? If yes, please describe? • Are there policies, initiatives, or procedures that the State could implement to help improve care coordination for beneficiaries with SMI? If yes, please describe.

Stigma

#	Background	Question(s)
22	From the last iteration of interviews all advocacy organizations asserted stigma as a significant barrier for early identification and engagement for SMI beneficiaries, with one organization noting that parents struggle with obtaining assessment and treatment services for children in schools.	• During the timeframe, has stigma continued to impact earlier identification and engagement of SMI beneficiaries? If yes, please describe. • Are there policies, initiatives, or procedures that the state could implement focused on stigma reducing for beneficiaries with SMI? If yes, please describe.

E. Indiana 1115(a) SMI Demonstration Evaluation: Member KII Guide

1. Background:

The goal of the 2024 Interim Report KIIs with beneficiaries is to better understand their experiences of SMI services from CY2021 to CY2023 timeframe.

The beneficiary interviews are scheduled to last up to 20 minutes.

2. Voicemail Script:

Hello, my name is [insert first name], calling on behalf of Indiana Family Social Services Administration (FSSA). I would like to speak to [insert respondent name]. We are talking with Medicaid beneficiaries to get their opinions about MH and/or SUD services received during 2021-2023. Please call me back at 123-456-7890 to discuss further. Thank you.

3. Script:

Section	Mapping	#	Question/Response
Intro	N/A	Introduction	Hello, my name is _____, calling on behalf of Indiana Family Social Services Administration (FSSA). May I please speak with (**insert respondent name**)? (OBTAIN CORRECT RESPONDENT; REINTRODUCE IF NECESSARY) Today we are talking with Medicaid beneficiaries to get their opinions about MH or SUD services received during 2023. Your answers to all questions will remain anonymous and your participation will not affect your benefits. May we begin? • Yes [Go to **I1**] • No [Go to **Closing**] IF NEEDED: Your name was picked randomly from a list of all people who received MH services in 2023 and had Medicaid coverage through December 2023. IF NEEDED: This survey will take approximately 5 – 20 minutes. IF NEEDED: Our company was hired by Indiana FSSA to make these calls. IF NEEDED: The answers you give will be combined with answers from other interviewees and will be anonymous. Your participation does not affect your Medicaid benefits.
	N/A	I1	Are you enrolled in Medicaid at this time? (2023) • Yes [Go to **A1**] • No [Go to **I2**] • Don't know [Go to **I2**] • Refused [Go to **I2**]
Intro (cont.)	N/A	I2	Sorry, but just to confirm, the State of Indiana provides Medicaid coverage for Indiana residents between the ages of 21 to 64. Based on the information we have from the State, it looks like you had Medicaid coverage as of December 2023. You may know this program by the name of your health plan such as Anthem, CareSource, MDwise (M-D- WISE SOMETIMES PRONOUNCED MED-WISE), United Healthcare (UHC) or Managed Health Services (MHS), or traditional Medicaid (***Note to facilitator***: Fee-for-service (FFS), also known as traditional Medicaid is our non-managed care Medicaid. FFS is managed by the state. These beneficiaries also get SMI coverage). Is this correct? • Yes [Go to **A1**] • No [Go to **Closing**] • Don't know [Go to **Closing**] • Refused [Go to **Closing**]
Access	N/A	A1	During 2021-2023, did you receive MH or SUD care services? Examples of MH or SUD care services include individual screening or assessment, psychotherapy, group therapy, medication, resources, or any specific treatment for a MH or SUD condition. • Yes [Go to **A.ER1**] • No [Go to **A.ER1**] • Don't Know [Go to **A.ER1**] • Refused [Go to **A.ER1**]

Section	Mapping	#	Question/Response
Access: ER	Goal 1	A.ER1	During 2021-2023, did you receive care (**Prompt**: includes care for physical (e.g., diabetes, COPD), MH, and/or SUD conditions) in an emergency room (ER)- hospital? • Yes [Go to **A.ER2**] • No [Go to **A.O1**] • Don't Know [Go to **A.O1**] • Refused [Go to **A.O1**]
	Goal 1	A.ER2	How many times did you use the ER between 2021 and 2023? **[Go to A.ER3]**
	Goal 1	A.ER3	How long was your stay in the ER? [**Prompt**: Approximate number of hours/days?]. ***If multiple stays were identified***: On average, how long did you stay in the ER? **[Go to A.ER4]**.
	Goal 1	A.ER4	Of the times you used the ER, how often was the visit for a MH or SUD condition? (**Note**: Read the Likert scale below and ask interviewee to choose the most appropriate response) • Never [Go to **S.ER1**]. • Rarely [Go to **S.ER1**]. • Occasionally [Go to **S.ER1**]. • Frequently [Go to **S.ER1**]. • Always [Go to **S.ER1**]. • Unsure [Go to **S.ER1**].
Satisfaction: ER	Goal 1	S.ER1	How satisfied were you with your care in the ER? • Very satisfied **[Go to S.ER2]** • Somewhat satisfied **[Go to S.ER2]** • Neither satisfied nor dissatisfied **[Go to S.ER2]** • Somewhat dissatisfied **[Go to S.ER2]** • Very dissatisfied **[Go to S.ER2]** • Don't know **[Go to S.ER2]** • Refused **[Go to S.ER2]**
	Goal 1	S.ER2	Thinking about your care in 2021-2023, please describe the most helpful things about the services you received in the ER [**Prompt**: Staff Support; Treatment Plan During Discharge; Availability of Doctors; Wait Time; Access to Treatment, Care Coordination; Assistance with Medication Management; Symptom Improvement]. **[Go to S.ER3]**
	Goal 1	S.ER3	Thinking about your care in 2021-2023, what improvements could be made to the services you received in the ER [**Prompt**: Staff Support; Treatment Plan During Discharge; Availability of Doctors; Wait Time; Access to Treatment, Care Coordination; Assistance with Medication Management; Symptom Improvement]. **[Go to S.ER4]**
	Goal 1	S.ER4	Thinking about your care in 2021-2023, are there services [**Prompt**: other programs, treatments, or resources] that you wished were available? **[Go to CC.ER1]**

Section	Mapping	#	Question/Response
Care Coordination: ER	Goal 5	CC.ER1	Thinking about your care in the ER in 2021-2023, did a professional, such as a nurse or case manager help you coordinate care [**Prompt**: For example, did someone help you connect to transportation or needed medical appointments.]. • Yes [Go to **CC.ER2**] • No [Go to **A.CS1**] • Don't Know [Go to **A.CS1**] • Refused [Go to **A.CS1**]
	Goal 5	CC.ER2	Describe what you liked and didn't like about the care coordination you received in the ER. **[Go to CC.ER3]**
	Goal 5	CC.ER3	Thinking about individuals with MH and SUD, how could care coordination in the ER be improved? [**Prompt**: Timeliness of coordination, medical records, etc.; Smooth transitions of medical care (including medication management); Staff Support] **[Go to A.CS1]**
Access: Outpatient	Goal 3	A.01	During 2021-2023, did you receive MH or SUD care in an outpatient setting? • Yes [Go to **A.O2**] • No [Go to **A.I1**] • Don't Know [Go to **A.I1**] • Refused [Go to **A.I1**] ***Notes for facilitator- Examples of Outpatient Services:*** • ***Intensive Outpatient (IOP)****: An IOP is a* ***structured*** *non-residential psychological treatment program which addresses MH disorders and SUD that do not require detox. Services offered are group therapy, individual therapy, family counseling, educational programs, etc. Does* ***NOT*** *offer the more intensive residential or partial day services typically offered by a larger, more comprehensive treatment facility. This is very similar to day treatment. The only difference is the number of hours spent in therapy each week. Goal is to provide stabilization and prevent admission to inpatient services.* • ***Partial Hospitalization****: A PHP is a structured, IOP treatment program for those who need a higher level of care for a serious MH condition. A PHP provides people with comprehensive MH services- from individual and group therapy to medication management- while allowing them to return home at night. This is often offered as an alternative to inpatient psychiatric care and providing more intense treatment than regular office visits. This program typically involves about 4-5 days a week on site, with multiple sessions, and regular check-ins.* • ***Outpatient- Hospital or Office Practice****: Might be referred to as an outpatient clinic, this type of treatment includes psychopharmacology management, individual therapy, group therapy, couples therapy, and family treatment. This way, individuals can receive care within their communities, without having to stay overnight. (Probably the least intensive)*

Section	Mapping	#	Question/Response
Access: Outpatient (cont.)	Goal 3	A.02	Did you receive outpatient services as part of an IOP or partial hospitalization? [**Note**: May need to describe both services. See below.] **[Go to S.O2]** ***Notes for facilitator- Examples of Outpatient Services:*** • ***IOP****: An IOP is a* ***structured*** *non-residential psychological treatment program which addresses MH disorders and SUD that do not require detox. Services offered are group therapy, individual therapy, family counseling, educational programs, etc. Does* ***NOT*** *offer the more intensive residential or partial day services typically offered by a larger, more comprehensive treatment facility. This is very similar to day treatment. The only difference is the number of hours spent in therapy each week. Goal is to provide stabilization and prevent admission to inpatient services.* • ***Partial Hospitalization****: A PHP is a structured, IOP treatment program for those who need a higher level of care for a serious MH condition. A PHP provides people with comprehensive MH services- from individual and group therapy to medication management- while allowing them to return home at night. This is often offered as an alternative to inpatient psychiatric care and providing more intense treatment than regular office visits. This program typically involves about 4-5 days a week on site, with multiple sessions, and regular check-ins.*
Satisfaction: Outpatient	Goal 3	S.01	How satisfied were you with your MH or SUD care you received in the outpatient setting? • Very satisfied **[Go to S.O2]** • Somewhat satisfied **[Go to S.O2]** • Neither satisfied nor dissatisfied **[Go to S.O2]** • Somewhat dissatisfied **[Go to S.O2]** • Very dissatisfied **[Go to S.O2]** • Don't know **[Go to S.O2]** • Refused **[Go to S.O2]**
	Goal 3	S.02	Thinking about your MH and SUD care in 2021-2023, please describe the most helpful things about the services you received [**Prompt**: Staff Support; Treatment Plan During Discharge; Availability of Doctors; Wait Time; Access to Treatment, Care Coordination; Assistance with Medication Management; Symptom Improvement]. **[Go to S.O3]**
	Goal 3	S.03	Thinking about your MH and SUD care in 2021-2023, what improvements could be made to the services you received [**Prompt**: Staff Support; Treatment Plan During Discharge; Availability of Doctors; Wait Time; Access to Treatment, Care Coordination; Assistance with Medication Management; Symptom Improvement]. **[Go to S.O4]**
	Goal 3	S.04	Thinking about your MH and SUD care in 2021-2023, are there services [**Prompt**: other programs, treatments, or resources] that you wished were available? **[Go to CC.O1]**

Section	Mapping	#	Question/Response
Care Coordination: Outpatient	Goal 5	CC.01	Thinking about your outpatient MH and SUD care in 2021-2023, did a professional, such as a nurse or case manager help you coordinate care [**Prompt**: For example, did someone help you connect to transportation or needed medical appointments.]. • Yes [Go to **CC.O2**] • No [Go to **A.I1**] • Don't Know [Go to **A.I1**] • Refused [Go to **A.I1**]
	Goal 5	CC.02	Describe what you liked and didn't like about the care coordination you received. **[Go to CC.O3]**
	Goal 5	CC.03	How could care coordination in an outpatient setting for individuals with MH and SUD be improved? [**Prompt**: Timeliness of coordination, medical records, etc.; Smooth transitions of medical care (including medication management); Staff Support] **[Go to A.I1]**
Access: Inpatient	Goal 3	A.I1	During 2021-2023, did you receive care in an inpatient setting? • Yes [Go to **A.I2**] • No [Go to **A.CS1**] • Don't Know [Go to **A.CS1**] • Refused [Go to **A.CS1**] ***Notes for facilitator- Example of Inpatient Services:*** • ***Inpatient Unit- Hospital****: Also known as an inpatient psychiatric unit. For people who can no longer be supported at home and need to be admitted to the hospital due to severe MH problems.*
	Goal 3	A.I2	How many stays did you have in an inpatient setting between 2021 and 2023? **[Go to A.I3]**
	Goal 3	A.13	How long was your stay in inpatient? [**Prompt**: Approximate number of hours/days?] ***If multiple stays***, what was the average length of stay (ALOS). **[Go to S.I1]**
Satisfaction: Inpatient	Goal 3	S.I1	How satisfied were you with your MH or SUD care in the inpatient setting? • Very satisfied **[Go to S.I2]** • Somewhat satisfied **[Go to S.I2]** • Neither satisfied nor dissatisfied **[Go to S.I2]** • Somewhat dissatisfied **[Go to S.I2]** • Very dissatisfied **[Go to S.I2]** • Don't know **[Go to S.I2]** • Refused **[Go to S.I2]**
	Goal 3	S.I2	Thinking about your MH and SUD care in 2021-2023, please describe the most helpful things about the services you received in the inpatient setting [**Prompt**: Staff Support; Treatment Plan During Discharge; Availability of Doctors; Wait Time; Access to Treatment, Care Coordination; Assistance with Medication Management; Symptom Improvement]. **[Go to S.I3]**

Section	Mapping	#	Question/Response
Satisfaction: Inpatient (cont.)	Goal 3	S.I3	Thinking about your MH and SUD care in 2021-2023, what improvements could be made to the services you received in the inpatient setting [**Prompt**: Staff Support; Treatment Plan During Discharge; Availability of Doctors; Wait Time; Access to Treatment, Care Coordination; Assistance with Medication Management; Symptom Improvement]. **[Go to S.I4]**
	Goal 3	S.I4	Thinking about your MH and SUD care in 2021-2023, are there services [**Prompt**: other programs, treatments, or resources] that you wished were available? **[Go to CC.I1]**
Care Coordination: Inpatient	Goal 5	CC.I1	Thinking about your inpatient MH/SUD care in 2021-2023, did a professional, such as a nurse or case manager help you coordinate care during discharge? (**Prompt**: For example, did someone help you connect to another care setting for MH treatment or coordinate medication prescriptions at your pharmacy) • Yes [Go to **CC.I2**] • No [Go to **A.CS1**] • Don't Know [Go to **A.CS1**] • Refused [Go to **A.CS1**]
	Goal 5	CC.I2	When this individual helped to coordinate care, were you coordinated to care nearby (in their community)? **[Go to CC.I3]**
	Goal 5	CC.I3	Describe what you liked and didn't like about the care coordination you received. **[Go to CC.I4]**
	Goal 5	CC.I4	How could care coordination in an inpatient setting for individuals with MH and SUD be improved? [**Prompt**: Timeliness of coordination, medical records, etc.; Smooth transitions of medical care (including medication management); Staff Support] **[Go to A.R1]**
Access: Crisis Setting	Goal 3	A.CS1	During 2021-2023, did you receive care or use any of the following services: CSUs, mobile crisis response units, 988? • Yes [Go to **A.CS2**] • No [Go to **A.R1**] • Don't Know [Go to **A.R1**] • Refused [Go to **A.R1**] ***Notes for facilitator- Examples of crisis services:*** • ***CSU:*** *The CSU is a 23-hour voluntary crisis observation and receiving center. They provide immediate care to individuals experiencing a MH or SUD crisis. These units serve as a safe and secure environment that is less intense than a hospital and less restrictive than a jail. Individuals usually stay a few hours at a CSU.* • ***Mobile Crisis Response Units:*** *Teams (comprised of non-police) respond to MH crises, relieving the burden on law enforcement and medical providers. The teams consist of peers and behavioral health professionals who provide specialized crisis care on-site in the community.* • ***988:*** *This is a direct connection to specialists who are trained in suicide and crisis prevention. The line is open 24/7.*

Section	Mapping	#	Question/Response
Access: Crisis Setting (cont.)	Goal 3	A.CS2	Did you receive MH or SUD care via the computer or phone? **[Go to S.CS1]**
Satisfaction: Crisis Setting	Goal 3	S.CS1	Describe what you liked and didn't like about receiving MH or SUD care from the CSUs, mobile crises response units or 988. **[Go to S.CS2]**
	Goal 3	S.CS2	In general, how satisfied were you with your MH or SUD care from the CSU, mobile crisis response units or 988? • Very satisfied **[Go to S.CS3]** • Somewhat satisfied **[Go to S.CS3]** • Neither satisfied nor dissatisfied **[Go to S.CS3]** • Somewhat dissatisfied **[Go to S.CS3]** • Very dissatisfied **[Go to S.CS3]** • Don't know **[Go to S.CS3]** • Refused **[Go to S.CS3]**
	Goal 3	S.CS3	Thinking about your MH and SUD care in 2021-2023, please describe the most helpful things about the services you received via CSUs, mobile crisis response units or 988 [**Prompt**: Staff Support; Treatment Plan During Discharge; Availability of Doctors; Wait Time; Access to Treatment, Care Coordination; Assistance with Medication Management; Symptom Improvement]. **[Go to S.CS4]**
	Goal 3	S.CS4	Thinking about your MH and SUD care in 2021-2023, what improvements could be made to the services you received via CSUs, mobile crisis response units or 988 [**Prompt**: Staff Support; Treatment Plan During Discharge; Availability of Doctors; Wait Time; Access to Treatment, Care Coordination; Assistance with Medication Management; Symptom Improvement]. **[Go to S.CS5]**
	Goal 3	S.CS5	Thinking about your MH and SUD care in CSUs, mobile crisis response units or 988 during 2021-2023, are there services [**Prompt**: other programs, treatments, or resources] that you wished were available? **[Go to CC.CS1]**
Care Coordination: Crisis Settings	Goal 5	CC.CS1	Thinking about your MH and SUD care via CSUs, mobile crisis response units or 988 in 2021-2023, did a professional, such as a nurse or case manager help you coordinate care [**Prompt**: For example, did someone help you connect to transportation or needed medical appointments.]. • Yes [Go to **CC.CS2**] • No [Go to **A.R1**] • Don't Know [Go to **A.R1**] • Refused [Go to **A.R1**]
	Goal 5	CC.CS2	Describe what you liked and didn't like about the care coordination you received. **[Go to CC.CS3]**
	Goal 5	CC.CS3	How could care coordination in CSUs, mobile crisis response units or 988 settings be improved? [**Prompt**: Timeliness of coordination, medical records, etc.; Smooth transitions of medical care (including medication management); Staff Support] **[Go to A.R1]**

Section	Mapping	#	Question/Response
Access: Residential	Goal 2	A.R1	During 2021-2023, did you receive care in a residential setting? • Yes [Go to **A.R2**] • No [Go to **P1**] • Don't Know [Go to **P1**] • Refused [Go to **P1**] ***Notes for facilitators- Example of Residential Services:*** • ***Residential Treatment****: Residential treatment is a structured, live-in program at a licensed treatment facility for clients. Services include assessment, individual and group counseling, family counseling. The length of the residential services depends on an assessment of an individual's needs.*
	Goal 2	A.R2	How many stays did you have in a residential setting between 2021 and 2023? **[Go to A.R3]**
	Goal 2	A.R3	How long was your stay in the residential setting? [**Prompt**: Approximate number of hours/days? If multiple stays, what was the ALOS. **[Go to S.R1]**
Satisfaction: Residential	Goal 2	S.R1	How satisfied were you with your MH or SUD care in the residential setting? • Very satisfied **[Go to S.R2]** • Somewhat satisfied **[Go to S.R2]** • Neither satisfied nor dissatisfied **[Go to S.R2]** • Somewhat dissatisfied **[Go to S.R2]** • Very dissatisfied **[Go to S.R2]** • Don't know **[Go to S.R2]** • Refused **[Go to S.R2]**
	Goal 2	S.R2	Thinking about your MH and SUD care in 2021-2023, please describe the most helpful things about the services you received in the residential setting [**Prompt**: Staff Support; Treatment Plan During Discharge; Availability of Doctors; Wait Time; Access to Treatment, Care Coordination; Assistance with Medication Management; Symptom Improvement]. **[Go to S.R3]**
	Goal 2	S.R3	Thinking about your MH and SUD care in 2021-2023, what improvements could be made to the services you received in the residential setting [**Prompt**: Staff Support; Treatment Plan During Discharge; Availability of Doctors; Wait Time; Access to Treatment, Care Coordination; Assistance with Medication Management; Symptom Improvement]. **[Go to S.R4]**
	Goal 2	S.R4	Thinking about your MH and SUD care in 2021-2023, are there services [**Prompt**: other programs, treatments, or resources] that you wished were available? **[Go to CC.R1]**
Care Coordination: Residential	Goal 5	CC.R1	Thinking about your residential care during 2021-2023, did a professional, such as a nurse or case manager help you coordinate care during discharge? (**Prompt**: For example, did someone help you connect to another care setting for MH treatment or coordinate medication prescriptions at your pharmacy) • Yes [Go to **CC.R2**] • No [Go to **Physical Conditions Prompt**] • Don't Know [Go to **Physical Conditions Prompt**] • Refused [Go to **Physical Conditions Prompt**]

Section	Mapping	#	Question/Response
Care Coordination: Residential (cont.)	Goal 5	CC.R2	When this individual helped to coordinate care, were you coordinated to care nearby (in their community)? **[Go to CC.R3]**
	Goal 5	CC.R3	Describe what you liked and didn't like about the care coordination you received. **[Go to CC.R4]**
	Goal 5	CC.R4	How could care coordination in a residential setting for individuals with MH and SUD be improved? [**Prompt**: Timeliness of coordination, medical records, etc.; Smooth transitions of medical care (including medication management); Staff Support] **[Go to Physical Conditions Prompt]**
Physical Conditions	N/A	Physical Conditions: Prompt	**Prompt**: Some medical settings provide care for physical (e.g., diabetes or COPD), MH, and SUD conditions. We call these settings integrated care. The next few questions focus on access to integrated care settings. **[Go to P1]**
	Goal 4	P1	During 2021-2023, did you receive any medical services (e.g., annual health exam or treatment for a physical condition, such as asthma) in the same setting as your MH and substance use care? • Yes [Go to **P2**] • No [Go to **Closing**] • Don't Know [Go to **P3**] • Refused [Go to **P3**]
	Goal 4	P2	What types of medical services did you receive in the integrated care setting? • Preventative (**Prompt**: annual health exams, lab work, vaccines) **[Go to P3]** • Primary Care (**Prompt**: diagnosis or treatment of medical conditions like asthma, diabetes, high blood pressure) **[Go to P3]** • Specialty Care (**Prompt**: OBGYN, Cardiologist, Physical Therapist, Radiologist) **[Go to P3]** • Urgent Care (**Prompt**: Walk-In Clinics, Express Care Centers) **[Go to P3]** • Emergency Room (Prompt: confirm services for physical condition only) **[Go to P3]**
	Goal 4	P3	Thinking about your experience in integrated care settings receiving care for your PH and MH/SUD needs, please describe the most helpful things about the services you received [**Prompt**: Staff Support; Access to Treatment, Care Coordination; Symptom Improvement]. **[Go to P4]**
	Goal 4	P4	Thinking about your experience in integrated care settings receiving care for your PH and MH/SUD needs in 2021-2023, what improvements could be made to the services you received [**Prompt**: Staff Support; Access to Treatment, Care Coordination; Symptom Improvement]. **[Go to P5]**
	Goal 4	P5	Thinking about your experience in integrated care settings receiving care for your PH and MH/SUD needs in 2021-2023, are there services [**Prompt**: other programs, treatments, or resources] that you wished were available? **[Go to Closing]**
Closing	N/A	N/A	On behalf of the Family and Social Services Administration (FSSA), we thank you for participating in this survey. Your answers will help improve the program.

Attachment D: Quantitative Analysis Technical Specification

Attachment D provides the detailed technical specifications used for data processing (e.g., initial data preparation, population identification, and metrics specifications) across the demonstration goals.

A. Claims Finalization

Prior to identifying the evaluation population and conducting evaluation analyses, a claims finalization process was run using claims layout data to identify and maintain the latest transaction record for each claim. More specifically, the claims finalization process used the following data processing steps:

1. Removed pharmacy and compound drug claims (i.e., Claim_Type = "P" or "Q") from the denied claims data extract (as none of these claims would have been paid).
2. Combined both regular and remaining denied claim layout records (i.e., to run the subsequent steps for claims from both the regular and denied claims layout data extracts). A claim was then flagged as "paid" if:
    a. They were included in the regular claims layout extract, or
    b. They were included in the denied claims layout data extract, and
        i. Were identified as a managed care encounter (Claim_Enc_Code = "E"), and
        ii. Were identified as having been paid by an MCO (I_MCO_Deny = "N" in the claim details).
3. Identified and kept the latest transaction record (I_Latest_Trans = "Y") for each claim.
4. Split claims by pharmacy and non-pharmacy records.
5. Sorted each type of claim (pharmacy and non-pharmacy) by original claim number (Original_Claim_Numb), pharmacy sequence ID (Pharm_Seq_Id; pharmacy claims only), Mom Medicaid claim number (Claim_Numb_Mom), system-assigned claim number (Claim_Numb), adjudication date (Date_Adjudication), and claim transaction type (Claim_Trans_Type).
    a. From these sorted claims the first row was kept (i.e., the latest adjudication date).
6. Re-combined pharmacy and non-pharmacy claims.
7. Dropped unpaid claims.

B. Analytic Population

The SMI beneficiary roster was constructed using the following data processing steps:

1. Extracted all finalized claims with an SMI diagnosis in the primary and secondary positions for both inpatient and outpatient claims.
    a. SMI-related inpatient claims – i.e., claims with a claim type of institutional crossover, inpatient, or long-term care (claim_type in ("A","I","L"), respectively) – were identified using the claims' primary diagnosis (sequence_id = 1), admission diagnosis (sequence_id = 2), and secondary diagnosis (sequence_id = 4) fields.

b. SMI-related outpatient claims (i.e., any claims not identified as "inpatient" according to the rules outlined above) were identified using primary diagnosis (sequence_id = 1) and secondary diagnosis (sequence_id = 4) fields.

c. Specific diagnosis codes used to identify SMI conditions are shown in **Exhibit D.1**, below.

Exhibit D.1: SMI Diagnosis Categories and ICD10 Codes

SMI Diagnosis Category	ICD10 Diagnosis Code
Bipolar	F310, F3110, F3111, F3112, F3113, F312, F3130, F3131, F3132, F314, F315, F3160, F3161, F3162, F3163, F3164, F3170, F3171, F3172, F3173, F3174, F3175, F3176, F3177, F3178, F3181, F3189, F319
MDD	F330, F331, F332, F333, F3340, F3341, F3342, F339
Schizophrenia	F200, F201, F202, F203, F205, F2081, F2089, F209, F250, F251, F258, F259

2. Determined monthly Medicaid enrollment for any SMI waiver eligible beneficiaries identified as having an SMI diagnosis (i.e., beneficiaries identified in Step 1). As noted in **Section I.H** (Target Population) and shown in **Exhibit D.2**, below, the SMI waiver-eligible Medicaid enrollment excluded beneficiaries with the following types of Medicaid enrollment:

Exhibit D.2: Eligibility Groups Excluded from the Demonstration

Eligibility Group Name	Social Security Act & CFR Citation
Limited Services Available to Certain Aliens	42 CFR §435.139
Qualified Medicare Beneficiaries (QMB)	1902(a)(10)(E)(i) 1905(p)
Specified Low Income Medicare Beneficiaries (SLMB)	1902(a)(10)(E)(iii)
Qualified Individual (QI) Program	1902(a)(10)(E)(iv)
Qualified Disabled Working Individual (QDWI) Program	1902(a)(10)(E)(ii) 1905(s)
Family Planning	1902(a)(10)(A)(ii)(XXI)

3. Beneficiaries were then added to the SMI beneficiary roster for each year according to the following rules:

   a. Once a beneficiary was identified as having a claim with an SMI diagnosis, the beneficiary remained in a "possible roster" SMI beneficiary list for that CY and for all subsequent years within the study period.

      i. For example, if a beneficiary had a claim with a principal or secondary diagnosis of MDD in June 2019, that beneficiary remained in the list of possible roster beneficiaries for 2019 and in each subsequent year (2020 to 2023).

   b. Medicaid eligibility and age eligibility were then checked for each "possible roster" beneficiary:

      i. *Medicaid eligibility*: To be included in the roster for a given year, beneficiaries with SMI were required to have at least one month of SMI waiver-eligible Medicaid coverage during a roster year.

1. Within each year, 95-97% of SMI beneficiaries were identified as having (SMI waiver-eligible) Medicaid coverage for at least one month.

ii. *Age eligibility*: To be included in the roster for a given year, beneficiaries with SMI and at least one month of enrollment in SMI waiver-eligible Medicaid coverage were required to be between ages 21 and 64 at the end of each measurement year (i.e., as of December 31).

1. About 76% of eligible SMI beneficiaries met this criterion.

The final SMI beneficiary roster for each year therefore consisted of beneficiaries who:

- Had a claim with a primary or secondary diagnosis of SMI within that year or within a prior year within the study period, and
- Were enrolled in SMI waiver-eligible Medicaid coverage for at least one month during the year, and
- Were between ages 21 and 64 as of December 31 of that year.

Metro/Non-metro Geographical Area

Beneficiary geographic location was identified based on county of residence available in the beneficiary enrollment data. Each county was mapped using RUCC to a metro or non-metro area based on the reported population information. The mapping of the RUCC to Indiana counties were obtained from United States Department of Agriculture publicly available data.[162] Based on the RUCC mapping, 44 counties were identified as metro areas, and 48 counties were identified as non-metro areas. **Exhibit D.3** categorizes the number of metro and non-metro counties by population size.

Exhibit D.3: Indiana Counties by RUCC Classification

RUCC Description	Metro	Non-Metro	Total
Metro - Counties in metro areas of 1 million population or more	22		22
Metro - Counties in metro areas of 250,000 to 1 million population	7		7
Metro - Counties in metro areas of fewer than 250,000 population	15		15
Nonmetro - Urban population of 20,000 or more, adjacent to a metro area		5	5
Nonmetro - Urban population of 20,000 or more, not adjacent to a metro area		2	2
Nonmetro - Urban population of 5,000 to 20,000, adjacent to a metro area		24	24
Nonmetro - Urban population of 5,000 to 20,000, not adjacent to a metro area		5	5
Nonmetro - Urban population of fewer than 5,000, adjacent to a metro area		11	11
Nonmetro - Urban population of fewer than 5,000, not adjacent to a metro area		1	1
All Metro and non-Metro	**44**	**48**	**92**

Source: RUCC 2023 mapping data.

[162] https://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx

C. Sampling for Member KII

Stratified sampling was used to select beneficiary samples for the beneficiary KII. The sampling population was drawn from the SMI beneficiary roster using quarter-based Medicaid eligibility. The SMI beneficiary roster was based on claims/encounters that were not paid by third parties. This quarter-based SMI beneficiary roster included any beneficiaries with an SMI diagnosis during each quarter who were Medicaid eligible and between the ages of 21 and 64 at the end of the measurement year (December 2023). Consequently, the quarter-based SMI beneficiary roster included 67,516 beneficiaries (i.e., had an SMI diagnosis during last quarter of 2023, aged 21-64 and also eligible for Medicaid in December 2023. The following data processing steps were conducted to construct the beneficiary KII sample:

1. Excluded SMI beneficiaries who were deceased or did not have a valid phone number (about 7% of the sample were excluded).
2. Stratified the sample using three demographic variables: gender (male, female), age group (21-30, 31-50 and 51-64), and race (White/Caucasian, Black, and Other/Not available).

Given the potential for non-response, a sample of 500 beneficiaries was derived to maximize data collection efforts for completing 25 interviews (target number of responses from the evaluation design). The number of sample cohorts selected per strata (of the total 500) was proportional to the relative volume (number of beneficiaries) of each stratum. The PROC SURVEYSELECT procedure in SAS was used to construct the sample.

As interviews were expected to take weeks to complete and response rates typically vary by beneficiary characteristics, the sampled beneficiaries were split into five outreach waves and sorted by beneficiary characteristics to maximize the number of completed interviews from the varied beneficiary pool. **Exhibit D.4** summarizes the counts for the sampling population, outreach sample and respondent by gender, age, and race categories.

Exhibit D.4: Counts of SMI Population, Outreach Sample, and Respondents by Gender, Age, and Race

Population/Sample Group		N	Strata	Gender		Age Group			Race		
			Cat.	F	M	21-30	31-50	51-64	White/ Caucasian	Af. Am./ Black	Oth.
SMI Pop. in Dec. 2023	With Available Strata Info	67,516	N	43,012	24,504	16,129	32,611	18,776	6,158	41,873	19,485
			%	63.7%	36.3%	23.9%	48.3%	27.8%	9.1%	62.0%	28.9%
	Alive and With Valid Phone #	62,554	N	39,823	22,731	14,567	30,255	17,732	5,666	38,037	18,851
			%	63.7%	36.3%	23.3%	48.4%	28.3%	9.1%	60.8%	30.1%
SMI Sample	Overall	500	N	317	183	117	241	142	46	304	150
			%	63.4%	36.6%	23.4%	48.2%	28.4%	9.2%	60.8%	30.0%
SMI Respondents Interviewed	Overall	25	N	10	15	4	9	12	13	6	6
			%	40%	60%	16%	36%	48%	52%	24%	24%

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

D. Goal 1

Changes in all-cause related ED service participation and utilization rates before and after the waiver extension were calculated for the SMI beneficiary roster who had at least 10 months of SMI waiver eligible Medicaid coverage in each respective year following their diagnosis. The rates the SMI population and relevant demographic subgroups used finalized claims data.

Monthly ED service participation rates were calculated as:

$$\frac{\text{\# of SMI roster beneficiaries who had at least one ED service visit in the month}}{\text{\# of SMI beneficiaries in the monthly roster}}$$

Annual ED service participation rates were calculated as:

$$\frac{\text{\# of SMI roster beneficiaries who had at least one ED service visit in the year}}{\text{\# of SMI beneficiaries in the annual roster}}$$

Annual ED service utilization rates were calculated as:

$$\frac{\text{\# of ED service visits per year}}{\text{member months}}$$

For monthly participation rates, ED service visits were counted for an individual if that individual was in the monthly SMI beneficiary roster in the month that the ED service visit occurred. For annual participation rates, ED service visits were counted for an individual if that individual was in the annual SMI beneficiary roster in the year that the ED service visit occurred. Only beneficiaries who had at least 10 months of SMI waiver eligible Medicaid coverage after their first SMI diagnosis were included in these metrics.

For annual utilization rates, ED service visits were counted for an individual if the individual was in the annual SMI roster in that year. For the denominator of the utilization rate, beneficiary months were counted for those beneficiaries if that beneficiary month occurred on or after a beneficiary's first SMI diagnosis date. Only beneficiaries who had at least 10 months of SMI waiver eligible Medicaid coverage after their first SMI diagnosis were included in the metric.

To identify ED visits, the following data processing steps were used:

1. Identified claims where the service begin date (date_begin_service_header) occurred on or after the SMI beneficiary's first SMI diagnosis date, and the claim had a revenue code (revenue_code) or claim header procedure code (proc_code) in the HEDIS VSD *ED* value set.
2. Kept one ED service visit per beneficiary per day.

For analyses examining MH or SMI related ED service visits, the following steps were taken to flag ED service visits:

1. For MH related claims, if any claims from the ED service date had a primary diagnosis code in the following value sets, the ED service visit from that date was flagged as MH related:
    a. The HEDIS VSD MH Diagnosis value set, or
    b. The HEDIS VSD Intentional Self-Harm value set, or
    c. The CCSR Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis categories.
2. For SMI related claims, all claims from the date of the ED service visit (date_begin_service_header) were checked for a primary diagnosis code (primary_diag_code) in the SMI diagnosis codes listed in **Exhibit D.1**. If any claims from the ED service date had a primary diagnosis code listed in this table, the ED service visit from that date was flagged as SMI related.

For each year in the valuation period, the participation and utilization rates were calculated and stratified for: gender, age group (21-30, 31-40, 41-50, 51-60, 60-64), race, ethnicity, metro/non-metro, dual eligibility, HIP/Non-HIP, SMI diagnosis groups, and chronic conditions.

E. Goal 2

Changes in all-cause, unplanned 30-day readmission rates before and after the waiver extension were calculated for the SMI beneficiary roster population using claims data. The 30-day all-cause, unplanned readmission rate was calculated as:

$$\frac{\#\text{ of "D" with all-cause acute inpatient or observation readmissions stays within 30 days of discharge}}{\#\text{ of (eligible) acute inpatient or observation stays related to MH (D)}}$$

More specifically, to calculate this measure, MH-related acute inpatient and observation stays for the denominator (D) were first identified using the following data processing steps:

1. Identified and removed any beneficiaries within the SMI beneficiary roster who received hospice services within the given CY. Beneficiaries with hospice services were identified as those with claims with a service begin date (date_begin_service_header) between January 1 and December 31 of the CY and:
    a. A revenue code (revenue_code) within the HEDIS VSD Hospice Encounter value set, or
    b. A claim header procedure code (proc_code) within the HEDIS VSD Hospice Encounter value set, or
    c. A claim header procedure code (proc_code) within the HEDIS VSD Hospice Intervention value set.
2. Extracted all acute and nonacute inpatient stays and observation stays with a discharge/service end date (date_end_service_header) within the given CY among SMI beneficiary roster beneficiaries who did not receive any hospice services within the given

CY. Acute and nonacute inpatient stays and observation stays were identified as claims with:

   a. A revenue code (revenue_code) within the HEDIS VSD Inpatient Stay value set, or
   b. A revenue code (revenue_code) within the HEDIS VSD Observation Stay value set.

3. Excluded any claims corresponding to nonacute inpatient stays – i.e., excluded any claims with a revenue code (revenue_code) or bill type (bill_type) within the HEDIS VSD Nonacute Inpatient Stay value set.
4. Identified and concatenated any direct transfers among remaining stays as any stays with an admission date on the same day or one day after the discharge date of a previous stay. When a direct transfer or overlapping stay was identified, the stays were concatenated into a single stay, using the earliest admission date (date_begin_service_header) and the latest discharge date (date_end_service_header).
5. Removed any stays with a discharge date (date_end_service_header) before January 1 or after December 1 of the given CY.
6. Removed any stays where the discharge date (date_end_service_header) was the same as the admission date (date_begin_service_header) – i.e., all stays were required to have a LOS of at least one day.
7. Removed any stays where the beneficiary died during the stay (i.e., removed any stays where date_begin_service_header <= date_death_recipient <= date_end_service_header).
8. Removed any stays in which the beneficiary had a claim with a primary diagnosis (diag_code, where sequence_id = 1) related to pregnancy or perinatal care.
9. Pregnancy-related claims were identified as those with a primary diagnosis code within the HEDIS VSD Pregnancy value set.
10. Perinatal care-related claims were identified as those with a primary diagnosis code within the HEDIS VSD Perinatal Conditions value set.
11. Removed any stays without a claim with a primary or secondary diagnosis (diag_code, where sequence_id = 1 or sequence_id = 4) related to MH. MH-related diagnoses were identified as any diagnoses included in:
    a. The HEDIS VSD MH Diagnosis value set, or
    b. The HEDIS VSD Intentional Self-Harm value set, or
    c. The CCSR Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis categories.
12. Removed any stays after which the beneficiary was not enrolled in SMI waiver-eligible Medicaid coverage for 30 days.

