State of New Hampshire
Department of Health and Human Services

Premium Assistance Program (PAP) Evaluation Plan Implementation

Interim Evaluation Report
Version 2

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HSAG HEALTH SERVICES ADVISORY GROUP

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Executive Summary

The Centers for Medicare & Medicaid Services (CMS) approved the New Hampshire Health Protection Program (NHHPP) Premium Assistance Program (PAP) for a 3-year demonstration in 2015 with service coverage beginning on January 1, 2016. The PAP is a Medicaid waiver program that provides premium assistance to Medicaid members to purchase insurance on the New Hampshire health insurance marketplace (the Marketplace) through a Qualified Health Plan (QHP). Premiums are paid directly to the QHP by New Hampshire Medicaid. Prior to the PAP, NHHPP members in the PAP received insurance through a Bridge program from Medicaid Managed Care Organizations (MCOs).

This Interim Evaluation Report is required by CMS as part of the waiver's terms and conditions and evaluates the first full year of the PAP, calendar year (CY) 2016. After the conclusion of the Demonstration period of the PAP a Final Evaluation Report will include an analysis of the full 3-year demonstration period. The Final Report is expected to be complete by December 31, 2019. The New Hampshire Department of Health and Human Services (DHHS) has contracted with the external vendor Health Services Advisory Group, Inc. (HSAG) and their subcontractor, Milliman, to conduct the evaluation and produce the CMS required reports.

Summary of the Goals of the Demonstration

The New Hampshire Demonstration goals are centered on the following domains:

- Continuity of coverage,
- Plan variety,
- Cost-effective coverage,
- Uniform provider access, and
- Cost neutrality.

Fourteen research hypotheses were selected to evaluate the achievement of the waiver goals and compare results for members in the PAP population with beneficiaries who received Medicaid Managed Care (MMC). Each hypothesis was evaluated through a set of process and outcome measures collected throughout the demonstration period.

Key Findings

The PAP fully met the Cost-Effective Coverage waiver goal during CY 2016. The Cost Neutrality waiver goal was not met during CY 2016.[1] The analytical results for all other waiver goals were inconclusive. Table 1 below provides details of the results.

Continuity of Coverage

The analysis was inconclusive whether the Demonstration allowed for continuity of health plans and provider networks for individuals whose incomes fluctuated.

[1] The term "cost neutrality" used herein does not refer to the formal Budget Neutrality test required under the Section 1115 Waiver Demonstration program, which sets a fixed target under which waiver expenditures must fall that was set at the time the waiver was approved. See the Cost Neutrality section below for additional information.

Plan Variety

The analysis results were inconclusive whether the Demonstration encouraged MMC carriers to offer QHPs in the Marketplace in order to retain Medicaid market share.

Cost-Effective Coverage

The Demonstration increased QHP enrollment and resulted in increased competition among QHPs, although there was no evidence available to test the existence of economies of scale.

Uniform Provider Access

The analysis results were inconclusive in determining if the premium assistance population had access to primary, specialty, and behavioral health care services comparable to what had been provided by the Bridge program. Data were not available to compare provider access with the general New Hampshire population.

While largely inconclusive, the results of the hypothesis associated with this goal suggest that the QHPs are struggling to accommodate the higher rates of chemical dependency and mental health issues among the Medicaid population.

Cost Neutrality

Based on the analysis conducted by Milliman, the PAP does not meet the waiver goal of cost neutrality. The term "cost neutrality" used herein does not refer to the formal Budget Neutrality test required under the Section 1115 Waiver Demonstration program, but is based on a hypothetical continuation of the Bridge program.[2]

Conclusion

The results of the analysis of the New Hampshire PAP were largely inconclusive, likely due to an extended ramp-up period during which participating plans incorporated the unique health care needs of the Medicaid population and additional Medicaid requirements into their policies, procedures, and products.

Table 1: Summary of Continuity of Coverage Hypotheses Results

Continuity of Coverage Waiver Goal: For individuals, whose incomes fluctuate, the Demonstration will permit continuity of health plans and provider networks.		
Hypothesis	**Hypothesis Description**	**Supported by Analysis**
1	Premium assistance beneficiaries will have equal or fewer gaps in insurance coverage than non-PAP members enrolled in Medicaid.	Yes
2	Premium assistance beneficiaries will maintain continuous access to the same health plans, and will maintain continuous access to providers.	Inconclusive

[2] The CMS approved budget neutrality target for 2016 is $701.53 per member per month (PMPM). The actual PAP cost under both approaches described in the rest of this report is below the $701.53 PMPM target.

Plan Variety Waiver Goal: The Demonstration could also encourage Managed Care Management (MCM) carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and could encourage QHP carriers to seek MMC contracts.		
Hypothesis	**Hypothesis Description**	**Supported by Analysis**
3	Premium assistance beneficiaries, including those who become eligible for Exchange Marketplace coverage, will have equal or fewer gaps in plan enrollment, equal or improved continuity of care, and resultant equal or lower administrative costs.	Inconclusive
4	The Demonstration could lead to an increase in plan variety by encouraging MMC carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and encouraging QHP carriers to seek MMC contracts.	Inconclusive
Cost-Effective Coverage Waiver Goal: The premium assistance approach will increase QHP enrollment and may result in greater economies of scale and competition among QHPs.		
Hypothesis	**Hypothesis Description**	**Supported by Analysis**
5	Premium assistance beneficiaries will have equal or lower non-emergent use of emergency room services.	Inconclusive
6	Premium assistance beneficiaries will have equal or lower rates of potentially preventable emergency department (ED) and hospital admissions.	Yes
7	Implementation of the program will result in more Medicaid plans deciding to enter the New Hampshire health insurance marketplace.	Yes
Uniform Provider Access Waiver Goal: The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.		
Hypothesis	**Hypothesis Description**	**Supported by Analysis**
8	Premium assistance beneficiaries will have equal or better access to care, including primary care and specialty physician networks and services.	Inconclusive
9	Premium assistance beneficiaries will have equal or better access to preventive care services.	Inconclusive
10	Premium assistance beneficiaries will report equal or better satisfaction in the care provided.	Inconclusive
11	Premium assistance beneficiaries who are young adults eligible for Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefits will have at least as satisfactory and appropriate access to these benefits.	Inconclusive
12	Premium assistance beneficiaries will have appropriate access to Non-Emergency Medical Transportation (NEMT).	Yes
13	Premium assistance beneficiaries will have equal or better access to care, including behavioral health services.	Inconclusive
Cost Neutrality Waiver Goal: The premium assistance program will be cost neutral with respect to continuation of the previous New Hampshire Medicaid expansion program.		
Hypothesis	**Hypothesis Description**	**Supported by Analysis**
14	The premium assistance program will be cost neutral with respect to continuation of the previous New Hampshire Medicaid expansion program.	No

1. Purpose of the Interim Evaluation Report

This Interim Evaluation Report assesses the Premium Assistance Program (PAP) waiver demonstration after its first full year of implementation. The report presents the results of selected process and outcome measures, as well as an evaluation of the costs and cost-effectiveness of the program during 2016. Health Services Advisory Group, Inc. (HSAG) provides an in-depth analysis of the progress, results, conclusions, and policy implications of the PAP to date.

2. Background

States are provided an opportunity to design and test their own methods for providing and funding health care services that meet the objectives of the federal Medicaid and Children's Health Insurance Programs (CHIP) through the Section 1115 demonstrations and waiver authorities set out in Section 1915 of the Social Security Act. The Centers for Medicare & Medicaid Services (CMS) has designed a national evaluation strategy to compare the approaches used by different states in its Section 1115 Medicaid expansion waivers, requiring that each demonstration meet the program objectives of increasing and strengthening coverage for low-income individuals, increasing access to providers, improving health outcomes, or increasing the efficiency and quality of care, while maintaining budget neutrality.

The Premium Assistance Program (PAP) is one element of the State of New Hampshire's approach to the expansion of Medicaid made available to the states through the Affordable Care Act (ACA); this element must be evaluated in the context of the fundamental changes taking place as the nation adjusted to the mandate that individuals obtain health insurance and the creation of the state health insurance marketplace exchanges. A critical factor in the New Hampshire legislature's decision to accept the Medicaid expansion was the PAP's incorporation of the private sector and traditional market principals in its approach.

New Hampshire designed a "Bridge" program that enrolled the newly insured adults in the Medicaid Managed Care Organizations (MCOs) from December 2013 through December 2015. New Hampshire's Medicaid Managed Care (MMC) program began operating with three providers, or MCOs, including New Hampshire Healthy Families and Well Sense, which both continue to provide MMC services today.[2-1] The PAP waiver application was developed in 2014 over several months, with input from stakeholders and was designed to move the non-medically frail population from managed care into the private health insurance marketplace beginning January 2016.

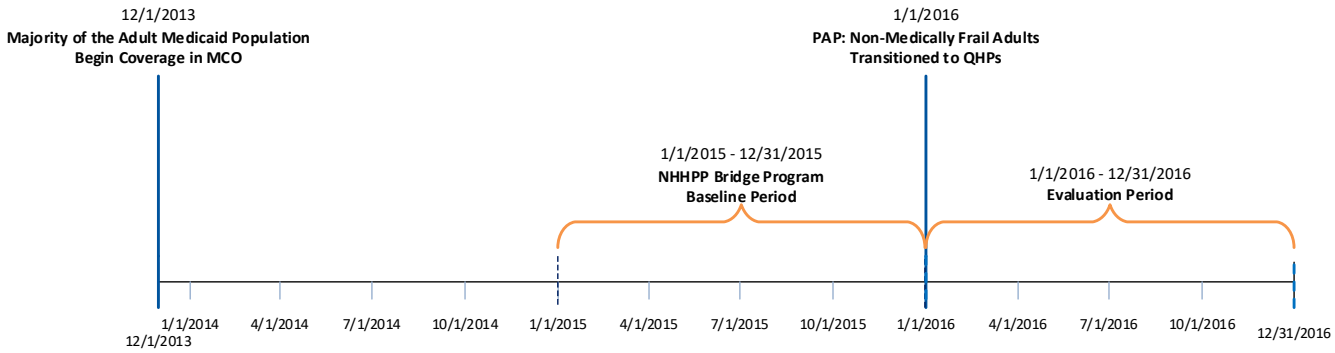
Overview of PAP

As mentioned in the Executive Summary, CMS approved New Hampshire's application for a 3-year Section 1115 demonstration project for the New Hampshire Health Protection Program (NHHPP) Premium Assistance Demonstration (the PAP) in March 2015, effective January 1, 2016. The PAP automatically enrolled individuals in the new adult group covered by the expansion in one of the state's Qualified Health Plans (QHPs) approved to sell insurance on the state's exchange. New Hampshire used premium assistance to support the purchase of health insurance coverage for the Medicaid expansion population from the QHPs offered on the individual health care marketplace created pursuant to the ACA. Most New Hampshire residents who gained eligibility for health insurance through the state's decision to expand Medicaid coverage under the ACA began receiving Medicaid benefits through the PAP on January 1, 2016.

Milestones in the progression from the Bridge program to the period evaluated for this report are illustrated in Figure 2-1.

[2-1] The third MCO, Meridian, elected to leave the program in approximately August 2014.

Figure 2-1: Milestones from Bridge to PAP



Demonstration Description

The purpose of the New Hampshire PAP was to provide mandatory health insurance to the new adult expansion population through the QHPs, which would further continuity of coverage for individuals as they transitioned from different sources of coverage, or into coverage for the first time. The state hypothesized that the program would perform an important service by integrating low-income, usually uninsured New Hampshire residents into the health insurance system. At the same time, by enabling an estimated 45,000 persons to purchase health insurance on the New Hampshire health insurance marketplace (the Marketplace), the program would foster a stronger and more competitive individual insurance market, possibly attracting new or additional carriers, while providing continuity of care and access to care for the Bridge population.[2-2]

More specifically, the PAP was designed to support the purchase of health insurance coverage on the commercial market for beneficiaries eligible for the expansion of benefits, aged 19 through 64 years of age with incomes up to 133 percent of the Federal Poverty Level (FPL) who were neither enrolled in nor eligible for Medicare, did not identify as medically frail, and were not incarcerated or eligible for cost-effective employer sponsored insurance. Members who met the criteria were presented with a choice of qualified health plans in the Marketplace and received financial assistance to defray payment of premiums, via sums paid directly to the QHP on their behalf.[2-3] Once determined eligible and enrolled, the individual would be covered for a year absent a change in circumstances, with annual redetermination of eligibility by the state.

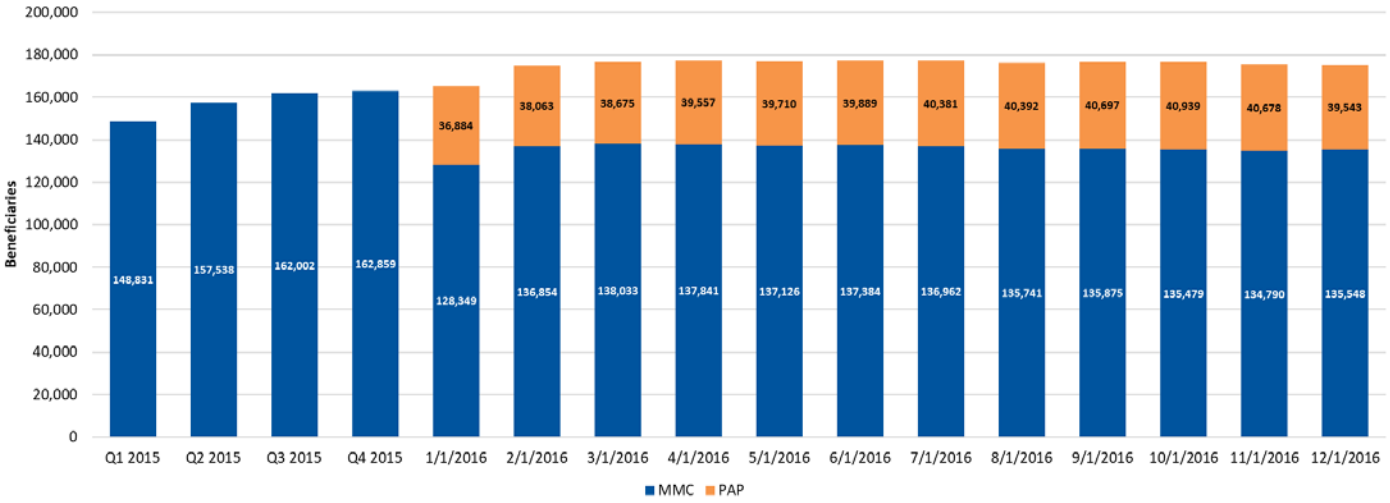
Members in the Bridge population who qualified for the PAP would continue automatically with their MCO if it elected to create a QHP offering on the Marketplace; otherwise, members were automatically assigned at random to one of the QHPs with the right to choose a different plan if they so desired. New members seeking Medicaid in 2016 who were qualified for the PAP were required to enroll in a QHP unless they were medically frail or fit within other specific exceptions or opt out provisions.

Figure 2-2 illustrates the changes in enrollment in the MCOs and the PAP/QHPs from 2015 through 2016.

[2-2] Submission of Waiver Application by Governor of New Hampshire, November 20, 2014. Available at: https://www.dhhs.nh.gov/pap-1115-waiver/documents/final-waiver-app-11202014.pdf. Accessed on October 27, 2017.

[2-3] Members who did not choose a QHP were automatically assigned to one of the QHPs operating on the Marketplace.

Figure 2-2: Combined MCO and PAP Enrollment 2016



Source: New Hampshire Department of Health and Human Services, Medicaid Services, Quarterly Reports.[2-4]

CMS' approval of the Section 1115 waiver application was contingent on annual review and reauthorization of the PAP by the New Hampshire legislature.

Program Goals and Strategies and Relation to Cost Neutrality

The core strategies of the PAP demonstration, like the Medicaid program in general, have been chosen to work together to improve patient health and reduce health care costs. Continuity of care recognizes the importance of maintaining a usual primary source of care in order to coordinate preventive care and screening as well as to prevent or lessen the worsening of health conditions. Nationwide, one of the major concerns about the newly insured population covered by the Medicaid expansion was that coverage and care would be interrupted frequently due to changes in eligibility as work status or schedules changed from month to month. The PAP aimed to smooth out this fluctuation by paying premiums directly on behalf of eligible members, and re-determining eligibility annually. It was believed that this would result in a healthier population with lower health care costs.

At the same time, directing the newly insured population into the private sector to the extent possible meant an increase of 45,000 individuals eligible to purchase insurance on the Marketplace. It was believed that this pool of customers would attract carriers to offer plans who might not otherwise have been willing to go through the process of obtaining approval to sell health insurance on the relatively small health insurance exchange in New Hampshire compared to many other states. It was believed that private enterprise's ability to settle on the most competitive and efficient products would naturally bring down costs and limit government involvement in the health care system. At the same time, the right to choose among plans preserved the individuals' right to direct their own care, honoring the importance of patient-centered decisions in health care.

It was hypothesized that a significant portion of the newly covered Medicaid population would be relatively healthy, employable, and able to thrive without the need for intensively managed MMC that was provided by the MCOs. People who needed this level of care could still opt out by self-identifying as medically frail, but the rest of the population could be responsible for its own health care decisions and navigation of the health care system.

[2-4] Available for download through CMS website at https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/?entry=29927. Accessed on November 9, 2017.

3. Evaluation Design

The following section describes Health Services Advisory Group, Inc.'s (HSAG's) approach to assessing the impact of the Premium Assistance Program (PAP).

Research Questions and Hypotheses

Fourteen research hypotheses were identified to guide the evaluation of the program consistent with the broad goals of the waiver approved by the Centers for Medicare & Medicaid Services (CMS). These hypotheses are presented here with the waiver program goals they were designed to evaluate.

Continuity of Coverage

CMS required that waiver projects demonstrate continuity of coverage for beneficiaries that was at least as good as that provided to Medicaid beneficiaries nationwide. Specifically, for New Hampshire's PAP evaluation, the research hypotheses were:

- Hypothesis 1—PAP beneficiaries will have equal or fewer gaps in insurance coverage.
- Hypothesis 2—PAP beneficiaries will maintain continuous access to the same health plans and provider networks.

Plan Variety

CMS required that Medicaid beneficiaries be offered a choice in the insurance plan, networks, and providers that would provide their health care. For New Hampshire's PAP evaluation, the research hypotheses were:

- Hypothesis 3—PAP beneficiaries, including those who become eligible for Exchange Marketplace coverage, will have equal or fewer gaps in plan enrollment, equal or improved continuity of care, and resultant equal or lower administrative costs.
- Hypothesis 4—The Demonstration leads to an increase in plan variety by encouraging Medicaid Managed Care (MMC) carriers to offer Qualified Health Plans (QHPs) in the Marketplace in order to retain Medicaid market share, and encouraging QHP carriers to seek MMC contracts.

Cost-Effective Coverage

CMS required that attention be paid to the value of waiver programs, and cost-effectiveness of plans offered by the states should be at least as good as that seen in the general Medicaid population. For New Hampshire's PAP evaluation, the research hypotheses were:

- Hypothesis 5—PAP beneficiaries will have equal or lower non-emergent use of emergency room services.
- Hypothesis 6—PAP beneficiaries will have equal or lower rates of potentially preventable emergency department (ED) and hospital admissions.
- Hypothesis 7—Implementation of the program will result in more Medicaid plans deciding to enter the New Hampshire health insurance marketplace.

Uniform Provider Access

CMS required that provider access offered by the states in waiver demonstrations be at least as good as that seen in the general Medicaid population. For New Hampshire's PAP evaluation, the relevant research hypotheses were:

- Hypothesis 8—PAP beneficiaries will have equal or better access to care, including primary care and specialty physician networks and services.
- Hypothesis 9—PAP beneficiaries will have equal or better access to preventive care services.
- Hypothesis 10—PAP beneficiaries will report equal or better satisfaction in the care provided.
- Hypothesis 11—PAP beneficiaries who are young adults eligible for Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefits will have at least as satisfactory and appropriate access to these benefits.
- Hypothesis 12—PAP beneficiaries will have appropriate access to non-emergency transportation.
- Hypothesis 13—Premium assistance beneficiaries will have equal or better access to care, including behavioral health services.

Cost Neutrality

For New Hampshire's PAP evaluation, the research hypothesis regarding cost neutrality was:

- Hypothesis 14—The cost for covering premium assistance beneficiaries will be comparable to what the costs would have been for covering the same expansion group in New Hampshire Medicaid in accordance with Special Terms and Conditions (STC) #69 on determining cost-effectiveness and other requirements in the evaluation design as approved by CMS.

Study Design

HSAG employed multiple data sets and methodologies—including both qualitative and quantitative analyses—to understand more fully the impact of the PAP. HSAG and New Hampshire Department of Health and Human Services (DHHS) selected a portfolio of measures that captured health outcomes, expenditures, consumer satisfaction, and access to insurance and health care.[3-1] HSAG collected, reviewed, prepared, and analyzed data from a variety of sources, calculated measure performance based on the agreed-upon specifications, and performed statistical analyses to estimate the performance of the New Hampshire Health Protection Program (NHHPP) PAP relative to the hypotheses described above. Measure results and costs expended were compared to matched control groups for some measures, and/or to baseline periods prior to initiation of the PAP where appropriate. Trends over time were examined using difference-in-differences analyses where possible.

A difference-in-differences approach is a widely used method that aids in isolating the effect of a particular program or policy on measurable outcomes.[3-2] At its core, a difference-in-differences analysis consists of two groups—one being an intervention or treatment group (i.e., the PAP population) and the other being a comparison group who is similar to the treatment group, but did not receive the treatment—and two time periods—one before the intervention (i.e., baseline period) and the other after the intervention began (i.e., evaluation period).

[3-1] As mentioned, a detailed table of measure specifications is provided in Appendix B.

[3-2] See, for example, Imbens/Woodridge. Difference-in-Differences Estimation. Lecture Notes 10, Summer 2007. Available at: http://www.nber.org/WNE/lect_10_diffindiffs.pdf. Accessed on: December 7, 2017.

Outcomes for both groups are measured over both time periods. The change in the outcome between the baseline period and the evaluation for the comparison group is subtracted from the change in the outcome between the two time periods for the treatment group. The result is an estimated effect of the program controlling for changes due to other causes over time as represented by the change in the comparison group. A more detailed description of the methodology used can be found in Appendix A.

Impacted Populations and Stakeholders

Stakeholders included the PAP beneficiaries who were directly impacted by the program and Medicaid beneficiaries who were not eligible for the PAP. Other stakeholders included the Medicaid Managed Care Organizations (MCOs) and QHPs who provided health insurance in New Hampshire, their provider networks, and other members. New Hampshire policy makers, the DHHS, and the Department of Insurance all maintained a high level of engagement in the process of oversight and annual reauthorizations of the demonstration program. CMS and the United States taxpayers had significant interest in the outcome of the project, as did the population of New Hampshire.

Data Sources and Measures

Data sources used in this evaluation included administrative claims and encounter data for both PAP and Medicaid MCO members, secondary data (e.g., non-emergency transportation authorization data), survey data (Healthcare Effectiveness Data and Information Set [HEDIS®], Consumer Assessment of Healthcare Providers Systems [CAHPS®] survey), and qualitative data obtained during semi-structured interviews with representatives of several of the QHPs and MCOs who provided coverage for Medicaid beneficiaries in New Hampshire.[3-3,3-4]

Administrative Measures

Most measures were calculated from administrative claims and encounter data. Sources included fee-for-service (FFS) claims extracted from DHHS's Medicaid Management Information System (MMIS), Electronic Data Interchange (EDI) transactions provided by the MCOs, and the State's Comprehensive Health Care Information System (CHIS). These three data sources were used to collect, manage, and maintain Medicaid recipient files (i.e., eligibility, enrollment, and demographics), FFS claims extract from MMIS, MCO encounter data from the EDI transactions, and CHIS. HSAG excluded voided and revised claims from the analysis based on information provided by the State indicating that these claims do not represent services rendered to or received by members. HSAG entered appropriate data use agreements and obtained access to and use of Medicaid claims and encounter data, member demographics and eligibility enrollment, and provider data. In addition, supplemental data from hospital discharge records were utilized as part of the analysis of Follow-Up After Hospitalization for Mental Illness (Measure 13-1).

3-3 HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

3-4 CAHPS® is a registered trademark of the Agency for Healthcare Research and Quality (AHRQ).

Survey Measures

A second group of measures was based on a consumer survey, CAHPS. CAHPS surveys were used to assess satisfaction with provided health care services, and were adapted to elicit information addressing the research hypotheses related to members' continuity of health care coverage and health plan market diversity. HSAG in collaboration with its subcontractor, DataStat, obtained approval from the State to supplement its annual CAHPS administration with evaluation-specific questions addressing continuity of health coverage and access to the same health plan and providers. The State cooperated in flagging whether respondents were part of the traditional managed care group (the MMCs), the NHHPP Bridge group (during the baseline period), or the NHHPP PAP (during the evaluation period).

The CAHPS survey was administered to 1,350 Medicaid MCO members and 1,350 PAP members from July 2017 to September 2017. HSAG and DataStat used a mixed mode methodology by enhancing the CAHPS mailing protocol and conducting computer assisted telephone interviewing (CATI) to maximize response rates. Upon the closing of the CAHPS survey, the overall response rate was 24.34 percent with approximately 21.19 percent being PAP respondents and 27.54 percent being Medicaid MCO respondents.

Semi-Structured Interviews

Two measures were based on data obtained during a series of semi-structured interviews with representatives of most of the health insurance plans who served the Medicaid population in New Hampshire in 2016. Individuals knowledgeable about the plan perspective on continuity of enrollment and administrative costs and the impact of the PAP were identified by the plans for interview. Data were synthesized to provide a high-level survey of the operation of the PAP that will better inform future policy in this complex area. Additional qualitative details on the semi-structured interviews is in Appendix E.

Other Data Sources

The MCOs and health insurance carriers offering QHPs for sale on the New Hampshire health insurance marketplace (the Marketplace) were identified from state sources and confirmed through internet research.

Time Periods for Data Collection and Evaluation

The data used to calculate the non-survey measures compared measure rates and outcomes for two time periods: a baseline period and an evaluation period. The baseline period selected was the 12-month period prior to implementation of the PAP, January 1, 2015, through December 31, 2015. The evaluation period was January 1, 2016, through December 31, 2016.

The survey-based measures required a slightly different time period due to the lag between the time at which beneficiaries received services and the collection and analysis of survey data as part of the National Committee for Quality Assurance (NCQA) schedule for administering the CAHPS surveys. Thus, the baseline period was identified as the results from CAHPS 2015 administration, and the evaluation period was identified as results from the CAHPS 2017 administration covering services provided during 2016.

The interviews for the interview-based measures were conducted by HSAG in October 2017. HSAG interviewed representatives of 4 of 5 QHPs who offered coverage on the Marketplace in 2016, and the two MCO providers active during that time period.

Analysis Techniques

The approach used to assess the impact of the PAP included statistical analysis of the differences in health and financial outcomes between members who were part of the PAP plan and those who were covered by Medicaid. The techniques are summarized in this section of the report, as well as the reasons for a handful of revisions to the original CMS-approved evaluation plan, and are described in detail in Appendix A.

Health Outcomes

Eligible Populations

To evaluate the health-related outcomes, two eligible populations were identified, the treatment and comparison groups as described below.

Treatment Group

The treatment group (i.e., the Bridge/PAP population) for the health outcomes measures was composed of a subset of members who were in New Hampshire Medicaid's NHHPP, and who did not identify themselves as medically frail. All childless adults between the age of 19 through 64 with incomes at or below 133 percent of the FPL, and many parents with incomes in that range, were automatically assigned to the PAP and covered by a QHP. Parents who were in a lower income group could remain in managed care rather than transition to a QHP.[3-5]

Since individuals were not assigned to the PAP if they were enrolled in or eligible for Medicare, were incarcerated, or were eligible for cost-effective employer sponsored health insurance, these same exclusions were applied to the treatment group.

To fairly evaluate health outcomes, the treatment group was also restricted by the length of time a member was enrolled in the PAP because brief periods of enrollment were less likely to generate substantial or sustained improvements in outcomes that could be attributed to enrollment in the PAP. Therefore, members who did not exhibit a continuous enrollment of 6 months or longer in the PAP during the evaluation period were excluded from the analysis.

Some measures used in this evaluation required additional enrollment criteria. The measure specifications contained in Appendix A describe these requirements and the type of enrollment necessary (e.g., PAP, Medicaid).

Health outcomes for the treatment group were evaluated only during the time the member was enrolled in the PAP. If the member transitioned in or out of the PAP (either leaving Medicaid entirely or transitioning to or from an MCO) but still met the 6 months continuous enrollment requirements, only claims during the member's time in the PAP were to be used to evaluate outcomes.[3-6]

Finally, to adequately identify health conditions and outcomes at baseline, eligible treatment group members had to have continuous enrollment during calendar year (CY) 2015 with no more than one gap of up to 45 days.

[3-5] Parents between the age of 19 through 64 with incomes between 38 percent (for non-working parents) or 47 percent (for working parents) and 133 percent of the FPL were excluded from the PAP.

[3-6] To the extent an outcome measure requires historical claims data (e.g., year prior to the evaluation period) or for purposes such as identification of members with relevant chronic conditions, all claims will be used to assess the historical claims.

Comparison Group

The comparison group for the health outcomes analysis was composed of adult MCO members who were never enrolled in the Bridge or PAP programs and were continuously enrolled in a single MCO for 6 months or more during the evaluation period who were sufficiently similar to the Bridge/PAP members to provide a valid comparison (see Propensity Score-Based Matching below).

Again, to adequately identify health conditions and outcomes at baseline, members of the comparison group had to demonstrate sufficient enrollment throughout the baseline period. Eligible comparison group members had to have continuous enrollment during CY 2015 with no more than one gap of up to 45 days.

Exclusions

Given that the PAP excluded certain groups of enrollees, it was necessary to exclude the same groups from the eligible comparison group. This included dual Medicare/Medicaid enrollees, members younger than 19 and older than 65, and members who self-identified as medically frail. The methodology used to identify the population to be excluded from the comparison group comparable to those who declared themselves medically frail was based on an analysis of demographic and disease characteristics, and is set out in detail in Appendix A.

Propensity Score-Based Matching

Since the evaluation sought to examine how the PAP compared to what would have happened if the population had remained with the MCOs, several measures required determination of expected rates for the PAP group during the evaluation period had the PAP not been implemented. To accomplish this, a non-Bridge/PAP sample with characteristics similar to the Bridge/PAP sample was identified. Propensity score-based matching is a common methodology used to select a comparison group that is statistically similar to a treatment group. Members were matched based on demographic characteristics including age, gender, race and ethnicity, plan enrollment, and relevant health conditions. The complete methodology is provided in detail in Appendix A.

Propensity scores were derived and used to match individuals in the Bridge/PAP and non-Bridge/PAP populations, allowing for the construction of a comparison group that was similar to the treatment group (i.e., the Bridge/PAP population) without the use of randomized selection. Thus, the propensity score reduced bias and controlled for multiple confounders. Matching was completed using a Greedy 5→1 algorithm to select the "best" matches first, followed by the next "best" matches until no more matches can be made at a reasonable caliper. Specifically, this algorithm matches Bridge/PAP members with non-Bridge/PAP members by propensity score rounded to the fifth decimal place until no more matches can be made. Then the algorithm matches remaining members by propensity score out to the fourth decimal place and continues until the algorithm matches pairs by the first decimal place of the propensity score. Once matches are made they are not reconsidered. This algorithm was selected in part due to its ability to retain a high proportion of Bridge/PAP members while maintaining high quality matches as determined through covariate balance. An assessment of covariate balance was conducted to evaluate how closely the matched Bridge/PAP and non-Bridge/PAP samples aligned in composition of measured demographics and health conditions. The matched comparison group was statistically equivalent to the matched PAP group across all measured demographics and health conditions as a whole. Additionally, 80 percent of the eligible Bridge/PAP population was matched to a non-Bridge/PAP comparison group member. On an individual covariate level, two covariates (total member months and mental health disorders) were found to be unbalanced using traditional two-sample statistical testing. The difference in member months was 0.044 months, which translates into approximately 1 to 2 days of enrollment. The difference in mental health disorders was 1.2 percentage points, or approximately a five percent higher prevalence of mental health disorders among the Bridge/PAP population compared to the non-Bridge/PAP population. Although these differences are small, any impact resulting from the imbalance will be adequately controlled for through the inclusion of the propensity

score matching covariates in the regressions. Traditional two-sample statistical testing has the ability to detect small differences given a large enough sample size. To evaluate covariate balance without the influence of sample size, HSAG calculated the standardized difference between the matched Bridge/PAP and non-Bridge/PAP groups. A standardized difference of 0.1 or below generally suggests balance. Both covariates that were found to be statistically unbalanced had standardized differences well below this threshold. Additional details pertaining to propensity score matching and covariate balance is in Appendix A.

Statistical Testing

Once the populations were matched, a series of tests and analyses were performed to assess the impact of the NHHPP PAP on the selected measures. The statistical test or analysis applied depended on the measure construct and underlying data used for the measure calculation. A difference-in-differences analysis was performed on all measures for which baseline and evaluation period data were available for both the treatment and comparison groups. This analysis compared the changes in the rates or outcomes between the baseline period (CY 2015) and the evaluation period (CY 2016) for the two populations. The change in outcomes for the non-PAP comparison group served as an expected change in outcomes for the PAP group had the PAP not been implemented. Therefore, the difference between the change in outcomes for the non-PAP group and the observed change in outcomes for the PAP group serve as an estimate of the impact of the PAP group on the outcome after controlling for additional observable characteristics of the two groups. Statistical noninferiority tests were employed to determine if the estimated impacts of the PAP were both statistically significant and meaningful.[3-7,3-8,3-9] Additional information regarding the statistical testing is provided in Appendix A.

Financial Outcomes

Financial outcomes were evaluated using a separate methodology, an overview of which is presented below. Details of the methodology are presented in Appendix A.

Treatment Group

The treatment group (i.e., the Bridge/PAP population) was defined in the same manner as for the health outcomes measures.

Comparison Group

For the financial measures, the comparison group was composed of members who became eligible for the Bridge program from September 2014 through December 2015. The Bridge program ended on January 1, 2016, when most members were enrolled in PAP coverage and others remained in NHHPP medically frail and transitional population coverage. The comparison group excluded the medically frail members who were not eligible to enroll in PAP coverage.

For the cost-effectiveness analyses, an estimate was developed of what the comparison group would have cost the State if the Bridge program had continued past December 2015, adjusting for items such as medical cost trends, demographic differences, acuity differences, and changes to targeted Bridge program provider reimbursement

3-7 Streiner, D.L. (2003) "Unicorns Do Exist: A Tutorial on 'Proving' the Null Hypothesis," Can J Psychiatry, 48(11).

3-8 Mascha, E. J., and Sessler, D. I., (2011) "Equivalence and Noninferiority Testing in Regression Models and Repeated-Measures Designs," Anesth Analg. 2011 Mar;112(3):678-87.

3-9 Paiggio, G., et al. (2012) "Reporting of Noninferiority and Equivalence Randomized Trials: Extension of the CONSORT 2010 Statement" JAMA. 2012;308(24):2594-2604.

levels. This process included developing hypothetical capitation rates for the Bridge program for time periods after December 2015.

Thus, the financial outcomes measures were calculated based on differences across time for essentially the same population, while the health outcome measures were generally calculated based on differences between the treatment group (PAP participants) and a separate comparison group (Medicaid MCO members) at the same point in time.

The comparison group is different from that described above for health outcomes for a number of reasons. First, the Waiver Evaluation Design Plan approved by CMS specifically required a financial comparison of the "Bridge to actual PAP costs" with the "estimated costs if the Bridge program were continued." This methodology paralleled the methodologies employed for the initial budget neutrality calculations submitted to CMS for approval of the PAP waiver. In addition, there were practical reasons for the different approaches. Current Medicaid MCO capitation rates are calculated differently and are significantly different from those used while the Bridge program was in existence. Using current MCO capitation rates to measure costs would require significant adjustments for which little supporting data exists. The result would be less accurate cost estimates.

However, comparing health outcomes across time for the same group of clients presents significant issues in identifying PAP impacts. Health outcomes can change over time in the absence of any programmatic changes simply as individuals age and standards of care and practice evolve. When the same clients are tracked over time, it becomes difficult to distinguish the impact of the PAP from those changes that occur as a result of changes to the entire health care system and individuals aging. By using a comparison group separate from the treatment group, changes unrelated to participation in the PAP can be controlled for and the result is a more accurate evaluation of PAP estimates.

Since the financial measures will be effectively comparing the experience of the same groups of individuals over time, the comparability of the treatment and comparison groups is virtually assured. For this reason, matching methods, such as the propensity score matching method described above, are not necessary for the financial populations.

Analytical Approach—Financial Measures

Milliman used two methods to compare the *actual* medical cost experience of the Bridge program population to the *actual* medical cost experience of the PAP. These two methods allow for a comprehensive picture of the relative costs associated with the PAP population. Full details of the method are in Appendix D.

The first method compares the medical cost component from the hypothetical Bridge program capitation rate to the average medical cost component from PAP carrier premiums, cost sharing reduction (CSR) payments, deductible funding, and the cost of wraparound services for the PAP population.

For the study group, Milliman calculated the average PAP medical cost in the PAP carriers' filed premium rates as well as other documents prepared for DHHS to estimate medical costs. There are also adjustments for other medical cost components such as CSR payments, deductible funding, and the cost of wraparound services. For the comparison group, Milliman projected medical costs based on CY 2015 Bridge program encounter data adjusted for trend, demographic changes, acuity differences, etc.

The second method compares the medical cost component from the hypothetical Bridge program capitation rate to the PAP carriers' actual CY 2016 medical cost for the PAP population. It is important to note that this approach does not represent a true measure of cost neutrality since the actual PAP claims do not represent actual DHHS expenses. Milliman provided this comparison because DHHS specifically requested a comparison using the "actual experience of the PAP."

For the PAP population, Milliman used the average PAP medical cost from the 2016 New Hampshire *CHIS* database to determine the medical cost (which already reflects reduced cost sharing and deductible funding) and added the cost of wraparound services. The hypothetical Bridge program medical cost projections were developed from CY 2015 Bridge program encounter data adjusted for trend, demographic changes, acuity differences, etc.

For the study group, Milliman estimated the PAP administrative costs based on the administrative amounts included in PAP premium rate filings. For the comparison group, the administrative cost ratio from the historical Bridge program capitation rate was used as this ratio would have been used if the program had continued.

The total costs for both the study and comparison groups is the sum of the medical and administrative cost components. This results in two different total cost estimates for the study group, one for each of the approaches used to estimate medical costs.

Limitations of the Study

The limitations surrounding this evaluation center on the lack of truly comparative data for the NHHPP PAP beneficiaries for outcome variables beyond the all-payer hospital data. As a new and empirically different group of patients added to the Medicaid program, there was no pre-existing comparison group with data to assess potential programmatic differences. Every effort was made to compensate for this through analyzing encounter data, and other data sources, but there were limitations in the degree of accuracy that can be expected from that data.

Standard techniques were used to estimate and project data on costs, as discussed more fully in the appendices, but again, there is a degree of uncertainty inherent in the methodologies.

Self-selection bias. The design of the study was not randomized; all individuals who met the eligibility criteria for the PAP were automatically enrolled in the program, but had the opportunity to remain in MMC by declaring themselves medically frail. This self-determination made reconstruction of the group to be excluded from the comparison group more uncertain. The use of a matched comparison population for the comparison group mitigated any bias caused by the lack of randomization of the study, but no method to adjust for this bias in an observational study, such as the PAP evaluation, can completely remove the effect of self-selection bias.

Confounding causes. A number of different health care settings and insurance providers within the region (hospitals, health insurance carriers, etc.) have implemented strategies to improve patient access and quality of care which, undoubtedly, have impacted those residing in New Hampshire. These efforts may have contributed to any improvements in access or quality of care for the intervention group. Clearly, reducing readmissions and improving coordination across transitions of care are also the subjects of extensive safety and quality improvement activities, both formal and informal. Similarly, unexpected events during the evaluation period could have negatively affected the health or health care statewide, including the intervention group. The use of difference-in-differences analyses were used wherever possible to control for such confounders, both positive and negative.

4. Findings and Conclusions

The following section summarizes the measure findings and conclusions for the evaluation of New Hampshire's Premium Assistance Program (PAP). For details on the measure definitions and specifications, reference Appendix B.

The majority of measures hypothesize that the PAP performs at least as well as or better than the non-PAP comparison group. To test this hypothesis, HSAG employed noninferiority statistical testing. A prespecified fraction (δ) of the change in the comparison group (coefficient on time, β_2) is used to define an "equivalence range" that would conclude that the PAP group performed as well as the non-PAP comparison group. For measures that use a difference-in-differences framework, the equivalence range is bounded by the change in rates for the non-PAP comparison group, plus or minus 10 percent of the change in the non-PAP comparison group. The change in the PAP group was compared against this equivalence range using a 95 percent confidence interval around the change in PAP. Figure 4-1 illustrates how the equivalence window will be calculated and how statistical significance will be determined.

Figure 4-1: Illustration of Non-Equivalence Testing Procedure

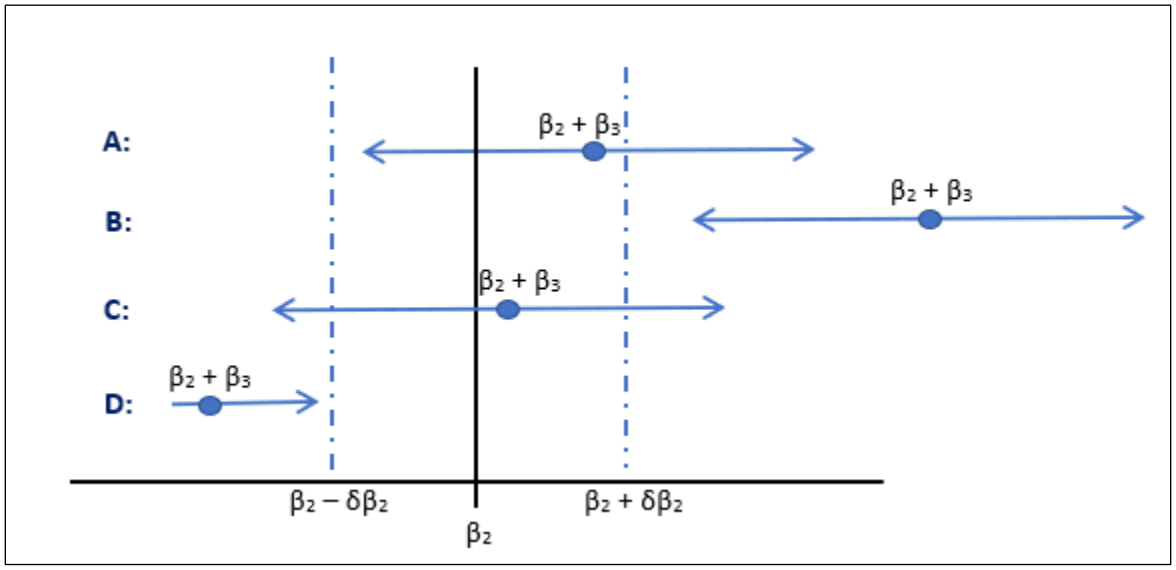


Table 4-1 defines the equivalence intervals used for each scenario in Figure 4-1.

Table 4-1: Noninferiority Equivalence Intervals

Noninferiority Equivalence Intervals		
Desired Direction	**Equivalence Interval**	**Noninferiority Threshold**
Higher is better	$(\beta_2 - \delta\beta_2)$ to β_2	$(\beta_2 - \delta\beta_2)$
Lower is better	β_2 to $(\beta_2 + \delta\beta_2)$	$(\beta_2 + \delta\beta_2)$

In Figure 4-1, given a measure in which higher is better, the confidence interval in scenario A, denoted by the arrows, includes β_2 but not the noninferiority threshold, $(\beta_2 - \delta\beta_2)$. Therefore, evidence supports the finding that the PAP is not inferior to the non-PAP comparison group. The confidence interval in scenario B is above β_2, which suggests that the PAP is superior to the non-PAP comparison group. The confidence interval in scenario C spans both β_2 and $(\beta_2 - \delta\beta_2)$. Therefore, there is insufficient evidence to establish noninferiority and the results

are inconclusive. The confidence interval in Scenario D falls below the noninferiority threshold ($\beta_2 - \delta\beta_2$). Therefore, evidence supports the finding that the PAP is inferior to the non-PAP comparison group.

Similar logic is used to conduct noninferiority testing for survey questions. The equivalence interval is defined as ranging from zero (i.e., no difference) to plus or minus an effect size of 0.10 based on Cohen's *h* of the non-PAP response proportion. That is, Health Services Advisory Group, Inc. (HSAG) computed the rate that corresponded to an effect size of 0.10 of the non-PAP proportion. This rate was then used as the noninferiority threshold. Statistical testing is conducted by comparing the difference between the PAP and non-PAP top-box Consumer Assessment of Healthcare Providers and Systems (CAHPS®) responses against zero and the noninferiority threshold.[4-1]

Additional information regarding the statistical testing is provided in Appendix A.

Summary of Key Findings and Outcomes

The findings are organized by waiver goal, hypothesis, and measure results in the following sections.

Waiver Goal: Continuity of Coverage

For individuals, whose incomes fluctuate, the Demonstration will permit continuity of health plans and provider networks.

One of the basic tenets for design of the PAP was the belief that continuity of coverage would improve members' health and health care as well as reduce costs. Commentators expected that the newly covered Medicaid population would be likely to have high rates of "churn," or frequent changes in eligibility and coverage due to month-to-month changes in financial eligibility. The PAP provided financial assistance to purchase private coverage on the New Hampshire health insurance marketplace (the Marketplace) on behalf of PAP members, expecting a decrease in the number of times an individual might lose health insurance coverage due to changes in financial eligibility for coverage under Medicaid, leading to greater continuity of coverage for individuals and plans. Thus, for individuals whose incomes fluctuate, the goal of the Demonstration was to improve continuity of health plans and provider networks. This goal was studied through two hypotheses.

Hypothesis 1

Premium assistance beneficiaries will have equal or fewer gaps in insurance coverage than non-PAP members enrolled in Medicaid.

This hypothesis was tested in several ways:

- The average number of gaps in Medicaid coverage per 100 members (Measure 1-1). It was predicted that if the PAP was effective to improve or maintain continuity of coverage, that PAP members would have a lower average number of gaps in Medicaid coverage per 100 members than non-PAP members.
- The percentage of eligible members with gaps in Medicaid coverage (Measure 1-2). It was predicted that if the PAP was effective to improve or maintain continuity of coverage, that the percentage of PAP members with gaps in Medicaid coverage would be equal or lower than the percentage of non-PAP members with gaps in Medicaid coverage.

[4-1] CAHPS is a registered trademark for the Agency for Healthcare Research and Quality (AHRQ).

- The proportion of CAHPS respondents who reported that they had been without health insurance at any time during the previous 12 months (Measure 1-3). It was predicted that if the PAP was effective to improve or maintain continuity of coverage, the proportion of PAP members who responded to CAHPS surveys reporting that they had been without health insurance at any time during the previous 12 months would be lower than the proportion of non-PAP CAHPS respondents.

Results of Measure 1-1

HSAG employed a difference-in-differences model for Measure 1-1 (Average Number of Gaps in Medicaid Coverage per 100 Members) to estimate the effect of implementing the PAP on the average number of gaps in Medicaid coverage per 100 members during the measurement period (Table 4-2).

PAP members experienced fewer gaps in Medicaid coverage per 100 members than did members in the non-PAP comparison group in both the baseline and evaluation periods. During the baseline period, the regression-adjusted percentage of PAP members with gaps was 11.887 per 100 members, compared to 13.065 per 100 members for the non-PAP comparison group. During the evaluation period, the average number of gaps was 3.995 (adjusted) per 100 PAP members and 5.440 per 100 non-PAP members.

Rates for PAP members decreased by -7.892 between the baseline and evaluation period, while rates for the non-PAP comparison group decreased by -7.624 per 100 members. The estimated impact of the PAP led to a reduction of -0.267 gaps in Medicaid coverage per 100 members.

Table 4-2: Results for Measure 1-1: Average Number of Gaps in Medicaid Coverage per 100 Members

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	13.065	5.440	-7.624	-0.267 (0.484)
	N=22,932	*N=23,570*		
PAP	11.887	3.995	-7.892	
	N=32,808	*N=36,386*		

Source: Eligibility and Enrollment Data

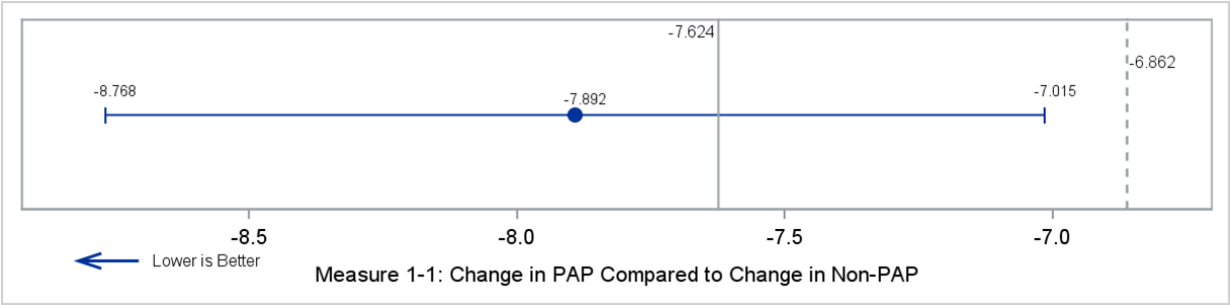
To statistically test whether the PAP had rates that were less than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from -7.624 gaps (i.e., the change in the non-PAP comparison group) to -6.862 gaps (i.e., noninferiority threshold: -7.624 × (1-0.1)). Table 4-3 presents the results of the noninferiority testing.

Table 4-3: Results for Measure 1-1: Average Number of Gaps in Medicaid Coverage per 100 Members

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-7.892 (-8.768 to -7.015)	-6.862	Noninferior

The confidence interval around the change in PAP used in the noninferiority test encompassed the change in the non-PAP comparison group but not the noninferiority threshold, as illustrated in Figure 4-2. Therefore, results from this measure suggest that PAP is noninferior to the non-PAP comparison group and support Hypothesis 1.

Figure 4-2: Results for Measure 1-1: Average Number of Gaps in Medicaid Coverage per 100 Members



Results of Measure 1-2

HSAG employed a difference-in-differences model for Measure 1-2 (Percentage of Eligible Members with Gaps in Medicaid Coverage) to estimate the effect of implementing the PAP on the percentage of eligible members with gaps in Medicaid coverage, including Bridge and PAP coverage (Table 4-4).

A larger percentage of PAP members experienced a gap in coverage than did the non-PAP comparison group in the baseline period, while a smaller percentage of PAP members experienced a gap in coverage than the non-PAP members in the evaluation period. During the baseline period, the regression-adjusted percentage of PAP members with gaps was 10.10 percent, compared to 8.51 percent for the non-PAP comparison group. During the evaluation period, 3.51 percent (adjusted) of PAP members and 4.64 percent of non-PAP comparison group members experienced a gap in Medicaid coverage.

Rates for PAP members decreased by -6.59 percentage points between the baseline and evaluation period, while rates for the non-PAP comparison group decreased by -3.87 percentage points. The estimated impact of the PAP led to a reduction of -2.72 percentage points for members who experienced a gap in Medicaid coverage.

Table 4-4: Results for Measure 1-2: Percentage of Eligible Members with Gaps in Medicaid Coverage

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	8.51%	4.64%	-3.87%	-2.72% (0.27%)
	N=22,932	*N=23,570*		
PAP	10.10%	3.51%	-6.59%	
	N=32,808	*N=36,386*		

Source: Eligibility and Enrollment Data

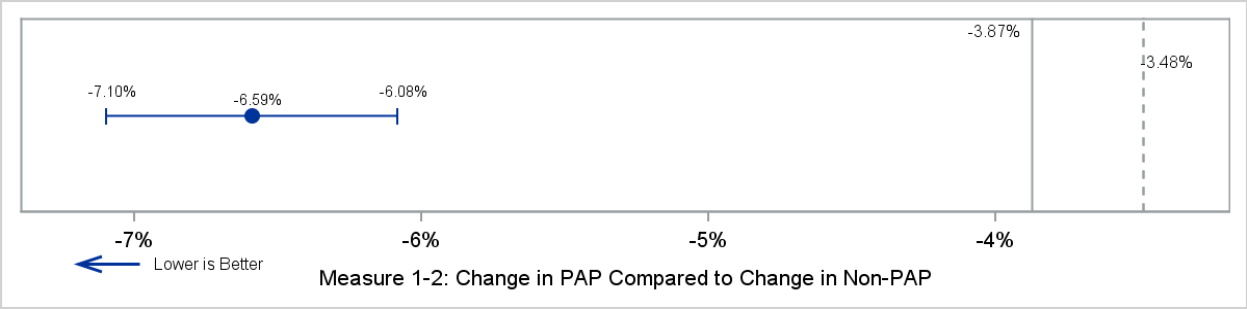
To test statistically whether the PAP had rates that were less than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from -3.87 percent (i.e., the change in the non-PAP comparison group) to -3.48 percent (i.e., noninferiority threshold: -3.87 × (1-0.1)). Table 4-5 presents the results of the noninferiority testing.

Table 4-5: Results for Measure 1-2: Percentage of Eligible Members with Gaps in Medicaid Coverage

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-6.59% (-7.10% to -6.08%)	-3.48%	PAP Superior

The confidence interval around the change in PAP used in the noninferiority test fell below both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-3. Therefore, results from this measure suggest that PAP was superior to the non-PAP comparison group and support Hypothesis 1.

Figure 4-3: Results for Measure 1-2: Percentage of Eligible Members with Gaps in Medicaid Coverage



Results of Measure 1-3

To estimate the effect of the PAP on members' who were without health insurance at any time in the last 12 months, HSAG conducted an analysis on a question that was included in its administration of the 2017 CAHPS. Samples of both the PAP and non-PAP populations were asked, "In the last 12 months, were you without health insurance at any time?" Allowable responses were "Yes" and "No" (Table 4-6). Responses were case-mix adjusted using the AHRQ adjustment algorithm that used respondent age, education level, and self-rating of health as adjustment factors.

Of PAP members, 8.34 percent reported they were without health insurance at any time, and only 6.95 percent of non-PAP members reported they were without insurance during the last 12 months. A traditional statistical test of the difference in proportions shows that there was no statistically significant difference between the two proportions, as evidenced by the Z-statistic in Table 4-6 being lower than the critical value of 1.96.

Table 4-6: Results for Measure 1-3: In the Last 12 Months, Were You Without Health Insurance at Any Time?