Possible readmission stays for the numerator were then identified using the following data processing rules:

1. Identified and removed any beneficiaries within the SMI beneficiary roster who received hospice services within the given CY. Beneficiaries with hospice services were identified as those with claims with a service begin date (date_begin_service_header) between January 1 and December 31 of the CY and:
    a. A revenue code (revenue_code) within the HEDIS VSD Hospice Encounter value set, or
    b. A claim header procedure code (proc_code) within the HEDIS VSD Hospice Encounter value set, or
    c. A claim header procedure code (proc_code) within the HEDIS VSD Hospice Intervention value set.
2. Extracted all acute and nonacute inpatient stays and observation stays with an admission/service begin date (date_begin_service_header) within the given CY (among SMI beneficiary roster beneficiarys who did not receive any hospice services within the given CY). Acute and nonacute inpatient stays and observation stays were identified as claims with:
    a. A revenue code (revenue_code) within the HEDIS VSD Inpatient Stay value set, or
    b. A revenue code (revenue_code) within the HEDIS VSD Observation Stay value set.
3. Excluded any claims corresponding to nonacute inpatient stays – i.e., excluded any claims with a revenue code (revenue_code) or bill type (bill_type) within the HEDIS VSD Nonacute Inpatient Stay value set.
4. Identified and concatenated any direct transfers among remaining stays as any stays with an admission date on the same day or one day after the discharge date of a previous stay. When a direct transfer or overlapping stay was identified, the stays were concatenated into a single stay, using the earliest admission date (date_begin_service_header) and the latest discharge date (date_end_service_header).
5. Removed any stays with an admission date (date_begin_service_header) before January 3 or after December 31 of the given CY.
6. Removed any stays in which the beneficiary had a claim with a primary diagnosis (diag_code, where sequence_id = 1) related to pregnancy or perinatal care.
    a. Pregnancy-related claims were identified as those with a primary diagnosis code within the HEDIS VSD Pregnancy value set.
    b. Perinatal care-related claims were identified as those with a primary diagnosis code within the HEDIS VSD Perinatal Conditions value set.

7. Removed any stays related to other types of planned visits or procedures. Specifically, the following types of stays were excluded:
    a. Stays with a principal diagnosis (diag_code, where sequence_id = 1) of maintenance chemotherapy (as identified by the HEDIS VSD Chemotherapy Encounter value set).
    b. Stays with a principal diagnosis (diag_code, where sequence_id = 1) of rehabilitation (as identified by the HEDIS VSD Rehabilitation value set).
    c. Stays with procedure codes (proc_code) to an organ transplant (as identified by the HEDIS VSD Kidney Transplant, Bone Marrow Transplant, Organ Transplant Other Then Kidney, or Introduction of Autologous Pancreatic Cells value sets).
    d. A potentially planned procedure (as identified by the HEDIS VSD Potentially Planned Procedures value set), without a principal acute diagnosis (as identified by the HEDIS VSD Acute Conditions value set).

Possible readmission stays were then merged with denominator stays to indicate whether a given denominator stay (D) had an all-cause, unplanned readmission within 30 days. A binary indicator (i.e., 1 = "Yes", 0 = "No) to develop the numerator count of (D) with readmissions (as specified in the formula above) according to the following data processing rules:

1. A possible readmission stay was counted as a "readmission" (i.e., in the numerator) for a given denominator stay if the readmission stay occurred within one to 30 days after the denominator discharge date.
2. If a possible readmission stay could be counted as a "readmission" for more than one denominator stay, the possible readmission was counted toward the numerator for the denominator stay with the latest discharge date (date_end_service_header).
    a. Thus, each possible readmission stay would only be counted once (at most) toward the numerator.

For each year in the valuation period, the readmission rate was calculated and stratified for: gender, age group (21-30, 31-40, 41-50, 51-60, 60-64), race, ethnicity, metro/non-metro, dual eligibility, HIP/Non-HIP, SMI diagnosis groups, and chronic conditions.

F. Goal 4

For each measurement year of 2018-2023, participation rates were calculated for the following three community-based services from beneficiaries in the SMI beneficiary roster who had at least 10 months of SMI waiver eligible Medicaid coverage in each respective year following their diagnosis:

- Outpatient rehabilitation (including targeted case management services),
- HCBS & LTSS, and
- Outpatient MH using the analytic population.

Additionally, the overall community-based services participation rate was calculated. This participation rate calculated the proportion of the analytic population that had at least one paid claim in the measurement year related to any of the community-based service types listed above.

Participation rates were calculated as:

$$\frac{\text{\# of SMI roster beneficiaries who had at least one qualifying service visit in the year}}{\text{\# of SMI roster beneficiaries who had at least 10 months of SMI waiver eligible Medicaid coverage}}$$

1. Outpatient Rehab - Percent of beneficiaries using MH-related Outpatient rehab (MRO Services) or other Outpatient rehab services.

To identify these services the following data processing steps were used:

1. Identified claims where:
    a. The service begin date (date_begin_service_header) occurred on or after the SMI beneficiary's first SMI diagnosis date and
    b. The claim had the primary diagnosis code in the HEDIS VSD MH Diagnosis value set and
    c. The Date_Begin_Service_Header is between January 1, 2018 and December 31, 2023 and
    d. Neither the place_of_service_header or the place_of_service_detail (POS) are "2", "02" or "10" or either of the proc_mod (proc_mod1- proc_mod4) are "95", "93" or "GT" (telehealth) for date_begin_service_header in 2018 and 2019 only. No exclusions applied for date_begin_service_header in 2020-2023.
2. From the claims identified above the number of beneficiaries with a claim that met any of the following criteria was calculated.
    a. MH related MRO services – These codes are obtained from Indiana Provider Reference Module for MRO services.
        i. proc_code_L in ('H0004', 'H0005', 'H0031', 'H0034', 'H2012', 'H2014', 'H2017', 'H2019', 'H2035', 'T1016') AND
        ii. POS in ('11', '12', '23', '31', '32', '53', '99')
    b. Other Outpatient Rehab Services – These specifications were adapted from Metric 14: MH Services Utilization – IOP and Partial Hospitalization Technical Specifications for Monitoring Metrics Version 3.0 September 2021. Among claims identified in Step 1, claims were retained having a code from any of the following.
        i. Partial Hospitalization or IOP- Partial Hospitalization or IOP Procedure Codes (HCPCS) and Revenue codes value sets
        ii. Mental Health Utilization (MPT) IOP Program/Partial Hospitalization Group 1; Electroconvulsive Therapy; or Transcranial Magnetic Stimulation value sets with a corresponding POS code in Partial Hospitalization or IOP POS Value Set
        iii. MPT IOP/Partial Hospitalization Group 1; Electroconvulsive Therapy; or Transcranial Magnetic Stimulation Value Sets with a corresponding code in CMHC POS Value set

iv. MPT IOP/Partial Hospitalization Group 2 Value Set with a corresponding code in Partial Hospitalization POS value set billed by a MH provider in with provider specialty in ('011', '090', '091', '092', '093', '095', '100', '11', '110', '111', '112', '113', '114', '115', '117', '339', '599', '611', '612', '613', '615', '615', '616', '617', '618', '619', '620', '621', '835', '836', '90', '91', '92', '93', '95', 'B05', 'C02', 'C12', 'C18', 'D08', 'F28', 'M07', 'M08', 'M09', 'M11', 'M12', 'M14', 'M16', 'O13', 'O27', 'O41', 'O60', 'O71')[163]

v. MPT IOP/Partial Hospitalization Group 2 Value Set with a corresponding code in CMHC POS billed by a provider with MH provider specialty in ('011', '090', '091', '092', '093', '095', '100', '11', '110', '111', '112', '113', '114', '115', '117', '339', '599', '611', '612', '613', '615', '615', '616', '617', '618', '619', '620', '621', '835', '836', '90', '91', '92', '93', '95', 'B05', 'C02', 'C12', 'C18', 'D08', 'F28', 'M07', 'M08', 'M09', 'M11', 'M12', 'M14', 'M16', 'O13', 'O27', 'O41', 'O60', 'O71')

vi. Targeted Case Management with procedure code in ('T1017', 'T2023', '99366', '99367', '99368','T2022')

3. For each year in the valuation period, the participation rate was calculated by dividing the total unique beneficiaries from Step 2 by the total unique beneficiaries from Step 1

4. For each year in the valuation period, the participation rate was calculated and stratified for: gender, age group (21-30, 31-40, 41-50, 51-60, 60-64), race, ethnicity, metro/non-metro, dual eligibility, HIP/Non-HIP, SMI diagnosis groups, and chronic conditions.

2. HCBS/LTSS - Percent of beneficiaries using MH related HCBS & Percent of beneficiaries using MH-related LTSS

1. Subseted the claims data to claims meeting the following conditions:
    a. The service begin date (date_begin_service_header) occurred on or after the SMI beneficiary's first SMI diagnosis date and
    b. The claim had the primary diagnosis code in the HEDIS VSD MH Diagnosis value set and
    c. The Date_Begin_Service_Header between January 1, 2018 and December 31, 2023 and
    d. Neither the POS was "2", "02" or "10" (telehealth) for date_begin_service_header in 2018 and 2019 only. No exclusions applied for date_begin_service_header in 2020-2023 and
    e. The claim did not contain any revenue code in the Inpatient Stay Value Set
2. From Step 1, calculated the number of beneficiaries having a claim with procedure codes in HCBS-LTSS value set or revenue codes in HCBS-LTSS revenue codes.[164]

[163] Provider specialty codes were identified by a collaborative review between FSSA and Lewin.
[164] HCBS.LTSS services were identified by a collaborative review of the FSSA fee schedule between FSSA and Lewin.

3. For each year in the valuation period, the participation rate was calculated by dividing the total unique beneficiaries from Step 2 by the total unique beneficiaries from Step 1
4. For each year in the valuation period, the participation rate was calculated and stratified for: gender, age group (21-30, 31-40, 41-50, 51-60, 60-64), race, ethnicity, metro/non-metro, dual eligibility, HIP/Non-HIP, SMI diagnosis groups, and chronic conditions.

3. Outpatient MH - Percent of beneficiaries using Outpatient MH Services

1. Divided the claims data to claims that meet the following conditions:
    a. The service begin date (date_begin_service_header) occurred on or after the SMI beneficiary's first SMI diagnosis date AND
    b. The claim had the primary diagnosis code in the HEDIS VSD MH Diagnosis value set AND
    c. The Date_Begin_Service_Header between January 1, 2018 and December 31, 2023 AND
    d. Neither the POS was "2", "02" or "10" or either of the proc_mod (proc_mod1-proc_mod4) are "95", "93" or "GT" (telehealth) for date_begin_service_header in 2018 and 2019 only. No exclusions applied for date_begin_service_header in 2020-2023 AND
    a. The claim did not contain any revenue code in *Inpatient Stay Value Set*
2. From above claims, the number of beneficiaries with a claim that met any of the following criteria was calculated. These specifications are adapted from Metric 15 – Medicaid Section 1115 SMI and SED Demonstrations: Technical Specifications for Monitoring Metrics Version 3.0 September 2021.
    a. Procedure and Revenue code from MPT Stand Alone Outpatient Group 1 value set
    b. Procedure and Revenue code from MPT Stand Alone Outpatient Group 2 Value Set billed by a MH provider with provider specialty in ('011', '090', '091', '092', '093', '095', '100', '11', '110', '111', '112', '113', '114', '115', '117', '339', '599', '611', '612', '613', '615', '615', '616', '617', '618', '619', '620', '621', '835', '836', '90', '91', '92', '93', '95', 'B05', 'C02', 'C12', 'C18', 'D08', 'F28', 'M07', 'M08', 'M09', 'M11', 'M12', 'M14', 'M16', 'O13', 'O27', 'O41', 'O60', 'O71')
    c. Procedure code in Observation Value Set billed by MH provider with provider specialty in ('011', '090', '091', '092', '093', '095', '100', '11', '110', '111', '112', '113', '114', '115', '117', '339', '599', '611', '612', '613', '615', '615', '616', '617', '618', '619', '620', '621', '835', '836', '90', '91', '92', '93', '95', 'B05', 'C02', 'C12', 'C18', 'D08', 'F28', 'M07', 'M08', 'M09', 'M11', 'M12', 'M14', 'M16', 'O13', 'O27', 'O41', 'O60', 'O71')
    d. Procedure code in Visit Setting Unspecified; Electroconvulsive Therapy; or Transcranial Magnetic Stimulation Value Sets with a corresponding code from Outpatient POS Value Set

e. Procedure code in Visit Setting Unspecified; Electroconvulsive Therapy; or Transcranial Magnetic Stimulation Value Sets with a corresponding code from CMHC POS Value Set

f. Procedure code in Electroconvulsive Therapy or Transcranial Magnetic Stimulation Value Sets with a corresponding code from Ambulatory Surgical Center POS Value Set

3. For each year in the valuation period, the participation rate was calculated by dividing total unique beneficiaries from Step 2 by total unique beneficiaries from Step 1
4. For each year in the valuation period, the participation rate calculated and stratified for: gender, age group (21-30, 31-40, 41-50, 51-60, 60-64), race, ethnicity, metro/non-metro, dual eligibility, HIP/Non-HIP, SMI diagnosis groups, and chronic conditions.

G. Goal 5

1. Specification for Follow-Up After ED Visit for MH-Related Diagnosis

For each measurement year of 2018-2023, two follow-up rates for MH-related ED visits were calculated and examined for the SMI beneficiary population, including:

- Seven-day follow-up after the ED visit, and
- Thirty-day follow-up after the ED visits.

The rates are calculated at the ED visit encounter level as follows:

$$\frac{\text{\# of index visits with follow up visit to any provider within [7 or 30 days]}}{\text{\# of index ED visits related to AOD dependence}}$$

The finalized claims were used to establish both denominator and numerator of the measure.

The denominator ED visits were identified through the process listed below:

1. Identified ED claims with HEDIS VSD ED value set and a principal diagnosis of the following ICD10 diagnosis value sets for the annual SMI beneficiaries:
    a. The HEDIS VSD MH Diagnosis value set, or
    b. The HEDIS VSD Intentional Self-Harm value set, or
    c. The CCSR Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis categories.

The principal diagnosis was required to be on the same day as an ED visit. Only one ED visit was counted per day.

2. Kept ED visits on or between January 1 and December 1 of each measurement year that occurred after the first SMI diagnosis per beneficiary. The first SMI diagnosis is the first SMI diagnosis during the six-year study period.
3. Removed multiple eligible ED visits within 31-day period and only kept the first eligible ED visit per beneficiary.

4. Excluded eligible ED visits that resulted in an inpatient stay within 31-day period. If an ED visit was followed by inpatient admission into an acute or nonacute inpatient care setting on the date of the ED visit or within 30 days after the ED visit, regardless of the principal diagnosis for the admission, the ED visit was excluded. Inpatient admissions were identified using the HEDIS VSD Inpatient Stay Value Set. The admission date was used to check if the admission occurred during 31-day time window of the ED visit date.
5. Excluded any ED visits for beneficiaries meeting the following criteria:
    a. If a beneficiary was identified to have a year-long inpatient admission (LOS=365 days), all ED visits for the beneficiary in the same year were excluded.
    b. Beneficiaries in hospice or using hospice services (the HEDIS VSD Hospice Encounter value set) anytime during the measurement year.
    c. Beneficiaries who died anytime during the measurement year.
6. Enrollment eligibility was checked. A beneficiary with an ED visit was eligible in the month of the ED visit and the subsequent month after the ED visit.

Follow-up visits are defined as any follow-up visits with any practitioner, with a principal diagnosis of MH-related diagnosis (as listed in 1a-1c) within the specified time-periods, seven or thirty days after eligible ED visits. The steps to identify follow-up visits are detailed below:

1. Among beneficiaries identified with eligible ED visits, any visits meeting criteria below were identified:
    a. An outpatient visit (Visit Setting Unspecified value set with Outpatient POS value set).
    b. An outpatient visit (behavioral health Outpatient value set)
    c. An IOP encounter or partial hospitalization (Visit Setting Unspecified with Partial Hospitalization POS value set)
    d. An IOP encounter or partial hospitalization (Partial Hospitalization IOP value set)
    e. A CMHC visit (Visit Setting Unspecified value set with CMHC POS value set)
    f. Electroconvulsive therapy (Electroconvulsive Therapy value set) with (Ambulatory Surgical Center POS value set; CMHC POS value set; Outpatient POS value set; Partial Hospitalization POS value set)
    g. A telehealth visit (Visit Setting Unspecified value set with Telehealth POS value set)
    h. An observation visit (Observation value set)
    i. A telehealth visit (Telehealth Visit value set)
    j. An e-visit or virtual check-in (Online Assessments value set).
2. All eligible visits specified above were required to have one of the following diagnoses on the same date of visits:
    a. A principal diagnosis of a MH disorder (MH Diagnosis value set)

b. A principal diagnosis of intentional self-harm (Intentional Self-Harm value set) and any diagnosis of a MH disorder (MH Diagnosis value set)

c. A principal diagnosis of suicidal ideation, attempt, and intentional self-harm (CCSR Suicidal Ideation, Attempt, and Intentional Self-Harm Diagnosis value set) and any diagnosis of a MH disorder (MH Diagnosis value set)

3. The dates of identified visits were compared to the date of ED visits per beneficiary.
   - 7-day follow-up: a follow-up visit within 7 days after an ED visit (8 total days, including visits on the same day as the ED visit).
   - 30-day follow-up: a follow-up visit within 30 days after an ED visit (31 total days, including visits on the same day as the ED visit).

   A binary indicator (i.e., 1 for Yes, 0 for No) was created for each ED visit encounter when any follow-up visits were identified within the specified period after ED visits. The binary indicator allowed counting all eligible ED visits for the denominator and those with follow-up visits for the numerator and thus calculation of the rates at the ED visit encounter level.

For each year in the valuation period, rates were calculated and stratified for: gender, age group (21-30, 31-40, 41-50, 51-60, 60-64), race, ethnicity, metro/non-metro, dual eligibility, HIP/Non-HIP, SMI diagnosis groups, and chronic conditions.

2. Specification for Follow-Up After ED Visit for AOD Abuse or Dependence

For each measurement year of 2018-2023, two follow-up rates for AOD-related ED visits for a principal diagnosis of AOD abuse or dependence were calculated and examined for the SMI beneficiary population, including:

- Seven-day follow-up after the ED visit, and
- Thirty-day follow-up after the ED visits.

The rates are calculated at the ED visit encounter level as follows:

$$\frac{\text{\# of index visits with follow up visit to any provider within [7 or 30 days]}}{\text{\# of index ED visits related to AOD dependence}}$$

The finalized claims were used for both denominator and numerator of the measure.

The denominator ED visits were identified through the process listed below:

1. Identified ED claims with HEDIS VSD ED value set and a principal diagnosis of AOD abuse or dependence (AOD Abuse and Dependence value set) for the annual SMI beneficiaries.
2. Kept the ED visits on or between January 1 and December 1 of each measurement year that occurred after the date of first SMI diagnosis per beneficiary. The first SMI diagnosis date was the date of the first SMI diagnosis during the six-year study period.
3. Removed multiple eligible ED visits within 31-day period and only kept the first eligible ED visit per beneficiary.

4. Excluded eligible ED visits that resulted in an inpatient stay within 31-day period. If an ED visit was followed by inpatient admission into an acute or nonacute inpatient care setting on the date of the ED visit or within 30 days after the ED visit, regardless of the principal diagnosis for the admission, the ED visit was excluded. Inpatient admissions were identified using the HEDIS VSD Inpatient Stay Value Set. The admission date was used to check if the admission occurred during 31-day time window after the ED visit date.
5. Excluded any ED visits for beneficiaries meeting the following criteria:
    a. If a beneficiary was identified to have a year-long inpatient admission (LOS=365 days), all ED visits for the beneficiary in the same year were excluded.
    b. Beneficiaries in hospice or using hospice services (HEDIS VSD Hospice Encounter value set) anytime during the measurement year.
    c. Beneficiaries who died anytime during the measurement year.
6. Enrollment eligibility was checked. A beneficiary with an ED visit was eligible in the month of the ED visit and the subsequent month after the ED visit.

Follow-up visits are defined as any follow-up visits with any practitioner, with a principal diagnosis of AOD abuse or dependence within specified time-periods, seven or thirty days after eligible ED visits. The steps to identify follow-up visits are detailed below:

1. Among beneficiaries identified with eligible ED visits, any visits with a principal diagnosis of AOD abuse or dependence (AOD Abuse and Dependence value set) and meeting criteria below were extracted:
    a. Initiation and Engagement Treatment (IET) stand-alone visits value set
    b. Opioid Use Disorder (OUD) Weekly Non-Drug Service value set
    c. OUD Monthly Office Based Treatment value set
    d. OUD Weekly Drug Treatment Service value set
    e. IET Visits Group 1 value set with IET POS Group 1 value set
    f. IET Visits Group 2 value set with IET POS Group 2 value set
    g. An observation visit (Observation value set)
    h. A telephone visit (Telephone Visits value set)
    i. An e-visit or virtual check-in (Online Assessments value set)
2. The dates of identified visits were compared to the date of ED visits per beneficiary.
    - 7-day follow-up: a follow-up visit within 7 days after an ED visit (8 total days, including visits on the same day as the ED visit).
    - 30-day follow-up: a follow-up visit within 30 days after an ED visit (31 total days, including visits on the same day as the ED visit).

    A binary indicator (i.e., 1 for Yes, 0 for No) was created for each ED visit encounter when any follow-up visits were identified within the specified period after ED visits. The binary indicator allowed counting all eligible ED visits for the denominator and those

with follow-up visits for the numerator and thus calculation of the rates at the ED visit encounter level.

For each year in the valuation period, the rates were calculated and stratified for: gender, age group (21-30, 31-40, 41-50, 51-60, 60-64), race, ethnicity, metro/non-metro, dual eligibility, HIP/Non-HIP, SMI diagnosis groups, and chronic conditions.

3. Specification for Follow-Up After Inpatient Stays for Mental Health

For each measurement year of 2018-2023, two follow-up rates after MH-related acute inpatient stays rates were calculated and examined for the SMI beneficiary population, including:

- Seven-day follow-up after acute inpatient discharges, and
- Thirty-day follow-up after acute inpatient discharges.

The rates are calculated at the inpatient stay encounter level as follows:

$$\frac{\#\ of\ index\ stays\ with\ followup\ visit(s)\ with\ a\ MH\ provider\ within\ [7\ or\ 30\ days]}{\#\ of\ index\ stays\ with\ a\ principal\ diangosis\ of\ MH}$$

The finalized claims were used for both the denominator and the numerator of the measure. The denominator inpatient stays were identified through the process listed below:

1. Identified any beneficiaries within the SMI beneficiary roster who were deceased or received hospice services within the given CY. Beneficiaries with hospice services were identified as those with claims with a service begin date (date_begin_service_header) during the CY and:
    a. A revenue code (revenue_code) within the HEDIS VSD Hospice Encounter value set, or
    b. A claim header procedure code (proc_code) within the HEDIS VSD Hospice Encounter value set, or
    c. A claim header procedure code (proc_code) within the HEDIS VSD Hospice Intervention value set.
2. Extracted all inpatient claims with a discharge/service end date (date_end_service_header) within the given CY among SMI beneficiary roster beneficiaries who did not receive any hospice services or deceased within the given CY. Inpatient claims were identified as those with a revenue code (revenue_code) within the HEDIS VSD Inpatient Stay value set.
3. Excluded any inpatient claims corresponding to nonacute inpatient stays – i.e., excluded any claims with a revenue code (revenue_code) or bill type (bill_type) within the HEDIS VSD Nonacute Inpatient Stay value set.
4. Kept acute inpatient claims with a principal diagnosis of MH and excluded any inpatient claims with a principal diagnosis of pregnancy or perinatal conditions. Acute inpatient claims with a principal diagnosis of MH were then concatenated into inpatient stays when the service begin date (date_begin_service_header) was on the same day or one day after the service end date (date_end_service_header) of a previous inpatient claim. When there

were any overlapping days between two acute inpatient claims, the inpatient claims were concatenated into one inpatient stay.

5. Checked if the acute inpatient stay had readmissions or direct transfers within the 30-day follow-up period.
    a. Identified and concatenated any inpatient claims with other principal diagnoses that were not related to MH for beneficiaries who were identified in the last step (Step 4) having an acute inpatient stay for MH principal diagnosis.
    b. Identified and concatenated any nonacute inpatient claims with a revenue code (revenue_code) or bill type (bill_type) within the HEDIS VSD Nonacute Inpatient Stay value set for beneficiaries who were identified in the last step (Step 4) having an acute inpatient stay for MH principal diagnosis.
    c. Combined all inpatient stays for beneficiaries who were identified in the last step (Step 4) having an acute inpatient stay for MH principal diagnosis, including
        i. Acute inpatient stays with principal diagnoses of MH identified in Step 4,
        ii. Acute inpatient stays with any other principal diagnosis identified in Step 5a, and
        iii. Nonacute inpatient stays identified in Step 5b.
    d. If the readmission or direct transfer to the acute inpatient care setting was for a principal diagnosis of MH, the latest discharge was counted.
    e. If the readmission or direct transfer to the acute inpatient care setting was for any other principal diagnosis or to nonacute setting, both the original discharge and the readmission/direct transfer were excluded.
6. Removed any stays with a discharge date (date_end_service_header) before January 1 or after December 1 of the given CY.
7. Kept only the stays with both the months of discharge dates and the months of 30 days after discharge dates in which the beneficiary was enrolled.

The numerator was defined as follow-up visits with mental health providers within the specified time-periods, seven or 30 days after the discharge dates of eligible acute inpatient stays.

1. Mental health providers were identified as providers with billing provider specialty and rendering provider specialty in either claims header or detail files with the specialty codes in the list ('011', '090', '091', '092', '093', '095', '100', '11', '110', '111', '112', '113', '114', '115', '117', '339', '599', '611', '612', '613', '615', '615', '616', '617', '618', '619', '620', '621', '835', '836', '90', '91', '92', '93', '95', 'B05', 'C02', 'C12', 'C18', 'D08', 'F28', 'M07', 'M08', 'M09', 'M11', 'M12', 'M14', 'M16', 'O13', 'O27', 'O41', 'O60', 'O71').
2. Follow-up visits eligible for inclusion in the numerator included:
    a. An outpatient visit (Visit Setting Unspecified value set with Outpatient POS value set) with a mental health provider.
    b. An outpatient visit (Behavioral Health Outpatient value set) with a mental health provider

c. An intensive outpatient encounter or partial hospitalization (Visit Setting Unspecified value set) with (Partial Hospitalization POS value set)

d. An intensive outpatient encounter or partial hospitalization (Partial Hospitalization or Intensive Outpatient value set) with a mental health provider

e. A community mental health center visit (Visit Setting Unspecified value set; Behavioral Health Outpatient value set; Observation Values Set; Transitional Care Management Services value set) with (Community Mental Health Center POS value set)

f. Electroconvulsive therapy (Electroconvulsive Therapy value set) with (Ambulatory Surgical Center POS value set; Community Mental Health Center POS value set; Outpatient POS value set; Partial Hospitalization POS value set)

g. A telehealth visit (Visit Setting Unspecified value set with Telehealth POS value set) with a mental health provider

h. An observation visit (Observation value set) with a mental health provider

i. Transitional care management services (Transitional Care Management Services value set) with a mental health provider

j. A visit in a behavioral healthcare setting (Behavioral Healthcare Setting value set)

k. A telephone visit (Telephone Visits value set) with a mental health provider.

Attachment E: Additional Quantitative Findings

A. Population Summary

Exhibits in this section provide additional detail for findings in **Section V.B** (**Population Summary**).

Exhibit E.1 provides the count of all beneficiaries with Medicaid coverage eligible for SMI waiver services, counts of beneficiaries included on the SMI beneficiary roster, as well as the count of new beneficiaries added to the roster each year. In addition, the exhibit displays the proportion of beneficiaries on the SMI roster who received any health care utilization (i.e., had any non-dental and non-pharmacy claims) and those with any MH-related utilization in each year. Although the proportion of beneficiaries with at least one utilization claim remained high (i.e., higher than 90%) in each year of the study period, the proportion of beneficiaries with MH-related utilization decreased considerably over the study period.

Exhibit E.1: Waiver-Eligible Medicaid Beneficiaries, Overall and Within the SMI Roster by Year (2018 – 2023)

Year	Medicaid beneficiaries Eligible for SMI Waiver (Age 21-64), Overall	SMI Beneficiary Roster		New Beneficiaries Included in SMI Roster		Roster Beneficiaries with Health Care Utilization in Year[b]		Roster Beneficiaries with MH Related Health Care Utilization[c]	
		N	% of Elig. Medicaid Pop.	N	% of SMI Beneficiary Roster	N	% of SMI Beneficiary Roster	N	% of SMI Beneficiary Roster
All Years	1,464,785	305,344	20.8%	-	-	-	-	-	-
2018[a]	735,240	90,833	12.4%	90,833	100.0%	90,833	100.0%	90,833	100.0%
2019[a]	715,439	124,131	17.4%	43,029	34.7%	120,785	97.3%	108,751	87.6%
2020	796,534	153,217	19.2%	40,767	26.6%	146,950	95.9%	124,084	81.0%
2021	921,348	191,728	20.8%	44,146	23.0%	182,718	95.3%	148,162	77.3%
2022	1,026,666	227,466	22.2%	42,956	18.9%	212,531	93.4%	164,558	72.3%
2023	1,131,978	263,327	23.3%	43,613	16.6%	240,110	91.2%	180,148	68.4%

[a] Pre-demonstration period.

[b] Count of roster beneficiaries who had at least one paid claim (excluding pharmacy and dental) in the year.

[c] Count of roster beneficiaries who had at least one paid claim (excluding pharmacy and dental) related to MH in the year. MH-related claims were identified as those with a MH-related primary or secondary diagnosis using a combination of value sets, including the HEDIS VSD's MH Diagnosis and Intentional Self-Harm value sets, as well as the CCSR Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis category.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.2 summarizes the sociodemographic and clinical history characteristics of all Medicaid beneficiaries (i.e., all beneficiaries enrolled in SMI waiver-eligible Medicaid coverage) by year.

Exhibit E.2: Beneficiary Characteristics, Among All Medicaid Beneficiaries Enrolled in SMI Waiver-Eligible Medicaid Coverage (2018-2023)

Characteristics		Medicaid Recipients Eligible for SMI Waiver (Age 21-64), Overall					
		2018	2019	2020	2021	2022	2023
Total Recipients		**735,240**	**715,439**	**796,534**	**921,348**	**1,026,666**	**1,131,978**
Gender	Female	445,750 (60.6%)	433,746 (60.6%)	477,403 (59.9%)	545,002 (59.2%)	600,431 (58.5%)	652,215 (57.6%)
	Male	289,480 (39.4%)	281,689 (39.4%)	319,128 (40.1%)	376,339 (40.8%)	426,227 (41.5%)	479,759 (42.4%)
Age	21-30	224,875 (30.6%)	213,215 (29.8%)	237,901 (29.9%)	278,970 (30.3%)	314,562 (30.6%)	348,838 (30.8%)
	31-40	189,388 (25.8%)	185,467 (25.9%)	208,611 (26.2%)	244,909 (26.6%)	276,779 (27.0%)	308,488 (27.3%)
	41-50	138,266 (18.8%)	135,443 (18.9%)	151,836 (19.1%)	175,676 (19.1%)	195,586 (19.1%)	218,128 (19.3%)
	51-60	137,313 (18.7%)	134,145 (18.8%)	144,687 (18.2%)	160,432 (17.4%)	172,076 (16.8%)	183,082 (16.2%)
	61-64	45,398 (6.2%)	47,169 (6.6%)	53,499 (6.7%)	61,361 (6.7%)	67,663 (6.6%)	73,442 (6.5%)
Race	White/Caucasian	467,768 (63.6%)	445,948 (62.3%)	492,382 (61.8%)	566,770 (61.5%)	625,591 (60.9%)	680,177 (60.1%)
	Black	128,996 (17.5%)	124,820 (17.4%)	137,667 (17.3%)	161,776 (17.6%)	185,128 (18.0%)	211,176 (18.7%)
	Other	24,377 (3.3%)	22,079 (3.1%)	22,696 (2.8%)	26,560 (2.9%)	30,700 (3.0%)	34,846 (3.1%)
	Not Available	114,099 (15.5%)	122,592 (17.1%)	143,789 (18.1%)	166,242 (18.0%)	185,247 (18.0%)	205,779 (18.2%)
Ethnicity	Hispanic	35,696 (4.9%)	35,653 (5.0%)	42,936 (5.4%)	56,155 (6.1%)	67,416 (6.6%)	78,613 (6.9%)
	Non-Hispanic	649,916 (88.4%)	634,278 (88.7%)	684,201 (85.9%)	765,774 (83.1%)	832,913 (81.1%)	896,759 (79.2%)
Geographic Location	Metro	563,138 (76.6%)	547,035 (76.5%)	607,815 (76.3%)	706,087 (76.6%)	791,412 (77.1%)	878,582 (77.6%)
	Non-Metro	171,950 (23.4%)	168,277 (23.5%)	188,583 (23.7%)	215,121 (23.3%)	235,108 (22.9%)	253,234 (22.4%)
Dual Eligibility[a]	Dually Eligible	84,025 (11.4%)	82,816 (11.6%)	86,629 (10.9%)	94,777 (10.3%)	99,353 (9.7%)	102,321 (9.0%)
HIP/Non-HIP	HIP	524,934 (71.4%)	500,043 (69.9%)	575,857 (72.3%)	674,087 (73.2%)	754,721 (73.5%)	848,088 (74.9%)
SMI Diagnosis[b]	Bipolar Only	21,089 (2.9%)	25,209 (3.5%)	28,484 (3.6%)	32,797 (3.6%)	35,851 (3.5%)	38,058 (3.4%)
	MDD Only	45,255 (6.2%)	64,913 (9.1%)	82,052 (10.3%)	106,204 (11.5%)	129,623 (12.6%)	153,815 (13.6%)
	Schizophrenia Only	13,064 (1.8%)	13,071 (1.8%)	12,828 (1.6%)	12,830 (1.4%)	12,654 (1.2%)	12,481 (1.1%)
	Co-occurring SMI Dx	11,425 (1.6%)	20,938 (2.9%)	29,853 (3.7%)	39,897 (4.3%)	49,338 (4.8%)	58,973 (5.2%)

Characteristics		Medicaid Recipients Eligible for SMI Waiver (Age 21-64), Overall					
		2018	2019	2020	2021	2022	2023
Total Recipients		**735,240**	**715,439**	**796,534**	**921,348**	**1,026,666**	**1,131,978**
Chronic Conditions	Cancer	19,824 (2.7%)	20,102 (2.8%)	20,547 (2.6%)	23,219 (2.5%)	24,682 (2.4%)	26,017 (2.3%)
	Cardiovascular Disease	43,293 (5.9%)	43,661 (6.1%)	43,866 (5.5%)	49,958 (5.4%)	51,320 (5.0%)	52,346 (4.6%)
	COPD	61,118 (8.3%)	60,967 (8.5%)	60,694 (7.6%)	64,757 (7.0%)	65,211 (6.4%)	64,174 (5.7%)
	Diabetes	84,752 (11.5%)	85,300 (11.9%)	90,320 (11.3%)	103,132 (11.2%)	109,691 (10.7%)	115,805 (10.2%)
	Hypertension	183,602 (25.0%)	183,096 (25.6%)	194,653 (24.4%)	223,775 (24.3%)	234,559 (22.8%)	245,616 (21.7%)
	Infectious Disease	138,902 (18.9%)	142,283 (19.9%)	162,583 (20.4%)	218,300 (23.7%)	243,737 (23.7%)	210,383 (18.6%)
	Metabolic Disease	215,819 (29.4%)	217,744 (30.4%)	227,395 (28.5%)	278,308 (30.2%)	304,131 (29.6%)	330,868 (29.2%)
	Respiratory Disease	228,162 (31.0%)	230,008 (32.1%)	223,792 (28.1%)	262,161 (28.5%)	299,673 (29.2%)	307,691 (27.2%)
# of Chronic Conditions	0	326,856 (44.5%)	306,816 (42.9%)	364,330 (45.7%)	404,299 (43.9%)	463,087 (45.1%)	551,334 (48.7%)
	1	147,269 (20.0%)	145,253 (20.3%)	157,173 (19.7%)	184,430 (20.0%)	197,923 (19.3%)	206,967 (18.3%)
	2	106,223 (14.4%)	106,185 (14.8%)	113,336 (14.2%)	138,876 (15.1%)	154,341 (15.0%)	161,093 (14.2%)
	3	69,592 (9.5%)	70,458 (9.8%)	73,441 (9.2%)	90,074 (9.8%)	99,829 (9.7%)	103,463 (9.1%)
	4	42,918 (5.8%)	43,346 (6.1%)	44,895 (5.6%)	53,307 (5.8%)	58,514 (5.7%)	58,461 (5.2%)
	5	24,794 (3.4%)	25,369 (3.5%)	25,628 (3.2%)	30,356 (3.3%)	31,683 (3.1%)	30,760 (2.7%)
	6	12,298 (1.7%)	12,657 (1.8%)	12,621 (1.6%)	14,359 (1.6%)	15,177 (1.5%)	14,134 (1.2%)
	7	4,769 (0.6%)	4,847 (0.7%)	4,644 (0.6%)	5,132 (0.6%)	5,517 (0.5%)	5,218 (0.5%)
	8	521 (0.1%)	508 (0.1%)	466 (0.1%)	515 (0.1%)	595 (0.1%)	548 (0.0%)

[a] Dually eligible in at least one month in the given year.

[b] SMI diagnoses were flagged cumulatively over time. For example, if a roster beneficiary had a claim with a (primary or secondary) diagnosis of MDD in 2018, followed by a claim with a diagnosis of bipolar disorder in 2020, they would be flagged as "MDD" in 2018-2019 and "Co-occurring SMI Dx" in 2020-2023.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.3 summarizes the sociodemographic and clinical history characteristics of all Medicaid beneficiaries (i.e., all beneficiaries enrolled in SMI waiver-eligible Medicaid coverage) by year.

Exhibit E.3: Beneficiary Characteristics, Among Beneficiaries Included on the SMI Beneficiary Roster (2018-2023)

Characteristics		Medicaid Recipients Eligible for SMI Waiver (Age 21-64), with SMI Diagnosis (SMI Roster)					
		2018	2019	2020	2021	2022	2023
Total Recipients		90,833	124,131	153,217	191,728	227,466	263,327
Gender	Female	57,189 (63.0%)	79,046 (63.7%)	98,243 (64.1%)	123,572 (64.5%)	147,066 (64.7%)	170,101 (64.6%)
	Male	33,644 (37.0%)	45,083 (36.3%)	54,973 (35.9%)	68,156 (35.5%)	80,398 (35.3%)	93,224 (35.4%)
Age	21-30	19,797 (21.8%)	28,943 (23.3%)	37,833 (24.7%)	50,208 (26.2%)	61,370 (27.0%)	72,124 (27.4%)
	31-40	22,184 (24.4%)	31,657 (25.5%)	40,218 (26.2%)	51,729 (27.0%)	62,902 (27.7%)	74,198 (28.2%)
	41-50	20,748 (22.8%)	27,499 (22.2%)	33,129 (21.6%)	40,318 (21.0%)	47,219 (20.8%)	54,499 (20.7%)
	51-60	21,789 (24.0%)	27,719 (22.3%)	31,927 (20.8%)	37,237 (19.4%)	41,782 (18.4%)	46,249 (17.6%)
	61-64	6,315 (7.0%)	8,313 (6.7%)	10,110 (6.6%)	12,236 (6.4%)	14,193 (6.2%)	16,257 (6.2%)
Race	White/Caucasian	58,748 (64.7%)	79,160 (63.8%)	97,373 (63.6%)	123,407 (64.4%)	147,857 (65.0%)	172,432 (65.5%)
	Black	9,727 (10.7%)	13,188 (10.6%)	15,822 (10.3%)	19,972 (10.4%)	24,067 (10.6%)	28,436 (10.8%)
	Other	870 (1.0%)	1,058 (0.9%)	1,097 (0.7%)	1,420 (0.7%)	1,817 (0.8%)	2,221 (0.8%)
	Not Available	21,488 (23.7%)	30,725 (24.8%)	38,925 (25.4%)	46,929 (24.5%)	53,725 (23.6%)	60,238 (22.9%)
Ethnicity	Hispanic	2,382 (2.6%)	3,411 (2.7%)	4,501 (2.9%)	6,091 (3.2%)	7,985 (3.5%)	10,069 (3.8%)
	Non-Hispanic	84,479 (93.0%)	115,232 (92.8%)	140,830 (91.9%)	173,073 (90.3%)	202,087 (88.8%)	230,344 (87.5%)
Geographic Location	Metro	67,315 (74.1%)	91,915 (74.0%)	112,846 (73.7%)	141,333 (73.7%)	168,186 (73.9%)	195,379 (74.2%)
	Non-Metro	23,500 (25.9%)	32,197 (25.9%)	40,347 (26.3%)	50,375 (26.3%)	59,263 (26.1%)	67,931 (25.8%)
Dual Eligibility[a]	Dually Eligible	24,699 (27.2%)	29,062 (23.4%)	32,479 (21.2%)	37,505 (19.6%)	41,003 (18.0%)	43,556 (16.5%)
HIP/Non-HIP	HIP	47,932 (52.8%)	71,207 (57.4%)	92,594 (60.4%)	120,356 (62.8%)	148,189 (65.1%)	178,798 (67.9%)
SMI Diagnosis[b]	Bipolar Only	21,089 (23.2%)	25,209 (20.3%)	28,484 (18.6%)	32,797 (17.1%)	35,851 (15.8%)	38,058 (14.5%)
	MDD Only	45,255 (49.8%)	64,913 (52.3%)	82,052 (53.6%)	106,204 (55.4%)	129,623 (57.0%)	153,815 (58.4%)
	Schizophrenia Only	13,064 (14.4%)	13,071 (10.5%)	12,828 (8.4%)	12,830 (6.7%)	12,654 (5.6%)	12,481 (4.7%)
	Co-occurring SMI Dx	11,425 (12.6%)	20,938 (16.9%)	29,853 (19.5%)	39,897 (20.8%)	49,338 (21.7%)	58,973 (22.4%)

Characteristics		Medicaid Recipients Eligible for SMI Waiver (Age 21-64), with SMI Diagnosis (SMI Roster)					
		2018	2019	2020	2021	2022	2023
Total Recipients		90,833	124,131	153,217	191,728	227,466	263,327
Chronic Conditions	Cancer	3,362 (3.7%)	4,345 (3.5%)	4,840 (3.2%)	5,787 (3.0%)	6,529 (2.9%)	7,341 (2.8%)
	Cardiovascular Disease	9,687 (10.7%)	12,004 (9.7%)	13,005 (8.5%)	15,585 (8.1%)	16,857 (7.4%)	18,230 (6.9%)
	COPD	15,831 (17.4%)	19,866 (16.0%)	21,789 (14.2%)	24,572 (12.8%)	25,975 (11.4%)	27,146 (10.3%)
	Diabetes	18,599 (20.5%)	23,381 (18.8%)	26,752 (17.5%)	31,658 (16.5%)	35,665 (15.7%)	39,405 (15.0%)
	Hypertension	37,924 (41.8%)	47,725 (38.4%)	55,808 (36.4%)	66,963 (34.9%)	73,891 (32.5%)	81,844 (31.1%)
	Infectious Disease	29,335 (32.3%)	38,851 (31.3%)	48,459 (31.6%)	65,782 (34.3%)	80,197 (35.3%)	75,298 (28.6%)
	Metabolic Disease	45,796 (50.4%)	58,157 (46.9%)	66,722 (43.5%)	84,609 (44.1%)	97,983 (43.1%)	112,158 (42.6%)
	Respiratory Disease	44,610 (49.1%)	58,594 (47.2%)	65,790 (42.9%)	80,683 (42.1%)	97,170 (42.7%)	107,018 (40.6%)
# of Chronic Conditions	0	18,134 (20.0%)	28,782 (23.2%)	39,761 (26.0%)	49,533 (25.8%)	61,966 (27.2%)	80,505 (30.6%)
	1	18,534 (20.4%)	25,493 (20.5%)	32,558 (21.2%)	40,713 (21.2%)	46,909 (20.6%)	54,538 (20.7%)
	2	17,733 (19.5%)	23,916 (19.3%)	29,160 (19.0%)	37,093 (19.3%)	44,205 (19.4%)	49,330 (18.7%)
	3	14,103 (15.5%)	18,210 (14.7%)	20,927 (13.7%)	27,267 (14.2%)	32,367 (14.2%)	35,131 (13.3%)
	4	10,181 (11.2%)	12,726 (10.3%)	14,270 (9.3%)	17,728 (9.2%)	20,570 (9.0%)	21,755 (8.3%)
	5	6,699 (7.4%)	8,271 (6.7%)	9,298 (6.1%)	11,095 (5.8%)	12,183 (5.4%)	12,726 (4.8%)
	6	3,704 (4.1%)	4,624 (3.7%)	4,973 (3.2%)	5,771 (3.0%)	6,475 (2.8%)	6,461 (2.5%)
	7	1,568 (1.7%)	1,907 (1.5%)	2,062 (1.3%)	2,298 (1.2%)	2,526 (1.1%)	2,615 (1.0%)
	8	177 (0.2%)	202 (0.2%)	208 (0.1%)	230 (0.1%)	265 (0.1%)	266 (0.1%)

[a] Dually eligible in at least one month in the given year.

[b] SMI diagnoses were flagged cumulatively over time. For example, if a roster beneficiary had a claim with a (primary or secondary) diagnosis of MDD in 2018, followed by a claim with a diagnosis of bipolar disorder in 2020, they would be flagged as "MDD" in 2018-2019 and "Co-occurring SMI Dx" in 2020-2023.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023

B. Interrupted Time Series Logistic Regression Analysis

Interrupted time series (ITS) logistic regression analysis was conducted to assess any waiver intervention effect with other beneficiary and encounter characteristics controlled for. Specifically, as the formula shows below, a binary outcome variable was modeled as a function of the waiver intervention, time, and other social demographic characteristics.

$$Y_t = \beta_0 + \beta_1 t + \beta_2 x_t + \beta_3 t x_t + \beta_4 Z_t$$

where Y is the binary outcome, for example, for Goal 1, whether an SMI beneficiary had an ED visit, and for Goal 2, whether an inpatient discharge had unplanned readmission within 30 days after the discharge. t is the various time point during the study period of 2018-2023, that is, year one to year six. x is a binary indicator for the pre-waiver intervention period (x=0 for years of 2018 and 2019) or the post-waiver intervention period (x=1 for years of 2020-2023). Z is a list of social demographic variables such as gender, age group, race and geographic location, etc.

The waiver intervention effect was estimated through β_2 and β_3. The OR was generated to show any significant difference in the likelihood of an outcome after the waiver intervention to the existing trend in the pre-waiver period.

C. Goal 1

1. All-Cause ED Visits – Regression Estimates

Exhibits in this section list the estimated odds (or incidence rates) for the various factors included in the regressions for all-cause ED visit participation and utilization rates.

Exhibit E.4 provides estimates from an ITS logistic regression model of all-cause ED visits excluding data from CY 2020.

Exhibit E.4: Logistic ITS Regression Model of All-Cause ED Participation Rate (2018 – 2023, Excluding 2020)

Variable	Level	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	1.02	(0.98, 1.06)	0.259
Time	Pre-Intervention	1.05	(1.02, 1.08)	< 0.001
	Post-Intervention	0.97	(0.96, 0.97)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.05	(1.02, 1.08)	< 0.001
	Post-Int. * 2021	0.92	(0.90, 0.94)	< 0.001
	Post-Int. * 2022	0.89	(0.87, 0.91)	< 0.001
	Post-Int. * 2023	0.85	(0.84, 0.87)	< 0.001
Gender (Ref: Female)	Male	0.95	(0.94, 0.96)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.87	(0.85, 0.88)	< 0.001
	Age 41-50	0.70	(0.69, 0.71)	< 0.001
	Age 51-60	0.48	(0.47, 0.49)	< 0.001
	Age 61-64	0.37	(0.36, 0.38)	< 0.001

Variable	Level	OR	95% CI	p-Value
Race (Ref: White/Caucasian)	Black	1.34	(1.31, 1.36)	< 0.001
	Other/Not Available	1.27	(1.25, 1.28)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.84	(0.82, 0.87)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.05	(1.04, 1.07)	< 0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.87	(0.86, 0.88)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.13	(1.11, 1.14)	< 0.001
	Schizophrenia only	0.92	(0.90, 0.94)	< 0.001
	Co-occurring SMI	1.66	(1.64, 1.68)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.19	(1.15, 1.22)	< 0.001
	Cardiovascular Disease	1.87	(1.83, 1.92)	< 0.001
	COPD	1.64	(1.61, 1.67)	< 0.001
	Diabetes	1.09	(1.07, 1.10)	< 0.001
	Hypertension	1.82	(1.79, 1.84)	< 0.001
	Infectious Disease	2.18	(2.16, 2.21)	< 0.001
	Metabolic Disease	1.11	(1.10, 1.13)	< 0.001
	Respiratory Disease	2.06	(2.04, 2.08)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.5 provides estimates from an ITS negative binomial regression model of all-cause ED visits excluding data from CY 2020.

Exhibit E.5: Negative Binomial ITS Regression Model of All-Cause ED Utilization Rate (2018 – 2023, Excluding 2020)

Variable	Level	IRR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.96	(0.94, 0.98)	< 0.001
Time	Pre-Intervention	1.02	(1.00, 1.04)	0.031
	Post-Intervention	0.97	(0.97, 0.98)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.02	(1.00, 1.04)	0.031
	Post-Int. * 2021	0.89	(0.87, 0.90)	< 0.001
	Post-Int. * 2022	0.86	(0.85, 0.88)	< 0.001
	Post-Int. * 2023	0.84	(0.83, 0.85)	< 0.001
Gender (Ref: Female)	Male	1.10	(1.10, 1.11)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.88	(0.87, 0.88)	< 0.001
	Age 41-50	0.72	(0.71, 0.72)	< 0.001
	Age 51-60	0.53	(0.52, 0.54)	< 0.001
	Age 61-64	0.43	(0.43, 0.44)	< 0.001
Race (Ref: White/Caucasian)	Black	1.28	(1.27, 1.30)	< 0.001
	Other/Not Available	1.27	(1.26, 1.28)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.81	(0.80, 0.83)	< 0.001

Variable	Level	IRR	95% CI	p-Value
Geographic Location (Ref: Metro)	Non-metro	1.00	(0.99, 1.01)	0.640
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.91	(0.90, 0.92)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.07	(1.06, 1.08)	< 0.001
	Schizophrenia only	1.03	(1.02, 1.05)	< 0.001
	Co-occurring SMI	1.64	(1.63, 1.65)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.13	(1.10, 1.15)	< 0.001
	Cardiovascular Disease	1.54	(1.52, 1.56)	< 0.001
	COPD	1.37	(1.36, 1.39)	< 0.001
	Diabetes	1.07	(1.06, 1.08)	< 0.001
	Hypertension	1.61	(1.59, 1.62)	< 0.001
	Infectious Disease	1.87	(1.86, 1.88)	< 0.001
	Metabolic Disease	1.17	(1.16, 1.18)	< 0.001
	Respiratory Disease	1.80	(1.79, 1.81)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

2. *All-Cause ED Visits – By Sociodemographic Characteristics*

Exhibit E.6 provides all-cause ED participation rates from 2018 through 2023 by sociodemographic characteristic.

Exhibit E.6: All-Cause ED Participation Rate by Year and Demographic Characteristics (2018 – 2023) – Analytic Population

Beneficiary Characteristics		(All-Cause) ED Participation Rate					
		2018	2019	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
All SMI Beneficiaries		56.6%	58.0%	53.2%	53.7%	51.6%	50.9%
Gender	Female	59.6%	60.3%	54.2%	55.2%	53.3%	52.8%
	Male	51.9%	54.0%	51.3%	51.0%	48.4%	47.3%
Age	Age 21-30	58.3%	60.1%	55.3%	55.2%	52.2%	51.0%
	Age 31-40	57.6%	59.3%	54.3%	54.5%	51.5%	50.9%
	Age 41-50	58.5%	59.0%	53.7%	54.4%	52.6%	51.2%
	Age 51-60	54.2%	55.7%	50.6%	51.5%	50.6%	51.2%
	Age 61-64	53.4%	54.0%	49.4%	49.5%	48.7%	49.4%
Race	White/ Caucasian	54.3%	55.1%	50.4%	51.4%	49.0%	48.5%
	Black	56.2%	60.7%	54.8%	56.0%	54.8%	53.5%
	Other	48.3%	47.3%	41.9%	43.3%	41.8%	38.4%
	Not Available	62.8%	63.8%	59.1%	58.9%	57.3%	56.6%
Ethnicity	Hispanic	53.7%	55.4%	49.9%	50.7%	47.5%	46.8%
	Non-Hispanic	56.7%	58.1%	53.2%	53.8%	51.9%	51.4%
	Unknown	58.8%	59.5%	55.4%	54.4%	49.6%	47.7%
Geographic Location	Metro	56.4%	57.8%	53.0%	53.2%	51.2%	50.5%
	Non-Metro	57.3%	58.6%	53.6%	55.3%	52.7%	52.1%
Dual Eligibility	Dually Eligible	54.6%	56.2%	51.0%	51.7%	51.1%	50.7%
	Not Dually Eligible	57.8%	58.8%	53.9%	54.3%	51.7%	51.0%
HIP/Non-HIP	HIP	57.4%	58.0%	53.2%	53.2%	50.4%	49.9%
	Non-HIP	56.1%	58.0%	53.2%	54.5%	53.6%	53.0%

Beneficiary Characteristics		(All-Cause) ED Participation Rate					
		2018	2019	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
SMI Diagnosis	Bipolar only	57.2%	58.3%	52.2%	52.8%	50.6%	48.9%
	MDD only	55.8%	55.8%	50.2%	50.4%	48.4%	47.8%
	Schizophrenia only	44.9%	45.8%	42.8%	44.0%	42.1%	41.4%
	Co-Occurring Diagnoses	73.5%	70.6%	64.9%	64.9%	61.7%	61.1%
Chronic Conditions	Cancer	65.5%	66.7%	62.6%	61.8%	61.6%	63.6%
	No Cancer	56.3%	57.7%	52.8%	53.5%	51.3%	50.6%
	Cardiovascular Disease	75.4%	76.6%	74.2%	74.9%	75.1%	74.8%
	No Cardiovascular Disease	54.0%	55.6%	51.0%	51.8%	49.7%	49.1%
	COPD	72.0%	73.0%	68.7%	69.7%	69.5%	70.0%
	No COPD	52.6%	54.5%	50.2%	51.2%	49.2%	48.5%
	Diabetes	65.1%	66.5%	62.8%	64.6%	63.6%	64.4%
	No Diabetes	53.8%	55.6%	50.8%	51.5%	49.3%	48.4%
	Hypertension	65.1%	66.9%	63.9%	65.5%	64.5%	64.9%
	No Hypertension	49.1%	51.0%	46.2%	47.1%	45.2%	44.1%
	Infectious Disease	70.0%	72.1%	69.9%	71.4%	69.8%	69.9%
	No Infectious Disease	49.6%	50.7%	44.9%	44.2%	41.5%	42.7%
	Metabolic Disease	61.2%	63.2%	59.9%	61.2%	60.1%	60.3%
	No Metabolic Disease	50.4%	51.9%	47.2%	47.5%	44.9%	43.3%
	Respiratory Disease	68.5%	69.8%	67.4%	69.0%	66.6%	66.3%
	No Respiratory Disease	43.5%	45.2%	41.2%	42.2%	40.1%	39.5%
Number of Chronic Conditions	0	34.1%	34.5%	30.4%	30.0%	27.9%	27.6%
	1	47.7%	51.7%	49.4%	51.3%	50.0%	49.9%
	2	54.7%	58.0%	55.9%	58.2%	57.0%	56.5%
	3	59.4%	61.9%	59.7%	62.4%	61.5%	61.9%
	4+	73.3%	74.9%	72.8%	74.2%	73.3%	73.7%

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.7 provides all-cause ED utilization rates from 2018 through 2023 by sociodemographic characteristic.

Exhibit E.7: All-Cause ED Utilization Rate by Year and Demographic Characteristics (2018 – 2023)

Beneficiary Characteristics		(All-Cause) ED Utilization Rate					
		2018	2019	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
All SMI Beneficiaries (with 10+ months enrollment after First SMI Dx Date)		2,096	2,087	1,767	1,734	1,589	1,588
Gender	Female	2,182	2,107	1,730	1,712	1,586	1,593
	Male	1,959	2,053	1,834	1,775	1,595	1,579
Age	Age 21-30	2,334	2,274	1,871	1,762	1,576	1,553
	Age 31-40	2,298	2,191	1,844	1,778	1,579	1,568
	Age 41-50	2,124	2,171	1,785	1,784	1,654	1,648
	Age 51-60	1,864	1,889	1,648	1,660	1,584	1,627
	Age 61-64	1,814	1,744	1,498	1,517	1,487	1,514
Race	White/ Caucasian	1,874	1,832	1,542	1,521	1,379	1,378
	Black	2,205	2,302	1,882	1,880	1,744	1,720
	Other	1,397	1,573	1,289	1,172	1,176	1,045
	Not Available	2,615	2,587	2,239	2,221	2,096	2,105
Ethnicity	Hispanic	1,696	1,811	1,404	1,356	1,231	1,253
	Non-Hispanic	2,107	2,098	1,776	1,752	1,612	1,621
	Unknown	2,063	1,973	1,808	1,648	1,467	1,358
Geographic Location	Metro	2,112	2,092	1,787	1,738	1,595	1,594
	Non-Metro	2,053	2,074	1,709	1,722	1,572	1,571
Dual Eligibility	Dually Eligible	1,949	1,967	1,723	1,704	1,606	1,616
	Not Dually Eligible	2,184	2,140	1,781	1,742	1,585	1,582
HIP/ Non-HIP	HIP	2,007	1,969	1,648	1,600	1,449	1,453
	Non-HIP	2,152	2,195	1,914	1,936	1,836	1,839
SMI Diagnosis	Bipolar only	1,942	1,872	1,506	1,483	1,387	1,351
	MDD only	1,845	1,811	1,465	1,436	1,314	1,304
	Schizophrenia only	1,419	1,403	1,320	1,344	1,242	1,251
	Co-Occurring Diagnoses	3,861	3,359	2,831	2,697	2,435	2,426

Beneficiary Characteristics		(All-Cause) ED Utilization Rate					
		2018	2019	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
Chronic Conditions	Cancer	2,762	2,852	2,441	2,352	2,246	2,336
	No Cancer	2,068	2,055	1,743	1,714	1,570	1,566
	Cardiovascular Disease	3,823	3,841	3,546	3,593	3,478	3,549
	No Cardiovascular Disease	1,853	1,861	1,584	1,565	1,438	1,434
	COPD	3,298	3,283	2,857	2,919	2,838	2,920
	No COPD	1,780	1,802	1,559	1,547	1,421	1,419
	Diabetes	2,867	2,896	2,566	2,585	2,495	2,590
	No Diabetes	1,833	1,850	1,572	1,555	1,415	1,396
	Hypertension	2,750	2,797	2,535	2,577	2,432	2,498
	No Hypertension	1,507	1,525	1,265	1,256	1,173	1,143
	Infectious Disease	3,223	3,266	2,929	2,878	2,676	2,822
	No Infectious Disease	1,497	1,468	1,190	1,119	986	1,051
	Metabolic Disease	2,480	2,529	2,286	2,271	2,153	2,171
	No Metabolic Disease	1,568	1,566	1,299	1,285	1,150	1,111
	Respiratory Disease	2,946	2,919	2,650	2,647	2,442	2,468
	No Respiratory Disease	1,156	1,186	1,022	1,044	941	930
Number of Chronic Conditions	0	752	734	598	580	513	514
	1	1,287	1,361	1,220	1,234	1,162	1,168
	2	1,733	1,823	1,682	1,740	1,619	1,628
	3	2,087	2,214	2,066	2,120	2,015	2,034
	4+	3,509	3,552	3,296	3,350	3,202	3,320

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

3. All-Cause ED Visits – Sensitivity Analyses

Exhibit E.8 provides estimates from an ITS logistic regression model of all-cause ED visits including interactions between the intervention period and age, dual eligibility, and SMI diagnosis. OR estimates were similar to those in the primary ED visit ITS logistic regression model.

Exhibit E.8: Logistic ITS Regression Model of All-Cause ED Participation Rate (2018 – 2023, Excluding 2020, Including Intervention Period Interactions with Age, Dual Eligibility, and SMI Diagnosis)

Variable	Level	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	1.01	(0.97, 1.05)	0.557
Time	Pre-Intervention	1.03	(1.01, 1.06)	0.013
	Post-Intervention	0.97	(0.96, 0.97)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.03	(1.01, 1.06)	0.013
	Post-Int. * 2021	0.91	(0.89, 0.93)	< 0.001
	Post-Int. * 2022	0.88	(0.86, 0.90)	< 0.001
	Post-Int. * 2023	0.85	(0.83, 0.87)	< 0.001
Int. Period * Age Group (Ref: Pre-Int. * Age Group)	Post-Int. * Age 21-30	0.94	(0.90, 0.99)	0.011
	Post-Int. * Age 31-40	0.97	(0.92, 1.01)	0.127
	Post-Int. * Age 41-50	1.03	(0.98, 1.08)	0.21
	Post-Int. * Age 51-60	1.08	(1.03, 1.13)	< 0.001
	Post-Int. * Age 61-64	1.05	(0.99, 1.11)	0.128
Int. Period * Dual Eligibility (Ref: Pre-Int. * Dual Eligibility)	Post-Int. * Dually Eligible	0.99	(0.95, 1.03)	0.575
	Post-Int. * Non-dually Eligible	1.04	(1.00, 1.08)	0.086
Int. Period * SMI Diagnosis (Ref: Pre-Int. * SMI Diagnosis)	Post-Int. * Bipolar Only	1.00	(0.96, 1.05)	0.847
	Post-Int. * MDD Only	1.00	(0.96, 1.05)	0.821
	Post-Int. * Schizophrenia Only	1.17	(1.11, 1.23)	< 0.001
	Post-Int. * Co-occurring SMI	0.89	(0.85, 0.93)	< 0.001
Gender (Ref: Female)	Male	0.95	(0.94, 0.96)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.86	(0.84, 0.87)	< 0.001
	Age 41-50	0.68	(0.66, 0.69)	< 0.001
	Age 51-60	0.46	(0.45, 0.47)	< 0.001
	Age 61-64	0.36	(0.35, 0.37)	< 0.001
Race (Ref: White/Caucasian)	Black	1.34	(1.31, 1.36)	< 0.001
	Other/Not Available	1.27	(1.25, 1.28)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.84	(0.82, 0.87)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.05	(1.04, 1.07)	< 0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.88	(0.87, 0.90)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.13	(1.11, 1.15)	< 0.001
	Schizophrenia only	0.91	(0.89, 0.93)	< 0.001
	Co-occurring SMI	1.74	(1.71, 1.77)	< 0.001

Variable	Level	OR	95% CI	p-Value
Chronic Conditions (Ref: No)	Cancer	1.19	(1.15, 1.23)	< 0.001
	Cardiovascular Disease	1.88	(1.83, 1.92)	< 0.001
	COPD	1.64	(1.61, 1.67)	< 0.001
	Diabetes	1.09	(1.07, 1.10)	< 0.001
	Hypertension	1.82	(1.79, 1.84)	< 0.001
	Infectious Disease	2.19	(2.16, 2.21)	< 0.001
	Metabolic Disease	1.11	(1.10, 1.13)	< 0.001
	Respiratory Disease	2.06	(2.04, 2.08)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.9 provides estimates from an ITS negative binomial regression model of all-cause ED visits including interactions between the intervention period and age, dual eligibility, and SMI diagnosis. IRR estimates were similar to those in the primary ED visit ITS negative binomial regression model, with the exception of the effect of SMI diagnosis. In this model, those with schizophrenia only have a lower incidence rate of ED visits compared to those with MDD only (no effect was observed in the primary model).

Exhibit E.9: Negative Binomial ITS Regression Model of All-Cause ED Utilization Rate (2018 – 2023, Excluding 2020, Including Intervention Period Interactions with Age, Dual Eligibility, and SMI Diagnosis)

Variable	Level	IRR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.97	(0.95, 0.99)	0.018
Time	Pre-Intervention	1.01	(0.99, 1.03)	0.353
	Post-Intervention	0.97	(0.97, 0.98)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.01	(0.99, 1.03)	0.353
	Post-Int. * 2021	0.90	(0.88, 0.91)	< 0.001
	Post-Int. * 2022	0.88	(0.86, 0.89)	< 0.001
	Post-Int. * 2023	0.85	(0.84, 0.87)	< 0.001
Int. Period * Age Group (Ref: Pre-Int. * Age Group)	Post-Int. * Age 21-30	0.90	(0.87, 0.93)	< 0.001
	Post-Int. * Age 31-40	0.92	(0.89, 0.94)	< 0.001
	Post-Int. * Age 41-50	1.00	(0.97, 1.03)	0.92
	Post-Int. * Age 51-60	1.04	(1.01, 1.07)	0.01
	Post-Int. * Age 61-64	1.01	(0.97, 1.05)	0.664
Int. Period * Dual Eligibility (Ref: Pre-Int. * Dual Eligibility)	Post-Int. * Dually Eligible	0.96	(0.93, 0.98)	0.002
	Post-Int. * Non-dually Eligible	0.98	(0.96, 1.01)	0.21
Int. Period * SMI Diagnosis (Ref: Pre-Int. * SMI Diagnosis)	Post-Int. * Bipolar Only	0.96	(0.93, 0.99)	0.003
	Post-Int. * MDD Only	0.94	(0.91, 0.96)	< 0.001
	Post-Int. * Schizophrenia Only	1.09	(1.05, 1.13)	< 0.001
	Post-Int. * Co-occurring SMI	0.91	(0.88, 0.94)	< 0.001
Gender (Ref: Female)	Male	1.10	(1.09, 1.11)	< 0.001

Variable	Level	IRR	95% CI	p-Value
Age Group (Ref: Age 21-30)	Age 31-40	0.87	(0.86, 0.88)	< 0.001
	Age 41-50	0.69	(0.68, 0.70)	< 0.001
	Age 51-60	0.51	(0.50, 0.52)	< 0.001
	Age 61-64	0.42	(0.41, 0.43)	< 0.001
Race (Ref: White/Caucasian)	Black	1.28	(1.27, 1.30)	< 0.001
	Other/Not Available	1.26	(1.25, 1.28)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.82	(0.80, 0.83)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.00	(0.99, 1.01)	0.698
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.92	(0.91, 0.93)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.06	(1.05, 1.07)	< 0.001
	Schizophrenia only	1.01	(0.99, 1.03)	0.223
	Co-occurring SMI	1.66	(1.64, 1.68)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.13	(1.10, 1.15)	< 0.001
	Cardiovascular Disease	1.54	(1.52, 1.56)	< 0.001
	COPD	1.38	(1.36, 1.39)	< 0.001
	Diabetes	1.07	(1.06, 1.08)	< 0.001
	Hypertension	1.61	(1.59, 1.62)	< 0.001
	Infectious Disease	1.87	(1.86, 1.88)	< 0.001
	Metabolic Disease	1.17	(1.16, 1.18)	< 0.001
	Respiratory Disease	1.80	(1.79, 1.81)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.10 provides estimates from an ITS logistic regression model of all-cause ED visits including HIP status as a covariate. OR estimates were similar to those in the primary ED visit ITS logistic regression model. The effect of HIP status was not significant.

Exhibit E.10: Logistic ITS Regression Model of All-Cause ED Participation Rate (2018 – 2023, Excluding 2020, Including HIP Status as a Covariate)

Variable	Level	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	1.02	(0.98, 1.06)	0.278
Time	Pre-Intervention	1.05	(1.02, 1.07)	< 0.001
	Post-Intervention	0.96	(0.96, 0.97)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.05	(1.02, 1.07)	< 0.001
	Post-Int. * 2021	0.92	(0.90, 0.94)	< 0.001
	Post-Int. * 2022	0.88	(0.87, 0.90)	< 0.001
	Post-Int. * 2023	0.85	(0.83, 0.87)	< 0.001
Gender (Ref: Female)	Male	0.95	(0.94, 0.96)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.86	(0.85, 0.88)	< 0.001
	Age 41-50	0.70	(0.69, 0.71)	< 0.001
	Age 51-60	0.48	(0.47, 0.49)	< 0.001
	Age 61-64	0.37	(0.36, 0.38)	< 0.001

Variable	Level	OR	95% CI	p-Value
Race (Ref: White/Caucasian)	Black	1.34	(1.31, 1.36)	< 0.001
	Other/Not Available	1.27	(1.25, 1.29)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.84	(0.82, 0.87)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.05	(1.04, 1.07)	< 0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.88	(0.87, 0.89)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.13	(1.11, 1.15)	< 0.001
	Schizophrenia only	0.93	(0.91, 0.95)	< 0.001
	Co-occurring SMI	1.66	(1.64, 1.69)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.19	(1.15, 1.23)	< 0.001
	Cardiovascular Disease	1.88	(1.83, 1.92)	< 0.001
	COPD	1.64	(1.61, 1.67)	< 0.001
	Diabetes	1.09	(1.07, 1.10)	< 0.001
	Hypertension	1.82	(1.79, 1.84)	< 0.001
	Infectious Disease	2.19	(2.16, 2.21)	< 0.001
	Metabolic Disease	1.11	(1.10, 1.13)	< 0.001
	Respiratory Disease	2.06	(2.04, 2.08)	< 0.001
HIP Status (Ref: Non-HIP)	HIP	1.02	(1.00, 1.03)	0.027

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.11 provides estimates from an ITS negative binomial regression model of all-cause ED visits including HIP status as a covariate. IRR estimates were similar to those in the primary ED visit ITS negative binomial regression model, with the exception of the effect of SMI diagnosis. In this model, those with schizophrenia only have a lower incidence rate of ED visits compared to those with MDD only (no effect was observed in the primary model). The effect of HIP status was significant, with those in HIP being 0.92 times less likely to have ED visits compared to those not in HIP.

Exhibit E.11: Negative Binomial ITS Regression Model of All-Cause ED Utilization Rate (2018 – 2023, Excluding 2020, Including HIP Status as a Covariate)

Variable	Level	IRR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.97	(0.95, 1.00)	0.034
Time	Pre-Intervention	1.01	(0.99, 1.03)	0.253
	Post-Intervention	0.98	(0.97, 0.98)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.01	(0.99, 1.03)	0.253
	Post-Int. * 2021	0.90	(0.89, 0.92)	< 0.001
	Post-Int. * 2022	0.88	(0.87, 0.89)	< 0.001
	Post-Int. * 2023	0.86	(0.85, 0.87)	< 0.001
Gender (Ref: Female)	Male	1.10	(1.10, 1.11)	< 0.001

Variable	Level	IRR	95% CI	p-Value
Age Group (Ref: Age 21-30)	Age 31-40	0.87	(0.86, 0.88)	< 0.001
	Age 41-50	0.69	(0.68, 0.70)	< 0.001
	Age 51-60	0.51	(0.50, 0.51)	< 0.001
	Age 61-64	0.41	(0.41, 0.42)	< 0.001
Race (Ref: White/Caucasian)	Black	1.28	(1.26, 1.29)	< 0.001
	Other/Not Available	1.26	(1.24, 1.27)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.82	(0.80, 0.84)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.00	(0.99, 1.01)	0.571
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.88	(0.87, 0.89)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.05	(1.04, 1.07)	< 0.001
	Schizophrenia only	0.99	(0.98, 1.01)	0.454
	Co-occurring SMI	1.65	(1.63, 1.67)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.12	(1.10, 1.15)	< 0.001
	Cardiovascular Disease	1.54	(1.52, 1.56)	< 0.001
	COPD	1.37	(1.35, 1.38)	< 0.001
	Diabetes	1.07	(1.06, 1.08)	< 0.001
	Hypertension	1.61	(1.59, 1.62)	< 0.001
	Infectious Disease	1.87	(1.86, 1.88)	< 0.001
	Metabolic Disease	1.17	(1.16, 1.18)	< 0.001
	Respiratory Disease	1.80	(1.79, 1.81)	< 0.001
HIP Status (Ref: Non-HIP)	HIP	0.94	(0.93, 0.94)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.12 provides estimates from an ITS logistic regression model of all-cause ED visits including interactions between the intervention period and age, dual eligibility, SMI diagnosis, and HIP status. OR estimates were similar to those in the primary ED visit ITS logistic regression model.

Exhibit E.12: Logistic ITS Regression Model of All-Cause ED Participation Rate (2018 – 2023, Excluding 2020, Including Intervention Period Interactions with Age, Dual Eligibility, SMI Diagnosis, and HIP Status)

Variable	Level	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	1.01	(0.97, 1.05)	0.715
Time	Pre-Intervention	1.03	(1.01, 1.06)	0.016
	Post-Intervention	0.97	(0.96, 0.97)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.03	(1.01, 1.06)	0.016
	Post-Int. * 2021	0.91	(0.88, 0.93)	< 0.001
	Post-Int. * 2022	0.88	(0.85, 0.90)	< 0.001
	Post-Int. * 2023	0.85	(0.82, 0.87)	< 0.001

Variable	Level	OR	95% CI	p-Value
Int. Period * Age Group (Ref: Pre-Int. * Age Group)	Post-Int. * Age 21-30	0.94	(0.89, 0.98)	0.009
	Post-Int. * Age 31-40	0.96	(0.92, 1.01)	0.102
	Post-Int. * Age 41-50	1.03	(0.98, 1.07)	0.283
	Post-Int. * Age 51-60	1.07	(1.03, 1.12)	0.002
	Post-Int. * Age 61-64	1.04	(0.98, 1.11)	0.2
Int. Period * Dual Eligibility (Ref: Pre-Int. * Dual Eligibility)	Post-Int. * Dually Eligible	0.98	(0.94, 1.03)	0.378
	Post-Int. * Non-dually Eligible	1.04	(1.00, 1.08)	0.084
Int. Period * SMI Diagnosis (Ref: Pre-Int. * SMI Diagnosis)	Post-Int. * Bipolar Only	1.00	(0.96, 1.05)	0.989
	Post-Int. * MDD Only	1.00	(0.96, 1.05)	0.877
	Post-Int. * Schizophrenia Only	1.16	(1.10, 1.22)	< 0.001
	Post-Int. * Co-occurring SMI	0.88	(0.84, 0.93)	< 0.001
Int. Period * HIP Status (Ref: Pre-Int * HIP Status)	Post-Int * HIP	1.00	(0.95, 1.05)	0.958
	Post-Int * Non-HIP	1.02	(0.98, 1.06)	0.437
Gender (Ref: Female)	Male	0.95	(0.94, 0.96)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.86	(0.84, 0.87)	< 0.001
	Age 41-50	0.68	(0.66, 0.69)	< 0.001
	Age 51-60	0.46	(0.45, 0.47)	< 0.001
	Age 61-64	0.36	(0.35, 0.37)	< 0.001
Race (Ref: White/Caucasian)	Black	1.34	(1.31, 1.36)	< 0.001
	Other/Not Available	1.27	(1.25, 1.28)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.84	(0.82, 0.87)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.05	(1.04, 1.07)	< 0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.89	(0.87, 0.91)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.13	(1.11, 1.15)	< 0.001
	Schizophrenia only	0.91	(0.89, 0.93)	< 0.001
	Co-occurring SMI	1.74	(1.71, 1.78)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.19	(1.15, 1.23)	< 0.001
	Cardiovascular Disease	1.88	(1.83, 1.92)	< 0.001
	COPD	1.64	(1.61, 1.67)	< 0.001
	Diabetes	1.09	(1.07, 1.10)	< 0.001
	Hypertension	1.82	(1.79, 1.84)	< 0.001
	Infectious Disease	2.19	(2.16, 2.21)	< 0.001
	Metabolic Disease	1.11	(1.10, 1.13)	< 0.001
	Respiratory Disease	2.06	(2.04, 2.08)	< 0.001
HIP Status (Ref: Non-HIP)	HIP	1.02	(1.00, 1.04)	0.035

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.13 provides estimates from an ITS negative binomial regression model of all-cause ED visits including interactions between the intervention period and age, dual eligibility, SMI

diagnosis, and HIP status. IRR estimates were similar to those in the primary ED visit ITS negative binomial regression model, with the exception of the effect of SMI diagnosis. In this model, those with schizophrenia only have a lower incidence rate of ED visits compared to those with MDD only (no effect was observed in the primary model).

Exhibit E.13: Negative Binomial ITS Regression Model of All-Cause ED Utilization Rate (2018 – 2023, Excluding 2020, Including Intervention Period Interactions with Age, Dual Eligibility, SMI Diagnosis, and HIP Status)

Variable	Level	IRR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.98	(0.95, 1.00)	0.056
Time	Pre-Intervention	1.01	(0.99, 1.03)	0.241
	Post-Intervention	0.98	(0.97, 0.98)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.01	(0.99, 1.03)	0.241
	Post-Int. * 2021	0.91	(0.89, 0.92)	< 0.001
	Post-Int. * 2022	0.88	(0.87, 0.90)	< 0.001
	Post-Int. * 2023	0.86	(0.85, 0.88)	< 0.001
Int. Period * Age Group (Ref: Pre-Int. * Age Group)	Post-Int. * Age 21-30	0.90	(0.87, 0.93)	< 0.001
	Post-Int. * Age 31-40	0.92	(0.89, 0.95)	< 0.001
	Post-Int. * Age 41-50	1.01	(0.98, 1.04)	0.698
	Post-Int. * Age 51-60	1.05	(1.02, 1.08)	0.003
	Post-Int. * Age 61-64	1.02	(0.98, 1.06)	0.43
Int. Period * Dual Eligibility (Ref: Pre-Int. * Dual Eligibility)	Post-Int. * Dually Eligible	0.96	(0.94, 0.99)	0.016
	Post-Int. * Non-dually Eligible	0.99	(0.96, 1.01)	0.353
Int. Period * SMI Diagnosis (Ref: Pre-Int. * SMI Diagnosis)	Post-Int. * Bipolar Only	0.96	(0.93, 0.99)	0.013
	Post-Int. * MDD Only	0.94	(0.91, 0.96)	< 0.001
	Post-Int. * Schizophrenia Only	1.10	(1.06, 1.14)	< 0.001
	Post-Int. * Co-occurring SMI	0.91	(0.89, 0.94)	< 0.001
Int. Period * HIP Status (Ref: Pre-Int * HIP Status)	Post-Int * HIP	0.98	(0.95, 1.01)	0.197
	Post-Int * Non-HIP	0.97	(0.95, 1.00)	0.023
Gender (Ref: Female)	Male	1.10	(1.10, 1.11)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.87	(0.86, 0.88)	< 0.001
	Age 41-50	0.69	(0.68, 0.70)	< 0.001
	Age 51-60	0.51	(0.50, 0.51)	< 0.001
	Age 61-64	0.41	(0.40, 0.42)	< 0.001
Race (Ref: White/Caucasian)	Black	1.28	(1.26, 1.29)	< 0.001
	Other/Not Available	1.26	(1.24, 1.27)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.82	(0.80, 0.84)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.00	(0.99, 1.01)	0.571
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.88	(0.87, 0.89)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.05	(1.04, 1.07)	< 0.001
	Schizophrenia only	0.99	(0.98, 1.01)	0.395
	Co-occurring SMI	1.65	(1.63, 1.67)	< 0.001

Variable	Level	IRR	95% CI	p-Value
Chronic Conditions (Ref: No)	Cancer	1.12	(1.10, 1.15)	< 0.001
	Cardiovascular Disease	1.54	(1.52, 1.56)	< 0.001
	COPD	1.37	(1.35, 1.38)	< 0.001
	Diabetes	1.07	(1.06, 1.08)	< 0.001
	Hypertension	1.61	(1.59, 1.62)	< 0.001
	Infectious Disease	1.87	(1.86, 1.88)	< 0.001
	Metabolic Disease	1.17	(1.16, 1.18)	< 0.001
	Respiratory Disease	1.80	(1.79, 1.81)	< 0.001
HIP Status (Ref: Non-HIP)	HIP	0.93	(0.92, 0.94)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.14 provides estimates from an ITS logistic regression model of all-cause ED visits including interactions between the intervention period and SMI diagnosis. OR estimates were similar to those in the primary ED visit ITS logistic regression model.