Case-Mix Adjusted Response				
Group	No	Yes	Sample Size	Z-Statistic (Standard Error)
Non-PAP	93.04%	6.96%	N=348	0.64 (2.16%)
PAP	91.66%	8.34%	N=271	

Source: 2017 CAHPS

If Hypothesis 1 is true, the percentage of PAP members who answered "Yes" to the survey question in Measure 1-3 (In the Last 12 months, Were You Without Health Insurance at Any Time?) should be less than or equal to the percentage of non-PAP members who answered "Yes." To evaluate whether the PAP performed at least as well as the non-PAP comparison group, HSAG conducted a noninferiority test using an effect size of 0.10 of the non-

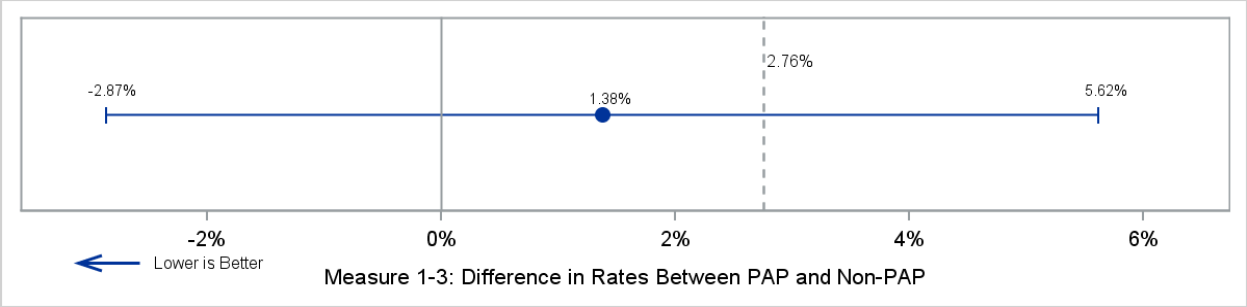
PAP proportion to calculate an equivalence interval. The equivalence interval ranged from zero (i.e., no difference between groups) to 2.76 percent (i.e., noninferiority threshold). Table 4-7 presents the results of the noninferiority testing.

Table 4-7: Results for Measure 1-3: In the Last 12 Months, Were You Without Health Insurance at Any Time?

Noninferiority Testing Results		
PAP Change (95 Percent CI)	**Noninferiority Threshold**	**Result**
1.38% (-2.87 to 5.62%)	2.76%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-4. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 1.

Figure 4-4: Results for Measure 1-3: In the Last 12 Months, Were You Without Health Insurance at Any Time?



Summary and Conclusions for Hypothesis 1

The results of two of the measures related to Hypothesis 1 support the hypothesis (Table 4-8).

After adjusting for differences between comparison groups, fewer PAP members experienced gaps in coverage than did non-PAP members both before and after implementation of the PAP. The implementation of the PAP was associated with a slightly larger decrease in the number of gaps for PAP members than for non-PAP members. Statistical testing does not support the conclusion that the PAP produced superior results (PAP members experienced fewer gaps). However, statistical testing confirmed that the change in the number of gaps in coverage for PAP members was not inferior to that of non-PAP members. These results support the hypothesis that PAP members would experience equal or fewer gaps in coverage.

The results of Measure 1-2 show that the percentage of PAP members experiencing a gap in coverage was reduced. Statistical testing confirmed that the reduction in the percentage of members for PAP members was superior to that for non-PAP members.

The survey results in Measure 1-3 indicate that more PAP members indicated they were without insurance in the 12 months prior to the survey. While the raw figures do not support the hypothesis of a reduction in PAP members experiencing a gap in coverage, statistical testing is inconclusive; therefore, Measure 1-3 neither supports nor contradicts Hypothesis 1.

Taken together, the results from measures presented in this section suggest that premium assistance beneficiaries did have equal or fewer gaps in insurance coverage compared to non-PAP members enrolled in Medicaid.

Table 4-8: Hypothesis 1 Results

Measure ID	Measure Description	Supports Hypothesis 1
1-1	Average Number of Gaps in Medicaid Coverage per 100 Members	Yes
1-2	Percentage of Eligible Members with Gaps in Medicaid Coverage	Yes
1-3	In the Last 12 Months, Were You Without Health Insurance at Any Time?	Inconclusive

Hypothesis 2[4-2]

Premium assistance beneficiaries will maintain continuous access to the same health plans, and will maintain continuous access to providers.

It was hypothesized that the financial assistance provided to PAP beneficiaries would permit them to maintain continuous access to, and enrollment in, the same health plan. The rationale for this hypothesis was that premium assistance for a large population of members would invite Managed Care Organizations (MCOs) to offer Qualified Health Plans (QHPs) and vice versa, allowing PAP members (adults) to have the same plan and providers as their children or other family members enrolled in Medicaid. The provision that PAP members received the premium assistance from enrollment until determined by the state to be ineligible was also expected to smooth out "churn" and keep beneficiaries from being dropped and reinstated with their QHP frequently.

Research questions proposed to test this hypothesis measured the following:

- The percentage of members who maintained continuous enrollment in one Medicaid MCO during the measurement year (Measure 2-1). It was predicted that if the PAP was effective, the percentage of members who maintained continuous enrollment in one MCO during the measurement year would be greater among PAP members than non-PAP members.
- The proportion of CAHPS respondents who reported that they had switched health plans in the prior six months (Measure 2-2). It was predicted that if the PAP was effective to improve or maintain continuity of coverage, the proportion of PAP members who responded to CAHPS surveys reporting that they had switched health plans in the prior 6 months would be lower than the proportion of non-PAP CAHPS respondents.
- The percentage of members who transitioned from New Hampshire Healthy Families Medicaid coverage to Ambetter QHP, and vice versa (Measure 2-4). It was assumed that when a member transitioned from a Medicaid plan to a QHP, both the Medicaid plan and QHP would incur costs in processing that member's enrollment. However, Ambetter QHP is a subsidiary of New Hampshire Healthy Families and, therefore, its members should reduce administrative costs for the plan upon transition. This could encourage other health plans to offer both a Medicaid plan and a QHP. Measure 2-4 evaluates the percentage of members who transitioned out of New Hampshire Healthy Families who went to Ambetter, and vice versa. If the PAP was successful in encouraging dual-plan offerings, more members would transition within the same parent plan than to a different plan.

[4-2] As of result of changes to the evaluation plan, there is no Measure 2-3.

Results of Measure 2-1

HSAG employed a difference-in-differences model for Measure 2-1 (Percentage of Members with Continuous Access to the Same Health Plan) to estimate the effect of implementing the PAP on the percentage of members with continuous access to the same health plan (Table 4-9).

A larger percentage of PAP members had continuous access to the same health plan than did members in the non-PAP comparison group in the baseline period. During the baseline period, the regression-adjusted percentage of PAP members with continuous access to the same health plan was 84.05 percent, compared to 83.95 percent for the non-PAP comparison group. During the evaluation period, however, a small percentage of PAP members had access to the same health plan while the non-PAP comparison group saw an increase in members having continuous access to the same health plan. Specifically, 81.62 percent (adjusted) of PAP members and 90.10 percent of non-PAP had continuous access.

Rates for PAP members decrease by -2.42 percentage points between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 6.15 percentage points. The estimated impact of the PAP led to a reduction of -8.57 percentage points in members with continuous access to the same health plan.

Table 4-9: Results for Measure 1-2: Percentage of Members with Continuous Access to the Same Health Plan

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	83.95%	90.10%	6.15%	-8.57% (0.41%)
	N=19,407	*N=23,570*		
PAP	84.05%	81.62%	-2.42%	
	N=26,398	*N=36,386*		

Source: Eligibility and Enrollment Data

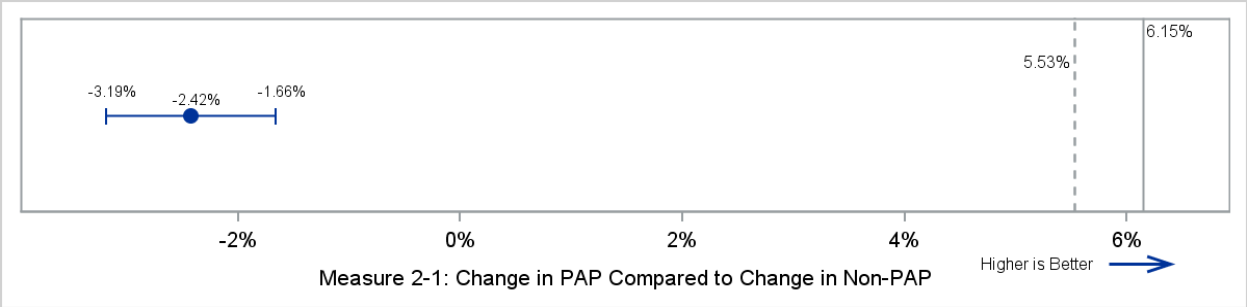
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 5.53 percent (i.e., noninferiority threshold: 6.15 × (1-0.1)) to 6.15 percent (i.e., the change in non-PAP comparison group). Table 4-10 presents the results of the noninferiority testing.

Table 4-10: Results for Measure 2-1: Percentage of Members with Continuous Access to the Same Health Plan

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-2.42% (-3.19% to -1.66%)	5.53%	PAP Inferior

The confidence interval around the change in PAP used in the noninferiority test fell below both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-5. Therefore, results from this measure suggest that PAP was inferior to the non-PAP comparison group and do not support Hypothesis 2.

Figure 4-5: Results for Measure 2-1: Percentage of Members with Continuous Access to the Same Health Plan



Results of Measure 2-2

To estimate the effect of the PAP on members' access to the same health plan during the previous six months, HSAG conducted an analysis on a question included in its administration of the 2017 CAHPS. Samples of both the PAP and non-PAP populations were asked, "In the last six months, did you switch to a different health care plan?" Allowable responses were "Yes" and "No" (Table 4-11). Responses were case-mix adjusted using the AHRQ adjustment algorithm that used respondent age, education level, and self-rating of health as adjustment factors.

Of PAP members, 4.86 percent reported they had switched to a different health plan during the previous 6 months. Only 2.67 percent of non-PAP members reported switching plans during the previous 6 months. A traditional statistical test of the difference in proportions shows that there was no statistically significant difference between the two proportions, as evidenced by the Z-statistic in Table 4-11 being lower than the critical value of 1.96.

Table 4-11: Results for Measure 2-2: In the Last Six Months, Did You Switch to A Different Health Care Plan?

Case-Mix Adjusted Response				
Group	No	Yes	Sample Size	Z-Statistic (Standard Error)
Non-PAP	97.33%	2.67%	N=348	1.42 (1.55%)
PAP	95.14%	4.86%	N=279	

Source: 2017 CAHPS

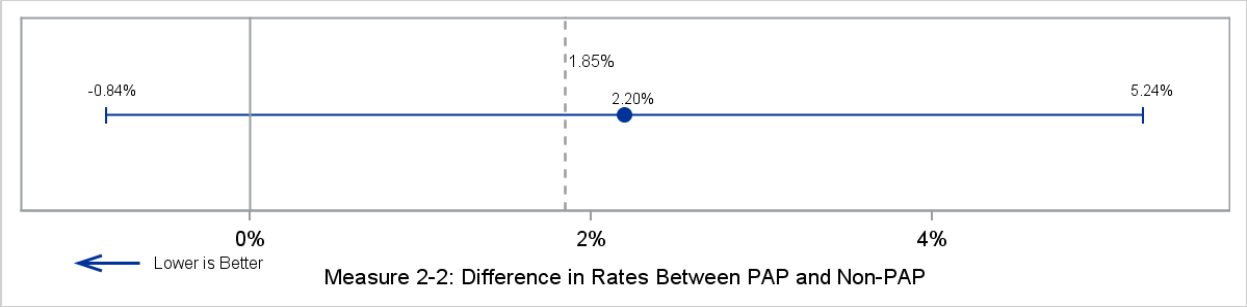
If Hypothesis 2 is true, the percentage of PAP members who answered "Yes" to the survey question in Measure 2-2 (In the Last Six Month, Did You Switch to A Different Health Care Plan?) should be less than or equal to the percentage of non-PAP members who answered "Yes." To evaluate whether the PAP performed at least as well as the non-PAP comparison group, HSAG conducted a noninferiority test using an effect size of 0.10 of the non-PAP proportion to calculate an equivalence interval. The equivalence interval ranged from zero (i.e., no difference between groups) to 1.845 percent (i.e., noninferiority threshold). Table 4-12 presents the results of the noninferiority testing.

Table 4-12: Results for Measure 2-2: In the Last Six Months, Did You Switch to A Different Health Care Plan?

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
2.20% (-0.84 to 5.24%)	1.845%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-6. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 2.

Figure 4-6: Results for Measure 2-2: In the Last Six Months, Did You Switch to A Different Health Care Plan?



Results of Measure 2-4

To measure continuity of same health plan coverage, HSAG evaluated two groups of members who made plan transitions in Measure 2-4 (Continuous Care During Marketplace Transition). First, HSAG identified all New Hampshire Healthy Families members who transitioned to a Medicaid QHP and measured the percentage of those who transitioned to Ambetter QHP. Second, HSAG identified all Ambetter QHP members who transitioned to a Medicaid MCO and measured the percentage of those who transitioned to New Hampshire Healthy Families.

Of members transitioning out of New Hampshire Healthy Families into the PAP during CY 2016, a total of 18,052 had been members of New Hampshire Healthy Families.[4-3] Of these former New Hampshire Healthy Families members, 17,526, or 97.09 percent, gained coverage with Ambetter QHP. During CY 2016, there were 1,463 members who transitioned out of Ambetter QHP into a Medicaid MCO. Of these, 975, or 66.64 percent, gained coverage with New Hampshire Healthy Families.

The percentage of members who gained same-plan coverage moving from a Medicaid MCO to the PAP is substantially greater than the percentage of members with same-plan coverage moving from the PAP to a Medicaid MCO (Table 4-13).

Table 4-13: Continuous Care During Marketplace Transition (Measure 2-4)

Measure	Number Meeting Criteria	Eligible Population	Percentage Meeting Criteria
1. Number of New Hampshire Healthy Families members who gained coverage under Ambetter	17,526	18,052	97.09%
2. Number of Ambetter members who gained coverage under New Hampshire Families	975	1,463	66.64%

[4-3] Including those who transitioned out of Medicaid on December 31, 2015, and into the PAP on January 1, 2016.

Summary and Conclusions for Hypothesis 2

The measures associated with Hypothesis 2 are mixed in their support of the hypothesis (Table 4-14).

Measure 2-1 indicates that with the implementation of the PAP, there was a decrease in the number of members with continuous access to the same plan than there would have been in the absence of the PAP. Statistical testing confirmed that the performance of the PAP was inferior in this respect. This may be the result of additional plan choice among PAP members and reflects PAP members exercising their ability to choose between more plans.

Measure 2-2 results show that more PAP members indicated they had switched to a different health plan in the six months prior to the survey than did non-PAP members. However, statistical noninferiority testing determined that the results are inconclusive and the results neither support nor contradict the hypothesis.

The impact of the results of Measure 2-4 are less clear in their support for Hypothesis 2. Nearly all members who left New Hampshire Healthy Families received their PAP coverage from Ambetter. In this regard, the evidence strongly supports Hypothesis 2. However, only about two-thirds of Ambetter members who transitioned from the PAP into Medicaid moved into New Hampshire Healthy Families. In this aspect of the measure, the evidence provides weak support for Hypothesis 2.

Based on these results, the analytical evidence is inconclusive whether premium assistance beneficiaries maintained continuous access to the same health plans and maintained continuous access to providers.

Table 4-14: Hypothesis 2 Results

Measure ID	Measure Description	Supports Hypothesis 2
2-1	Percentage of Members with Continuous Access to the Same Health Plan	No
2-2	In the Last Six Months, Did You Switch to a Different Health Care Plan?	Inconclusive
2-4	Continuous Care During Marketplace Transition	Yes

Summary and Conclusion for Waiver Goal: Continuity of Coverage

Hypotheses 1 and 2 are part of evaluating the extent to which the PAP has achieved the waiver goal of Continuity of Coverage. The analysis supports Hypothesis 1 with two of the three measures. The results for Hypothesis 2 are inconclusive based on the three measures. For individuals whose incomes fluctuate, the Demonstration partly permitted continuity of health plans and provider networks; however, the overall results of the analyses are inconclusive.

Waiver Goal: Plan Variety

The Demonstration could also encourage Medicaid Care Management (MCM) carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and could encourage QHP carriers to seek Medicaid Managed Care (MMC) contracts.

Another major underpinning of the PAP design was the belief that the Demonstration's infusion of an estimated 50,000 beneficiaries into the Marketplace would encourage both MCOs and QHPs to offer more plans on the Marketplace. The goal was assessed through Hypothesis 3.

Hypothesis 3

Premium assistance beneficiaries, including those who become eligible for Exchange Marketplace coverage, will have equal or fewer gaps in plan enrollment, equal or improved continuity of care, and resultant equal or lower administrative costs.

The measures selected to test this hypothesis examined differences in continuity of plan enrollment and administrative costs between MCOs and QHPs. The measures were:

- The average number of gaps in enrollment from any MCO or PAP QHP per 100 enrollee years (Measure 3-1).
- The percentage of eligible members with continuous access to any Medicaid MCO or PAP health plan during the measurement period (continuous enrollment for 6 months or more in one plan) (Measure 3-2).
- The proportion of CAHPS respondents who reported that their personal doctor seemed informed and up-to-date about the care they had gotten from their doctors or other health providers (Measure 3-3).
- The perspective of the individual MCO and QHP plans on administrative costs, and whether implementation of PAP reduced those costs and/or the proportion of members changing plans (Measure 3-4a).
- The extent to which the implementation of the PAP reduced the number/percent of members changing plans (Measure 3-4b).

Results of Measure 3-1

HSAG employed a difference-in-differences model for Measure 3-1 (Average Number of Gaps in Enrollment From Any MCO or PAP QHP per 100 Enrollee Years) to estimate the effect of implementing the PAP on the average number of gaps in enrollment from any MCO or PAP QHP per 100 enrollee years (Table 4-15).

PAP members experienced a greater number of gaps in enrollment than did members in the non-PAP comparison group in the baseline period. During the baseline period, the regression adjusted percentage of PAP members experienced an average of 19.467 gaps in coverage per 100 enrollee years, compared to 18.388 gaps in coverage per 100 enrollee years for the non-PAP comparison group. While in the evaluation period, the PAP members experienced approximately the same number of gaps as did members in the non-PAP group. During the evaluation period, the average number of gaps per 100 enrollees for PAP was 10.232 (adjusted) of PAP members and 10.857 for non-PAP members.

Rates for PAP members decreased by -9.234 gaps per 100 member enrollees between the baseline and evaluation period, while rates for the non-PAP comparison group decreased by -7.531 gaps per 100 member enrollees. The estimated impact of the PAP led to a reduction of -1.703 gaps per 100 member enrollees.

Table 4-15: Results for Measure 3-1: Average Number of Gaps in Enrollment From Any MCO or PAP QHP per 100 Enrollee Years

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	18.388	10.857	-7.531	-1.703 (0.509)
	N=19,407	*N=23,570*		
PAP	19.467	10.232	-9.234	
	N=26,398	*N=36,386*		

Source: Eligibility and Enrollment Data

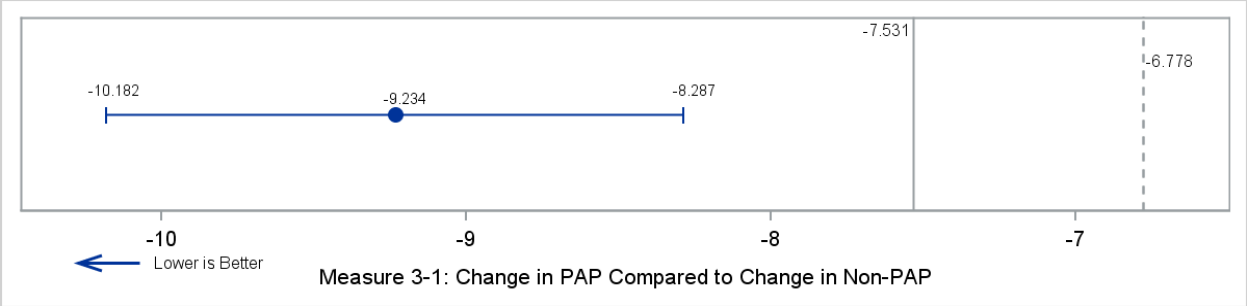
To test statistically whether the PAP had rates less than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from -7.531 percent (i.e., the change in non-PAP comparison group) to -6.778 percent (i.e., noninferiority threshold: -7.531 × (1-0.1)). Table 4-16 presents the results of the noninferiority testing.

Table 4-16: Results for Measure 3-1: Average Number of Gaps in Enrollment From Any MCO or PAP QHP per 100 Enrollee Years

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-9.234 (-10.182 to -8.287)	-6.778	PAP Superior

The confidence interval around the change in PAP used in the noninferiority test fell below both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-7. Therefore, results from this measure suggest that PAP was superior to the non-PAP comparison group and support Hypothesis 3.

Figure 4-7: Results for Measure 3-1: Average Number of Gaps in Enrollment From Any MCO or PAP QHP per 100 Enrollee Years



Results of Measure 3-2

HSAG employed a difference-in-differences model for Measure 3-2 (Percentage of Eligible Members with Continuous Access to Any Medicaid MCO or PAP Health Plan) to estimate the effect of implementing the PAP on the average number of gaps in enrollment from any MCO or PAP QHP per 100 enrollee years during the measurement period (Table 4-17).

The percentage of PAP members continuously enrolled in an MCO was about the same as the percentage of non-PAP members continuously enrolled during both the baseline and evaluation periods. During the baseline period, the regression adjusted percentage of PAP members with continuous enrollment in an MCO was 85.13 percent, compared to 85.17 percent for the non-PAP comparison group. During the evaluation period, 90.30 percent (adjusted) of PAP members and 90.61 percent of non-PAP members had continuous enrollment in an MCO.

Rates for PAP members increased by 5.16 percentage points between the baseline and evaluation periods, while rates for the non-PAP comparison group increased by 5.43 percentage points. The estimated impact of the PAP led to a reduction of -0.27 percentage points in continuous enrollment in an MCO.

Table 4-17: Results for Measure 3-2: Percentage of Eligible Members with Continuous Access to Any Medicaid MCO or PAP Health Plan

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	85.17%	90.61%	5.43%	-0.27% (0.38%)
	N=19,407	*N=23,570*		
PAP	85.13%	90.30%	5.16%	
	N=26,398	*N=36,386*		

Source: Eligibility and Enrollment Data

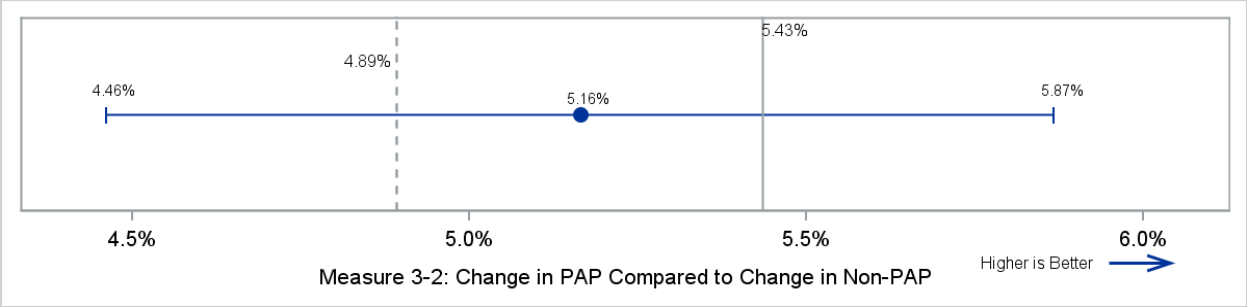
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 4.89 percent (i.e., noninferiority threshold: 5.43 × (1-0.1)) to 5.43 percent (i.e., the change in the non-PAP comparison group). Table 4-18 presents the results of the noninferiority testing.

Table 4-18: Results for Measure 3-2: Percentage of Eligible Members with Continuous Access to Any Medicaid MCO or PAP Health Plan

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
5.16% (4.46% to 5.87%)	4.89%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-8. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 3.

Figure 4-8: Results for Measure 3-2: Percentage of Eligible Members with Continuous Access to Any Medicaid MCO or PAP Health Plan



Results of Measure 3-3

To estimate the effect of the PAP on how well members' personal doctors seemed informed and up to date about the care members received from other doctors or health providers, HSAG conducted an analysis on a question included in its administration of the 2017 CAHPS. Samples of both the PAP and non-PAP populations were asked, "In the last six months, how often did your personal doctor seem informed and up-to-date about the care

you got from these doctors or other health providers?" Allowable responses were "Never + Sometimes" and "Usually + Always" (Table 4-19). Responses were case-mix adjusted using the AHRQ adjustment algorithm that used respondent age, education level, and self-rating of health as adjustment factors.

Of PAP members, 82.31 percent reported that usually or always their personal doctor seemed to be informed and up-to-date about the care they had received either from these doctors or from other health providers during the previous six months. Additionally, 81.37 percent of non-PAP members reported that usually or always their personal doctor seemed to be informed and up-to-date about the care they had received from these doctors or from other health providers during the past six months. A traditional statistical test of the difference in proportions shows that there was no statistically significant difference between the two proportions, as evidenced by the Z-statistic in Table 4-19 being lower than the critical value of 1.96.

Table 4-19: Results for Measure 3-3: In the Last 6 Months, How Often Did Your Personal Doctor Seem Informed and Up-To-Date About the Care You Got From These Doctors or Other Health Providers?

Case-Mix Adjusted Response				
Group	Never + Sometimes	Usually + Always	Sample Size	Z-Statistic (Standard Error)
Non-PAP	18.63%	81.37%	N=126	0.18 5.29%
PAP	17.69%	82.31%	N=91	

Source: 2017 CAHPS

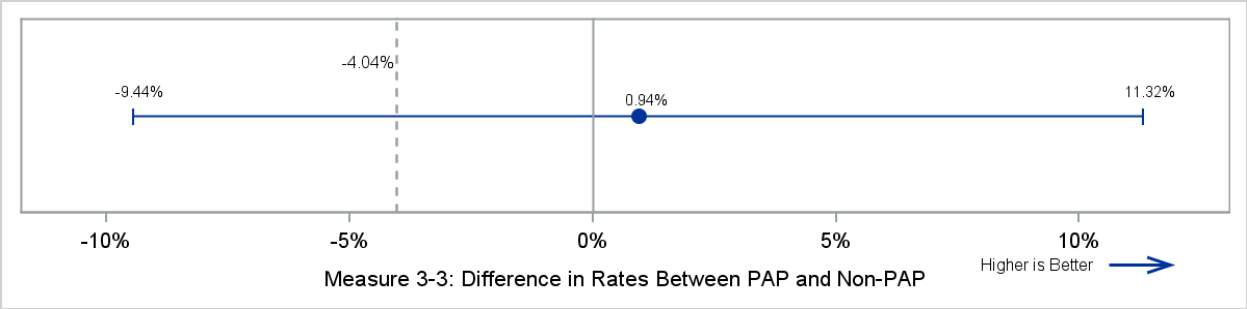
If Hypothesis 3 is true, the percentage of PAP members who answered "Usually + Always" to the survey question in Measure 3-3 (In the Last 6 Months, How Often Did Your Personal Doctor Seem Informed and Up-To-Date About the Care You Got From These or Other Doctors or Other Health Providers?) should be greater than or equal to the percentage of non-PAP members who answered "Usually + Always." To evaluate whether the PAP performed at least as well as the non-PAP comparison group, HSAG conducted a noninferiority test using an effect size of 0.10 of the non-PAP proportion to calculate an equivalence interval. The equivalence interval ranged from -4.044 percent (i.e. noninferiority threshold) to zero (i.e., no difference between groups). Table 4-20 presents the results of the noninferiority testing.

Table 4-20: Noninferiority Testing Results for Measure 3-3: In the Last 6 Months, How Often Did Your Personal Doctor Seem Informed and Up-To-Date About the Care You Got From These Doctors or Other Health Providers?

Noninferiority Testing Results		
Difference (95 Percent CI)	Noninferiority Threshold	Result
0.94% (-9.44% to 11.32%)	-4.044%	Inconclusive

The confidence interval around the difference in proportions between PAP and non-PAP used in the noninferiority test encompassed zero and the noninferiority threshold, as illustrated in Figure 4-9. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 3.

Figure 4-9: Results for Measure 3-3: In the Last 6 Months, How Often Did Your Personal Doctor Seem Informed and Up-To-Date About the Care You Got From These Doctors or Other Health Providers?



Results of Measure 3-4

To What Extent Did Members Changing Plans Increase Your Administrative Costs? (Measure 3-4a)

In the semi-structured interviews, HSAG found that each plan's ability to observe the PAP's impact on continuity of care and administrative costs (Measure 3-4) was limited by its specific experience prior to and during the PAP. Only one plan actually had experience with the Medicaid expansion population in New Hampshire both prior to and during the PAP, offering an MMC throughout, and adding a PAP plan. That carrier reported a high rate of retention of its MMC population in its PAP offering and felt that the increased continuity with each member provided important opportunities to intervene and assist members with issues. While the carrier acknowledged higher administrative costs for members in the PAP population, it felt that the cost of items such as additional new member packets, outreach, or welcoming phone calls were outweighed by the savings in medical costs achieved by the opportunity for long-term management of the PAP population.

The other plans could not directly compare administrative costs or the rate of members dropping, adding, or changing plans before and after the PAP; those offering QHPs on the Marketplace had not served the Medicaid population in New Hampshire prior to PAP and had no point of reference. The other MMC provider did not add a commercial offering under the PAP.

The plans identified several features of the PAP that they felt contributed more to their overall costs than solely to their administrative costs. These included the extra costs driven by claims and utilization; the need to build up infrastructure to accommodate the population that needed more care coordination; the training of call center and case management staff members experienced with commercial products in the needs of the population; and in the details of handling enrollment, finances, member services, and the internet portal required by Department of Health and Human Services (DHHS). There were also additional costs to monitor and report on elements of performance for the PAP population that were not required for other commercial plans. All agreed that the cost savings they stood to achieve from better management of claims and care were far greater than any administrative cost savings.

The carriers did not appear to view that savings on administrative costs was the major driver of the economic success or failure of their experience with PAP.

To What Extent Did Implementation of PAP Reduce the Number or Percentage of Members Changing Plans? (Measure 3-4b)

There was no consensus on how to define "churn" or what constituted a "normal" rate of churn before or after implementation of the PAP. When asked whether the PAP had reduced the number or percentage of members changing plans, or churn, the plans' responses ranged from "churn did not affect a significant percentage of the population" to "churn among PAP members was significant, and consistent over time." One plan mentioned that

roughly 9 percent of its PAP members experienced at least one break in coverage and then returned. Another plan estimated that the average enrollment for PAP members was six months, compared to nine months for non-PAP commercially insured members.

Only one plan could actually comment from experience on whether implementing the PAP reduced churn, and it appeared that the PAP worked as intended in that most of that carrier's Bridge population was retained and covered in its QHP after the PAP was introduced.

In summary, the carriers did not have a standardized definition of administrative costs or a normal or acceptable level of churn, making comparisons difficult. Most of the carriers lacked pre- and post-experience with the PAP population and could not comment on how administrative costs or the rate of churn changed as a result of the PAP. There was a consensus that however administrative costs were defined, they were not a major factor in the economic viability of covering the population, lagging far behind other factors that contributed to costs such as claims, care management, and the unique requirements of the PAP. There was also broad support for the proposition that continuity of care was crucial to better outcomes for this population and, ultimately, to the most cost-effective care.

Summary and Conclusions for Hypothesis 3

The results of the analysis of measures associated with Hypothesis 3 are largely inconclusive (Table 4-21).

The results for Measure 3-1 showed a decrease in the number of enrollment gaps per 100 enrollee years after controlling for changes over time external to the PAP. Statistical testing confirmed PAP superiority. Although the results for Measure 3-2 showed an increase in the percentage of eligible members with continuous access to any Medicaid MCO or PAP plan for both PAP and non-PAP members, statistical testing was inconclusive. The case-mix adjusted results for Measure 3-3 showed that a greater percentage of PAP members thought their personal doctor was usually or always informed about the care they received from other providers; however, the statistical noninferiority test was inconclusive. The results of Measure 3-4a pertaining to the extent that members changing plans increased administrative costs were largely inconclusive due to the fact that most plans did not have the sufficient information to address the question. The results of Measure 3-4b regarding the extent to which the PAP reduced members changing plans weakly supported Hypothesis 3. Only one plan had the data to address the question, but the response was that the PAP had reduced the number of members changing plans.

Based on these results, it is inconclusive whether premium assistance beneficiaries, including those who become eligible for Marketplace coverage, have equal or fewer gaps in plan enrollment, equal or improved continuity of care, and resultant equal or lower administrative costs.

Table 4-21: Hypothesis 3 Results

Measure ID	Measure Description	Supports Hypothesis 3
3-1	Average Number of Gaps in Enrollment in Any MCO or PAP QHP per 100 Enrollee Years	Yes
3-2	Percentage of Eligible Members with Continuous Access to Any Medicaid MCO or PAP Health Plan	Inconclusive
3-3	In the Last 6 Months, How Often Did Your Personal Doctor Seem Informed and Up-To-Date About the Care You Got from These [Other] Doctors or Other Health Providers?	Inconclusive
3-4a	To What Extent Did Members Changing Plans Increase Your Administrative Costs?	Inconclusive
3-4b	To What Extent Did Implementation of PAP Reduce the Number or Percentage of Members Changing Plans?	Yes

Hypothesis 4

The Demonstration leads to an increase in plan variety by encouraging MMC carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and encouraging QHP carriers to seek MMC contracts.

HSAG tested this hypothesis through direct research and qualitative interviews with the MCOs and QHPs active in New Hampshire during 2016.

- The number of MMC carriers offering QHPs in the Marketplace at the start of the waiver and annually thereafter (Measure 4-1).
- The number of QHPs for PAP enrollees in the Marketplace offering Medicaid MCO plans at the start of the waiver and annually thereafter (Measure 4-2).

Results of Measure 4-1

The New Hampshire DHHS website identified two carriers offering MMC plans at the beginning of the waiver and throughout 2016, Measure 4-1 (MMC Carriers Offering QHPs in the Marketplace). In the semi-structured interviews with the plans conducted for Measure 3-4, HSAG learned that one MMC specifically attributed its decision to create a commercial product for offer on the exchange to the presence of the PAP. The other MMC decided not to offer a QHP for reasons unrelated to the PAP.

Results of Measure 4-2

The quarterly reports published by the New Hampshire Department of Health and Human Services, Medicaid Services indicated that five carriers (Ambetter, Anthem, Community Health Options, Harvard Pilgrim Health Care, and Minuteman Health) offered QHPs on the Marketplace at the beginning of the waiver, Measure 4-2 (QHPs in the Marketplace Offering Medicaid MCO Plans). None of the commercial carriers added an MMC plan during 2016.

Summary and Conclusions for Hypothesis 4

The results of the measures associated with Hypothesis 4 are mixed in their support for the hypothesis (Table 4-22). The desk audit results of Measure 4-1 for the first year of the waiver provides little information on the extent to which the PAP encouraged health plans to pursue new market opportunities. However, during the plan interviews, one plan indicated that the PAP was a major factor in its decision to pursue new market opportunities. Although this evidence is strictly not part of Measure 4-1, the evidence is compelling enough to warrant its inclusion with the measure and its consequent support of Hypothesis 4. The results of Measure 4-2 are largely inconclusive, providing no evidence for or against Hypothesis 4. While Measure 4-2 presents an important picture of the status of the MCO and PAP markets, a single year of the measure does not provide enough history to support or refute Hypothesis 4. Subsequent analyses with additional years may provide more conclusive evidence.

Based on these results it appears that the Demonstration did lead to an increase in plan variety by encouraging MMC carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, but it did not encourage QHP carriers to seek MMC contracts. Since one measure supports and one measure refutes Hypothesis 4, the overall result for the hypothesis is inconclusive.

Table 4-22: Hypothesis 4 Results

Measure ID	Measure Description	Supports Hypothesis 4
4-1	Desk audit for the number of MMC carriers offering QHPs in the Marketplace at the start of the waiver and annually thereafter for which dual participation could be an option	Yes
4-2	Desk audit for the number of QHPs for PAP enrollees in the Marketplace offering Medicaid MCO plans at the start of the waiver and annually thereafter	No

Summary and Conclusion for Waiver Goal: Plan Variety

Hypotheses 3 and 4 are a part of evaluating the extent to which the PAP met the waiver goal of Plan Variety. The overall analytic results for Hypothesis 3 are inconclusive and neither support nor contradict the Plan Variety waiver goal. Hypothesis 4 is also inconclusive. The analysis indicated that the Demonstration has encouraged MMC carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, but it has not yet encouraged QHP carriers to seek MMC contracts. The sum result is that the analysis provides inconclusive results and it is not possible to determine whether the Demonstration has met the Plan Variety waiver goal.

Waiver Goal: Cost-Effective Coverage

The premium assistance approach will increase QHP enrollment and may result in greater economies of scale and competition among QHPs.

The third goal of the Demonstration was to provide cost-effective coverage for the newly covered adult Medicaid population. Three hypotheses were developed to evaluate whether this goal was met.

Hypothesis 5

Premium assistance beneficiaries will have equal or lower non-emergent use of emergency room services.

To test this hypothesis, HSAG calculated the number of ambulatory emergency department (ED) visits for conditions potentially treatable in primary care per 1,000 member months, stratified for age 19–44 years and age 45–64 years (Measure 5-1).

Results of Measure 5-1

HSAG employed a difference-in-differences model for Measure 5-1 (Ambulatory Care: Emergency Department Visits Potentially Treatable in Primary Care) to estimate the effect of implementing the PAP on the number of ambulatory ED visits for conditions potentially treatable in primary care per 1,000 member months for ages 19–44 and 45–64 (Table 4-23).

A lower rate of PAP members had ED visits potentially treatable in primary care, in both ages 19–44 and ages 45–64, than did members in the non-PAP comparison groups in both the baseline and evaluation periods. During the baseline period, the regression adjusted rate of PAP members who had ED visits potentially treatable in primary care was 16.308 in the ages 19–44 group and 13.697 in the ages 45–64 group, compared to 16.408 in the ages 19–44 group and 19.509 in the ages 45–64 group for the non-PAP comparison groups. During the evaluation period, the rate of PAP members who had ED visits potentially treatable in primary care was 14.845 in the ages 19–44 group and 10.339 in the ages 45–64 group, compared to 16.786 in the ages 19–44 group and 16.919 in the ages 45–64 group for the non-PAP comparison groups.

Rates for PAP members decreased by -1.463 in the ages 19–44 group and -3.358 in the ages 45–64 group between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 0.379 in the ages 19–44 group and decreased by -2.59 in the ages 45–64 group. The estimated impact of the PAP led to a reduction of -1.842 in the ages 19–44 group and a reduction of -0.768 in the ages 45–64 group in members who had ED visits potentially treatable in primary care.

Table 4-23: Results for Measure 5-1: Ambulatory Care: Emergency Department Visits Potentially Treatable in Primary Care (Per 1,000 Member Months)

Regression Adjusted Rates					
Age Group	Group	Time Period		Change	PAP Impact (Standard Error)
		Baseline	Evaluation		
19 to 44	Non-PAP	16.408	16.786	0.379	-1.842 (1.148)
		N=53,808	*N=49,757*		
	PAP	16.308	14.845	-1.463	
		N=51,373	*N=61,185*		
45 to 64	Non-PAP	19.509	16.919	-2.590	-0.768 (1.637)
		N=24,795	*N=24,714*		
	PAP	13.697	10.339	-3.358	
		N=29,364	*N=35,897*		

Note: Reported sample sizes are member months.
Source: PAP encounter data, Electronic Data Interchange (EDI) transaction encounters, and Medicaid Management Information System (MMIS) FFS claims data.

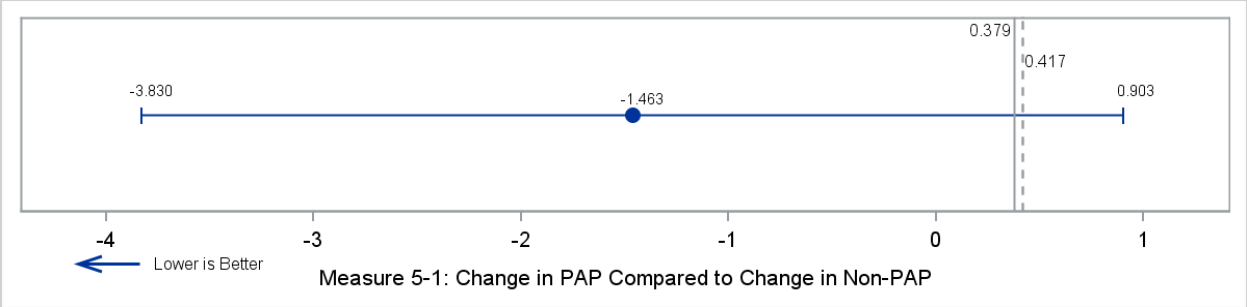
To test statistically whether the PAP had rates that were less than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. In the group with members ages 19–44, the equivalence interval ranged from 0.379 (i.e., the change in non-PAP comparison group) to 0.417 (i.e., noninferiority threshold: 0.379 × (1-0.1)). In the group with members ages 45–64, the equivalence interval ranged from -2.590 (i.e., the change in non-PAP comparison group) to -2.331 (i.e., noninferiority threshold: -2.590 × (1-0.1)). Table 4-24 presents the results of the noninferiority testing.

Table 4-24: Results for Measure 5-1: Ambulatory Care: Emergency Department Visits Potentially Treatable in Primary Care (Per 1,000 Member Months)

Noninferiority Testing Results			
Age Group	PAP Change (95 Percent CI)	Noninferiority Threshold	Result
19 to 44	-1.463 (-3.830 to 0.903)	0.417	Inconclusive
45 to 64	-3.358 (-6.358 to -0.358)	-2.331	Inconclusive

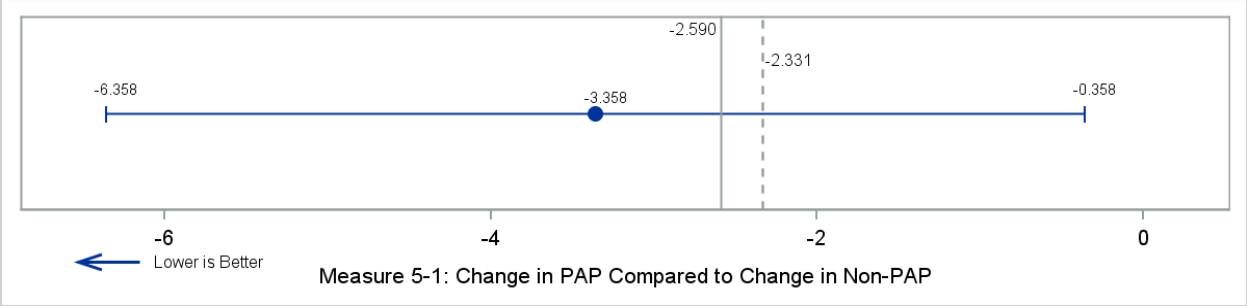
The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-10. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 5.

Figure 4-10: Results for Measure 5-1a: Ambulatory Care: Emergency Department Visits Potentially Treatable in Primary Care (Per 1,000 Member Months), Members 19–44 Years Old



The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-11. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 5.

Figure 4-11: Results for Measure 5-1b: Ambulatory Care: Emergency Department Visits Potentially Treatable in Primary Care (Per 1,000 Member Months), Members 45–64 Years Old



Summary and Conclusions for Hypothesis 5

Hypothesis 5 is neither supported nor contradicted by the results of Measure 5-1 (Table 4-25). The PAP was associated with decreases in the number of ED visits for conditions potentially treatable in primary care for members in both the 19–44 and 45–64 age groups. However, the results of statistical noninferiority testing were inconclusive.

Based on these results it is inconclusive whether premium assistance beneficiaries had equal or lower non-emergent use of ED services.

Table 4-25: Hypothesis 5 Results

Measure ID	Measure Description	Supports Hypothesis 5
5-1a	Ambulatory Care: ED Visits Potentially Treatable in Primary Care—Members 19–44 Years Old	Inconclusive
5-1b	Ambulatory Care: ED Visits Potentially Treatable in Primary Care—Members 45–64 Years Old	Inconclusive

Hypothesis 6

Premium assistance beneficiaries will have equal or lower rates of potentially preventable ED and hospital admissions.

Two measures were selected to test Hypothesis 6:

- The quarterly rate of inpatient hospital utilization for ambulatory care sensitive conditions for overall AHRQ Prevention Quality Indicators (PQI) Composite per 1,000 adult Medicaid members (Measure 6-1).
- The quarterly rate of ED utilization for ambulatory care sensitive conditions for Overall PQI Composite per 1,000 adult Medicaid members (Measure 6-2).

Results of Measure 6-1

HSAG employed a difference-in-differences model for Measure 6-1 (Inpatient Hospital Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members) to estimate the effect of implementing the PAP on the rate of inpatient hospital utilization for ambulatory care sensitive conditions per 1,000 adult Medicaid members months (Table 4-26).

A higher rate of PAP members had inpatient hospital utilization for ambulatory care sensitive conditions per 1,000 adult Medicaid member months than in the non-PAP comparison group in the baseline period. However, PAP members had a lower rate in the in the evaluation period. During the baseline period, the regression adjusted rate of PAP members for inpatient hospital utilization for ambulatory care sensitive conditions per 1,000 adult Medicaid member months was 0.652, compared to 0.618 for the non-PAP comparison group. During the evaluation period, rate for PAP members for inpatient hospital utilization for ambulatory care sensitive conditions for adult Medicaid members was 0.505 (adjusted) and was 0.85 for non-PAP members.

Rates for PAP members decreased by -0.147 between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 0.232. The estimated impact of the PAP led to a rate reduction of -0.38 in inpatient hospital utilization for ambulatory care sensitive conditions for adult Medicaid members.

Table 4-26: Results for Measure 6-1: Inpatient Hospital Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	0.618	0.85	0.232	-0.38 (0.177)
	N=84,576	*N=78,145*		
PAP	0.652	0.505	-0.147	
	N=83,573	*N=97,082*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data.

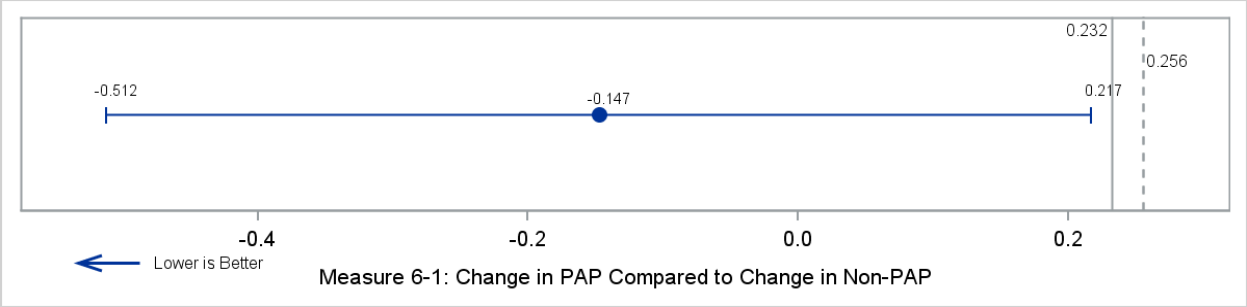
To statistically test whether the PAP had rates that were less than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 0.232 (i.e., the change in non-PAP comparison group) to 0.256 (i.e., noninferiority threshold: 0.232 × (1-0.1)). Table 4-27 presents the results of the noninferiority testing.

Table 4-27: Results for Measure 6-1: Inpatient Hospital Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-0.147 (-0.512 to 0.217)	0.256	PAP Superior

The confidence interval around the change in PAP used in the noninferiority test fell below both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-12. Therefore, results from this measure suggest that PAP was superior to the non-PAP comparison group and support Hypothesis 6.

Figure 4-12: Results for Measure 6-1: Inpatient Hospital Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members



Results of Measure 6-2

HSAG employed a difference-in-differences model for Measure 6-2 (ED Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members) to estimate the effect of implementing the PAP on the rate of ED utilization for ambulatory care sensitive conditions per 1,000 adult Medicaid member months (Table 4-28).

A lower rate of PAP members had emergency department utilization for ambulatory care sensitive conditions per 1,000 adult Medicaid member months than in the non-PAP comparison group for both the baseline and evaluation periods. During the baseline period, the regression adjusted rate of PAP members for ED utilization for ambulatory care sensitive conditions per 1,000 adult Medicaid member months was 3.166, compared to 3.754 for the non-PAP comparison group. During the evaluation period, the rate for PAP members for ED utilization for ambulatory care sensitive conditions per 1,000 adult Medicaid member months was 2.486 (adjusted) and was 4.092 for non-PAP members.

Rates for PAP members decreased by -0.680 between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 0.338. The estimated impact of the PAP led to a rate reduction of -1.018 in ED utilization for ambulatory care sensitive conditions per 1,000 adult Medicaid member months.

Table 4-28: Results for Measure 6-2: ED Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	3.754	4.092	0.338	-1.018 (0.436)
	N=84,576	*N=78,145*		
PAP	3.166	2.486	-0.680	
	N=83,573	*N=97,082*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data

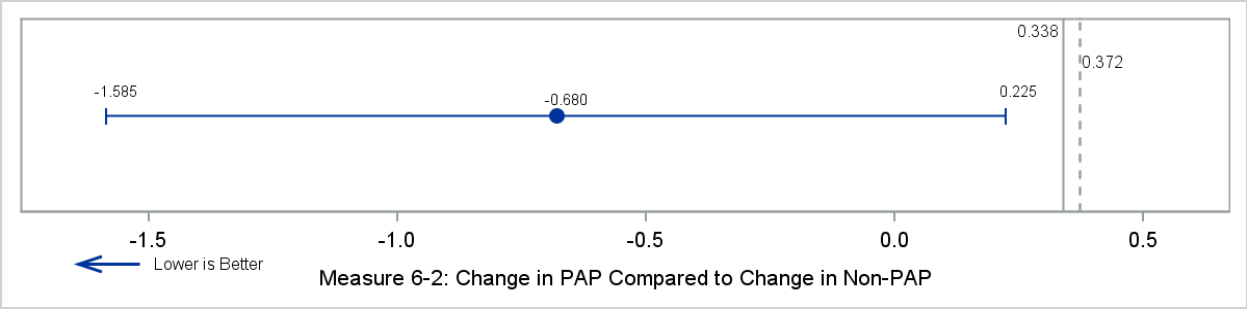
To test statistically whether the PAP had rates that were less than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 0.338 (i.e., the change in non-PAP comparison group) to 0.372 (i.e., noninferiority threshold: 0.338 × (1-0.1)). Table 4-29 presents the results of the noninferiority testing.

Table 4-29: Results for Measure 6-2: ED Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-0.680 (-1.585 to 0.225)	0.372	PAP Superior

The confidence interval around the change in PAP used in the noninferiority test fell below both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-13. Therefore, results from this measure suggest that PAP was superior to the non-PAP comparison group and support Hypothesis 6.

Figure 4-13: Results for Measure 6-2: ED Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members



Summary and Conclusions for Hypothesis 6

Both measures associated with Hypothesis 6 support the hypothesis (Table 4-30). The results of Measure 6-1 showed a decrease in the rates of inpatient admissions for sensitive conditions than what would have been expected in the absence of the PAP. Statistical testing results supported PAP superiority. Similarly, Measure 6-2 showed a decrease in the rates of ED visits for sensitive conditions for the PAP group than what would have been expected in the absence of the PAP. Again, the results of statistical testing supported PAP superiority.

Based on these results, premium assistance beneficiaries did have equal or lower rates of potentially preventable ED and hospital admissions.

Table 4-30: Hypothesis 6 Results

Measure ID	Measure Description	Supports Hypothesis 6
6-1	Inpatient Hospital Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members	Yes
6-2	ED Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members	Yes

Hypothesis 7

Implementation of the program will result in more Medicaid plans deciding to enter the New Hampshire health insurance marketplace.

This hypothesis was assessed through qualitative review of interview responses. Plan representatives were asked:

- Whether implementation of the PAP program influenced their decision to enter the Marketplace (Measure 7-1).

Results of Measure 7-1

In conducting the semi-structured interviews for Measure 7-1 (Plan Perspective on Program Impact on Marketplace Entry), HSAG identified the following:

MMCs: One of two MMCs active in New Hampshire prior to 2016 cited the PAP as the reason for its decision to offer a commercial product on the Marketplace. The second plan chose not to offer a commercial plan under PAP, although its stated reasons were unrelated to the PAP.

QHPs: The three remaining carriers interviewed had all developed commercial products for sale on the Marketplace in New Hampshire before the PAP was implemented; all decided to continue with their plans after the PAP was implemented, knowing that in doing so they agreed to offer coverage to the PAP population. One plan described significant reservations about offering a product under the PAP; the others were more confident that the increased numbers of beneficiaries would more than offset the increased costs and other burdens of creating an additional plan for the PAP population.

Summary and Conclusions for Hypothesis 7

Since providing a policy consistent with the PAP was a requirement to offer health insurance on the Marketplace in New Hampshire, it may have been effective in enticing five insurance companies to offer policies that would cover this population. Although not all plans were represented in the interviews, those that were had all been contemplating entering the Marketplace prior to the PAP and none changed their plans as a result. There is no way of knowing whether other carriers considering entering the Marketplace in New Hampshire were deterred by the requirement to comply with the PAP.

Consequently, the PAP succeeded in that it induced one MMC to offer a plan on the Marketplace. It had a more limited influence on the carriers who provided QHPs on the Marketplace, since their decisions to offer products on the Marketplace had been in development prior to the PAP. All were willing to comply with the PAP to be able to offer their QHPs on the Marketplace (Table 4-31).

Table 4-31: Hypothesis 7 Results

Measure ID	Measure Description	Supports Hypothesis 7
7-1	Whether implementation of the PAP program influenced their decision to enter the New Hampshire Marketplace	Yes

Summary and Conclusion for Waiver Goal: Cost-Effective Coverage

Hypotheses 5, 6, and 7 fall under the Cost-Effective waiver goal. The analyses for measures related to Hypothesis 5 are inconclusive. Hypothesis 6 is strongly supported by the analysis of its related measures. Hypothesis 7 is supported in as much as one Medicaid plan entered the commercial exchange. There was insufficient data to determine if plans experienced any economies of scale as a result of the implementation of the PAP. Based on the evidence, it appears that the premium assistance approach increased QHP enrollment and did result in increased competition among QHPs, although there was no evidence to support or refute the existence of economies of scale related to the PAP.

Waiver Goal: Uniform Provider Access

The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.

The PAP Demonstration project's performance with respect to this waiver goal was assessed through five different hypotheses, with multiple measures used for each.

Hypothesis 8

Premium assistance beneficiaries will have equal or better access to care, including primary care and specialty physician networks and services.

Six measures were used to examine Hypothesis 8:

- The percentage of members who were identified as having persistent asthma who were dispensed appropriate medications that they remained on at least 75 percent of the treatment period (Measure 8-1).
- The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year who received prenatal care (Measure 8-2).
- The percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year who received postpartum care (Measure 8-3).
- The percentages of respondent's quick access to needed care (Measure 8-4).
- The percentage of respondent's ease of getting appointments with specialists (Measure 8-5).
- The percentage of eligible members, age 20 years through 64 years, who had an ambulatory or preventive care visit, by age group (Measure 8-6).