Exhibit E.14: Logistic ITS Regression Model of All-Cause ED Participation Rate (2018 – 2023, Excluding 2020, Including Intervention Period Interaction with SMI Diagnosis)

Variable	Level	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.95	(0.93, 0.98)	0.001
Time	Pre-Intervention	1.03	(1.01, 1.06)	0.011
	Post-Intervention	0.98	(0.97, 0.98)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.03	(1.01, 1.06)	0.011
	Post-Int. * 2021	0.90	(0.88, 0.92)	< 0.001
	Post-Int. * 2022	0.88	(0.86, 0.90)	< 0.001
	Post-Int. * 2023	0.86	(0.84, 0.88)	< 0.001
Int. Period * SMI Diagnosis (Ref: Pre-Int. * SMI Diagnosis)	Post-Int. * Bipolar Only	0.95	(0.91, 0.98)	0.005
	Post-Int. * MDD Only	0.95	(0.92, 0.98)	0.004
	Post-Int. * Schizophrenia Only	1.09	(1.04, 1.14)	< 0.001
	Post-Int. * Co-occurring SMI	0.84	(0.81, 0.88)	< 0.001
Gender (Ref: Female)	Male	0.96	(0.95, 0.97)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.86	(0.85, 0.88)	< 0.001
	Age 41-50	0.69	(0.68, 0.70)	< 0.001
	Age 51-60	0.47	(0.47, 0.48)	< 0.001
	Age 61-64	0.37	(0.36, 0.38)	< 0.001
Race (Ref: White/Caucasian)	Black	1.32	(1.30, 1.35)	< 0.001
	Other/Not Available	1.27	(1.26, 1.29)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.84	(0.82, 0.86)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.05	(1.04, 1.06)	< 0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.87	(0.86, 0.88)	< 0.001

Variable	Level	OR	95% CI	p-Value
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.13	(1.11, 1.15)	< 0.001
	Schizophrenia only	0.90	(0.88, 0.92)	< 0.001
	Co-occurring SMI	1.75	(1.71, 1.78)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.19	(1.15, 1.22)	< 0.001
	Cardiovascular Disease	1.87	(1.83, 1.91)	< 0.001
	COPD	1.63	(1.60, 1.66)	< 0.001
	Diabetes	1.08	(1.06, 1.09)	< 0.001
	Hypertension	1.82	(1.79, 1.84)	< 0.001
	Infectious Disease	2.18	(2.15, 2.20)	< 0.001
	Metabolic Disease	1.11	(1.09, 1.12)	< 0.001
	Respiratory Disease	2.07	(2.05, 2.09)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.15 provides estimates from an ITS negative binomial regression model of all-cause ED visits including interactions between the intervention period and SMI diagnosis. IRR estimates were similar to those in the primary ED visit ITS negative binomial regression model, with the exception of SMI diagnosis. In this model, those with schizophrenia only have a lower incidence rate of ED visits compared to those with MDD only (no effect was observed in the primary model).

Exhibit E.15: Negative Binomial ITS Regression Model of All-Cause ED Utilization Rate (2018 – 2023, Excluding 2020, Including Intervention Period Interaction with SMI Diagnosis)

Variable	Level	IRR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.96	(0.95, 0.98)	< 0.001
Time	Pre-Intervention	1.01	(0.99, 1.03)	0.25
	Post-Intervention	0.98	(0.97, 0.98)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.01	(0.99, 1.03)	0.25
	Post-Int. * 2021	0.90	(0.88, 0.91)	< 0.001
	Post-Int. * 2022	0.88	(0.86, 0.89)	< 0.001
	Post-Int. * 2023	0.85	(0.84, 0.87)	< 0.001
Int. Period * SMI Diagnosis (Ref: Pre-Int. * SMI Diagnosis)	Post-Int. * Bipolar Only	0.95	(0.92, 0.97)	< 0.001
	Post-Int. * MDD Only	0.93	(0.91, 0.95)	< 0.001
	Post-Int. * Schizophrenia Only	1.08	(1.05, 1.11)	< 0.001
	Post-Int. * Co-occurring SMI	0.90	(0.88, 0.92)	< 0.001
Gender (Ref: Female)	Male	1.11	(1.10, 1.12)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.87	(0.87, 0.88)	< 0.001
	Age 41-50	0.71	(0.70, 0.71)	< 0.001
	Age 51-60	0.52	(0.52, 0.53)	< 0.001
	Age 61-64	0.43	(0.42, 0.43)	< 0.001
Race (Ref: White/Caucasian)	Black	1.27	(1.26, 1.28)	< 0.001
	Other/Not Available	1.27	(1.26, 1.28)	< 0.001

Variable	Level	IRR	95% CI	p-Value
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.81	(0.80, 0.83)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	0.99	(0.99, 1.00)	0.177
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.92	(0.91, 0.92)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.06	(1.05, 1.07)	< 0.001
	Schizophrenia only	1.00	(0.99, 1.02)	0.673
	Co-occurring SMI	1.66	(1.64, 1.68)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.13	(1.11, 1.15)	< 0.001
	Cardiovascular Disease	1.54	(1.52, 1.56)	< 0.001
	COPD	1.37	(1.36, 1.39)	< 0.001
	Diabetes	1.07	(1.06, 1.08)	< 0.001
	Hypertension	1.61	(1.60, 1.62)	< 0.001
	Infectious Disease	1.86	(1.85, 1.87)	< 0.001
	Metabolic Disease	1.17	(1.16, 1.18)	< 0.001
	Respiratory Disease	1.81	(1.79, 1.82)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.16 provides estimates from an ITS logistic regression model of all-cause ED visits including data from CY 2020. OR estimates were similar to those in the primary ED visit ITS logistic regression model.

Exhibit E.16: Logistic ITS Regression Model of All-Cause ED Participation Rate (2018 – 2023, Including 2020)

Variable	Level	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.96	(0.93, 0.99)	0.003
Time	Pre-Intervention	1.05	(1.02, 1.07)	< 0.001
	Post-Intervention	0.98	(0.97, 0.98)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.05	(1.02, 1.07)	< 0.001
	Post-Int. * 2020	0.92	(0.90, 0.94)	< 0.001
	Post-Int. * 2021	0.90	(0.88, 0.92)	< 0.001
	Post-Int. * 2022	0.88	(0.86, 0.90)	< 0.001
	Post-Int. * 2023	0.86	(0.84, 0.88)	< 0.001
Gender (Ref: Female)	Male	0.96	(0.95, 0.97)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.86	(0.85, 0.88)	< 0.001
	Age 41-50	0.69	(0.68, 0.70)	< 0.001
	Age 51-60	0.47	(0.47, 0.48)	< 0.001
	Age 61-64	0.37	(0.36, 0.38)	< 0.001
Race (Ref: White/Caucasian)	Black	1.33	(1.30, 1.35)	< 0.001
	Other/Not Available	1.27	(1.26, 1.29)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.84	(0.82, 0.86)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.05	(1.04, 1.06)	< 0.001

Variable	Level	OR	95% CI	p-Value
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.87	(0.86, 0.88)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.13	(1.11, 1.14)	< 0.001
	Schizophrenia only	0.92	(0.91, 0.94)	< 0.001
	Co-occurring SMI	1.67	(1.64, 1.69)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.19	(1.15, 1.22)	< 0.001
	Cardiovascular Disease	1.87	(1.83, 1.91)	< 0.001
	COPD	1.63	(1.61, 1.66)	< 0.001
	Diabetes	1.08	(1.06, 1.09)	< 0.001
	Hypertension	1.82	(1.79, 1.84)	< 0.001
	Infectious Disease	2.18	(2.15, 2.20)	< 0.001
	Metabolic Disease	1.11	(1.09, 1.12)	< 0.001
	Respiratory Disease	2.07	(2.05, 2.09)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.17 provides estimates from an ITS negative binomial regression model of all-cause ED visits including data from CY 2020. Incidence rate ratio estimates were similar to those in the primary ED visit ITS negative binomial regression model.

Exhibit E.17: Negative Binomial ITS Regression Model of All-Cause ED Utilization Rate (2018 – 2023, Including 2020)

Variable	Level	IRR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.95	(0.93, 0.97)	< 0.001
Time	Pre-Intervention	1.02	(1.00, 1.04)	0.033
	Post-Intervention	0.98	(0.97, 0.98)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.02	(1.00, 1.04)	0.033
	Post-Int. * 2020	0.91	(0.89, 0.92)	< 0.001
	Post-Int. * 2021	0.88	(0.87, 0.90)	< 0.001
	Post-Int. * 2022	0.86	(0.85, 0.88)	< 0.001
	Post-Int. * 2023	0.84	(0.83, 0.86)	< 0.001
Gender (Ref: Female)	Male	1.11	(1.10, 1.12)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.87	(0.87, 0.88)	< 0.001
	Age 41-50	0.71	(0.70, 0.72)	< 0.001
	Age 51-60	0.52	(0.52, 0.53)	< 0.001
	Age 61-64	0.43	(0.42, 0.43)	< 0.001
Race (Ref: White/Caucasian)	Black	1.27	(1.26, 1.28)	< 0.001
	Other/Not Available	1.27	(1.26, 1.28)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.81	(0.80, 0.83)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	0.99	(0.99, 1.00)	0.16
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.92	(0.91, 0.92)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.07	(1.06, 1.08)	< 0.001
	Schizophrenia only	1.03	(1.02, 1.05)	< 0.001
	Co-occurring SMI	1.64	(1.63, 1.66)	< 0.001

Variable	Level	IRR	95% CI	p-Value
Chronic Conditions (Ref: No)	Cancer	1.13	(1.11, 1.15)	< 0.001
	Cardiovascular Disease	1.54	(1.53, 1.56)	< 0.001
	COPD	1.37	(1.36, 1.39)	< 0.001
	Diabetes	1.07	(1.06, 1.08)	< 0.001
	Hypertension	1.61	(1.60, 1.62)	< 0.001
	Infectious Disease	1.86	(1.85, 1.87)	< 0.001
	Metabolic Disease	1.17	(1.16, 1.18)	< 0.001
	Respiratory Disease	1.81	(1.79, 1.82)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

D. Goal 2

1. Analytic Cohort for 30-Day All-Cause Readmissions

Detailed results from the claims/encounter data-based analytics for Goal 2 are included in this section. **Exhibit E.18** displays the counts of MH-related acute inpatient and observation stays and unique SMI roster beneficiaries with stays for the 30-day all-cause readmission metric denominator.

Exhibit E.18: Counts of Stays and Beneficiaries for 30-Day All-Cause Readmission Metric Denominator, by Data Processing Step (2018 – 2023)

30-Day All-Cause Readmission Calculation Step: Denominator	Count of Acute Inpatient / Observation Stays and Unique Beneficiaries with Stay(s)											
	2018		2019		2020		2021		2022		2023	
	Unique Bene.	Total Stays	Unique Bene.	Total Stays	Unique Bene.	Total Stays	Unique Bene.	Total Stays	Unique Bene.	Total Stays	Unique Bene.	Total Stays
Total SMI Roster beneficiaries	90,833	N/A	124,131	N/A	153,217	N/A	191,728	N/A	227,466	N/A	263,327	N/A
Total SMI Roster beneficiaries without hospice services in the year	90,552	N/A	123,651	N/A	152,650	N/A	191,067	N/A	226,775	N/A	262,610	N/A
With acute inpatient/observation stay(s)[a]	29,172	67,291	35,244	65,603	39,749	73,094	45,958	84,230	47,715	84,577	51,046	90,049
After applying direct transfer algorithm	29,172	50,981	35,244	61,946	39,749	68,768	45,958	79,112	47,715	80,088	51,046	85,441
After excluding stays with discharge date after Dec. 1	27,234	46,462	33,329	57,064	37,606	63,500	43,588	73,313	44,937	73,868	48,455	79,414
After excluding stays where with LOS = 0 (i.e., admission date = discharge date)	26,743	44,467	32,397	53,743	36,392	59,801	42,410	69,971	44,139	71,533	47,651	77,110
After excluding stays where beneficiary died during stay	26,650	44,292	32,277	53,511	36,187	59,436	42,142	69,503	43,861	71,054	47,411	76,685
After excluding cases with pregnancy/ perinatal-related principal (primary) dx code	25,223	42,224	29,944	50,254	32,842	55,013	38,024	64,157	39,215	65,059	41,879	69,715
After excluding cases without enrollment on the discharge date	24,987	41,822	29,694	49,777	32,568	54,561	37,938	63,984	39,135	64,871	41,671	69,324
After excluding cases without continuous enrollment in the 30 days after discharge date	24,359	40,666	28,948	48,453	32,162	53,849	37,661	63,501	38,875	64,422	40,980	68,163
After excluding non-MH-related stays (primary or secondary dx code)	12,343	16,905	14,556	20,503	15,752	22,553	17,720	25,604	17,619	25,387	18,350	26,388

[a] "Acute Inpatient and Observation stays" were identified via the following process: 1) Identify all acute and nonacute inpatient stays (HEDIS VSD Inpatient Stay Value Set) and observation stays (HEDIS VSD Observation Stay Value Set), 2) Exclude nonacute inpatient stays (HEDIS VSD Nonacute Inpatient Stay Value Set).

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.19 displays the counts of MH-related acute inpatient and observation stays and unique SMI roster beneficiaries with stays for the 30-day all-cause readmission metric numerator.

Exhibit E.19: Counts of Stays and Beneficiaries for 30-Day All-Cause Readmission Metric Numerator, by Data Processing Step (2018 – 2023)

30-Day All-Cause Readmission Calculation Step: Numerator	Count of Acute Inpatient / Observation Stays and Unique Beneficiaries with Stay(s)											
	2018		2019		2020		2021		2022		2023	
	Unique Bene.	Total Stays	Unique Bene.	Total Stays	Unique Bene.	Total Stays	Unique Bene.	Total Stays	Unique Bene.	Total Stays	Unique Bene.	Total Stays
Total SMI Roster beneficiaries	90,833	N/A	124,131	N/A	153,217	N/A	191,728	N/A	227,466	N/A	263,327	N/A
Total SMI Roster beneficiaries without hospice services in the year	90,552	N/A	123,651	N/A	152,650	N/A	191,067	N/A	226,775	N/A	262,610	N/A
(With) acute inpatient/observation stay(s)[a]	29,350	67,894	35,213	65,643	39,663	73,037	45,940	84,307	47,670	84,545	50,922	89,866
After applying direct transfer algorithm	29,350	51,523	35,213	61,957	39,663	68,666	45,940	79,138	47,670	80,041	50,922	85,254
After excluding stays with admission date before Jan. 3 or after Dec. 31	28,824	50,698	35,057	61,580	39,470	68,234	45,793	78,760	47,509	79,658	50,696	84,776
After excluding cases with pregnancy/ perinatal-related principal (primary) diagnosis code	27,327	48,060	32,568	57,297	35,889	62,579	41,306	72,235	42,489	72,428	44,775	76,651
After excluding cases with principal (primary) diagnosis and/or procedure code indicating a pre-planned stay[b]	26,998	47,389	32,560	57,247	35,880	62,541	41,302	72,186	42,482	72,382	44,762	76,576

[a] "Acute Inpatient and Observation stays" were identified via the following process: 1) Identify all acute and nonacute inpatient stays (HEDIS VSD Inpatient Stay Value Set) and observation stays (HEDIS VSD Observation Stay Value Set), 2) Exclude nonacute inpatient stays (HEDIS VSD Nonacute Inpatient Stay Value Set).

[b] Pre-planned stays included those with diagnosis and/or procedure codes as identified in the following HEDIS VSD value sets: Chemotherapy Encounter, Rehabilitation, Kidney Transplant, Bone Marrow Transplant, Organ Transplant Other Than Kidney, Introduction of Autologous Pancreatic Cells, and Potentially Planned Procedures (excluding Acute Conditions).

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

2. 30-Day All-Cause Readmissions – Overall

Exhibit E.20 shows 30-day all-cause readmission rates when outlier beneficiaries (i.e., those with four or more MH-related (denominator) stays were excluded. When compared with the readmission rates calculated in **Section II.D**, the removal of these outlier beneficiaries resulted in a notable reduction of readmission rates within each year. For example, removing these outliers reduced the 2018 readmission rate from 16.9% to 11.7%; similarly, the 2023 all-cause readmission rate decreased from 19.3% to 11.8%.

Exhibit E.20: 30-Day All-Cause, Unplanned Readmission Rates Following MH-Related Acute Inpatient and Observation Stays, Among SMI Beneficiaries (2018 – 2023), with Outliers (>= 4 or More MH-Related Visits) Excluded

Year	# of SMI Benes with at Least 1 MH-Related Stay	# of SMI Benes with a 30-day Readmission	# of MH-Related Stays Among SMI Benes (Denom.)	# of MH-Related Stays with All-Cause 30-Day Readmission (Numer.)	30-Day All-Cause Readmission Rate
2018	11,928	1,510	14,798	1,730	11.7%
2019	13,999	1,844	17,565	2,142	12.2%
2020	15,073	1,900	19,012	2,182	11.5%
2021	16,947	2,220	21,456	2,574	12.0%
2022	16,813	2,002	21,060	2,348	11.1%
2023	17,541	2,213	21,945	2,581	11.8%

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

3. 30-Day All-Cause Readmissions – By Sociodemographic Characteristics

Exhibit E.21 includes the 30-day all-cause readmission rates by beneficiary characteristics.

Exhibit E.21: 30-Day All-Cause Readmission Rate to Acute Care Hospitals and Residential Settings Following Psychiatric Hospitalization, by Year and Demographic Characteristics (2018 – 2023)

Beneficiary Characteristics		(All-Cause) 30-Day Readmission Rate[a]					
		2018	2019	2020	2021	2022	2023
		N=16,904	N=20,503	N=22,553	N=25,604	N=25,387	N=26,388
All Beneficiaries		16.9%	18.2%	18.3%	18.8%	18.4%	19.3%
Gender	Female	14.7%	15.0%	16.1%	15.9%	16.0%	16.9%
	Male	19.2%	21.3%	20.2%	21.4%	20.6%	21.5%
Age	21-30	15.9%	18.0%	17.0%	17.8%	17.0%	17.3%
	31-40	17.6%	18.1%	18.3%	19.0%	18.4%	18.8%
	41-50	17.3%	18.5%	19.4%	19.3%	19.0%	21.2%
	51-60	17.7%	19.1%	19.1%	19.8%	19.9%	21.0%
	61-64	12.8%	14.8%	18.1%	18.1%	18.9%	20.5%

Beneficiary Characteristics		(All-Cause) 30-Day Readmission Rate[a]					
		2018	2019	2020	2021	2022	2023
		N=16,904	N=20,503	N=22,553	N=25,604	N=25,387	N=26,388
Race	White/Caucasian	15.8%	16.1%	15.7%	16.5%	16.2%	17.1%
	Black	13.9%	16.3%	15.2%	18.7%	15.9%	16.3%
	Other	12.6%	21.6%	21.8%	19.6%	15.4%	17.3%
	Not Available	19.8%	22.0%	22.9%	22.5%	22.5%	23.7%
Ethnicity	Hispanic	10.1%	14.3%	10.5%	13.2%	11.5%	13.2%
	Non-Hispanic	17.3%	18.3%	18.7%	19.3%	18.8%	19.9%
	Unknown	11.0%	17.4%	15.3%	15.3%	16.2%	15.8%
Geographic Location	Metro	17.0%	18.6%	18.6%	19.0%	18.4%	19.6%
	Non-Metro	16.3%	16.7%	17.1%	17.9%	18.3%	18.3%
Dual Eligibility	Dually Eligible	8.5%	9.3%	7.7%	11.8%	11.1%	11.8%
	Not Dually Eligible	19.0%	20.1%	20.2%	20.1%	19.8%	20.7%
HIP/Non-HIP	HIP	17.3%	18.7%	18.8%	18.4%	18.1%	18.7%
	Non-HIP	16.3%	17.5%	17.4%	19.5%	18.9%	20.3%
SMI Dx	Bipolar Only	9.5%	9.2%	9.5%	9.8%	9.7%	9.2%
	MDD Only	13.0%	14.9%	13.6%	12.2%	11.1%	11.5%
	Schizophrenia Only	13.1%	13.2%	13.3%	14.8%	12.3%	13.0%
	Co-occurring SMI Dx	23.4%	23.6%	23.5%	24.1%	24.1%	25.0%
Chronic Conditions	Cancer	19.4%	24.3%	22.3%	25.5%	21.1%	20.5%
	No Cancer	16.8%	18.0%	18.2%	18.6%	18.3%	19.3%
	Cardiovascular Disease	23.9%	27.1%	28.8%	29.3%	28.8%	30.8%
	No Cardiovascular Disease	15.9%	17.0%	17.0%	17.5%	17.2%	18.0%
	COPD	20.8%	24.5%	24.3%	25.4%	25.7%	26.5%
	No COPD	16.0%	16.8%	17.0%	17.6%	17.1%	18.1%
	Diabetes	22.1%	23.0%	25.2%	24.0%	24.5%	26.2%
	No Diabetes	15.6%	17.1%	16.7%	17.7%	17.0%	17.8%
	Hypertension	20.4%	22.7%	23.2%	23.8%	23.2%	25.1%
	No Hypertension	13.7%	14.3%	13.8%	14.1%	14.3%	14.2%
	Infectious Disease	21.8%	23.3%	24.4%	24.0%	23.1%	25.3%
	No Infectious Disease	13.8%	14.8%	13.7%	14.6%	14.1%	15.1%
	Metabolic Disease	20.2%	21.9%	22.7%	22.8%	22.3%	23.7%
	No Metabolic Disease	13.1%	14.3%	13.8%	14.5%	14.2%	14.2%

Beneficiary Characteristics		(All-Cause) 30-Day Readmission Rate[a]					
		2018	2019	2020	2021	2022	2023
		N=16,904	N=20,503	N=22,553	N=25,604	N=25,387	N=26,388
Chronic Conditions (cont.)	Respiratory Disease	20.5%	22.0%	22.6%	22.2%	22.6%	23.6%
	No Respiratory Disease	12.6%	13.7%	13.3%	15.2%	13.8%	14.5%
# of Chronic Conditions	0	8.0%	9.1%	8.3%	10.3%	9.5%	9.4%
	1	12.4%	13.6%	13.4%	13.1%	13.2%	13.6%
	2	16.4%	16.8%	16.4%	16.9%	16.2%	16.8%
	3	19.4%	20.9%	19.2%	20.7%	20.2%	22.2%
	4+	23.7%	26.2%	28.5%	28.4%	27.9%	29.7%

[a] N values shown in header row correspond to the number of acute inpatient and observation stays within the given year.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

4. 30-Day All-Cause Readmissions – Regression Estimates

Exhibit E.22 displays OR estimates from the ITS logistic regression model; each OR shows the odds of a MH-related inpatient or observation stay being followed by an all-cause readmission within 30 days, relative to the reference group. Estimates suggest that when adjusting for other beneficiary characteristics, there was a significant decrease in the likelihood of readmission in the post-intervention period.

Exhibit E.22: Logistic ITS Regression Model of 30-Day All-Cause Readmission Rate (2018 – 2023, Excluding 2020)

Variable	Level	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.93	(0.84, 1.04)	0.193
Time	Pre-Intervention	1.01	(0.96, 1.08)	0.653
	Post-Intervention	1.00	(0.98, 1.03)	0.828
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.01	(0.96, 1.08)	0.653
	Post-Int. * 2021	0.94	(0.88, 1.01)	0.092
	Post-Int. * 2022	0.94	(0.88, 1.02)	0.131
	Post-Int. * 2023	0.95	(0.87, 1.03)	0.216
Likelihood of Having an ED Visit		0.71	(0.44, 1.17)	0.178
Gender (Ref: Female)	Male	1.62	(1.54, 1.71)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.96	(0.92, 1.01)	0.099
	Age 41-50	0.88	(0.83, 0.93)	< 0.001
	Age 51-60	0.81	(0.75, 0.88)	< 0.001
	Age 61-64	0.70	(0.63, 0.79)	< 0.001
Race (Ref: White/Caucasian)	Black	1.02	(0.96, 1.08)	0.543
	Other/Not Available	1.19	(1.15, 1.24)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.65	(0.58, 0.72)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	0.94	(0.91, 0.98)	0.002

Variable	Level	OR	95% CI	p-Value
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.37	(0.35, 0.39)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.83	(0.77, 0.89)	< 0.001
	Schizophrenia only	1.37	(1.27, 1.47)	< 0.001
	Co-occurring SMI	2.27	(2.06, 2.50)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.06	(0.96, 1.17)	0.234
	Cardiovascular Dis.	1.35	(1.29, 1.42)	< 0.001
	COPD	1.21	(1.16, 1.27)	< 0.001
	Diabetes	1.11	(1.06, 1.16)	< 0.001
	Hypertension	1.44	(1.36, 1.52)	< 0.001
	Infectious Disease	1.49	(1.44, 1.55)	< 0.001
	Metabolic Disease	1.41	(1.36, 1.47)	< 0.001
	Respiratory Disease	1.35	(1.30, 1.40)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

5. 30-Day All-Cause Readmissions – Sensitivity Analyses

This section details the results of sensitivity analyses for Goal 2 (30-day all-cause readmission rate) regression analyses.

Exhibit E.23 provides estimates from an ITS logistic regression model of 30-day all-cause readmissions including data from the CY 2020 (with 2020 categorized as part of the "post-intervention" period). OR estimates were similar to those in the primary readmission rate ITS logistic regression model (i.e., the model with 2020 data excluded).

Exhibit E.23: Logistic ITS Regression Model of 30-Day All-Cause Readmission Rate (2018 – 2023, Including 2020)

Variable	Level	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.93	(0.87, 1.00)	0.058
Int. Period * Time (Year)	Pre-Intervention * Time	1.02	(0.96, 1.08)	0.602
	Post-Intervention * Time	1.00	(0.99, 1.02)	0.62
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.02	(0.96, 1.08)	0.602
	Post-Int. * 2020	0.94	(0.89, 1.00)	0.055
	Post-Int. * 2021	0.95	(0.89, 1.01)	0.091
	Post-Int. * 2022	0.95	(0.89, 1.02)	0.169
	Post-Int. * 2023	0.96	(0.88, 1.04)	0.282
Likelihood of Having an ED Visit		0.76	(0.49, 1.19)	0.235
Gender (Ref: Female)	Male	1.60	(1.53, 1.69)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.96	(0.93, 1.00)	0.077
	Age 41-50	0.89	(0.84, 0.94)	< 0.001
	Age 51-60	0.81	(0.76, 0.87)	< 0.001
	Age 61-64	0.72	(0.64, 0.80)	< 0.001

Variable	Level	OR	95% CI	p-Value
Race (Ref: White/Caucasian)	Black	1.01	(0.96, 1.06)	0.77
	Other/Not Available	1.21	(1.17, 1.25)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.63	(0.56, 0.69)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	0.94	(0.91, 0.97)	< 0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.36	(0.34, 0.37)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.82	(0.77, 0.88)	< 0.001
	Schizophrenia only	1.34	(1.25, 1.43)	< 0.001
	Co-occurring SMI	2.18	(2.00, 2.39)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.06	(0.97, 1.16)	0.204
	Cardiovascular Dis.	1.35	(1.29, 1.42)	< 0.001
	COPD	1.20	(1.15, 1.25)	< 0.001
	Diabetes	1.13	(1.08, 1.18)	< 0.001
	Hypertension	1.44	(1.37, 1.51)	< 0.001
	Infectious Disease	1.50	(1.45, 1.56)	< 0.001
	Metabolic Disease	1.41	(1.36, 1.45)	< 0.001
	Respiratory Disease	1.36	(1.31, 1.40)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

E. Goal 3

1. Crisis Stabilization Services – Provider Availability

This section provides detailed exhibits related to findings for Goal 3**. Exhibit E.24** provides the distribution (e.g., minimum, median, and maximum) of counts of CSUs among Indiana counties (with a CSU), as well as the number of counties without a CSU. **Exhibit E.25** provides maps of CSUs by county for 2020 to 2022.

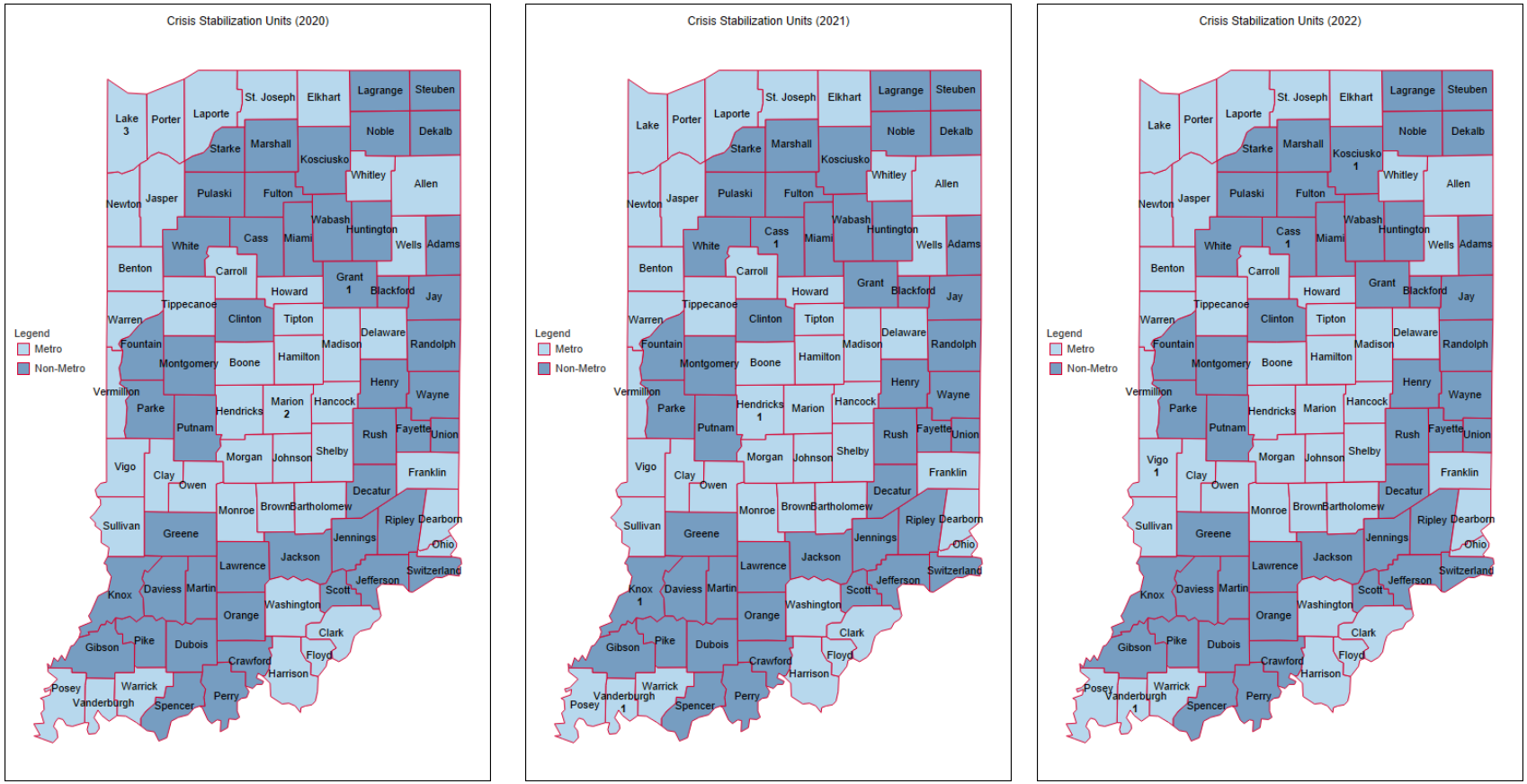
Exhibit E.24: Distribution of Crisis Services Per County by Year – CSUs

Provider	Year	Total # of CSUs	# of Counties with CSUs	Distribution of # of Providers in a County (Among Counties with Available Assessment Data)						# of Counties with No CSUs
				Mean	Min	P25	Median	P75	Max	
CSUs	2020	6	3	2.0	1	1	2	3	3	89
	2021	4	4	1.0	1	1	1	1	1	88
	2022	4	4	1.0	1	1	1	1	1	88
	2023[165]	18	16	1.1	1	1	1	1	2	76

Source: Annual PAA, 2020 – 2023.

[165] Beginning in 2023, PAA counts reported in the CSU measure represent a broader classification of crisis stabilization services, which include crisis observation/assessment centers. Prior to 2023, the state reported two crisis observation/assessment centers operating in 2020, and three were reported in 2022. Crisis observation/assessment centers were unavailable for 2021.

Exhibit E.25: Number of Crisis Services by County – CSUs (2020-2022)



Source: Annual PAA, 2020 – 2022.

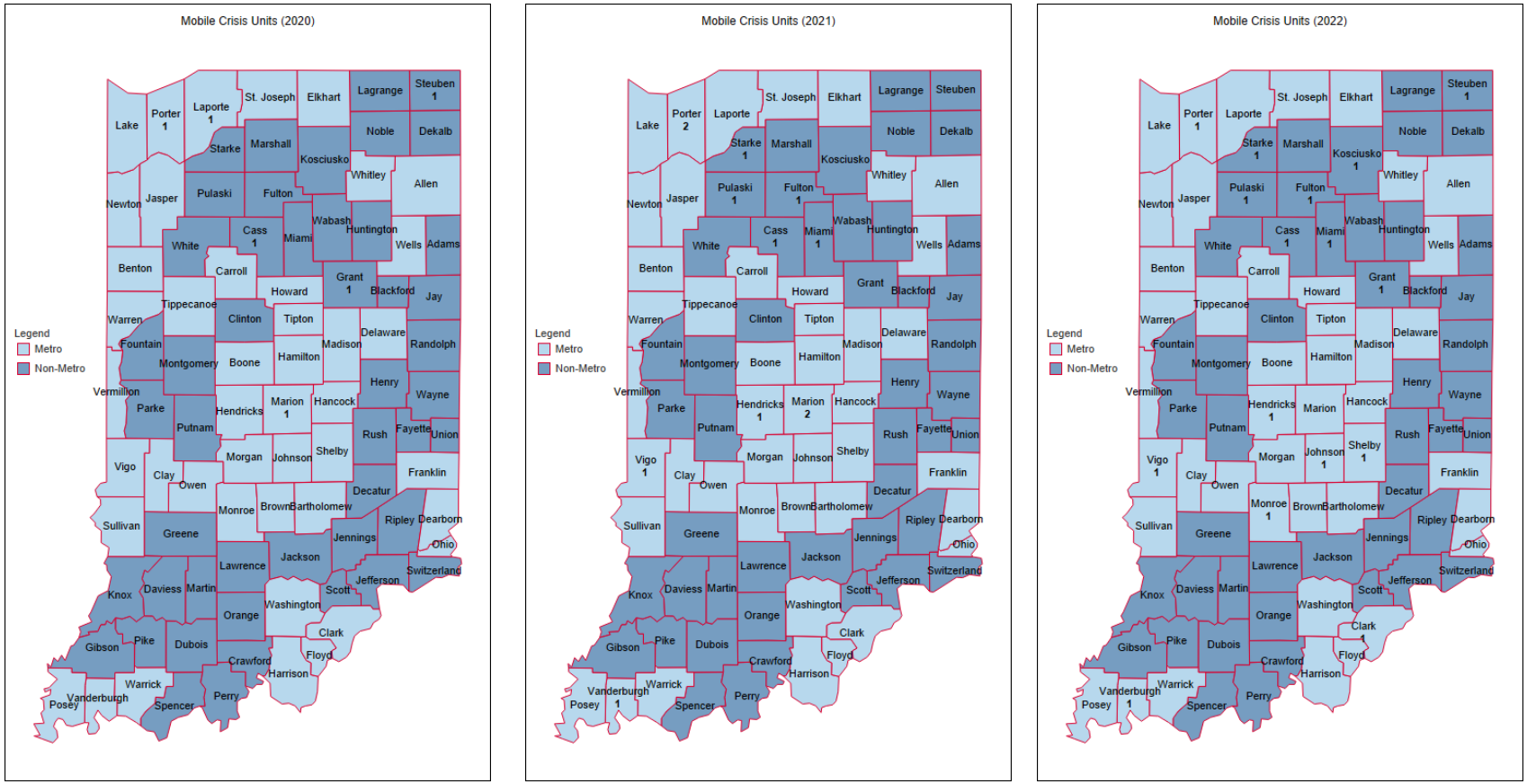
Exhibit E.26 provides the distribution (e.g., minimum, median, and maximum) of counts of MCU/MRSS among Indiana counties (with an MCU/MRSS), as well as the number of counties without an MCU/MRSS. **Exhibit E.27** provides maps of MCU/MRSS by county for 2020 to 2022.

Exhibit E.26: Distribution of Crisis Services Per County by Year – MCU/MRSS

Provider	Year	Total # of MCU/ MRSS	# of Counties with MCU/ MRSS	Distribution of # of Providers in a County (Among Counties with Available Assessment Data)						# of Counties with No MCU/ MRSS
				Mean	Min	P25	Median	P75	Max	
MCU/MRSS	2020	6	6	1.0	1	1	1	1	1	86
	2021	12	10	1.2	1	1	1	1	2	82
	2022	16	16	1.0	1	1	1	1	1	76
	2023	20	19	1.1	1	1	1	1	2	73

Source: Annual PAA, 2020 – 2023.

Exhibit E.27: Number of Crisis Services by County – MCU/MRSS (2020-2022)



Source: Annual PAA, 2020 – 2022.

Exhibit E.28 identifies the number of crisis stabilization services by type of service (e.g., CSU, MCU/MRSS, call center) by county. The exhibit also includes information detailing the reach of counties served by the crisis stabilization services for a given county.

Exhibit E.28: Crisis Service Location and Served Counties, 2023

County: Service Location	CSU	MCU/MRSS	Call Center	Counties Served by Available Services
Allen	1	1	1	Call Center: Whole state; MCU/CRSS: Adams, Wells, DeKalb, Noble, LaGrange, Kosciusko, Whitley, Huntington, and Wabash
Cass	1	1		Fulton, Miami, Tipton, White, and Howard
Clark	1	1		Spencer, Perry, Crawford, Dubois, Orange, Harrison, Washington, Scott, Jefferson, and Floyd
Dearborn	1	1		Ohio, Switzerland, Franklin, and Ripley
Dekalb	1	1		Noble, Steuben, and Lagrange
Grant	1	1		Blackford, Howard, Wabash, and Hamilton
Hamilton	1	1		MCU/CRSS: Boone, Madison, and Marion
Johnson		1		Johnson, Morgan, and Shelby
Knox	1	1		Daviess, Martin, and Pike
Kosciusko	1	1		Huntington, Marshall, Whitley, and Wabash
Lake	2	2	1	Call Center: Whole state; MCU/CRSS: Porter and LaPorte
Marion	1	1	1	Call Center: Whole state; MCU/CRSS: Johnson
Monroe	1	1		Bartholomew, Brown, Decatur, Jackson, Jennings, Johnson, Lawrence, Morgan, and Owen
Morgan		1		Johnson, Morgan, and Shelby
Porter	1	1		Porter and Starke
Shelby		1		Johnson, Morgan, and Shelby
St. Joseph	1	1		Elkhart
Steuben		1		Dekalb, LaGrange, Noble, and Steuben
Tippecanoe	2		1	Call Center: Whole state; NAMI CRSS serves: Benton, White, Carroll, Clinton, Montgomery, Fountain, Warren; Valley Oaks CRSS serves: White, Carroll, Benton, Jasper, Newton, Montgomery, Warren and Fountain
Vanderburgh	1	1		Posey, Gibson, and Warrick

Source: Annual PAA, 2023; state-provided administrative data (Updated September 2023).

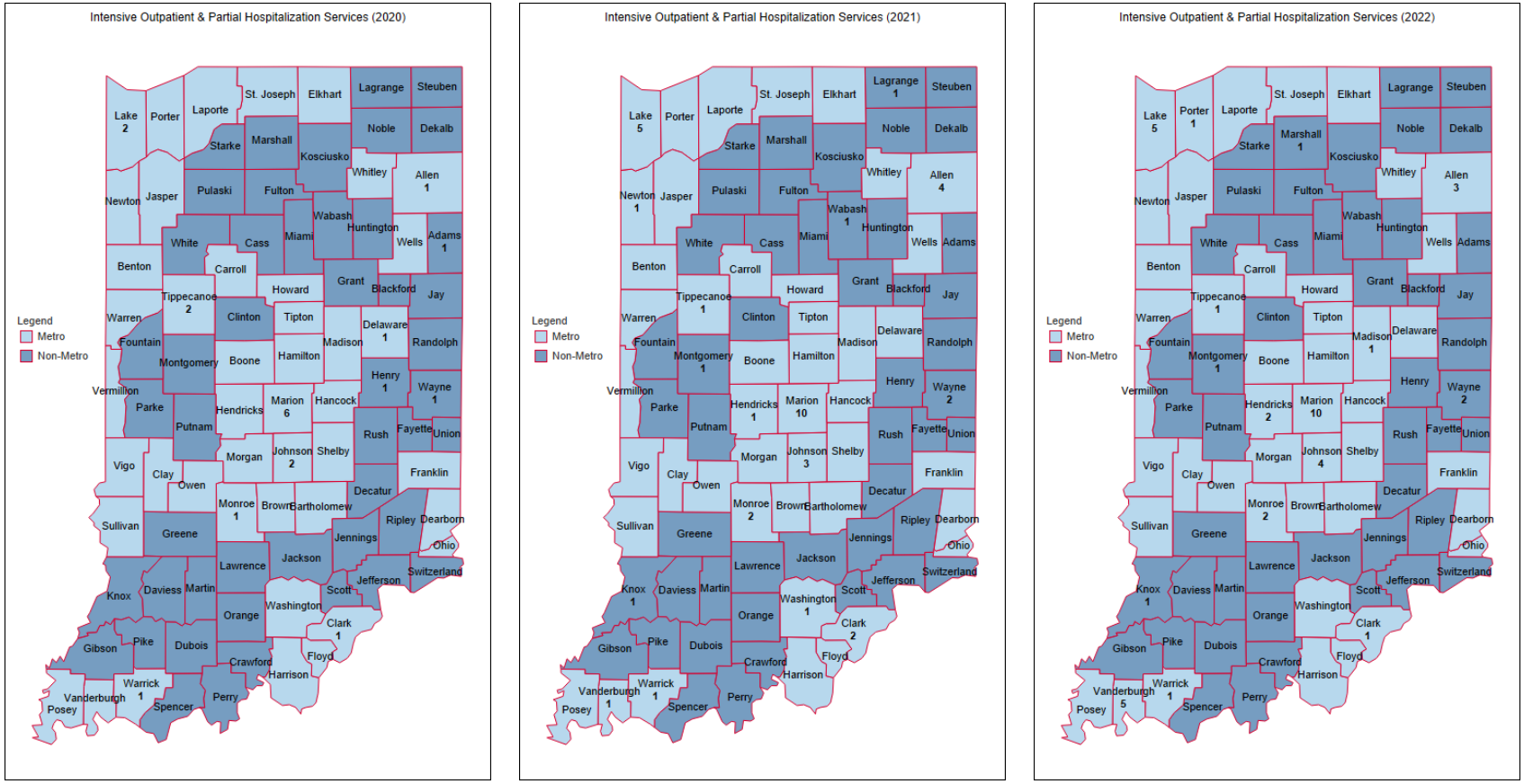
Exhibit E.29 provides the distribution (e.g., minimum, median, and maximum) of counts of IOP and partial hospitalization services among Indiana counties (with an IOP or partial hospitalization service), as well as the number of counties without an IOP or partial hospitalization services. **Exhibit E.30** provides maps of IOP and partial hospitalizations services by county for 2020 to 2022.

Exhibit E.29: Distribution of Crisis Services Per County by Year – IOP and Partial Hospitalization Services (2020 – 2023)

Provider	Year	Total # of IOP/Partial Hosp. Services	# of Counties with IOP/Partial Hosp. Services	Distribution of # of Providers in a County (Among Counties with Available Assessment Data)						# of Counties with No IOP/ Partial Hosp. Services
				Mean	Min	P25	Median	P75	Max	
IOP & Partial Hosp. Services	2020	20	12	1.7	1	1	1	2	6	80
	2021	38	17	2.2	1	1	1	2	10	75
	2022	41	16	2.6	1	1	1.5	3.5	10	76
	2023	47	19	2.5	1	1	2	3	9	73

Source: State-provided administrative data, 2020-2023 (Updated November 2024).

Exhibit E.30: Number of Crisis Services by County – IOP and Partial Hospitalization Services (2020 – 2022)



Source: State-provided administrative data, 2020-2022 (Updated November 2024).

Exhibit E.31 provides the distribution (e.g., minimum, median, and maximum) of counts of public and private psychiatric hospitals and psychiatric hospitals that qualify as IMDs among Indiana counties (with these providers), as well as the number of counties without these providers. **Exhibits E.32** to **E.33** provide maps of public and private psychiatric hospitals and psychiatric hospitals that qualify as IMDs by county and year (for years in which data was available), respectively.

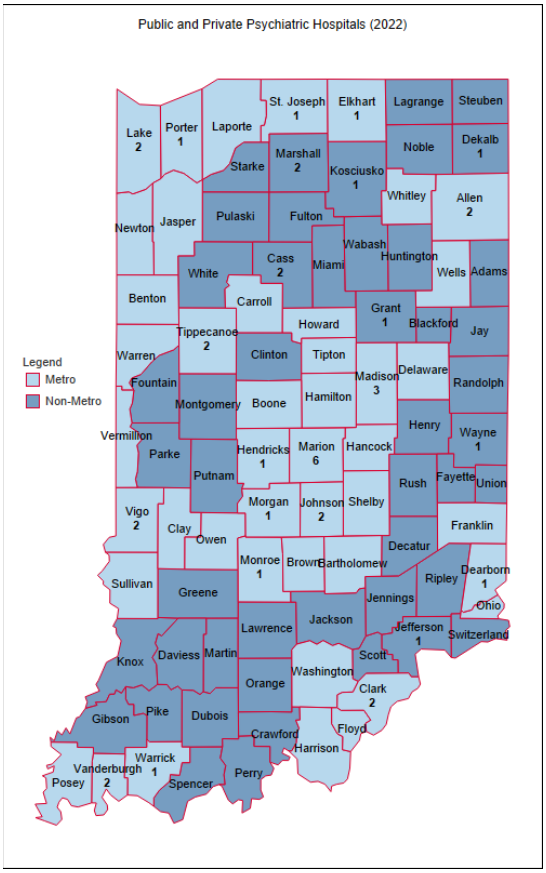
Exhibit E.31: Distribution of Crisis Services Per County by Year – Psychiatric Hospitals (2020 – 2023)

Provider	Year	Total # of Providers	# of Counties with Providers	Distribution of # of Providers in a County (Among Counties with Available Assessment Data)						# of Counties with No Provider
				Mean	Min	P25	Median	P75	Max	
Public and Private Psychiatric Hospitals	2020	*	*	*	*	*	*	*	*	*
	2021	*	*	*	*	*	*	*	*	*
	2022	40	24	1.7	1	1	1	2	6	68
	2023	40	23	1.7	1	1	2	2	6	69
Psychiatric Hospitals That Qualify as IMDs	2020	19	14	1.4	1	1	1	1	4	78
	2021	20	14	1.4	1	1	1	2	4	78
	2022	22	15	1.5	1	1	1	2	5	77
	2023	21	14	1.5	1	1	1	2	5	78

* Exact counts for Public and Private Psychiatric Hospitals were unavailable for years 2020 and 2021. However, state officials have indicated that these previous year counts were similar to those in 2022 and 2023.

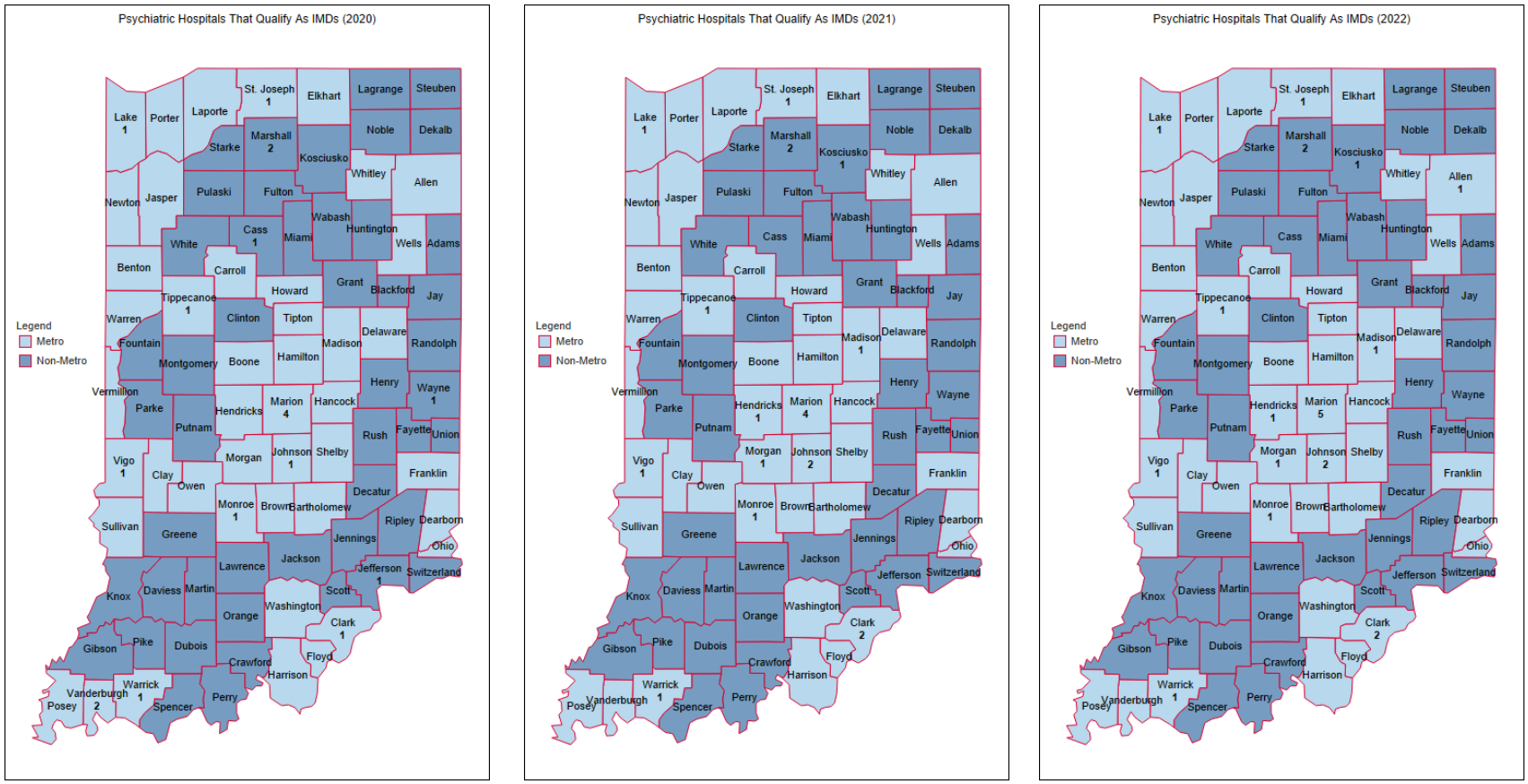
Source: Public and Private Psychiatric Hospitals: State-provided administrative data, 2022-2023 (Updated September 2024). Psychiatric Hospitals That Qualify as IMDs: Annual PAA, 2020 – 2023.

Exhibit E.32: Number of Crisis Services by County – Public and Private Psychiatric Hospitals (2022)



Source: State-provided administrative data, 2022 (Updated September 2024).

Exhibit E.33: Number of Crisis Services by County – Psychiatric Hospitals That Qualify as IMDs (2020 – 2022)



Source: Annual PAA, 2020 – 2022.

Exhibit E.34 provides the distribution (e.g., minimum, median, and maximum) of counts of Medicaid-enrolled acute care hospitals offering psychiatric services among Indiana counties (with these providers), as well as the number of counties without a Medicaid-enrolled acute care hospitals offering psychiatric services. **Exhibit E.35** provides maps of Medicaid-enrolled acute care hospitals offering psychiatric services by county for 2021 to 2022.[166]

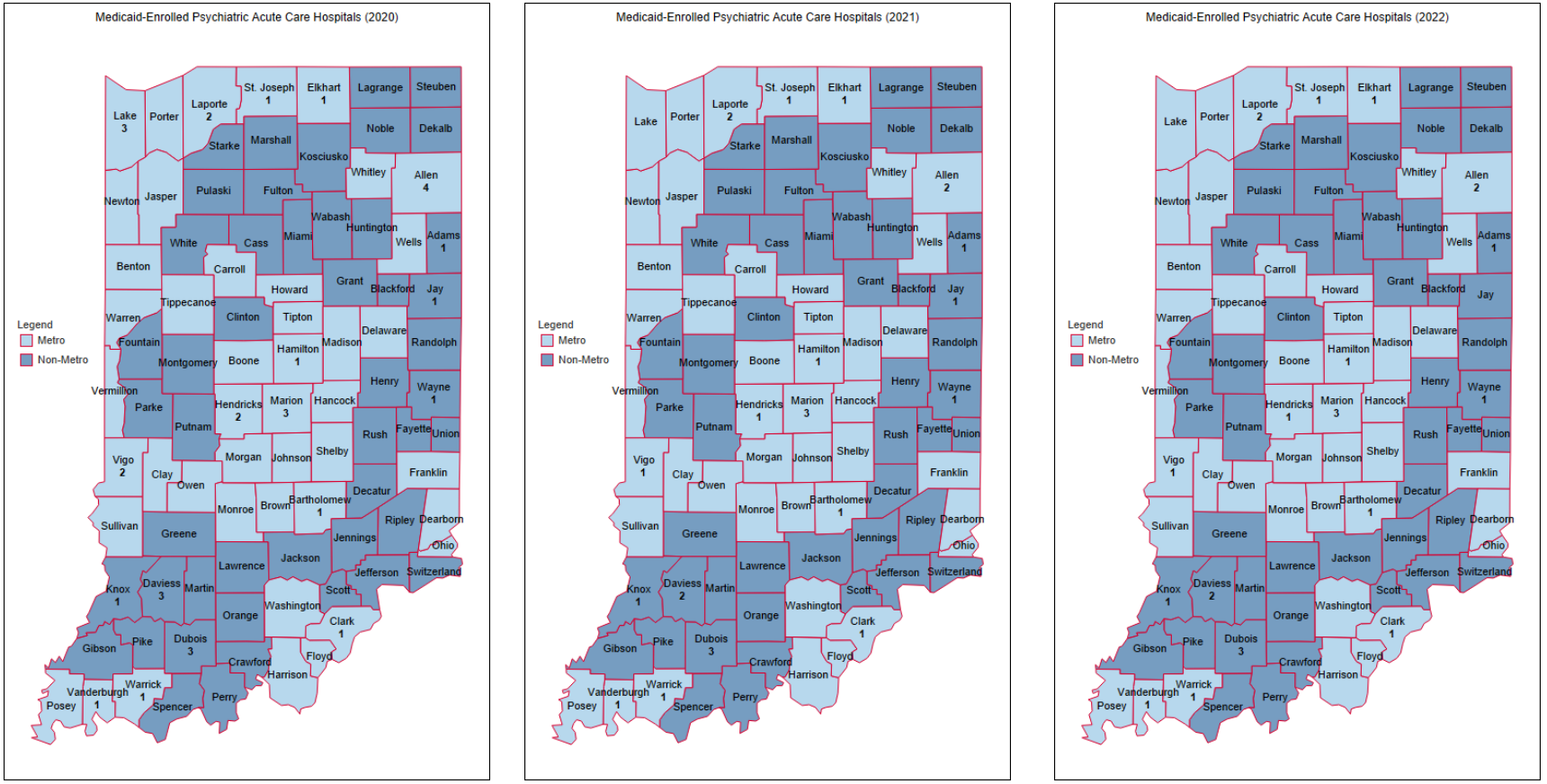
Exhibit E.34: Distribution of Crisis Services Per County by Year – Medicaid-enrolled Psychiatric Acute Care Hospitals and Critical Access Hospitals

Provider	Year	Total # of Providers	# of Counties with Providers	Distribution of # of Providers in a County (Among Counties with Available Assessment Data)						# of Counties with No Provider
				Mean	Min	P25	Median	P75	Max	
Medicaid-enrolled psychiatric acute care hospitals offering psychiatric services	2020	33	19	1.7	1	1	1	3	4	73
	2021	25	18	1.4	1	1	1	2	3	74
	2022	24	17	1.4	1	1	1	2	3	75
	2023	22	16	1.4	1	1	1	1.5	3	76
Medicaid-enrolled psychiatric critical access hospitals	2020	2	2	1.0	1	1	1	1	1	90
	2021	2	2	1.0	1	1	1	1	1	90
	2022	2	2	1.0	1	1	1	1	1	90
	2023	2	2	1.0	1	1	1	1	1	90

Source: State-provided administrative data, 2020 – 2023 (Updated November 2024).

[166] Medicaid-enrolled psychiatric critical access hospitals remained consistent over the study period (i.e., from 2020 to 2023) as shown in **Exhibit V.55** (i.e., one hospital in Adams County and one in Warrick County). The 2020 to 2022 maps have therefore been omitted from this appendix.

Exhibit E.35: Number of Crisis Services by County – Medicaid-enrolled Psychiatric Acute Care Hospitals (2020-2022)



Source: State-provided administrative data, 2020 – 2022 (Updated November 2024).

Exhibit E.36 provides the distribution (e.g., minimum, median, and maximum) of counts of licensed psychiatric hospital beds among Indiana counties (with these providers), as well as the number of counties without these providers. **Exhibit E.37** provides maps of licensed psychiatric hospital beds by county for 2021 to 2022.

Exhibit E.36: Distribution of Crisis Services Per County by Year – Licensed Psychiatric Hospital Beds

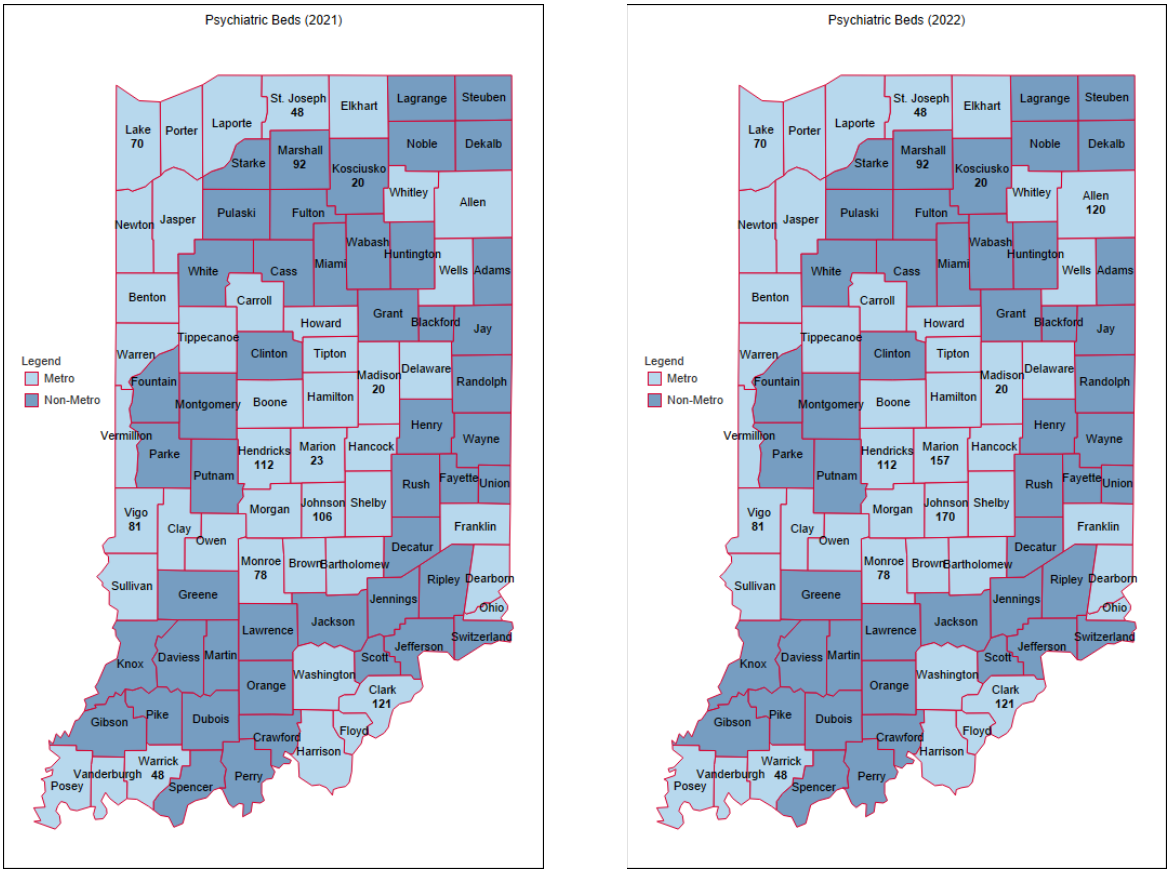
Provider	Year	Total # of Beds	# of Counties with Beds	Distribution of # of Psychiatric Hospital Beds in a County (Among Counties with Available Assessment Data)						# of Counties with No Beds
				Mean	Min	P25	Median	P75	Max	
Licensed Psychiatric Hospital Beds[167]	2020	*	*	*	*	*	*	*	*	*
	2021	819	12	68.3	20	35.5	74	99	121	80
	2022	1,137	13	87.5	20	48	81	120	170	79
	2023	1,227	14	87.6	20	48	79.5	120	199	78

* Exact bed counts for 2020 were not available via the same counting methodology as later years. However, state officials have indicated that bed counts have remained largely consistent over the past several years.

Source: State-provided administrative data, 2021 – 2023 (Updated September 2024).

[167] Exact bed counts for state-operated facilities were not available for years 2020 - 2023. Therefore, counts reported only include bed counts among private psychiatric hospitals.

Exhibit E.37: Number of Crisis Services by County – Licensed Psychiatric Hospital Beds (2021 – 2022)



Source: State-provided administrative data, 2021 – 2022 (Updated September 2024).

Exhibit E.38 provides the distribution (e.g., minimum, median, and maximum) of counts of RMHT facilities and RMHT facility beds among Indiana counties (with these providers), as well as the number of counties without these providers. **Exhibits E.39** to **E.40** provide maps of RMHT facilities and RMHT facility beds by county and year (for years in which data was available), respectively.

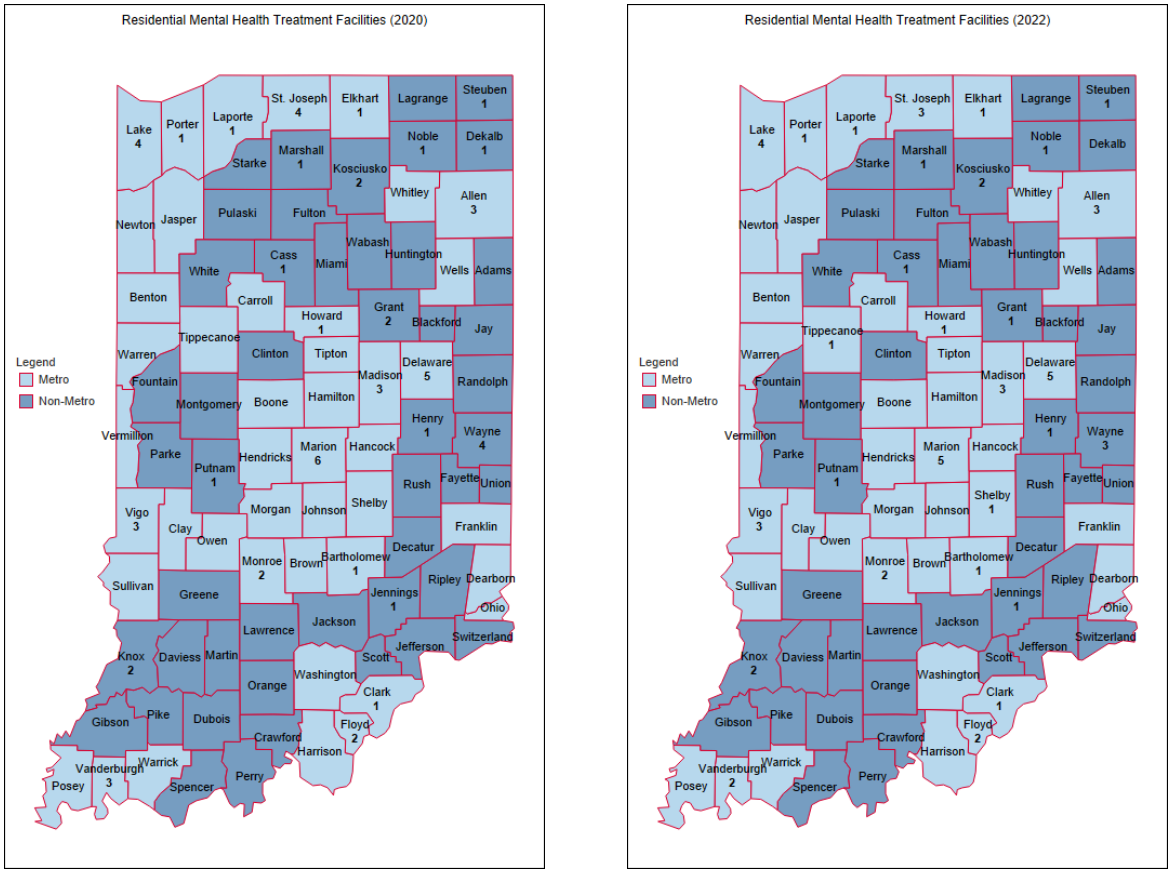
Exhibit E.38: Distribution of Crisis Services Per County by Year – RMHT Facilities and Beds

Provider	Year	Total # of Providers	# of Counties with Providers	Distribution of # of Providers in a County (Among Counties with Available Assessment Data)						# of Counties with No Provider
				Mean	Min	P25	Median	P75	Max	
RMHT Facilities	2020	59	28	2.1	1	1	1.5	3	6	64
	2021	*	*	*	*	*	*	*	*	*
	2022	55	29	1.9	1	1	1	3	5	63
	2023	56	28	2.0	1	1	1.5	3	5	64
RMHT Facility Beds	2020	610	28	21.8	6	10	14.5	31	60	64
	2021	*	*	*	*	*	*	*	*	*
	2022	565	29	19.5	6	10	14	27	55	63
	2023	*	*	*	*	*	*	*	*	*

* Exact RMHT facility and bed counts could not be confirmed for 2021. Exact bed counts were also unavailable for 2023. However, state records confirm that the 2023 list of RMHT facilities included: 54 of the same facilities as in the 2022 reporting period, plus two additional RMHT facilities, suggesting that the 2023 bed counts were similar to those for 2022.

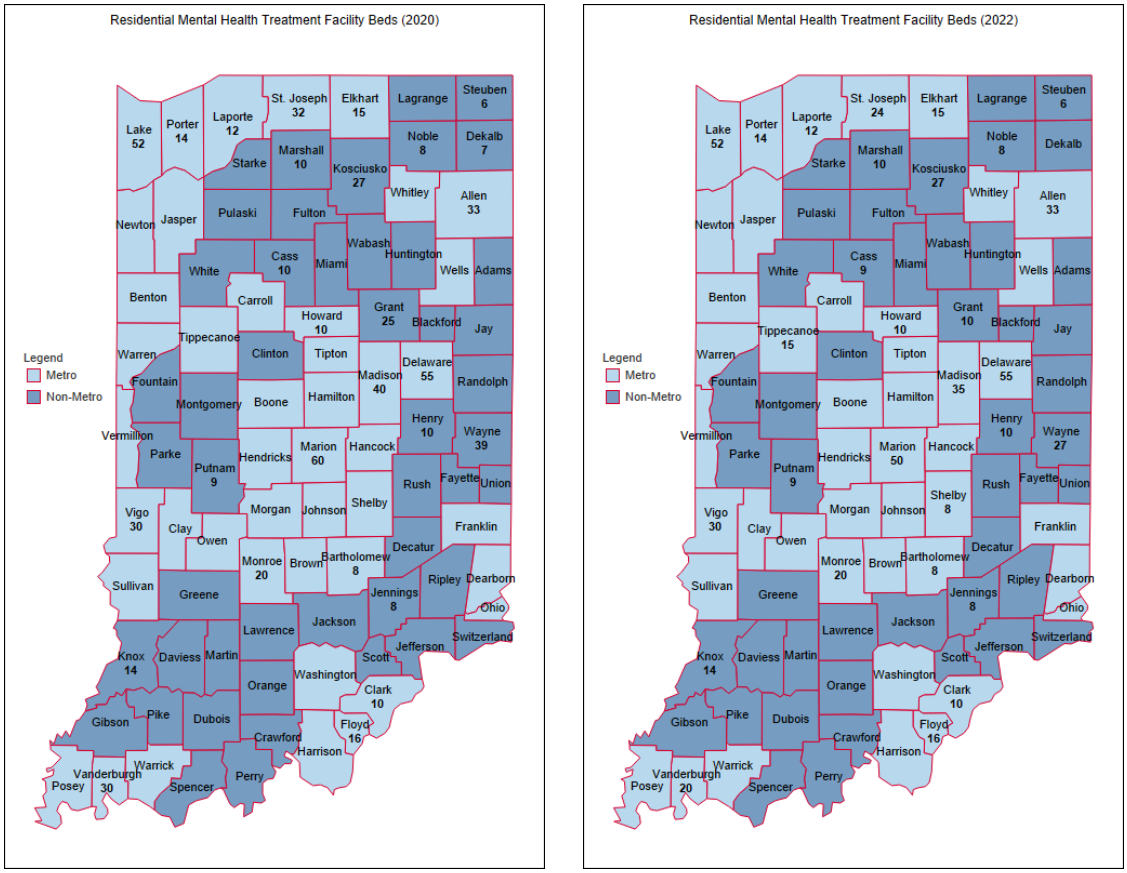
Source: RMHT Facilities: State-provided administrative data, 2020 (Updated November 2024); Annual PAA, 2022 – 2023. RMHT Facility Beds: State-provided administrative data, 2020, 2022 (Updated November 2024).

Exhibit E.39: Number of Crisis Services by County – RMHT Facilities (2020, 2022)



Source: State-provided administrative data, 2020 (Updated November 2024); Annual PAA, 2022.

Exhibit E.40: Number of Crisis Services by County – RMHT Facility Beds (2020, 2022)



Source: State-provided administrative data, 2020, 2022 (Updated November 2024).

Exhibit E.41 provides the distribution (e.g., minimum, median, and maximum) of counts of CMHC satellite sites among Indiana counties (with these providers), as well as the number of counties without a CMHC satellite site. **Exhibit E.42** provides maps of CMHC satellite sites by county for 2021 to 2022.

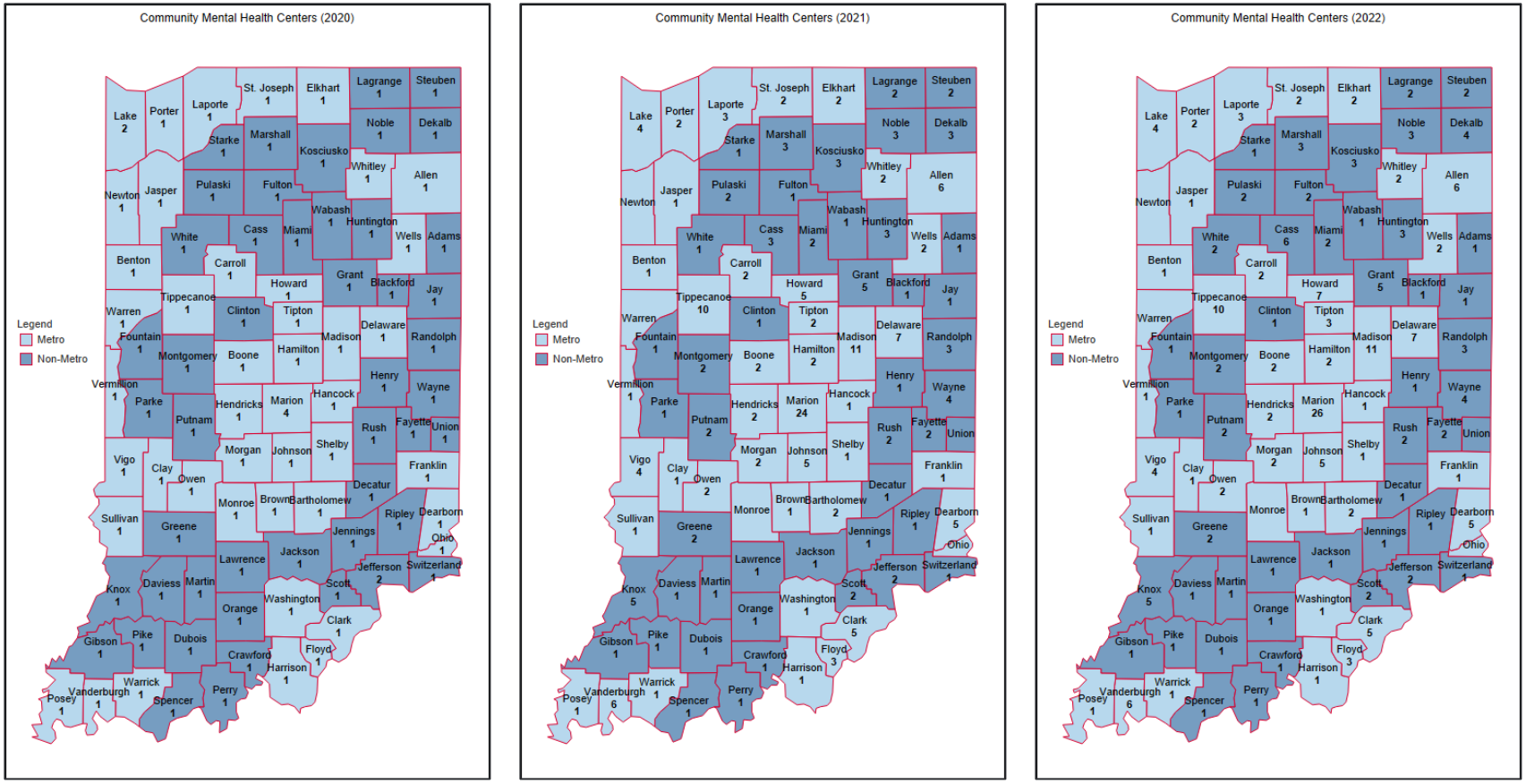
Exhibit E.41: Distribution of Crisis Services Per County by Year – CMHCs

Provider	Year	Total # of CMHC Satellite Sites	# of Counties with CMHC Satellite Sites	Distribution of # of Providers in a County (Among Counties with Available Assessment Data)						# of Counties with No CMHC Satellite Sites
				Mean	Min	P25	Median	P75	Max	
CMHCs (Satellite Sites)	2020	97	92	1.1	1	1	1	1	4	0
	2021	220	87	2.5	1	1	2	3	24	5
	2022	231	87	2.7	1	1	2	3	26	5
	2023[a]	324	87	3.7	1	1	2	5	33	5

[a] Prior to 2023, the state only reported CMHC satellite locations that provided MH-related services. Beginning in 2023, however, the state began reporting all CMHC satellite locations without differentiating among sites providing MH services. Thus, readers cannot assess growth in CMHCs in 2023 compared to prior years.

Source: Annual PAA, 2020 – 2023.

Exhibit E.42: Number of Crisis Services by County – CMHC Satellite Sites (2020 – 2022)



Source: Annual PAA, 2020 – 2022.

F. Goal 4

This section lists detailed exhibits related to Goal 4 claims/encounter-based analyses.

1. Community-Based Service Participation – Overall

Exhibit E.43 displays the number of SMI beneficiaries with each type of community-based services and the participation rates out of the yearly SMI beneficiary rosters. The majority (over 98%) of the SMI beneficiaries with a community-based service had used an outpatient MH service.

Exhibit E.43: Community-Based Services Participation Rate Among SMI Beneficiaries, by Year (2018 – 2023)

Service Type	Measure	2018*	2019*	2020	2021	2022	2023
	# SMI Beneficiaries	43,705	75,898	110,857	153,597	192,062	203,040
All MH-Related Community-Based Services	# SMI Beneficiaries with Service	38,412	53,022	66,955	86,070	97,895	100,355
	Participation Rate	87.9%	69.9%	60.4%	56.0%	51.0%	49.4%
Outpatient Rehab with Targeted Case Management	# SMI Beneficiaries with Service	21,290	25,217	28,663	32,903	31,050	27,093
	Participation Rate	48.7%	33.2%	25.9%	21.4%	16.2%	13.3%
HCBS & LTSS	# SMI Beneficiaries with Service	4,121	4,302	3,673	4,152	5,021	5,865
	Participation Rate	9.4%	5.7%	3.3%	2.7%	2.6%	2.9%
Outpatient MH Services	# SMI Beneficiaries with Service	37,814	52,270	66,390	85,283	97,085	99,522
	Participation Rate	86.5%	68.9%	59.9%	55.5%	50.5%	49.0%

* 2018 and 2019 data excludes Telehealth claims (POS code 02 or 10 or Telehealth Modifier 95, 93 or GT)

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

2. Community-Based Service Participation – By Sociodemographic Characteristics

Exhibits E.44 – E.47 provide the overall participation rates and the participation rates of each type of community-based services in the six years, by beneficiary characteristics.