Results of Measure 8-1

HSAG employed a difference-in-differences model for Measure 8-1 (Medication Management for People with Asthma [MMA]) to estimate the effect of implementation of the PAP on the percentage of members ages 19–64 during the measurement year who were identified as having persistent asthma and were dispensed appropriate medications that they remained on for at least 75 percent of their treatment period (Table 4-32).

A larger percentage of PAP members with asthma had appropriate medication management than members in the non-PAP comparison group for the baseline period. However, a lower percentage of PAP members with asthma had appropriate medication management in the evaluation period as compared to non-PAP members. During the baseline period, the regression adjusted rate of PAP members with asthma who had appropriate medication management was 52.86 percent, compared to 43.72 percent for the non-PAP comparison group. During the evaluation period, the percentage of PAP members with asthma who had appropriate medication management was 41.72 percent (adjusted) and was 43.68 percent for non-PAP members.

Rates for PAP members decreased by -11.13 percentage points between the baseline and evaluation period, while rates for the non-PAP comparison group decreased by -0.04 percentage points. The estimated impact of the PAP led to a reduction of -11.10 percentage points in medication management for members with asthma.

Table 4-32: Results for Measure 8-1: Medication Management for People with Asthma (MMA)

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	43.72%	43.68%	-0.04%	-11.10% (15.95%)
	N=65	*N=140*		
PAP	52.86%	41.72%	-11.13%	
	N=15	*N=184*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data

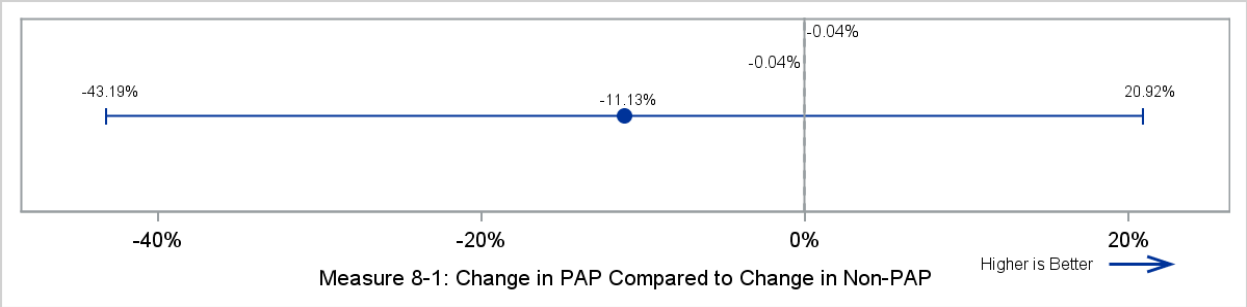
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. Given that, the change in the non-PAP comparison group was effectively zero and the equivalence interval had an exceedingly narrow range at 0.04 percent. Table 4-33 presents the results of the noninferiority testing.

Table 4-33: Results for Measure 8-1: Medication Management for People with Asthma (MMA)

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-11.13% (-43.19% to 20.92%)	-0.04%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-14. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 8.

Figure 4-14: Results for Measure 8-1: Medication Management for People with Asthma (MMA)



Given that the change in the non-PAP comparison group was effectively zero, the equivalence interval had an exceedingly narrow range at 0.04 percent. Therefore, the noninferiority testing effectively reduces to a traditional test of the coefficient on the interaction between PAP enrollment indicator and the time indicator. However, the standard error on this coefficient is so large (15.95) that only an indefensibly large value for delta would change the inconclusive results.

Results of Measure 8-2

To estimate the effect of the PAP on the percentage of women who received prenatal care prior to a delivery of a live birth between November 6, 2015, and November 5, 2016 (the measurement year), HSAG had intended to conduct a difference-in-differences analysis, Measure 8-2 (Timeliness of Prenatal Care). However, once eligibility and analysis criteria were applied to the number of live births during the specified period, the number of births in the PAP was too small for meaningful analysis.

There were 677 deliveries in the PAP encounter data. Of these, 126 met the baseline enrollment criteria to include in the analysis; 382 met the six-month continuous eligibility requirement to include in the analysis; 69 met both the baseline and the six-month continuous eligibility requirements; and only 57 met both the baseline enrollment and six-month continuous eligibility requirements, had fewer than three months of Medicaid MCO history (to reduce confounding of Medicaid MCO and PAP impacts), and were matched in the matching algorithm. This reduction suggests pregnant women in the PAP may be systematically different from other PAP members in that they have a shorter duration of enrollment. This may be driven, in part, by the newborn being eligible for non-PAP Medicaid, thereby carrying the woman into non-PAP Medicaid. However, additional research is necessary to confirm this hypothesis.

Results of Measure 8-3

To estimate the effect of the PAP on the percentage of women who received postpartum care after delivery of a live birth between November 6, 2015, and November 5, 2016 (the measurement year), HSAG had intended to conduct a difference-in-differences analysis, Measure 8-3 (Postpartum Care). However, once eligibility and analysis criteria were applied to the number of live births during the specified period, the number of births in the PAP was too small for meaningful analysis. See the discussion in the Results of Measure 8-2 for additional details.

Results of Measure 8-4

To estimate how the PAP affected the degree to which the members were able to get care as soon as needed, HSAG conducted an analysis on a question it included in its administration of the 2017 CAHPS. Samples of members in both the PAP and non-PAP populations were asked, "In the last six months, when you needed care right away, how often did you get care as soon as you needed?" Allowable responses were "Never + Sometimes" and "Usually + Always" (Table 4-34). Responses were case-mix adjusted using the AHRQ adjustment algorithm using respondent age, education level, and self-rating of health as adjustment factors.

Of PAP members, 82.48 percent reported "Usually + Always" getting care as soon as needed during the previous six months. Additionally, 88.62 percent of non-PAP members reported they usually or always got care as soon as needed during the previous six months. A traditional statistical test of the difference in proportions shows that there was no statistically significant difference between the two proportions, as evidenced by the Z-statistic in Table 4-34 being lower in magnitude than the critical value of -1.96.

Table 4-34: Results for Measure 8-4: In the Last Six Months, When You Needed Care Right Away, How Often Did You Get Care as Soon as You Needed?

Case-Mix Adjusted Response				
Group	Never + Sometimes	Usually + Always	Sample Size	Z-Statistic (Standard Error)
Non-PAP	11.38%	88.62%	N=148	-1.29 4.76%
PAP	17.52%	82.48%	N=91	

Source: 2017 CAHPS

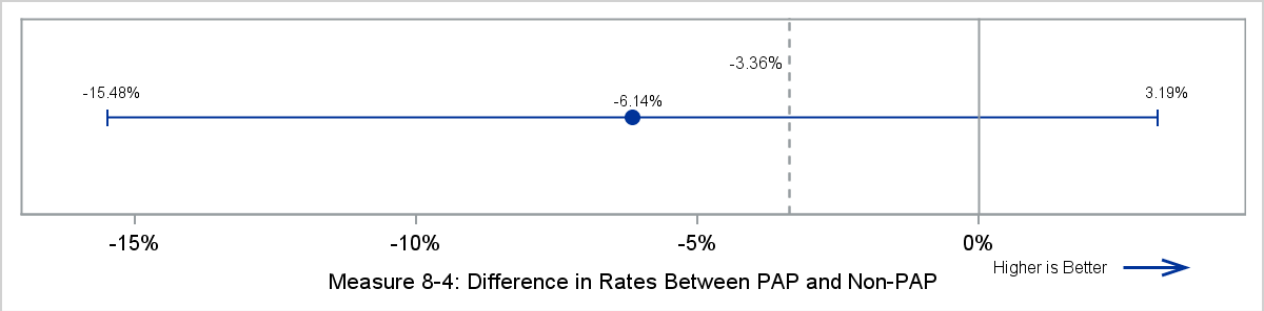
If Hypothesis 8 is true, the percentage of PAP members who answered "Usually + Always" to the survey question in Measure 8-4 (In the Last Six Months, When You Needed Care Right Away, How Often Did You Get Care as Soon as You Needed?) should be greater than or equal to the percentage of non-PAP members who answered "Usually + Always." To evaluate whether the PAP performed at least as well as the non-PAP comparison group, HSAG conducted a noninferiority test using an effect size of 0.1 of the non-PAP proportion to calculate an equivalence interval. The equivalence interval ranged from -3.363 percent (i.e., noninferiority threshold) to zero (i.e., no difference between groups). Table 4-35 presents the results of the noninferiority testing.

Table 4-35: Noninferiority Testing Results for Measure 8-4: In the Last Six Months, When You Needed Care Right Away, How Often Did You Get Care as Soon as You Needed?

Noninferiority Testing Results		
Difference (95 Percent CI)	Noninferiority Threshold	Result
-6.14% (-15.48% to 3.19%)	-3.363%	Inconclusive

The confidence interval around the difference in proportions between PAP and non-PAP used in the noninferiority test encompassed zero and the noninferiority threshold, as illustrated in Figure 4-15. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 8.

Figure 4-15: Results for Measure 8-4: In the Last Six Months, When You Needed Care Right Away, How Often Did You Get Care as Soon as You Needed?



Results of Measure 8-5

To estimate the effect of the PAP on members' ability to get an appointment with a specialist as soon as needed, HSAG conducted an analysis on a question it included in its administration of the 2017 CAHPS. Samples of both the PAP and non-PAP populations were asked, "In the last six months, how often did you get an appointment to see a specialist as soon as you needed?" Allowable responses were "Never + Sometimes" and "Usually + Always" (Table 4-36). Responses were case-mix adjusted using the AHRQ adjustment algorithm that used respondent age, education level, and self-rating of health as adjustment factors.

Of PAP members, 86.01 percent reported "Usually + Always" getting an appointment to see a specialist as soon as needed during the previous six months. Additionally, 79.72 percent of non-PAP members reported they usually or always got an appointment to see a specialist as soon as needed during the previous six months. A traditional statistical test of the difference in proportions shows that there was no statistically significant difference between the two proportions, as evidenced by the Z-statistic in Table 4-36 being lower than the critical value of 1.96.

Table 4-36: Results for Measure 8-5: In the Last Six Months, How Often Did You Get an Appointment to See a Specialist as Soon as You Needed?

Case-Mix Adjusted Response				
Group	Never + Sometimes	Usually + Always	Sample Size	Z-Statistic (Standard Error)
Non-PAP	20.28%	79.72%	N=167	1.41
PAP	13.99%	86.01%	N=118	4.46%

Source: 2017 CAHPS

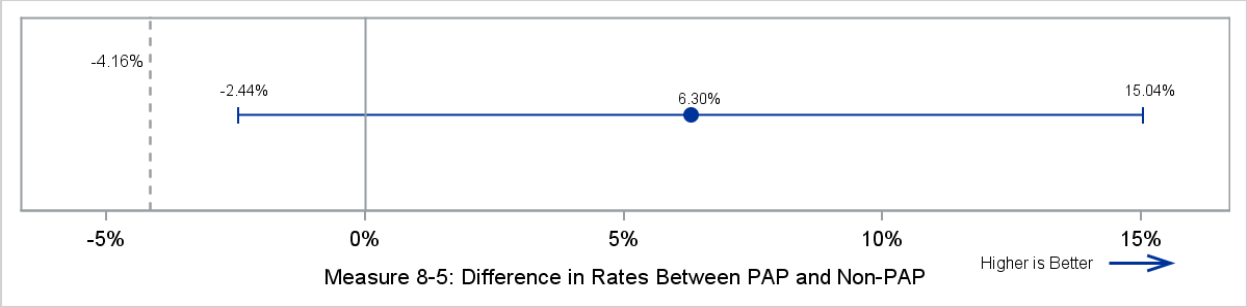
If Hypothesis 8 is true, the percentage of PAP members who answered "Usually + Always" to the survey question in Measure 8-5 (In the Last Six Months, How Often Did You Get an Appointment to See a Specialist as Soon as You Needed?) should be greater than or equal to the percentage of non-PAP members who answered "Usually + Always." To evaluate whether the PAP group performed at least as well as the non-PAP comparison group, HSAG conducted a noninferiority test using an effect size of 0.10 of the non-PAP proportion to calculate an equivalence interval. The equivalence interval ranged from -4.163 percent (i.e., noninferiority threshold) to zero (i.e., no difference between groups). Table 4-37 presents the results of the noninferiority testing.

Table 4-37: Noninferiority Testing Results for Measure 8-5: In the Last Six Months, How Often Did You Get an Appointment to See a Specialist as Soon as You Needed?

Noninferiority Testing Results		
Difference (95 Percent CI)	Noninferiority Threshold	Result
6.30% (-2.44% to 15.04%)	-4.163%	Noninferior

The confidence interval around the difference in proportions between PAP and non-PAP used in the noninferiority test did not encompass the noninferiority threshold, as illustrated in Figure 4-16. Therefore, results from this measure suggest that PAP is noninferior to the non-PAP comparison group and support Hypothesis 8.

Figure 4-16: Results for Measure 8-5: In the Last Six Months, How Often Did You Get an Appointment to See a Specialist as Soon as You Needed?



Results of Measure 8-6

HSAG employed a difference-in-differences model for Measure 8-6 (Adults' Access to Ambulatory/Preventive Health) to estimate the effect of implementation of the PAP on the percentage of patients ages 20–44 and the percentage of patients ages 45–64 who had an ambulatory or preventive care visit (Table 4-38).

A lower percentage of PAP members had an ambulatory or preventive care visit in both the 20–44 and 45–64 age groups than did members in the non-PAP comparison groups in both the baseline and evaluation periods. During the baseline period, the regression adjusted percentage of PAP members who had an ambulatory or preventive care visit was 73.95 percent in the 20–44 age group and 81.97 percent in the 45–64 age group, compared to 82.93 percent in the 20–44 age group and 89.36 percent in the 45–64 age group for the non-PAP comparison groups. During the evaluation period, the percentage of PAP members who had an ambulatory or preventive care visit was 71.40 percent in the 20–44 age group and 80.78 percent in the 45–64 age group, compared to 84.13 percent in the 20–44 age group and 91.56 percent in the 45–64 age group for the non-PAP comparison groups.

Rates for PAP members decreased by -2.55 percentage points in the 20–44 age group and -1.19 percentage points in the 45–64 age group between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 1.20 percentage points in the 20–44 age group and 2.20 percentage points in the 45–64 age group. The estimated impact of the PAP led to a reduction of -3.75 percentage points in the 20–44 age group and a reduction of -3.39 percentage points in the 45–64 age group among members who had an ambulatory or preventive care visit.

Table 4-38: Results for Measure 8-6: Adults' Access to Ambulatory/Preventive Health

Regression Adjusted Rates					
Age Group	Group	Time Period		Change	PAP Impact (Standard Error)
		Baseline	Evaluation		
20 to 44	Non-PAP	82.93%	84.13%	1.20%	-3.75% (1.25%)
		N=4,419	*N=3,560*		
	PAP	73.95%	71.40%	-2.55%	
		N=4,041	*N=4,083*		
45 to 64	Non-PAP	89.36%	91.56%	2.20%	-3.39% (1.39%)
		N=2,142	*N=1,863*		
	PAP	81.97%	80.78%	-1.19%	
		N=2,547	*N=2,633*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data

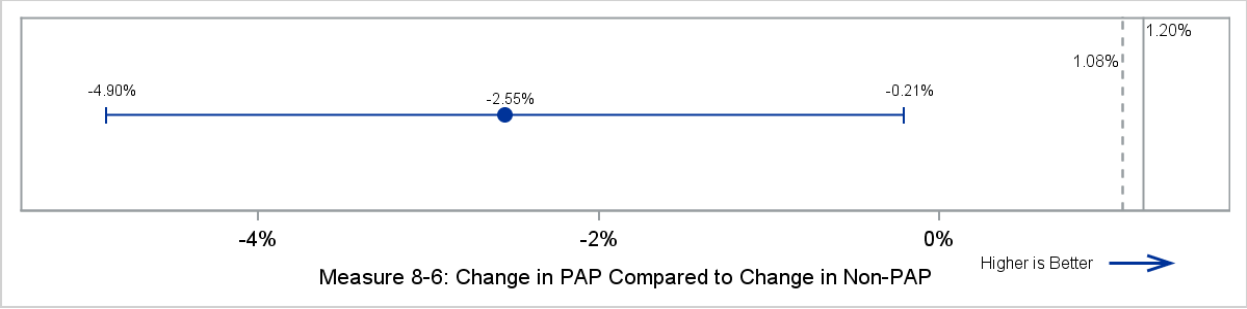
To test statistically whether the PAP had rates that were greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. In the group with members ages 20–44, the equivalence interval ranged from 1.08 percent (i.e., noninferiority threshold: 1.20 × (1-0.1)) to 1.20 (i.e., the change in non-PAP comparison group). In the group with members ages 45–64, the equivalence interval ranged from 1.98 percent (i.e., noninferiority threshold: 2.20 × (1-0.1)) to 2.20 (i.e., the change in non-PAP comparison group). Table 4-39 presents the results of the noninferiority testing.

Table 4-39: Results for Measure 8-6: Adults' Access to Ambulatory/Preventive Health

Noninferiority Testing Results			
Age Group	PAP Change (95% CI)	Noninferiority Threshold	Result
20 to 44	-2.55% (-4.90% to -0.21%)	1.08%	PAP Inferior
45 to 64	-1.19% (-3.78% to 1.41%)	1.98%	PAP Inferior

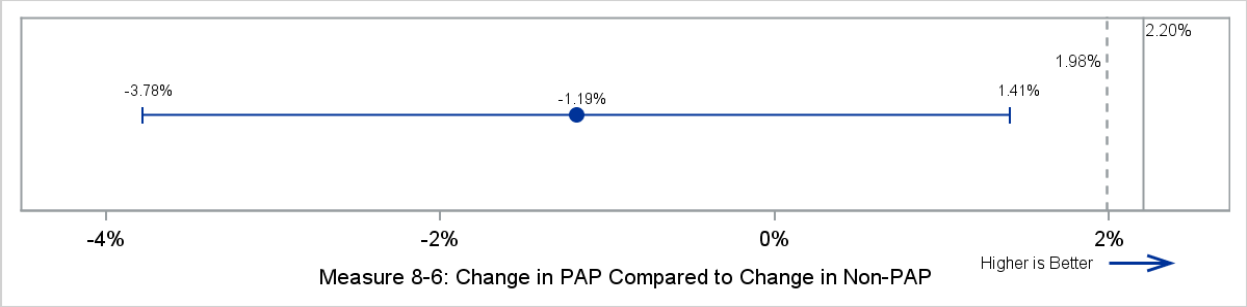
The confidence interval around the change in PAP used in the noninferiority test fell below both the change in non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-17. Therefore, results from this measure suggest that the PAP is inferior to the non-PAP comparison group and the results do not support Hypothesis 8.

Figure 4-17: Results for Measure 8-6a: Adults' Access to Ambulatory/Preventive Health, Members 20–44 Years Old



The confidence interval around the change in PAP used in the noninferiority test fell below both the change in non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-18. Therefore, results from this measure suggest that the PAP is inferior to the non-PAP comparison group and the results do not support Hypothesis 8.

Figure 4-18: Results for Measure 8-6b: Adults' Access to Ambulatory/Preventive Health, Members 45–64 Years Old



Summary and Conclusions for Hypothesis 8

Only one of the analyzed measures associated with Hypothesis 8 provides unambiguous support for the hypothesis (Table 4-40). The results of Measure 8-1 found a decrease in the appropriate medication management for people with asthma relative to what would be expected in the absence of the PAP, although the results of statistical noninferiority tests were inconclusive. Measures 8-2 and 8-3 were not analyzed due to sample sizes that were too small for reliable results. These measures are not considered in determining if the hypothesis is supported by the results of the analyses. The Measure 8-4 cased-mix adjusted results showed PAP members reporting a slightly smaller percentage usually or always being able to get care as soon as needed, but statistical noninferiority testing was inconclusive. The results of Measure 8-5 showed that a greater percentage of PAP members were usually or always able to get specialist care as soon as needed than were non-PAP members. Statistical tests supported the noninferiority of the PAP. The results for Measure 8-6 did not support Hypothesis 8. The PAP was found to be inferior in access to ambulatory preventive health services for adults in both the 20–44 and 45–64 age ranges.

The analytical evidence related to Hypothesis 8 is mixed or inconclusive. The analytical results of Measure 8-5 support the hypothesis; the results of Measure 8-6 do not support the hypothesis. The results of Measures 8-1 and 8-4 are inconclusive. Overall, it cannot be determined whether premium assistance beneficiaries had equal or better access to care, including primary care and specialty physician networks and services.

Table 4-40: Hypothesis 8 Results

Measure ID	Measure Description	Supports Hypothesis 8
8-1	Medication Management for People with Asthma	Inconclusive
8-2	Timeliness of Prenatal Care	N/A
8-3	Postpartum Care	N/A
8-4	In the Last 6 Months, When You Needed Care Right Away, How Often Did You Get Care as Soon as You Needed?	Inconclusive
8-5	In the Last 6 Months, How Often Did You Get an Appointment to See a Specialist as Soon as You Needed?	Yes
8-6a	Adults' Access to Ambulatory Preventive Health Services—Members 20–44 Years Old	No
8-6b	Adults' Access to Ambulatory Preventive Health Services—Members 45–64 Years Old	No

Hypothesis 9[4-4]

Premium assistance beneficiaries will have equal or better access to preventive care services.

Eight measures were used to examine Hypothesis 9:

- The percentage of eligible members, age 20 years through 64 years, who had an ambulatory or preventive care visit, by age group (Measure 9-1).
- Flu vaccinations for adults ages 18–64: percentage of members 18–64 years of age who received an influenza vaccination between July 1 of the measurement year and the date on which the CAHPS 5.0 survey was completed (Measure 9-3).
- The percentage of patients 19–64 years of age with type 1 or type 2 diabetes who had an eye exam (retinal exam) performed (Measure 9-4).
- The percentage of patients 19–64 years of age with type 1 or type 2 diabetes who had an eye exam HbA1c test performed (Measure 9-5).
- The percentage of members 40 years of age and older with a new diagnosis of chronic obstructive pulmonary disease (COPD) or newly active COPD, who received appropriate spirometry testing to confirm the diagnosis (Measure 9-6).
- The percentage of women 21–64 years of age who were screened for cervical cancer every 3 year; and women 30–64 who had a cervical cancer screening with a cervical cytology/human papillomavirus (HPV) co-testing performed every 5 years (Measure 9-7).
- Number of members who report "usually" or "always" getting an appointment for a check-up or routine care at a doctor's office or clinic as soon as they needed (Measure 9-8).
- The percentage of members ages 19–64 with schizophrenia or bipolar disorder, who were dispensed an antipsychotic medication and had a diabetes screening test during the measurement year (Measure 9-9).

Results of Measure 9-1

HSAG employed a difference-in-differences model for Measure 9-1 (Adults' Access to Preventive Health Services) to estimate the effect of implementation of the PAP on the percentage of patients ages 20–44 and 45–64 with a preventive care visit (Table 4-41).

A larger percentage of PAP members had a preventive care visit than did members in the non-PAP comparison group in the baseline periods in both 20–44 and 45–64 age groups. During the baseline period, the regression adjusted percentage of PAP members who had a preventive care visit was 34.47, compared to 33.14 for the non-PAP comparison group for ages 20–44. During the evaluation period, 31.92 percent (adjusted) of PAP members and 33.33 percent of non-PAP members had a preventive care visit for ages 45–64. During the baseline period, the regression adjusted percentage of PAP members who had a preventive care visit was 44.39, compared to 35.91 for the non-PAP comparison group for ages 20–44. During the evaluation period, 42.81 percent (adjusted) of PAP members and 36.08 percent of non-PAP had a preventive care visit for ages 45–64.

Rates for PAP members decreased by 2.55 percentage points between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 0.20 percentage points for ages 20–44. The estimated impact of the PAP led to a reduction of 2.74 percentage points in preventive care visits for ages 20–44. Rates for PAP members decreased by 1.58 percentage points between the baseline and evaluation period, while rates for the

[4-4] As of result of changes to the evaluation plan, there is no Measure 9-2.

non-PAP comparison group increased by 0.17 percentage points for ages 45–64. The estimated impact of the PAP led to a reduction of 1.76 percentage points in preventive care visits for ages 45–64.

Table 4-41: Results for Measure 9-1: Adults' Access to Preventive Health Services

Regression Adjusted Rates					
Age Group	Group	Time Period		Change	PAP Impact (Standard Error)
		Baseline	Evaluation		
20 to 44	Non-PAP	33.14%	33.33%	0.20%	-2.74% (1.46%)
		N=4,419	*N=3,560*		
	PAP	34.47%	31.92%	-2.55%	
		N=4,041	*N=4,083*		
45 to 64	Non-PAP	35.91%	36.08%	0.17%	-1.76% (2.02%)
		N=2,142	*N=1,863*		
	PAP	44.39%	42.81%	-1.58%	
		N=2,547	*N=2,633*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data

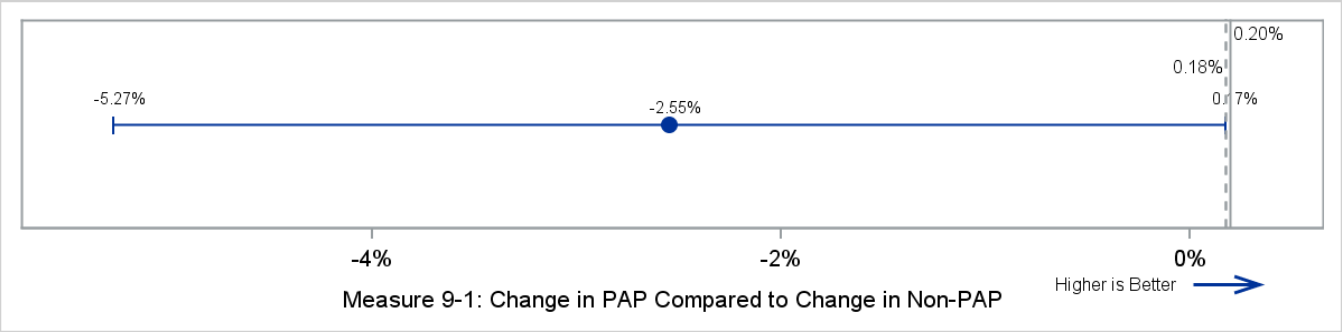
To statistically test whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 0.18 percent (i.e., noninferiority threshold: 0.2 × (1-0.1)) to 0.20 percent (i.e., the change in non-PAP comparison group) for ages 20–44. The equivalence interval ranged from 0.16 percent (i.e., noninferiority threshold: 0.17 × (1-0.1)) to 0.17 percent (i.e., the change in the non-PAP comparison group) for ages 45–64. Table 4-42 presents the results of the noninferiority testing.

Table 4-42: Results for Measure 9-1: Adults' Access to Preventive Health Services

Noninferiority Testing Results			
Age Group	PAP Change (95% CI)	Noninferiority Threshold	Result
20 to 44	-2.55% (-5.27% to 0.17%)	0.18%	PAP Inferior
45 to 64	-1.58% (-5.33% to 2.17%)	0.16%	Inconclusive

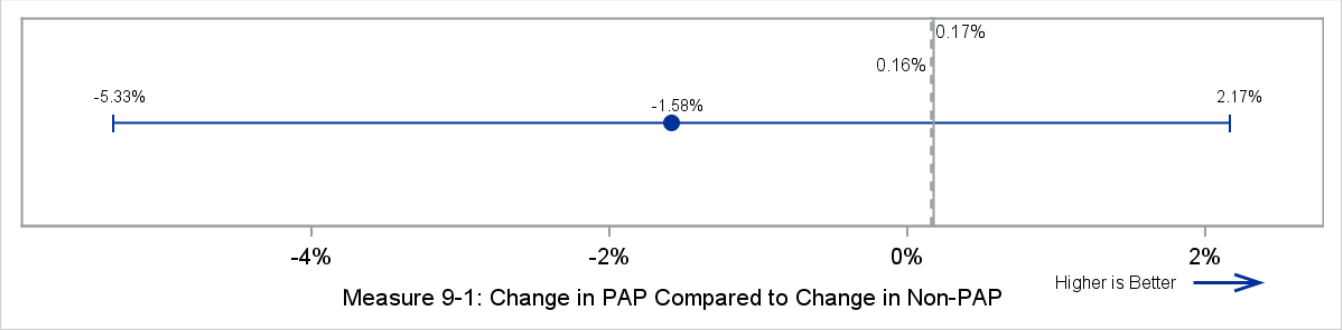
The confidence interval around the change for PAP members ages 20–44 used in the test falls below both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-19. Therefore, results from this measure suggest PAP was inferior and do not support Hypothesis 9. It should be noted, however, that the difference is very small and is based on the traditional 95 percent confidence interval. Given that, the non-PAP change was close to zero and the delta used in the test is also close to zero, narrowing the noninferiority range.

Figure 4-19: Results for Measure 9-1a: Adults' Access to Preventive Health Services Adults, Members 20–44 Years Old



The confidence interval around the change for PAP members ages 45–64 used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-20. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 9.

Figure 4-20: Results for Measure 9-1a: Adults' Access to Preventive Health Services, Members 45–64 Years Old



Results of Measure 9-3

To estimate the effect of the PAP on members' access to the same health plan during the previous six months, HSAG conducted an analysis on a question it included in its administration of the 2017 CAHPS. Samples of both the PAP and non-PAP populations were asked, "Have you had either a flu shot or flu spray in the nose since July 1, 2016?" Allowable responses were "Yes" and "No" (Table 4-43). Responses were case-mix adjusted using the AHRQ adjustment algorithm using respondent age, education level, and self-rating of health as adjustment factors.

Fewer PAP members reported having had either a flu shot or spray since July 1, 2016 than non-PAP members, with 38.4 percent reporting they had a flu vaccination as compared to 46.56 percent of non-PAP members. A traditional statistical test of the difference in proportions shows that there was a statistically significant difference between the two proportions. This was evidenced by the Z-statistic in Table 4-43 being lower than the critical value of -1.96.

Table 4-43: Results for Measure 9-3: Have You Had Either a Flu Shot or Flu Spray in the Nose Since July 1, 2016?

Case-Mix Adjusted Response				
Group	No	Yes	Sample Size	Z-Statistic (Standard Error)
Non-PAP	53.44%	46.56%	N=337	-2.03 (4.02%)
PAP	61.60%	38.40%	N=269	

Source: 2017 CAHPS

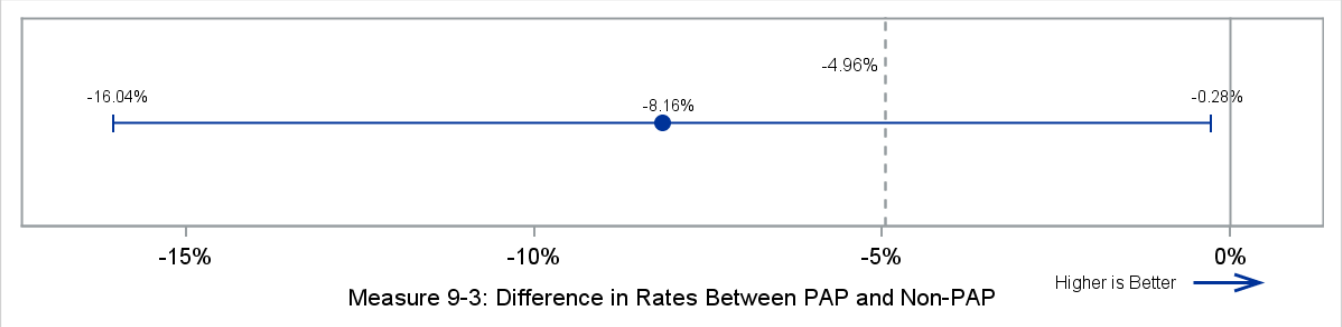
If Hypothesis 9 is true, the percentage of PAP members who answered "Yes" to the survey question in Measure 9-3 (Have You Had Either a Flu Shot or Flu Spray in the Nose Since July 1, 2016?) should be greater than or equal to the percentage of non-PAP members who answered "Yes" to the same question. To evaluate whether the PAP performed at least as well as the non-PAP comparison group, HSAG conducted a noninferiority test using an effect size of 0.1 of the non-PAP proportion to calculate an equivalence interval. The equivalence interval ranged from -4.963 percent (i.e. noninferiority threshold) to zero (i.e. no difference between groups). Table 4-44 presents the results of the noninferiority testing.

Table 4-44: Noninferiority Testing Results for Measure 9-3: Have You Had Either a Flu Shot or Flu Spray in the Nose Since July 1, 2016?

Noninferiority Testing Results		
Difference (95 Percent CI)	Noninferiority Threshold	Result
-8.16% (-16.04% to -0.28%)	-4.963%	Inconclusive

The confidence interval around the difference in proportions between PAP and non-PAP used in the noninferiority test encompassed the noninferiority threshold but not zero, as illustrated in Figure 4-21. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 9.

Figure 4-21: Results for Measure 9-3: Have You Had Either a Flu Shot or Flu Spray in the Nose Since July 1, 2016?



Results of Measure 9-4

HSAG employed a difference-in-differences model for Measure 9-4 (Comprehensive Diabetes Care—Eye Exam) to estimate the effect of implementation of the PAP on the percentage of patients ages 19–64 with Type 1 or Type 2 diabetes who had an eye exam performed (Table 4-45).

PAP members had lower rates of eye exams than did members in the non-PAP comparison group in both the baseline and evaluation periods. During the baseline period, the regression adjusted percentage of PAP members

with an eye exam was 54.37, compared to 56.44 for the non-PAP comparison group. During the evaluation period, 48.03 percent (adjusted) of PAP members and 64.22 percent of non-PAP members had an eye exam.

Rates for PAP members decreased by 6.34 percentage points between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 7.78 percentage points. The estimated impact of the PAP led to a reduction of 14.12 percentage points in eye exams.

Table 4-45: Results for Measure 9-4: Comprehensive Diabetes Care—Eye Exam

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	56.44%	64.22%	7.78%	-14.12% (4.99%)
	N=361	*N=302*		
PAP	54.37%	48.03%	-6.34%	
	N=392	*N=438*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data

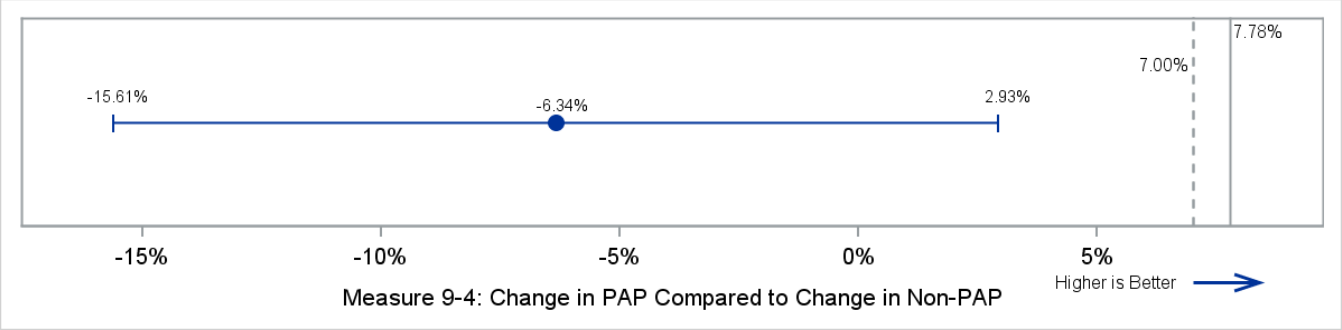
To test statistically whether the PAP had rates that were greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 7.00 percent (i.e., noninferiority threshold: 7.78 × (1-0.1)) to 7.78 percent (i.e., the change in the non-PAP comparison group). Table 4-46 presents the results of the noninferiority testing.

Table 4-46: Results for Measure 9-4: Comprehensive Diabetes Care—Eye Exam

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-6.34% (-15.61% to 2.93%)	7.00%	PAP Inferior

The confidence interval around the change in PAP used in the test fell below both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-22. Therefore, results from this measure suggest PAP was inferior and do not support Hypothesis 9.

Figure 4-22: Results for Measure 9-4: Comprehensive Diabetes Care—Eye Exam



Results of Measure 9-5

HSAG employed a difference-in-differences model for Measure 9-5 (Comprehensive Diabetes Care—HbA1c Testing) to estimate the effect of implementation of the PAP on the percentage of patients ages 19–64 with Type 1 or Type 2 diabetes who had an HbA1c test performed (Table 4-47).

A larger percentage of PAP members had an HbA1c test than did members in the non-PAP comparison group in both the baseline and evaluation periods. During the baseline period, the regression adjusted percentage of PAP members with an HbA1c test was 79.52, compared to 68.20 for the non-PAP comparison group. During the evaluation period, 82.16 percent (adjusted) of PAP members and 71.44 percent of non-PAP members had an HbA1c test.

Rates for PAP members increased by 2.65 percentage points between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 3.24 percentage points. The estimated impact of the PAP led to a reduction of 0.60 percentage points in HbA1c testing.

Table 4-47: Results for Measure 9-5: Comprehensive Diabetes Care—HbA1c Testing

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	68.20%	71.44%	3.24%	-0.60% (4.22%)
	N=361	*N=302*		
PAP	79.52%	82.16%	2.65%	
	N=392	*N=438*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data

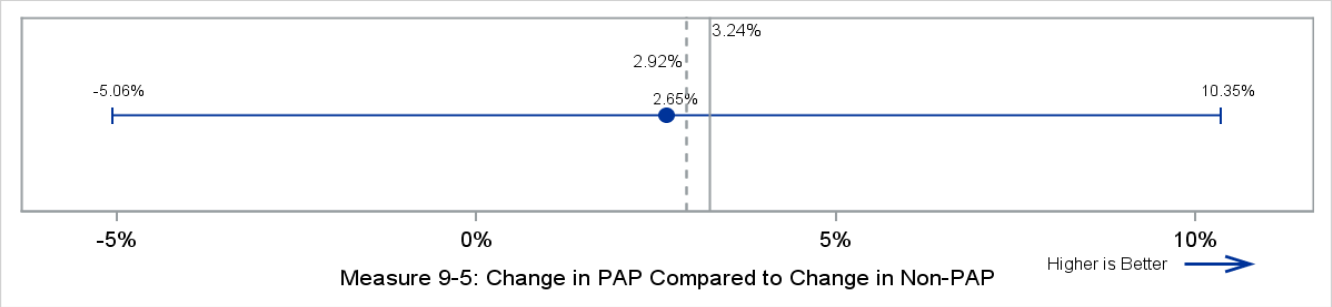
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 2.92 percent (i.e., noninferiority threshold: 3.24 × (1-0.1)) to 3.24 percent (i.e., the change in the non-PAP comparison group). Table 4-48 presents the results of the noninferiority testing.

Table 4-48: Results for Measure 9-5: Comprehensive Diabetes Care—HbA1c Testing

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
2.65% (-5.06% to 10.35%)	2.92%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-23. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 9.

Figure 4-23: Results for Measure 9-5: Comprehensive Diabetes Care—HbA1c Testing



Results of Measure 9-6

HSAG employed a difference-in-differences model for Measure 9-6 (Use of Spirometry Testing in the Assessment and Diagnosis of COPD) to estimate the effect of implementation of the PAP on the percentage of patients 40 years of age and older with a diagnosis of COPD who received appropriate spirometry testing to confirm the diagnosis or for the management of COPD (Table 4-49).

A larger percentage of PAP members received spirometry testing to confirm or manage COPD than did members in the non-PAP comparison group in both the baseline and evaluation periods. During the baseline period, the regression adjusted percentage of PAP members who received spirometry testing was 34.97, compared to 13.78 for the non-PAP comparison group. During the evaluation period, 27.57 percent (adjusted) of PAP members and 26.18 percent of non-PAP members received spirometry testing.

Rates for PAP members decreased by 7.39 percentage points between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 12.4 percentage points. The estimated impact of the PAP led to a reduction of 19.8 percentage points in spirometry testing.

Table 4-49: Results for Measure 9-6: Use of Spirometry Testing in the Assessment and Diagnosis of COPD

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	13.78%	26.18%	12.40%	-19.80% (6.65%)
	N=163	*N=153*		
PAP	34.97%	27.57%	-7.39%	
	N=156	*N=178*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data.

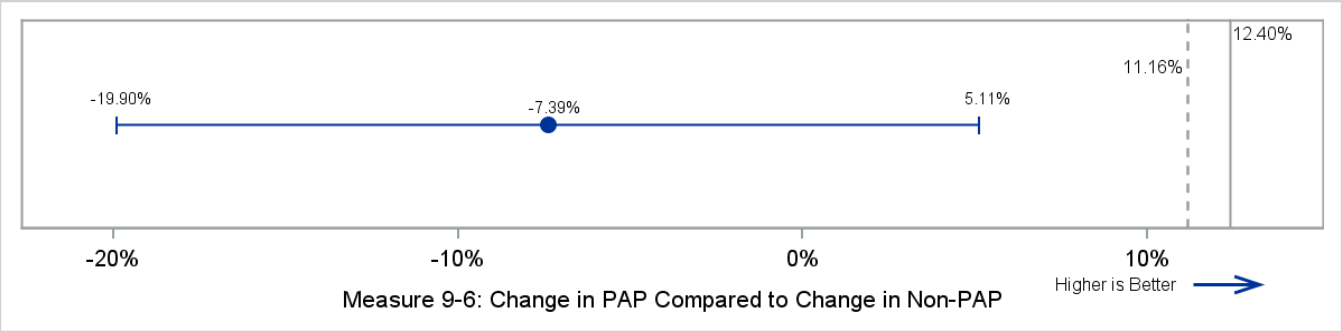
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 11.16 percent (i.e., noninferiority threshold: 12.40 × (1-0.1)) to 12.40 percent (i.e., the change in the non-PAP comparison group). Table 4-50 presents the results of the noninferiority testing.

Table 4-50: Results for Measure 9-6: Use of Spirometry Testing in the Assessment and Diagnosis of COPD

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-7.39% (-19.90% to 5.11%)	11.16%	PAP Inferior

The confidence interval around the change in PAP used in the test fell below both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-24. Therefore, results from this measure suggest PAP was inferior and do not support Hypothesis 9.

Figure 4-24: Results for Measure 9-6: Use of Spirometry Testing in the Assessment and Diagnosis of COPD



Results of Measure 9-7

HSAG employed a difference-in-differences model for Measure 9-7 (Percentage of Women 21-64 Years of Age Who Were Screened For Cervical Cancer) to estimate the effect of implementation of the PAP on the percentage of women ages 21–64 who were screened for cervical cancer using either of the following criteria: women ages 21–64 who had a cervical cytology performed every three years, or women ages 30–64 who had a cervical cytology/HPV co-testing performed every five years (Table 4-51).

A larger percentage of the appropriately aged female PAP members were screened for cervical cancer than were the appropriately aged female members in the non-PAP comparison group in both the baseline and evaluation periods. During the baseline period, the regression adjusted percentage of PAP members who were screened for cervical cancer was 17.68, compared to 11.52 for the non-PAP comparison group. During the evaluation period, 18.53 percent (adjusted) of PAP members and 10.79 percent of non-PAP members were screened.

Rates for PAP members increased by 0.85 percentage points between the baseline and the evaluation period, while rates for the non-PAP comparison group decreased by 0.73 percentage points. The estimated impact of the PAP led to an enlargement of 1.58 percentage points in cervical cancer screening.

Table 4-51: Results for Measure 9-7: Percentage of Women 21-64 Years of Age Who Were Screened For Cervical Cancer

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	11.52%	10.79%	-0.73%	1.58% (1.25%)
	N=3,348	*N=2,751*		
PAP	17.68%	18.53%	0.85%	
	N=3,112	*N=3,152*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data.

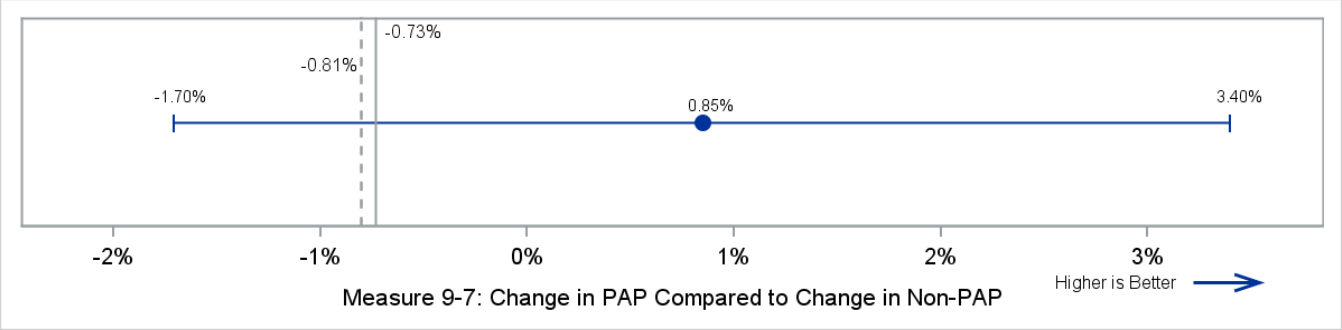
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from -0.81 percent (i.e., noninferiority threshold: -0.73 × (1-0.1)) to -0.73 percent (i.e., the change in the non-PAP comparison group). Table 4-52 presents the results of the noninferiority testing.

Table 4-52: Results for Measure 9-7: Percentage of Women 21-64 Years of Age Who Were Screened For Cervical Cancer

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
0.85% (-1.70% to 3.40%)	-0.81%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-25. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 9.

Figure 4-25: Results for Measure 9-7: Percentage of Women 21-64 Years of Age Who Were Screened For Cervical Cancer



Results of Measure 9-8

To estimate the effect of the PAP on members' access to the same health plan during the previous six months, HSAG conducted an analysis on a question included in its administration of the 2017 CAHPS. Samples of both the PAP and non-PAP populations were asked, "In the last six months, how often did you get an appointment for a checkup or routine care at a doctor's office or clinic as soon as you needed?" Allowable responses were "never," "sometimes," "usually," and "always" (Table 4-53). Responses were case-mix adjusted using the AHRQ adjustment algorithm that used respondent age, education level, and self-rating of health as adjustment factors.

Of the PAP members, 77.22 percent responded that they were usually or always able to schedule an appointment for a checkup or routine care at a doctor's office or clinic as soon as needed in the previous six months. Among non-PAP members, 81.54 percent indicated this to be the case. A traditional statistical test of the difference in proportions shows that there was no statistically significant difference between the two proportions, as evidenced by the Z-statistic in Table 4-53 being smaller in magnitude than the critical value of -1.96.

Table 4-53: Results for Measure 9-8: In the Last Six Months, How Often Did You Get an Appointment for a Check-Up or Routine Care at a Doctor's Office or Clinic as Soon as You Needed?

Case-Mix Adjusted Response				
Group	Never + Sometimes	Usually + Always	Sample Size	Z-Statistic (Standard Error)
Non-PAP	18.46%	81.54%	N=249	-1.06 (4.07%)
PAP	22.78%	77.22%	N=167	

Source: 2017 CAHPS

If Hypothesis 9 is true, the percentage of PAP members who answered "usually" or "always" to the survey question in Measure 9-8 (In the Last Six Months, How Often Did You Get an Appointment for a Check-Up or

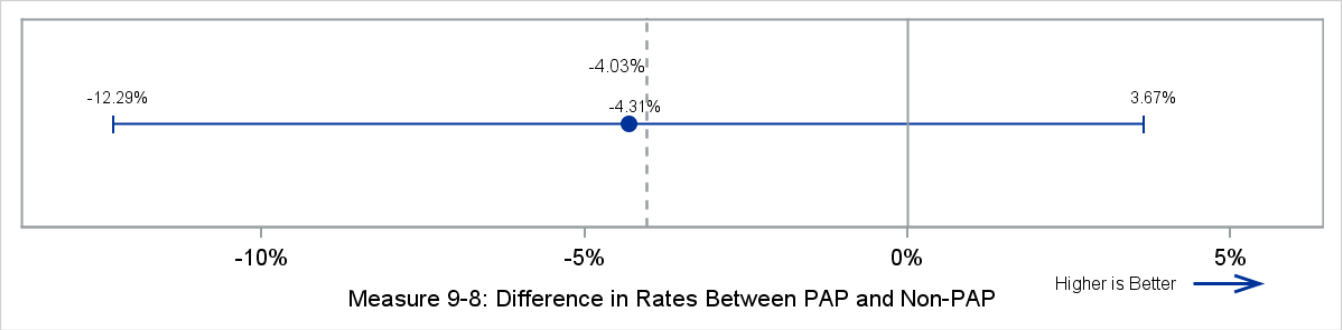
Routine Care at a Doctor's Office or Clinic as Soon as You Needed?) should be greater than or equal to the percentage of non-PAP members with similar answers to the same question. To evaluate whether the PAP performed at least as well as the non-PAP comparison group, HSAG conducted a noninferiority test using an effect size of 0.1 of the non-PAP proportion to calculate an equivalence interval. The equivalence interval ranged from -4.03 percent (i.e., noninferiority threshold) to zero (i.e., no difference between groups). Table 4-54 presents the results of the noninferiority testing.

Table 4-54: Noninferiority Testing Results for Measure 9-8: In the Last Six Months, How Often Did You Get an Appointment for a Check-Up or Routine Care at a Doctor's Office or Clinic as Soon as You Needed?

Noninferiority Testing Results		
Difference (95 Percent CI)	**Noninferiority Threshold**	**Result**
-4.31% (-12.29% to 3.67%)	-4.03%	Inconclusive

The confidence interval around the difference in proportions between PAP and non-PAP used in the noninferiority test encompassed zero and the noninferiority threshold, as illustrated in Figure 4-26. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 9.

Figure 4-26: Results for Measure 9-8: In the Last Six Months, How Often Did You Get an Appointment for a Check-Up or Routine Care at a Doctor's Office or Clinic as Soon as You Needed?



Results of Measure 9-9

HSAG employed a difference-in-differences model for Measure 9-9 (Diabetes Screening for People with Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications) to estimate the effect of implementation of the PAP on the percentage of patients ages 19–64 with schizophrenia or bipolar disorder who were using antipsychotic medications and had diabetes screening test (Table 4-55).

The percentage of PAP members ages 19–64 with schizophrenia or bipolar disorder, who were dispensed an antipsychotic medication and had a diabetes screening test during the measurement year, was slightly greater than the percentage of similar members in the non-PAP comparison group in both the baseline and evaluation periods. During the baseline period, the regression adjusted percentage of PAP members who had a diabetes screening was 70.33, compared to 63.19 for the non-PAP comparison group. During the evaluation period, 74.74 percent (adjusted) of PAP members and 72.02 percent of non-PAP members had a diabetes screening test.

Rates for PAP members increased by 4.41 percentage points between the baseline and the evaluation period, while rates for the non-PAP comparison group increased by 8.83 percentage points. The estimated impact of the PAP led to a reduction of 4.42 percentage points in diabetes screening.

Table 4-55: Results for Measure 9-9: Diabetes Screening for People with Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	63.19%	72.02%	8.83%	-4.42% (9.54%)
	N=142	*N=126*		
PAP	70.33%	74.74%	4.41%	
	N=65	*N=64*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data.

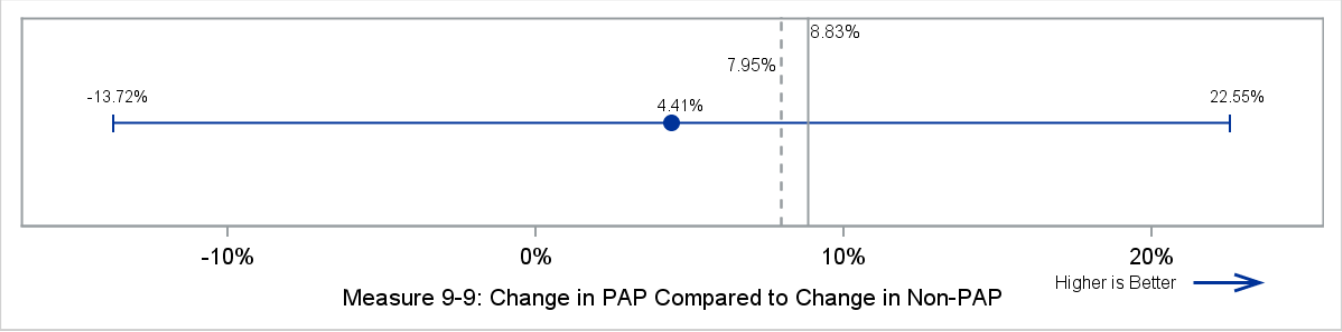
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 7.95 percent (i.e., noninferiority threshold: 8.83 × (1-0.1)) to 8.83 percent (i.e., the change in the non-PAP comparison group). Table 4-56 presents the results of the noninferiority testing.

Table 4-56: Results for Measure 9-9: Diabetes Screening for People with Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
4.41% (-13.72% to 22.55%)	7.95%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-27. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 9.

Figure 4-27: Results for Measure 9-9: Diabetes Screening for People with Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications



Summary and Conclusions for Hypothesis 9

The majority of the measures associated with Hypothesis 9 provide inconclusive evidence that the premium assistance beneficiaries had equal or better access to preventive care services (Table 4-57).

The results for Measure 9-1 found that, for members ages 20–44, there was a decrease in access to preventive health services and a strict application of noninferiority testing methods found that the PAP performance was inferior. However, the results are very close to the cutoff and the small delta region suggests that the results of the test are not entirely conclusive. For members ages 45–64, however, access to preventive health services was found to have increased very slightly, although statistical noninferiority tests were inconclusive.

Fewer PAP members reported receiving a flu vaccination than did non-PAP members in Measure 9-3; statistical noninferiority testing results were, however, inconclusive.

The analysis results of Measure 9-4 found the PAP was associated with a decrease beyond what would have been expected in the absence of the PAP in the percentage of patients with a diabetes diagnosis who had an eye exam. Statistical noninferiority testing results found that the PAP performance was inferior and the results for Measure 9-4 do not support Hypothesis 9.

For Measure 9-5, the analysis showed a slight decrease compared to what would have been expected in the absence of the PAP in the percentage of patients with a diagnosis of diabetes and who had an HbA1c test. However, noninferiority test results were inconclusive so that the results for Measure 9-5 neither support nor contradict Hypothesis 9.

The results of the analysis of Measure 9-6 found a decrease beyond what would be expected in the absence of the PAP in the percentage of qualifying patients who received appropriate spirometry testing to diagnose or manage COPD. Through statistical noninferiority tests, the PAP was found to be inferior in this measure, indicating that the results of Measure 9-6 do not support Hypothesis 9.

Analysis of Measure 9-7 found a slight increase in the percentage of qualifying women who were screened for cervical cancer above what would have been expected in the absence of the PAP. However, statistical noninferiority tests were inconclusive, providing no evidence for or against Hypothesis 9.