Exhibit E.44: Community-Based Services Participation Rate Among SMI Beneficiaries, by Year and Beneficiary Characteristics: All MH-related Community-based Services (2018 – 2023)

Member Characteristics		Participation Rate: All Community-Based Services					
		2018*	2019*	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
All SMI Beneficiaries (with 10+ months enrollment after First SMI Diagnosis Date)		87.9%	69.9%	60.4%	56.0%	51.0%	49.4%
Gender	87.4%	87.6%	69.4%	60.5%	57.1%	52.5%	50.8%
	88.3%	88.4%	70.7%	60.1%	54.0%	48.0%	46.9%
Age	87.7%	87.7%	69.2%	60.4%	56.4%	50.8%	49.3%
	88.4%	88.8%	70.1%	60.5%	56.0%	51.1%	49.9%
	89.0%	89.2%	72.0%	62.2%	57.4%	52.3%	50.5%
	87.5%	87.5%	69.7%	60.4%	55.9%	51.0%	49.1%
	83.4%	83.5%	64.9%	54.1%	50.9%	46.3%	45.3%
Race	White/Caucasian	86.6%	68.4%	58.6%	54.5%	49.8%	48.5%
	Black	89.5%	67.8%	54.6%	49.4%	43.2%	41.0%
	Other	84.2%	65.1%	56.9%	55.2%	47.6%	43.7%
	Not Available	90.5%	74.0%	66.5%	62.6%	57.5%	55.7%
Ethnicity	Hispanic	90.8%	68.0%	57.2%	53.3%	47.7%	45.5%
	Non-Hispanic	87.9%	70.1%	60.7%	56.4%	51.4%	50.0%
	Unknown	85.8%	64.0%	54.1%	52.2%	46.5%	45.1%
Geographic Location	Metro	88.1%	69.6%	59.6%	55.2%	50.1%	48.4%
	Non-Metro	87.3%	70.5%	62.7%	58.4%	53.6%	52.4%
Dual Eligibility	Dually Eligible	89.6%	74.5%	64.9%	61.1%	57.3%	54.9%
	Not Dually Eligible	86.9%	67.9%	58.9%	54.6%	49.5%	48.2%
HIP	HIP	85.1%	66.8%	57.8%	53.7%	48.9%	47.6%
	Non-HIP	89.7%	72.7%	63.7%	59.6%	54.7%	52.8%

Member Characteristics		Participation Rate: All Community-Based Services					
		2018*	2019*	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
SMI Diagnosis	Bipolar only	86.3%	68.3%	59.4%	54.0%	48.8%	47.0%
	MDD only	84.6%	61.5%	51.8%	48.2%	43.7%	42.0%
	Schizophrenia only	93.4%	84.3%	75.7%	71.2%	64.9%	62.3%
	Co-Occurring Diagnoses	91.2%	81.0%	73.8%	70.5%	65.7%	65.0%
Chronic Conditions	Cancer	85.6%	68.0%	59.5%	56.8%	54.3%	53.7%
	No Cancer	88.0%	69.9%	60.4%	56.0%	50.9%	49.3%
	Cardiovascular Dis.	84.1%	65.5%	57.0%	54.8%	50.1%	50.0%
	No Cardiovascular Dis.	88.4%	70.4%	60.7%	56.2%	51.0%	49.4%
	COPD	86.6%	68.8%	60.7%	57.6%	53.1%	51.8%
	No COPD	88.2%	70.1%	60.3%	55.8%	50.7%	49.1%
	Diabetes	88.9%	71.8%	63.7%	60.4%	56.0%	54.5%
	No Diabetes	87.5%	69.3%	59.6%	55.1%	50.0%	48.5%
	Hypertension	87.3%	70.2%	62.0%	58.9%	55.2%	54.4%
	No Hypertension	88.4%	69.6%	59.4%	54.4%	48.9%	47.0%
	Metabolic Disease	88.0%	72.4%	65.0%	62.4%	58.9%	57.8%
	No Metabolic Disease	87.7%	66.8%	56.2%	50.7%	44.8%	42.6%
	Infectious Disease	85.5%	68.8%	61.2%	59.0%	55.5%	55.4%
	No Infectious Disease	89.1%	70.4%	60.0%	54.4%	48.5%	46.8%
	Respiratory Disease	87.6%	71.1%	63.5%	61.1%	57.3%	56.6%
	No Respiratory Disease	88.2%	68.5%	57.8%	52.2%	46.2%	44.1%
Number of Chronic Conditions	0	90.1%	65.8%	52.2%	44.8%	37.8%	34.9%
	1	87.8%	69.3%	60.9%	56.9%	52.4%	52.4%
	2	87.5%	71.1%	63.6%	60.3%	56.5%	55.2%
	3	87.7%	72.9%	65.1%	62.4%	58.4%	57.9%
	4+	87.2%	70.0%	62.2%	59.9%	56.5%	55.7%

* 2018 and 2019 data excludes Telehealth claims (POS code 02 or 10 or Telehealth Modifier 95, 93 or GT)

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023

Exhibit E.45: Community-Based Services Participation Rate Among SMI Beneficiaries, by Year and Beneficiary Characteristics: Outpatient Rehab and Targeted Case Management Services (2018 – 2023)

Member Characteristics		Participation Rate: Outpatient Rehab with Targeted Case Management					
		2018*	2019*	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
All SMI Beneficiaries (with 10+ months enrollment after First SMI Diagnosis Date)		48.7%	33.2%	25.9%	21.4%	16.2%	13.3%
Gender	Female	45.4%	30.3%	23.8%	20.2%	15.1%	12.1%
	Male	54.1%	38.4%	29.6%	23.8%	18.1%	15.6%
Age	Age 21-30	46.7%	31.5%	23.9%	20.0%	14.8%	11.8%
	Age 31-40	47.7%	31.8%	24.1%	20.1%	14.9%	12.4%
	Age 41-50	48.7%	33.9%	26.4%	21.9%	16.7%	13.9%
	Age 51-60	50.9%	35.3%	28.7%	23.8%	18.5%	15.6%
	Age 61-64	47.9%	32.9%	27.1%	23.0%	18.3%	15.8%
Race	White/Caucasian	46.0%	30.5%	23.4%	19.0%	14.4%	11.6%
	Black	54.9%	36.6%	26.0%	21.0%	14.7%	11.3%
	Other	37.6%	27.8%	25.2%	18.8%	14.3%	10.0%
	Not Available	53.1%	38.1%	31.4%	27.6%	21.6%	18.9%
Ethnicity	Hispanic	42.6%	26.4%	18.5%	14.7%	9.7%	8.1%
	Non-Hispanic	49.1%	33.7%	26.3%	22.0%	16.7%	13.9%
	Unknown	40.7%	24.5%	20.0%	16.1%	12.1%	9.0%
Geographic Location	Metro	47.1%	31.9%	24.7%	20.5%	15.3%	12.4%
	Non-Metro	53.2%	37.0%	29.1%	24.1%	18.5%	16.2%
Dual Eligibility	Dually Eligible	55.3%	41.9%	36.0%	31.3%	26.0%	23.2%
	Not Dually Eligible	44.8%	29.5%	22.5%	18.7%	13.8%	11.2%
HIP	HIP	40.0%	25.9%	19.8%	16.6%	12.3%	9.8%
	Non-HIP	54.3%	40.0%	33.5%	28.7%	22.9%	20.0%
SMI Diagnosis	Bipolar only	41.7%	28.5%	22.1%	17.6%	12.5%	10.4%
	MDD only	39.7%	23.1%	17.6%	14.5%	10.7%	8.4%
	Schizophrenia only	68.9%	59.6%	51.4%	45.5%	37.6%	33.5%
	Co-Occurring Diagnoses	55.1%	43.8%	36.4%	32.4%	25.9%	22.2%

Member Characteristics		Participation Rate: Outpatient Rehab with Targeted Case Management					
		2018*	2019*	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
Chronic Conditions	Cancer	44.3%	29.7%	24.9%	21.6%	17.8%	14.7%
	No Cancer	48.9%	33.4%	25.9%	21.4%	16.1%	13.3%
	Cardiovascular Dis.	44.3%	31.1%	26.4%	22.9%	18.3%	16.0%
	No Cardiovascular Dis.	49.3%	33.5%	25.8%	21.3%	16.0%	13.1%
	COPD	49.4%	34.1%	28.6%	25.8%	20.5%	17.6%
	No COPD	48.5%	33.0%	25.3%	20.7%	15.6%	12.8%
	Diabetes	51.7%	36.7%	31.0%	26.9%	21.7%	18.5%
	No Diabetes	47.7%	32.2%	24.6%	20.3%	15.1%	12.4%
	Hypertension	49.4%	34.9%	28.6%	24.6%	19.4%	16.7%
	No Hypertension	48.1%	31.9%	24.1%	19.6%	14.6%	11.7%
	Metabolic Disease	50.0%	35.5%	29.2%	25.0%	19.8%	16.5%
Chronic Conditions (cont.)	No Metabolic Disease	47.0%	30.5%	22.8%	18.4%	13.4%	10.7%
	Infectious Disease	46.3%	32.5%	26.1%	22.6%	17.4%	15.2%
	No Infectious Disease	50.0%	33.6%	25.7%	20.8%	15.5%	12.5%
	Respiratory Disease	47.4%	33.0%	27.0%	23.4%	18.0%	14.9%
	No Respiratory Disease	50.2%	33.4%	24.9%	19.9%	14.8%	12.1%
Number of Chronic Conditions	0	49.5%	30.8%	21.5%	16.4%	11.6%	8.9%
	1	47.8%	31.6%	24.4%	20.2%	15.3%	12.8%
	2	48.3%	32.9%	26.3%	22.1%	16.9%	14.1%
	3	49.3%	35.7%	29.0%	24.4%	18.8%	16.0%
	4+	48.8%	34.6%	29.1%	26.0%	20.8%	17.9%

* 2018 and 2019 data excludes Telehealth claims (POS code 02 or 10 or Telehealth Modifier 95, 93 or GT)

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023

Exhibit E.46: Community-Based Services Participation Rate Among SMI Beneficiaries, by Year and Beneficiary Characteristics: HCBS/LTSS (2018 – 2023)

Member Characteristics		Participation Rate: HCBS/LTSS					
		2018*	2019*	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
All SMI Beneficiaries (with 10+ months enrollment after First SMI Dx Date)		9.4%	5.7%	3.3%	2.7%	2.6%	2.9%
Gender	Female	9.1%	5.5%	3.3%	2.7%	2.7%	2.9%
	Male	9.9%	5.9%	3.3%	2.7%	2.5%	2.9%
Age	Age 21-30	8.4%	5.5%	3.8%	3.0%	2.9%	3.1%
	Age 31-40	8.1%	5.1%	3.4%	3.0%	2.8%	3.1%
	Age 41-50	9.1%	5.4%	3.1%	2.5%	2.5%	2.7%
	Age 51-60	10.2%	6.1%	3.0%	2.3%	2.3%	2.6%
	Age 61-64	13.0%	7.4%	3.3%	2.1%	2.1%	2.3%
Race	White/Caucasian	9.4%	5.4%	3.2%	2.6%	2.5%	2.6%
	Black	10.2%	5.8%	2.8%	2.1%	2.0%	2.4%
	Other	8.2%	5.1%	2.2%	2.2%	1.9%	2.6%
	Not Available	9.1%	6.1%	3.9%	3.3%	3.2%	3.8%
Ethnicity	Hispanic	8.8%	5.6%	2.5%	2.2%	2.0%	2.5%
	Non-Hispanic	9.5%	5.7%	3.4%	2.7%	2.7%	2.9%
	Unknown	8.4%	4.5%	2.7%	2.3%	2.4%	2.7%
Geographic Location	Metro	9.8%	5.9%	3.4%	2.8%	2.7%	3.0%
	Non-Metro	8.4%	5.1%	3.1%	2.5%	2.3%	2.6%
Dual Eligibility	Dually Eligible	11.8%	7.0%	4.2%	3.2%	3.4%	3.6%
	Not Dually Eligible	8.0%	5.1%	3.0%	2.6%	2.4%	2.7%
HIP	HIP	7.7%	4.8%	3.0%	2.5%	2.4%	2.7%
	Non-HIP	10.6%	6.5%	3.7%	3.0%	3.0%	3.3%

Member Characteristics		Participation Rate: HCBS/LTSS					
		2018*	2019*	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
SMI Diagnosis	Bipolar only	7.4%	4.6%	2.8%	2.3%	2.3%	2.3%
	MDD only	7.9%	4.4%	2.6%	2.0%	2.0%	2.2%
	Schizophrenia only	10.4%	6.1%	3.9%	3.1%	3.0%	3.4%
	Co-Occurring Diagnoses	14.9%	9.3%	5.1%	4.4%	4.2%	4.6%
Chronic Conditions	Cancer	11.4%	6.4%	3.2%	2.8%	2.5%	2.5%
	No Cancer	9.3%	5.6%	3.3%	2.7%	2.6%	2.9%
	Cardiovascular Dis.	13.0%	7.3%	2.9%	2.5%	2.3%	2.7%
	No Cardiovascular Dis.	8.9%	5.5%	3.4%	2.7%	2.6%	2.9%
	COPD	11.6%	6.7%	3.2%	2.7%	2.6%	2.8%
	No COPD	8.9%	5.4%	3.3%	2.7%	2.6%	2.9%
	Diabetes	11.5%	6.9%	3.7%	2.8%	2.8%	3.1%
	No Diabetes	8.7%	5.3%	3.2%	2.7%	2.6%	2.8%
	Hypertension	10.9%	6.6%	3.5%	2.8%	2.7%	3.1%
	No Hypertension	8.1%	4.9%	3.2%	2.7%	2.6%	2.8%
Chronic Conditions (cont.)	Metabolic Disease	10.5%	6.5%	3.8%	3.1%	3.1%	3.3%
	No Metabolic Disease	8.0%	4.7%	2.9%	2.4%	2.2%	2.5%
	Infectious Disease	11.9%	7.3%	3.8%	3.3%	3.2%	3.4%
	No Infectious Disease	8.1%	4.8%	3.1%	2.4%	2.3%	2.7%
	Respiratory Disease	10.3%	6.3%	3.7%	3.2%	3.0%	3.4%
	No Respiratory Disease	8.4%	5.0%	3.0%	2.3%	2.3%	2.5%
Number of Chronic Conditions	0	6.6%	4.1%	2.5%	1.9%	1.9%	2.0%
	1	8.3%	4.8%	3.3%	2.8%	2.6%	3.1%
	2	8.6%	5.2%	3.5%	3.0%	2.9%	3.3%
	3	9.3%	6.1%	3.7%	3.1%	3.2%	3.3%
	4+	12.2%	7.4%	3.7%	3.1%	3.0%	3.2%

* 2018 and 2019 data excludes Telehealth claims (POS code 02 or 10 or Telehealth Modifier 95, 93 or GT)

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

Exhibit E.47: Community-Based Services Participation Rate Among SMI Beneficiaries, by Year and Beneficiary Characteristics: Outpatient MH Related Services (2018 – 2023)

Member Characteristics		Participation Rate: Outpatient MH Services					
		2018	2019	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
All SMI Beneficiaries (with 10+ months enrollment after First SMI Dx Date)		86.5%	68.9%	59.9%	55.5%	50.5%	49.0%
Gender	Female	86.4%	68.6%	60.1%	56.7%	52.2%	50.4%
	Male	86.7%	69.4%	59.5%	53.4%	47.5%	46.4%
Age	Age 21-30	86.9%	68.7%	59.9%	55.9%	50.4%	48.9%
	Age 31-40	87.9%	69.5%	60.0%	55.6%	50.7%	49.5%
	Age 41-50	88.1%	71.2%	61.8%	56.9%	52.0%	50.1%
	Age 51-60	85.7%	68.3%	59.9%	55.3%	50.6%	48.7%
	Age 61-64	80.3%	62.5%	53.4%	50.1%	45.7%	44.8%
Race	White/Caucasian	85.2%	67.4%	58.2%	54.0%	49.4%	48.1%
	Black	87.5%	66.4%	54.0%	48.8%	42.6%	40.6%
	Other	81.6%	64.4%	56.1%	54.6%	47.4%	43.5%
	Not Available	89.4%	73.1%	66.1%	62.1%	57.0%	55.2%
Ethnicity	Hispanic	89.8%	67.2%	56.9%	52.9%	47.4%	45.3%
	Non-Hispanic	86.5%	69.1%	60.2%	55.8%	51.0%	49.5%
	Unknown	85.2%	63.3%	53.4%	51.8%	46.1%	44.7%
Geographic Location	Metro	86.7%	68.7%	59.1%	54.7%	49.6%	48.0%
	Non-Metro	86.0%	69.4%	62.2%	57.8%	53.1%	51.9%
Dual Eligibility	Dually Eligible	87.8%	72.8%	64.1%	60.2%	56.6%	54.3%
	Not Dually Eligible	85.8%	67.1%	58.5%	54.2%	49.1%	47.9%
HIP	HIP	84.3%	66.4%	57.4%	53.4%	48.5%	47.3%
	Non-HIP	88.0%	71.1%	63.0%	58.8%	54.1%	52.2%

Member Characteristics		Participation Rate: Outpatient MH Services					
		2018	2019	2020	2021	2022	2023
		N=43,705	N=75,898	N=110,857	N=153,597	N=192,062	N=203,040
SMI Diagnosis	Bipolar only	85.5%	67.7%	59.0%	53.5%	48.4%	46.6%
	MDD only	83.2%	60.7%	51.3%	47.7%	43.4%	41.6%
	Schizophrenia only	92.2%	83.2%	74.9%	70.4%	64.2%	61.7%
	Co-Occurring Diagnoses	88.8%	79.3%	73.1%	69.9%	65.1%	64.5%
Chronic Conditions	Cancer	83.1%	66.5%	58.8%	56.1%	53.8%	53.2%
	No Cancer	86.7%	69.0%	59.9%	55.5%	50.5%	48.9%
	Cardiovascular Dis.	80.4%	63.0%	56.4%	54.2%	49.5%	49.7%
	No Cardiovascular Dis.	87.4%	69.6%	60.2%	55.6%	50.6%	49.0%
	COPD	84.1%	67.0%	60.1%	56.9%	52.6%	51.4%
	No COPD	87.2%	69.3%	59.8%	55.3%	50.3%	48.7%
	Diabetes	86.7%	70.1%	63.1%	59.8%	55.5%	54.1%
	No Diabetes	86.5%	68.5%	59.1%	54.6%	49.6%	48.1%
	Hypertension	85.5%	68.8%	61.4%	58.3%	54.7%	54.0%
	No Hypertension	87.5%	69.0%	58.9%	53.9%	48.5%	46.6%
	Metabolic Disease	86.5%	71.3%	64.5%	61.9%	58.5%	57.4%
	No Metabolic Disease	86.6%	66.0%	55.7%	50.2%	44.3%	42.2%
	Infectious Disease	83.1%	67.1%	60.6%	58.4%	55.0%	55.0%
	No Infectious Disease	88.3%	69.8%	59.5%	54.0%	48.1%	46.4%
	Respiratory Disease	86.1%	70.0%	62.9%	60.6%	56.9%	56.2%
	No Respiratory Disease	87.0%	67.6%	57.3%	51.7%	45.7%	43.7%
Number of Chronic Conditions	0	89.3%	65.2%	51.6%	44.3%	37.3%	34.5%
	1	87.0%	68.7%	60.5%	56.5%	52.0%	51.9%
	2	86.5%	70.5%	63.2%	59.8%	56.1%	54.8%
	3	86.7%	72.1%	64.6%	62.0%	58.0%	57.6%
	4+	84.7%	68.2%	61.6%	59.3%	56.0%	55.3%

* 2018 and 2019 data excludes Telehealth claims (POS code 02 or 10 or Telehealth Modifier 95, 93 or GT)

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023

3. Community-Based Service Participation – Regression Estimates

Exhibit E.48 displays OR estimates from the ITS logistic regression model; each OR shows the estimated odds of an eligible SMI beneficiary having community-based services, relative to the reference group.

Exhibit E.48: Logistic Regression Model of MH Community-based Services Participation Rates (2018 – 2023, Excluding 2020)

Variable	Level	All Community-Based Services			Outpatient Rehab with Targeted Case Management			HCBS/LTSS			Outpatient MH Services		
		OR	95% CI	p-Value	OR	95% CI	p-Value	OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.27	(0.26, 0.28)	< 0.001	0.75	(0.72, 0.78)	< 0.001	0.23	(0.21, 0.26)	< 0.001	0.30	(0.28, 0.31)	< 0.001
Time	Pre-Intervention	0.32	(0.31, 0.33)	< 0.001	0.55	(0.53, 0.56)	< 0.001	0.58	(0.55, 0.60)	< 0.001	0.35	(0.34, 0.36)	< 0.001
	Post-Intervention	0.88	(0.87, 0.89)	< 0.001	0.76	(0.75, 0.76)	< 0.001	1.05	(1.03, 1.07)	< 0.001	0.88	(0.88, 0.89)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	0.32	(0.31, 0.33)	< 0.001	0.55	(0.53, 0.56)	< 0.001	0.58	(0.55, 0.60)	< 0.001	0.35	(0.34, 0.36)	< 0.001
	Post-Int. * 2021	0.18	(0.18, 0.19)	< 0.001	0.33	(0.32, 0.33)	< 0.001	0.27	(0.26, 0.28)	< 0.001	0.20	(0.20, 0.21)	< 0.001
	Post-Int. * 2022	0.16	(0.16, 0.17)	< 0.001	0.25	(0.24, 0.25)	< 0.001	0.28	(0.27, 0.29)	< 0.001	0.18	(0.17, 0.18)	< 0.001
	Post-Int. * 2023	0.14	(0.14, 0.15)	< 0.001	0.19	(0.18, 0.19)	< 0.001	0.30	(0.28, 0.31)	< 0.001	0.16	(0.15, 0.16)	< 0.001
Gender (Ref: Female)	Male	0.83	(0.82, 0.84)	< 0.001	1.08	(1.06, 1.09)	< 0.001	1.00	(0.97, 1.03)	0.896	0.82	(0.81, 0.83)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.93	(0.92, 0.94)	< 0.001	0.92	(0.90, 0.93)	< 0.001	0.90	(0.86, 0.93)	< 0.001	0.93	(0.92, 0.95)	< 0.001
	Age 41-50	0.89	(0.87, 0.90)	< 0.001	0.89	(0.87, 0.91)	< 0.001	0.77	(0.74, 0.80)	< 0.001	0.89	(0.88, 0.91)	< 0.001
	Age 51-60	0.79	(0.77, 0.80)	< 0.001	0.91	(0.89, 0.93)	< 0.001	0.75	(0.72, 0.79)	< 0.001	0.79	(0.78, 0.81)	< 0.001
	Age 61-64	0.64	(0.62, 0.65)	< 0.001	0.83	(0.80, 0.85)	< 0.001	0.76	(0.72, 0.81)	< 0.001	0.63	(0.62, 0.65)	< 0.001
Race (Ref: White/Caucasian)	Black	0.76	(0.75, 0.78)	< 0.001	1.03	(1.01, 1.06)	0.002	0.23	(0.21, 0.26)	< 0.001	0.30	(0.28, 0.31)	< 0.001
	Other/Not Available	1.24	(1.23, 1.26)	< 0.001	1.51	(1.49, 1.53)	< 0.001	0.58	(0.55, 0.60)	< 0.001	0.35	(0.34, 0.36)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.82	(0.80, 0.85)	< 0.001	0.57	(0.55, 0.60)	< 0.001	1.05	(1.03, 1.07)	< 0.001	0.88	(0.88, 0.89)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.12	(1.10, 1.13)	< 0.001	1.34	(1.32, 1.36)	< 0.001	0.58	(0.55, 0.60)	< 0.001	0.35	(0.34, 0.36)	< 0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	1.24	(1.22, 1.25)	< 0.001	1.66	(1.64, 1.69)	< 0.001	0.27	(0.26, 0.28)	< 0.001	0.20	(0.20, 0.21)	< 0.001

Variable	Level	All Community-Based Services			Outpatient Rehab with Targeted Case Management			HCBS/LTSS			Outpatient MH Services		
		OR	95% CI	p-Value	OR	95% CI	p-Value	OR	95% CI	p-Value	OR	95% CI	p-Value
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.23	(1.22, 1.25)	< 0.001	1.19	(1.16, 1.21)	< 0.001	0.28	(0.27, 0.29)	< 0.001	0.18	(0.17, 0.18)	< 0.001
	Schizophrenia only	2.97	(2.90, 3.04)	< 0.001	4.23	(4.14, 4.32)	< 0.001	0.30	(0.28, 0.31)	< 0.001	0.16	(0.15, 0.16)	< 0.001
	Co-occurring SMI	2.44	(2.41, 2.48)	< 0.001	2.55	(2.51, 2.59)	< 0.001	1.00	(0.97, 1.03)	0.896	0.82	(0.81, 0.83)	< 0.001
Chronic Conditions (Ref: No)	Cancer	1.03	(1.00, 1.06)	0.069	0.93	(0.90, 0.97)	< 0.001	0.90	(0.86, 0.93)	< 0.001	0.93	(0.92, 0.95)	< 0.001
	Cardiovascular Dis.	0.77	(0.75, 0.78)	< 0.001	0.80	(0.78, 0.82)	< 0.001	0.77	(0.74, 0.80)	< 0.001	0.89	(0.88, 0.91)	< 0.001
	COPD	0.86	(0.85, 0.88)	< 0.001	1.02	(1.00, 1.04)	0.135	0.75	(0.72, 0.79)	< 0.001	0.79	(0.78, 0.81)	< 0.001
	Diabetes	0.97	(0.96, 0.99)	< 0.001	1.10	(1.08, 1.12)	< 0.001	0.76	(0.72, 0.81)	< 0.001	0.63	(0.62, 0.65)	< 0.001
	Hypertension	1.06	(1.05, 1.08)	< 0.001	1.06	(1.04, 1.07)	< 0.001	0.87	(0.83, 0.91)	< 0.001	0.76	(0.74, 0.77)	< 0.001
	Infectious Disease	1.05	(1.04, 1.06)	< 0.001	1.00	(0.99, 1.02)	0.667	1.15	(1.12, 1.19)	< 0.001	1.24	(1.23, 1.26)	< 0.001
	Metabolic Disease	1.63	(1.61, 1.65)	< 0.001	1.33	(1.31, 1.35)	< 0.001	0.82	(0.75, 0.89)	< 0.001	0.83	(0.80, 0.85)	< 0.001
	Respiratory Disease	1.34	(1.32, 1.35)	< 0.001	1.14	(1.12, 1.15)	< 0.001	0.84	(0.82, 0.87)	< 0.001	1.11	(1.10, 1.12)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023 (Excluding 2020).

4. Community-Based Service Participation – Sensitivity Analyses

Exhibit E.49 presents the results of the logistic regression with 2020 data included for MH Community-based Services. The OR estimates were consistent with the logistic regressions with 2020 data excluded.

Exhibit E.49: Logistic Regression Model of MH Community-based Services Participation Rates (2018 – 2023)

Variable	Level	All Services			Outpatient Rehab with Targeted Case Management			HCBS/LTSS			Outpatient MH Services		
		OR	95% CI	p-Value	OR	95% CI	p-Value	OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.29	(0.28, 0.30)	< 0.001	0.70	(0.68, 0.73)	< 0.001	0.32	(0.30, 0.34)	< 0.001	0.32	(0.31, 0.33)	< 0.001
Time	Pre-Intervention	0.31	(0.30, 0.32)	< 0.001	0.54	(0.53, 0.56)	< 0.001	0.58	(0.56, 0.61)	< 0.001	0.34	(0.32, 0.35)	< 0.001
	Post-Intervention	0.86	(0.86, 0.87)	< 0.001	0.77	(0.76, 0.77)	< 0.001	0.97	(0.96, 0.98)	< 0.001	0.87	(0.86, 0.87)	< 0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	0.31	(0.30, 0.32)	< 0.001	0.54	(0.53, 0.56)	< 0.001	0.58	(0.56, 0.61)	< 0.001	0.34	(0.32, 0.35)	< 0.001
	Post-Int * 2020	0.22	(0.21, 0.22)	< 0.001	0.41	(0.40, 0.42)	< 0.001	0.30	(0.29, 0.31)	< 0.001	0.24	(0.23, 0.25)	< 0.001
	Post-Int. * 2021	0.19	(0.18, 0.19)	< 0.001	0.32	(0.31, 0.32)	< 0.001	0.29	(0.28, 0.30)	< 0.001	0.21	(0.20, 0.21)	< 0.001
	Post-Int. * 2022	0.16	(0.16, 0.17)	< 0.001	0.24	(0.24, 0.25)	< 0.001	0.28	(0.27, 0.29)	< 0.001	0.18	(0.17, 0.18)	< 0.001
	Post-Int. * 2023	0.14	(0.13, 0.14)	< 0.001	0.18	(0.18, 0.19)	< 0.001	0.27	(0.26, 0.29)	< 0.001	0.15	(0.15, 0.16)	< 0.001
Gender (Ref: Female)	Male	0.81	(0.80, 0.82)	< 0.001	1.05	(1.04, 1.07)	< 0.001	0.97	(0.95, 1.00)	0.043	0.81	(0.80, 0.82)	< 0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.93	(0.92, 0.94)	< 0.001	0.92	(0.90, 0.93)	< 0.001	0.89	(0.86, 0.92)	< 0.001	0.93	(0.92, 0.95)	< 0.001
	Age 41-50	0.88	(0.87, 0.90)	< 0.001	0.89	(0.88, 0.91)	< 0.001	0.76	(0.73, 0.79)	< 0.001	0.89	(0.88, 0.90)	< 0.001
	Age 51-60	0.79	(0.77, 0.80)	< 0.001	0.92	(0.90, 0.93)	< 0.001	0.73	(0.70, 0.76)	< 0.001	0.79	(0.78, 0.80)	< 0.001
	Age 61-64	0.63	(0.62, 0.65)	< 0.001	0.83	(0.81, 0.86)	< 0.001	0.74	(0.70, 0.79)	< 0.001	0.63	(0.61, 0.64)	< 0.001
Race (Ref: White/Caucasian)	Black	0.76	(0.75, 0.78)	< 0.001	1.02	(1.00, 1.05)	0.020	0.85	(0.82, 0.89)	< 0.001	0.76	(0.75, 0.77)	< 0.001
	Other/Not Available	1.26	(1.24, 1.27)	< 0.001	1.51	(1.49, 1.53)	< 0.001	1.15	(1.12, 1.19)	< 0.001	1.25	(1.24, 1.27)	< 0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.81	(0.79, 0.84)	< 0.001	0.58	(0.56, 0.60)	< 0.001	0.81	(0.75, 0.88)	< 0.001	0.82	(0.80, 0.84)	< 0.001
Geographic Location (Ref: Metro)	Non-metro	1.12	(1.10, 1.13)	< 0.001	1.35	(1.33, 1.37)	< 0.001	0.85	(0.82, 0.87)	< 0.001	1.11	(1.10, 1.12)	< 0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	1.20	(1.19, 1.22)	< 0.001	1.61	(1.59, 1.64)	< 0.001	1.36	(1.32, 1.40)	< 0.001	1.18	(1.17, 1.20)	< 0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	1.25	(1.23, 1.26)	< 0.001	1.20	(1.18, 1.22)	< 0.001	1.03	(0.99, 1.07)	0.100	1.25	(1.24, 1.27)	< 0.001
	Schizophrenia only	2.95	(2.89, 3.01)	< 0.001	4.17	(4.08, 4.25)	< 0.001	1.43	(1.37, 1.49)	< 0.001	2.91	(2.85, 2.97)	< 0.001
	Co-occurring SMI	2.44	(2.41, 2.47)	< 0.001	2.51	(2.48, 2.55)	< 0.001	1.98	(1.93, 2.04)	< 0.001	2.41	(2.38, 2.44)	< 0.001

Variable	Level	All Services			Outpatient Rehab with Targeted Case Management			HCBS/LTSS			Outpatient MH Services		
		OR	95% CI	p-Value	OR	95% CI	p-Value	OR	95% CI	p-Value	OR	95% CI	p-Value
Chronic Conditions (Ref: No)	Cancer	1.04	(1.01, 1.07)	0.010	0.93	(0.90, 0.97)	< 0.001	0.99	(0.93, 1.07)	0.846	1.03	(1.00, 1.06)	0.036
	Cardiovascular Dis.	0.77	(0.76, 0.79)	< 0.001	0.81	(0.79, 0.83)	< 0.001	0.95	(0.91, 0.99)	0.029	0.76	(0.75, 0.78)	< 0.001
	COPD	0.92	(0.90, 0.93)	< 0.001	1.03	(1.02, 1.05)	< 0.001	0.97	(0.94, 1.01)	0.146	0.91	(0.90, 0.93)	< 0.001
	Diabetes	0.99	(0.97, 1.00)	0.117	1.11	(1.09, 1.12)	< 0.001	0.99	(0.96, 1.03)	0.681	0.99	(0.97, 1.00)	0.058
	Hypertension	1.08	(1.07, 1.09)	< 0.001	1.07	(1.05, 1.08)	< 0.001	1.06	(1.03, 1.10)	< 0.001	1.08	(1.07, 1.09)	< 0.001
	Infectious Disease	1.10	(1.09, 1.12)	< 0.001	1.01	(1.00, 1.03)	0.067	1.30	(1.26, 1.33)	< 0.001	1.09	(1.08, 1.10)	< 0.001
	Metabolic Disease	1.70	(1.68, 1.72)	< 0.001	1.35	(1.33, 1.37)	< 0.001	1.29	(1.25, 1.32)	< 0.001	1.71	(1.69, 1.72)	< 0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023

5. Community-Based Service Participation – Provider Availability

Exhibit E.50 provides the distribution (e.g., minimum, median, and maximum) of counts of psychiatrists and other MH practitioners authorized to prescribe (overall and those Medicaid-enrolled only) among Indiana counties (with these providers), as well as the number of counties without these providers. **Exhibit E.51** maps the counts of psychiatrists and other MH practitioners authorized to prescribe (overall and those Medicaid-enrolled only) by county for 2022.

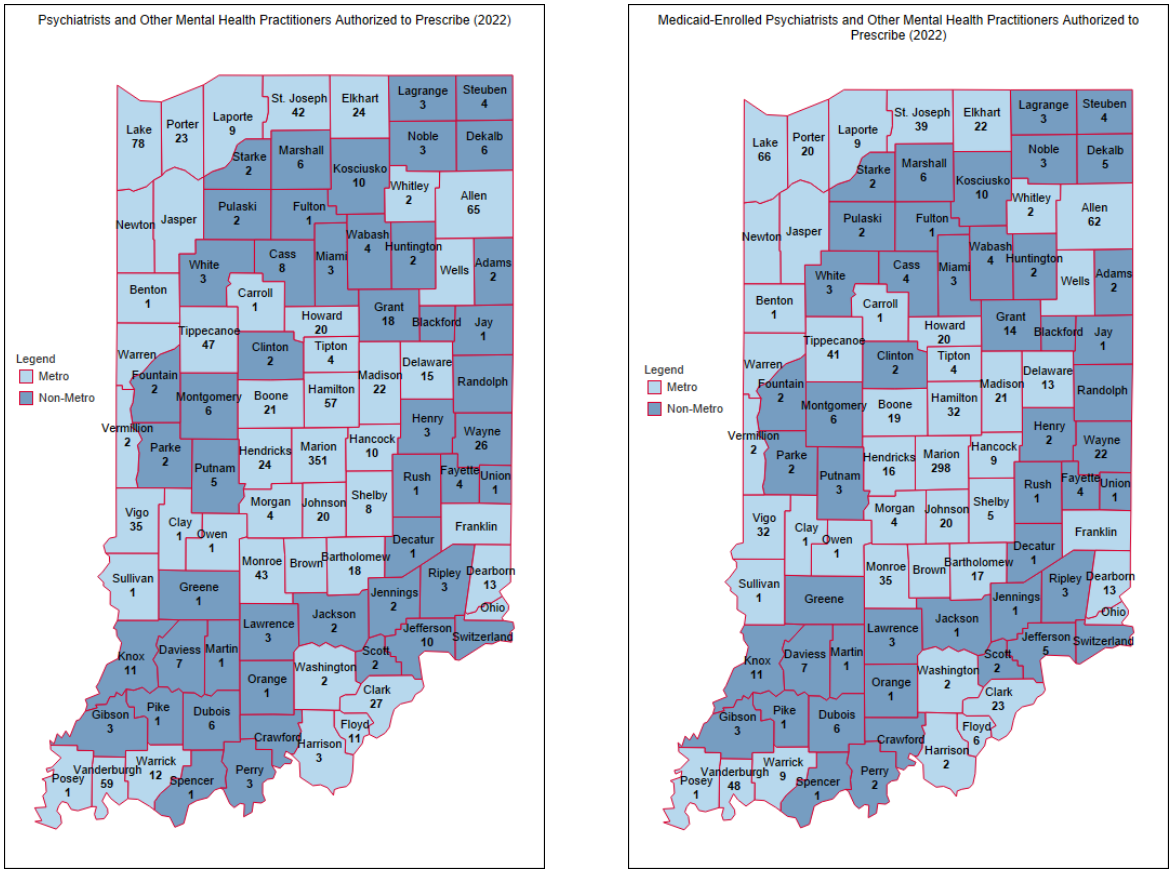
Exhibit E.50: Distribution of Community-based Services Providers Per County by Year – Psychiatrists and Other MH Practitioners Authorized to Prescribe, Overall and Medicaid-enrolled

Provider	Year	Total # of Providers	# of Counties with Providers	Distribution of # of Providers in a County (Among Counties with Available Assessment Data)						# of Counties with No Provider
				Mean	Min	P25	Median	P75	Max	
Psychiatrists Other MH Practitioners Authorized to Prescribe	2020	*	*	*	*	*	*	*	*	*
	2021	*	*	*	*	*	*	*	*	*
	2022	1,265	81	15.6	1	2	4	15	351	11
	2023	1,274	73	17.5	1	2	4	14	341	19
Medicaid-enrolled Psychiatrists Other MH Practitioners Authorized to Prescribe	2020	*	*	*	*	*	*	*	*	*
	2021	*	*	*	*	*	*	*	*	*
	2022	1,080	80	13.5	1	2	4	13.5	298	12
	2023	842	70	12.0	1	1	3.5	11	220	22

* Counts for 2020 and 2021 were not available via the same reporting source/using the same counting methodology for 2020-2021. Therefore, counts for these years are not reported.

Source: Psychiatrists and Other MH Practitioners Authorized to Prescribe: Annual PAA, 2022 – 2023.
Medicaid-enrolled Psychiatrists and Other MH Practitioners Authorized to Prescribe: State-provided administrative data, 2022 (Updated September 2024); Annual PAA, 2023.

Exhibit E.51: Number of Community-Based Service Providers – Psychiatrists and Other Practitioners Authorized to Prescribe, Overall and Medicaid-enrolled (2022)



Source: Psychiatrists and Other MH Practitioners Authorized to Prescribe: Annual PAA, 2022.
Medicaid-enrolled Psychiatrists and Other MH Practitioners Authorized to Prescribe: State-provided administrative data, 2022 (Updated November 2024).