Fewer PAP members reported that they were usually or always able to get an appointment for routine care or a checkup than were non-PAP members, as reported in Measure 9-8. However, statistical noninferiority test results were inconclusive. Thus, the results of Measure 9-8 neither support nor contradict Hypothesis 9.

Analysis of Measure 9-9 found a slight decrease beyond what would have been expected in the absence of the PAP in the percentage of members with a qualifying mental health disorder and with prescription who had a diabetes screening. However, noninferiority test results were inconclusive, neither supporting nor contradicting Hypothesis 9.

Of the nine measures related to Hypothesis 9, two clearly provided evidence contradicting Hypothesis 9 (Measures 9-4 and 9-6). Measure 9-1a does not support Hypothesis 9. However, based on the borderline nature of the results, they are not entirely conclusive. The analyses related to the remaining five measures were inconclusive. Therefore, the analytical evidence is inconclusive as to whether premium assistance beneficiaries had equal or better access to preventive care services.

Table 4-57: Hypothesis 9 Results

Measure ID	Measure Description	Supports Hypothesis 9
9-1a	Adults' Access to Preventive Health Services—Members 20–44 Years Old	No
9-1b	Adults' Access to Preventive Health Services—Members 45–64 Years Old	Inconclusive
9-3	Have You Had Either a Flu Shot or Flu Spray in the Nose Since July 1, 2016?	Inconclusive
9-4	Percentage of Patients 19 to 64 Years of Age with Type 1 or Type 2 Diabetes Who Had an Eye Exam (Retinal Exam) Performed	No
9-5	Percentage of Patients 19 to 64 Years of Age with Type 1 or Type 2 Diabetes Who Had an HbA1c Test Performed	Inconclusive
9-6	Percentage of Members 40 Years of Age and Older with a Diagnosis of Chronic Obstructive Pulmonary Disease (COPD), Who Received Appropriate Spirometry Testing to Confirm the Diagnosis or For the Management of COPD	No
9-7	Percentage of Women 21–64 Years of Age Who Were Screened for Cervical Cancer	Inconclusive
9-8	In the Last 6 Months, How Often Did You Get an Appointment for a Check-Up or Routine Care at a Doctor's Office or Clinic as Soon as You Needed?	Inconclusive
9-9	Percentage of Members 19–64 with Schizophrenia or Bipolar Disorder, Who Were Dispensed an Antipsychotic Medication and Had a Diabetes Screening Test	Inconclusive

Hypothesis 10

Premium assistance beneficiaries will report equal or better satisfaction in the care provided.

Two measures were used to examine Hypothesis 10:

- The percentage of respondents rating their overall health care at 8 or better (Measure 10-1). This is based on the answer to the question "Using any number from 0 to 10, what number would you use to rate all your healthcare in the last six months?"
- The percentage of respondents rating their health plan at 8 or better (Measure 10-2). This is based on the answer to the question "Using any number from 0 to 10, what number would you use to rate your health plan?"

Results of Measure 10-1

To estimate the effect of the PAP on members' access to the same health plan during the previous six months, HSAG conducted an analysis on a question it included in its administration of the 2017 CAHPS. Samples of both the PAP and non-PAP populations were asked, "Using any number from 0 to 10, what number would you used to rate all your health care in the last six months?" Allowable responses were proportional choices from 0 to 10, where 0 was the worst health care possible and 10 was the best health care possible (Table 4-58). Responses were case-mix adjusted using the AHRQ adjustment algorithm and using respondent age, education level, and self-rating of health as adjustment factors.

Of the PAP members, 72.80 percent reported receiving high-level quality of health care, with a response of 8 or greater. Among non-PAP members, 77.65 percent indicated this to be the case. A traditional statistical test of the difference in proportions shows that there was no statistically significant difference between the two proportions, as evidenced by the Z-statistic in Table 4-58 being smaller in magnitude than the critical value of -1.96.

Table 4-58: Results for Measure 10-1: Using Any Number From 0 to 10, What Number Would You Use to Rate All Your Healthcare in the Last Six Months?

Case-Mix Adjusted Response				
Group	0 - 7	8 + 9 + 10	Sample Size	Z-Statistic (Standard Error)
Non-PAP	22.35%	77.65%	N=258	-1.18 (4.12%)
PAP	27.20%	72.80%	N=193	

Source: 2017 CAHPS

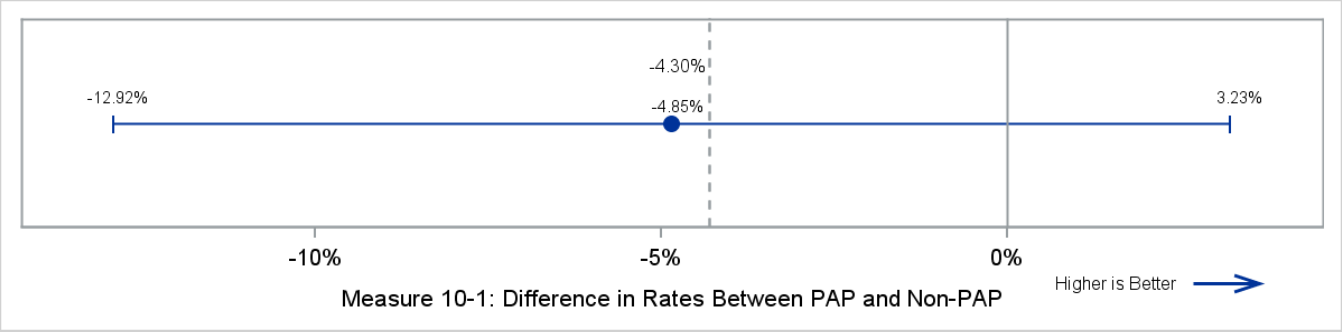
If Hypothesis 10 is true, the percentage of PAP members who rated their health care at an 8 or greater in the survey question used for Measure 10-1 (Using Any Number From 0 to 10, What Number Would You Use to Rate All Your Healthcare in the Last Six Months?) should be greater than or equal to the percentage of non-PAP members with similar answers to the same question. To evaluate whether the PAP performed at least as well as the non-PAP comparison group, HSAG conducted a noninferiority test using an effect size of 0.1 of the non-PAP proportion to calculate an equivalence interval. The equivalence interval ranged from -4.30 percent (i.e., noninferiority threshold) to zero (i.e., no difference between groups). Table 4-59 presents the results of the noninferiority testing.

Table 4-59: Noninferiority Testing Results for Measure 10-1: Using Any Number From 0 to 10, What Number Would You Use to Rate All Your Healthcare in the Last Six Months?

Noninferiority Testing Results		
Difference (95 Percent CI)	Noninferiority Threshold	Result
-4.85% (-12.92% to 3.23%)	-4.30%	Inconclusive

The confidence interval around the difference in proportions between PAP and non-PAP used in the noninferiority test encompassed zero and the noninferiority threshold, as illustrated in Figure 4-28. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 10.

Figure 4-28: Results for Measure 10-1: Using Any Number From 0 to 10, What Number Would You Use to Rate All Your Healthcare in the Last Six Months?



Results of Measure 10-2

To estimate the effect of the PAP on how members rate the quality of their health plan, HSAG analyzed a question included in the 2017 CAHPS. Samples of both PAP and non-PAP members were asked, "Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use

to rate your health plan?" (Table 4-60). Responses were case-mix adjusted using the AHRQ adjustment algorithm using respondent age, education level, and self-rating of health as adjustment factors.

Of PAP members, 73.52 percent reported a high level of satisfaction with their health plan (with a response of 8 or greater). Non-PAP members reported slightly greater satisfaction with the quality of their health plans, with 76.53 percent of respondents reporting a score of 8 or greater. A traditional statistical test of the difference in proportions shows that there was no statistically significant difference between the two proportions, as evidenced by the Z-statistic in Table 4-60 being lower than the critical value of 1.96.

Table 4-60: Results for Measure 10-2: Using Any Number From 0 to 10, What Number Would You Use to Rate Your Health Plan?

Case-Mix Adjusted Response				
Group	0 - 7	8 + 9 + 10	Sample Size	Z-Statistic (Standard Error)
Non-PAP	23.47%	76.53%	N=344	-0.85
PAP	26.48%	73.52%	N=268	3.53%

Source: 2017 CAHPS

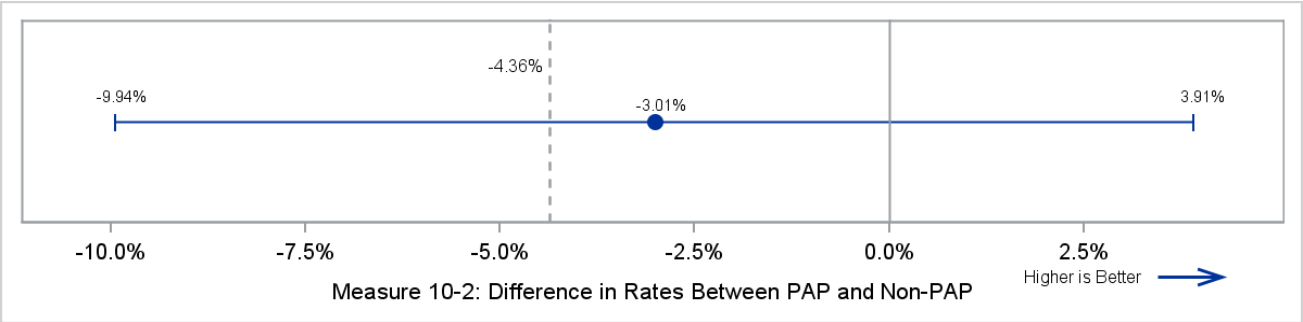
If Hypothesis 10 is true, the percentage of PAP members who rated their health plan at an 8 or greater in the survey question used for Measure 10-2 (Using Any Number From 0 to 10, What Number Would You Use to Rate Your Health Plan?) should be greater than or equal to the percentage of non-PAP members with similar answers. To evaluate whether the PAP performed at least as well as the non-PAP comparison group, HSAG conducted a noninferiority test using an effect size of 0.1 of the non-PAP proportion to calculate an equivalence interval. The equivalence interval ranged from -4.364 percent (i.e., noninferiority threshold) to zero (i.e., no difference between groups). Table 4-61 presents the results of the noninferiority testing.

Table 4-61: Noninferiority Testing Results for Measure 10-2: Using Any Number From 0 to 10, What Number Would You Use to Rate Your Health Plan?

Noninferiority Testing Results		
Difference (95 Percent CI)	Noninferiority Threshold	Result
-3.01% (-9.94% to 3.91%)	-4.364%	Inconclusive

The confidence interval around the difference in proportions between PAP and non-PAP used in the noninferiority test encompassed zero and the noninferiority threshold, as illustrated in Figure 4-29. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 10.

Figure 4-29: Noninferiority Confidence Interval for Measure 10-2: Using Any Number From 0 to 10, What Number Would You Use to Rate Your Health Plan?



Summary and Conclusions for Hypothesis 10

Both measures associated with Hypothesis 10 were inconclusive (Table 4-62).

After a case-mix adjustment, slightly fewer PAP members would rate their health care at an 8 or better compared to non-PAP members, as reported in Measure 10-1. However, the noninferiority test results were inconclusive and do not provide support for or against Hypothesis 10. The results of Measure 10-2 show slightly fewer PAP members would rate their health plan at an 8 or better compared to non-PAP members. However, statistical inferiority test results are inconclusive. Therefore, the results of Measure 10-2 neither support nor contradict Hypothesis 10.

The analysis results for the measures associated with Hypothesis 10 are inconclusive and provide no evidence to indicate whether premium assistance beneficiaries reported equal or better satisfaction in the care provided.

Table 4-62: Hypothesis 10 Results

Measure ID	Measure Description	Supports Hypothesis 10
10-1	What Number Would You Use to Rate All Your Health Care in the Last Six Months?	Inconclusive
10-2	What Number Would You Use to Rate Your Health Plan?	Inconclusive

Hypothesis 11

Premium assistance beneficiaries who are young adults eligible for Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefits will have at least as satisfactory and appropriate access to these benefits.

Two measures were used to examine Hypothesis 11:

- Percentage of Members Aged 19 and 20 Who Had At Least One Comprehensive Well-Care Visit (Measure 11-1).
- Percentage of Members Aged 19 and 20 Who Received At Least One Preventive Dental Visit (Measure 11-2).

Results of Measure 11-1

HSAG employed a difference-in-differences model for Measure 11-1 (Percentage of Members Aged 19 and 20 Who Had At Least One Comprehensive Well-Care Visit) to estimate the effect of the implementation of the PAP on the percentage of members ages 19 and 20 who had at least one comprehensive well-care visit (Table 4-63).

During the baseline period, a greater percentage of PAP members had at least one comprehensive well-care visit than did members in the non-PAP comparison group. However, in the evaluation period this relationship reversed so that a smaller percentage of PAP members had at least one comprehensive well-care visit than did members in the non-PAP comparison group. During the baseline period, the regression adjusted percentage of PAP members with a well-care visit was 29.12, compared to 25.46 for the non-PAP comparison group. During the evaluation period, only 22.33 percent (adjusted) of PAP members had a well-care visit compared to 27.49 percent for non-PAP members.

Rates for PAP members decreased by 6.79 percentage points between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 2.03 percentage points. The estimated impact of the PAP led to a reduction of 8.82 percentage points in the proportion of members with at least one comprehensive well-care visits.

Table 4-63: Results for Measure 11-1: Percentage of Members Aged 19 and 20 Who Had At Least One Comprehensive Well-Care Visit

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	25.46%	27.49%	2.03%	-8.82% (5.75%)
	N=215	*N=127*		
PAP	29.12%	22.33%	-6.79%	
	N=886	*N=409*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data.

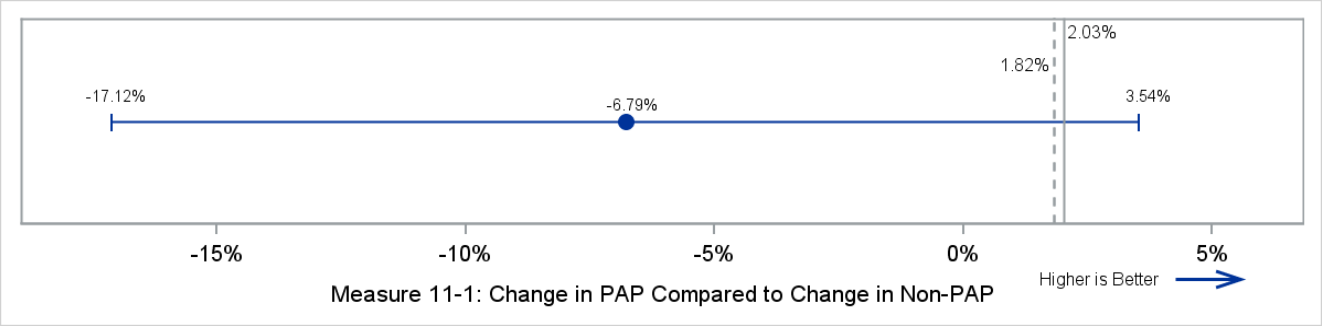
To statistically test whether the PAP had rates that were greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 1.82 percent (i.e., noninferiority threshold: 2.03 × (1-0.1)) to 2.03 percent (i.e., the change in non-PAP comparison group). Table 4-64 presents the results of the noninferiority testing.

Table 4-64: Results for Measure 11-1: Percentage of Members Aged 19 and 20 Who Had At Least One Comprehensive Well-Care Visit

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-6.79% (-17.12% to 3.54%)	1.82%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-30. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 9.

Figure 4-30: Noninferiority Confidence Interval for Measure 11-1: Percentage of Members Aged 19 and 20 Who Had At Least One Comprehensive Well-Care Visit



Results of Measure 11-2

HSAG employed a difference-in-differences model for Measure 11-2 (Percentage of Members Aged 19 and 20 Who Received At Least One Preventive Dental Visit) to estimate the effect of implementation of the PAP on the percentage of members ages 19 and 20 who received at least one preventive dental visit (Table 4-65).

A larger percentage of PAP members ages 19 and 20 received a preventive dental screening than did members in the non-PAP comparison group in the baseline period. During the baseline period, 34.41 percent of PAP members

ages 19 and 20 had a preventive dental screening while only 30.09 percent of similar non-PAP comparison group members had a preventive dental screening. During the evaluation period, this rate was 22.35 percent for PAP compared to 22.73 percent for the non-PAP comparison group.

Rates for PAP members decreased by 12.06 percentage points between the baseline and evaluation period while rates for the non-PAP comparison group decreased by 7.36 percentage points. The estimated impact of the PAP led to a reduction of 4.70 percentage points in the proportion of members with at least one dental screening visit.

Table 4-65: Results for Measure 11-2: Percentage of Members Aged 19 and 20 Who Received At Least One Preventive Dental Visit

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	30.09%	22.73%	-7.36%	-4.70% (5.86%)
	N=215	*N=127*		
PAP	34.41%	22.35%	-12.06%	
	N=886	*N=409*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data.

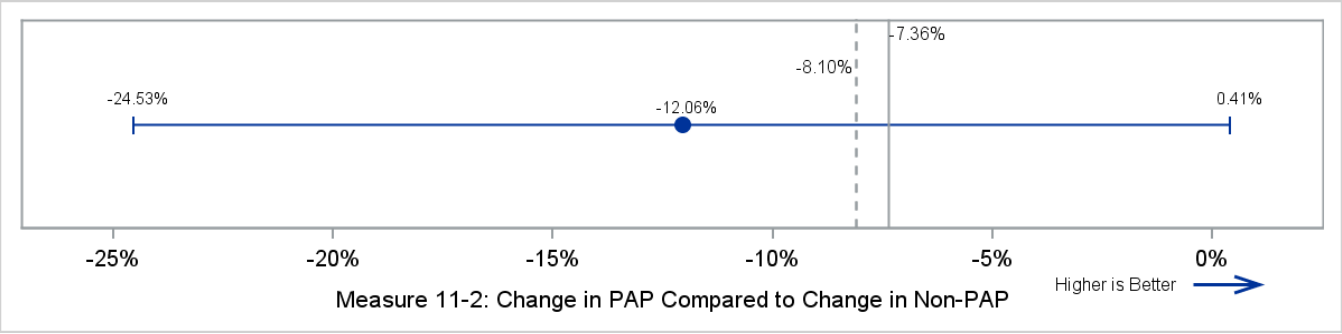
To statistically test whether the PAP had rates that were greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from -8.10 percent (i.e., noninferiority threshold: -7.36 × (1-0.1)) to -7.36 percent (i.e., the change in non-PAP comparison group). Table 4-66 presents the results of the noninferiority testing.

Table 4-66: Results for Measure 11-2: Percentage of Members Aged 19 and 20 Who Received At Least One Preventive Dental Visit

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-12.06% (-24.53% to 0.41%)	-8.10%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-31. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 9.

Figure 4-31: Noninferiority Confidence Interval for Measure 11-2: Percentage of Members Aged 19 and 20 Who Received At Least One Preventive Dental Visit



Summary and Conclusions for Hypothesis 11

Neither measure associated with Hypothesis 11 provided conclusive evidence regarding the hypothesis (Table 4-67).

Analysis of Measure 11-1 found a decrease beyond what would be expected in the absence of the PAP in the percentage of members ages 19 and 20 who had at least one comprehensive well-care visit. However, the results of the noninferiority test were inconclusive. Thus, the analysis results of Measure 11-1 provide no evidence to support or contradict Hypothesis 11.

Analysis results for Measure 11-2 showed a decrease beyond what would be expected in the absence of the PAP in the percentage of members ages 19 and 20 who had a preventive dental exam. Statistical noninferiority testing results were inconclusive providing, no evidence to either support or refute Hypothesis 11.

The results of the measures associated with Hypothesis 11 are inconclusive and therefore provide no insight into the extent to which premium assistance beneficiaries who are eligible for EPSDT receive EPSDT services at least as often as non-PAP members.

Table 4-67: Hypothesis 11 Results

Measure ID	Measure Description	Supports Hypothesis 11
11-1	Percentage of Members Aged 19 and 20 Who Had At Least One Comprehensive Well-Care Visit	Inconclusive
11-2	Percentage of Members Aged 19 and 20 Who Received At Least One Preventive Dental Visit	Inconclusive

Hypothesis 12

Premium assistance beneficiaries will have appropriate access to non-emergency transportation (NEMT).

Two measures were used to examine Hypothesis 12:

- Percentage of NEMT requests authorized, of those requested during the measure data period, for the eligible population (Measure 12-1).
- Percentage of NEMT requests authorized, of those requested during the measure data period, by type of medical service (i.e., hospital, medical provider, mental health provider, dentist, pharmacy, methadone treatment, other), for the eligible population (Measure 12-2).

Results of Measure 12-1

Measure 12-1 (Percentage of NEMT Requests Authorized, of Those Requested During The Measure Data Period, For The Eligible Population) assessed the percentage of NEMT requests authorized in the PAP and non-PAP Medicaid programs. The data were derived from New Hampshire Medicaid Measure NEMT.13, which collects the non-emergent transportation request authorization approval rate by mode of transportation quarterly. The authorization rate for the PAP plans was 99.88 percent; that of the MMC plans combined was 99.83 percent.

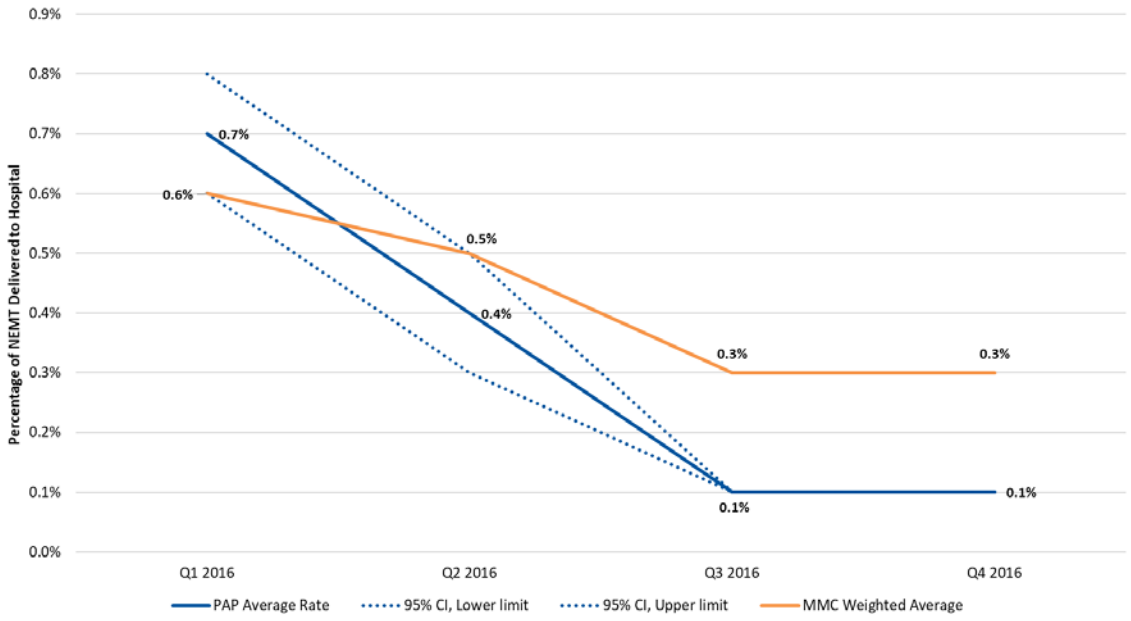
Results of Measure 12-2

Measure 12-2 (Percentage of NEMT Requests Authorized, of Those Requested During the Measure Data Period, by Type of Medical Service [i.e., hospital, medical provider, mental health provider, dentist, pharmacy, methadone treatment, other], For The Eligible Population) considered the requests for NEMT actually delivered by the type of medical service involved. The data were derived from New Hampshire Medicaid Measure NEMT.15, which looks at all requests for NEMT delivered by each plan by the type of provider destination.

For both PAP and MMC plans, transportation for methadone treatment constituted the majority of NEMT delivered, ranging from 65 percent to 88 percent. Transportation to medical providers and mental health providers was the second and third most frequent service for which members received transportation. The remaining categories of medical service each accounted for 1 percent or less of delivered NEMT. The percentages of NEMT provided to each type of provider is presented in Figure 4-32 through Figure 4-38. The figures display the average PAP rate, together with the 95 percent confidence intervals surrounding the rate, as well as the weighted average percentage combining the two MMC plans' averages.

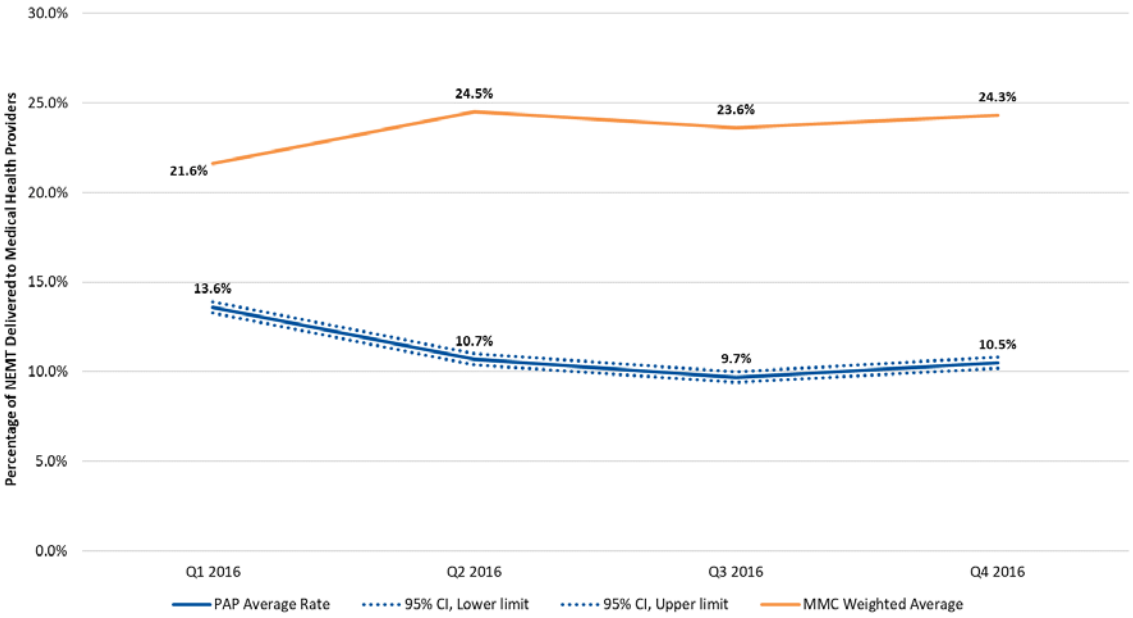
The percentage of non-emergency trips transporting members to the hospital were relatively small, at less than 1 percent of overall transportation delivered for PAP and non-PAP plans, as shown in Figure 4-32. The MMC weighted average falls within, or very close to, the 95 percent confidence intervals for the PAP plans, making it impossible to reject the null hypothesis that the rates are a functional equivalent for the first two quarters.

Figure 4-32: Transportation to Hospital



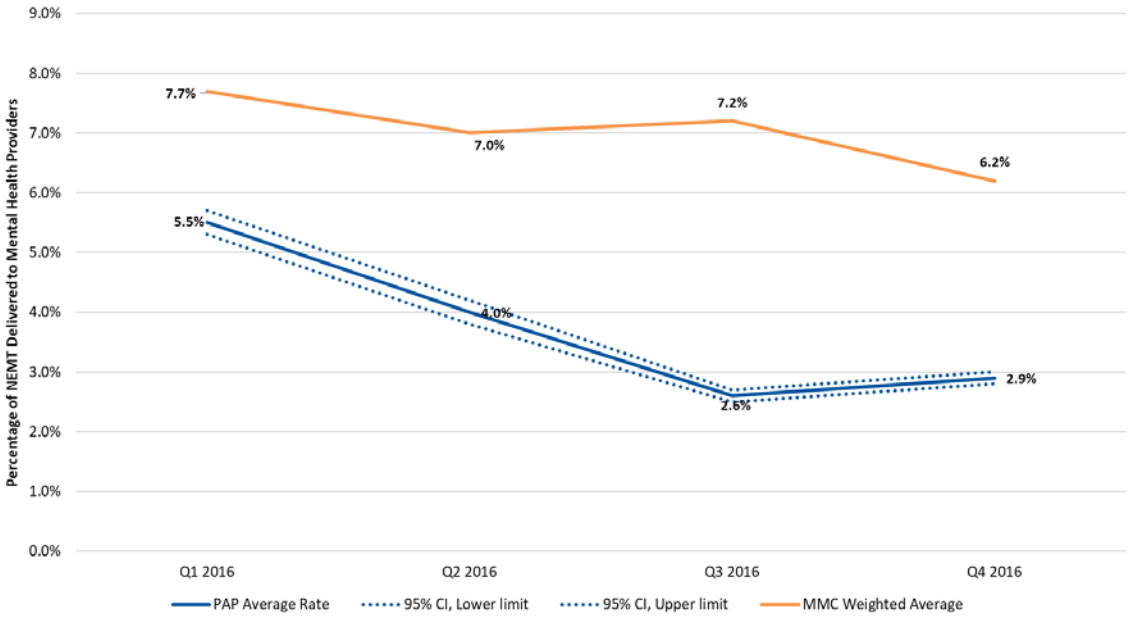
The percentage of non-emergency transportation for members to visit with medical providers was much greater for MMC plans than PAP. The MMC weighted average rate for all four quarters provided was much higher than the entire 95 percent confidence interval surrounding the average PAP rates, a finding that would be consistent with the interpretation that the MMC members used a significantly greater percentage of NEMT for visits to medical providers than did PAP members. The results are presented in Figure 4-33.

Figure 4-33: Transportation to Medical Providers



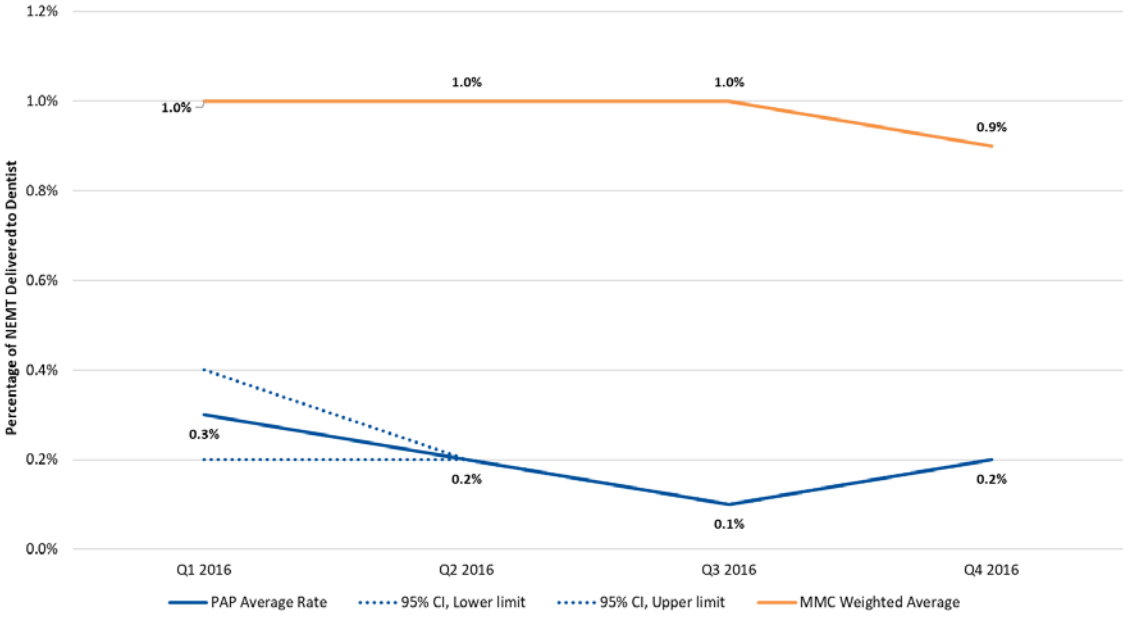
The share of NEMT used for travel to see mental health providers was smaller than that used for other medical providers for all plans, as shown in Figure 4-34. The MMC weighted average rate was significantly greater than the PAP rate, with rates that fell outside the 95 percent confidence intervals.

Figure 4-34: Transportation to Mental Health Providers



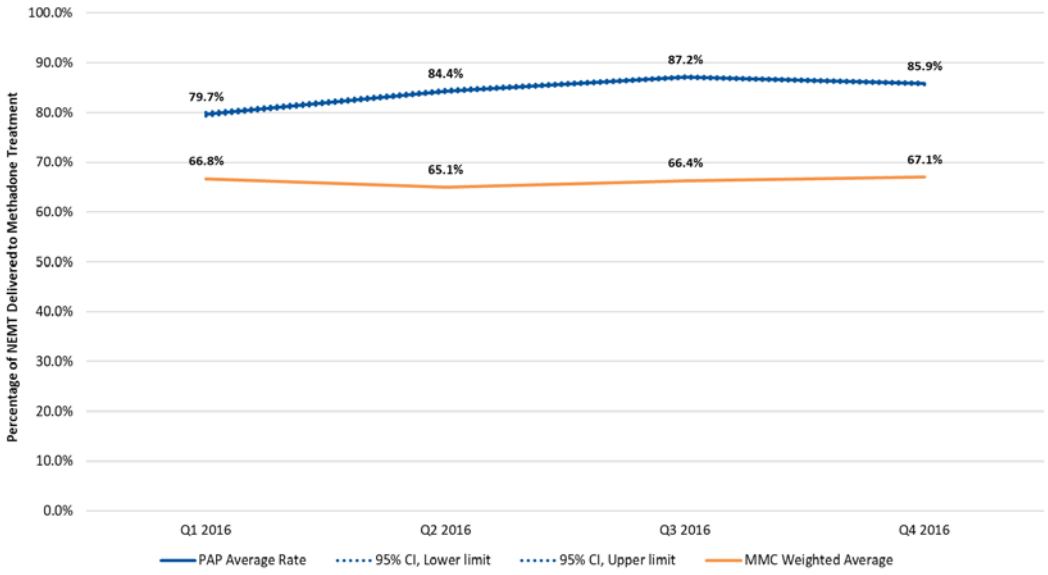
The percentage of NEMT used to travel to the dentist was about 1 percent or less for both PAP and MMC plans, as shown in Figure 4-35. Again, the MMC weighted average rate was higher than the 95 percent confidence intervals for the PAP plans, indicating higher use of NEMT for dental visits by MMC members.

Figure 4-35: Percentage of NEMT Delivered to Dentist



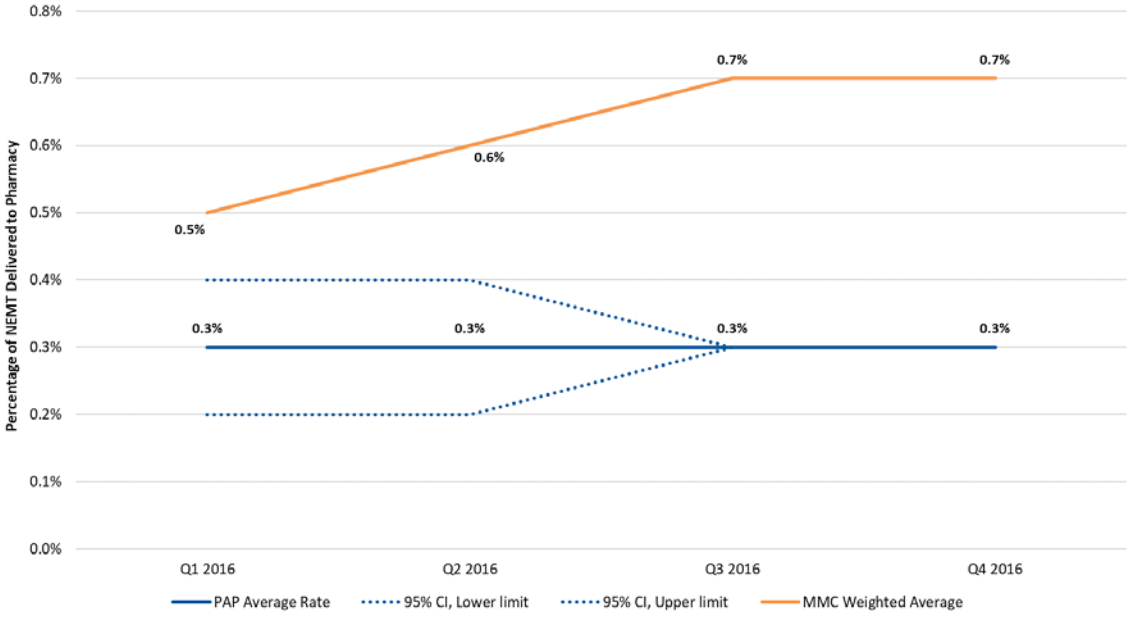
As stated previously, the largest share of NEMT transportation for both PAP and MMC plans was for methadone treatment, as shown in Figure 4-36. The entire 95 percent confidence interval for the PAP plans was above the average rates for the MMCs for all quarters with results, a result that is likely significant. This is the only type of provider for which PAP members received more NEMT than MMC members.

Figure 4-36: Transportation for Methadone Treatment



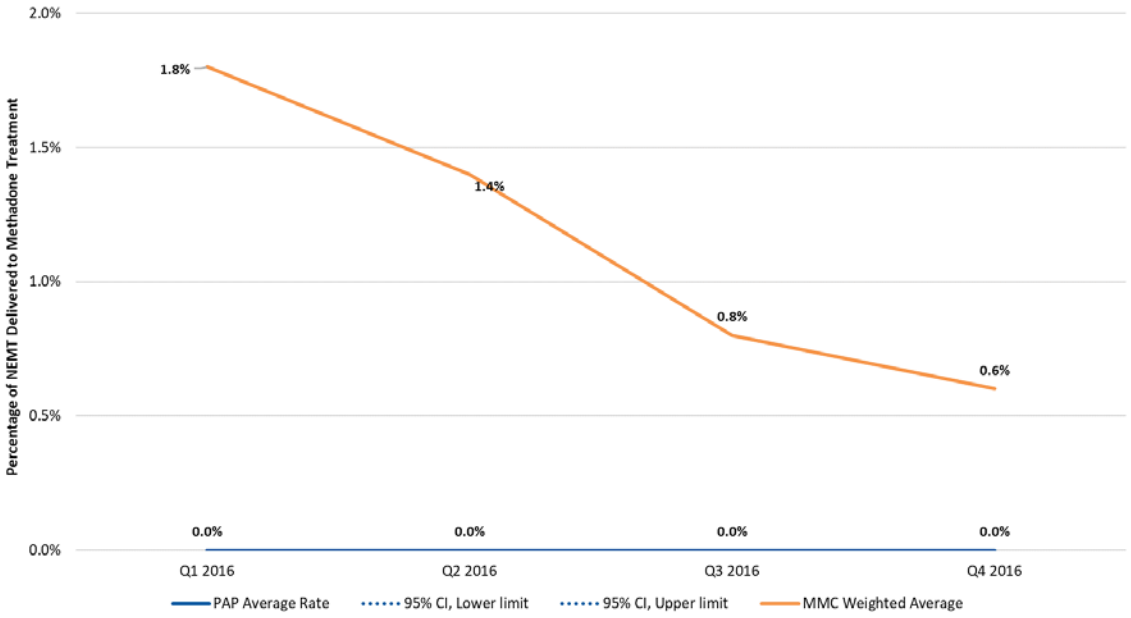
Less than 1 percent of NEMT was delivered to provide transportation to a pharmacy, and the percentage of requests by MMC members exceeded the 95 percent confidence interval for PAP members, as shown in Figure 4-37.

Figure 4-37: Transportation to Pharmacy



There was also very little use of NEMT for transportation to "other" providers, as shown in Figure 4-38, with the weighted average for MMC members exceeding the 95 percent confidence interval range for PAP members.

Figure 4-38: Transportation for Other Providers



Summary and Conclusions for Hypothesis 12

Both PAP and MMC plans provided excellent NEMT to members, authorizing more than 99 percent of all requests in 2016. Most NEMT was used for methadone treatment, with substantial shares going for individual medical and mental health providers. Visual inspection of the measure results demonstrated that NEMT was used significantly more frequently by PAP members for methadone treatment, combined with significantly lower percentages for travel to most other types of services when compared to MMC members. The only exception was for non-emergency travel to the hospital, for which the percentages used by PAP and MMC members were indistinguishable (Table 4-68).

Table 4-68: Hypothesis 12 Results

Measure ID	Measure Description	Supports Hypothesis 12
12-1	Percentage of NEMT requests authorized, of those requested during the measure data period, for the eligible population	Yes
12-2	Percentage of NEMT requests authorized, of those requested during the measure data period, by type of medical service (i.e., hospital, medical provider, mental health provider, dentist, pharmacy, methadone treatment, other), for the eligible population	Yes

Hypothesis 13

Premium assistance beneficiaries will have equal or better access to care, including behavioral health services.

Four measures were used to examine Hypothesis 13:

- The percentage of discharges for members 19 years through 64 years who were hospitalized for treatment of selected mental illness diagnoses and who had an outpatient visit, an intensive outpatient encounter, or partial hospitalization with a mental health practitioner within 7 days of discharge (Measure 13-1).
- The percentage of adolescent and adult members with a new episode of alcohol and other drug (AOD) abuse or dependence who (1) received initiation of AOD treatment within 14 days of the diagnosis, and (2) initiated treatment and had two or more additional AOD services or medication assisted treatment (MAT) within 34 days of initiation (Measure 13-2).
- The number and percentage of members receiving mental health outpatient services during the measurement year (Measure 13-3).
- The number and percentage of members with and AOD claim who received chemical dependency outpatient services during the measurement year (Measure 13-4).

Results of Measure 13-1

HSAG employed a difference-in-differences model for Measure 13-1 (Follow-Up After Hospitalization for Mental Illness [7-Day Follow-Up]) to estimate the effect of the implementation of the PAP on the percentage of discharges for members ages 19–64 who were hospitalized for treatment of selected mental illness diagnoses and who had an outpatient visit, an intensive outpatient encounter, or partial hospitalization with a mental health practitioner within seven days of discharge (Table 4-69).

A smaller percentage of PAP members had a follow-up visit within seven days after hospitalization for a mental illness than the non-PAP comparison group. During the baseline period, the regression-adjusted follow-up rates for the PAP group was 28.74 percent, while this rate was 55.05 percent for the non-PAP comparison group.

During the evaluation period, 29.39 percent of those in the PAP group received a follow-up treatment while 66.52 percent in the non-PAP comparison group received a follow-up treatment.

Rates for PAP members increased by 0.65 percentage points between the baseline and evaluation period, while rates for the non-PAP comparison group increased by 11.47 percentage points. The estimated impact of the PAP led to a reduction of 10.83 percentage points in the rate for seven-day follow-up after hospitalization for mental illness.

Table 4-69: Results for Measure 13-1: Follow-Up After Hospitalization for Mental Illness (7-Day Follow-Up)

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact
	Baseline	Evaluation		(Standard Error)
Non-PAP	55.05%	66.52%	11.47%	-10.83% (14.47%)
	N=51	*N=60*		
PAP	28.74%	29.39%	0.65%	
	N=30	*N=55*		

Source: PAP encounter data, EDI transaction encounters, MMIS FFS claims data, and hospital discharge data.

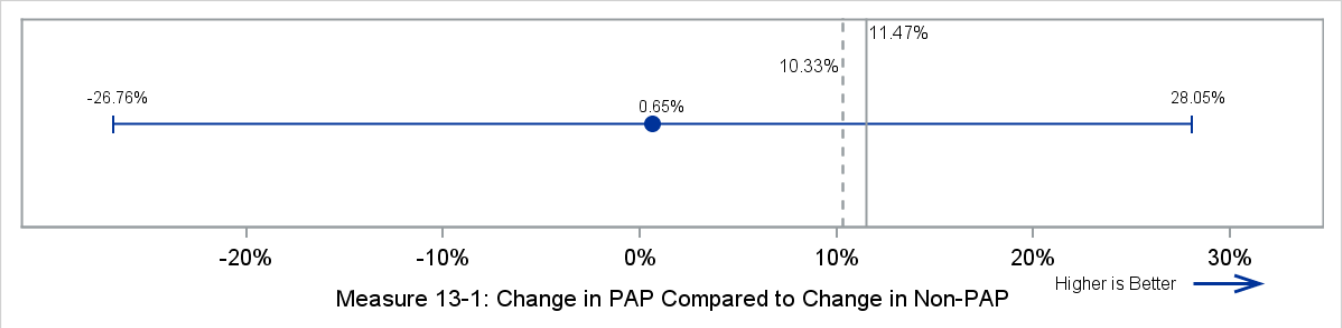
To test statistically whether the PAP had rates that were greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 10.33 percent (i.e., noninferiority threshold: 11.47 × (1-0.1)) to 11.47 percent (i.e., the change in the non-PAP comparison group). Table 4-70 presents the results of the noninferiority testing.

Table 4-70: Results for Measure 13-1: Follow-Up After Hospitalization for Mental Illness (7-Day Follow-Up)

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
0.65% (-26.76% to 28.05%)	10.33%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-39. Therefore, results from this measure are inconclusive and neither support nor fail to support Hypothesis 13.

Figure 4-39: Noninferiority Confidence Interval for Measure 13-1: Follow-Up After Hospitalization for Mental Illness (7-Day Follow-Up)



Results of Measure 13-2

HSAG employed a difference-in-differences model for Measure 13-2 (Initiation and Engagement of AOD Dependence Treatment [IET])to estimate the effect of the implementation of the PAP on the percentage of members with a new episode of AOD abuse or dependence for whom (1) treatment was initiated through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, and telehealth or MAT within 14 days of the diagnosis; and (2) treatment was initiated and who had two or more additional AOD services or MAT within 34 days of the initiation visit.

Initiation of Treatment

PAP members had slightly lower rates of initiation of AOD treatment in the baseline period than the non-PAP comparison group, but higher rates in the evaluation period (Table 4-71). During the baseline period, 30.21 percent of PAP members had AOD treatment initiated compared to 33.69 percent of the non-PAP comparison group. In the evaluation period, 32.67 percent of PAP members had AOD treatment initiated compared to 30.39 percent of those in the non-PAP comparison group.

Rates for PAP members increased by 2.46 percentage points between the baseline and evaluation period, while rates for the non-PAP comparison group decreased by 3.29 percentage points. The estimated impact of the PAP led to an increase of 5.75 percentage points in the rate of initiating AOD treatment.

Table 4-71: Results for Measure 13-2a: Initiation of Alcohol and Other Drug Abuse or Dependence Treatment

Regression Adjusted Rates					
Measure Indicator	Group	Time Period		Change	PAP Impact (Standard Error)
		Baseline	Evaluation		
Initiation	Non-PAP	33.69%	30.39%	-3.29%	5.75% (6.23%)
		N=155	*N=328*		
	PAP	30.21%	32.67%	2.46%	
		N=150	*N=515*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data

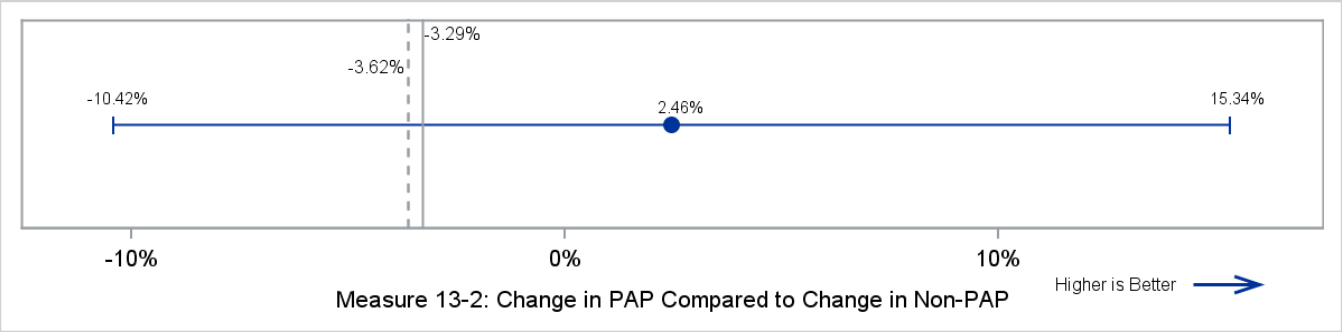
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from -3.62 percent (i.e., noninferiority threshold: -3.29 × (1-0.1)) to -3.29 percent (i.e., the change in non-PAP comparison group). Table 4-72 presents the results of the noninferiority testing.

Table 4-72: Results for Measure 13-2a: Initiation of Alcohol and Other Drug Abuse or Dependence Treatment

Noninferiority Testing Results			
Measure Indicator	PAP Change (95 Percent CI)	Noninferiority Threshold	Result
Initiation	2.46% (-10.42% to 15.34%)	-3.62%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-40. Therefore, results from this measure indicator are inconclusive and neither support nor fail to support Hypothesis 13.

Figure 4-40: Noninferiority Confidence Interval for Measure 13-2: Initiation of Alcohol and Other Drug Abuse or Dependence Treatment



Engagement of Treatment

PAP members had higher rates of engagement of AOD treatment than those in the non-PAP comparison group in both the baseline and evaluation period (Table 4-73). During the baseline period, 15.70 percent of PAP members engaged in AOD treatment compared to 15.17 percent of non-PAP comparison group members. During the evaluation period, 13.56 percent of PAP members engaged in treatment while only 11.89 percent of non-PAP members did so.

Rates for PAP members decreased by 2.15 percentage points while rates for the non-PAP comparison group decreased by 3.28 percentage points. The estimated impact of the PAP led to an increase of 1.13 percentage points in the rate of engaging in AOD treatment.

Table 4-73: Results for Measure 13-2b: Engagement of Alcohol and Other Drug Abuse or Dependence Treatment

Regression Adjusted Rates					
Measure Indicator	Group	Time Period		Change	PAP Impact (Standard Error)
		Baseline	Evaluation		
Engagement	Non-PAP	15.17%	11.89%	-3.28%	1.13% (4.78%)
		N=155	*N=328*		
	PAP	15.70%	13.56%	-2.15%	
		N=150	*N=515*		

Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data

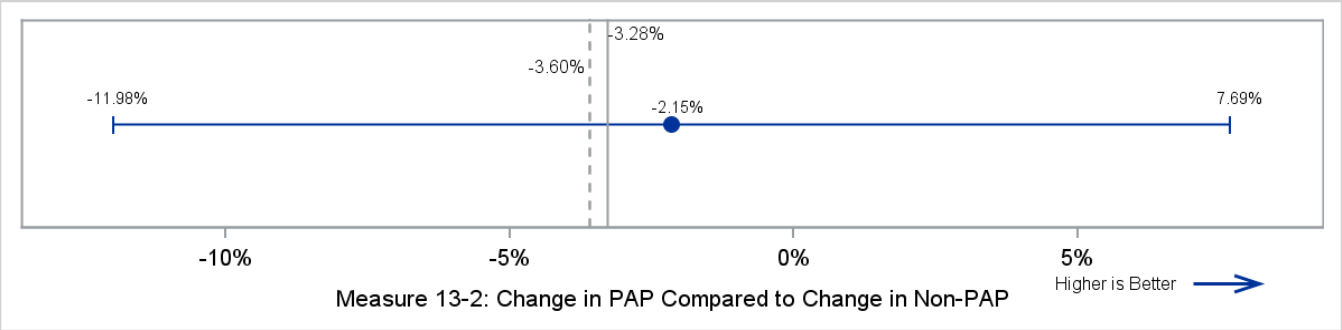
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from -3.60 percent (i.e., noninferiority threshold: -3.28 × (1-0.1)) to -3.28 percent (i.e., the change in the non-PAP comparison group). Table 4-74 presents the results of the noninferiority testing.

Table 4-74: Results for Measure 13-2b: Engagement of Alcohol and Other Drug Abuse or Dependence Treatment

Noninferiority Testing Results			
Measure Indicator	PAP Change (95 Percent CI)	Noninferiority Threshold	Result
Engagement	-2.15% (-11.98% to 7.69%)	-3.60%	Inconclusive

The confidence interval around the change in PAP used in the noninferiority test encompassed both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-41. Therefore, results from this measure indicator are inconclusive and neither support nor fail to support Hypothesis 13.

Figure 4-41: Noninferiority Confidence Interval for Measure 13-2: Initiation of Alcohol and Other Drug Abuse or Dependence Treatment



Results of Measure 13-3

HSAG employed a difference-in-differences model for Measure 13-3 (Mental Health Outpatient Services Utilization) to estimate the effect of implementation of the PAP on the number and percentage of members receiving mental health outpatient services during the measurement year (Table 4-75).

PAP members had lower rates of mental health utilization than those in the non-PAP comparison group in both the baseline and evaluation period (Table 4-75). During the baseline period, 14.50 percent of PAP members used mental health services while 23.36 percent of members in the non-PAP comparison group used mental health services. During the evaluation period, this percentage declined by 2.44 percentage points for PAP members, to 12.06 percent, while increasing by 1.68 percentage points for the non-PAP comparison group to, 25.04 percent.

The estimated impact of the PAP led to a decline of 4.12 percentage points in the rate of mental health utilization.

Table 4-75: Results for Measure 13-3: Mental Health Outpatient Services Utilization

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	23.36%	25.04%	1.68%	-4.12% (0.22%)
	N=97,379	*N=78,145*		
PAP	14.50%	12.06%	-2.44%	
	N=83,573	*N=97,082*		

Note: Reported sample sizes are member months.
Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data

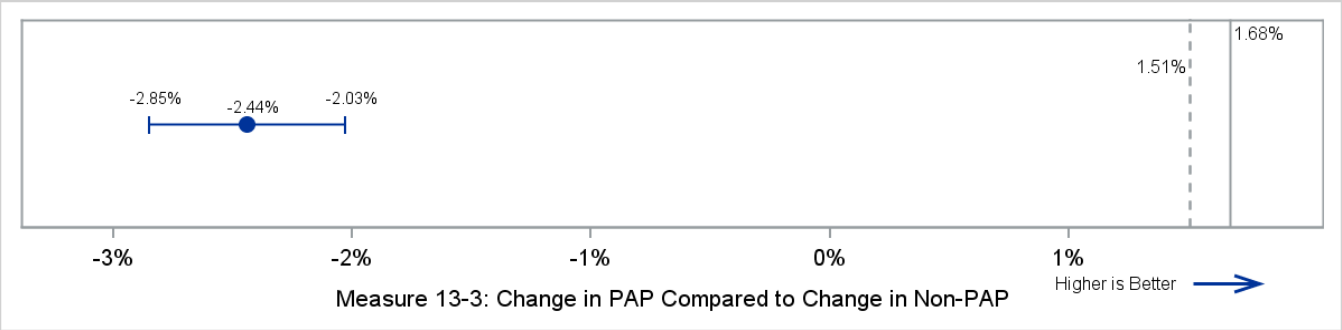
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 1.51 percent (i.e., noninferiority threshold: 1.68 × (1-0.1)) to 1.68 percent (i.e., the change in the non-PAP comparison group). Table 4-76 presents the results of the noninferiority testing.