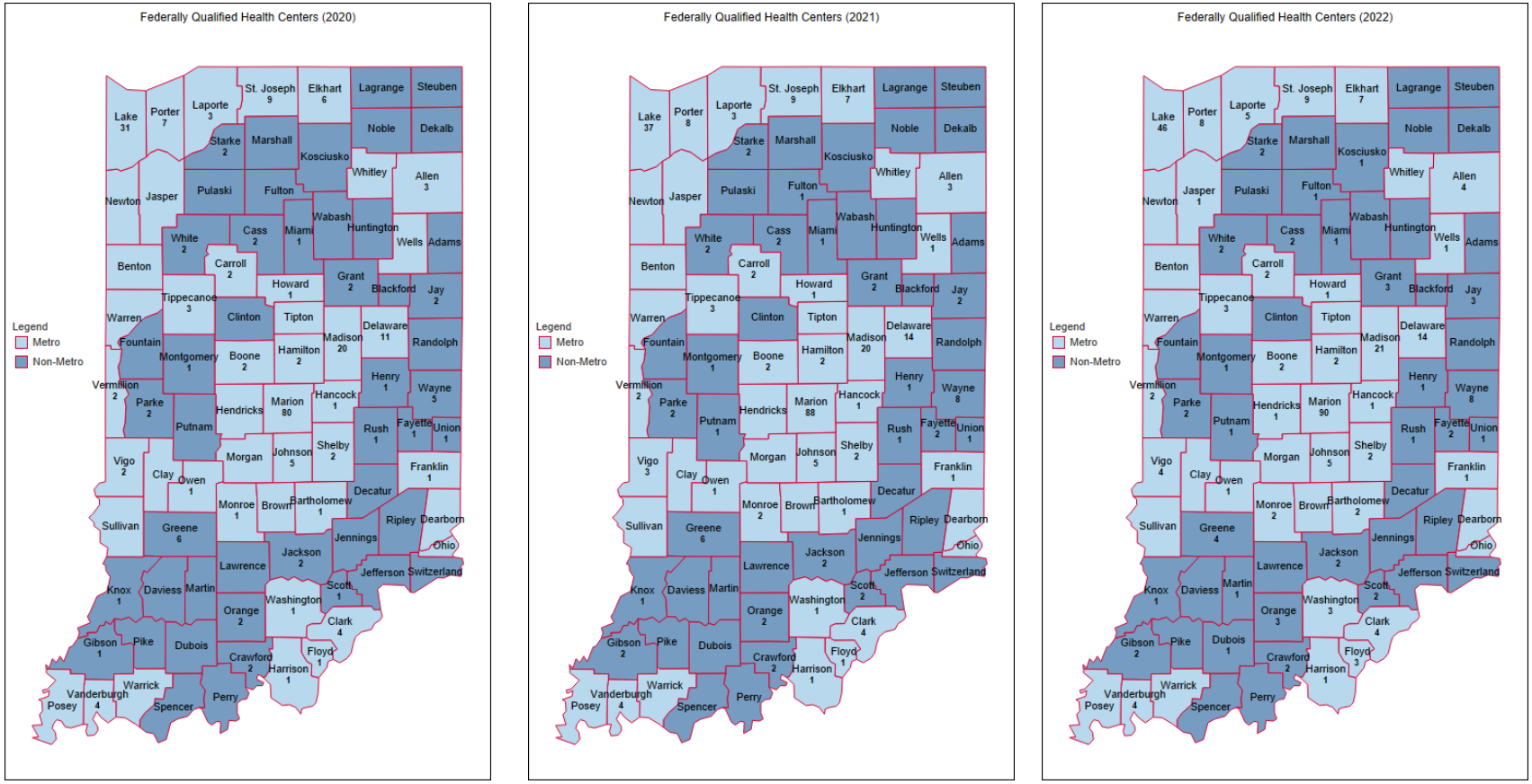
Exhibit E.52 provides the distribution (e.g., minimum, median, and maximum) of counts of FQHCs among Indiana counties (with a FQHC), as well as the number of counties without a FQHC. **Exhibit E.53** provides maps of FQHCs by county for 2020 to 2022.

Exhibit E.52: Distribution of Crisis Services Per County by Year – FQHCs

Provider	Year	Total # of FQHCs	# of Counties with FQHCs	Distribution of # of Providers in a County (Among Counties with Available Assessment Data)						# of Counties with No FQHC
				Mean	Min	P25	Median	P75	Max	
FQHCs That Offer Behavioral Health Services	2020	245	48	5.1	1	1	2	3.5	80	44
	2021	275	51	5.4	1	1	2	3	88	41
	2022	302	56	5.4	1	1	2	4	90	36
	2023	300	60	5.0	1	1	2	3	80	32

Source: State-provided administrative data, 2020-2023 (Updated November 2024).

Exhibit E.53: Number of Community-Based Service Providers by County – FCHCs (2020 – 2022)



Source: State-provided administrative data, 2020-2023 (Updated November 2024).

G. Goal 5

Detailed results from the claims/encounter data-based analytics for Goal 5 are listed in this section. The exhibits include tables showing: (1) the step-by-step approach to identifying the index ED visits/discharges, the count for numerator and the follow-up rates, (2) 7- and 30-day follow-up rates by selected beneficiary sociodemographic characteristics, and (3) findings from the regression-based analyses.

1. Analytic Cohort for Follow-up After ED Visits with MH Diagnosis

Exhibit E.54 displays the step-by-step approach to identifying the index ED visits, the count for numerator and the follow-up rates after MH-related ED visits.

Exhibit E.54: Step-by-Step Attrition of Follow-Up After ED Visits for MH-Related Diagnosis Among SMI Beneficiaries, (2018 – 2023)

Measurement Year		2018		2019		2020		2021		2022		2023	
All SMI Beneficiaries		90,833		124,131		153,217		191,728		227,466		263,327	
Measure Unit		B[a]	V[b]	B	V	B	V	B	V	B	V	B	V
Step-by-step attrition to generate denominator	All ED visits between January 1 and December 1	53,254	179,330	69,492	222,498	79,628	241,825	100,205	303,393	114,186	332,074	126,273	362,869
	On or after First SMI diagnosis	42,164	124,552	61,675	187,752	72,155	212,481	92,387	272,661	106,821	304,310	119,185	336,083
	With primary MH-related diagnosis	10,900	18,785	13,384	23,530	14,387	25,789	16,362	29,258	16,613	30,070	18,124	32,552
	Earliest ED visits only within 30-day period	10,900	14,232	13,384	17,477	14,387	18,929	16,362	21,527	16,613	21,873	18,124	23,482
	Exclude ED visits followed by inpatient admission within 30 days	4,760	5,598	6,302	7,345	6,532	7,640	7,527	8,672	8,056	9,296	8,549	9,792
	Exclude beneficiaries with hospice claims or deceased	4,686	5,510	6,228	7,266	6,428	7,522	7,412	8,539	7,951	9,173	8,467	9,703
	Eligible in the month of ED visit and the following month	4,506	5,297	6,030	7,015	6,330	7,405	7,378	8,499	7,925	9,141	8,318	9,536
Numerator	7-Day follow-up	2,132	2,428	2,591	2,894	2,775	3,090	2,996	3,308	3,043	3,335	3,211	3,509
	30-Day follow-up	2,885	3,340	3,553	4,050	3,646	4,148	4,015	4,529	4,232	4,733	4,418	4,935
Rates	7-Day follow-up		45.8%		41.3%		41.7%		38.9%		36.5%		36.8%
	30-Day follow-up		63.1%		57.7%		56.0%		53.3%		51.8%		51.8%

[a] Number of beneficiaries.

[b] Number of ED visits.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

2. *Follow-up After ED Visits with MH Diagnosis – By Sociodemographic Characteristics*

Exhibit E.55 provides the follow-up rates after MH-related ED visits by beneficiary characteristics.

Exhibit E.55: Follow-up (with Any Provider) After ED Visits for MH-Related Diagnosis, by Beneficiary Characteristics (2018 – 2023)

Beneficiary Characteristics		MH[a]-Related ED Visit[b] Follow-up Rate											
		2018		2019		2020		2021		2022		2023	
		N=5,297[c]		N=7,015[c]		N=7,405[c]		N=8,499[c]		N=9,141[c]		N=9,536[c]	
		7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate
All SMI Beneficiaries: Follow-up Rate		44.3%	62.4%	37.6%	55.2%	41.0%	56.7%	38.4%	54.6%	35.7%	52.7%	35.6%	52.4%
Gender	Female	45.8%	64.5%	41.6%	59.1%	41.8%	57.7%	39.7%	55.7%	36.6%	53.2%	37.9%	54.2%
	Male	45.9%	61.3%	40.9%	56.1%	41.7%	54.1%	38.0%	50.4%	36.3%	50.0%	35.4%	48.6%
Age	Age 21-30	44.7%	63.1%	43.0%	60.4%	42.9%	56.4%	42.4%	56.2%	39.1%	54.7%	39.5%	54.7%
	Age 31-40	44.0%	60.5%	37.7%	54.5%	39.3%	53.0%	36.9%	51.6%	36.0%	51.1%	34.7%	50.2%
	Age 41-50	47.4%	65.1%	42.9%	58.6%	41.2%	57.6%	36.5%	49.9%	33.6%	49.2%	34.9%	49.6%
	Age 51-60	48.4%	64.3%	41.7%	58.4%	44.3%	58.6%	39.6%	54.1%	34.8%	50.3%	36.8%	51.0%
	Age 61-64[d]	46.9%	64.8%	44.4%	55.6%	45.3%	58.7%	37.0%	56.8%	39.8%	52.2%	41.2%	53.7%
Race	White/ Caucasian	45.6%	62.9%	39.9%	56.4%	39.8%	54.2%	36.6%	51.0%	34.2%	49.2%	35.1%	50.1%
	Black	46.1%	62.1%	42.9%	55.4%	44.7%	57.0%	42.7%	55.4%	39.8%	51.7%	40.0%	51.5%
	Other[d]	46.2%	51.3%	48.2%	55.4%	53.2%	66.0%	47.4%	61.4%	35.9%	60.9%	46.0%	58.7%
	Not Available	46.1%	63.9%	42.6%	60.6%	43.3%	58.1%	41.2%	56.0%	38.8%	55.4%	38.2%	54.3%
Ethnicity	Hispanic	41.8%	64.5%	36.6%	59.6%	37.1%	54.3%	33.0%	49.3%	35.3%	52.7%	33.3%	45.5%
	Non-Hispanic	46.5%	63.5%	41.6%	58.0%	42.1%	56.5%	39.5%	53.9%	37.2%	52.5%	37.2%	52.4%
	Unknown[d]	30.3%	50.3%	35.8%	50.0%	36.9%	48.3%	32.9%	44.9%	28.0%	42.2%	33.3%	46.7%
Geographic Location	Metro	45.7%	62.9%	40.6%	57.3%	41.2%	55.6%	39.3%	53.1%	37.0%	52.0%	37.0%	51.5%
	Non-Metro	46.3%	63.4%	43.2%	59.2%	43.6%	57.3%	37.9%	53.8%	34.9%	51.3%	36.2%	52.6%

Beneficiary Characteristics		MH[a]-Related ED Visit[b] Follow-up Rate											
		2018		2019		2020		2021		2022		2023	
		N=5,297[c]		N=7,015[c]		N=7,405[c]		N=8,499[c]		N=9,141[c]		N=9,536[c]	
		7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate
Dual Eligibility	Dually Eligible	50.7%	69.8%	45.0%	65.2%	47.5%	64.6%	45.0%	61.8%	41.9%	60.8%	40.6%	57.9%
	Not Dually Eligible	43.6%	59.9%	39.8%	54.8%	39.8%	53.1%	37.1%	50.7%	35.1%	49.5%	35.9%	50.3%
HIP	HIP	39.6%	56.8%	38.1%	52.8%	37.7%	51.3%	35.3%	48.7%	33.2%	47.5%	34.1%	48.3%
	Non-HIP	50.4%	67.7%	44.2%	62.2%	46.2%	61.4%	43.7%	59.3%	41.2%	57.9%	41.3%	57.4%
SMI Diagnosis	Bipolar only	38.0%	55.6%	37.5%	54.1%	34.3%	47.9%	31.9%	44.6%	28.8%	44.2%	32.5%	46.3%
	MDD only	43.9%	60.6%	36.7%	51.2%	38.2%	51.3%	34.7%	47.9%	32.6%	46.4%	33.3%	47.9%
	Schizophrenia only	53.0%	67.5%	44.5%	60.4%	46.9%	58.8%	47.4%	59.8%	43.9%	58.2%	41.2%	55.1%
	Co-Occurring Diagnoses	47.8%	66.8%	45.0%	63.2%	44.8%	60.8%	42.0%	58.1%	39.6%	56.0%	39.6%	55.2%
Chronic Conditions	Cancer[e]	41.2%	60.8%	44.9%	56.2%	43.9%	60.2%	38.5%	55.7%	37.9%	54.4%	40.9%	60.0%
	No Cancer	46.0%	63.1%	41.2%	57.8%	41.7%	55.9%	38.9%	53.2%	36.5%	51.7%	36.7%	51.6%
	Cardiovascular Dis.	43.0%	61.7%	39.1%	56.0%	41.1%	56.0%	37.1%	52.1%	35.3%	48.7%	35.6%	52.0%
	No Cardiovascular Dis.	46.2%	63.2%	41.5%	57.9%	41.8%	56.0%	39.1%	53.4%	36.6%	52.1%	36.9%	51.7%
	COPD	43.7%	62.6%	41.0%	59.1%	40.1%	56.4%	36.6%	52.0%	37.1%	51.4%	36.3%	50.6%
	No COPD	46.3%	63.2%	41.3%	57.4%	42.0%	55.9%	39.3%	53.5%	36.4%	51.8%	36.9%	51.9%
	Diabetes	52.7%	68.4%	46.3%	63.3%	48.3%	62.6%	47.1%	61.2%	41.4%	58.7%	39.4%	55.5%
	No Diabetes	44.1%	61.7%	40.0%	56.4%	40.2%	54.5%	37.3%	51.7%	35.5%	50.4%	36.3%	51.1%
	Hypertension	46.3%	63.7%	42.4%	58.9%	43.7%	58.4%	39.5%	54.1%	36.6%	52.4%	37.5%	53.3%
	No Hypertension	45.4%	62.6%	40.4%	56.8%	40.0%	53.9%	38.4%	52.7%	36.4%	51.3%	36.3%	50.7%

Beneficiary Characteristics		MH[a]-Related ED Visit[b] Follow-up Rate											
		2018		2019		2020		2021		2022		2023	
		N=5,297[c]		N=7,015[c]		N=7,405[c]		N=8,499[c]		N=9,141[c]		N=9,536[c]	
		7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate
Chronic Conditions (cont.)	Infectious Disease	45.2%	62.3%	41.6%	58.4%	41.9%	57.1%	39.0%	53.5%	37.3%	53.4%	37.1%	53.3%
	No Infectious Disease	46.3%	63.6%	41.0%	57.3%	41.6%	55.3%	38.8%	53.1%	35.8%	50.3%	36.6%	50.7%
	Metabolic Disease	49.6%	67.9%	45.3%	63.5%	46.2%	62.0%	42.5%	58.9%	39.7%	57.4%	39.9%	56.7%
	No Metabolic Disease	42.1%	58.3%	37.4%	52.2%	37.9%	50.9%	36.0%	48.8%	33.9%	47.2%	34.0%	47.4%
	Respiratory Disease	46.2%	64.1%	42.6%	59.5%	42.8%	58.2%	40.3%	56.1%	38.0%	54.6%	38.8%	55.2%
	No Respiratory Disease	45.3%	61.7%	39.4%	55.3%	40.6%	53.5%	37.5%	50.3%	34.8%	48.7%	34.5%	47.8%
Number of Chronic Conditions	0	45.8%	60.6%	36.8%	51.7%	38.8%	50.2%	36.4%	48.7%	33.6%	45.5%	32.4%	44.0%
	1	42.6%	59.7%	39.2%	55.9%	38.1%	51.5%	37.4%	50.0%	34.5%	48.8%	37.2%	51.1%
	2	44.8%	62.0%	39.7%	55.5%	42.3%	56.6%	38.3%	53.8%	37.1%	53.1%	36.7%	52.7%
	3	47.0%	66.6%	45.6%	61.5%	43.9%	59.8%	39.3%	55.4%	36.6%	54.1%	38.0%	53.5%
	4+	48.2%	65.5%	44.0%	62.2%	44.9%	60.7%	42.5%	57.6%	39.7%	56.3%	39.3%	56.6%

[a] MH-related visits were identified using the primary diagnoses from all claims in the same day as an ED visit. MH-related diagnoses were identified using a combination of value sets, including the HEDIS VSD's MH Diagnosis and Intentional Self-Harm value sets, as well as the Clinical Classifications Software Refined (CCSR) Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis category.

[b] ED visits were calculated after a beneficiary's first SMI diagnosis within the evaluation period. In addition, ED visits were only counted if the beneficiary had (SMI waiver-eligible) Medicaid coverage in the same month as the ED visit and during the following 30 days. Only one ED visit was counted per day (e.g., if a recipient had multiple ED-related claims in a single day, that day was counted as one "visit").

[c] N = denominator (ED visits)

[d] The sample size of the demographic categories was very small as the denominator of the categories, so their associated follow-up rates had more fluctuations than the denominator categories with large sample sizes. These categories of small sample sizes were collapsed with other categories for meaningful analysis and interpretation. Age 61-64 was grouped with Age 51-60, other race was grouped with unavailable race, and unknown ethnicity was collapsed with the non-Hispanic group.

[e] There were a small number of SMI beneficiaries with cancer for the measure ED-FUM across six years, and therefore, cancer was not included in the regression analysis.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

3. Follow-up After ED Visits with MH Diagnosis – Regression Estimates

Exhibit E.56 displays OR estimates from the ITS logistic regression model; each OR shows the odds of a MH-related ED visit being followed by any follow-up visit within 7 or 30 days, relative to the reference group.

Exhibit E.56: Logistic Regression Model for Follow-up After MH-Related ED Visit (2018 – 2023, Excluding 2020)

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.87	(0.76,1.00)	0.051	0.75	(0.66,0.86)	<0.001
Time	Pre-Intervention	0.84	(0.78,0.90)	<0.001	0.81	(0.75,0.87)	<0.001
	Post-Intervention	0.96	(0.93,0.99)	0.005	0.97	(0.94,1.00)	0.068
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	0.84	(0.78,0.90)	<0.001	0.81	(0.75,0.87)	<0.001
	Post-Int. * 2021	0.76	(0.71,0.82)	<0.001	0.69	(0.64,0.75)	<0.001
	Post-Int. * 2022	0.73	(0.68,0.78)	<0.001	0.67	(0.63,0.72)	<0.001
	Post-Int. * 2023	0.70	(0.64,0.75)	<0.001	0.65	(0.61,0.71)	<0.001
Likelihood of Having an ED Visit		1.28	(0.36,4.57)	0.706	2.59	(0.72,9.33)	0.146
Gender (Ref: Female)	Male	0.92	(0.88,0.97)	<0.001	0.81	(0.77,0.85)	<0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.82	(0.77,0.86)	<0.001	0.81	(0.77,0.86)	<0.001
	Age 41-50	0.83	(0.77,0.89)	<0.001	0.80	(0.74,0.85)	<0.001
	Age 51-64	0.87	(0.79,0.96)	0.004	0.82	(0.75,0.91)	<0.001
Race (Ref: White/Caucasian)	Black	1.13	(1.06,1.21)	<0.001	1.02	(0.95,1.09)	0.616
	Other/Not Available	1.10	(1.04,1.16)	<0.001	1.11	(1.06,1.17)	<0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.84	(0.74,0.96)	0.010	0.92	(0.81,1.04)	0.174
Geographic Location (Ref: Metro)	Non-metro	1.00	(0.95,1.05)	0.975	1.03	(0.98,1.08)	0.249
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	1.20	(1.14,1.26)	<0.001	1.40	(1.33,1.48)	<0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.90	(0.84,0.97)	0.003	0.92	(0.86,0.98)	0.014
	Schizophrenia only	1.49	(1.37,1.63)	<0.001	1.49	(1.37,1.63)	<0.001
	Co-occurring SMI	1.26	(1.14,1.39)	<0.001	1.30	(1.18,1.43)	<0.001

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Chronic Conditions (Ref: No)	Cardiovascular Dis.	0.84	(0.77,0.91)	<0.001	0.83	(0.76,0.89)	<0.001
	COPD	0.89	(0.83,0.95)	<0.001	0.87	(0.81,0.93)	<0.001
	Diabetes	1.20	(1.13,1.28)	<0.001	1.14	(1.07,1.21)	<0.001
	Hypertension	0.94	(0.88,1.00)	0.045	0.92	(0.87,0.98)	0.007
	Infectious Disease	0.95	(0.90,1.00)	0.049	0.94	(0.89,0.98)	0.010
	Metabolic Disease	1.30	(1.24,1.36)	<0.001	1.46	(1.40,1.53)	<0.001
	Respiratory Disease	1.10	(1.05,1.16)	<0.001	1.14	(1.09,1.20)	<0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

4. Follow-up After ED Visits with MH Diagnosis – Sensitivity Analyses

Exhibit E.57 presents the results of the logistic regression with 2020 data included. The OR estimates were consistent with the logistic regressions with 2020 data excluded for follow-up after MH-Related ED visits.

Exhibit E.57 Logistic Regression Model for Follow-up After MH-Related ED Visit (2018 – 2023)

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.96	(0.88,1.06)	0.415	0.83	(0.75,0.91)	<0.001
Time	Pre-Intervention	0.84	(0.78,0.90)	<0.001	0.81	(0.75,0.87)	<0.001
	Post-Intervention	0.94	(0.92,0.96)	<0.001	0.95	(0.94,0.97)	<0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	0.84	(0.78,0.90)	<0.001	0.81	(0.75,0.87)	<0.001
	Pre-Int. * 2020	0.85	(0.79,0.91)	<0.001	0.75	(0.70,0.81)	<0.001
	Post-Int. * 2021	0.79	(0.74,0.85)	<0.001	0.72	(0.67,0.77)	<0.001
	Post-Int. * 2022	0.74	(0.69,0.79)	<0.001	0.69	(0.64,0.73)	<0.001
	Post-Int. * 2023	0.70	(0.65,0.75)	<0.001	0.65	(0.61,0.71)	<0.001
Likelihood of Having an ED Visit		2.07	(0.65,6.59)	0.217	4.11	(1.28,13.19)	0.017
Gender (Ref: Female)	Male	0.92	(0.88,0.96)	<0.001	0.80	(0.77,0.84)	<0.001

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Age Group (Ref: Age 21-30)	Age 31-40	0.83	(0.78,0.87)	<0.001	0.82	(0.78,0.86)	<0.001
	Age 41-50	0.85	(0.79,0.90)	<0.001	0.83	(0.78,0.89)	<0.001
	Age 51-64	0.91	(0.83,0.99)	0.037	0.87	(0.79,0.95)	0.002
Race (Ref: White/Caucasian)	Black	1.14	(1.07,1.21)	<0.001	1.03	(0.96,1.09)	0.398
	Other/Not Available	1.09	(1.04,1.15)	<0.001	1.11	(1.05,1.16)	<0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.84	(0.75,0.95)	0.006	0.92	(0.82,1.04)	0.182
Geographic Location (Ref: Metro)	Non-metro	1.02	(0.98,1.07)	0.299	1.04	(1.00,1.09)	0.082
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	1.20	(1.14,1.26)	<0.001	1.41	(1.34,1.48)	<0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.89	(0.84,0.95)	<0.001	0.91	(0.86,0.97)	0.003
	Schizophrenia only	1.45	(1.34,1.57)	<0.001	1.44	(1.33,1.56)	<0.001
	Co-occurring SMI	1.21	(1.11,1.33)	<0.001	1.26	(1.15,1.37)	<0.001
Chronic Conditions (Ref: No)	Cardiovascular Dis.	0.83	(0.78,0.90)	<0.001	0.82	(0.77,0.88)	<0.001
	COPD	0.87	(0.82,0.92)	<0.001	0.86	(0.81,0.91)	<0.001
	Diabetes	1.21	(1.14,1.28)	<0.001	1.14	(1.08,1.21)	<0.001
	Hypertension	0.94	(0.89,0.99)	0.026	0.92	(0.87,0.97)	0.002
	Infectious Disease	0.94	(0.90,0.99)	0.009	0.93	(0.89,0.97)	0.002
	Metabolic Disease	1.31	(1.25,1.37)	<0.001	1.47	(1.41,1.53)	<0.001
	Respiratory Disease	1.08	(1.04,1.14)	<0.001	1.13	(1.08,1.18)	<0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023

Exhibit E.58 displays the estimated OR and their statistical significance from one-stage logistic regression. The estimates were consistent with that generated from the two-stage model for follow-up after ED visits for MH-related diagnosis.

Exhibit E.58: One-Stage Logistic Regression Model for Follow-up After MH-Related ED Visit (2018 – 2023, Excluding 2020)

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.87	(0.76,1.00)	0.048	0.75	(0.65,0.86)	<0.001
Time	Pre-Intervention	0.84	(0.78,0.90)	<0.001	0.80	(0.75,0.87)	<0.001
	Post-Intervention	0.95	(0.93,0.98)	0.003	0.97	(0.94,1.00)	0.031
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	0.84	(0.78,0.90)	<0.001	0.80	(0.75,0.87)	<0.001
	Post-Int. * 2021	0.76	(0.71,0.81)	<0.001	0.68	(0.63,0.73)	<0.001
	Post-Int. * 2022	0.72	(0.68,0.77)	<0.001	0.66	(0.62,0.70)	<0.001
	Post-Int. * 2023	0.69	(0.65,0.74)	<0.001	0.64	(0.59,0.68)	<0.001
Gender (Ref: Female)	Male	0.92	(0.89,0.96)	<0.001	0.82	(0.79,0.86)	<0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.82	(0.77,0.86)	<0.001	0.80	(0.76,0.85)	<0.001
	Age 41-50	0.82	(0.77,0.87)	<0.001	0.78	(0.73,0.82)	<0.001
	Age 51-64	0.86	(0.80,0.92)	<0.001	0.79	(0.73,0.84)	<0.001
Race (Ref: White/Caucasian)	Black	1.13	(1.06,1.21)	<0.001	1.03	(0.96,1.10)	0.427
	Other/Not Available	1.10	(1.05,1.15)	<0.001	1.14	(1.09,1.19)	<0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.84	(0.74,0.96)	0.008	0.90	(0.80,1.03)	0.119
Geographic Location (Ref: Metro)	Non-metro	1.00	(0.95,1.05)	0.970	1.03	(0.98,1.08)	0.238
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	1.20	(1.14,1.26)	<0.001	1.42	(1.34,1.49)	<0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.90	(0.84,0.97)	0.004	0.93	(0.87,0.99)	0.021
	Schizophrenia only	1.50	(1.40,1.62)	<0.001	1.54	(1.43,1.66)	<0.001
	Co-occurring SMI	1.28	(1.22,1.34)	<0.001	1.38	(1.31,1.45)	<0.001
Chronic Conditions (Ref: No)	Cardiovascular Dis.	0.84	(0.77,0.91)	<0.001	0.83	(0.77,0.89)	<0.001
	COPD	0.89	(0.83,0.95)	<0.001	0.87	(0.82,0.93)	<0.001
	Diabetes	1.20	(1.13,1.27)	<0.001	1.13	(1.06,1.20)	<0.001
	Hypertension	0.95	(0.90,0.99)	0.026	0.95	(0.90,0.99)	0.023
	Infectious Disease	0.96	(0.91,1.00)	0.041	0.95	(0.91,1.00)	0.033
	Metabolic Disease	1.29	(1.23,1.36)	<0.001	1.45	(1.39,1.52)	<0.001
	Respiratory Disease	1.11	(1.06,1.16)	<0.001	1.16	(1.11,1.22)	<0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023 (2020 data excluded)

5 Analytic Cohort for ED Visits Related to AOD Dependence

Exhibit E.59 displays the step-by-step approach to identifying the index ED visits, the count for numerator and the follow-up rates after AOD-related ED visits.

Exhibit E.59: Step-by-Step Attrition of Follow-Up After ED Visits for AOD Diagnosis Among SMI Beneficiaries (2018 – 2023)

Measurement Year		2018		2019		2020		2021		2022		2023	
Total SMI Recipients		90,833		124,131		153,217		191,728		227,466		263,327	
Measure Unit		B[a]	V[b]	B	V	B	V	B	V	B	V	B	V
Step-by-step attrition to generate denominator	All ED visits between January 1 and December 1	53,254	179,330	69,492	222,498	79,628	241,825	100,205	303,393	114,186	332,074	126,273	362,869
	On or after first SMI diagnosis	42,164	124,552	61,675	187,752	72,155	212,481	92,387	272,661	106,821	304,310	119,185	336,083
	With primary diagnosis of AOD	2,847	5,272	4,510	8,720	5,767	11,106	7,129	13,926	6,834	13,044	7,238	13,094
	Earliest ED visits only within 30-day period	2,847	3,648	4,510	6,063	5,767	7,808	7,129	9,679	6,834	9,146	7,238	9,577
	Exclude ED visits followed by inpatient admission within 30 days	1,799	2,107	2,946	3,529	3,776	4,477	4,690	5,526	4,729	5,604	4,923	5,817
	Exclude beneficiaries with hospice claims or deceased	1,757	2,056	2,886	3,455	3,672	4,358	4,574	5,393	4,620	5,481	4,833	5,717
	Eligible in the month of ED visit and the following month	1,680	1,965	2,770	3,316	3,624	4,295	4,558	5,371	4,609	5,469	4,761	5,622
Numerator	7-day follow-up	241	260	443	474	657	703	847	892	883	945	974	1,047
	30-day follow-up	362	394	665	734	951	1,050	1,232	1,340	1,226	1,334	1,427	1,562
Rates	7-day follow-up		12.6%		12.2%		16.6%		16.7%		16.9%		18.2%
	30-day follow-up		19.3%		20.9%		25.6%		25.6%		24.7%		28.2%

[a] Number of beneficiaries.

[b] Number of ED visits

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

6. Follow-up After ED Visits with AOD Diagnosis – By Sociodemographic

Exhibit E.60 provides the follow-up rates after AOD-related ED visits by beneficiary characteristics.

Exhibit E.60: Follow-up (with Any Provider) After ED Visits for AOD Diagnosis, by Beneficiary Characteristics (2018 – 2023)

SMI Recipient Characteristics		AOD-Related ED Visit Follow-up Rate											
		2018		2019		2020		2021		2022		2023	
		N=1,965[a]		N=3,316[a]		N=4,295[a]		N=5,371[a]		N=5,469[a]		N=5,622[a]	
		7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate
All SMI Beneficiaries: Follow-up Rate		13.2%	20.1%	14.3%	22.1%	16.4%	24.4%	16.6%	24.9%	17.3%	24.4%	18.6%	27.8%
Gender	Female	13.1%	20.6%	13.3%	21.5%	16.0%	24.3%	16.6%	24.9%	17.6%	24.2%	17.5%	26.2%
	Male	13.3%	19.7%	15.0%	22.6%	16.6%	24.6%	16.6%	25.0%	17.1%	24.5%	19.5%	29.0%
Age	Age 21-30	11.2%	17.3%	13.0%	19.9%	15.7%	22.7%	13.9%	19.6%	15.5%	21.5%	15.4%	22.6%
	Age 31-40	14.1%	22.0%	13.8%	22.0%	19.6%	29.1%	17.8%	27.2%	18.8%	26.5%	20.9%	31.3%
	Age 41-50	13.4%	20.0%	15.9%	24.8%	14.7%	22.6%	17.9%	28.0%	17.4%	25.3%	17.7%	27.2%
	Age 51-60	13.2%	20.5%	14.7%	21.8%	13.9%	20.6%	16.8%	24.6%	16.7%	23.3%	20.2%	29.8%
	Age 61-64[b]	16.1%	18.4%	12.9%	20.9%	14.8%	24.9%	14.7%	20.7%	15.6%	21.1%	15.6%	21.8%
Race	White/Caucasian	15.2%	22.3%	16.2%	24.8%	17.9%	27.1%	17.1%	26.2%	17.8%	25.4%	20.2%	30.6%
	Black	11.7%	17.7%	7.0%	11.5%	9.4%	13.3%	14.0%	18.7%	15.5%	19.6%	13.8%	18.4%
	Other[b]	25.0%	33.3%	6.3%	12.5%	16.7%	20.8%	12.5%	25.0%	18.2%	27.3%	21.1%	31.6%
	Not Available	10.7%	17.4%	13.2%	20.8%	15.8%	23.2%	16.5%	24.5%	16.8%	24.0%	17.2%	25.6%
Ethnicity	Hispanic	13.3%	20.0%	13.4%	16.4%	9.1%	20.5%	16.7%	27.8%	20.2%	29.8%	15.7%	25.2%
	Non-Hispanic	13.0%	19.6%	14.3%	22.2%	16.7%	24.7%	16.5%	25.0%	17.1%	24.1%	18.6%	27.7%
	Unknown[b]	18.9%	31.1%	15.6%	22.7%	14.2%	22.3%	17.4%	23.2%	18.8%	25.6%	19.6%	29.2%
Geographic Location	Metro	13.8%	20.7%	14.1%	22.4%	15.9%	24.1%	17.0%	25.1%	17.4%	24.6%	18.9%	28.1%
	Non-Metro	10.7%	16.7%	15.2%	21.1%	18.4%	26.0%	15.3%	24.3%	16.8%	23.5%	17.4%	26.6%
Dual Eligibility	Dually Eligible	10.4%	15.3%	8.8%	14.7%	8.8%	14.7%	15.2%	24.4%	12.3%	17.4%	11.8%	19.4%
	Not Dually Eligible	13.8%	21.1%	15.2%	23.4%	17.3%	25.7%	16.8%	25.0%	17.8%	25.1%	19.3%	28.6%

SMI Recipient Characteristics		AOD-Related ED Visit Follow-up Rate											
		2018		2019		2020		2021		2022		2023	
		N=1,965[a]		N=3,316[a]		N=4,295[a]		N=5,371[a]		N=5,469[a]		N=5,622[a]	
		7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate
HIP	HIP	15.7%	23.9%	16.2%	25.3%	18.1%	27.0%	17.3%	26.0%	18.4%	26.1%	20.0%	30.0%
	Non-HIP	9.7%	14.5%	10.7%	16.2%	12.0%	17.9%	14.6%	21.8%	13.6%	18.9%	14.1%	20.6%
SMI Diagnosis	Bipolar only	12.6%	19.6%	12.4%	17.4%	15.1%	20.9%	14.0%	20.4%	15.5%	21.4%	15.9%	23.6%
	MDD only	15.4%	22.6%	17.3%	26.0%	17.6%	27.0%	17.0%	25.8%	18.4%	25.1%	18.8%	28.9%
	Schizophrenia only	8.6%	13.4%	8.7%	16.5%	9.9%	15.3%	10.8%	15.4%	10.3%	13.6%	9.8%	15.5%
	Co-Occurring Diagnoses	13.3%	20.6%	13.2%	21.4%	17.0%	25.0%	18.2%	27.4%	17.5%	26.0%	20.2%	29.2%
Chronic Conditions	Cancer[c]	13.5%	23.1%	16.1%	25.0%	18.3%	26.9%	19.4%	28.6%	19.8%	29.7%	20.3%	28.0%
	No Cancer	13.2%	20.0%	14.2%	22.0%	16.3%	24.4%	16.6%	24.9%	17.2%	24.3%	18.6%	27.8%
	Cardiovascular Dis.	13.7%	18.3%	16.6%	25.0%	13.7%	21.9%	17.2%	27.2%	17.6%	24.1%	19.9%	30.2%
	No Cardiovascular Dis.	13.2%	20.3%	14.0%	21.8%	16.7%	24.7%	16.5%	24.7%	17.2%	24.4%	18.5%	27.6%
	COPD	13.3%	19.9%	15.8%	25.0%	15.0%	22.1%	19.0%	26.8%	18.3%	26.5%	20.6%	30.5%
	No COPD	13.2%	20.1%	13.9%	21.4%	16.6%	24.9%	16.1%	24.6%	17.1%	24.0%	18.3%	27.4%
	Diabetes	10.5%	17.0%	16.8%	23.5%	12.4%	19.9%	15.6%	25.6%	15.2%	22.9%	17.2%	24.4%
	No Diabetes	13.7%	20.6%	14.0%	22.0%	16.9%	25.0%	16.7%	24.9%	17.5%	24.6%	18.8%	28.2%
	Hypertension	13.4%	20.4%	15.4%	24.0%	17.5%	25.9%	19.0%	28.4%	18.9%	27.0%	21.3%	31.8%
	No Hypertension	13.0%	19.7%	13.2%	20.3%	15.3%	23.1%	14.4%	21.8%	16.0%	22.3%	16.2%	24.2%
	Infectious Disease	14.1%	21.9%	16.5%	25.2%	17.8%	27.4%	19.5%	28.3%	19.3%	27.9%	21.4%	32.0%
	No Infectious Disease	12.6%	18.5%	12.5%	19.7%	15.3%	22.1%	14.1%	22.0%	15.6%	21.4%	16.6%	24.6%
	Metabolic Disease	12.4%	18.9%	16.2%	24.6%	17.7%	27.0%	18.7%	28.5%	20.2%	27.8%	21.8%	32.4%
	No Metabolic Dis	13.9%	20.9%	12.9%	20.4%	15.5%	22.7%	15.2%	22.6%	15.3%	22.1%	16.3%	24.4%
	Respiratory Disease	12.4%	18.9%	14.4%	22.0%	16.7%	24.9%	18.3%	26.6%	18.1%	26.2%	19.9%	30.3%
	No Respiratory Disease	14.2%	21.5%	14.2%	22.3%	16.1%	24.0%	15.2%	23.6%	16.6%	23.0%	17.5%	25.6%

SMI Recipient Characteristics		AOD-Related ED Visit Follow-up Rate											
		2018		2019		2020		2021		2022		2023	
		N=1,965[a]		N=3,316[a]		N=4,295[a]		N=5,371[a]		N=5,469[a]		N=5,622[a]	
		7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate
Number of Chronic Conditions	0	14.6%	19.2%	11.1%	17.9%	13.6%	19.4%	10.2%	17.1%	13.2%	18.4%	12.9%	17.5%
	1	14.0%	20.4%	11.9%	20.2%	14.5%	23.1%	16.2%	23.8%	16.7%	22.9%	16.8%	25.9%
	2	13.3%	22.3%	15.7%	23.4%	18.0%	26.3%	16.5%	25.2%	18.0%	25.5%	19.2%	29.6%
	3	11.6%	19.9%	15.2%	21.8%	20.9%	28.3%	19.2%	27.2%	19.3%	26.8%	22.4%	34.4%
	4+	12.9%	18.6%	16.5%	25.5%	15.0%	24.5%	20.1%	30.1%	19.4%	28.6%	21.8%	31.4%

[a] N = denominator (ED visits)

[b] The sample size of the demographic categories was very small as the denominator of the categories, so their associated follow-up rates had more fluctuations than the denominator categories with large sample sizes. These categories of small sample sizes were collapsed with other categories for meaningful analysis and interpretation. Age 61-64 was grouped with Age 51-60, other race was grouped with unavailable race, and unknown ethnicity was collapsed with the non-Hispanic group.

[c] There were a small number of SMI beneficiaries with cancer for the measure ED-FUA, and therefore, cancer was not included in the regression analysis.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

7. Follow-up After ED Visits with AOD Diagnosis – Regression Estimates

Exhibit E.61 displays OR estimates from the ITS logistic regression model; each OR shows the odds of an AOD-related ED visit being followed by any follow-up visit within 7 or 30 days, relative to the reference group.

Exhibit E.61: Logistic Regression Model for Follow-up After AOD-Related ED Visit (2018 – 2023, Excluding 2020)

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.95	(0.74,1.22)	0.673	0.92	(0.74,1.15)	0.468
Time	Pre-Intervention	1.04	(0.88,1.22)	0.654	1.08	(0.94,1.24)	0.301
	Post-Intervention	1.08	(1.02,1.13)	0.004	1.08	(1.03,1.13)	<0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.04	(0.88,1.22)	0.654	1.08	(0.94,1.24)	0.301
	Post-Int. * 2021	1.18	(1.02,1.38)	0.026	1.17	(1.03,1.32)	0.018
	Post-Int. * 2022	1.28	(1.11,1.47)	<0.001	1.26	(1.12,1.42)	<0.001
	Post-Int. * 2023	1.38	(1.19,1.59)	<0.001	1.36	(1.20,1.55)	<0.001
Likelihood of Having an ED Visit		5.30	(0.45,62.99)	0.187	3.36	(0.38,29.70)	0.275
Gender (Ref: Female)	Male	1.05	(0.94,1.16)	0.403	1.06	(0.97,1.16)	0.211
Age Group (Ref: Age 21-30)	Age 31-40	1.22	(1.10,1.36)	<0.001	1.32	(1.20,1.45)	<0.001
	Age 41-50	1.11	(0.99,1.25)	0.070	1.21	(1.09,1.34)	<0.001
	Age 51-64	1.09	(0.96,1.24)	0.199	1.09	(0.98,1.22)	0.128
Race (Ref: White/Caucasian)	Black	0.74	(0.65,0.85)	<0.001	0.63	(0.56,0.71)	<0.001
	Other/Not Available	0.84	(0.78,0.92)	<0.001	0.83	(0.77,0.89)	<0.001
Geographic Location (Ref: Metro)	Non-metro	0.91	(0.83,1.00)	0.058	0.90	(0.83,0.98)	0.010
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.70	(0.61,0.82)	<0.001	0.72	(0.64,0.81)	<0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.82	(0.73,0.93)	0.001	0.77	(0.70,0.86)	<0.001
	Schizophrenia only	0.60	(0.50,0.72)	<0.001	0.61	(0.53,0.71)	<0.001
	Co-occurring SMI	0.95	(0.85,1.06)	0.366	0.97	(0.88,1.07)	0.610
Chronic Conditions (Ref: No)	Cardiovascular Dis.	0.94	(0.83,1.08)	0.392	0.95	(0.84,1.06)	0.337
	COPD	1.04	(0.93,1.16)	0.511	1.03	(0.93,1.14)	0.547
	Diabetes	0.84	(0.74,0.97)	0.015	0.84	(0.74,0.94)	0.003
	Hypertension	1.16	(1.04,1.29)	0.006	1.22	(1.11,1.34)	<0.001
	Infectious Disease	1.24	(1.14,1.37)	<0.001	1.28	(1.19,1.39)	<0.001
	Metabolic Disease	1.27	(1.16,1.38)	<0.001	1.25	(1.16,1.35)	<0.001
	Respiratory Disease	0.99	(0.91,1.07)	0.748	0.99	(0.93,1.06)	0.842

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023, (2020 data excluded).

8. Follow-up After ED Visits with AOD Diagnosis – Sensitivity Analyses

Exhibit E.62 presents the results of the logistic regression with 2020 data included. The OR estimates were consistent with the logistic regression with 2020 data excluded for follow-up after AOD-Related ED visits.

Exhibit E.62: Logistic Regression Model for Follow-up After AOD-Related ED Visit (2018 – 2023)

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	1.05	(0.87,1.27)	0.609	1.05	(0.89,1.23)	0.558
Time	Pre-Intervention	1.04	(0.88,1.23)	0.646	1.08	(0.94,1.24)	0.305
	Post-Intervention	1.05	(1.01,1.09)	0.005	1.05	(1.02,1.08)	0.002
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.04	(0.88,1.23)	0.646	1.08	(0.94,1.24)	0.305
	Pre-Int. * 2020	1.16	(1.00,1.34)	0.052	1.15	(1.01,1.31)	0.029
	Post-Int. * 2021	1.22	(1.06,1.40)	0.006	1.21	(1.07,1.36)	0.002
	Post-Int. * 2022	1.28	(1.11,1.47)	<0.001	1.26	(1.12,1.42)	<0.001
	Post-Int. * 2023	1.34	(1.16,1.55)	<0.001	1.33	(1.17,1.50)	<0.001
Likelihood of Having an ED Visit		2.33	(0.24,22.26)	0.463	1.94	(0.27,13.98)	0.512
Gender (Ref: Female)	Male	1.07	(0.97,1.18)	0.175	1.07	(0.99,1.17)	0.106
Age Group (Ref: Age 21-30)	Age 31-40	1.23	(1.12,1.36)	<0.001	1.33	(1.22,1.44)	<0.001
	Age 41-50	1.08	(0.97,1.20)	0.148	1.17	(1.07,1.29)	<0.001
	Age 51-64	1.05	(0.93,1.18)	0.409	1.07	(0.96,1.18)	0.228
Race (Ref: White/Caucasian)	Black	0.71	(0.63,0.80)	<0.001	0.60	(0.54,0.67)	<0.001
	Other/Not Available	0.85	(0.79,0.92)	<0.001	0.83	(0.77,0.88)	<0.001
Geographic Location (Ref: Metro)	Non-metro	0.94	(0.86,1.03)	0.180	0.92	(0.85,0.99)	0.025
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.66	(0.58,0.76)	<0.001	0.68	(0.61,0.77)	<0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.83	(0.75,0.93)	0.001	0.77	(0.70,0.85)	<0.001
	Schizophrenia only	0.61	(0.52,0.72)	<0.001	0.62	(0.54,0.70)	<0.001
	Co-occurring SMI	0.98	(0.88,1.08)	0.651	0.98	(0.90,1.07)	0.701
Chronic Conditions (Ref: No)	Cardiovascular Dis.	0.92	(0.82,1.04)	0.200	0.93	(0.84,1.03)	0.184
	COPD	1.03	(0.93,1.14)	0.588	1.01	(0.92,1.10)	0.859
	Diabetes	0.80	(0.71,0.91)	<0.001	0.81	(0.72,0.90)	<0.001
	Hypertension	1.20	(1.09,1.32)	<0.001	1.23	(1.13,1.34)	<0.001
	Infectious Disease	1.24	(1.14,1.35)	<0.001	1.29	(1.20,1.39)	<0.001
	Metabolic Disease	1.25	(1.16,1.36)	<0.001	1.26	(1.18,1.35)	<0.001
	Respiratory Disease	0.99	(0.92,1.06)	0.790	0.99	(0.93,1.05)	0.797

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023

Exhibit E.63 displays the estimated OR and their statistical significance from one-stage logistic regression. The estimates were consistent with that generated from the two-stage model for follow-up after ED visits for AOD-related diagnosis.

Exhibit E.63: One-Stage Logistic Regression Model for Follow-up After AOD-Related ED Visit (2018 – 2023, Excluding 2020)

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	0.98	(0.77,1.25)	0.883	0.95	(0.77,1.17)	0.612
Time	Pre-Intervention	1.05	(0.89,1.24)	0.562	1.09	(0.94,1.25)	0.250
	Post-Intervention	1.07	(1.02,1.12)	0.009	1.07	(1.03,1.12)	0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.05	(0.89,1.24)	0.562	1.09	(0.94,1.25)	0.250
	Post-Int. * 2021	1.20	(1.03,1.39)	0.017	1.17	(1.03,1.33)	0.013
	Post-Int. * 2022	1.28	(1.11,1.47)	<0.001	1.26	(1.12,1.42)	<0.001
	Post-Int. * 2023	1.37	(1.18,1.58)	<0.001	1.36	(1.20,1.54)	<0.001
Gender (Ref: Female)	Male	1.10	(1.02,1.19)	0.013	1.10	(1.03,1.17)	0.004
Age Group (Ref: Age 21-30)	Age 31-40	1.24	(1.12,1.38)	<0.001	1.34	(1.22,1.46)	1.24
	Age 41-50	1.13	(1.00,1.27)	0.041	1.22	(1.10,1.35)	1.13
	Age 51-64	1.08	(0.95,1.23)	0.245	1.08	(0.97,1.21)	1.08
Race (Ref: White/Caucasian)	Black	0.74	(0.65,0.85)	<0.001	0.63	(0.56,0.71)	0.74
	Other/Not Available	0.85	(0.78,0.92)	<0.001	0.83	(0.77,0.89)	0.85
Geographic Location (Ref: Metro)	Non-metro	0.90	(0.82,0.99)	0.023	0.89	(0.82,0.96)	0.90
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	0.68	(0.59,0.77)	<0.001	0.70	(0.62,0.78)	0.68
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.82	(0.73,0.93)	0.001	0.77	(0.70,0.86)	0.82
	Schizophrenia only	0.60	(0.51,0.72)	<0.001	0.61	(0.53,0.71)	0.60
	Co-occurring SMI	1.00	(0.92,1.08)	0.991	1.01	(0.94,1.09)	1.00
Chronic Conditions (Ref: No)	Cardiovascular Dis.	0.95	(0.83,1.08)	0.411	0.95	(0.85,1.06)	0.351
	COPD	1.06	(0.95,1.18)	0.319	1.04	(0.95,1.15)	0.378
	Diabetes	0.81	(0.72,0.92)	<0.001	0.81	(0.73,0.90)	<0.001
	Hypertension	1.21	(1.12,1.32)	<0.001	1.26	(1.17,1.36)	<0.001
	Infectious Disease	1.29	(1.20,1.39)	<0.001	1.32	(1.24,1.41)	<0.001
	Metabolic Disease	1.24	(1.14,1.34)	<0.001	1.23	(1.15,1.32)	<0.001
	Respiratory Disease	0.99	(0.92,1.07)	0.846	1.00	(0.93,1.07)	0.925

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023 (2020 data excluded).

9. Analytic Cohort for Follow-up After Inpatient Discharges with MH Diagnosis

Exhibit E.64 displays the step-by-step approach to identifying the index acute inpatient stays, the count for numerator and the follow-up rates after MH-related acute inpatient discharges.

Exhibit E.64: Step-by-Step Attrition of Follow-Up After Inpatient Discharges for MH-Related Diagnosis Among SMI Beneficiaries, (2018 – 2023)

Measurement Year		2018		2019		2020		2021		2022		2023	
All SMI Beneficiaries		90,833		124,131		153,217		191,728		227,466		263,327	
Measure Unit		B[a]	D/V[b]	B	D/V	B	D/V	B	D/V	B	D/V	B	D/V
Step-by-step attrition to generate denominator	All acute inpatient claims	25,298	65,174	29,786	59,932	34,238	67,977	39,657	83,136	40,287	82,994	42,631	85,906
	Eligible acute inpatient claims with principal diagnosis of MH[c]	12,402	20,757	13,258	21,733	13,981	22,358	15,387	26,132	15,538	26,325	16,401	27,434
	Acute inpatient stays with principal diagnosis of MH[d]	12,402	17,188	13,258	18,678	13,981	19,954	15,387	22,377	15,538	22,712	16,401	24,062
	Latest discharges with principal dx of MH[e]	12,021	14,648	12,853	15,777	13,565	16,696	14,957	18,549	15,103	18,814	15,944	19,759
	Latest discharges with principal dx of MH, Jan 1-Dec 1[f]	11,144	13,330	11,725	14,071	12,380	14,880	13,758	16,654	13,854	16,848	14,728	17,869
	Enrolled in the month of discharge and the following month for follow-up	10,575	12,625	11,202	13,428	12,111	14,566	13,623	16,495	13,753	16,727	14,365	17,419
Numerator	7-Day follow-up	4,547	5,154	5,118	5,721	5,430	6,176	6,013	6,845	5,496	6,220	6,029	6,784
	30-Day follow-up	6,385	7,350	7,142	8,233	7,736	8,966	8,614	10,046	8,267	9,611	9,013	10,475
Rates	7-Day follow-up		40.8%		42.6%		42.4%		41.5%		37.2%		38.9%
	30-Day follow-up		58.2%		61.3%		61.6%		60.9%		57.5%		60.1%

[a] Number of beneficiaries.
[b] Number of inpatient discharges (denominator) or follow-up visits (numerator).
[c] Excluding acute inpatient claims with principal diagnosis of pregnancy or perinatal conditions or any inpatient claims for beneficiaries who deceased or had any hospice services during the CY.
[d] Eligible acute inpatient claims with a principal diagnosis of MH were concatenated into inpatient stays when the service begin date (date_begin_service_header) was on the same day or one day after the service end date (date_end_service_header) of a previous inpatient claim. When there were any overlap days between two inpatient claims, the inpatient claims were concatenated into one inpatient stay.
[e] If there was any readmission or direct transfer for any other principal diagnosis or to the nonacute inpatient care setting within 30 days after an MH-related acute inpatient discharge, both the original stay and the readmission/direct transfer were excluded. If there was a readmission or direct transfer within 30 days for a principal diagnosis of MH after an MH-related acute inpatient discharge, the latest discharge was counted
[f] The discharge date was used for the time-period January 1-December 1 of each CY to allow the 30-day follow-up period for each eligible MH-related acute inpatient discharge.
Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

10. Follow-up After Inpatient Discharges with MH Diagnosis – By Sociodemographic Characteristics

Exhibit E.65 provides the follow-up rates after MH-related inpatient discharges by beneficiary characteristics.

Exhibit E.65: Follow-up (with MH Providers) After Inpatient Discharges for MH-Related Diagnosis, by Beneficiary Characteristics, (2018 – 2023)

Beneficiary Characteristics		MH-Related[a] Inpatient Discharge[b] Follow-up Rate											
		2018		2019		2020		2021		2022		2023	
		N=12,655[c]		N=13,463[c]		N=14,610[c]		N=16,535[c]		N=16,766[c]		N=17,473[c]	
		7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate
All SMI Beneficiaries: Follow-up Rate		40.8%	58.2%	42.6%	61.3%	42.4%	61.6%	41.5%	60.9%	37.2%	57.5%	38.9%	60.1%
Gender	Female	43.1%	61.7%	45.7%	65.3%	46.5%	66.5%	45.8%	66.4%	41.0%	62.2%	42.0%	64.8%
	Male	38.3%	54.4%	39.3%	57.2%	38.5%	56.9%	37.3%	55.5%	33.4%	52.8%	35.9%	55.5%
Age	Age 21-30	38.6%	55.1%	41.3%	59.5%	42.1%	61.2%	41.5%	60.9%	37.1%	58.0%	38.9%	59.9%
	Age 31-40	38.8%	56.4%	43.0%	61.1%	40.9%	61.1%	41.6%	60.2%	37.6%	57.4%	39.5%	60.8%
	Age 41-50	41.9%	60.5%	42.5%	61.9%	42.7%	61.0%	40.9%	61.1%	36.2%	56.2%	38.1%	59.3%
	Age 51-60	45.9%	62.7%	44.0%	62.8%	44.1%	62.9%	41.7%	62.0%	37.2%	58.0%	39.4%	61.0%
	Age 61-64[d]	47.0%	65.8%	45.5%	68.7%	50.6%	66.8%	43.6%	61.7%	40.3%	57.6%	37.9%	57.7%
Race	White/ Caucasian	41.1%	58.4%	43.5%	61.7%	42.6%	62.0%	41.1%	60.2%	37.2%	56.9%	38.8%	60.1%
	Black	32.7%	48.8%	32.4%	50.1%	32.8%	50.2%	34.3%	52.9%	29.0%	46.9%	30.9%	50.1%
	Other[d]	34.4%	46.9%	37.9%	52.4%	43.4%	69.7%	51.4%	68.5%	31.9%	54.3%	33.1%	56.9%
	Not Available	43.2%	61.2%	44.4%	64.4%	44.7%	63.9%	44.1%	64.2%	39.9%	61.8%	42.1%	63.6%
Ethnicity	Hispanic	38.5%	57.3%	43.6%	62.0%	39.6%	54.1%	41.3%	61.5%	36.1%	57.7%	39.0%	60.5%
	Non-Hispanic	41.3%	58.7%	43.1%	62.0%	42.9%	62.4%	42.3%	61.7%	37.8%	58.2%	39.6%	61.1%
	Unknown[d]	33.7%	50.2%	33.0%	48.8%	36.4%	53.1%	33.2%	52.4%	31.6%	50.1%	33.3%	51.8%
Geographic Location	Metro	38.8%	56.2%	41.1%	59.5%	40.9%	60.2%	40.2%	59.7%	36.2%	56.4%	38.4%	59.3%
	Non-Metro	47.6%	65.0%	47.4%	67.1%	47.3%	66.0%	45.4%	64.5%	40.2%	60.8%	40.8%	62.8%

Beneficiary Characteristics		MH-Related[a] Inpatient Discharge[b] Follow-up Rate											
		2018		2019		2020		2021		2022		2023	
		N=12,655[c]		N=13,463[c]		N=14,610[c]		N=16,535[c]		N=16,766[c]		N=17,473[c]	
		7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate
Dual Eligibility	Dually Eligible	51.8%	72.2%	49.7%	69.1%	49.1%	68.4%	46.3%	66.6%	43.5%	64.9%	42.7%	64.4%
	Not Dually Eligible	38.0%	54.6%	40.9%	59.4%	41.0%	60.1%	40.5%	59.7%	35.8%	55.8%	38.2%	59.3%
HIP	HIP	35.7%	52.5%	40.4%	59.5%	39.5%	59.2%	39.2%	58.6%	34.7%	54.7%	37.7%	58.9%
	Non-HIP	47.4%	65.6%	45.6%	63.8%	47.2%	65.5%	45.4%	64.8%	41.4%	62.1%	41.2%	62.3%
SMI Diagnosis	Bipolar only	35.8%	53.5%	37.7%	55.9%	38.8%	59.5%	38.5%	56.7%	32.8%	54.3%	33.8%	57.3%
	MDD only	36.2%	51.8%	39.0%	56.9%	37.8%	56.0%	37.6%	57.4%	32.9%	51.9%	36.6%	56.4%
	Schizophrenia only	49.5%	65.7%	47.5%	63.5%	45.0%	61.8%	44.2%	61.2%	38.1%	58.3%	35.4%	53.4%
	Co-Occurring Diagnoses	43.0%	62.2%	44.8%	64.8%	45.1%	65.0%	43.5%	63.3%	39.9%	60.7%	41.2%	63.3%
Chronic Conditions	Cancer[e]	44.0%	61.8%	44.6%	68.1%	48.8%	65.3%	43.2%	66.3%	41.5%	62.1%	45.5%	71.0%
	No Cancer	40.7%	58.1%	42.6%	61.2%	42.3%	61.5%	41.5%	60.8%	37.1%	57.4%	38.8%	59.9%
	Cardiovascular Dis.	42.3%	60.4%	44.1%	65.3%	44.6%	63.4%	42.5%	63.0%	37.7%	59.8%	40.9%	62.7%
	No Cardiovascular Dis.	40.7%	58.0%	42.4%	60.9%	42.2%	61.4%	41.4%	60.7%	37.1%	57.3%	38.8%	59.9%
	COPD	43.6%	61.9%	45.2%	65.0%	47.9%	66.3%	44.0%	64.3%	39.6%	61.2%	41.4%	62.8%
	No COPD	40.3%	57.5%	42.1%	60.6%	41.5%	60.8%	41.1%	60.4%	36.8%	56.9%	38.6%	59.8%
	Diabetes	49.5%	68.1%	48.9%	69.1%	50.3%	68.7%	48.3%	68.7%	43.9%	66.5%	45.4%	67.5%
	No Diabetes	39.0%	56.1%	41.3%	59.7%	40.9%	60.2%	40.3%	59.5%	35.9%	55.8%	37.7%	58.8%
	Hypertension	43.8%	62.1%	44.5%	65.0%	45.2%	64.6%	42.7%	62.9%	39.8%	60.4%	42.1%	63.4%
	No Hypertension	38.5%	55.2%	41.2%	58.6%	40.4%	59.3%	40.6%	59.4%	35.4%	55.4%	36.7%	57.9%

Beneficiary Characteristics		MH-Related[a] Inpatient Discharge[b] Follow-up Rate											
		2018		2019		2020		2021		2022		2023	
		N=12,655[c]		N=13,463[c]		N=14,610[c]		N=16,535[c]		N=16,766[c]		N=17,473[c]	
		7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate	7-Day Rate	30-Day Rate
Chronic Conditions (cont.)	Infectious Disease	39.1%	58.4%	43.6%	63.8%	44.2%	64.3%	42.8%	63.4%	38.8%	60.1%	41.1%	64.7%
	No Infectious Disease	41.8%	58.1%	42.1%	59.9%	41.3%	59.9%	40.6%	59.3%	35.9%	55.4%	37.7%	57.5%
	Metabolic Disease	46.9%	66.2%	47.7%	68.3%	49.2%	69.0%	47.5%	68.1%	43.1%	64.5%	44.4%	67.2%
	No Metabolic Disease	34.8%	50.4%	37.9%	54.8%	36.5%	55.1%	36.2%	54.5%	31.8%	51.1%	33.7%	53.3%
	Respiratory Disease	43.3%	62.4%	45.8%	65.5%	45.9%	65.8%	44.8%	65.5%	41.0%	62.9%	42.6%	65.4%
	No Respiratory Disease	38.2%	53.8%	39.2%	56.9%	38.8%	57.2%	38.5%	56.7%	33.6%	52.2%	35.4%	55.0%
Number of Chronic Conditions	0	35.5%	49.1%	37.3%	52.3%	35.3%	52.6%	36.4%	52.8%	29.4%	46.6%	30.8%	48.2%
	1	36.0%	52.9%	38.6%	55.9%	38.0%	57.1%	37.2%	55.9%	33.7%	53.6%	35.9%	56.2%
	2	41.5%	58.2%	43.2%	61.9%	42.1%	62.3%	41.7%	61.8%	38.8%	59.3%	39.0%	62.3%
	3	44.2%	63.8%	45.8%	67.6%	46.8%	66.5%	45.3%	65.8%	39.9%	62.3%	44.3%	65.8%
	4+	46.3%	66.1%	47.9%	68.6%	50.1%	69.4%	47.2%	68.2%	43.4%	64.8%	45.1%	68.2%

[a] MH-related inpatient discharges were identified with the primary diagnoses in acute inpatient claims. MH-related diagnoses were identified using a combination of value sets, including the HEDIS VSD's MH Diagnosis and Intentional Self-Harm value sets, as well as the Clinical Classifications Software Refined (CCSR) Suicidal Ideation, Attempt, and Intentional Self-Harm diagnosis category.

[b] Inpatient Stays were only counted if the beneficiary had (SMI waiver-eligible) Medicaid coverage in the same month as the discharge date and during the following 30 days.

[c] N = denominator (Inpatient Stays)

[d] The sample size of the demographic categories was very small as the denominator of the categories, so their associated follow-up rates had more fluctuations than the denominator categories with large sample sizes. These categories of small sample sizes were collapsed with other categories for meaningful analysis and interpretation. Age 61-64 was grouped with Age 51-60, other race was grouped with unavailable race, and unknown ethnicity was collapsed with the non-Hispanic group.

[e] There were a small number of SMI beneficiaries with cancer for the measure IP-FUH across six years, and therefore, cancer was not included in the regression analysis.

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

11. Follow-up After Inpatient Discharges with MH Diagnosis – Regression Estimates

Exhibit E.66 displays OR estimates from the ITS logistic regression model; each OR shows the odds of a MH-related inpatient discharges being followed by any follow-up visit within 7 or 30 days, relative to the reference group.

Exhibit E.66: Logistic Regression Model for Follow-up After MH-Related Inpatient Discharges (2018 – 2023, Excluding 2020)

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	1.16	(1.05,1.28)	0.004	1.14	(1.03,1.26)	0.009
Time	Pre-Intervention	1.07	(1.01,1.13)	0.015	1.16	(1.10,1.22)	<0.001
	Post-Intervention	0.94	(0.92,0.96)	<0.001	0.99	(0.96,1.01)	0.244
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.07	(1.01,1.13)	0.015	1.16	(1.10,1.22)	<0.001
	Post-Int. * 2021	0.97	(0.91,1.03)	0.330	1.10	(1.03,1.16)	0.004
	Post-Int. * 2022	0.91	(0.86,0.97)	0.005	1.08	(1.02,1.15)	0.015
	Post-Int. * 2023	0.86	(0.80,0.93)	<0.001	1.07	(0.99,1.14)	0.079
Likelihood of Having an MH Inpatient Stay		0.71	(0.45,1.12)	0.138	1.12	(0.71,1.76)	0.630
Gender (Ref: Female)	Male	0.79	(0.76,0.82)	<0.001	0.72	(0.69,0.75)	<0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.96	(0.92,1.00)	0.038	0.95	(0.91,0.99)	0.014
	Age 41-50	0.86	(0.82,0.90)	<0.001	0.87	(0.83,0.92)	<0.001
	Age 51-64	0.86	(0.81,0.93)	<0.001	0.87	(0.82,0.93)	<0.001
Race (Ref: White/Caucasian)	Black	0.69	(0.65,0.73)	<0.001	0.68	(0.64,0.71)	<0.001
	Other/Not Available	1.07	(1.03,1.10)	<0.001	1.09	(1.05,1.13)	<0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.97	(0.89,1.06)	0.530	1.00	(0.92,1.09)	0.989
Geographic Location (Ref: Metro)	Non-metro	1.19	(1.15,1.23)	<0.001	1.22	(1.18,1.27)	<0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	1.23	(1.18,1.29)	<0.001	1.34	(1.28,1.40)	<0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.95	(0.89,1.00)	0.057	1.00	(0.94,1.06)	0.970
	Schizophrenia only	1.49	(1.40,1.58)	<0.001	1.42	(1.34,1.51)	<0.001
	Co-occurring SMI	1.27	(1.18,1.37)	<0.001	1.25	(1.16,1.35)	<0.001

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Chronic Conditions (Ref: No)	Cardiovascular Dis.	0.89	(0.84,0.94)	<0.001	0.90	(0.85,0.95)	<0.001
	COPD	0.94	(0.89,0.98)	0.009	0.91	(0.87,0.95)	<0.001
	Diabetes	1.14	(1.09,1.19)	<0.001	1.17	(1.12,1.23)	<0.001
	Hypertension	1.06	(1.01,1.10)	0.012	1.04	(1.00,1.08)	0.077
	Infectious Disease	0.93	(0.90,0.96)	<0.001	0.99	(0.95,1.02)	0.399
	Metabolic Disease	1.44	(1.40,1.49)	<0.001	1.56	(1.51,1.61)	<0.001
	Respiratory Disease	1.18	(1.14,1.22)	<0.001	1.26	(1.22,1.30)	<0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023.

12. Follow-up After Inpatient Discharges with MH Diagnosis – Sensitivity Analyses

Exhibit E.67 presents the results of the logistic regression with 2020 data included. The OR estimates were consistent with the logistic regressions with 2020 data excluded for follow-up after MH-related inpatient stays.

Exhibit E.67 Logistic Regression Model for Follow-up After MH-Related Inpatient Discharges (2018 - 2023)

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	1.21	(1.13,1.29)	<0.001	1.24	(1.16,1.32)	<0.001
Time	Pre-Intervention	1.07	(1.01,1.13)	0.012	1.16	(1.10,1.22)	<0.001
	Post-Intervention	0.93	(0.92,0.95)	<0.001	0.97	(0.95,0.98)	<0.001
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.07	(1.01,1.13)	0.012	1.16	(1.10,1.22)	<0.001
	Pre-Int. * 2020	1.05	(1.00,1.11)	0.061	1.16	(1.10,1.23)	<0.001
	Post-Int. * 2021	0.98	(0.93,1.04)	0.565	1.12	(1.06,1.19)	<0.001
	Post-Int. * 2022	0.92	(0.87,0.98)	0.006	1.09	(1.03,1.16)	0.005
	Post-Int. * 2023	0.86	(0.80,0.92)	<0.001	1.05	(0.99,1.13)	0.120
Likelihood of Having an MH Inpatient Stay		0.72	(0.48,1.10)	0.129	1.13	(0.74,1.71)	0.582
Gender (Ref: Female)	Male	0.79	(0.76,0.82)	<0.001	0.71	(0.69,0.74)	<0.001

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Age Group (Ref: Age 21-30)	Age 31-40	0.94	(0.91,0.98)	0.002	0.94	(0.91,0.98)	0.003
	Age 41-50	0.86	(0.82,0.90)	<0.001	0.86	(0.82,0.91)	<0.001
	Age 51-64	0.87	(0.81,0.92)	<0.001	0.87	(0.82,0.93)	<0.001
Race (Ref: White/Caucasian)	Black	0.68	(0.65,0.72)	<0.001	0.67	(0.64,0.70)	<0.001
	Other/Not Available	1.06	(1.03,1.10)	<0.001	1.09	(1.05,1.12)	<0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.96	(0.89,1.04)	0.374	0.96	(0.88,1.04)	0.299
Geographic Location (Ref: Metro)	Non-metro	1.20	(1.16,1.24)	<0.001	1.22	(1.18,1.26)	<0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	1.23	(1.18,1.28)	<0.001	1.33	(1.28,1.38)	<0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.96	(0.91,1.01)	0.094	1.02	(0.96,1.07)	0.557
	Schizophrenia only	1.49	(1.41,1.58)	<0.001	1.42	(1.34,1.50)	<0.001
	Co-occurring SMI	1.27	(1.19,1.37)	<0.001	1.25	(1.16,1.34)	<0.001
Chronic Conditions (Ref: No)	Cardiovascular Dis.	0.89	(0.84,0.93)	<0.001	0.89	(0.84,0.94)	<0.001
	COPD	0.96	(0.92,1.00)	0.052	0.92	(0.88,0.97)	<0.001
	Diabetes	1.14	(1.09,1.19)	<0.001	1.16	(1.11,1.22)	<0.001
	Hypertension	1.05	(1.01,1.09)	0.010	1.04	(1.00,1.08)	0.052
	Infectious Disease	0.94	(0.91,0.97)	<0.001	0.99	(0.96,1.02)	0.400
	Metabolic Disease	1.46	(1.41,1.50)	<0.001	1.57	(1.52,1.62)	<0.001
	Respiratory Disease	1.18	(1.14,1.21)	<0.001	1.25	(1.22,1.29)	<0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023

Exhibit E.68 displays the estimated OR and their statistical significance from one-stage logistic regression. The estimates were consistent with that generated from the two-stage model for follow-up after inpatient discharges for MH-related diagnosis.

Exhibit E.68: One-Stage Logistic Regression Model for Follow-up After MH-Related Inpatient Discharge (2018 – 2023, Excluding 2020)

Variable	Level	7-Day Follow-up Rate			30-Day Follow-up Rate		
		OR	95% CI	p-Value	OR	95% CI	p-Value
Intervention (Int.) Period (Ref: Pre-Int.)	Post-Intervention (Post-Int.)	1.18	(1.07,1.30)	0.001	1.14	(1.03,1.25)	0.010
Time	Pre-Intervention	1.09	(1.03,1.14)	0.001	1.15	(1.09,1.21)	<0.001
	Post-Intervention	0.95	(0.93,0.97)	<0.001	0.98	(0.96,1.01)	0.170
Int. Period * Year (Ref: Pre-Int. * 2018)	Pre-Int. * 2019	1.09	(1.03,1.14)	0.001	1.15	(1.09,1.21)	<0.001
	Post-Int. * 2021	1.00	(0.95,1.05)	0.994	1.08	(1.04,1.14)	<0.001
	Post-Int. * 2022	0.95	(0.91,0.99)	0.009	1.07	(1.03,1.11)	0.002
	Post-Int. * 2023	0.90	(0.86,0.94)	<0.001	1.05	(1.00,1.10)	0.034
Gender (Ref: Female)	Male	0.77	(0.75,0.80)	<0.001	0.72	(0.70,0.74)	<0.001
Age Group (Ref: Age 21-30)	Age 31-40	0.97	(0.93,1.01)	0.097	0.95	(0.91,0.98)	0.005
	Age 41-50	0.88	(0.84,0.92)	<0.001	0.87	(0.83,0.91)	<0.001
	Age 51-64	0.89	(0.85,0.94)	<0.001	0.86	(0.82,0.91)	<0.001
Race (Ref: White/Caucasian)	Black	0.69	(0.65,0.73)	<0.001	0.68	(0.64,0.71)	<0.001
	Other/Not Available	1.06	(1.02,1.09)	<0.001	1.10	(1.06,1.13)	<0.001
Ethnicity (Ref: Non-Hispanic/Unknown)	Hispanic	0.98	(0.89,1.06)	0.571	1.00	(0.92,1.09)	0.995
Geographic Location (Ref: Metro)	Non-metro	1.20	(1.16,1.24)	<0.001	1.22	(1.18,1.26)	<0.001
Dual Eligibility (Ref: Non-dually Eligible)	Dually Eligible	1.24	(1.20,1.30)	<0.001	1.34	(1.28,1.39)	<0.001
SMI Diagnosis (Ref: MDD Only)	Bipolar only	0.95	(0.90,1.00)	0.071	1.00	(0.94,1.06)	0.944
	Schizophrenia only	1.46	(1.38,1.54)	<0.001	1.43	(1.36,1.52)	<0.001
	Co-occurring SMI	1.21	(1.16,1.25)	<0.001	1.27	(1.23,1.31)	<0.001
Chronic Conditions (Ref: No)	Cardiovascular Dis.	0.89	(0.84,0.95)	<0.001	0.90	(0.84,0.95)	<0.001
	COPD	0.94	(0.89,0.98)	0.007	0.91	(0.87,0.96)	<0.001
	Diabetes	1.15	(1.10,1.20)	<0.001	1.17	(1.12,1.23)	<0.001
	Hypertension	1.04	(1.00,1.07)	0.042	1.04	(1.01,1.08)	0.015
	Infectious Disease	0.93	(0.90,0.96)	<0.001	0.99	(0.96,1.02)	0.454
	Metabolic Disease	1.44	(1.39,1.49)	<0.001	1.56	(1.51,1.61)	<0.001
	Respiratory Disease	1.17	(1.14,1.21)	<0.001	1.26	(1.22,1.30)	<0.001

Source: Monthly claims/encounter and enrollment files, January 2018 – December 2023 (2020 data excluded)

H. Power Analyses

Power, or the likelihood of detecting a "true" effect when it exists depends on multiple aspects including the effect size of the primary variable of interest to be tested, the number of parameters in the statistical model (and variability of its effect on outcomes), and the number of observations in the analytic data used to estimate the model. The power analysis conducted for the Interim evaluation aimed to determine the minimum number of observations that would be required to ensure the regressions estimated have 80% power to detect effects for the primary factor being tested. More specifically, simulations to estimate the minimum number of observations required to test for the effect of the primary factors (intervention period and time) on the outcome measures with 80% power and 95% confidence were conducted.

Since the majority of the claims/encounter-based outcome measures examined in the Interim evaluation were proportions or rates based on binary outcomes (e.g., proportion of beneficiaries with an all-cause ED visit, proportion of acute inpatient and observation stays with a 30-day readmission) and were assessed using ITS logistic regression analyses, the SAS procedure PROC POWER with the LOGISTIC statement was used to estimate the number of observations required for specified power (0.8), confidence level (0.05), and a set of assumed effect sizes for the primary factors of interest (intervention indicator and time). To test for the effect, the SAS procedure used likelihood ratio chi-square test.

Given that the Goal outcome measures could have a varying range of values (e.g., the average participation rate of all-cause ED visits was 54.0%, the average 30-day all-cause readmission rate was 18.3%, and the average participation rate of community-based services was 62.4%) the simulation included eight possible outcome values ranging between 5% to 50%. The simulation included five possible effect sizes (that is, possible logistic regression OR values [0.5, 0.9, 1.1, 1.5, and 2]) for the primary factors (intervention indicator and time). Since outcome measures could vary by beneficiary characteristics (or other control variables), select sociodemographic characteristics were included as other covariates for the simulation: gender, age (categorical), race (3 levels), ethnicity (2 levels), geography (metro/non-metro), prevalence of SMI condition. For each of these factors, the specified distribution (e.g., ordinal, normal) was identified based on observed distributions in the SMI beneficiary roster and three different effect sizes specified by odds ratios (0.5, 1.1, and 2). For example, the calculations generated the number of observations that would be required to power a regression (80%) to test for the intervention having an odds ratio of 1.1 when outcome is approximately 10% and the regression would include 5-level age and 3-level race as control variables.

Exhibit E.69 summarizes the estimated minimum and maximum number of observations to achieve 80% power for each primary factor (intervention indicator and time), for a range of possible factor ORs (0.5, 0.9, 1.1, 1.5, and 2), given a range of possible values for the outcome measures (i.e., from 5% to 50%).

Power calculations were also conducted to determine the number of observations required to test for differences in the key outcome measures between two time-periods (e.g., test for difference in participation rates in 2019 [pre-demonstration] and 2021 [first year of waiver extension]). **Exhibit E.70** summarizes the estimated observations required. For example, to test a detectable difference of 10% for two groups in which one group is twice the size of the other (1:2 group ratio) and the assumed outcome measure value is 20%; the number of observations needed is

538. Across the years, the analytic data included more than the minimum number of observations estimated based on these power analyses.

Exhibit E.69: Estimated Range for Number of Observations (N) to Support Regression Analysis (Power Calculation Simulation Summary)

Primary Control Factor for Regressions	Assumed Outcome Measure Value	Minimum N for 80% Power [a]					Maximum N for 80% Power [a]				
		0.5	0.9	1.1	1.5	2	0.5	0.9	1.1	1.5	2
Intervention Effect	5%	898	42,463	53,534	3,105	1,112	1,309	66,398	85,302	5,066	1,841
	10%	637	29,801	37,343	2,148	763	733	36,105	46,075	2,716	984
	15%	524	24,058	30,118	1,733	617	625	28,314	35,214	2,003	705
	20%	453	21,200	26,407	1,506	533	572	25,700	31,871	1,805	633
	25%	371	16,740	20,878	1,196	425	518	22,927	28,299	1,592	555
	30%	342	14,953	18,456	1,042	366	494	21,593	26,546	1,484	515
	40%	342	14,503	17,721	986	342	494	21,066	25,740	1,431	494
	50%	898	42,463	53,534	3,105	1,112	1,309	66,398	85,302	5,066	1,841
Time Effect	5%	53	2,892	3,852	239	88	58	4,411	6,196	373	122
	10%	40	2,040	2,677	166	63	47	2,423	3,339	206	72
	15%	34	1,655	2,160	136	52	43	1,956	2,509	152	57
	20%	32	1,451	1,886	118	46	41	1,781	2,266	136	51
	25%	30	1,158	1,495	95	38	39	1,597	2,005	119	45
	30%	30	1,046	1,313	83	34	38	1,510	1,875	111	42
	40%	32	1,025	1,251	77	32	40	1,485	1,813	106	40
	50%	53	2,892	3,852	239	88	58	4,411	6,196	373	122

[a] Five odds ratios, 0.5, 0.9, 1.1, 1.1, and 2, were used for the primary factors of interest, the intervention effect and the time effect.

Exhibit E.70: Estimated Range for Number of Observations (N) to Support Testing Difference Between Two Population (Power Calculation Simulation Summary)

Relative Size	Assumed Outcome Measure Value	Detectable Difference [a]						
		1%	2%	3%	4%	5%	8%	10%
Same Size	5%	12,847	3,481	1,664	1,000	680	310	216
	10%	23,234	6,047	2,790	1,626	1,076	459	309
	20%	40,298	10,251	4,631	2,646	1,719	699	458
	30%	52,416	13,218	5,923	3,357	2,164	861	556
	40%	59,587	14,949	6,665	3,759	2,411	946	606
	50%	61,813	15,444	6,857	3,852	2,461	954	606
1:2	5%	14,866	4,120	2,006	1,225	844	397	281
	10%	26,505	6,983	3,258	1,917	1,280	558	380
	20%	45,609	11,666	5,298	3,042	1,985	816	538
	30%	59,149	14,959	6,720	3,819	2,467	987	640
	40%	67,124	16,860	7,524	4,247	2,727	1,071	686
	50%	69,535	17,370	7,710	4,329	2,764	1,068	677
1:3	5%	17,863	5,004	2,457	1,511	1,047	498	354
	10%	31,630	8,384	3,932	2,325	1,558	686	470
	20%	54,217	13,907	6,332	3,644	2,382	985	651
	30%	70,209	17,781	7,999	4,550	2,943	1,181	767
	40%	79,607	20,007	8,933	5,045	3,240	1,274	816
	50%	82,409	20,584	9,135	5,127	3,273	1,263	800

[a] The detectable difference of 6%,7%, and 9% are not included because the number of observations were not very different from that of their nearest rate of detectable difference proportionally. For example, 6% detectable difference gave the number of observations that were less than 30% lower than that by 5% detectable difference.

Attachment F: IN SMI Evaluation Plan (2021-2025) Waiver

Attachment G: Impact on Healthcare Spending