Table 4-76: Results for Measure 13-3: Mental Health Outpatient Services Utilization

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
-2.44% (-2.85% to -2.03%)	1.51%	PAP Inferior

The confidence interval around the change in PAP used in the noninferiority test is below both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-42. Therefore, results from this measure do not support Hypothesis 13.

Figure 4-42: Noninferiority Confidence Interval for Measure 13-3: Mental Health Outpatient Services Utilization



Results of Measure 13-4

HSAG employed a difference-in-differences model for Measure 13-4 (Chemical Dependency Outpatient Services Utilization) to estimate the number and percentage of members with an AOD claim who received chemical dependency outpatient services or medication-assisted treatment during the measurement year (Table 4-77).

Table 4-77: Results for Measure 13-4: Chemical Dependency Outpatient Services Utilization

Regression Adjusted Rates				
Group	Time Period		Change	PAP Impact (Standard Error)
	Baseline	Evaluation		
Non-PAP	4.74%	7.36%	2.62%	-2.09% (0.14%)
	N=97,379	*N=78,145*		
PAP	6.75%	7.29%	0.54%	
	N=83,573	*N=97,082*		

Note: Reported sample sizes are member months.
Source: PAP encounter data, EDI transaction encounters, and MMIS FFS claims data.

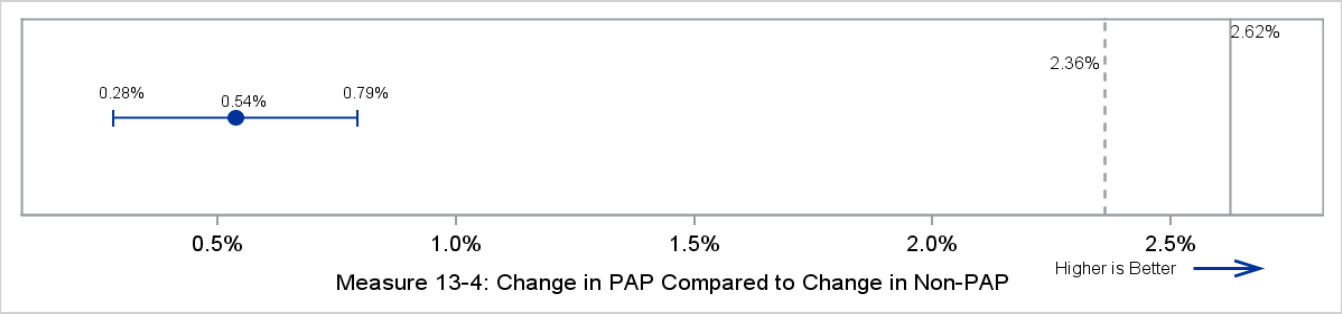
To test statistically whether the PAP had rates greater than or equal to the non-PAP comparison group, HSAG conducted a noninferiority test using 10 percent of the change in the non-PAP comparison group to calculate an equivalence interval. The equivalence interval ranged from 2.36 percent (i.e., noninferiority threshold: $2.62 \times (1 - 0.10)$) to 2.62 percent (i.e., the change in non-PAP comparison group). Table 4-78 presents the results of the noninferiority testing.

Table 4-78: Results for Measure 13-4: Chemical Dependency Outpatient Services Utilization

Noninferiority Testing Results		
PAP Change (95 Percent CI)	Noninferiority Threshold	Result
0.54% (0.28% to 0.79%)	2.36%	PAP Inferior

The confidence interval around the change in PAP used in the noninferiority test is below both the change in the non-PAP comparison group and the noninferiority threshold, as illustrated in Figure 4-43. Therefore, results from this measure do not support Hypothesis 13.

Figure 4-43: Noninferiority Confidence Interval for Measure 13-4: Chemical Dependency Outpatient Services Utilization



Summary and Conclusions for Hypothesis 13

Of the measures associated with Hypothesis 13, half are inconclusive and the others do not support the hypothesis that premium assistance beneficiaries will have equal or better access to care, including behavioral health services (Table 4-79).

Measure 13-1, Follow-Up After Hospitalization for Mental Illness, found that PAP members had a much lower rate of follow-up than the non-PAP comparison group in both time periods; however, statistical noninferiority test results were inconclusive.

The results for Measure 13-2a showed an increase in rates beyond what would be expected in the absence of the PAP in the percentage of members for whom AOD treatment was initiated. Statistical noninferiority testing result, however, were inconclusive. Similarly, results for Measure 13-2b showed a slight increase in rates beyond what would be expected in the absence of PAP in the percentage of members engaged in AOD treatment, but statistical noninferiority test results were inconclusive. As a result, neither part of Measure 13-2 provides analytical evidence supporting or refuting Hypothesis 13.

The results for Measure 13-3 showed that the utilization of mental health outpatient services decreased beyond what would be expected in the absence of the PAP. Statistical noninferiority testing confirmed that the PAP performance was inferior to that of the non-PAP comparison group, indicating that this measure did not support Hypothesis 13.

The results for Measure 13-4 showed a decrease beyond what would be expected in the absence of the PAP in the percentage of members utilizing chemical dependency services. The noninferiority test result confirmed that the PAP performance was inferior to that of the non-PAP comparison group, indicating that the results for this measure do not support Hypothesis 13.

Two measures do not support Hypothesis 13 and two measures are inconclusive. The analytical evidence is inconclusive and neither measure supports nor refutes the hypothesis that premium assistance beneficiaries will have equal or better access to care, including behavioral health services.

Table 4-79: Hypothesis 13 Results

Measure ID	Measure Description	Supports Hypothesis 13
13-1	Follow-Up After Hospitalization for Mental Illness	Inconclusive
13-2a	Initiation of Alcohol and Other Drug Abuse or Dependence Treatment	Inconclusive
13-2b	Engagement of Alcohol and Other Drug Abuse or Dependence Treatment	Inconclusive
13-3	Mental Health Outpatient Services Utilization	No
13-4	Chemical Dependency Outpatient Services Utilization	No

Summary and Conclusion for Waiver Goal: Uniform Provider Access

Hypotheses 8 through 13 are related to the Uniform Provider Access waiver goal. Five of the six hypotheses are inconclusive and neither supported nor refuted the Uniform Provider Access waiver goal.

One of the four calculated measures does not support Hypothesis 8; two measures are inconclusive and the remaining one measure supports the hypothesis. For Hypothesis 9, two measures did not support the hypothesis while the remaining six measures indicated mixed or inconclusive results. The results of the analysis of both measures associated with Hypothesis 10 were inconclusive. Similar inconclusive results were found for the measures associated with Hypothesis 11. Hypothesis 12 was supported by the available data. The results for half of the measures associated with Hypothesis 13 did not support the hypothesis and the results for the remaining two measures were inconclusive.

Based on the preponderance of inconclusive results for the associated measures and hypotheses, the analyses do not provide sufficient evidence to determine whether or not the Uniform Provider Access waiver goal was met. Since the evaluation did not include access to utilization data for the general population, specifically, non-Medicaid members, it was not possible to evaluate the access to care for PAP members compared to the general population.

Waiver Goal: Cost Neutrality

The premium assistance program will be cost neutral with respect to continuation of the previous New Hampshire Medicaid expansion program.

This section of the report documents the analysis and review of specific measures identified by the DHHS to determine the cost neutrality aspect of the PAP.

DHHS believed that the premium assistance approach would increase QHP enrollment and result in greater economies of scale and competition among QHPs. This, in turn, could result in coverage that achieves cost reductions in comparison to the continuation of the previous New Hampshire Medicaid expansion program (i.e., the Bridge program).

Please note that the term "cost neutrality" used in this report does not refer to the formal Budget Neutrality test required under the Section 1115 Waiver Demonstration program.

The CMS approved budget neutrality target for 2016 is $701.53 per member per month (PMPM). The actual PAP cost under both approaches described in the rest of this report is below the $701.53 PMPM target.

The cost neutrality portion of the evaluation examines costs for three components: total cost, medical cost, and administrative cost. The total cost is equal to the sum of the medical and administrative cost components.[4-5]

Hypothesis 14

The cost for covering premium assistance beneficiaries will be comparable to what the costs would have been for covering the same expansion group in New Hampshire Medicaid in accordance with Special Terms and Conditions (STC) #69 on determining cost-effectiveness and other requirements in the evaluation design as approved by CMS.

The hypothesis essentially states that the PAP will be cost neutral with respect to the continuation of the previous New Hampshire Medicaid expansion program (i.e., the Bridge program). To validate this research hypothesis, Milliman examined the relative costs in a comparative format between the new beneficiary program (i.e., the study group) and the continuation of the Bridge program (i.e., the comparison group). For each of the measures, the comparison group comprises the newly eligible adult members of the Bridge program, which was in effect from September 2014 – December 2015. The Bridge program ended on January 1, 2016, at which time most members enrolled in PAP coverage and a limited number remained in the New Hampshire Health Protection Program (NHHPP) as medically frail or transitional members. The comparison group excludes the medically frail members who were not eligible to enroll in PAP coverage.

The estimated costs of a hypothetically extended Bridge program were based on the CY 2015 per capita monthly paid cost for QHP eligible enrollees only and for all covered benefits. The CY 2015 costs were adjusted to account for claims incurred but not reported, utilization and unit cost trends between the base experience period and the projection period and changes in mental health services funding mandated by the Community Mental Health Agreement (CMHA).[4-6]

Three measures were used to examine Hypothesis 14:

- Annual total costs divided by total number of member months, calculated separately for the study and comparison groups. Calculated as the sum of the medical cost component (Measure 7-2) and the administrative cost component (Measure 3-4) (Measure 14-1).
- Bridge to Actual PAP costs compared to estimated costs if the Bridge program were continued (Measure 14-2).
- Annual administrative costs divided by total number of member months, calculated separately for the study and comparison groups (Measure 14-3).

Results of Measure 14-1

Measure 14-1 (Total Costs by Group) compares the total annual total costs PMPM between the PAP and the hypothetical Bridge program capitation rate. Measure 14-1 is calculated as the sum of the medical cost component (Measure 14-2) and the administrative cost component (Measure 14-3).

Milliman used a cost neutrality factor to confirm the hypothesis. The cost neutrality factor is defined as the ratio of the total cost PMPM for the PAP to the total cost for the hypothetical Bridge program capitation rate. A ratio over 1.000 signifies that the PAP may not be cost neutral, refuting the hypothesis. Similarly, a ratio below 1.000 signifies that the PAP appears to be cost neutral, validating the hypothesis. It is important to note that other factors

[4-5] Details of the development of the cost estimates for cost neutrality can be found in Appendix D.

[4-6] Details of the development of the cost estimates for this comparison group can be found in Appendix D.

not measured here, such as quality and health outcomes, could impact the determination whether or not the PAP is cost effective from a value-based purchasing perspective.

Milliman included results for two approaches to compare the relative costs of the program. Please refer to the sections below on Measures 14-2 and 14-3 for a more detailed description of the methodology used to develop the medical cost and administrative components used in this comparison.

Approach #1 Results

For this approach, Milliman compared the hypothetical Bridge program capitation rate to the average PAP carrier premiums, CSR payment, deductible funding, and the cost of wraparound services for the PAP population.

Table 4-80 below shows a summary of the comparison.

Table 4-80: Comparison of Total Cost PMPM—Approach #1

Cost Components	PAP Actual Costs	Hypothetical Bridge Program Capitation Rate
Medical Cost	$487.14	$451.35
Administrative Cost, Margin, Taxes, and Fees	$92.14	$65.11
Total Annual Cost PMPM	**$579.28**	**$516.46**
Cost Neutrality Factor	1.122	

The total cost paid by DHHS for the PAP population is about 12 percent higher than the estimated cost of a comparable population enrolled in the Bridge program. This result suggests that the PAP may not be cost neutral under this approach. As shown in Table 4-81, the cost difference is due to both higher medical and administrative expenses under the PAP than the Bridge program. The differences in administrative expenses are discussed in more detail in Measure 14-3.

Approach #2 Results

For this approach, Milliman compared the hypothetical Bridge program capitation rate to the carriers' actual medical cost of covering the PAP population in the exchange (which already reflects reduced cost sharing and deductible funding) and added the cost of wraparound services.

Table 4-81 below shows a summary of the comparison.

Table 4-81: Comparison of Total Cost PMPM—Approach #2

Cost Components	PAP Experience Based Cost	Hypothetical Bridge Program Capitation Rate
Medical Cost	$523.81	$451.35
Administrative Cost, Margin, Taxes, and Fees	99.08	65.11
Total Annual Cost PMPM	**$622.89**	**$516.46**
Cost Neutrality Factor	1.206	

The total cost for the PAP population, based on actual medical claims paid by the carriers, is about 21 percent higher than a comparable population enrolled in the Bridge program. This result suggests that the PAP may not be cost neutral under this approach. However, this comparison does not represent a true measure of cost neutrality since actual PAP medical claims do not represent actual DHHS expenses. Approach #1 more accurately measures DHHS program expenses.

Results of Measure 14-2

Measure 14-2 (Medical Costs by Group) compares the medical costs PMPM between the PAP program and the hypothetical Bridge program capitation rate.

Milliman included results for two approaches to compare the relative costs of the program and used a cost neutrality factor to confirm the hypothesis.

Approach #1 Results

For this approach, Milliman compared the hypothetical Bridge program capitation rate to the average PAP carrier premiums, CSR payment, deductible funding, and the cost of wraparound services for the PAP population.

Table 4-82 below shows a summary of the comparison.

Table 4-82: Comparison of Medical Cost PMPM—Approach #1

Cost Components	PAP Medical Cost	Hypothetical Bridge Program Medical Cost
Medical Cost	$487.14	$451.35
Cost Neutrality Factor	1.079	

The medical cost component of the PAP population is 7.9 percent higher than the estimated medical cost component of the hypothetical Bridge program capitation rate.

Approach #2 Results

For this approach, Milliman compared the hypothetical Bridge program capitation rate to the actual medical claims experience for the PAP population (which already reflects reduced cost sharing and deductible funding) and added the cost of wraparound services.

Table 4-83 below shows a summary of the comparison.

Table 4-83: Comparison of Medical Cost PMPM—Approach #2

Cost Components	PAP Experience Based Medical Cost	Hypothetical Bridge Program Medical Cost
Medical Cost	$523.81	$451.35
Cost Neutrality Factor	1.161	

The information in the table above shows that the actual medical cost of the PAP population is about 16 percent higher than the estimated medical cost component for the hypothetical Bridge program capitation rate. Milliman expects that some of this discrepancy is due to provider reimbursement differences. It is common for insurance carriers to pay providers at rates higher than Medicaid and Medicare reimbursement levels. Since the NHHPP Bridge program fee schedule was loosely based on prevailing Medicare fees, there could still be a significant difference in reimbursement level between the two delivery systems.

As stated above, this comparison does not represent a true measure of cost neutrality since the actual PAP medical costs do not represent actual DHHS expenses.

Results of Measure 14-3

Measure 14-3 (Members' Administrative Cost) compares the administrative costs PMPM between the PAP program and the hypothetical Bridge program capitation rate.

The administrative costs in the PAP rate filings are significantly higher than the administrative costs from the hypothetical CY 2016 Bridge program due to additional profit and fees that are not attributable to the Bridge program.

The administrative costs in the PAP rate filings are significantly higher than the administrative cost from the hypothetical CY 2016 Bridge program due to additional profit and fees that are not attributable to the Bridge program.

Table 4-84 below compares the administrative costs for the study and comparison groups on a PMPM and percent of premium basis. The administrative costs in the PAP rate filings are significantly higher than the administrative cost from the hypothetical CY 2016 Bridge program due to additional profit and fees that are not attributable to the Bridge program.

Table 4-84: Comparison of Administrative Costs PMPM

	PMPM	Percent of Total Program Costs
Average PAP Administrative Expenses from Rate Filings	$99.08	15.9%
Estimated Bridge Program Administrative Expenses	$65.11	12.6%

The administrative expense allowance included in the PAP premium is significantly higher than the allowance included in the hypothetical Bridge program capitation rates. As discussed above, this difference is a significant driver behind the total costs being higher in the PAP.

Table 4-85 below shows a comparison of the various administrative expense components.

Table 4-85: Summary of CY 2016 Administrative Expenses from Rate Filings as a Percent of Total Program Cost

Administrative Cost Components	Premium Assistance Program	Hypothetical Bridge Program
General Administrative Expenses	7.6%	7.1%
Profit and Risk Margin	1.8%	1.9%
Taxes and Fees	6.5%	3.5%
Total	**15.9%**	**12.6%**

The greatest difference in administrative expenses is due to taxes and fees. Unfortunately, most rate filings did not include enough information to quantify each of the fees individually.

Summary and Conclusions for Hypothesis 14

Based on the above information and the two approaches used in this analysis, the hypothesis that the cost for covering premium assistance beneficiaries will be comparable to what the costs would have been for covering the same expansion group in New Hampshire Medicaid has been refuted. The difference between the provider reimbursement levels and administrative costs in the PAP rate and the hypothetical CY 2016 Bridge program rate appear to be the largest drivers of this conclusion.

Table 4-86 shows a summary of the various cost neutrality measures.

Table 4-86: Summary of Cost Neutrality Measures

Cost Components	PAP	Hypothetical Bridge Program Capitation Rate	Cost Neutrality Factor
Approach #1			
Medical Cost	$487.14	$451.35	1.079
Administrative Cost, Margin, Taxes, and Fees	$92.14	$65.11	1.415
Total Annual Cost PMPM	**$579.28**	**$516.46**	**1.122**
Approach #2			
Medical Cost	$523.81	$451.35	1.161
Administrative Cost, Margin, Taxes, and Fees	$99.08	$65.11	1.522
Total Annual Cost PMPM	**$622.89**	**$516.46**	**1.206**

Summary and Conclusion for Waiver Goal: Cost Neutrality

Based on this analysis, it appears that the PAP is not cost neutral to the state. Based on the analysis in this report, the program could have saved up to $62.82 PMPM or roughly $30.3 million in CY 2016 if the Medicaid expansion had remained in the Bridge program at the hypothetical Bridge program rates calculated in this report. This estimate includes both the federal and state share of the expenditures. Note that the hypothetical Bridge program rates calculated in this report are based on CY 2015 encounter data that would not have been available to set rates for CY 2016, therefore the actual rates would have been different than the hypothetical rates.

The difference in costs can be attributed to higher reimbursement level on the Marketplace as well as significantly higher administrative costs for PAP carriers.

Please note that the term "cost neutrality" used in this report does not refer to the formal Budget Neutrality test required under the Section 1115 Waiver Demonstration program.

The CMS approved budget neutrality target for 2016 is $701.53 per member per month (PMPM). The actual PAP cost under both approaches described in the rest of this report is below the $701.53 PMPM target.

Self-Declared Medically Frail

People who are eligible for the PAP can opt of the PAP by declaring themselves to be medically frail. These people are then enrolled in a non-PAP Medicaid MCO. Because this is nevertheless a Medicaid expansion population, it is important to understand the differences between the self-declared medically frail (SDMF) population and the non-self-declared medically frail population (i.e., the PAP population). As illustrated in Figure 4-44 and Table 4-87, throughout 2016 the number of New Hampshire Medicaid expansion members self-declaring as medically frail steadily increased from 4,208 in January 2016 to 6,204 by December 2016. Those enrolled in the PAP also increased throughout 2016, but the SDMF group grew as a percentage of the PAP population throughout that time.

Figure 4-44: Self-Declared Medically Frail and PAP Enrollment in 2016

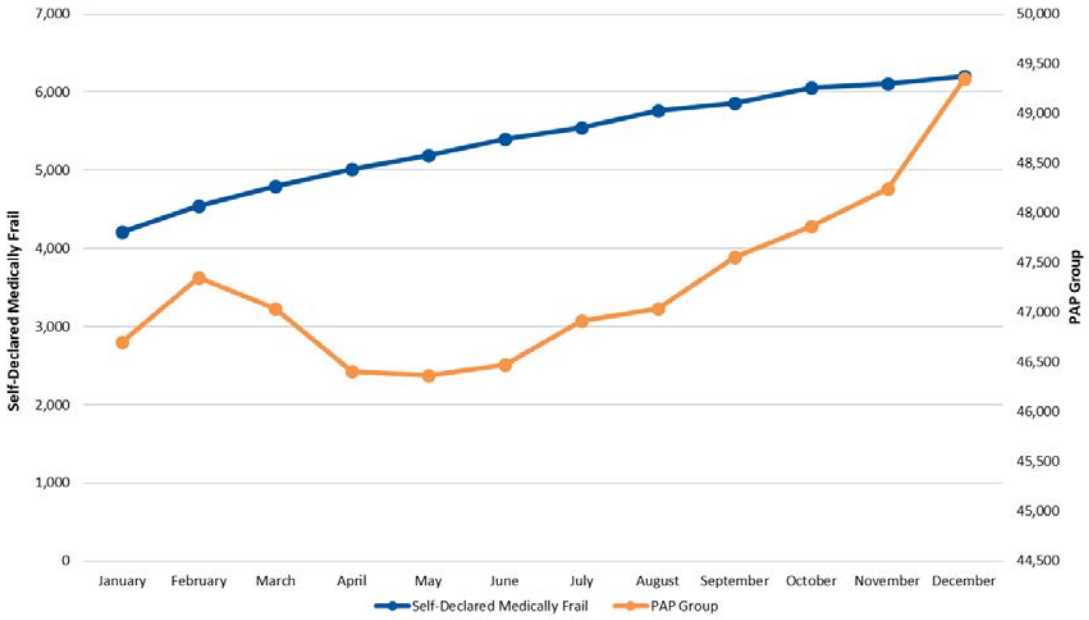


Table 4-87: Enrollment of Self-Declared Medically Frail in 2016

Month	SDMF Count	PAP Count	Percent of PAP Enrollment
January	4,208	46,701	9.01%
February	4,543	47,353	9.59%
March	4,797	47,035	10.20%
April	5,011	46,410	10.80%
May	5,191	46,370	11.19%
June	5,404	46,471	11.63%
July	5,551	46,918	11.83%
August	5,769	47,039	12.26%
September	5,864	47,555	12.33%
October	6,055	47,866	12.65%
November	6,106	48,243	12.66%
December	6,204	49,351	12.57%

In terms of member demographic composition, as shown in Table 4-88, those self-declaring as medically frail were generally older by an average of nearly four years and were more likely to be male (48.17 percent female for the SDMF group compared to 54.08 percent female for the PAP group). Additionally, there were small but statistically significant differences in county of residence and race. For example, 4.87 percent of PAP members resided in Carroll County, while only 4.26 percent of the SDMF members resided in Carroll County. While this difference is statistically significant, the difference of 0.61 percentage points may not be meaningful.

Table 4-88: Comparison of Self-Declared Medically Frail to Non-Self-Declared Medically Frail Group Demographics

Attribute	PAP Group	Medically Frail	Significantly Different
Age	36.89	40.52	*
Female	54.08%	48.17%	*
Ethnicity: Hispanic	4.37%	3.14%	*
County: Belknap	6.13%	5.71%	
County: Carroll	4.87%	4.26%	*
County: Cheshire	6.37%	4.57%	*
County: Coos	3.91%	2.63%	*
County: Grafton	6.72%	5.23%	*
County: Hillsborough	30.25%	34.16%	*
County: Merrimack	11.28%	12.15%	*
County: Rockingham	15.01%	15.86%	*
County: Strafford	9.45%	10.21%	*
County: Sullivan	4.08%	3.23%	*
County: Unknown	1.93%	2.01%	
Race: African American	2.36%	2.85%	*
Race: American Indian	0.49%	0.66%	*
Race: Multiple	1.10%	1.18%	
Race: Other	1.73%	1.65%	
Race: Native Hawaiian	0.08%	0.09%	
Race: Asian	1.70%	1.62%	
Race: White	83.75%	84.93%	*
Race: None	8.78%	7.02%	*

In contrast to the comparison of demographics, when evaluating the prevalence of health conditions the differences between the two groups are much more striking.[4-7] Table 4-89 shows a comparison of the prevalence of health conditions between the SDMF group and the PAP group. The SDMF group had a significantly higher prevalence across all health conditions. These differences are both statistically significant as well as clinically meaningful. For example, the prevalence of mental health disorders and substance abuse were more than two times that of the PAP—27.41 percent of the PAP group had a primary diagnosis related to mental health disorders, while more than half (56.89 percent) of the SDMF group was diagnosed with a mental health disorder. For substance abuse, 13.62 percent of the PAP group had a primary diagnosis for substance abuse while 33.80 percent of the SDMF group had such a diagnosis.

Large differences were found across the remaining health conditions—COPD among the SDMF group was more than double that of the PAP, at 11.92 percent compared to 5.24 percent. Similarly, the prevalence for both diabetes and hypertension among the SDMF group was approximately double that of the PAP. While having a low prevalence, the SDMF population was more than *four times* as likely as the PAP population to have had a

[4-7] Health conditions were identified using all available data during and before the evaluation period. Because it is possible for one group to show a higher prevalence than the other in the event one group has more enrollment, HSAG also evaluated health conditions using only claims during 2016. The results did not change the conclusions presented above. By incorporating additional claims, a more accurate summary of member composition is given.

stroke or congestive heart failure at 0.47 percent compared to 2.03 percent for stroke, and 0.53 percent compared to 2.36 percent for congestive heart failure.

Table 4-89: Comparison of Self-Declared Medically Frail to Non-Self-Declared Medically Frail Group Health Conditions

Attribute	PAP Group	Medically Frail	Significantly Different
Asthma	5.42%	9.16%	*
COPD	5.24%	11.92%	*
Cancer	6.12%	11.24%	*
Congestive Heart Failure	0.53%	2.36%	*
Coronary Artery Disease	1.11%	3.38%	*
Diabetes	6.13%	13.41%	*
Hypertension	7.75%	15.41%	*
Mental Health Disorders	27.41%	56.89%	*
Other Cardiac Conditions	7.47%	16.90%	*
Other Respiratory Conditions	19.07%	34.72%	*
Pregnancy	12.01%	6.78%	*
Stroke	0.47%	2.03%	*
Substance Abuse	13.62%	33.80%	*
N=	*62,842*	*8,973*	

While the member composition in terms of demographics is not particularly significant other than the SDMF generally being older by an average of four years and more likely to be male, it is clear there are significant differences between the SDMF and PAP groups across chronic health conditions, with the SDMF generally experiencing a greater prevalence of serious health conditions.

Discussion of Cost-Effectiveness

The PAP was found to be cost effective in the sense defined by the Cost-Effective Coverage waiver goal (see above). However, there remains the broader question of cost-effectiveness of the program in the more general sense of the term.

Based on the analysis conducted by Milliman, it appears that the PAP is not cost neutral to the State. Estimates suggest that DHHS could have saved up to $62.82 PMPM or roughly $30.3 million in CY 2016 if the Medicaid expansion population had remained in the Bridge program, including both the Federal and State shares of the expenditures.

Medical costs were about 8 percent higher than a hypothetical continuation of the Bridge program. The largest driver of the difference in costs stems from administrative costs that were approximately 42 percent higher than a hypothetical continuation of the Bridge program for carriers in the Marketplace.

In general, the analytical results of the healthcare processes and outcomes are largely inconclusive whether the PAP provides care equally as good as that provided under the Bridge program, controlling for changes caused by other factors. While there are advantages to having members obtain coverage through the Marketplace, it is not clear that the advantages outweigh the increased costs.

Discussion of Implementation Success, Challenges, and Lessons Learned

The analysis identified several successes of the PAP. There is evidence of continuity of same-plan eligibility leading to increased continuity and coordination of care. The PAP also has performed equally as well in reducing potentially treatable ED and hospital visits.

There are, however, challenges that have been identified through the analysis as well. It appears that plans may have struggled to manage the increased rates of mental health and chemical dependency issues among the Medicaid expansion population, which resulted in lower utilization of mental health and chemical dependency services. This could be improved by additional information and training for the PAP plans.

There also may be structural elements of the PAP that are blunting the price benefits of the competitive market. Since the State is willing to pay the premium posted on the Marketplace for PAP coverage, there is no incentive for PAP members to choose less expensive plans. In fact, is it likely that higher premiums are treated by members as signals of higher quality, which will attract more members to the higher-premium plans.

5. Policy Implications

Health Services Advisory Group, Inc. (HSAG) and its subcontractor, Milliman, conducted analyses of 43 total measures, each related to 1 of the 14 hypotheses. Each of the 14 hypotheses is related to one waiver goal. The following provides an interpretation of findings, impacts on health policy, and opportunities for other State Medicaid demonstrations.

Interpretation of Results

Each measure was evaluated to determine if it supported the associated hypothesis. The status of each hypothesis was subsequently used to determine if the related waiver goal was met. The criteria for determining if a hypothesis and/or waiver goal was met are presented below.

Waiver Goals

- A waiver goal is considered met if the analysis supports a majority of the related hypotheses.
- A waiver goal is considered "inconclusive" if the majority of the related hypotheses have inconclusive results or the waiver goal has an equal number of hypotheses with different results (e.g., a tie).

Hypotheses

- A hypothesis is considered supported by the analysis if the results for a majority of the associated measures support the hypothesis.
- A hypothesis is considered "inconclusive" if a majority of measures associated with the hypothesis have inconclusive results or if there are an equal number of measures with different results (e.g., a tie).

Table 5-1 provides a performance summary of the Premium Assistance Program (PAP) by measure, hypothesis, and waiver goal.

Table 5-1: Summary of Measure Support for PAP Hypotheses and Waiver Goals

Measure ID	Measure Description	Measure Supports Hypothesis	Hypothesis Supported by Analysis	Waiver Goal Met
Continuity of Coverage Waiver Goal: For individuals, whose incomes fluctuate, the Demonstration will permit continuity of health plans and provider networks.				**Inconclusive**
Hypothesis 1—Premium assistance beneficiaries will have equal or fewer gaps in insurance coverage than non-PAP members enrolled in Medicaid.			**Yes**	
1-1	Average Number of Gaps in Medicaid Coverage per 100 Members	Yes		
1-2	Percentage of Eligible Members with Gaps in Medicaid Coverage	Yes		
1-3	In the Last 12 Months, Were You Without Health Insurance at Any Time?	Inconclusive		
Hypothesis 2—Premium assistance beneficiaries will maintain continuous access to the same health plans, and will maintain continuous access to providers.			**Inconclusive**	
2-1	Percentage of Members with Continuous Access to the Same Health Plan	No		
2-2	In the Last Six Months, Did You Switch to a Different Health Care Plan?	Inconclusive		
2-4	Continuous Care During Marketplace Transition	Yes		

Measure ID	Measure Description	Measure Supports Hypothesis	Hypothesis Supported by Analysis	Waiver Goal Met
Plan Variety Waiver Goal: The Demonstration could also encourage Medicaid Care Management (MCM) carriers to offer Qualified Health Plans (QHPs) in the Marketplace in order to retain Medicaid market share, and could encourage QHP carriers to seek Medicaid Managed Care (MMC) contracts.				**Inconclusive**
Hypothesis 3—Premium assistance beneficiaries, including those who become eligible for Exchange Marketplace coverage, will have equal or fewer gaps in plan enrollment, equal or improved continuity of care, and resultant equal or lower administrative costs.			**Inconclusive**	
3-1	Average Number of Gaps in Enrollment in Any Managed Care Organization (MCO) or PAP QHP per 100 Enrollee Years	Yes		
3-2	Percentage of Eligible Members with Continuous Access to Any Medicaid MCO or PAP Health Plan	Inconclusive		
3-3	In the Last 6 Months, How Often Did Your Personal Doctor Seem Informed and Up-To-Date About the Care You Got From These [Other] Doctors or Other Health Providers?	Inconclusive		
3-4a	To What Extent Did Members Changing Plans Increase Your Administrative Costs?	Inconclusive		
3-4b	To What Extent Did Implementation of PAP Reduce the Number or Percentage of Members Changing Plans?	Yes		
Hypothesis 4—The Demonstration leads to an increase in plan variety by encouraging MMC carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and encouraging QHP carriers to seek MMC contracts.			**Inconclusive**	
4-1	Desk audit for the number of Medicaid Managed Care carriers offering QHPs in the Marketplace at the start of the waiver and annually thereafter for which dual participation could be an option	Yes		
4-2	Desk audit for the number of QHPs for PAP enrollees in the Marketplace offering Medicaid MCO Plans at the start of the waiver and annually thereafter	No		
Cost-Effective Coverage Waiver Goal: The premium assistance approach will increase QHP enrollment and may result in greater economies of scale and competition among QHPs.				**Yes**
Hypothesis 5—Premium assistance beneficiaries will have equal or lower non-emergent use of emergency room services.			**Inconclusive**	
5-1a	Ambulatory Care: Emergency Department (ED) Visits Potentially Treatable in Primary Care—Members 19–44 Years Old	Inconclusive		
5-1b	Ambulatory Care: ED Visits Potentially Treatable in Primary Care—Members 45–64 Years Old	Inconclusive		
Hypothesis 6—Premium assistance beneficiaries will have equal or lower rates of potentially preventable ED and hospital admissions.			**Yes**	
6-1	Inpatient Hospital Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members	Yes		
6-2	ED Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members	Yes		

Measure ID	Measure Description	Measure Supports Hypothesis	Hypothesis Supported by Analysis	Waiver Goal Met
Hypothesis 7—Implementation of the program will result in more Medicaid plans deciding to enter the New Hampshire health insurance marketplace.			**Yes**	
7-1	Whether implementation of the PAP influenced their decision to enter the New Hampshire Marketplace	Yes		
Uniform Provider Access Waiver Goal: The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.				**Inconclusive**
Hypothesis 8—Premium assistance beneficiaries will have equal or better access to care, including primary care and specialty physician networks and services.			**Inconclusive**	
8-1	Medication Management for People with Asthma	Inconclusive		
8-2	Timeliness of Prenatal Care	N/A		
8-3	Postpartum Care	N/A		
8-4	In the Last 6 Months, When You Needed Care Right Away, How Often Did You Get Care as Soon as You Needed?	Inconclusive		
8-5	In the Last 6 Months, How Often Did You Get an Appointment to See a Specialist as Soon as You Needed?	Yes		
8-6a	Adults' Access to Ambulatory Preventive Health Services—Members 20–44 Years Old	No		
8-6b	Adults' Access to Ambulatory Preventive Health Services—Members 45–64 Years Old	No		
Hypothesis 9—Premium assistance beneficiaries will have equal or better access to preventive care services.			**Inconclusive**	
9-1a	Adults' Access to Preventive Health Services—Members 20–44 Years Old	No		
9-1b	Adults' Access to Preventive Health Services—Members 45–64 Years Old	Inconclusive		
9-3	Have You Had Either a Flu Shot or Flu Spray in the Nose Since July 1, 2016?	Inconclusive		
9-4	Percentage of Patients 19 to 64 Years of Age with Type 1 or Type 2 Diabetes Who Had an Eye Exam (Retinal Exam) Performed	No		
9-5	Percentage of Patients 19 to 64 Years of Age with Type 1 or Type 2 Diabetes Who Had an HbA1c Test Performed	Inconclusive		
9-6	Percentage of Members 40 Years of Age and Older with a Diagnosis of Chronic Obstructive Pulmonary Disease (COPD), Who Received Appropriate Spirometry Testing to Confirm the Diagnosis or For the Management of COPD	No		
9-7	Percentage of Women 21–64 Years of Age Who Were Screened for Cervical Cancer	Inconclusive		
9-8	In the Last 6 Months, How Often Did You Get an Appointment for a Check-Up or Routine Care at a Doctor's Office or Clinic as Soon as You Needed?	Inconclusive		
9-9	Percentage of Members 19–64 with Schizophrenia or Bipolar Disorder, Who Were Dispensed an Antipsychotic Medication and Had a Diabetes Screening Test	Inconclusive		

Measure ID	Measure Description	Measure Supports Hypothesis	Hypothesis Supported by Analysis	Waiver Goal Met
Hypothesis 10—Premium assistance beneficiaries will report equal or better satisfaction in the care provided.			**Inconclusive**	
10-1	What Number Would You Use to Rate All Your Health Care in the Last 6 Months?	Inconclusive		
10-2	What Number Would You Use to Rate Your Health Plan?	Inconclusive		
Hypothesis 11—Premium assistance beneficiaries who are young adults eligible for Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefits will have at least as satisfactory and appropriate access to these benefits.			**Inconclusive**	
11-1	Percentage of Members Aged 19 and 20 Who Had At Least One Comprehensive Well-Care Visit	Inconclusive		
11-2	Percentage of Members Aged 19 and 20 Who Received At Least One Preventive Dental Visit	Inconclusive		
Hypothesis 12—Premium assistance beneficiaries will have appropriate access to non-emergency transportation (NEMT).			**Yes**	
12-1	Percentage of NEMT requests authorized, of those requested during the measure data period, for the eligible population	Yes		
12-2	Percentage of NEMT requests authorized, of those requested during the measure data period, by type of medical service (i.e., hospital, medical provider, mental health provider, dentist, pharmacy, methadone treatment, other), for the eligible population	Yes		
Hypothesis 13—Premium assistance beneficiaries will have equal or better access to care, including behavioral health services.			**Inconclusive**	
13-1	Follow-Up After Hospitalization for Mental Illness	Inconclusive		
13-2a	Initiation of Alcohol and Other Drug Abuse or Dependence Treatment	Inconclusive		
13-2b	Engagement of Alcohol and Other Drug Abuse or Dependence Treatment	Inconclusive		
13-3	Mental Health Outpatient Services Utilization	No		
13-4	Chemical Dependency Outpatient Services Utilization	No		
Cost Neutrality Waiver Goal: The premium assistance program will be cost neutral with respect to continuation of the previous New Hampshire Medicaid expansion program.				**No**
Hypothesis 14—Premium assistance beneficiaries will be comparable to what the costs would have been for covering the same expansion group in New Hampshire Medicaid in accordance with Special Terms and Conditions (STC) #69 on determining cost-effectiveness and other requirements in the evaluation design as approved by the Centers for Medicare & Medicaid Services (CMS).			**No**	
14-1	Total Costs by Group	No		
14-2	Medical Costs by Group	No		
14-3	Members' Administrative Cost	No		

The analysis provided conclusive results for only two waiver goals, with the Cost Neutrality and Cost-Effective Coverage waiver goal. The analysis is based on a single year of PAP data. Inconclusive results were driven by large variations in the performance measures, which may be the result of an extended implementation ramp-up process through which the PAP plans in the Marketplace incorporated new Medicaid members and Medicaid requirements into their administrative processes and procedures. As future evaluations incorporate additional years of data and the PAP plans fully incorporate Medicaid members and requirements into their products, processes, and procedures, a sharper distinction between the PAP and the non-PAP comparison group may be expected, providing more conclusive results.

For the Cost-Effective Coverage waiver goal, there are two hypotheses for which the analytical results are conclusive. The PAP was at least as good as the non-PAP comparison group in reducing potentially preventable ED and hospital visits and in attracting additional plans to the New Hampshire marketplace.

The PAP did not meet the Cost Neutrality waiver goal when compared to a hypothetically extended Bridge program.[5-1] Estimates suggest that Department of Health and Human Services (DHHS) could have saved up to $62.82 per member per month (PMPM), or roughly $30.3 million in calendar year (CY) 2016, if the Medicaid expansion had remained in the Bridge program, including both the Federal and State share of the expenditures.

Medical costs were about 8 percent higher than a hypothetical continuation of the Bridge program. The largest driver of the difference in costs stems from administrative costs that were approximately 42 percent higher than a hypothetical continuation of the Bridge program for carriers in the Marketplace.

Some themes emerge from the measures in which the PAP performed worse than a hypothetical extended Bridge program. At first glance, it seems counterintuitive that the PAP would not at least meet the same level of performance in Measures 2-1 and 3-2. However, when members were in the Bridge program, care and plan enrollment was more "churn-proof" since Medicaid expansion members were enrolled in a Medicaid MCO and received the same care from the same plan as non-expansion Medicaid members. Under these conditions, changes in an individual's program eligibility that would otherwise lead to members churning between the expansion Medicaid and non-expansion Medicaid programs generally would not impact the member since the same plan, provider networks, and services would be retained.

Several of the measures that performed worse than the Bridge program suggest that PAP plans may be struggling with some higher needs associated with the Medicaid expansion population compared to the general population that they have historically managed. An example is in the results of the mental health and chemical dependency measures in Hypothesis 13. The results for Measures 13-2 and 13-4 suggest that plans are struggling to accommodate the higher rates of mental health issues and chemical dependency among the Medicaid expansion population compared to the populations that they normally manage.

Implications for State and Federal Health Policy

The results of the New Hampshire PAP analysis have been largely inconclusive as to whether the public marketplace approach can achieve health outcomes at least as good as or better than traditional MMC. However, the analysis did indicate that the care provided by the PAP has not been provided at an equal or lower cost to that of a hypothetical extension of the Bridge program.

It should be noted that the cost-neutrality issue does not necessarily negate the public marketplace approach. The cost containment mechanism expected to be in place through the public marketplace is based on the idea of

[5-1] The term "cost neutrality" used herein does not refer to the formal Budget Neutrality test required under the Section 1115 Waiver Demonstration program, which sets a fixed target under which waiver expenditures must fall and that was set at the time the waiver was approved. See the Cost Neutrality section in Findings and Conclusions.

competition between plans keeping prices down. However, the underlying assumption is that carriers in the public marketplace will compete based on lower prices. In the case of the PAP population, since the State is paying 100 percent of the premium for qualifying plans, members have no incentive to select lower-priced plans. PAP members "shopping" for a health plan may interpret higher premiums as a signal of more services and higher quality care.

This does not mean that the public marketplace cannot be a viable and cost-effective option for providing healthcare coverage and services to expansion populations. Mechanisms may be designed to effectively implement additional price containment for similar premium assistance programs for Medicaid expansion populations. As a result, attention to financial incentives inherent in the structure of the program and public marketplace should be considered in designing reimbursement mechanisms.

Potential for Successful Demonstration Strategies to be Replicated in Other State Medicaid Programs

While every Medicaid program is unique and the analytical results of the quality of care provided by the PAP are largely inconclusive, the New Hampshire PAP established that there are components of the Demonstration that could be replicated in other Medicaid programs. By successfully encouraging Medicaid MCOs to enter the Marketplace, PAP members were provided continuity of health plan carrier coverage, which can lead to increased continuity of care.

Given the largely inconclusive results and use of a limited one-year evaluation period, it is likely too early to determine if a premium assistance approach can provide care of equal or better quality than that provided by the traditional Medicaid MCO structure. However, based on the elements of the analysis that were conclusive, a handful of strategies can be considered for similar initiatives in other State Medicaid programs:

- Encourage Medicaid plans to participate in the public marketplace to ensure continuity and coordination of care among a population subject to significant levels of churn.
- Ensure plans have experience with, and are cognizant of, the unique needs of the Medicaid expansion population. In the absence of plan experience, provide the plans with de-identified unpriced claim and encounter data prior to the first PAP enrollment to help plans develop premiums as well as policies and procedures to meet the unique health care needs of the Medicaid population.
- Develop a premium payment mechanism that incorporates appropriate financial incentives that are aligned with program goals, such as provision of quality care and cost neutrality. One strategy may involve hidden premium pricing for PAP members so that pricing cannot be used as a signal of quality.
- Ensure that members have access to care quality information by providing plan performance information prior to the member selecting a plan.

Although implementing these strategies would not guarantee a successful program, they may assist a State Medicaid program in replicating the best elements and avoiding the challenges associated with the New Hampshire PAP experience.

6. Interactions With Other State Initiatives

As mentioned in the study limitations above, the Premium Assistance Program (PAP) took place in a period of overall change in health care, especially for the individuals impacted by the expansion of Medicaid coverage. The PAP initiative was one in a group of interventions the State of New Hampshire undertook to improve health care for its residents, as discussed in this section.

Discussion of This Demonstration Within an Overall Medicaid Context and Long-Term Planning

New Hampshire was one of several states that applied for and were granted waivers from the Centers for Medicare & Medicaid Services (CMS) to design a unique approach to the expansion of Medicaid to a new population—adults with incomes up to 133 percent of Federal Poverty Level (FPL). This population was different from the population eligible for Medicaid as determined by eligibility for Social Security disability prior to the expansion. It was expected that this coverage would not be long-term, but would change as the economy improved and more people were able to earn more than the minimum eligibility threshold.

Interrelations of the Demonstration With Other Aspects of the State's Medicaid Program

When New Hampshire accepted the federal government's offer to expand Medicaid eligibility to adults up to 133 percent of FPL beginning in December 2013, the population was enrolled in Medicaid Managed Care (MMC). With the PAP, many of these adults, especially those who were not disabled, moved into the New Hampshire health insurance marketplace (the Marketplace) beginning in January 2015. Qualified Health Plans (QHPs) and the Actuary who evaluated the PAP for New Hampshire discovered that the PAP population was actuarily distinct from the general commercial population. This resulted in higher than expected costs for some of the QHPs (those without prior experience with the population), and was a factor in the exit of one carrier (Minuteman) from the PAP.

Interactions with Other Medicaid Waivers, the State Innovation Model (SIM) Award, and Other Federal Awards Affecting Service Delivery, Health Outcomes, and the Cost of Care Under Medicaid

The population covered under the PAP is made up primarily of adults who are of working age and healthy enough to work, excluding individuals who are on disability (dually eligible for Medicare and Medicaid) or who declare themselves to be medically frail. This population gained coverage due to the Affordable Care Act's (ACA's) Medicaid expansion, and New Hampshire's decision to participate in the Medicaid expansion was predicated on implementation of the PAP. If not for the PAP, there would be no Medicaid expansion in New Hampshire and these adults would likely remain uninsured.

The PAP will expire at the end of 2018, unless the New Hampshire legislature reapproves the program.[6-1] Its successes and failures have been the subject of a series of hearings in the New Hampshire legislature and are not the subject of this Interim Evaluation Report.

Other Medicaid Waivers

There are several other Medicaid waivers operative in New Hampshire, as listed in Table 6-1. The population for the PAP is demographically and programmatically distinct from the children and disabled populations generally covered in these other waiver programs, so interrelations between the programs are limited.

Table 6-1: New Hampshire Medicaid Waivers

Waiver	Program Description	Interaction with PAP Population
New Hampshire Developmental Disabilities Waiver	Provides community participation services for individuals with autism, developmental disability, or intellectual disability (ID) of any age.	Excluded from PAP because of age and/or dual eligibility.
New Hampshire Acquired Brain Disorder Services Waiver	Provides community participation and support services for adults age 22 and over who have suffered brain injury.	Excluded from PAP because of dual eligibility.
New Hampshire In Home Supports for Children with Development Disabilities	Provides personal care, family support and coordination for individuals aged 0-21 with autism, ID, or developmental disabilities.	Excluded from PAP because of age and/or dual eligibility.
New Hampshire Choices for Independence	Provides adult medical day services, residential care, and adult in-home services for aged individuals 65 years and older, and for adults with disabilities aged 18-64 years.	Excluded from PAP because of dual eligibility.
New Hampshire Building Capacity for Transformation	Beginning in 2018, reforms the State's behavioral health care system by creating a Delivery System Reform Incentive Payment (DSRIP) program that provides integrated behavioral health services through a statewide network of regionally-based Integrated Delivery Networks.	Medicaid members eligible for this program are specifically excluded from the PAP waiver program and will receive Medicaid benefits through their QHPs. However, the two programs may potentially influence each other in the future, especially if the PAP is reauthorized.
Mandatory Managed Care for State Plan Services for Currently Voluntary Populations	Mandates enrollment in MMC plans for individuals with voluntary enrollment in Medicaid, (e.g., children in foster care, members of Federally recognized Indian tribes, dual eligible).	This waiver mandates enrollment into capitated managed care (MMC plans) for some voluntary Medicaid enrollees who were formerly permitted to elect fee-for-service (FFS) Medicaid.

Source: State Waivers List, Medicaid.gov. Available at: https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/?entry=35353. Accessed on December 6, 2017.

The waiver program that will have the most interaction with PAP is Building Capacity for Transformation, approved by CMS in early 2016. The waiver plan includes the DSRIP, designed to serve Medicaid members with behavioral health needs by developing regional care delivery systems integrating their behavioral health care with their other health needs, from primary care to care coordination across transitions in care. The DSRIP includes seven regional integrated networks, with each pursuing a variety of projects. The overall focus is coordinating the State's community-based social service organizations, hospitals, county facilities, physical health providers, and

6-1 There are current hearings.

behavioral health providers (mental health and substance abuse) to build behavioral health capacity, promote integration, facilitate smooth transitions in care, and prepare for alternative payment models (APMs).[6-2]

The DSRIP has created a roadmap for its approach to APM, which will ramp up over 2018. The carriers who provide insurance to PAP members are certainly stakeholders in the complex program task of preparing for the APMs anticipated under Medicaid Access and CHIP Reauthorization Act (MACRA), but are not directly impacted in the material payment reform efforts that drive the CMS program.[6-3]

Although PAP members are not among the severe or chronically mentally ill who are disabled from working due to behavioral health needs, as many as 25 percent of PAP members have behavioral health needs. There will undoubtedly be some programmatic overlap despite the specific exclusion of PAP members from the DSRIP demonstration; some PAP members will receive care from members of the integrated care delivery networks. However, the integrated care delivery networks developed under the DSRIP will not be fully operational until the end of 2017, and PAP is scheduled to expire at the end of 2018, limiting the potential for programmatic overlap.

6-2 Building Capacity for Transformation: New Hampshire's DSRIP Waiver Program, May 2016. Available at https://www.dhhs.nh.gov/section-1115-waiver/documents/nh-dsrip-overview-052016.pdf. Accessed on December 6, 2017.

6-3 New Hampshire's Building Capacity for Transformation Section 1115(a) Medicaid Research and Demonstration Waiver DSRIP Alternative Payment Models Roadmap for Year 2 (CY 2017) and Year 3 (CY 2018) Available for download from https://www.dhhs.nh.gov/section-1115-waiver/. Accessed on December 6, 2017.

State of New Hampshire
Department of Health and Human Services

Premium Assistance Program (PAP) Evaluation Plan Implementation

Interim Evaluation Report, Appendices
Version 2

November 2018

HSAG HEALTH SERVICES ADVISORY GROUP

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Acknowledgements

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Appendix A. Methodologies

The methods and approaches described in Appendix A are based on the most recently available information about the data sources used in evaluating the Premium Assistance Program (PAP). Health Services Advisory Group, Inc. (HSAG) conducted several analyses involving the following methodologies:

- Defining evaluation periods
- Measure selection
- Identification of study populations
- Measure calculation
- Estimating the impact

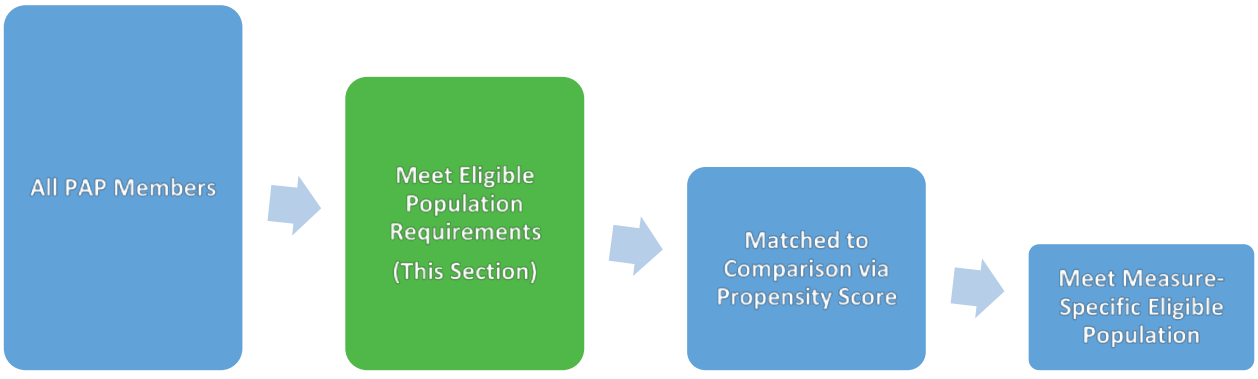
Some methods and approaches may require adjustment for the final evaluation report if additional information about the data sources indicate the method(s) are not appropriate as described.

Health Outcomes

To evaluate the health-related outcomes (i.e., nonfinancial or web research-based) two eligible populations were identified.[A-1] The eligible populations defined in this section were used as a starting point in evaluating all health-related outcomes. The eligible treatment group defined below was subject to a number of further limitations globally and for each measure. In particular, a member meeting the eligible treatment group criteria may have been removed later from the study if not matched with an eligible comparison group member, or the member may have been removed from a particular measure if the measure's specific eligible population criteria were not met (such as demonstrating continuous enrollment for the evaluation year after allowing for one gap in coverage of up to 45 days).

Figure A-1 outlines the member selection process for the PAP population (i.e., treatment group). Identifying the final comparison group followed similar steps.

Figure A-1: Member Selection Process for the PAP Population



A-1 Financial outcomes were evaluated using a separate methodology included in Appendix D.

Treatment Group

The treatment group (i.e., the Bridge/PAP population) for the health outcomes measures was composed of members in the New Hampshire Health Protection Program (NHHPP) who were not medically frail. These members were either:

1. Childless adults between the ages of 19 through 64 with incomes at or below 133 percent of the Federal Poverty Level (FPL) who are neither enrolled in or eligible for Medicare, not incarcerated, not medically frail, or not eligible for cost-effective employer-sponsored insurance; or
2. Parents between the ages of 19 through 64 with incomes between 38 percent (for non-working parents) or 47 percent (for working parents) and 133 percent of the FPL and who are not enrolled in or eligible for Medicare, not incarcerated, not medically frail, or not eligible for cost-effective employer-sponsored insurance.

Brief periods of enrollment in the PAP, or mixed enrollment in PAP and a non-PAP Managed Care Organization (MCO), are less likely to generate substantial or sustained improvements in outcomes than longer enrollment periods. Therefore, members must exhibit a continuous enrollment of six months or longer in the PAP and no more than two months in an MCO during the evaluation period to be included in the analysis as program participants. Some measures used in this evaluation require additional enrollment criteria. The measure specifications describe these requirements and the type of enrollment necessary (e.g., PAP, Medicaid). Health outcomes for the treatment group were evaluated only during the time the member was enrolled in the PAP. If the member transitioned in or out of the PAP (either leaving Medicaid entirely or transitioning to/from an MCO) but still met the six-month continuous enrollment requirement, only claims during their time in the PAP were used to evaluate outcomes.[A-2] To adequately identify health conditions and outcomes at baseline, members also must have had sufficient enrollment throughout the baseline period. Eligible treatment group members must have had continuous enrollment during calendar year (CY) 2015, with no more than one gap of up to 45 days.

Comparison Group

The comparison group for the health outcomes analysis was composed of adult MCO members who were never enrolled in the Bridge or PAP programs and were continuously enrolled in a single MCO for six months or more during the evaluation period.

To adequately identify health conditions and outcomes at baseline, members must also demonstrate sufficient enrollment throughout the baseline period. Eligible comparison group members must have continuous enrollment during CY 2015, with no more than one gap of up to 45 days.

Exclusions

Given that the PAP excludes certain groups of enrollees, it is necessary to exclude these same groups from the eligible comparison group. This includes dual enrollees, members younger than 19 and older than 65, and members who self-identify as medically frail.

[A-2] To the extent an outcome measure requires historical claims data (e.g., year prior to the evaluation period) for purposes such as identification of members with relevant chronic conditions, all claims were used to assess the historical claims.

Propensity Scoring Matching

For purposes of determining the expected rates for the treatment group, a non-Bridge/PAP population with characteristics similar to those of the Bridge/PAP population was identified. Propensity score-based matching is a common methodology used to select a comparison group that is statistically similar to a treatment group. The following describes the methodology to generate propensity scores and use those scores to match members in the treatment group (i.e., the Bridge/PAP population) with members in the comparison group (i.e., the non-Bridge/non-PAP population).

Covariate Identification

Demographic and health condition covariates were identified for each member. The following provides a description of each covariate and the methods used to identify the covariates. All covariates were identified during the baseline period and were expected to be related to the likelihood of a member being enrolled in the PAP. Table A-1 provides a list of the demographic covariates and the methods used to identify each covariate.

Table A-1: Demographic and Utilization Covariates

Covariates	Identification Method
Age	
Age	Member's date of birth was used to identify the member's age at the end of the baseline period.
Gender	
Male Female	Member's gender in the demographic file.
Geography	
County	County codes in demographic data.
Race	
White African American American Indian/Alaskan Native Native Hawaiian/Other Pacific Islander Asian Other Multiple	Members flagged as "W" were classified as White. Members flagged as "A" were classified as African American. Members flagged as "I" were classified as American Indian/Alaskan Native. Members flagged as "P" were classified as Native Hawaiian/Other Pacific Islander. Members flagged as "S" were classified as Asian. Members flagged as "O" were classified as Other. Members with more than one race code were classified as Multiple.
Ethnicity	
Hispanic Non-Hispanic	Members with ethnicity of "1" were classified as Hispanic. Members with ethnicity of "0" were classified as non-Hispanic.
Enrollment	
Number of months a member was enrolled in PAP/Medicaid	Eligibility/enrollment files were used to determine the number of months a member was enrolled in PAP or Medicaid.

The following list provides the health condition covariates incorporated into the propensity scoring methodology.[A-3] Encounter and fee-for-service (FFS) data were used to identify members who had a primary diagnosis for any of the health conditions listed below. Each health condition was represented separately as an indicator variable. For example, a member diagnosed with both asthma and hypertension would have two health condition flags, one for asthma and another for hypertension.

- Asthma
- Chronic Obstructive Pulmonary Disease (COPD)
- Cancer
- Congestive Health Failure (CHF)
- Coronary Artery Disease (CAD)
- Diabetes
- Hypertension
- Mental Health Disorders
- Other Cardiac Conditions
- Other Respiratory Conditions
- Pregnancy
- Stroke
- Substance Abuse

Propensity Score Matching

Propensity scores were derived to match individuals in the Bridge/PAP and non-Bridge/non-PAP populations. This allowed the construction of a comparison group that was most similar to the treatment group (i.e., the Bridge/PAP population) without the use of randomized selection. Thus, the propensity score was used to reduce bias in the results and control for multiple confounders.

The covariates were used to determine a propensity score for each member through logistic regression. The equation for the logistic regression is:

$$\Pr(Y_i = 1) = \frac{1}{1 + \exp[-(\beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \cdots + \beta_k X_{ik})]}$$

Where $\Pr(Y_i = 1)$ is the propensity score, the βs are parameters to be estimated and the Xs are the covariates.[A-4]

A Greedy 5→1-digit matching algorithm was used to match the populations, as it "is frequently used to match cases to controls in observational studies."[A-5] The populations were first matched on the propensity score out to the fifth decimal place. For those that did not match, the populations were then matched on the propensity score out to the fourth decimal place and continued down to a one-digit match. Any ties were matched randomly and once a pair had been matched neither member of that pair was eligible for re-matching. By matching cases and

[A-3] HSAG began by identifying health conditions using the Agency for Health Research and Quality (AHRQ) Clinical Classification Software (CCS) categories. Certain CCS categories were grouped together in the final covariate selection based on characteristics of the PAP population and clinical relevance (e.g., the CCS category for "diabetes mellitus without complications" and "diabetes mellitus with complications" were grouped together into the Diabetes health condition covariate).

[A-4] Linden, A., Adams, J.L., and Roberts, N. (2005). "Using propensity scores to construct comparable comparison groups for disease management program evaluation." Disease Management Health Outcomes. 13(2): 107-115.

[A-5] Parsons, L.S. (2001). "Reducing Bias in Propensity Score Matched-Pair Sample Using Greedy Matching Techniques." Paper 214-26. Proceedings of the Twenty-Sixth Annual SAS Users Group International Conference. Cary (NC): SAS Institute Inc.

controls on propensity score first by using five decimal places, the "best" matches are made first, followed by the "next-best" matches until no more matches can be made at a reasonable distance in propensity score. This algorithm provides a balanced trade-off between reducing bias due to incomplete matching through retaining a sufficient number of treatment group members in the final matched sample, and reducing bias due to inexact matching by choosing the highest quality matches first.[A-6] One alternative to the Greedy 5→1 digit matching is a Greedy 5→2 digit match. This removes matches made at the tenth decimal place, thereby sacrificing matched sample size for quality of matches. HSAG found that covariate balance in the Greedy 5→1 was sufficient and included an additional 239 matched pairs that were otherwise lost in the Greedy 5→2 algorithm and brought the matching rate to 80 percent.

Evaluating Matched Populations

Matching on propensity scores has been shown to create a "covariate balance," such that the matched comparison population is similar for all the covariates included in calculating the propensity score.[A-7] Covariate balance was assessed through several ways. First, the entire distribution of each covariate for the comparison group after matching was compared against that of the treatment group using either a chi-square test or *t*-test depending on the type of covariate. Given that, traditional statistical tests could find statistical significance on small differences if the sample sizes were large enough, then the distributions of each covariate for both groups were compared against each other using standardized differences.[A-8] The standardized difference represents the difference in averages between the PAP and non-PAP comparison groups in terms of the pooled standard deviation. A rule of thumb when interpreting standardized differences is that an absolute value of less than 0.1 generally indicates a minimal difference between the two groups (i.e., the covariate is balanced). Finally, to evaluate covariate balance across the spectrum of covariates, an omnibus test was employed to test the joint hypothesis that the mean difference between the PAP and non-PAP comparison groups across all measured covariates was zero.[A-9]

While two covariates were statistically unbalanced after matching, the standardized difference on these covariates was well below the 0.1 rule of thumb threshold for statistically unbalanced covariates, and the omnibus test failed to reject the joint hypothesis that the mean differences across all covariates was equal to zero. Table A-2 shows the covariate averages before and after matching for the non-PAP comparison and the PAP groups, computed standardized differences, and an indicator of denoting covariates that were statistically balanced using either a chi-square or a *t*-test. Table A-2 also shows that, after matching, all but two covariates were statistically balanced. All covariates, including the two that were found statistically unbalanced, had a standardized difference of less than 0.1. The *p*-value on the omnibus test was 0.9639, which indicates the two matched groups across all the covariates as a whole are statistically balanced. Taken together, these results provide strong evidence that the propensity score matching process worked as intended and a non-PAP comparison group similar in composition to the PAP group was identified. For conditions that were disproportionately more prevalent in the full comparison group, such as diabetes, the prevalence of diabetes among the matched comparison group was statistically equivalent to that of the matched PAP group. Further, 80 percent (9,311/11,620) of the full PAP group was matched, which means results from the evaluation are representative of the majority of the PAP population as a whole.

A-6 Parsons, L.S. (2001). "Reducing Bias in Propensity Score Matched-Pair Sample Using Greedy Matching Techniques." Paper 214-26. Proceedings of the Twenty-Sixth Annual SAS Users Group International Conference. Cary (NC): SAS Institute Inc.

A-7 Parsons, L.S. (2001). "Reducing Bias in Propensity Score Matched-Pair Sample Using Greedy Matching Techniques." Paper 214-26. Proceedings of the Twenty-Sixth Annual SAS Users Group International Conference. Cary (NC): SAS Institute Inc.

A-8 See, Austin, P.C. (2011) "An Introduction to Propensity Score Methods for Reducing the Effects of Confounding in Observational Studies," Multivariate Behavioral Research. 46(3): 399-424. Available online at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3144483/; last accessed December 7, 2017.

A-9 See, Hansen, B.B. and Bowers, J. (2008). "Covariate Balance in Simple, Stratified, and Clustered Comparative Studies," Statistical Science. 23(2): 219-236.

Table A-2: Summary of Covariate Balance

Covariate	Full Group		Matched Samples		Standardized Difference	Balanced
	Comparison	PAP	Comparison	PAP		
Total Member Months	11.434	10.888	11.250	11.206	-0.029	
Age	40.244	38.445	38.763	38.665	-0.007	*
Female	0.634	0.554	0.587	0.577	-0.020	*
Ethnicity: Hispanic	0.039	0.042	0.040	0.039	-0.008	*
Asthma	0.076	0.039	0.043	0.045	0.009	*
COPD	0.089	0.036	0.039	0.042	0.013	*
Cancer	0.070	0.042	0.047	0.047	0.002	*
Congestive Heart Failure	0.011	0.003	0.003	0.003	0.004	*
Coronary Artery Disease	0.020	0.008	0.009	0.009	0.004	*
Diabetes	0.126	0.063	0.069	0.071	0.008	*
Hypertension	0.099	0.075	0.080	0.077	-0.010	*
Mental Health Disorders	0.432	0.214	0.242	0.254	0.029	
Other Cardiac Conditions	0.078	0.046	0.050	0.051	0.003	*
Other Respiratory Conditions	0.202	0.128	0.138	0.138	0.002	*
Pregnancy	0.051	0.036	0.039	0.039	0.001	*
Stroke	0.008	0.003	0.003	0.003	-0.002	*
Substance Abuse	0.118	0.104	0.107	0.103	-0.011	*
County: Belknap	0.063	0.064	0.062	0.063	0.003	*
County: Carroll	0.037	0.052	0.044	0.047	0.012	*
County: Cheshire	0.057	0.068	0.063	0.063	0.002	*
County: Coos	0.045	0.044	0.047	0.048	0.006	*
County: Grafton	0.057	0.068	0.062	0.065	0.010	*
County: Hillsborough	0.315	0.301	0.315	0.303	-0.025	*
County: Merrimack	0.122	0.117	0.117	0.118	0.003	*
County: Rockingham	0.128	0.145	0.138	0.142	0.010	*
County: Strafford	0.111	0.083	0.091	0.092	0.002	*
County: Sullivan	0.049	0.042	0.047	0.046	-0.005	*
County: Unknown	0.015	0.016	0.014	0.014	0.001	*
Race: African American	0.020	0.023	0.020	0.020	0.003	*
Race: American Indian	0.002	0.004	0.003	0.003	0.000	*
Race: Multiple	0.010	0.010	0.010	0.010	-0.001	*
Race: Other	0.013	0.019	0.015	0.014	-0.004	*
Race: Native Hawaiian	0.000	0.001	0.001	0.001	0.000	*
Race: Asian	0.007	0.021	0.010	0.010	0.001	*
Race: White	0.943	0.875	0.936	0.933	-0.010	*
Race: None	0.004	0.048	0.006	0.008	0.028	*
N=	*14,525*	*11,620*	*9,311*	*9,311*		

Difference-in-Differences

A difference-in-differences analysis was performed on all measures for which baseline and evaluation period data were available for both the treatment and comparison groups. This analysis compared the changes in the rates or outcomes between the baseline period (CY 2015) and the evaluation period for the two populations. This allowed for expected rates for the matched treatment group (i.e., matched Bridge/PAP members) to be calculated by considering expected changes in rates had the PAP not been implemented. This was accomplished by subtracting the average change in the comparison group from the average change in the treatment group, thus removing biases from the evaluation period comparisons due to permanent differences between the two groups. In other words, any cost or rate changes caused by factors external to the PAP would apply to both groups equally, and the difference-in-differences methodology removed the potential bias. The result is a clearer picture of the actual effect of the program on the evaluated outcomes. The generic difference-in-differences model is:

$$Y_{it} = \beta_0 + \beta_1 T_i + \beta_2 R_t + \beta_3 (R_t * T_i) + \boldsymbol{\gamma} \mathbf{D'}_{\boldsymbol{it}} + u_{it}$$

where Y_{it} is the outcome of interest for individual i in time period t. R_t is a dummy variable for the remeasurement time period (i.e., evaluation period). The dummy variable T_i identifies the treatment group with a 1 and the comparison group with a 0. The vector $\mathbf{D'}$ includes all covariates used in the propensity score matching to ensure comparability of the groups for any subpopulations and $\boldsymbol{\gamma}$ is the related coefficient vector. The coefficient, β_1, identifies the average difference between the groups prior to implementation of the PAP. The time period dummy, R, captures factors that would have changed in the absence of the intervention. The coefficient of interest, β_3, is the coefficient for the interaction term $R_t * T_i$, which is the same as the dummy variable equal to one for those observations in the treatment group in the remeasurement period. The final difference-in-differences estimate is:

$$\hat{\beta}_3 = \left(\bar{y}_{T,R} - \bar{y}_{\mathrm{T,B}}\right) - \left(\bar{y}_{\mathrm{C,R}} - \bar{y}_{\mathrm{C,B}}\right) \mid \mathbf{D'}$$

The estimate provides the expected rates without intervention. If the β_3 coefficient is significantly different from zero, then it is reasonable to conclude that the outcome differed between the treatment and comparison group after the PAP program went into effect. For this analysis, a statistically significant difference will be represented by a p value of 0.05 or less, indicating the probability of the results occurring by chance is less than 5 percent.

All covariates, except race and county dummy variables, will be included in the difference-in-differences regression model as a control variable to account for any remaining differences between the PAP and non-PAP measure-level subgroups.

Difference-in-Differences—Statistical Testing

Noninferiority testing will be conducted using a pre-specified fraction (δ) of the change in the comparison group (β_2) to define an "equivalence range" within which it would be concluded that the PAP group performed as well as the non-PAP comparison group. In this specification, equivalence is measured as a difference in the change between the baseline and measurement periods. For this reason, HSAG set δ at 10 percent of β_2. As an example, if higher rates are better and the rates for the comparison group increased from 70 percent to 75 percent between the baseline and evaluation periods, β_2 would be 5 percentage points. Mathematically, let δ^* be half the width of the equivalence range. Then $\delta^* = \delta \times \beta_2$. Continuing the example, since $\beta_2 = 5$, then $\delta^* = 10\% \times 5 = 0.5$. Intuitively, if the change in the PAP group net of the change in the comparison group (β_3) is greater than -0.5 of a percentage point, then noninferiority can be established. It should be noted that the estimated value of β_2 is a random variable so the variance of the measure must also be considered. To this end, HSAG will test the following linear hypotheses using an F-test for $\alpha = 0.05$. Table A-3 details the noninferiority hypothesis tests.

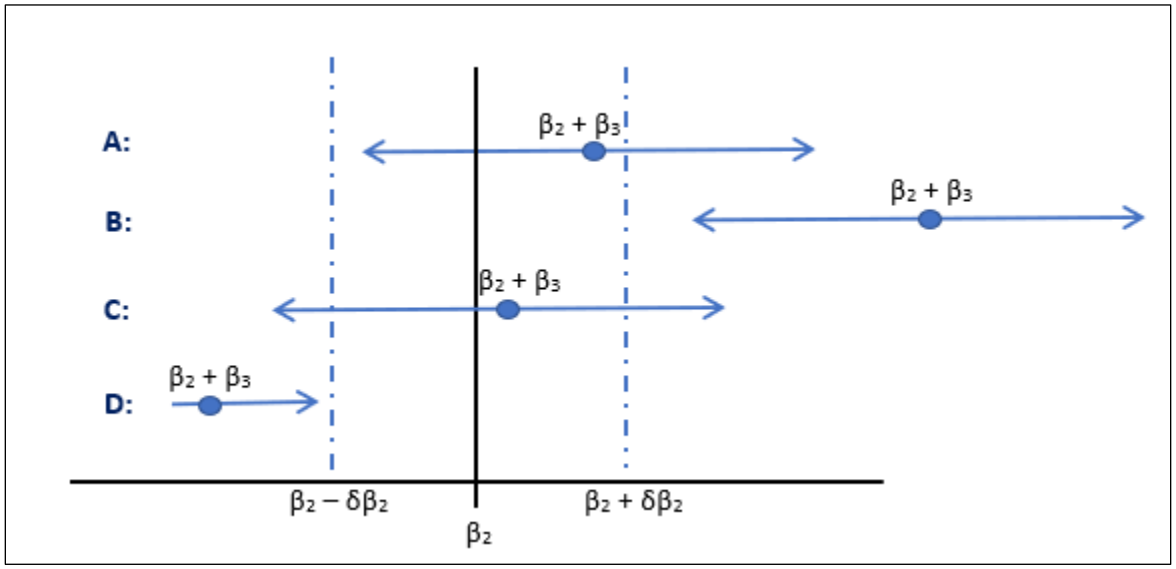
Table A-3: Noninferiority Hypothesis Tests

Noninferiority Hypothesis Tests		
β_2	Higher Rate Is Favorable	Lower Rate Is Favorable
$\beta_2 > 0$	$\beta_3 + \delta\beta_2 > 0$	$\beta_3 - \delta\beta_2 < 0$
$\beta_2 < 0$	$\beta_3 - \delta\beta_2 > 0$	$\beta_3 + \delta\beta_2 < 0$

Results of this F-test will be presented alongside the regression results. It is important to note that for results in which the F-test is not significant (i.e., having a *p* value of greater than 0.05), noninferiority cannot be established. Therefore, the results would be inconclusive and would not indicate whether PAP performed at least as well as the non-PAP comparison group.

This approach is functionally equivalent to testing whether the 95 percent confidence interval lies within and/or in the desired direction of the equivalence range. For example, consider Figure A-2 for a measure in which higher rates represent better performance. The 95 percent confidence intervals represented by A and B indicate the PAP performed at least as well as the MCOs. The confidence interval represented by C is inconclusive. Given the 95 percent confidence interval represented by D, the PAP would be determined to have performed worse than the MCOs.

Figure A-2: Illustration of Non-Equivalence Testing Procedure



The 95 percent confidence intervals will be constructed as

$$(\hat{\beta}_2 + \hat{\beta}_3) \pm t_{DF,0.025} SE$$

where DF is the regression model degrees of freedom and SE is given by:

$$SE = \sqrt{\delta^2 Var[\hat{\beta}_2] + Var[\hat{\beta}_3] + 2\delta Cov(\hat{\beta}_2, \hat{\beta}_3)}$$

CAHPS Questions Measurement

Responses from the CAHPS were case-mix adjusted using the Agency for Healthcare Research and Quality (AHRQ) adjustment algorithm using age, education, and self-rating of health as adjustment factors to adjust for differences in respondent characteristics between the two populations. Data from CAHPS questions in this study were gathered using three different scales. Some questions used a simple binary "yes/no" response. Other survey questions used a four-point scale with responses of "never," "sometimes," "usually," or "always." The remaining survey questions used an 11-point scale with responses ranging from 0 to 10. Table A-4 shows the response levels for each CAHPS measure question.

Table A-4: Response Levels for CAHPS Questions

Measure	Response Level
1-3: Patient Perspective on Continuity in Health Insurance Coverage	Binary
2-2: Patient Perspective on Continuity in Same Plan Coverage	Binary
3-3: Patient Perspective on Continuity of Care	Binary
8-4: Patients' Perception of Quick Access to Needed Care	4-Point Scale
8-5: Patients' Perception of Ease of Getting Appointments with Specialists	Binary
9-3: Annual Influenza Immunization, 19–64	Binary
10-1: Patients' Rating of Overall Health Care	11-Point Scale
10-2: Patients' Rating of the Health Plan	11-Point Scale

Binary Response

The proportion of "yes" responses for the treatment and comparison groups was evaluated using a *z*-test.

Four-Point Scale Response

Measures using a four-point scale response with choices for "never," "sometimes," "usually," or "always" were evaluated using a "usually+always" top box approach, where four responses are recoded as a binary indicator as defined in Table A-5. Statistical testing was done using a proportional *z*-test.

Table A-5: Four-Point Scale Top Box Coding

Response Choices	Top Box (Usually + Always)
Never	0
Sometimes	0
Usually	1
Always	1

Eleven-Point Scale Response

Measures that used an 11-point scale response ranging from 0 to 10 were evaluated using a "8+9+10" top box approach, following guidance from Healthcare Effectiveness Data and Information Set (HEDIS®) specifications.[A-10] Similar to the four-point scale top box, the "8+9+10" top box converts the numeric responses to a binary indicator

[A-10] HEDIS® is a registered trademark of the National Committee of Quality Assurance (NCQA).

following the coding system defined in Table A-6. Statistical testing for this binary indicator was performed using a proportional *z*-test.

Table A-6: Eleven-Point Scale Top Box Coding

Response Choices	Top Box (8 + 9 + 10)
0 – Worst	0
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	1
9	1
10 – Best	1

CAHPS Questions—Statistical Testing

A two-proportional *z*-test is typically used to compare two samples when the measurement data are discrete or categorical in nature (such as gender or "yes/no" survey questions). For survey-based questions, the treatment group's outcomes were measured against the comparison group's outcomes, and the *z*-test determines whether the two groups are statistically significantly different.

The standard two-proportional *z*-test is given by:

$$z = \frac{\hat{p}_{PAP} - \hat{p}_{MCO}}{\sqrt{\frac{p_{PAP}(1 - p_{PAP})}{n_{PAP}} + \frac{p_{MCO}(1 - p_{MCO})}{n_{MCO}}}}$$

Prior to conducting the analysis, a minimum important difference, δ, is calculated for each measure. This threshold represents the greatest difference between the PAP and non-PAP comparison groups that can exist while still being considered "equivalent." The threshold will be calculated using an effect size of 0.10 of the non-PAP comparison group.[A-11] While an effect size of 0.20 has commonly been deemed to represent a "small" effect as originally suggested by Cohen, Cohen writes, "the terms 'small,' 'medium,' and 'large' are relative, not only to each other, but to the area of behavioral science or even more particularly to the specific content and research method being employed in any given investigation" (p. 25).[A-12] Because the application of effect size in this context is to identify a minimum acceptable difference between proportions while still considering them "equal" for practical purposes, a stricter threshold than what may be typically used is appropriate. Therefore, δ for each measure will be calculated as follows, where $\hat{p}_1$ is the proportion of successes for the comparison group

[A-11] See, e.g. Treadwell J, Uhl S, Tipton K, et al. Assessing Equivalence and Noninferiority [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2012 Jun. Guidance. Available from: https://www.ncbi.nlm.nih.gov/books/NBK98982/. Accessed on Oct 17, 2018.

[A-12] Cohen, J. *Statistical Power Analysis for the Behavioral Sciences,* 2nd Ed. Hillsdale, N.J.: L. Erlbaum Associates; 1988:25.

$$\delta = \hat{p}_{MCO} - \sin\left(\frac{2\sin^{-1}\left(\sqrt{\hat{p}_{MCO}}\right) \pm 0.1}{2}\right)^2$$

where the $\pm$ operation is + if a lower rate is favorable and – if a higher rate is favorable.

Incorporating this into the statistical test yields:

$$z = \frac{\hat{p}_{PAP} - \hat{p}_{MCO} + \delta}{\sqrt{\frac{\hat{p}_{PAP}(1-\hat{p}_{PAP})}{n_{PAP}} + \frac{\hat{p}_{MCO}(1-\hat{p}_{MCO})}{n_{MCO}}}}$$

Test results are interpreted similar to the noninferiority tests described above.

Self-Declared Medically Frail (SDMF)

Measures

In addition to analysis of the outcomes for individuals participating in the PAP, it is equally important to understand the characteristics of the individuals who elect not to participate in the PAP by a self-declaration of medical frailty.

SDMF individuals were counted for each month of the interim evaluation period and reported for each month both as raw numbers as well as a percentage of the total number of individuals participating in PAP.

SDMF individuals were compared to all PAP participants based on a number of demographic and medical characteristics. The demographic characteristics evaluated were:

- Age
- Gender
- County
- Race/Ethnicity

The health conditions used in the comparison were:

- Asthma
- COPD
- Cancer
- CHF
- CAD
- Diabetes
- Hypertension
- Mental Health Disorders
- Other Cardiac Conditions
- Other Respiratory Conditions
- Pregnancy
- Stroke
- Substance Abuse

Encounter and FFS claims data prior to December 31, 2016, were used to identify members who had a primary diagnosis for any of the health conditions listed above.

Statistical Testing

Differences between the SDMF and PAP participants were tested to determine the extent to which there were statistically significant differences between the two populations. Statistical testing was conducted using the two-proportion *z*-test or *t*-test, depending on the type of condition under evaluation.

Changes from CMS Approved Plan

In developing the Analytic Plan and the Interim Evaluation Report, New Hampshire Department of Health and Human Services (DHHS) and HSAG made several revisions to the measure list that deviated from the original analytic plan approved by the Centers for Medicare & Medicaid Services (CMS). These revisions help tie outcomes measures more closely to the hypothesis. The list below outlines the substantive changes from the original analytic plan and Appendix B provides detailed measure definitions and specifications.

- Removed Measure 2-4: Number of Medically Frail Self-Declarations. Added discussion of these members as separate section to the report.
- Moved Measure 2-3 to Measure 9-8: In the last 6 months, how often did you get an appointment for a check-up or routine care at a doctor's office or clinic as soon as you needed?
- Split Measure 9-1: Adults' Access to (use of) Preventive/Ambulatory Health Services Adults by Age Group into two measures: (1) Preventive services only (Measure 8-6), and (2) full HEDIS Adults' Access to Preventive (AAP) Health Services (Measure 9-1).
- Added Measure 9-7: Cervical Cancer Screening to Hypothesis 9 (PAP beneficiaries will have equal or better access to preventive care services).
- Revised Measure 9-7: Mental Health Utilization – 1 to follow HEDIS specifications for Mental Health Utilization outpatient visits, with revisions to remove emergency care and crisis management, and updated measure ID to be Measure 13-1 (see below).
- Removed Measure 9-8: Mental Health Utilization – 2.
- Split Measure 11-1: Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) Screening into two measures: (1) Well-Care Visits, and (2) Preventive Dental Visits.
- Added Measure 12-2: Non-Emergency Medical Transportation (NEMT) Requests Delivered by Type of Medical Service.
- Added new Hypothesis 13: Premium assistance beneficiaries will have equal or better access to care, including behavioral health services.
  - Moved Measure 9-2: Follow-Up After Hospitalization (FUH) to this hypothesis and updated measure ID to be Measure 13-1.
  - Moved revised Measure 9-7: Mental Health Outpatient Utilization under this hypothesis and updated measure ID to be Measure 13-3.
  - Added Measure 13-2: Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET).
- Added new Hypothesis 14: PAP will be cost neutral with respect to continuation of the previous New Hampshire Medicaid expansion program.
  - Moved Measures 14-1 (Total Costs by Group), 14-2 (Medical Costs by Group), and 14-3 (Members' Administrative Cost).

Appendix B. Measure Definitions

The performance measure specifications and definitions included in Appendix B have been selected to determine the cost and effectiveness of the Premium Assistance Program (PAP). Health Services Advisory Group, Inc. (HSAG) utilized each of these measures to assess the dimensions of access and quality of care by:

- Comparing provider networks
- Member satisfaction and experience
- Provider experience
- Evidence of improved access and quality of care

Each measure being evaluated is categorized into the four waiver goals and spread across the 14 hypotheses. The measure definitions are based on the most recent information available about the data to be used in the evaluation. Some definitions for some measures may require adjustment as additional information about the data is received.

Continuity of Coverage

Continuity in Member Health Insurance Coverage—Average Number of Gaps in Medicaid Coverage

Continuity in Member Health Insurance Coverage	
Domain	Continuity of Coverage
Waiver Goal	For individuals, whose incomes fluctuate, the Demonstration will permit continuity of health plans and provider networks.
Hypothesis 1	Premium assistance beneficiaries will have equal or fewer gaps in insurance coverage.
Measure Description	The average number of gaps in Medicaid coverage per 100 members during the measurement period.
Eligible Population	PAP and non-PAP members continuously enrolled for six months or more during the measurement year.
Numerator	The number of gaps in Medicaid enrollment. A gap is defined as a lapse in coverage lasting more than 45 calendar days, or at least two gaps of between one and 45 calendar days during the measurement year.
Denominator	The eligible population
Data Source(s)	State eligibility and enrollment databases
Measure ID	1-1

Statistical Testing

- Difference-in-differences

Continuity in Member Health Insurance Coverage—Percentage of Eligible Members With Medicaid Coverage Gaps

Continuity in Member Health Insurance Coverage	
Domain	Continuity of Coverage
Waiver Goal	For individuals, whose incomes fluctuate, the Demonstration will permit continuity of health plans and provider networks.
Hypothesis 1	Premium assistance beneficiaries will have equal or fewer gaps in insurance coverage.
Measure Description	The percentage of eligible members with gaps in Medicaid coverage.
Eligible Population	PAP and non-PAP members continuously enrolled for six months or more during the measurement year.
Numerator	The number of members with one or more gaps in Medicaid enrollment. A gap is defined as a lapse in coverage lasting more than 45 calendar days, or at least two gaps of between one and 45 calendar days during the measurement year.
Denominator	The eligible population
Data Source(s)	State eligibility and enrollment databases
Measure ID	1-2

Statistical Testing

- Difference-in-differences

Patient Perspective on Continuity in Health Insurance Coverage

Patient Perspective on Continuity in Health Insurance Coverage	
Domain	Continuity of Coverage
Waiver Goal	For individuals, whose incomes fluctuate, the Demonstration will permit continuity of health plans and provider networks.
Hypothesis 1	Premium assistance beneficiaries will have equal or fewer gaps in insurance coverage.
Measure Description	Eligible recipients will be surveyed to whether the members reported being without health insurance during the previous 12 months. "In the last 12 months, were you without health insurance at any time?" (Use CAHPS' standard Yes/No response categories and format).
Eligible Population	PAP and non-PAP sample frame.
Numerator	The number of members who answered "Yes" to the following question: "In the last 12 months, were you without health insurance at any time?"
Denominator	The number of valid responses from the eligible population.
Data Source(s)	CAHPS 2017 Survey
Measure ID	1-3

Statistical Testing

- Interim Evaluation Report
  - z-test
- Final Evaluation Report
  - Difference-in-differences

Continuous Access to the Same Health Plan

Continuous Access to the Same Health Plan	
Domain	Continuity of Coverage
Waiver Goal	For individuals, whose incomes fluctuate, the Demonstration will permit continuity of health plans and provider networks.
Hypothesis 2	Premium assistance beneficiaries will maintain continuous access to the same health plans, and will maintain continuous access to providers.
Measure Description	The percentage of members with continuous access to the same health plan.
Eligible Population	PAP and non-PAP members continuously enrolled for six months or more during the measurement year.
Numerator	The number of members who were continuously enrolled in one Managed Care Organization (MCO) during the measurement year. If a member had at least one gap in coverage OR a member switched health plans during the measurement year, then the member did not have continuous access and is therefore not numerator compliant. A gap is defined as a lapse in coverage lasting more than 45 calendar days, or at least two gaps of between one and 45 calendar days during the measurement year. Health plan will be identified by the **Health care organization** name field in Benefit Plan Spans data.
Denominator	The eligible population.
Data Source(s)	Eligibility and enrollment files
Measure ID	2-1

Statistical Testing

- Difference-in-differences

Patient Perspective on Continuity in Same Plan Coverage

Patient Perspective on Continuity in Same Plan Coverage	
Domain	Continuity of Coverage
Waiver Goal	For individuals, whose incomes fluctuate, the Demonstration will permit continuity of health plans and provider networks.
Hypothesis 2	Premium assistance beneficiaries will maintain continuous access to the same health plans, and will maintain continuous access to providers.
Measure Description	Eligible recipients will be surveyed to whether the members had continuous access to the same health care plan during the previous six months. "In the last six months, did you switch to a different health care plan?" (Use CAHPS' standard Yes/No response categories and format)
Eligible Population	PAP and non-PAP sample frame.
Numerator	The number of members responding "Yes" to the following question: "In the last six months, did you switch to a different health care plan?"
Denominator	The number of valid responses from the eligible population.
Data Source(s)	CAHPS 2017 Survey
Measure ID	2-2

Statistical Testing

- Interim Evaluation Report
  - *z*-test
- Final Evaluation Report
  - Difference-in-differences

Continuous Care During Marketplace Transition

Continuous Care During Marketplace Transition	
Domain	Continuity of Coverage
Waiver Goal	For individuals, whose incomes fluctuate, the Demonstration will permit continuity of health plans and provider networks.
Hypothesis 2	Premium assistance beneficiaries will maintain continuous access to the same health plans, and will maintain continuous access to providers.
Measure Description	The percentage of members who transitioned from NH Healthy Families Medicaid coverage to Ambetter QHP, and the percentage of members who transitioned from Ambetter QHP to NH Health Families Medicaid.
Eligible Population	All Medicaid members enrolled in NH Healthy Families who transitioned to a QHP, and all Ambetter members.
Numerator	1) Number of NH Healthy Families members who gained coverage under Ambetter. 2) Number of Ambetter members who gained coverage under NH Family Services. Enrollment in a NH Healthy Families, Ambetter, or another qualifying QHP will be identified using the BP ID in the Benefit Plan enrollment spans file. The following BP IDs designate enrollment in either an MCM or QHP.
Denominator	The eligible population.
Data Source(s)	Eligibility and enrollment files
Measure ID	2-4

List of Medicaid Care Management and Qualified Health Plan IDs	
NH Healthy Families Plan ID	NHHLFM
Ambetter Plan ID	AMBBC1, AMBBC2
QHP Plan ID	ATHSL1, ATHSL2, CHOCA1, CHOCA2, HPHEH1, HPHEH2, HPHEH3, HPHEH4, HPHSH1, HPHSH2, HPHSH3, HPHSH4, MMHSA1, MMHSA2, MMHSA3, MMHSA4

Plan Variety

Continuity in Plan Enrollment—Average Number of Gaps in Enrollment

Continuity in Plan Enrollment	
Domain	Plan Variety
Waiver Goal	The Demonstration could also encourage Medicaid Care Management carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and could encourage QHP carriers to seek Medicaid managed care contracts.
Hypothesis 3	Premium assistance beneficiaries, including those who become eligible for Exchange Marketplace coverage, will have equal or fewer gaps in plan enrollment, equal or improved continuity of care, and resultant equal or lower administrative costs.
Measure Description	The average number of gaps in enrollment from any MCO or PAP QHP per 100 enrollee years.
Eligible Population	PAP and non-PAP members continuously enrolled for six months or more during 2016.
Numerator	The number of gaps in any member's MCO or PAP QHP enrollment. A gap is defined as a lapse in coverage lasting more than 45 calendar days, or at least two gaps of between one and 45 calendar days during the measurement year.
Denominator	Total number of enrolled months for the eligible population, divided by 12 and divided by 100.
Data Source(s)	Eligibility and enrollment databases
Measure ID	3-1

Statistical Testing

- Difference-in-differences

Continuity in Plan Enrollment—Percentage of Eligible Members With Continuous Access to Health Plan

Continuity in Plan Enrollment	
Domain	Plan Variety
Waiver Goal	The Demonstration could also encourage Medicaid Care Management carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and could encourage QHP carriers to seek Medicaid managed care contracts.
Hypothesis 3	Premium assistance beneficiaries, including those who become eligible for Exchange Marketplace coverage, will have equal or fewer gaps in plan enrollment, equal or improved continuity of care, and resultant equal or lower administrative costs.
Measure Description	Percentage of eligible members with continuous access to any Medicaid MCO or PAP health plan during the measurement period.
Eligible Population	PAP and non-PAP members continuously enrolled for six months or more during 2016.
Numerator	The number of members who did not have any gaps in MCO or PAP QHP coverage during the measurement period. A gap is defined as a lapse in coverage lasting more than 45 calendar days, or at least two gaps of between one and 45 calendar days during the measurement year.
Denominator	The eligible population
Data Source(s)	Eligibility and enrollment databases
Measure ID	3-2

Statistical Testing

- Difference-in-differences

Patient Perspective on Continuity of Care

Patient Perspective on Continuity of Care	
Domain	Plan Variety
Waiver Goal	The Demonstration could also encourage Medicaid Care Management carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and could encourage QHP carriers to seek Medicaid managed care contracts.
Hypothesis 3	Premium assistance beneficiaries, including those who become eligible for Exchange Marketplace coverage, will have equal or fewer gaps in plan enrollment, equal or improved continuity of care, and resultant equal or lower administrative costs.
Measure Description	The percentage of members who respond "usually" or "always" to the following question: "In the last 6 months, how often did your personal doctor seem informed and up-to-date about the care you got from these doctors or other health providers?" Responses and their corresponding coding values for statistical testing are as follows: **Response Choices** / **Coding Value** Never / 0 Sometimes / 0 Usually / 1 Always / 1
Eligible Population	PAP and non-PAP sample frame.
Numerator	The number of members who respond "yes" to the following question: "In the last 6 months, how often did your personal doctor seem informed and up-to-date about the care you got from these doctors or other health providers?"
Denominator	The number of valid responses from the eligible population.
Data Source(s)	CAHPS 2017 Survey
Measure ID	3-3

Statistical Testing

- Interim Evaluation Report
  - *z*-test
- Final Evaluation Report
  - Difference-in-differences

Plan Perspective on Continuity of Enrollment on Administrative Costs

Plan Perspective on Continuity of Enrollment on Administrative Costs	
Domain	Plan Variety
Waiver Goal	The Demonstration could also encourage Medicaid Care Management carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and could encourage QHP carriers to seek Medicaid managed care contracts.
Hypothesis 3	Premium assistance beneficiaries, including those who become eligible for Exchange Marketplace coverage, will have equal or fewer gaps in plan enrollment, equal or improved continuity of care, and resultant equal or lower administrative costs.
Measure Description	Ask the plans the extent to which members changing plans increases their administrative costs. Ask to what extent the implementation of PAP has reduced the number/percent of members changing plans.
Eligible Population	PAP QHPs and Medicaid MCOs
Data Source(s)	2017 Plan Interviews
Measure ID	3-4

Statistical Testing

- Interim Evaluation Report
  - Qualitative Review of Interview Responses
- Final Evaluation Report
  - Qualitative Review of Interview Responses

Medicaid Managed Care Carriers Offering QHPs in the Marketplace

Medicaid Managed Care Carriers Offering QHPs in the Marketplace	
Domain	Plan Variety
Waiver Goal	The Demonstration encourages Medicaid Managed Care carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and could encourage QHP carriers to seek Medicaid managed care contracts.
Hypothesis 4	The Demonstration leads to an increase in plan variety by encouraging Medicaid Managed Care carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and encouraging QHP carriers to seek Medicaid managed care contracts.
Measure Description	Desk audit for the number of Medicaid Managed Care carriers offering QHPs in the Marketplace at the start of the waiver and annually thereafter for which dual participation could be an option.
Eligible Population	All Bridge Plans, PAP Plans, QHP Plans, and MCOs
Numerator	Count of the number of Medicaid Managed Care carriers offering QHPs in the Marketplace for which dual participation could be an option.
Data Source(s)	Internet Research
Measure ID	4-1

Statistical Testing

- None

QHPs in the Marketplace Offering Medicaid MCO Plans

QHPs in the Marketplace Offering Medicaid MCO Plans	
Domain	Plan Variety
Waiver Goal	The Demonstration encourages Medicaid Managed Care carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and could encourage QHP carriers to seek Medicaid managed care contracts.
Hypothesis 4	The Demonstration leads to an increase in plan variety by encouraging Medicaid Managed Care carriers to offer QHPs in the Marketplace in order to retain Medicaid market share, and encouraging QHP carriers to seek Medicaid managed care contracts.
Measure Description	Desk audit for the number of QHPs for PAP enrollees in the Marketplace offering Medicaid MCO Plans at the start of the waiver and annually thereafter.
Eligible Population	All Bridge Plans, PAP Plans, QHP Plans, and MCOs
Numerator	Count of the number of QHPs in the Marketplace offering Medicaid MCO Plans.
Data Source(s)	Internet Research
Measure ID	4-2

Statistical Testing

- None

Cost-Effective Coverage

Ambulatory Care: Emergency Department Visits Potentially Treatable in Primary Care

Ambulatory Care: Emergency Department Visits Potentially Treatable in Primary Care	
Domain	Cost-Effective Coverage
Waiver Goal	The premium assistance approach will increase QHP enrollment and may result in greater economies of scale and competition among QHPs.
Hypothesis 5	Premium assistance beneficiaries will have equal or lower non-emergent use of emergency room services.
Measure Description	Ambulatory ED visits for conditions potentially treatable in primary care per 1,000 member months. Reporting Units • Age 19–44 years • Age 45–64 years Member age for the numerator should be based on the last day of the month regardless of the age of the member at the time of service.
Eligible Population	Matched treatment group and comparison group.
Numerator	The number of ED visits for conditions potentially treatable in primary care. *Step 1*—Count each visit to an ED once, regardless of the intensity or duration of the visit. Count multiple ED visits on the same date of service as one visit. Identify ED visits during the measurement year using either of the following: • An ED Visit (ED Value Set) **with** a primary diagnosis of (Conditions Potentially Preventable in Primary Care DHHS Value Set) • A procedure code (ED Procedure Code Value Set) with an ED place of service code (ED POS Value Set) **with** a primary diagnosis of (Conditions Potentially Preventable in Primary Care DHHS Value Set) Do not include ED visits that result in an inpatient stay (Inpatient Stay Value Set). An ED visit results in an inpatient stay when the ED date of service and the admission date for the inpatient stay are one calendar day apart or less. *Step 2*—Exclude visits with any of the following: • A principal diagnosis of mental health or chemical dependency (Mental and Behavioral Disorders Value Set). • Psychiatry (Psychiatry Value Set). • Electroconvulsive therapy (Electroconvulsive Therapy Value Set). • Alcohol or drug rehabilitation or detoxification (AOD Rehab and Detox Value Set).
Denominator	The number of member months for the eligible population.
Data Source(s)	PAP encounter data, Electronic Data Interchange (EDI) transaction encounters, and Medicaid Management Information System (MMIS) FFS claims data
Measure Steward	NCQA: HEDIS 2017/NH DHHS
Measure Source	Ambulatory Care (AMB) – with modifications based on AMBCARE.07: Emergency Department Visits – Potentially Treatable in Primary Care by Age Group - Excluding NHHP Members
Measure ID	5-1

Statistical Testing

- Difference-in-differences

Inpatient Hospital Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members

Inpatient Hospital Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members	
Domain	Cost-Effective Coverage
Waiver Goal	The premium assistance approach will increase QHP enrollment and may result in greater economies of scale and competition among QHPs.
Hypothesis 6	Premium assistance beneficiaries will have equal or lower rates of potentially preventable emergency department and hospital admissions.
Measure Description	Quarterly rate of inpatient hospital utilization for ambulatory care sensitive conditions for overall AHRQ Prevention Quality Indicators (PQI) Composite per 1,000 adult Medicaid member months.
Eligible Population	Matched treatment group and comparison group.
Numerator	Acute inpatient discharges, for patients ages 18 years and older, that meet the inclusion and exclusion rules for the numerator in any of the following PQIs: • PQI #1 Diabetes Short-Term Complications Admission Rate • PQI #3 Diabetes Long-Term Complications Admission Rate • PQI #5 COPD or Asthma in Older Adults Admission Rate • PQI #7 Hypertension Admission Rate • PQI #8 Heart Failure Admission Rate • PQI #10 Dehydration Admission Rate • PQI #11 Bacterial Pneumonia Admission Rate • PQI #12 Urinary Tract Infection Admission Rate • PQI #14 Uncontrolled Diabetes Admission Rate • PQI #15 Asthma in Younger Adults Admission Rate • PQI #16 Lower-Extremity Amputation among Patients with Diabetes Rate Discharges that meet the inclusion and exclusion rules for the numerator in more than one of the above PQIs are counted only once in the composite numerator. To identify acute inpatient discharges: 1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set). 2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set). 3. Identify the discharge date for the stay. ***PQI 1: Diabetes Short-Term Complications Admission*** **Numerator:** Number of discharges of members ages 18 and older with an ICD-9-CM or ICD-10-CM principal diagnosis code for diabetes short-term complications (Diabetes with Short Term Complications PQI Value Set). **Exclusions:** Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 3: Diabetes Long-Term Complications Admission*** **Numerator**: Number of discharges of members ages 18 and older with an ICD-9-CM or ICD-10-CM principal diagnosis code for diabetes long-term complications (Diabetes with Long Term Complications PQI Value Set). **Exclusions**: Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 5: COPD or Asthma in Older Adults Admission*** **Numerator**: Number of discharges of members ages 40 and older with any one of the following: • Principal diagnosis code for COPD (excluding acute bronchitis—COPD PQI Value Set)

Inpatient Hospital Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members	
	• Principal diagnosis code for asthma (Asthma PQI Value Set) **Exclusions**: Members with a diagnosis for cystic fibrosis and anomalies of the respiratory system (Cystic Fibrosis PQI Value Set). Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 7: Hypertension Admission*** **Numerator**: Number of discharges of members ages 18 and older with an ICD-9-CM or ICD-10-CM principal diagnosis code for hypertension (Hypertension PQI Value Set). **Exclusions**: Members with a procedure code for cardiac procedure (Cardiac Procedures Value Set). Also, exclude members with a diagnosis for Stage I–IV kidney disease if the diagnosis is accompanied by a procedure code for dialysis (Kidney Disease PQI Value Set with Dialysis Access Procedures PQI Value Set). Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 8: Heart Failure Admission*** **Numerator**: Number of discharges of members ages 18 and older with an ICD-9-CM or ICD-10-CM principal diagnosis code for heart failure (Heart Failure PQI Value Set). **Exclusions**: Exclude patients with a listed procedure code for cardiac procedure (Cardiac Procedures PQI Value Set). Patients who were transferred to the hospital from another hospital (different facility), SNF or ICF, or another health care facility are excluded from the numerator of the measure (Table PQI–A). Patients with a missing principal diagnosis on admission are excluded. ***PQI 10: Dehydration Admission Rate*** **Numerator**: Number of discharges for members ages 18 years and older with either: • A principal ICD-9-CM or ICD-10-CM diagnosis code for dehydration (Dehydration PQI Value Set) • Any secondary ICD-9-CM or ICD-10-CM diagnosis codes for dehydration (Dehydration PQI Value Set) ***and*** a principal ICD-9-CM or ICD-10-CM diagnosis code for hyperosmolality and/or hypernatremia (Hyperosmolality and Hypernatremia PQI Value Set), gastroenteritis (Gastroenteritis PQI Value Set), or acute kidney injury (Acute Kidney Failure PQI Value Set) **Exclusions**: Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. Exclude any listed ICD-9-CM or ICD-10-CM diagnosis code for chronic renal failure (Chronic Renal Failure PQI Value Set). ***PQI 11: Bacterial Pneumonia Admission Rate*** **Numerator**: Number of discharges for members ages 18 years and older, with a principal ICD-9-CM or ICD-10-CM diagnosis code for bacterial pneumonia (Bacterial Pneumonia PQI Value Set). **Exclusions**: Members with any ICD-9-CM or ICD-10-CM diagnosis codes for sickle cell anemia or HB-S disease (Sickle Cell Anemia or HB-S Disease PQI Value Set) ***or*** members with immunocompromised state (Immunocompromised State PQI Value Set). Exclude members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 12: Urinary Tract Infection Admission Rate*** **Numerator**: Number of discharges for members ages 18 years and older with a principal ICD-9-CM or ICD-10-CM diagnosis code for urinary tract infection (Urinary Tract Infection PQI Value Set). **Exclusions**: Members with a kidney/urinary tract disorder (Kidney or Urinary Tract Disorder PQI Value Set) ***or*** members with immunocompromised state (Immunocompromised State PQI Value Set). Exclude members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded.

Inpatient Hospital Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members	
	PQI 14: Uncontrolled Diabetes Admission **Numerator**: Number of discharges of members ages 18 and older with an ICD-9-CM or ICD-10-CM principal diagnosis code for uncontrolled diabetes, without mention of a short-term or long-term complication (Diabetes Uncontrolled PQI Value Set). **Exclusions**: Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 15: Asthma in Younger Adults Admission*** **Numerator**: Number of discharges of members ages 18 through 39 years with an ICD-9-CM or ICD-10-CM principal diagnosis code for asthma (Asthma PQI Value Set). **Exclusions**: Members with a diagnosis for cystic fibrosis and anomalies of the respiratory system (Cystic Fibrosis PQI Value Set). Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 16: Lower-Extremity Amputations Among Patients with Diabetes*** **Numerator**: Number of discharges of members ages 18 and older with any listed diagnosis code for lower-extremity amputation and any listed diagnosis code of diabetes (Lower Extremity Amputation PQI Value Set and Diabetes PQI Value Set). **Exclusions**: Members with any listed diagnosis for traumatic amputation of the lower extremity (Traumatic Amputation Lower Extremity PQI Value Set), members with an obstetric discharge, (Obstetric Discharge PQI Value Set), and members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded.
Denominator	The number of member months for the eligible population.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	AHRQ Version 6.0
Measure Source	PQI 92 AHRQ Quality Indicators
Measure ID	6-1

Table PQI-A: Admission Codes for Transfers	
Point of Origin UB-04 Code	**Description**
4	Transfer from a hospital
5	Transfer from a skilled nursing facility or intermediate care facility
6	Transfer from another health care facility

Statistical Testing

- Difference-in-differences

Emergency Department Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members

Emergency Department Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members	
Domain	Cost-Effective Coverage
Waiver Goal	The premium assistance approach will increase QHP enrollment and may result in greater economies of scale and competition among QHPs.
Hypothesis 6	Premium assistance beneficiaries will have equal or lower rates of potentially preventable emergency department and hospital admissions.
Measure Description	Quarterly rate of ED utilization for ambulatory care sensitive conditions for overall AHRQ PQI Composite per 1,000 adult Medicaid member months.
Eligible Population	Matched treatment group and comparison group.
Numerator	Emergency department visits, for patients ages 19 years and older, that meet the inclusion and exclusion rules for the numerator in any of the following PQIs: • PQI #1 Diabetes Short-Term Complications Admission Rate • PQI #3 Diabetes Long-Term Complications Admission Rate • PQI #5 COPD or Asthma in Older Adults Admission Rate • PQI #7 Hypertension Admission Rate • PQI #8 Heart Failure Admission Rate • PQI #10 Dehydration Admission Rate • PQI #11 Bacterial Pneumonia Admission Rate • PQI #12 Urinary Tract Infection Admission Rate • PQI #14 Uncontrolled Diabetes Admission Rate • PQI #15 Asthma in Younger Adults Admission Rate • PQI #16 Lower-Extremity Amputation among Patients with Diabetes Rate ED visits that meet the inclusion and exclusion rules for the numerator in more than one of the above PQIs are counted only once in the composite numerator. Identify ED visits during the measurement year using either of the following: • An ED Visit (ED Value Set) • A procedure code (ED Procedure Code Value Set) with an ED place of service code (ED POS Value Set) Do not include ED visits that result in an inpatient stay (Inpatient Stay Value Set). An ED visit results in an inpatient stay when the ED date of service and the admission date for the inpatient stay are one calendar day apart or less. **Exclusions:** ED Visits with any of the following: • A principal diagnosis of mental health or chemical dependency (Mental and Behavioral Disorders Value Set) • Psychiatry (Psychiatry Value Set) • Electroconvulsive therapy (Electroconvulsive Therapy Value Set) • Alcohol of drug rehabilitation or detoxification (AOD Rehab and Detox Value Set) ***PQI 1: Diabetes Short-Term Complications Admission*** **Numerator**: Number of discharges of members ages 18 and older with an ICD-9-CM or ICD-10-CM principal diagnosis code for diabetes short-term complications (Diabetes with Short Term Complications PQI Value Set). **Exclusions**: Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 3: Diabetes Long-Term Complications Admission*** **Numerator**: Number of discharges of members ages 18 and older with an ICD-9-CM or ICD-10-CM principal diagnosis code for diabetes long-term complications (Diabetes with Long Term Complications PQI Value Set).

Emergency Department Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members	
	Exclusions: Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 5: COPD or Asthma in Older Adults Admission*** **Numerator**: Number of discharges of members ages 40 and older with any one of the following: • Principal diagnosis code for COPD (excluding acute bronchitis—COPD PQI Value Set) • Principal diagnosis code for asthma (Asthma PQI Value Set) **Exclusions**: Members with a diagnosis for cystic fibrosis and anomalies of the respiratory system (Cystic Fibrosis PQI Value Set). Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 7: Hypertension Admission*** **Numerator**: Number of discharges of members ages 18 and older with an ICD-9-CM or ICD-10-CM principal diagnosis code for hypertension (Hypertension PQI Value Set). **Exclusions**: Members with a procedure code for cardiac procedure (Cardiac Procedures Value Set). Also, exclude members with a diagnosis for Stage I–IV kidney disease if the diagnosis is accompanied by a procedure code for dialysis (Kidney Disease PQI Value Set with Dialysis Access Procedures PQI Value Set). Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 8: Heart Failure Admission*** **Numerator**: Number of discharges of members ages 18 and older with an ICD-9-CM or ICD-10-CM principal diagnosis code for heart failure (Heart Failure PQI Value Set). **Exclusions**: Exclude patients with a listed procedure code for cardiac procedure (Cardiac Procedures PQI Value Set). Patients who were transferred to the hospital from another hospital (different facility), SNF or ICF, or another health care facility are excluded from the numerator of the measure (Table PQI–A). Patients with a missing principal diagnosis on admission are excluded. ***PQI 10: Dehydration Admission Rate*** **Numerator**: Number of discharges for members ages 18 years and older with either: • A principal ICD-9-CM or ICD-10-CM diagnosis code for dehydration (Dehydration PQI Value Set) • Any secondary ICD-9-CM or ICD-10-CM diagnosis codes for dehydration (Dehydration PQI Value Set) ***and*** a principal ICD-9-CM or ICD-10-CM diagnosis code for hyperosmolality and/or hypernatremia (Hyperosmolality and Hypernatremia PQI Value Set), gastroenteritis (Gastroenteritis PQI Value Set), or acute kidney injury (Acute Kidney Failure PQI Value Set) **Exclusions**: Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. Exclude any listed ICD-9-CM or ICD-10-CM diagnosis code for chronic renal failure (Chronic Renal Failure PQI Value Set). ***PQI 11: Bacterial Pneumonia Admission Rate*** **Numerator**: Number of discharges for members ages 18 years and older, with a principal ICD-9-CM or ICD-10-CM diagnosis code for bacterial pneumonia (Bacterial Pneumonia PQI Value Set). **Exclusions**: Members with any ICD-9-CM or ICD-10-CM diagnosis codes for sickle cell anemia or HB-S disease (Sickle Cell Anemia or HB-S Disease PQI Value Set) ***or*** members with immunocompromised state (Immunocompromised State PQI Value Set). Exclude members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 12: Urinary Tract Infection Admission Rate***

Emergency Department Utilization for Ambulatory Care Sensitive Conditions for Adult Medicaid Members	
	Numerator: Number of discharges for members ages 18 years and older with a principal ICD-9-CM or ICD-10-CM diagnosis code for urinary tract infection (Urinary Tract Infection PQI Value Set). **Exclusions**: Members with a kidney/urinary tract disorder (Kidney or Urinary Tract Disorder PQI Value Set) ***or*** members with immunocompromised state (Immunocompromised State PQI Value Set). Exclude members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 14: Uncontrolled Diabetes Admission*** **Numerator**: Number of discharges of members ages 18 and older with an ICD-9-CM or ICD-10-CM principal diagnosis code for uncontrolled diabetes, without mention of a short-term or long-term complication (Diabetes Uncontrolled PQI Value Set). **Exclusions**: Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 15: Asthma in Younger Adults Admission*** **Numerator**: Number of discharges of members ages 18 through 39 years with an ICD-9-CM or ICD-10-CM principal diagnosis code for asthma (Asthma PQI Value Set). **Exclusions**: Members with a diagnosis for cystic fibrosis and anomalies of the respiratory system (Cystic Fibrosis PQI Value Set). Members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded. ***PQI 16: Lower-Extremity Amputations Among Patients with Diabetes*** **Numerator**: Number of discharges of members ages 18 and older with any listed diagnosis code for lower-extremity amputation and any listed diagnosis code of diabetes (Lower Extremity Amputation PQI Value Set and Diabetes PQI Value Set). **Exclusions**: Members with any listed diagnosis for traumatic amputation of the lower extremity (Traumatic Amputation Lower Extremity PQI Value Set), members with an obstetric discharge, (Obstetric Discharge PQI Value Set), and members who transferred to a hospital from another hospital (different facility), SNF or ICF, or another health care facility (Table PQI–A). In addition, members with missing principal diagnosis codes on admission are excluded.
Denominator	The number of member months for the eligible population
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	AHRQ Version 6.0
Measure Source	PQI 92 AHRQ Quality Indicators
Measure ID	6-2

Table PQI-A: Admission Codes for Transfers	
Point of Origin UB-04 Code	**Description**
4	Transfer from a hospital
5	Transfer from a skilled nursing facility or intermediate care facility
6	Transfer from another health care facility

Statistical Testing

- Difference-in-differences

Plan Perspective on Program Impact on Marketplace Entry

Plan Perspective on Program Impact on Marketplace Entry	
Domain	Cost Effective Coverage
Waiver Goal	The premium assistance approach will increase QHP enrollment and may result in greater economies of scale and competition among QHPs.
Hypothesis 7	Implementation of the program will result in more Medicaid plans deciding to enter the NH health insurance marketplace.
Measure Description	Ask Medicaid plans the extent to which implementation of the PAP program has influenced their decision to expand into the NH marketplace or the extent to which they have considered such expansions. Ask QHPs to what extent PAP influenced their decision to enter the NH marketplace.
Eligible Population	PAP QHPs and Medicaid MCOs
Data Source(s)	2017 Plan Interviews
Measure ID	7-1

Statistical Testing

- Interim Evaluation Report
  - Qualitative Review of Interview Responses
- Final Evaluation Report
  - Qualitative Review of Interview Responses

Uniform Provider Access

Medication Management for People with Asthma (MMA)

Medication Management for People with Asthma (MMA)	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 8	Premium assistance beneficiaries will have equal or better access to care, including primary care and specialty physician networks and services.
Measure Description	The percentage of members 5–64 years of age during the measurement year who were identified as having persistent asthma and were dispensed appropriate medications that they remained on for at least 75 percent of their treatment period.
Eligible Population	Matched treatment group and comparison group with continuous enrollment in the measurement year and the year prior to the measurement year. Members cannot have more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Member must be enrolled on the last day of the measurement year.
Numerator	The number of members who achieved a proportion of days covered (PDC) of at least 75 percent for their asthma controller medications (Table MMA-B) during the measurement year. *Step 1*—Identify the Index Prescription Start Date (IPSD). The earliest dispensing event for any asthma controller medication (Table MMA-B) during the measurement year. *Step 2*—The treatment period is the period beginning on the IPSD through the end of the measurement year. Count the number of days during the member's treatment period. *Step 3*—Count the days covered by at least one prescription for an asthma controller medication (Table MMA-B) during the treatment period. *Step 4*—Calculate the member's PDC as the count of days from Step 3/count of days from Step 2.

Medication Management for People with Asthma (MMA)	
Denominator	*Step 1*—Identify members as having persistent asthma who met at least one of the following criteria during both the measurement year and the year prior to the measurement year. Criteria need not be the same across both years. • At least one ED visit (ED Value Set), with a principal diagnosis of asthma (Asthma Value Set). • At least one acute inpatient stay (Acute Inpatient Value Set), with a principal diagnosis of asthma (Asthma Value Set). • At least four outpatient visits (Outpatient Value Set) or observation visits (Observation Value Set) on different dates of service, with any diagnosis of asthma (Asthma Value Set) and at least two asthma medication dispensing events (Table MMA-A). Visit type need not be the same for the four visits. • At least four asthma medication dispensing events (Table MMA-A). *Step 2*—A member identified in Step 1 where leukotriene modifiers or antibody inhibitors were the sole asthma medication dispensed in that year, must also have at least one diagnosis of asthma (Asthma Value Set) in the same year as the dispensing event. *Step 3*—Exclude members who met any of the following criteria: • Members who had any diagnosis from any of the following value sets, any time during the member's history through December 31 of the measurement year. o Emphysema Value Set o Other Emphysema Value Set o COPD Value Set o Obstructive Chronic Bronchitis Value Set o Chronic Respiratory Conditions Due to Fumes/Vapors Value Set o Cystic Fibrosis Value Set o Acute Respiratory Failure Value Set • Members who had no asthma controlling medications (Table MMA-B) dispensed during the measurement year.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2017
Measure Source	Medication Management for People with Asthma (MMA)
Measure ID	8-1

Table MMA-A: Asthma Medications		
Description	**Prescription**	
Antiasthmatic combinations	• Dyphylline-guaifenesin	• Guaifenesin-theophylline
Antibody inhibitor	• Omalizumab	
Inhaled steroid combinations	• Budesonide-formoterol • Fluticasone-salmeterol	• Mometasone-formoterol
Inhaled corticosteroids	• Beclomethasone • Budesonide • Ciclesonide	• Flunisolide • Fluticasone CFC free • Mometasone
Leukotriene modifiers	• Montelukast • Zafirlukast	• Zileuton
Mast cell stabilizers	• Cromolyn	
Methylxanthines	• Aminophylline • Dyphylline	• Theophylline
Short acting, inhaled beta-2 agonists	• Albuterol • Levalbuterol	• Pirbuterol

Table MMA-B: Asthma Controller Medications		
Description	**Prescription**	
Antiasthmatic combinations	• Dyphylline-guaifenesin	• Guaifenesin-theophylline
Antibody inhibitor	• Omalizumab	
Inhaled steroid combinations	• Budesonide-formoterol • Fluticasone-salmeterol	• Mometasone-formoterol
Inhaled corticosteroids	• Beclomethasone • Budesonide • Ciclesonide	• Flunisolide • Fluticasone CFC free • Mometasone
Leukotriene modifiers	• Montelukast • Zafirlukast	• Zileuton
Mast cell stabilizers	• Cromolyn	
Methylxanthines	• Aminophylline • Dyphylline	• Theophylline

Statistical Testing

- Difference-in-differences

Timeliness of Prenatal Care

Timeliness of Prenatal Care	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 8	Premium assistance beneficiaries will have equal or better access to care, including primary care and specialty physician networks and services.
Measure Description	For women, the percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year who received prenatal care according to HEDIS specifications for the measure.
Eligible Population	Matched treatment group and comparison group continuously enrolled 43 days prior to delivery through 56 days after delivery.
Numerator	A prenatal visit in the first trimester on the enrollment start date or within 42 days of enrollment, depending on the date of enrollment and the gaps in enrollment during the pregnancy. *Include only visits that occur while the member was enrolled in the respective program. The respective program is Medicaid MCO enrollment for matched non-PAP members and PAP members during the baseline year, and the PAP for PAP members during the evaluation year.* *Step 1*—Determine enrollment status during the first trimester. Identify women who were enrolled on or before 280 days prior to delivery (or estimated date of delivery [EDD]). For these women, proceed to Step 2. For women not enrolled on or before 280 days prior to delivery (or EDD), who were therefore pregnant at the time of enrollment, proceed to Step 3. *Step 2*—Determine continuous enrollment for the first trimester. Identify women from Step 1 who were continuously enrolled during the first trimester (176-280 days prior to delivery [or EDD]), with no gaps in enrollment. For these women, determine numerator compliance using the decision rules for *Identifying Prenatal Care for Women Continuously Enrolled During the First Trimester*. For women who were not continuously enrolled during the first trimester (e.g. had a gap between 176 and 280 days before delivery), proceed to Step 3. *Step 3*—Determine the start date of the last enrollment segment (i.e., the enrollment segment during the pregnancy with the start date that is closest to the delivery date). • For women whose last enrollment started on or between 219 and 279 days before delivery, proceed to Step 4. • For women whose last enrollment started less than 219 days before delivery, proceed to Step 5. *Step 4*—Determine numerator compliance. If the last enrollment segment started on or between 219 and 279 days before delivery, determine numerator compliance using the instructions for *Identifying Prenatal Care for Women Not Continuously Enrolled During the First Trimester* and find a visit on or between the last enrollment start date and 176 days before delivery. *Step 5*—Determine numerator compliance. If the last enrollment segment started between 219 days and the date of delivery (exclusive), determine numerator compliance using the instructions for *Identifying Prenatal Care for Women Not Continuously Enrolled During the First Trimester* and find a visit on the enrollment start date or within 42 days after enrollment. **Identifying Prenatal Care for Women Continuously Enrolled During the First Trimester** There are **three** decision rules for identifying prenatal visits. The dates of service for all criteria must be during the first trimester (between 176 and 280 days prior to the delivery date or EDD). **Decision Rule 1**: A visit for prenatal care (Stand Alone Prenatal Visits Value Set) or bundled service (Prenatal Bundled Services Value Set) during the first trimester, where the practitioner type is an OB/GYN or other prenatal care practitioner, or PCP. Vital statistics will be used to determine the date that bundled services were initiated.

Timeliness of Prenatal Care	
	Decision Rule 2: Any visit to an OB/GYN or other prenatal care practitioner with a prenatal visit (Prenatal Visits Value Set) with one of the following: • An obstetric panel (Obstetric Panel Value Set). • An ultrasound (echocardiography) of the pregnant uterus (Prenatal Ultrasound Value Set). • A pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set). • All of the following: o Toxoplasma (Toxoplasma Antibody Value Set) o Rubella (Rubella Antibody Value Set) o Cytomegalovirus (Cytomegalovirus Antibody Value Set) o Herpes simplex (Herpes Simplex Antibody Value Set) • Rubella (Rubella Antibody Value Set) and at least one of the following: o ABO (ABO Value Set) o Rh (Rh Value Set) **Decision Rule 3**: Any of the following during the first trimester, where the practitioner type is a PCP with a pregnancy related ICD-CM diagnosis code (Pregnancy Diagnosis Value Set) and a prenatal visit (Prenatal Visits Value Set) ***and*** one of the following: • An obstetric panel (Obstetric Panel Value Set) • An ultrasound (echocardiography) of the pregnant uterus (Prenatal Ultrasound Value Set) • All of the following: o Toxoplasma (Toxoplasma Antibody Value Set) o Rubella (Rubella Antibody Value Set) o Cytomegalovirus (Cytomegalovirus Antibody Value Set) o Herpes simplex (Herpes Simplex Antibody Value Set) • Rubella (Rubella Antibody Value Set) and at least one of the following: o ABO (ABO Value Set) o Rh (Rh Value Set) Note: For Decision Rule 3 criteria that require a prenatal visit code ***and*** a pregnancy-related diagnosis code, codes must be on the same claim. **Identifying Prenatal Care for Women Not Continuously Enrolled During the First Trimester** Any of the following, where the practitioner type is an OB/GYN or other prenatal care practitioner or PCP, meet the criteria: • A bundled service (Prenatal Bundled Services Value Set). Vital statistics will be used to determine the date that bundled services were initiated • A visit for prenatal care (Stand Alone Prenatal Visits Value Set) • A prenatal visit (Prenatal Visits Value Set) with an ultrasound of the pregnant uterus (Prenatal Ultrasound Value Set) • A prenatal visit (Prenatal Visits Value Set) with a principal pregnancy-related diagnosis code (Pregnancy Diagnosis Value Set) Note: For criteria that require a prenatal visit code and a pregnancy-related diagnosis code, codes must be on the same claim.

Timeliness of Prenatal Care	
Denominator	Women with a live birth on or between November 6 of the year prior to the measurement year and November 5 of the measurement year. Delivery can be in any setting. Multiple births: Women who had two separate deliveries (different dates of service) between November 6 of the year prior to the measurement year and November 5 of the measurement year count twice. Dates of service must be 210 or more calendar days apart. Women who had multiple live births during one pregnancy (within 210 calendar days) count once. Identify live births: 1. Identify all women with a delivery (Deliveries Value Set) on or between November 6 of the year prior to the measurement year and November 5 of the measurement year. 2. Exclude non-live births (Non-live Births Value Set) Determine if enrollment in respective program was continuous 43 days prior to delivery through 56 days after delivery, with no gaps.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data; Matched vital statistics
Measure Steward	HEDIS 2017
Measure Source	Prenatal and Postpartum Care (PPC)
Measure ID	8-2

Statistical Testing

- Difference-in-differences

Postpartum Care

Postpartum Care	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 8	Premium assistance beneficiaries will have equal or better access to care, including primary care and specialty physician networks and services.
Measure Description	For women, the percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year who received postpartum care according to HEDIS specifications for the measure.
Eligible Population	Matched treatment group and comparison group continuously enrolled 43 days prior to delivery through 56 days after delivery.
Numerator	Any of the following on or between 21 and 56 days after delivery meet criteria: • A postpartum visit (Postpartum Visits Value Set) • Cervical cytology (Cervical Cytology Value Set) A bundled service (Postpartum Bundled Services Value Set). Vital statistics will be used to determine the date that bundled services were initiated, if available.
Denominator	Women with a live birth on or between November 6 of the year prior to the measurement year and November 5 of the measurement year. Delivery can be in any setting. Multiple births: Women who had two separate deliveries (different dates of service) between November 6 of the year prior to the measurement year and November 5 of the measurement year count twice. Dates of service must be 210 or more calendar days apart. Women who had multiple live births during one pregnancy (within 210 calendar days) count once. Matched vital statistics will be used where applicable to identify the delivery date of live births. For members where vital statistics cannot be used to identify the delivery date, use the following steps to identify live births: 1. Identify all women with a delivery (Deliveries Value Set) on or between November 6 of the year prior to the measurement year and November 5 of the measurement year. 2. Exclude non-live births (Non-live Births Value Set) Determine if enrollment in respective program was continuous 43 days prior to delivery through 56 days after delivery, with no gaps.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data; Matched vital statistics
Measure Steward	HEDIS 2017
Measure Source	Prenatal and Postpartum Care (PPC)
Measure ID	8-3

Statistical Testing

- Difference-in-differences

Patients' Perception of Quick Access to Needed Care

Patients' Perception of Quick Access to Needed Care	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 8	Premium assistance beneficiaries will have equal or better access to care, including primary care and specialty physician networks and services.
Measure Description	For respondents, a proportional choice for "In the last 6 months, when you needed care right away, how often did you get care as soon as you needed?" for responses "Never/Sometimes/Usually/Always".
Eligible Population	PAP and non-PAP sample frame.
Numerator	Three summary rates will be evaluated based on different numeric representation of the responses to the following question: "In the last 6 months, when you needed care right away, how often did you get care as soon as you needed?" Responses and their corresponding coding values for statistical testing are as follows: **Response Choices** / **Coding Value** Never / 0 Sometimes / 0 Usually / 1 Always / 1
Denominator	The number of valid responses from the eligible population.
Data Source(s)	CAHPS 2015 and 2017 Survey
Measure ID	8-4

Note: this was measure 8-5 in the original evaluation plan.

Statistical Testing

- Interim Evaluation Report
  - z-test
- Final Evaluation Report
  - Difference-in-differences

Patients' Perception of Ease of Getting Appointments with Specialists

Patients' Perception of Ease of Getting Appointments with Specialists	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 8	Premium assistance beneficiaries will have equal or better access to care, including primary care and specialty physician networks and services.
Measure Description	For respondents, a proportional choice for "In the last 6 months, how often did you get an appointment to see a specialist as soon as you needed?" for responses "Never/Sometimes/Usually/Always".
Eligible Population	PAP and non-PAP sample frame.
Numerator	Three summary rates will be evaluated based on different numeric representation of the responses to the following question: "In the last 6 months, how often did you get an appointment to see a specialist as soon as you needed?" Responses and their corresponding coding values for statistical testing are as follows:
Denominator	The number of valid responses from the eligible population.
Data Source(s)	CAHPS 2015 and 2017 Survey
Measure ID	8-5

Response Choices	Coding Value
Never	0
Sometimes	0
Usually	1
Always	1

Note: this was measure 8-4 in the original evaluation plan.

Statistical Testing

- Interim Evaluation Report
  - z-test
- Final Evaluation Report
  - Difference-in-differences

Adults' Access to Ambulatory/Preventive Health Services

Adults' Access to Ambulatory/Preventive Health Services	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 8	Premium assistance beneficiaries will have equal or better access to care, including primary care and specialty physician networks and services.
Measure Description	The percentage of eligible members, age 20 years through 64 years, who had an ambulatory or preventive care visit, by age group.
Eligible Population	Matched treatment group and comparison group members with continuous enrollment in the measurement year. Members can have one gap in enrollment of up to 45 days. Member must be enrolled on the last day of the measurement year.
Numerator	One or more ambulatory or preventive care visits during the measurement year (Ambulatory Visits Value Set or Other Ambulatory Visits Value Set).
Denominator	The eligible population.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2017
Measure Source	Adults' Access to Preventive/Ambulatory Health Services (AAP)
Measure ID	8-6

Note: this measure was not included in the original evaluation plan.

Statistical Testing

- Difference-in-differences

Adults' Access to Preventive Health Services

Adults' Access to Preventive Health Services	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 9	Premium assistance beneficiaries will have equal or better access to preventive care services.
Measure Description	The percentage of eligible members, age 20 years through 64 years, who had an preventive care visit, by age group.
Eligible Population	Matched treatment group and comparison group members with continuous enrollment in the measurement year. Members cannot can have one gap in enrollment of up to 45 days. Member must be enrolled on the last day of the measurement year.
Numerator	One or more ambulatory or preventive care visits during the measurement year (Preventive Ambulatory Visits Value Set or Other Preventive Ambulatory Visits Value Set).
Denominator	The eligible population.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2017
Measure Source	Revised version of Adults' Access to Preventive/Ambulatory Health Services (AAP)
Measure ID	9-1

Statistical Testing

- Difference-in-differences

Annual Influenza Immunization

Annual Influenza Immunization	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 9	Premium assistance beneficiaries will have equal or better access to preventive care services.
Measure Description	Flu vaccinations for adults ages 18 to 64: percentage of members 18 to 64 years of age who received an influenza vaccination between July 1 of the measurement year and the date on which the CAHPS 5.0 survey was completed.
Eligible Population	PAP and non-PAP sample frame.
Numerator	Number of members who responded "Yes" to the following question: "Have you had either a flu shot or flu spray in the nose since July 1, 2016?"
Denominator	Number of members who responded "Yes" or "No" to the following question: "Have you had either a flu shot or flu spray in the nose since July 1, 2016?"
Data Source(s)	CAHPS 2015 and 2017 Survey
Measure ID	9-3

Statistical Testing

- Interim Evaluation Report
  - *z*-test
- Final Evaluation Report
  - Difference-in-differences

Comprehensive Diabetes Care—Eye Exam

Comprehensive Diabetes Care—Eye Exam	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 9	Premium assistance beneficiaries will have equal or better access to preventive care services.
Measure Description	The percentage of patients 19 to 64 years of age with type 1 or type 2 diabetes who had an eye exam (retinal exam) performed.
Eligible Population	Matched treatment group and comparison group members with continuous enrollment in the measurement year and the year prior to the measurement year. Members cannot have more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Member must be enrolled on the last day of the measurement year.
Numerator	Screening or monitoring for diabetic retinal disease as identified by administrative data. This includes diabetics who had one of the following: • A retinal dilated eye exam by an eye care professional (optometrist or ophthalmologist) in the measurement year. • A **negative** retinal or dilated eye exam (negative for retinopathy) by an eye care professional in the year prior to the measurement year. Any of the following meet criteria: • Any code in the Diabetic Retinal Screening Value Set billed by an eye care professional during the measurement year. • Any code in the Diabetic Retinal Screening Value Set billed by an eye care professional during the year prior to the measurement year, with a negative result (negative for retinopathy). • Any code in the Diabetic Retinal Screening Value Set billed by an eye care professional during the year prior to the measurement year, with a diagnosis of diabetes without complications (Diabetes Mellitus Without Complications Value Set). All codes must be on the same claim. • Any code in the Diabetic Retinal Screening With Eye Care Professional Value Set billed by any provider type during the measurement year. • Any code in the Diabetic Retinal Screening With Eye Care Professional Value Set billed by any provider type during the year prior to the measurement year, with a negative result (negative for retinopathy). • Any code in the Diabetic Retinal Screening Negative Value Set billed by any provider type during the measurement year. Exclusions (optional) • Members who do not have a diagnosis of diabetes (Diabetes Value Set), in any setting, during the measurement year or the year prior to the measurement year **and** who had a diagnosis of gestational diabetes or steroid-induced diabetes (Diabetes Exclusions Value Set), in any setting, during the measurement year or the year prior to the measurement year. • Exclude members from Measure 9-4 if they were excluded through optional exclusions for Measure 9-5.

Comprehensive Diabetes Care—Eye Exam	
Denominator	Members who met any of the following criteria during the measurement year or the year prior to the measurement year: • At least two outpatient visits (Outpatient Value Set), observation visits (Observation Value Set), ED visits (ED Value Set) or nonacute inpatient encounters (Nonacute Inpatient Value Set) on different dates of service **with** a diagnosis of diabetes (Diabetes Value Set). Visit type need not be the same for the two visits. • At least one acute inpatient encounter (Acute Inpatient Value Set) **with** a diagnosis of diabetes (Diabetes Value Set). • Member was dispensed insulin or hypoglycemic/antihyperglycemics on an ambulatory basis (Table CDC-A).
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2017
Measure Source	Comprehensive Diabetes Care (CDC)
Measure ID	9-4

Table CDC-A: Prescriptions to Identify Diabetics Using Pharmacy Data		
Description	**Prescription**	
Alpha-glucosidase inhibitors	• Acarbose	• Miglitol
Amylin analogs	• Pramlinitide	
Antidiabetic combinations	• Alogliptin-metformin • Alogliptin-pioglitazone • Canagliflozin-metformin • Glimepiride-pioglitazone • Glimepiride-rosiglitazone • Glipizide-metformin • Glyburide-metformin • Linagliptin-metformin	• Metformin-pioglitazone • Metformin-repaglinide • Metformin-rosiglitazone • Metformin-saxagliptin • Metformin-sitagliptin • Sitagliptin-simvastatin
Insulin	• Insulin aspart • Insulin aspart-insulin aspart protamine • Insulin detemir • Insulin glargine • Insulin glulisine	• Insulin isophane human • Insulin isophane-insulin regular • Insulin lispro • Insulin lispro-insulin lispro protamine • Insulin regular human • Insulin human inhaled
Meglitinides	• Nateglinide	• Repaglinide
Glucagon-like peptide-1 (GLP1) agonists	• Exenatide • Dualaglutide	• Liraglutide • Albiglutide
Sodium glucose cotransporter 2 (SGLT2) inhibitor	• Canagliflozin • Dapagliflozin	• Empagliflozin

Table CDC-A: Prescriptions to Identify Diabetics Using Pharmacy Data		
Description	**Prescription**	
Sulfonylureas	• Chlorpropamide • Glimepiride • Glipizide	• Glyburide • Tolazamide • Tolbutamide
Thiazolidinediones	• Pioglitazone	• Rosiglitazone
Dipeptidyl peptidase-4 (DDP-4) inhibitors	• Alogliptin • Linagliptin	• Saxagliptin • Sitaglipin

Statistical Testing

- Difference-in-differences

Comprehensive Diabetes Care—HbA1c Testing

Comprehensive Diabetes Care—HbA1c Testing	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire
Hypothesis 9	Premium assistance beneficiaries will have equal or better access to preventive care services.
Measure Description	The percentage of patients 19 to 64 years of age with type 1 or type 2 diabetes who had an HbA1c test performed.
Eligible Population	Matched treatment group and comparison group members with continuous enrollment in the measurement year and the year prior to the measurement year. Members cannot have more than one gap in enrollment of up to 45 days during each year of continuous enrollment. Member must be enrolled on the last day of the measurement year.
Numerator	An HbA1c test (HbA1c Tests Value Set) performed during the measurement year. Exclusions (optional) • Members who do not have a diagnosis of diabetes (Diabetes Value Set), in any setting, during the measurement year or the year prior to the measurement year and who had a diagnosis of gestational diabetes or steroid-induced diabetes (Diabetes Exclusions Value Set), in any setting, during the measurement year or the year prior to the measurement year. • Exclude members from Measure 9-5 if they were excluded through optional exclusions for Measure 9-4.
Denominator	Members who met any of the following criteria during the measurement year or the year prior to the measurement year: • At least two outpatient visits (Outpatient Value Set), observation visits (Observation Value Set), ED visits (ED Value Set) or nonacute inpatient encounters (Nonacute Inpatient Value Set) on different dates of service **with** a diagnosis of diabetes (Diabetes Value Set). Visit type need not be the same for the two visits. • At least one acute inpatient encounter (Acute Inpatient Value Set) **with** a diagnosis of diabetes (Diabetes Value Set). • Member was dispensed insulin or hypoglycemic/antihyperglycemics on an ambulatory basis (Table CDC-A).
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2017
Measure Source	Comprehensive Diabetes Care (CDC)
Measure ID	9-5

Table CDC-A: Prescriptions to Identify Diabetics Using Pharmacy Data		
Description	**Prescription**	
Alpha-glucosidase inhibitors	• Acarbose	• Miglitol
Amylin analogs	• Pramlinitide	
Antidiabetic combinations	• Alogliptin-metformin • Alogliptin-pioglitazone • Canagliflozin-metformin • Glimepiride-pioglitazone • Glimepiride-rosiglitazone • Glipizide-metformin • Glyburide-metformin	• Linagliptin-metformin • Metformin-pioglitazone • Metformin-repaglinide • Metformin-rosiglitazone • Metformin-saxagliptin • Metformin-sitagliptin • Sitagliptin-simvastatin
Insulin	• Insulin aspart • Insulin aspart-insulin aspart protamine • Insulin detemir • Insulin glargine • Insulin glulisine • Insulin isophane human	• Insulin isophane-insulin regular • Insulin lispro • Insulin lispro-insulin lispro protamine • Insulin regular human • Insulin human inhaled
Meglitinides	• Nateglinide	• Repaglinide
Glucagon-like peptide-1 (GLP1) agonists	• Exenatide • Dualaglutide	• Liraglutide • Albiglutide
Sodium glucose cotransporter 2 (SGLT2) inhibitor	• Canagliflozin • Dapagliflozin	• Empagliflozin
Sulfonylureas	• Chlorpropamide • Glimepiride • Glipizide	• Glyburide • Tolazamide • Tolbutamide
Thiazolidinediones	• Pioglitazone	• Rosiglitazone
Dipeptidyl peptidase-4 (DDP-4) inhibitors	• Alogliptin • Linagliptin	• Saxagliptin • Sitaglipin

Statistical Testing

- Difference-in-differences

Use of Spirometry Testing in the Assessment and Diagnosis of COPD

Use of Spirometry Testing in the Assessment and Diagnosis of COPD	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 9	Premium assistance beneficiaries will have equal or better access to preventive care services.
Measure Description	The percentage of members 40 years of age and older with a diagnosis of COPD, who received appropriate spirometry testing to confirm the diagnosis or for the management of COPD.
Eligible Population	Matched treatment group and comparison group members aged 40 years or older as of December 31 of the measurement year, with continuous enrollment in the measurement year with up to one gap in enrollment of up to 45 days. The member must be enrolled in the relevant program on the Index Episode Start Date (IESD).
Numerator	At least one claim or encounter for spirometry (Spirometry Value Set) during the measurement year.
Denominator	The Index Episode Start Date is the first visit with a diagnosis of COPD during the Intake Period, which begins on February 1 to November 30 of the measurement year. The steps below identify the eligible population. *Step 1*—Identify all members who had any of the following during the Intake Period. • An outpatient visit (Outpatient Value Set), an observation visit (Observation Value Set) or an ED visit (ED Value Set) with any diagnosis of COPD (COPD Value Set), emphysema (Emphysema Value Set) or chronic bronchitis (Chronic Bronchitis Value Set). o Do not include ED visits or observation visits that result in an inpatient stay (Inpatient Stay Value Set). An ED visit or observation visit results in an inpatient stay when the ED/observation date of service and the admission date for the inpatient stay are one calendar day apart or less. • An acute inpatient discharge with any diagnosis of COPD (COPD Value Set), emphysema (Emphysema Value Set) or chronic bronchitis (Chronic Bronchitis Value Set). To identify acute inpatient discharges: 1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set). 2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set). 3. Identify the discharge date for the stay. If the member had more than one eligible visit, include only the first stay. *Step 3*—Calculate continuous enrollment. Members must be continuously enrolled in the measurement year.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2017
Measure Source	Use of Spirometry Testing in the Assessment and Diagnosis of COPD (SPR)
Measure ID	9-6

Statistical Testing

- Difference-in-differences

Cervical Cancer Screening

Cervical Cancer Screening	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 9	Premium assistance beneficiaries will have equal or better access to preventive care services.
Measure Description	The percentage of women 21-64 years of age who were screened for cervical cancer using either of the following criteria: Women age 21-64 who had cervical cytology performed every 3 years. Women age 30-64 who had cervical cytology/human papillomavirus (HPV) co-testing performed every 5 years.
Eligible Population	Matched treatment group and comparison group with continuous enrollment in the measurement year. Members can have one gap in enrollment of up to 45 days. Member must be enrolled on the last day of the measurement year.
Numerator	The number if women who were screened for cervical cancer, as identified in steps 1 and 2 below. *Step 1*—Identify women 24-64 years of age as of December 31 of the measurement year who had cervical cytology (Cervical Cytology Value Set) during the measurement year or the two years prior to the measurement year. *Step 2*—From the women who did not meet step 1 criteria, identify women 30-64 years of age as of December 31 of the measurement year who had cervical cytology (Cervical Cytology Value Set) and a HPV test (HPV Tests Value Set) with service dates four or less days apart during the measurement year or the four years prior to the measurement year ***and*** who were 30 years or older on the date of both tests. *Step 3*—Sum the events from steps 1 and 2 to obtain rate. **Exclusions (optional)** Exclude hysterectomy with no residual cervix, cervical agenesis or acquired absence of cervix (Absence of Cervix Value Set) any time during the member's history through December 31 of the measurement year.
Denominator	The eligible population.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2017
Measure Source	Cervical Cancer Screening (CCS)
Measure ID	9-7

Note: this measure was not included in the original evaluation plan.

Statistical Testing

- Difference-in-differences

Timeliness of Check-Up or Routine Care Appointments

Timeliness of Check-Up or Routine Care Appointments	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 9	Premium assistance beneficiaries will have equal or better access to preventive care services.
Measure Description	Number of members who report "usually" or always" getting an appointment for a check-up or routine care at a doctor's office or clinic as soon as they needed.
Eligible Population	PAP and non-PAP sample frame.
Numerator	Three summary rates will be evaluated based on different numeric representation of the responses to the following question: "In the last 6 months, how often did you get an appointment for a check-up or routine care at a doctor's office or clinic as soon as you needed?" Responses and their corresponding coding values for statistical testing are as follows:
Denominator	The number of valid responses from the eligible population.
Data Source(s)	CAHPS 2015 and 2017 Survey
Measure ID	9-8

Response Choices	Coding Value
Never	0
Sometimes	0
Usually	1
Always	1

Note: This measure was not included in the original evaluation plan.

Statistical Testing

- Interim Evaluation Report
  - *z*-test
- Final Evaluation Report
  - Difference-in-differences

Diabetes Screening for People with Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications

Diabetes Screening for People with Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 9	Premium assistance beneficiaries will have equal or better access to preventive care services.
Measure Description	The percentage of members 19–64 years of age with schizophrenia or bipolar disorder, who were dispensed an antipsychotic medication and had a diabetes screening test during the measurement year.
Eligible Population	Matched treatment group and comparison group members with continuous enrollment in the measurement year. Members can have one gap in enrollment of up to 45 days during the measurement year. Member must be enrolled on the last day of the measurement year.
Numerator	Members in the eligible population and in the denominator who have had a diabetes screening, defined by a glucose test (Glucose Tests Value Set) or an HbA1c test (HbA1c Tests Value Set) performed during the measurement year, as identified by claim/encounter or automated laboratory data.
Denominator	*Step 1*—Identify members with schizophrenia or bipolar disorder as those who met at least one of the following criteria during the measurement year. • At least one acute inpatient encounter, with any diagnosis of schizophrenia or bipolar disorder. Any of the following code combinations meet criteria: o BH Stand Alone Acute Inpatient Value Set ***with*** Schizophrenia Value Set. o BH Stand Alone Acute Inpatient Value Set ***with*** Bipolar Disorder Value Set. o BH Stand Alone Acute Inpatient Value Set ***with*** Other Bipolar Disorder Value Set. o BH Acute Inpatient Value Set ***with*** BH Acute Inpatient POS Value Set ***and*** Schizophrenia Value Set. o BH Acute Inpatient Value Set ***with*** BH Acute Inpatient POS Value Set ***and*** Bipolar Disorder Value Set. o BH Acute Inpatient Value Set ***with*** BH Acute Inpatient POS Value Set ***and*** Other Bipolar Disorder Value Set. • At least two visits in an outpatient, intensive outpatient, partial hospitalization, ED or nonacute inpatient setting, on different dates of service, with any diagnosis of schizophrenia. Any two of the following code combinations meet criteria: o BH Stand Alone Outpatient/PH/IOP Value Set ***with*** Schizophrenia Value Set. o BH Outpatient/PH/IOP Value Set w***ith*** BH Outpatient/PH/IOP POS Value Set ***and*** Schizophrenia Value Set. o ED Value Set ***with*** Schizophrenia Value Set. o BH ED Value Set ***with*** ED POS Value Set ***and*** Schizophrenia Value Set. o BH Stand Alone Nonacute Inpatient Value Set ***with*** Schizophrenia Value Set. o BH Nonacute Inpatient Value Set ***with*** BH Nonacute Inpatient POS Value Set ***and*** Schizophrenia Value Set. • At least two visits in an outpatient, intensive outpatient, partial hospitalization, ED or nonacute inpatient setting, on different dates of service, with any diagnosis of bipolar disorder. Any two of the following code combinations meet criteria: o BH Stand Alone Outpatient/PH/IOP Value Set ***with*** Bipolar Disorder Value Set. o BH Stand Alone Outpatient/PH/IOP Value Set ***with*** Other Bipolar Disorder Value Set. o BH Outpatient/PH/IOP Value Set ***with*** BH Outpatient/PH/IOP POS Value Set ***and*** Bipolar Disorder Value Set. o BH Outpatient/PH/IOP Value Set ***with*** BH Outpatient/PH/IOP POS Value Set ***and*** Other Bipolar Disorder Value Set. o ED Value Set ***with*** Bipolar Disorder Value Set.

Diabetes Screening for People with Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications	
	o ED Value Set ***with*** Other Bipolar Disorder Value Set. o BH ED Value Set ***with*** ED POS Value Set ***and*** Bipolar Disorder Value Set. o BH ED Value Set ***with*** ED POS Value Set ***and*** Other Bipolar Disorder Value Set. o BH Stand Alone Nonacute Inpatient Value Set ***with*** Bipolar Disorder Value Set. o BH Stand Alone Nonacute Inpatient Value Set ***with*** Other Bipolar Disorder Value Set. o BH Nonacute Inpatient Value Set ***with*** BH Nonacute Inpatient POS Value Set ***and*** Bipolar Disorder Value Set. o BH Nonacute Inpatient Value Set ***with*** BH Nonacute Inpatient POS Value Set ***and*** Other Bipolar Disorder Value Set. *Step 2*—Exclude members who met any of the following criteria: • Members with diabetes. There are two ways to identify members with diabetes: by claim/encounter data and by pharmacy data. The organization must use both methods to identify members with diabetes, but a member need only be identified by one method to be excluded from the measure. Members may be identified as having diabetes during the measurement year or the year prior to the measurement year. o **Claim/encounter data**. Members who met at any of the following criteria during the measurement year or the year prior to the measurement year (count services that occur over both years). ▪ At least two outpatient visits (Outpatient Value Set), observation visits (Observation Value Set), ED visits (ED Value Set) or nonacute inpatient encounters (Nonacute Inpatient Value Set) on different dates of service, with a diagnosis of diabetes (Diabetes Value Set). Visit type need not be the same for the two visits. ▪ At least one acute inpatient encounter (Acute Inpatient Value Set) with a diagnosis of diabetes (Diabetes Value Set). • **Pharmacy data**. Members who were dispensed insulin or oral hypoglycemics/ antihyperglycemics during the measurement year or year prior to the measurement year on an ambulatory basis (Table CDC-A). • Members who had no antipsychotic medications dispensed during the measurement year. There are two ways to identify dispensing events: by claim/encounter data and by pharmacy data. The organization must use both methods to identify dispensing events, but an event need only be identified by one method to be counted. o **Claim/encounter data**. An antipsychotic medication (Long-Acting Injections Value Set). o **Pharmacy data**. Dispensed an antipsychotic medication (Table SSD-D) on an ambulatory basis.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2017
Measure Source	Diabetes Screening for People with Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications (SSD)
Measure ID	9-9

Table CDC-A: Prescriptions to Identify Diabetics Using Pharmacy Data	
Description	**Prescription**
Alpha-glucosidase inhibitors	• Acarbose • Miglitol
Amylin analogs	• Pramlinitide
Antidiabetic combinations	• Alogliptin-metformin • Alogliptin-pioglitazone • Canagliflozin-metformin • Glimepiride-pioglitazone • Glimepiride-rosiglitazone • Glipizide-metformin • Glyburide-metformin • Linagliptin-metformin • Metformin-pioglitazone • Metformin-repaglinide • Metformin-rosiglitazone • Metformin-saxagliptin • Metformin-sitagliptin • Sitagliptin-simvastatin
Insulin	• Insulin aspart • Insulin aspart-insulin aspart protamine • Insulin detemir • Insulin glargine • Insulin glulisine • Insulin isophane human • Insulin isophane-insulin regular • Insulin lispro • Insulin lispro-insulin lispro protamine • Insulin regular human • Insulin human inhaled
Meglitinides	• Nateglinide • Repaglinide
Glucagon-like peptide-1 (GLP1) agonists	• Exenatide • Dualaglutide • Liraglutide • Albiglutide
Sodium glucose cotransporter 2 (SGLT2) inhibitor	• Canagliflozin • Dapagliflozin • Empagliflozin
Sulfonylureas	• Chlorpropamide • Glimepiride • Glipizide • Glyburide • Tolazamide • Tolbutamide
Thiazolidinediones	• Pioglitazone • Rosiglitazone
Dipeptidyl peptidase-4 (DDP-4) inhibitors	• Alogliptin • Linagliptin • Saxagliptin • Sitaglipin

Table SSD-D: Antipsychotic Medications	
Description	**Prescription**
Miscellaneous antipsychotic agents	• Aripiprazole • Asenapine • Brexpiprazole • Cariprazine • Clozapine • Haloperidol • Iloperidone • Loxapine • Lurisadone • Molindone • Olanzapine • Paliperidone • Pimozide • Quetiapine • Quetiapine fumarate • Risperidone • Ziprasidone
Phenothiazine antipsychotics	• Chlorpromazine • Fluphenazine • Perphenazine • Perphenazine-amitriptyline • Prochlorperazine • Thioridazine • Trifluoperazine
Psychotherapeutic combinations	• Fluoxetine-olanzapine

Table SSD-D: Antipsychotic Medications	
Description	**Prescription**
Thioxanthenes	• Thiothixene
Long-acting injections	• Aripiprazole • Fluphenazine decanoate • Haloperidol decanoate • Olanzapine • Paliperidone palmitate • Risperidone

Statistical Testing

- Difference-in-differences

Patients' Rating of Overall Health Care

Patients' Rating of Overall Health Care	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 10	Premium assistance beneficiaries will report equal or better satisfaction in the care provided.
Measure Description	For respondents, a proportional choice for "Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last 6 months?"
Eligible Population	PAP and non-PAP Sample Frame
Numerator	Three summary rates will be evaluated based on different numeric representations of the outcome. An 11-point non-recoded scale will be used and two top-box ratings will be used. The numerator value will be defined as the response score value or numerator compliance for each member answering the following question: "Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last 6 months?" Responses and their corresponding score values and numerator compliance are as follows:
Denominator	The number of valid responses from the eligible population.
Data Source(s)	CAHPS 2015 and 2017 Survey
Measure ID	10-1

Response Choices	Score Value
0 – Worst health care possible	0
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	1
9	1
10 – Best health care possible	1

Statistical Testing

- Interim Evaluation Report
  - *z*-test
- Final Evaluation Report
  - Difference-in-differences

Patients' Rating the Health Plan

Patients' Rating the Health Plan	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 10	Premium assistance beneficiaries will report equal or better satisfaction in the care provided.
Measure Description	For respondents, "Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?"
Eligible Population	PAP and non-PAP sample frame
Numerator	Three summary rates will be evaluated based on different numeric representations of the outcome. An 11-point non-recoded scale will be used and two top-box ratings will be used. The numerator value will be defined as the response score value or numerator compliance for each member answering the following question: "Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?" Responses and their corresponding score values are as follows:
Denominator	The number of valid responses from the eligible population.
Data Source(s)	CAHPS
Measure ID	10-2

Response Choices	Score Value
0 – Worst health plan possible	0
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	1
9	1
10 – Best health plan possible	1

Statistical Testing

- Interim Evaluation Report
  - *z*-test
- Final Evaluation Report
  - Difference-in-differences

EPSDT Screening—Well-Care Visits

EPSDT Screening—Well-Care Visits	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 11	Premium assistance beneficiaries who are young adults eligible for EPSDT benefits will have at least as satisfactory and appropriate access to these Benefits.
Measure Description	Percentage of members aged 19 and 20 who received at least one initial or periodic screen.
Eligible Population	Matched treatment group and comparison group aged 19 or 20 years old as of the last day of the measurement year.
Numerator	At least one comprehensive well-care visit (Well-Care Value Set) with a PCP or an OB/GYN practitioner during the measurement year.
Denominator	Matched treatment group and comparison group aged 19 or 20 years old as of the last day of the measurement year. Exclude members for whom EPSDT services may not be available: • Medically needy individuals if the state does not provide EPSDT services for the medically needy. • Waiver expansion population for which the full complement of EPSDT services is not available. • Undocumented aliens who are eligible only for emergency Medicaid services. • Children in separate state CHIP programs. • Those who are eligible only for limited services as part of their Medicaid eligibility (for example, pregnancy-related services).
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	CMS Child Core Set (June 2016)
Measure Source	AWC-CH: Adolescent Well-Care Visit
Measure ID	11-1

Statistical Testing

- Difference-in-differences

EPSDT Screening—Preventive Dental Visits

EPSDT Screening—Preventive Dental Visits	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 11	Premium assistance beneficiaries who are young adults eligible for EPSDT benefits will have at least as satisfactory and appropriate access to these Benefits.
Measure Description	Percentage of members aged 19 and 20 who received at least one initial or periodic screen.
Eligible Population	Matched treatment group and comparison group aged 19 or 20 years old as of the last day of the measurement year.
Numerator	At least one dental visit (Preventive Dental Visits Value Set) with a dental practitioner during the measurement year.
Denominator	Matched treatment group and comparison group aged 19 or 20 years old as of the last day of the measurement year. Exclude members for whom EPSDT services may not be available: • Medically needy individuals if the state does not provide EPSDT services for the medically needy. • Waiver expansion population for which the full complement of EPSDT services is not available. • Undocumented aliens who are eligible only for emergency Medicaid services. • Children in separate state CHIP programs. • Those who are eligible only for limited services as part of their Medicaid eligibility (for example, pregnancy-related services).
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	CMS Child Core Set (June 2016)
Measure Source	PDENT-CH: Percentage of Eligibles Who Received Preventive Dental Services
Measure ID	11-2

Statistical Testing

- Difference-in-differences

NEMT Request Authorization Approval Rate

NEMT Request Authorization Approval Rate	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 12	Premium assistance beneficiaries will have appropriate access to non-emergency transportation (NEMT).
Measure Description	The percentage of NEMT requests authorized, of those requested during the measure data period, for the eligible population.
Eligible Population	All Participants in PAP and non-PAP Medicaid programs.
Numerator	Number of authorized NEMT requests in each program.
Denominator	Number of NEMT requests in each program.
Data Source(s)	NH DHHS. Office of Quality Assurance and Improvement. Online Report based on NEMT provider self-reported data. [http://medicaidquality.nh.gov]
Measure ID	12-1

Statistical Testing

- *z*-test

NEMT Requests Delivered by Type of Medical Service

NEMT Requests Delivered by Type of Medical Service	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 12	Premium assistance beneficiaries will have appropriate access to non-emergency transportation (NEMT).
Measure Description	The percentage of NEMT requests authorized, of those requested during the measure data period, by type of medical service (i.e., hospital, medical provider, mental health provider, dentist, pharmacy, Methadone treatment, other), for the eligible population.
Eligible Population	All Participants in PAP and non-PAP Medicaid programs.
Numerator	Number of NEMT requests delivered for each medical service type in each program.
Denominator	Number of NEMT requests delivered in each program.
Data Source(s)	NH DHHS. Office of Quality Assurance and Improvement. Online Report based on NEMT provider self-reported data. [http://medicaidquality.nh.gov]
Measure ID	12-2

Note: this measure was not included in the original evaluation plan.

Statistical Testing

- *z*-test

Follow-Up After Hospitalization for Mental Illness (7-Day Follow-Up)

Follow-Up After Hospitalization for Mental Illness (7-Day Follow-Up)	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 13	Premium assistance beneficiaries will have equal or better access to care, including behavioral health services.
Measure Description	The percentage of discharges for members 19 years through 64 years who were hospitalized for treatment of selected mental illness diagnoses and who had an outpatient visit, an intensive outpatient encounter, or partial hospitalization with a mental health practitioner within 7 days of discharge.
Eligible Population	Matched treatment group and comparison group enrolled on the date of discharge through 30 days after discharge.
Numerator	A follow-up visit with a mental health practitioner within 7 days after discharge. Include visits that occur on the date of discharge. Any of the following meet criteria: • A visit (FUH Stand Alone Visits Value Set) with a mental health practitioner. • A visit (FUH Visits Group 1 Value Set and FUH POS Group 1 Value Set) with a mental health practitioner. • A visit (FUH Visits Group 2 Value Set and FUH POS Group 2 Value Set) with a mental health practitioner. • A visit in a behavioral health care setting (FUH RevCodes Group 1 Value Set). • A visit in a nonbehavioral health care setting (FUH RevCodes Group 2 Value Set) with a mental health practitioner. • A visit in a nonbehavioral health care setting (FUH RevCodes Group 2 Value Set) with a diagnosis of mental illness (Mental Illness Value Set). • Transitional care management services (TCM 7 Day Value Set). Transitional care management is a 30-day period that begins on the date of discharge and continues for the next 29 days. The date of service on the claim is the date of the face-to-face visit.

Follow-Up After Hospitalization for Mental Illness (7-Day Follow-Up)	
Denominator	The number of discharges for members 19 through 64 years who were discharged from a New Hampshire acute inpatient setting with a principal diagnosis of mental illness (Mental Illness Value Set) on or between January 1 and December 1 of the measurement year. To identify acute inpatient discharges: 1. Identify all acute and nonacute inpatient stays at any New Hampshire acute inpatient hospital (Inpatient Stay Value Set). 2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set). 3. Identify the discharge date for the stay. Calculate age as of the date of discharge. The member must have been enrolled in the PAP program (PAP members during evaluation period) or Medicaid (matched non-PAP members or PAP members during baseline) on discharge through 7 days after discharge. If the discharge is followed by readmission or direct transfer to an acute inpatient care setting for a principal mental health diagnosis (Mental Health Diagnosis Value Set) within the 7-day follow-up period, count only the last discharge. Exclude both the initial discharge and the readmission/direct transfer discharge if the last discharge occurs after December 1 of the measurement year. To identify readmissions and direct transfers to an acute inpatient care setting: 1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set). 2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set). 3. Identify the admission date for the stay. **Exclusions:** Exclude discharges followed by readmission or direct transfer to a nonacute inpatient care setting within the 7-day follow-up period, regardless of principal diagnosis for the readmission. To identify readmissions and direct transfers to a nonacute inpatient care setting: 1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set). 2. Confirm the stay was for nonacute care based on the presence of a nonacute code (Nonacute Inpatient Stay Value Set) on the claim. 3. Identify the admission date for the stay. Exclude discharges followed by readmission or direct transfer to an acute inpatient care setting within the 7-day follow-up period if the principal diagnosis was for non-mental health (any principal diagnosis code other than those included in the Mental Health Diagnosis Value Set). To identify readmissions and direct transfers to an acute inpatient care setting: 1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set). 2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set). 3. Identify the admission date for the stay.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data; NH Hospital Stays Data Provided by DHHS
Measure Steward	NCQA: HEDIS 2017
Measure Source	Follow-Up After Hospitalization for Mental Illness
Measure ID	13-1

Note: This was measure 9-2 in the original evaluation plan.

Statistical Testing

- Difference-in-differences

Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET)

Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 13	Premium assistance beneficiaries will have equal or better access to care, including behavioral health services.
Measure Description	The percentage of adolescent and adult members with a new episode of alcohol or other drug (AOD) abuse or dependence who received the following. Initiation of AOD Treatment. The percentage of members who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth or medication assisted treatment (MAT) within 14 days of the diagnosis. Engagement of AOD Treatment. The percentage of members who initiated treatment and who had two or more additional AOD services or MAT within 34 days of the initiation visit.
Eligible Population	Matched treatment group and comparison group with continuous enrollment 60 days (2 months) prior to the IESD through 48 days after the IESD (109 total days).
Numerator	**Initiation of AOD Treatment**: Initiation of AOD treatment through an inpatient admission, outpatient visit, telehealth, intensive outpatient encounter or partial hospitalization or MAT within 14 days of the Index Episode Start Date (IESD). *If the Index Episode was an inpatient discharge (or an ED visit that resulted in an inpatient stay)*, the inpatient stay is considered initiation of treatment and the member is compliant. *If the Index Episode was an outpatient, intensive outpatient, partial hospitalization, telehealth, detoxification or ED visit*, the member must have an inpatient admission, outpatient visit, telehealth, intensive outpatient encounter or partial hospitalization with a diagnosis of AOD abuse or dependence, on the IESD or in the 13 days after the IESD (14 total days). If the IESD and the initiation visit occur on the same day, they must be with different providers in order to count. Any of the following code combinations meet criteria: • Acute or nonacute inpatient admission ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set. To identify acute and nonacute inpatient admissions: 1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set). 2. Identify the admission date for the stay • IET Stand Alone Visits Value Set ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set, with or without a telehealth modifier (Telehealth Modifier Value Set). • IET Visits Group 1 Value Set ***with*** IET POS Group 1 Value Set ***and*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set, with or without a telehealth modifier (Telehealth Modifier Value Set). • IET Visits Group 2 Value Set ***with*** IET POS Group 2 Value Set ***and*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set, with or without a telehealth modifier (Telehealth Modifier Value Set). A telephone visit (Telephone Visit Value Set) ***with*** a diagnosis matching IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set. • On online assessment (Online Assessment Value Set) with a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.

Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment	
	• If the Index Episode was for a diagnosis of alcohol abuse or dependence (Alcohol Abuse and Dependence Value Set) a MAT dispensing event (*Table IET-A*) or a claim for MAT (Medication Assisted Treatment Value Set) • If the Index Episode was for a diagnosis of opioid abuse or dependence (Opioid Abuse and Dependence Value Set) a MAT dispensing event (*Table IET-B*) or a claim for MAT (Medication Assisted Treatment Value Set) If a member is compliant for the Initiation numerator for any diagnosis cohort (i.e. alcohol, opioid, other drug), count the member once in the Total Initiation numerator. If the member is compliant for multiple cohorts, only count the member once in the Total Initiation Numerator. Exclude the member from the denominator for both indicators if the initiation of treatment event is an inpatient stay with a discharge date after November 27 of the measurement year. **Engagement of AOD Treatment**: Identify all members who meet the following criteria: • Numerator compliant for the Initiation of AOD Treatment numerator ***and*** o Two or more inpatient admissions, outpatient visits, telehealth, intensive outpatient encounters or partial hospitalizations with a diagnosis matching the IESD diagnosis, beginning on the day after the initiation encounter through 34 days after the initiation event (34 total days). Multiple engagement visits may occur on the same day, but they must be with different providers in order to count. Any of the following code combinations meet criteria: ▪ An acute or nonacute inpatient admission (Inpatient Stay Value Set) with a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set. ▪ IET Stand Alone Visits Value Set ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set, with or without a telehealth modifier (Telehealth Modifier Value Set). ▪ IET Visits Group 1 Value Set ***with*** IET POS Group 1 Value Set ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set, with or without a telehealth modifier (Telehealth Modifier Value Set). ▪ IET Visits Group 2 Value Set ***with*** IET POS Group 2 Value Set ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set, with or without a telehealth modifier (Telehealth Modifier Value Set). ▪ A telephone visit (Telephone Visits Value Set) ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set. ▪ An online assessment (Online Assessment Value Set) ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set o If the initiation of AOD treatment was not a MAT dispensing event, one or more of the MAT dispensing events (*Table IET-A*; *Table IET-B*) beginning on the day after the initiation encounter through 34 days after the initiation event (total of 34 days). ▪ If the Initiation of AOD treatment was for treatment of a diagnosis of alcohol abuse or dependence (Alcohol Abuse and Dependence Value Set), one or more MAT dispensing events (*Table IET-A*) or claims for MAT (*Medication Assisted Treatment Value Set*), beginning on the day after the initiation encounter through 34 days after the initiation event (total of 34 days), meets criteria for Alcohol Abuse and Dependence Treatment. ▪ If the Initiation of AOD treatment was for treatment of a diagnosis of opioid abuse or dependence (Opioid Abuse and Dependence Value Set), one or more MAT dispensing events (*Table IET-B*) or claims for MAT (Medication Assisted Treatment Value Set),

Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment	
	beginning on the day after the initiation encounter through 34 days after the initiation event (total of 34 days), meets criteria for Opioid Abuse and Dependence Treatment. o If the Initiation of AOD treatment was a MAT dispensing event, two or more engagement events where at least one meets criteria for 1. For example, two engagement events from criteria 2 do not meet numerator compliance. If the member is compliant for multiple cohorts, only count the member once for the Total Engagement numerator. For members who initiated treatment via an inpatient admission, the 34-day period for the two engagement visits begins the day after discharge. The time frame for engagement, which includes the initiation event, is 34 total days.
Denominator	Follow the steps below to identify the denominator. *Step 1*—Identify the Index Episode. Identify all members in the specified age range who during the Intake Period had one of the following: • An outpatient visit, telehealth, intensive outpatient visit, or partial hospitalization with a diagnosis of AOD abuse or dependence. Any of the following code combinations meet criteria: o IET Stand Alone Visits Value Set ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set, with or without a telehealth modifier (Telehealth Modifier Value Set). o IET Visits Group 1 Value Set ***with*** IET POS Group 1 Value Set ***and*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set, with or without a telehealth modifier (Telehealth Modifier Value Set). o IET Visits Group 2 Value Set ***with*** IET POS Group 2 Value Set ***and*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set, with or without a telehealth modifier (Telehealth Modifier Value Set). • A detoxification visit (Detoxification Value Set) ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set • An ED visit (ED Value Set) ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set • An acute or nonacute inpatient discharge (Inpatient Stay Value Set) ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set • A telephone visit (Telephone Visits Value Set) ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set • An online assessment (Online Assessments Value Set) ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set For members with more than one episode of AOD abuse or dependence, use the first episode. For members whose first episode was an ED visit that resulted in an inpatient stay, use the diagnosis from the ED visit to determine the diagnosis cohort and use the inpatient discharge as the IESD. When an ED visit and an inpatient stay are billed on separate claims, the visit results in an inpatient stay when the admission date for the inpatient stay occurs on the ED date of service or one calendar day after. An ED visit billed on the same claim as an inpatient stay is considered a visit that resulted in an inpatient stay. *Step 2*—Select the Index Episode and stratify based on age and AOD diagnosis cohort. If the member has a claim with a diagnosis of alcohol abuse or dependence (Alcohol Abuse and Dependence Value Set), place the member in the alcohol cohort. If the member has a diagnosis of opioid abuse or dependence (Opioid Abuse and Dependence Value Set), place the member in the opioid cohort. If the member has a drug abuse or dependence that is neither for opioid nor alcohol (Other Drug Abuse and Dependence Value Set), place the member in the other drug cohort. If the member has multiple substance use diagnosis on the same claim, report the member in all AOD diagnosis stratifications for which they meet criteria.

Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment	
	The total is not a sum of the diagnosis cohorts. Count members in the total denominator rate if they had at least one alcohol, opioid, or other drug abuse or dependence diagnosis during the measurement period. Report member with multiple diagnosis on the Index Episode claim only once for the total rate for the denominator. *Step 3*—Test for Negative Diagnosis History. Exclude members who had a claim/encounter with a diagnosis of AOD abuse or dependence (AOD Abuse and Dependence Value Set), Medication Assisted Treatment Value Set or a MAT dispensing event (*Table IET-A*; *Table IET-B*) during the 60 days (2 months) before the IESD. For an inpatient IESD, use the admission date to determine the 60-day Negative Diagnosis History period. For an ED visit that results in an inpatient stay, use the ED date of service to determine the 60-day Negative Diagnosis History period. When an ED visit and an inpatient stay are billed on separate claims, the visit results in an inpatient stay when the admission date for the inpatient stay occurs on the ED date of service or one calendar day after. An ED visit billed on the same claim as an inpatient stay is considered a visit that resulted in an inpatient stay. *Step 4*—Calculate continuous enrollment. Members must be continuously enrolled for 60 days (2 months) before the IESD through 48 days after the IESD (109 total days), with no gaps.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2018
Measure Source	Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment
Measure ID	13-2

Note: this measure was not included in the original evaluation plan.

Table IET-A—MAT for Alcohol Abuse or Dependence Medications	
Description	**Prescription**
Aldehyde dehydrogenase inhibitor	• Disulfiram (oral)
Antagonist	• Naltrexone (oral and injectable)
Other	• Acamprosate (oral; delayed-release tablet)

Table IET-B—MAT for Opioid Abuse or Dependence Medications	
Description	**Prescription**
Antagonist	• Naltrexone (oral and injectable)
Partial agonist	• Buprenorphine (sublingual tablet and implant) • Buprenorphine/naloxone (sublingual tablet, buccal film, sublingual film)

Statistical Testing

- Difference-in-differences

Mental Health Utilization[B-1]

Mental Health Utilization	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 13	Premium assistance beneficiaries will have equal or better access to care, including behavioral health services.
Measure Description	The number mental health outpatient services per 1,000 member months during the measurement year.
Eligible Population	Matched treatment group and comparison group.
Numerator	Any of the following meet criteria: • MPT Stand Alone Outpatient Group 1 Value Set ***with*** a principal mental health diagnosis (Mental Health Diagnosis Value Set). • MPT Outpatient Visit Group 1 (Table MPT-A) ***and*** a principal mental health diagnosis (Mental Health Diagnosis Value Set). • MPT Outpatient Visit Group 2 (Table MPT-A) ***and*** a principal mental health diagnosis (Mental Health Diagnosis Value Set), where the organization can confirm that the visit was in an outpatient setting (POS 53 is not specific to setting). • MPT Stand Alone Outpatient Group 2 Value Set ***with*** a principal mental health diagnosis (Mental Health Diagnosis Value Set) billed by a mental health practitioner. • Telehealth Value Set ***with*** a principal mental diagnosis (Mental Health Diagnosis Value Set). Count services provided by physicians and non-physicians.
Denominator	The number of member months for the eligible population.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2017/NH DHHS
Measure Source	Mental Health Utilization (MPT) – with Modifications
Measure ID	13-3

Note: this measure was not included in the original evaluation plan.

Table MPT-A: Codes to Identify Mental Health Outpatient Visits			
Description	**CPT Code**		**POS**
MPT Outpatient Visit Group 1	90791, 90792, 90832, 90833, 90834, 90836, 90837, 90838, 90845, 90847, 90849, 90853, 90867, 90868, 90869, 90870, 90875, 90876	***and***	03, 05, 07, 09, 11, 12, 13, 14, 15, 16, 17, 18, 19, 22, 24, 33, 49, 50, 71, 72
MPT Outpatient Visit Group 2			53

Statistical Testing

- Difference-in-differences

[B-1] This measure is adapted from the HEDIS 2017 specifications for MPT Outpatient, ED, or telehealth measure indicator.

Chemical Dependency Outpatient Services Utilization[B-2]

Mental Health Utilization	
Domain	Uniform Provider Access
Waiver Goal	The State will evaluate access to primary, specialty, and behavioral health care services for beneficiaries in the Demonstration to determine if it is comparable to the access afforded to the general population in New Hampshire.
Hypothesis 13	Premium assistance beneficiaries will have equal or better access to care, including behavioral health services.
Measure Description	The number of chemical dependency outpatient services per 1,000 member months during the measurement year.
Eligible Population	Matched treatment group and comparison group.
Numerator	Any of the following meet criteria: IAD Stand Alone Outpatient Value Set ***with*** Chemical Dependency Value Set. • Observation Value Set. • BH Visit Setting Unspecified Value Set ***with*** Outpatient POS Value Set. • BH Visit Setting Unspecified Value Set ***with*** POS 53 Value Set, where the organization can confirm that the visit was in an outpatient setting (POS 53 is not specific to setting). An ambulatory MAT dispensing event (MAT for Alcohol Abuse or Dependence Medications List; MAT for Opioid Abuse or Dependence Medications List). Report the appropriate diagnosis categories based on the diagnosis codes on the claim (do not report claims that do not include one of these diagnosis codes). For MAT dispensing events, report in the diagnosis category identified by the medication list name. Any of the followings meets criteria: • Alcohol disorder (Alcohol Disorders Value Set). • Opioid disorder (Opioid Disorders Value Set). • Other or unspecified drug disorders (Other Drug Disorders Value Set). Do not include observation visits that result in an inpatient stay (Inpatient Stay Value Set). When an observation visit, and an inpatient stay are billed on separate claims, the visit results in an inpatient stay when the admission date for the inpatient stay occurs on the observation date of service or one calendar day after. An observation visit billed on the same claim as an inpatient stay is considered a visit that resulted in an inpatient stay. ***Note:*** *Report only in-person services in the Outpatient category. Exclude all services billed with a telehealth modifier (Telehealth Modifier Value Set or billed with a telehealth POS code (Telehealth POS Value Set) from the Outpatient category.* ***MAT for Alcohol Abuse or Dependence Medications*** **Description** / **Prescription** Aldehyde dehydrogenase inhibitor — • Disulfiram (oral) Antagonist — • Naltrexone (oral and injectable) Other — • Acamprosate (oral; delayed-release tablet) ***MAT for Opioid Abuse or Dependence Medications*** **Description** / **Prescription** Antagonist — • Naltrexone (oral and injectable) Partial agonist — • Buprenorphine (sublingual tablet and implant) • Buprenorphine/naloxone (sublingual tablet, buccal film, sublingual film)

B-2 This measure is based on the HEDIS 2018 specifications for IAD Outpatient or an ambulatory MAT dispensing event measure indicator.

Mental Health Utilization	
Denominator	The number of member months for the eligible population.
Data Source(s)	PAP encounter data, EDI transaction encounters, and MMIS FFS claims data
Measure Steward	NCQA: HEDIS 2018
Measure Source	Identification of Alcohol and Other Drug Services (IAD)
Measure ID	13-4

Table IAD-A: Codes to Identify Mental Health Outpatient Visits

Description	CPT Code		POS
IAD Outpatient Visit Group 1	90791, 90792, 90832, 90833, 90834, 90836, 90837, 90838, 90845, 90847, 90849, 90853, 90867, 90868, 90869, 90870, 90875, 90876	***and***	03, 05, 07, 09, 11, 12, 13, 14, 15, 16, 17, 18, 19, 22, 24, 33, 49, 50, 57, 71, 72
IAD Outpatient Visit Group 2			53

Statistical Testing

- Difference-in-differences

Cost Neutrality

Total Costs by Group

Total Costs by Group	
Domain	Cost Neutrality
Waiver Goal	The premium assistance program will be cost neutral with respect to continuation of the previous New Hampshire Medicaid expansion program.
Hypothesis 14	The cost for covering premium assistance beneficiaries will be comparable to what the costs would have been for covering the same expansion group in New Hampshire Medicaid in accordance with STC #69 on determining cost-effectiveness and other requirements in the evaluation design as approved by CMS.
Measure Description	Annual total costs divided by total number of member months, calculated separately for the study and comparison groups. Calculated as the sum of the medical cost component (measure 7-2) and the administrative cost component (measure 3-4).
Eligible Population	PAP Participants and newly eligible members of the Bridge program from September 2014–December 2015 (comparison group).
Numerator	The sum of the medical cost component (measure 7-2) and the administrative cost component (measure 3-4) for each of the two approaches described in detail for the Medical Costs by Group measure (measure 7-2): 1. Compare the hypothetical Bridge program capitation rate projections to the average PAP cost. 2. Compare the hypothetical Bridge program capitation rate projections to the carriers' actual cost of covering the PAP population in the exchange.
Denominator	Member months in each population
Data Source(s)	Rate filing information from the New Hampshire Insurance Department; Rate filings and other documents prepared by Milliman; Adjusted CY 2015 Bridge program experience data; New Hampshire CHIS data
Measure ID	14-1

Statistical Testing

- Interim Evaluation Report
  - None
- Final Evaluation Report
  - None

Medical Costs by Group

Medical Costs by Group	
Domain	Cost Neutrality
Waiver Goal	The premium assistance program will be cost neutral with respect to continuation of the previous New Hampshire Medicaid expansion program.
Hypothesis 14	The cost for covering premium assistance beneficiaries will be comparable to what the costs would have been for covering the same expansion group in New Hampshire Medicaid in accordance with STC #69 on determining cost-effectiveness and other requirements in the evaluation design as approved by CMS.
Measure Description	Bridge to Actual PAP costs compared to estimated costs if the Bridge program were continued.
Eligible Population	PAP Participants and newly eligible members of the Bridge program from September 2014–December 2015 (comparison group).
Numerator	Two approaches: 1. Compare the Bridge program medical component from the hypothetical capitation rate projections to the average medical cost component from Exchange premiums, CSR payments, deductible funding, and the cost of wraparound services. a. Study Group: Average PAP cost developed from the carriers filed premium rates and other documents estimating the other medical cost components such as CSR payment, deductible funding, and the cost of wraparound services. b. Comparison Group: Hypothetical Bridge program medical cost projections developed from adjusted CY 2015 Bridge program experience data. 2. Compare the hypothetical Bridge program medical cost component from the capitation rate projections to the carriers' actual medical cost of covering the PAP population in the exchange. a. Study Group: Actual PAP claims experience aggregated from the 2016 CHIS database. b. Comparison Group: Hypothetical Bridge program medical cost projections developed from adjusted CY 2015 Bridge program experience data.
Denominator	Member months in each population
Data Source(s)	Rate filings and other documents prepared by Milliman; Adjusted CY 2015 Bridge program experience data; New Hampshire CHIS data
Measure ID	14-2

Statistical Testing

- Interim Evaluation Report
  - None
- Final Evaluation Report
  - None

Members' Administrative Cost

Members' Administrative Cost	
Domain	Cost Neutrality
Waiver Goal	The premium assistance program will be cost neutral with respect to continuation of the previous New Hampshire Medicaid expansion program.
Hypothesis 14	The cost for covering premium assistance beneficiaries will be comparable to what the costs would have been for covering the same expansion group in New Hampshire Medicaid in accordance with STC #69 on determining cost-effectiveness and other requirements in the evaluation design as approved by CMS.
Measure Description	Annual administrative costs divided by total number of member months, calculated separately for the study and comparison groups.
Eligible Population	PAP Participants and newly eligible members of the Bridge program from September 2014–December 2015 (comparison group).
Numerator	PAP rate filing information for PAP administrative cost levels and administrative cost allowance included in a hypothetical Bridge program capitation rates had the program continued for comparison group.
Denominator	Member months in each population
Data Source(s)	Rate filing information from the New Hampshire Insurance Department
Measure ID	14-3

Statistical Testing

- Interim Evaluation Report
  - None
- Final Evaluation Report
  - None

Appendix C. Supplemental Tables and Results

This appendix provides supplemental tables and results (Table C-1 – Table C-26) for several measures found in the Findings and Conclusions section of the main body of the Interim Evaluation Report.

Table C-1: Measure 1-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	13.065	0.384	34.02	<.0001
PAP Indicator	-1.178	0.415	-2.84	0.0045
Time Indicator	-7.624	0.428	-17.82	<.0001
PAP x Time Indicator	-0.267	0.484	-0.55	0.5812
Age	-0.038	0.009	-4.38	<.0001
Female	1.207	0.219	5.51	<.0001
Ethnicity	2.100	0.583	3.60	0.0003
Member Months	-4.200	0.087	-48.53	<.0001
Asthma	-0.596	0.634	-0.94	0.3475
COPD	0.918	0.703	1.31	0.1919
Cancer	-0.074	0.717	-0.10	0.9183
Congestive Heart Failure	0.773	1.770	0.44	0.6623
Coronary Artery Disease	-1.011	0.911	-1.11	0.2671
Diabetes	1.566	0.593	2.64	0.0082
Hypertension	-0.563	0.479	-1.18	0.2396
Mental Health Disorders	2.552	0.307	8.32	<.0001
Other Cardiac Conditions	-0.540	0.599	-0.90	0.3675
Other Respiratory	0.230	0.386	0.59	0.5524
Pregnancy	0.921	0.559	1.65	0.0996
Stroke	-2.054	1.259	-1.63	0.1027
Substance Abuse	1.359	0.432	3.14	0.0017
Total Observations = 115,696 ANOVA F-Test: 315.584 (Pr > F: <.0001) Noninferiority F-Test: 5.299 (Pr > F: 0.0213)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-2: Measure 1-2 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.085	0.002	49.62	<.0001
PAP Indicator	0.016	0.002	6.82	<.0001
Time Indicator	-0.039	0.002	-20.20	<.0001
PAP x Time Indicator	-0.027	0.003	-9.98	<.0001
Age	-0.001	0.000	-9.83	<.0001
Female	0.010	0.001	6.94	<.0001
Ethnicity	0.019	0.004	4.53	<.0001
Member Months	-0.033	0.001	-61.95	<.0001
Asthma	-0.003	0.003	-1.06	0.2886
COPD	0.000	0.003	0.15	0.8780
Cancer	-0.009	0.003	-3.18	0.0015
Congestive Heart Failure	0.001	0.007	0.21	0.8299
Coronary Artery Disease	-0.002	0.005	-0.32	0.7498
Diabetes	0.001	0.002	0.22	0.8241
Hypertension	-0.001	0.002	-0.44	0.6574
Mental Health Disorders	0.002	0.002	1.15	0.2515
Other Cardiac Conditions	-0.006	0.003	-2.32	0.0203
Other Respiratory	0.000	0.002	0.19	0.8481
Pregnancy	0.011	0.004	2.72	0.0066
Stroke	-0.006	0.008	-0.72	0.4686
Substance Abuse	0.008	0.002	3.41	0.0007
Total Observations = 115,696 ANOVA F-Test: 499.136 (Pr > F: <.0001) Noninferiority F-Test: 143.423 (Pr > F: <.0001)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-3: Measure 2-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.839	0.003	334.21	<.0001
PAP Indicator	0.001	0.003	0.30	0.7644
Time Indicator	0.061	0.003	21.49	<.0001
PAP x Time Indicator	-0.086	0.004	-20.99	<.0001
Age	0.001	0.000	17.32	<.0001
Female	-0.025	0.002	-11.54	<.0001
Ethnicity	-0.006	0.006	-1.08	0.2820
Member Months	0.058	0.001	84.49	<.0001
Asthma	-0.009	0.005	-1.92	0.0548
COPD	-0.001	0.005	-0.28	0.7795
Cancer	0.004	0.005	0.94	0.3462
Congestive Heart Failure	-0.002	0.011	-0.14	0.8863
Coronary Artery Disease	-0.008	0.008	-0.93	0.3532
Diabetes	-0.014	0.004	-3.79	0.0002
Hypertension	-0.014	0.004	-3.62	0.0003
Mental Health Disorders	-0.023	0.002	-9.40	<.0001
Other Cardiac Conditions	-0.001	0.005	-0.33	0.7445
Other Respiratory	-0.014	0.003	-4.47	<.0001
Pregnancy	-0.046	0.006	-7.67	<.0001
Stroke	0.003	0.012	0.26	0.7919
Substance Abuse	-0.054	0.004	-14.62	<.0001
Total Observations = 105,761 ANOVA F-Test: 703.244 (Pr > F: <.0001) Noninferiority F-Test: 418.920 (Pr > F: <.0001)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-4: Measure 3-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	18.388	0.329	55.92	<.0001
PAP Indicator	1.078	0.445	2.42	0.0154
Time Indicator	-7.531	0.365	-20.64	<.0001
PAP x Time Indicator	-1.703	0.509	-3.35	0.0008
Age	-0.139	0.010	-14.44	<.0001
Female	1.893	0.248	7.64	<.0001
Ethnicity	1.619	0.670	2.42	0.0156
Member Months	-5.993	0.084	-71.46	<.0001
Asthma	0.690	0.604	1.14	0.2528
COPD	-0.999	0.526	-1.90	0.0575
Cancer	-0.861	0.537	-1.60	0.1086
Congestive Heart Failure	2.042	1.491	1.37	0.1710
Coronary Artery Disease	-0.061	0.960	-0.06	0.9493
Diabetes	0.816	0.441	1.85	0.0640
Hypertension	0.630	0.434	1.45	0.1459
Mental Health Disorders	1.497	0.293	5.10	<.0001
Other Cardiac Conditions	-0.048	0.535	-0.09	0.9286
Other Respiratory	1.171	0.382	3.07	0.0022
Pregnancy	2.777	0.747	3.72	0.0002
Stroke	-0.882	1.452	-0.61	0.5434
Substance Abuse	4.201	0.445	9.44	<.0001
Total Observations = 105,761 ANOVA F-Test: 519.224 (Pr > F: <.0001) Noninferiority F-Test: 25.815 (Pr > F: <.0001)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-5: Measure 3-2 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.852	0.002	355.62	<.0001
PAP Indicator	-0.000	0.003	-0.12	0.9019
Time Indicator	0.054	0.003	19.92	<.0001
PAP x Time Indicator	-0.003	0.004	-0.71	0.4749
Age	0.001	0.000	15.07	<.0001
Female	-0.015	0.002	-8.09	<.0001
Ethnicity	-0.016	0.005	-3.04	0.0024
Member Months	0.051	0.001	79.01	<.0001
Asthma	-0.003	0.004	-0.60	0.5453
COPD	0.005	0.004	1.19	0.2349
Cancer	0.007	0.004	1.86	0.0628
Congestive Heart Failure	-0.013	0.010	-1.22	0.2242
Coronary Artery Disease	0.001	0.007	0.14	0.8862
Diabetes	-0.004	0.003	-1.33	0.1823
Hypertension	-0.006	0.003	-1.93	0.0530
Mental Health Disorders	-0.011	0.002	-5.18	<.0001
Other Cardiac Conditions	0.001	0.004	0.13	0.8953
Other Respiratory	-0.008	0.003	-2.97	0.0029
Pregnancy	-0.016	0.005	-2.94	0.0032
Stroke	0.006	0.011	0.54	0.5866
Substance Abuse	-0.031	0.003	-9.44	<.0001
Total Observations = 105,761 ANOVA F-Test: 597.823 (Pr > F: <.0001) Noninferiority F-Test: 0.580 (Pr > F: 0.4464)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-6: Measure 5-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
19 to 44 Years Old				
Intercept	16.408	0.578	28.38	<.0001
PAP Indicator	-0.099	0.821	-0.12	0.9037
Time Indicator	0.379	0.817	0.46	0.6428
PAP x Time Indicator	-1.842	1.148	-1.60	0.1086
Age	-0.068	0.040	-1.71	0.0873
Female	4.790	0.575	8.34	<.0001
Ethnicity	3.052	1.617	1.89	0.0591
Member Months	-0.576	0.245	-2.35	0.0188
Asthma	19.321	2.464	7.84	<.0001
COPD	17.797	3.606	4.94	<.0001
Cancer	6.101	2.231	2.73	0.0063
Congestive Heart Failure	-18.412	8.263	-2.23	0.0259
Coronary Artery Disease	-1.553	7.675	-0.20	0.8396
Diabetes	6.288	2.171	2.90	0.0038
Hypertension	5.946	2.222	2.68	0.0075
Mental Health Disorders	6.804	0.828	8.22	<.0001
Other Cardiac Conditions	7.749	2.201	3.52	0.0004
Other Respiratory	21.774	1.464	14.88	<.0001
Pregnancy	0.686	1.486	0.46	0.6443
Stroke	36.034	14.688	2.45	0.0142
Substance Abuse	5.219	1.156	4.51	<.0001

N = 216,123
ANOVA F-Test: 71.385 (Pr > F: <.0001)
Noninferiority F-Test: 2.424 (Pr > F: 0.1195)
Note: Standard errors and statistical testing adjusted for heteroskedasticity.

Table C-7: Measure 5-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
45 to 64 Years Old				
Intercept	19.509	1.034	18.86	<.0001
PAP Indicator	-5.812	1.270	-4.57	<.0001
Time Indicator	-2.590	1.333	-1.94	0.0520
PAP x Time Indicator	-0.768	1.637	-0.47	0.6391
Age	-0.258	0.072	-3.57	0.0004
Female	-0.580	0.797	-0.73	0.4665
Ethnicity	9.532	2.667	3.57	0.0004
Member Months	-0.409	0.384	-1.07	0.2867
Asthma	12.508	3.120	4.01	<.0001
COPD	13.428	2.523	5.32	<.0001
Cancer	-3.417	1.579	-2.16	0.0304
Congestive Heart Failure	-5.907	5.397	-1.09	0.2737
Coronary Artery Disease	-5.843	2.653	-2.20	0.0276
Diabetes	2.055	1.234	1.66	0.0960
Hypertension	-0.000	1.055	-0.00	0.9997
Mental Health Disorders	8.144	1.256	6.48	<.0001
Other Cardiac Conditions	9.463	2.215	4.27	<.0001
Other Respiratory	18.229	1.511	12.07	<.0001
Pregnancy	100.331	55.890	1.80	0.0726
Stroke	44.530	12.037	3.70	0.0002
Substance Abuse	6.498	1.970	3.30	0.0010

N = 114,770
F-Test: 46.912 (Pr > F: <.0001)
Noninferiority F-Test: 0.450 (Pr > F: 0.5024)
Note: Standard errors and statistical testing adjusted for heteroskedasticity.

Table C-8: Measure 6-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.618	0.080	7.72	<.0001
PAP Indicator	0.035	0.118	0.30	0.7671
Time Indicator	0.232	0.123	1.90	0.0580
PAP x Time Indicator	-0.380	0.177	-2.14	0.0323
Age	-0.002	0.004	-0.46	0.6473
Female	-0.028	0.091	-0.31	0.7578
Ethnicity	-0.125	0.226	-0.55	0.5825
Member Months	0.072	0.030	2.42	0.0154
Asthma	0.895	0.397	2.25	0.0243
COPD	1.990	0.545	3.65	0.0003
Cancer	-0.170	0.265	-0.64	0.5211
Congestive Heart Failure	8.395	3.683	2.28	0.0226
Coronary Artery Disease	-0.819	0.824	-0.99	0.3203
Diabetes	2.906	0.468	6.21	<.0001
Hypertension	0.570	0.276	2.07	0.0388
Mental Health Disorders	0.352	0.126	2.80	0.0051
Other Cardiac Conditions	2.055	0.464	4.43	<.0001
Other Respiratory	0.811	0.199	4.08	<.0001
Pregnancy	-0.090	0.201	-0.45	0.6548
Stroke	3.408	2.225	1.53	0.1257
Substance Abuse	-0.086	0.160	-0.53	0.5929
Total Observations = 343,376 ANOVA F-Test: 37.499 (Pr > F: <.0001) Noninferiority F-Test: 4.689 (Pr > F: 0.0304)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-9: Measure 6-2 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	3.754	0.230	16.32	<.0001
PAP Indicator	-0.588	0.310	-1.89	0.0582
Time Indicator	0.338	0.330	1.02	0.3060
PAP x Time Indicator	-1.018	0.436	-2.33	0.0196
Age	-0.028	0.008	-3.30	0.0010
Female	1.295	0.212	6.11	<.0001
Ethnicity	0.774	0.622	1.24	0.2135
Member Months	0.042	0.084	0.50	0.6160
Asthma	11.597	1.227	9.45	<.0001
COPD	6.564	1.211	5.42	<.0001
Cancer	-0.044	0.639	-0.07	0.9446
Congestive Heart Failure	2.937	4.237	0.69	0.4882
Coronary Artery Disease	-0.790	1.420	-0.56	0.5779
Diabetes	2.838	0.665	4.27	<.0001
Hypertension	2.462	0.562	4.38	<.0001
Mental Health Disorders	1.260	0.314	4.02	<.0001
Other Cardiac Conditions	1.478	0.771	1.92	0.0551
Other Respiratory	4.920	0.494	9.96	<.0001
Pregnancy	1.583	0.762	2.08	0.0377
Stroke	8.036	3.986	2.02	0.0438
Substance Abuse	0.905	0.442	2.05	0.0406
Total Observations = 343,376 ANOVA F-Test: 63.327 (Pr > F: <.0001) Noninferiority F-Test: 5.191 (Pr > F: 0.0227)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-10: Measure 8-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.437	0.065	6.76	<.0001
PAP Indicator	0.091	0.153	0.60	0.5500
Time Indicator	-0.000	0.077	-0.00	0.9961
PAP x Time Indicator	-0.111	0.159	-0.70	0.4871
Age	0.001	0.002	0.57	0.5668
Female	-0.018	0.054	-0.32	0.7462
Ethnicity	-0.063	0.127	-0.50	0.6195
Member Months	0.055	0.035	1.56	0.1205
Asthma	0.043	0.053	0.81	0.4182
COPD	0.145	0.130	1.11	0.2667
Cancer	0.070	0.136	0.52	0.6053
Congestive Heart Failure	-0.322	0.123	-2.61	0.0094
Coronary Artery Disease	0.160	0.257	0.62	0.5336
Diabetes	-0.051	0.097	-0.53	0.5971
Hypertension	0.162	0.092	1.75	0.0803
Mental Health Disorders	-0.113	0.058	-1.94	0.0530
Other Cardiac Conditions	0.019	0.120	0.16	0.8745
Other Respiratory	0.057	0.062	0.92	0.3571
Pregnancy	0.030	0.168	0.18	0.8590
Stroke	-0.464	0.074	-6.25	<.0001
Substance Abuse	0.019	0.114	0.17	0.8654
Total Observations = 404 ANOVA F-Test: 0.798 (Pr > F: 0.7161) Noninferiority F-Test: 0.463 (Pr > F: 0.4963)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-11: Measure 8-6 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
20 to 44 Years Old				
Intercept	0.829	0.006	148.09	<.0001
PAP Indicator	-0.090	0.009	-10.50	<.0001
Time Indicator	0.012	0.009	1.39	0.1649
PAP x Time Indicator	-0.038	0.013	-3.00	0.0027
Age	0.002	0.000	3.77	0.0002
Female	0.109	0.007	16.43	<.0001
Ethnicity	-0.032	0.017	-1.88	0.0600
Member Months	0.003	0.003	1.13	0.2567
Asthma	0.119	0.011	11.35	<.0001
COPD	0.110	0.015	7.19	<.0001
Cancer	0.130	0.013	10.24	<.0001
Congestive Heart Failure	0.077	0.041	1.89	0.0593
Coronary Artery Disease	0.167	0.036	4.67	<.0001
Diabetes	0.169	0.012	14.46	<.0001
Hypertension	0.165	0.010	15.97	<.0001
Mental Health Disorders	0.190	0.006	31.16	<.0001
Other Cardiac Conditions	0.081	0.013	6.11	<.0001
Other Respiratory	0.121	0.007	16.21	<.0001
Pregnancy	0.098	0.012	8.09	<.0001
Stroke	0.192	0.052	3.68	0.0002
Substance Abuse	0.002	0.010	0.24	0.8078

N = 16,103
ANOVA F-Test: 94.855 (Pr > F: <.0001)
Noninferiority F-Test: 9.213 (Pr > F: 0.0024)
Note: Standard errors and statistical testing adjusted for heteroskedasticity.

Table C-12: Measure 8-6 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
45 to 64 Years Old				
Intercept	0.894	0.007	135.54	<.0001
PAP Indicator	-0.074	0.010	-7.60	<.0001
Time Indicator	0.022	0.010	2.26	0.0239
PAP x Time Indicator	-0.034	0.014	-2.44	0.0146
Age	0.002	0.001	3.05	0.0023
Female	0.075	0.007	10.16	<.0001
Ethnicity	0.052	0.016	3.21	0.0013
Member Months	0.001	0.003	0.30	0.7615
Asthma	0.081	0.010	7.78	<.0001
COPD	0.064	0.011	6.03	<.0001
Cancer	0.094	0.009	9.92	<.0001
Congestive Heart Failure	0.003	0.023	0.14	0.8898
Coronary Artery Disease	0.102	0.016	6.26	<.0001
Diabetes	0.131	0.007	19.90	<.0001
Hypertension	0.134	0.006	21.88	<.0001
Mental Health Disorders	0.130	0.007	19.49	<.0001
Other Cardiac Conditions	0.047	0.010	4.54	<.0001
Other Respiratory	0.083	0.007	11.82	<.0001
Pregnancy	-0.001	0.011	-0.08	0.9328
Stroke	0.097	0.029	3.34	0.0008
Substance Abuse	0.017	0.013	1.38	0.1679

N = 9,185
F-Test: 58.546 (Pr > F: <.0001)
Noninferiority F-Test: 5.727 (Pr > F: 0.0167)
Note: Standard errors and statistical testing adjusted for heteroskedasticity.

Table C-13: Measure 9-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
20 to 44 Years Old				
Intercept	0.331	0.007	46.88	<.0001
PAP Indicator	0.013	0.010	1.31	0.1912
Time Indicator	0.002	0.011	0.18	0.8537
PAP x Time Indicator	-0.027	0.015	-1.88	0.0605
Age	0.001	0.001	2.83	0.0047
Female	0.116	0.007	15.50	<.0001
Ethnicity	0.081	0.020	4.10	<.0001
Member Months	0.002	0.004	0.49	0.6262
Asthma	0.074	0.022	3.38	0.0007
COPD	0.038	0.030	1.27	0.2026
Cancer	0.129	0.024	5.40	<.0001
Congestive Heart Failure	-0.064	0.115	-0.56	0.5752
Coronary Artery Disease	-0.110	0.099	-1.11	0.2660
Diabetes	0.090	0.025	3.67	0.0002
Hypertension	0.077	0.024	3.19	0.0014
Mental Health Disorders	0.090	0.010	9.39	<.0001
Other Cardiac Conditions	0.032	0.023	1.41	0.1572
Other Respiratory	0.026	0.013	2.02	0.0434
Pregnancy	0.014	0.018	0.74	0.4623
Stroke	-0.028	0.115	-0.25	0.8059
Substance Abuse	-0.068	0.012	-5.70	<.0001

N = 16,103
ANOVA F-Test: 27.811 (Pr > F: <.0001)
Noninferiority F-Test: 3.848 (Pr > F: 0.0498)
Note: Standard errors and statistical testing adjusted for heteroskedasticity.

Table C-14: Measure 9-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
45 to 64 Years Old				
Intercept	0.359	0.010	34.88	<.0001
PAP Indicator	0.085	0.014	6.03	<.0001
Time Indicator	0.002	0.015	0.11	0.9094
PAP x Time Indicator	-0.018	0.020	-0.87	0.3856
Age	0.004	0.001	4.18	<.0001
Female	0.082	0.010	8.01	<.0001
Ethnicity	0.157	0.028	5.52	<.0001
Member Months	0.008	0.005	1.57	0.1153
Asthma	0.077	0.027	2.81	0.0049
COPD	0.006	0.023	0.26	0.7945
Cancer	0.082	0.022	3.73	0.0002
Congestive Heart Failure	-0.049	0.076	-0.65	0.5178
Coronary Artery Disease	-0.072	0.037	-1.97	0.0489
Diabetes	0.074	0.017	4.47	<.0001
Hypertension	0.066	0.014	4.60	<.0001
Mental Health Disorders	0.096	0.014	7.06	<.0001
Other Cardiac Conditions	0.040	0.021	1.84	0.0657
Other Respiratory	0.016	0.015	1.11	0.2673
Pregnancy	0.190	0.259	0.73	0.4634
Stroke	-0.096	0.064	-1.50	0.1331
Substance Abuse	-0.019	0.019	-1.00	0.3181

N = 9,185
F-Test: 17.969 (Pr > F: <.0001)
Noninferiority F-Test: 0.825 (Pr > F: 0.3636)
Note: Standard errors and statistical testing adjusted for heteroskedasticity.

Table C-15: Measure 9-4 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.564	0.026	21.86	<.0001
PAP Indicator	-0.021	0.036	-0.58	0.5617
Time Indicator	0.078	0.038	2.06	0.0395
PAP x Time Indicator	-0.141	0.050	-2.83	0.0047
Age	0.004	0.001	3.08	0.0021
Female	0.072	0.025	2.82	0.0049
Ethnicity	0.070	0.047	1.49	0.1369
Member Months	-0.001	0.011	-0.05	0.9567
Asthma	-0.065	0.059	-1.11	0.2675
COPD	-0.047	0.055	-0.86	0.3904
Cancer	0.034	0.054	0.63	0.5302
Congestive Heart Failure	-0.039	0.099	-0.39	0.6971
Coronary Artery Disease	-0.074	0.080	-0.92	0.3563
Diabetes	0.193	0.031	6.20	<.0001
Hypertension	0.020	0.032	0.63	0.5310
Mental Health Disorders	0.092	0.034	2.75	0.0060
Other Cardiac Conditions	0.041	0.043	0.96	0.3382
Other Respiratory	0.124	0.032	3.84	0.0001
Pregnancy	0.048	0.125	0.39	0.6992
Stroke	0.174	0.186	0.94	0.3489
Substance Abuse	-0.076	0.050	-1.52	0.1297
Total Observations = 1,493 ANOVA F-Test: 5.474 (Pr > F: <.0001) Noninferiority F-Test: 7.971 (Pr > F: 0.0048)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-16: Measure 9-5 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.682	0.023	29.59	<.0001
PAP Indicator	0.113	0.029	3.87	0.0001
Time Indicator	0.032	0.036	0.91	0.3639
PAP x Time Indicator	-0.006	0.042	-0.14	0.8870
Age	0.002	0.001	2.57	0.0102
Female	0.023	0.021	1.14	0.2546
Ethnicity	-0.071	0.041	-1.75	0.0804
Member Months	0.008	0.010	0.76	0.4473
Asthma	-0.028	0.050	-0.57	0.5702
COPD	-0.061	0.045	-1.38	0.1689
Cancer	-0.028	0.043	-0.65	0.5145
Congestive Heart Failure	0.011	0.051	0.22	0.8241
Coronary Artery Disease	0.076	0.047	1.62	0.1065
Diabetes	0.289	0.030	9.74	<.0001
Hypertension	0.065	0.025	2.57	0.0104
Mental Health Disorders	-0.036	0.029	-1.24	0.2161
Other Cardiac Conditions	-0.003	0.031	-0.11	0.9140
Other Respiratory	0.022	0.025	0.87	0.3856
Pregnancy	0.160	0.095	1.68	0.0932
Stroke	-0.197	0.187	-1.06	0.2909
Substance Abuse	0.006	0.043	0.15	0.8830
Total Observations = 1,493 ANOVA F-Test: 11.207 (Pr > F: <.0001) Noninferiority F-Test: 0.005 (Pr > F: 0.9442)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-17: Measure 9-6 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.138	0.027	5.15	<.0001
PAP Indicator	0.212	0.047	4.47	<.0001
Time Indicator	0.124	0.044	2.80	0.0052
PAP x Time Indicator	-0.198	0.066	-2.98	0.0030
Age	0.002	0.003	0.60	0.5513
Female	0.004	0.034	0.12	0.9079
Ethnicity	0.368	0.211	1.74	0.0820
Member Months	0.012	0.016	0.75	0.4533
Asthma	0.086	0.061	1.39	0.1643
COPD	-0.026	0.036	-0.72	0.4729
Cancer	-0.049	0.053	-0.92	0.3557
Congestive Heart Failure	-0.058	0.161	-0.36	0.7204
Coronary Artery Disease	0.091	0.097	0.94	0.3486
Diabetes	0.038	0.051	0.76	0.4486
Hypertension	-0.049	0.039	-1.26	0.2077
Mental Health Disorders	-0.001	0.040	-0.02	0.9867
Other Cardiac Conditions	0.089	0.057	1.58	0.1152
Other Respiratory	0.117	0.036	3.20	0.0014
Pregnancy	0.000	.	.	.
Stroke	-0.073	0.164	-0.45	0.6559
Substance Abuse	0.013	0.054	0.23	0.8168
Total Observations = 650 ANOVA F-Test: 2.530 (Pr > F: 0.0004) Noninferiority F-Test: 8.490 (Pr > F: 0.0036)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-18: Measure 9-7 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.115	0.005	21.12	<.0001
PAP Indicator	0.062	0.009	7.11	<.0001
Time Indicator	-0.007	0.008	-0.90	0.3655
PAP x Time Indicator	0.016	0.013	1.26	0.2067
Age	-0.001	0.000	-3.28	0.0010
Female	0.000	.	.	.
Ethnicity	0.054	0.018	2.98	0.0029
Member Months	0.001	0.003	0.26	0.7962
Asthma	0.002	0.016	0.13	0.9005
COPD	0.020	0.019	1.06	0.2888
Cancer	0.167	0.019	8.87	<.0001
Congestive Heart Failure	-0.073	0.062	-1.18	0.2378
Coronary Artery Disease	-0.036	0.042	-0.85	0.3927
Diabetes	0.019	0.014	1.35	0.1780
Hypertension	-0.011	0.012	-0.92	0.3566
Mental Health Disorders	0.021	0.008	2.56	0.0104
Other Cardiac Conditions	-0.018	0.016	-1.15	0.2501
Other Respiratory	0.012	0.010	1.15	0.2506
Pregnancy	0.074	0.017	4.27	<.0001
Stroke	-0.032	0.075	-0.43	0.6657
Substance Abuse	-0.022	0.011	-2.06	0.0395
Total Observations = 12,363 ANOVA F-Test: 18.329 (Pr > F: <.0001) Noninferiority F-Test: 1.610 (Pr > F: 0.2045)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-19: Measure 9-9 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.632	0.041	15.50	<.0001
PAP Indicator	0.071	0.070	1.02	0.3105
Time Indicator	0.088	0.060	1.48	0.1399
PAP x Time Indicator	-0.044	0.095	-0.46	0.6434
Age	0.003	0.002	1.69	0.0915
Female	0.008	0.048	0.18	0.8597
Ethnicity	0.040	0.122	0.33	0.7420
Member Months	0.001	0.019	0.07	0.9410
Asthma	0.118	0.109	1.08	0.2804
COPD	0.133	0.093	1.43	0.1524
Cancer	0.140	0.091	1.55	0.1226
Congestive Heart Failure	0.000	.	.	.
Coronary Artery Disease	0.334	0.122	2.75	0.0063
Diabetes	0.002	0.190	0.01	0.9936
Hypertension	0.053	0.121	0.44	0.6631
Mental Health Disorders	-0.057	0.062	-0.91	0.3636
Other Cardiac Conditions	0.028	0.129	0.21	0.8306
Other Respiratory	0.079	0.060	1.33	0.1850
Pregnancy	0.120	0.198	0.61	0.5445
Stroke	0.000	.	.	.
Substance Abuse	-0.030	0.067	-0.44	0.6611
Total Observations = 397 ANOVA F-Test: 1.105 (Pr > F: 0.3450) Noninferiority F-Test: 0.147 (Pr > F: 0.7015)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-20: Measure 11-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.255	0.029	8.69	<.0001
PAP Indicator	0.037	0.033	1.12	0.2622
Time Indicator	0.020	0.056	0.36	0.7199
PAP x Time Indicator	-0.088	0.057	-1.53	0.1251
Age	-0.061	0.025	-2.40	0.0164
Female	0.088	0.022	3.96	<.0001
Ethnicity	0.095	0.050	1.91	0.0557
Member Months	-0.004	0.010	-0.41	0.6851
Asthma	0.047	0.056	0.83	0.4093
COPD	0.024	0.089	0.27	0.7904
Cancer	0.040	0.095	0.42	0.6734
Congestive Heart Failure	0.000	.	.	.
Coronary Artery Disease	0.000	.	.	.
Diabetes	-0.089	0.110	-0.81	0.4193
Hypertension	-0.109	0.099	-1.10	0.2713
Mental Health Disorders	0.040	0.028	1.46	0.1445
Other Cardiac Conditions	0.080	0.073	1.09	0.2778
Other Respiratory	0.059	0.041	1.43	0.1532
Pregnancy	-0.098	0.064	-1.53	0.1254
Stroke	-0.240	0.062	-3.85	0.0001
Substance Abuse	-0.165	0.046	-3.55	0.0004
Total Observations = 1,637 ANOVA F-Test: 3.039 (Pr > F: <.0001) Noninferiority F-Test: 2.676 (Pr > F: 0.1019)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-21: Measure 11-2 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.301	0.031	9.62	<.0001
PAP Indicator	0.043	0.035	1.25	0.2119
Time Indicator	-0.074	0.057	-1.28	0.2000
PAP x Time Indicator	-0.047	0.059	-0.80	0.4227
Age	-0.099	0.026	-3.76	0.0002
Female	0.053	0.023	2.30	0.0215
Ethnicity	0.108	0.051	2.13	0.0335
Member Months	-0.006	0.010	-0.53	0.5958
Asthma	0.025	0.053	0.47	0.6372
COPD	0.016	0.091	0.18	0.8579
Cancer	-0.022	0.101	-0.22	0.8236
Congestive Heart Failure	0.000	.	.	.
Coronary Artery Disease	0.000	.	.	.
Diabetes	-0.034	0.127	-0.27	0.7886
Hypertension	0.022	0.130	0.17	0.8637
Mental Health Disorders	0.035	0.028	1.27	0.2048
Other Cardiac Conditions	0.104	0.073	1.43	0.1542
Other Respiratory	-0.036	0.039	-0.91	0.3646
Pregnancy	-0.088	0.065	-1.35	0.1762
Stroke	0.070	0.313	0.23	0.8217
Substance Abuse	-0.135	0.050	-2.67	0.0077
Total Observations = 1,637 ANOVA F-Test: 2.533 (Pr > F: 0.0004) Noninferiority F-Test: 0.388 (Pr > F: 0.5332)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-22: Measure 13-1 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.550	0.070	7.90	<.0001
PAP Indicator	-0.263	0.114	-2.30	0.0227
Time Indicator	0.115	0.099	1.16	0.2471
PAP x Time Indicator	-0.108	0.145	-0.75	0.4553
Age	-0.001	0.003	-0.43	0.6652
Female	0.024	0.070	0.34	0.7310
Ethnicity	-0.562	0.173	-3.24	0.0014
Member Months	-0.023	0.021	-1.11	0.2700
Asthma	0.248	0.172	1.44	0.1507
COPD	0.137	0.158	0.87	0.3881
Cancer	-0.132	0.189	-0.70	0.4880
Congestive Heart Failure	0.000	.	.	.
Coronary Artery Disease	0.000	.	.	.
Diabetes	-0.010	0.165	-0.06	0.9505
Hypertension	0.172	0.116	1.48	0.1412
Mental Health Disorders	0.346	0.093	3.72	0.0003
Other Cardiac Conditions	0.001	0.122	0.01	0.9954
Other Respiratory	-0.044	0.090	-0.49	0.6273
Pregnancy	-0.108	0.217	-0.50	0.6201
Stroke	-0.542	0.166	-3.27	0.0013
Substance Abuse	-0.015	0.079	-0.19	0.8522
Total Observations = 196 ANOVA F-Test: 2.148 (Pr > F: 0.0061) Noninferiority F-Test: 0.486 (Pr > F: 0.4858)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-23: Measure 13-2 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Initiation				
Intercept	0.337	0.038	8.84	<.0001
PAP Indicator	-0.035	0.054	-0.64	0.5211
Time Indicator	-0.033	0.046	-0.72	0.4726
PAP x Time Indicator	0.058	0.062	0.92	0.3561
Age	-0.001	0.001	-0.79	0.4271
Female	-0.025	0.028	-0.88	0.3792
Ethnicity	0.047	0.076	0.62	0.5341
Member Months	-0.009	0.010	-0.91	0.3621
Asthma	-0.053	0.071	-0.74	0.4601
COPD	0.015	0.066	0.23	0.8217
Cancer	0.035	0.069	0.51	0.6090
Congestive Heart Failure	-0.144	0.165	-0.87	0.3827
Coronary Artery Disease	0.002	0.151	0.01	0.9913
Diabetes	0.006	0.058	0.10	0.9214
Hypertension	0.067	0.047	1.41	0.1575
Mental Health Disorders	-0.007	0.030	-0.25	0.8062
Other Cardiac Conditions	0.019	0.056	0.33	0.7379
Other Respiratory	0.041	0.038	1.09	0.2761
Pregnancy	0.078	0.093	0.84	0.4010
Stroke	0.079	0.174	0.45	0.6517
Substance Abuse	0.112	0.030	3.75	0.0002

N = 1,148
ANOVA F-Test: 1.279 (Pr > F: 0.1832)
Noninferiority F-Test: 0.858 (Pr > F: 0.3542)
Note: Standard errors and statistical testing adjusted for heteroskedasticity.

Table C-24: Measure 13-2 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Engagement				
Intercept	0.152	0.028	5.34	<.0001
PAP Indicator	0.005	0.043	0.13	0.9001
Time Indicator	-0.033	0.033	-0.99	0.3211
PAP x Time Indicator	0.011	0.048	0.24	0.8129
Age	-0.001	0.001	-1.56	0.1190
Female	0.015	0.021	0.72	0.4714
Ethnicity	0.030	0.056	0.53	0.5954
Member Months	0.002	0.008	0.32	0.7493
Asthma	-0.093	0.032	-2.88	0.0040
COPD	-0.002	0.044	-0.05	0.9563
Cancer	0.052	0.054	0.96	0.3382
Congestive Heart Failure	-0.034	0.050	-0.68	0.4958
Coronary Artery Disease	0.040	0.098	0.41	0.6824
Diabetes	-0.063	0.031	-2.05	0.0403
Hypertension	0.024	0.031	0.75	0.4520
Mental Health Disorders	-0.006	0.022	-0.25	0.8034
Other Cardiac Conditions	-0.066	0.033	-1.98	0.0475
Other Respiratory	-0.012	0.026	-0.49	0.6262
Pregnancy	-0.038	0.068	-0.55	0.5791
Stroke	0.031	0.134	0.23	0.8149
Substance Abuse	0.081	0.022	3.67	0.0003

N = 1,148
F-Test: 1.643 (Pr > F: 0.0368)
Noninferiority F-Test: 0.085 (Pr > F: 0.7710)
Note: Standard errors and statistical testing adjusted for heteroskedasticity.

Table C-25: Measure 13-3 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.234	0.001	230.61	<.0001
PAP Indicator	-0.089	0.001	-63.26	<.0001
Time Indicator	0.017	0.002	9.92	<.0001
PAP x Time Indicator	-0.041	0.002	-18.51	<.0001
Age	-0.001	0.000	-27.21	<.0001
Female	-0.017	0.001	-15.06	<.0001
Ethnicity	-0.007	0.003	-2.71	0.0067
Member Months	0.001	0.001	1.22	0.2206
Asthma	0.024	0.003	7.81	<.0001
COPD	-0.004	0.003	-1.27	0.2025
Cancer	0.019	0.003	6.42	<.0001
Congestive Heart Failure	0.034	0.009	3.70	0.0002
Coronary Artery Disease	-0.043	0.005	-9.00	<.0001
Diabetes	0.014	0.002	6.50	<.0001
Hypertension	0.010	0.002	4.86	<.0001
Mental Health Disorders	0.503	0.002	268.42	<.0001
Other Cardiac Conditions	-0.006	0.003	-2.02	0.0437
Other Respiratory	0.015	0.002	7.75	<.0001
Pregnancy	-0.007	0.003	-2.19	0.0287
Stroke	-0.024	0.010	-2.26	0.0240
Substance Abuse	-0.008	0.002	-3.56	0.0004
Total Observations = 356,179 ANOVA F-Test: 7,656.952 (Pr > F: <.0001) Noninferiority F-Test: 354.120 (Pr > F: <.0001)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Table C-26: Measure 13-4 Full Regression Results

Variable	Estimate	Standard Error	T-Statistic	Prob > |t|
Intercept	0.047	0.001	84.70	<.0001
PAP Indicator	0.020	0.001	24.70	<.0001
Time Indicator	0.026	0.001	26.53	<.0001
PAP x Time Indicator	-0.021	0.001	-15.20	<.0001
Age	-0.000	0.000	-7.14	<.0001
Female	-0.010	0.001	-13.43	<.0001
Ethnicity	-0.007	0.001	-5.22	<.0001
Member Months	-0.002	0.000	-7.66	<.0001
Asthma	0.005	0.002	2.79	0.0053
COPD	0.007	0.002	3.41	0.0007
Cancer	-0.018	0.002	-11.58	<.0001
Congestive Heart Failure	0.023	0.008	2.97	0.0030
Coronary Artery Disease	-0.017	0.003	-5.19	<.0001
Diabetes	-0.008	0.001	-6.54	<.0001
Hypertension	-0.004	0.001	-3.37	0.0008
Mental Health Disorders	0.023	0.001	23.83	<.0001
Other Cardiac Conditions	0.000	0.002	0.07	0.9439
Other Respiratory	0.000	0.001	0.30	0.7662
Pregnancy	0.014	0.002	6.64	<.0001
Stroke	-0.007	0.005	-1.28	0.2021
Substance Abuse	0.469	0.003	161.33	<.0001
Total Observations = 356,179 ANOVA F-Test: 8,211.865 (Pr > F: <.0001) Noninferiority F-Test: 195.544 (Pr > F: <.0001)				
Note: Standard errors and statistical testing adjusted for heteroskedasticity. Total observations includes PAP & Non-PAP comparison group members in the baseline and evaluation periods.				

Appendix D. Financial Methods and Supplemental Tables

This appendix provides the financial methods and supplemental tables.

Financial Outcomes Methods

Treatment Group

The treatment group (i.e., the Bridge/Premium Assistance Program [PAP] population) for the financial measures will be similar to that for the health outcomes measures. Specifically, the treatment group will be composed of members who are either:

1. Childless adults between the age of 19 through 64 with incomes at or below 133 percent of the Federal Poverty Level (FPL) who are neither enrolled in (or eligible for) Medicare, not incarcerated, not medically frail, or not eligible for cost-effective employer sponsored insurance, or
2. Parents between the age of 19 through 64 with incomes between 38 percent (for non-working parents) or 47 percent (for working parents) and 133 percent of the FPL and who are not enrolled in (or eligible for) Medicare, not incarcerated, not medically frail, or not eligible for cost-effective employer sponsored insurance.

Comparison Group

For the financial measures the comparison group are the newly eligible members of the Bridge program, which was in effect from September 2014–December 2015. The Bridge program ended on January 1, 2016, when most members were enrolled in PAP coverage and others remained in New Hampshire Health Plan (NHHP) Medically Frail and Transitional population coverage. The comparison group excludes the Medically Frail members who are not eligible to enroll in PAP coverage.

For the cost effectiveness analyses, an estimate was developed of what the comparison group would have cost if the Bridge program had continued past December 2015, adjusting for items such as medical cost trends, demographic differences, acuity differences, and changes to targeted Bridge program provider reimbursement levels. This means that part of this process will consist of developing hypothetical capitation rates for the Bridge program for time periods after December 2015.

Thus, the financial outcomes measures were calculated based on differences across time for essentially the same population, while the health outcome measures were calculated based on differences between the treatment group (PAP participants) and a separate comparison group (Medicaid Managed Care Organization [MCO] members) at the same point in time. The comparison group is different from that described above for health outcomes for a number of reasons.

The Waiver Evaluation Design Plan approved by the Centers for Medicare & Medicaid Services (CMS) specifically defined the financial comparison groups as “Bridge to actual PAP costs compared to estimated costs if the Bridge program were continued”. This methodology parallels the methodologies employed for the initial budget neutrality calculations for CMS approval of the PAP waiver. There are also practical reasons for the different approaches. Current Medicaid MCO capitation rates are calculated differently and are significantly different than those for the Bridge program when it was in existence. Using current MCO capitation rates would

require significant adjustments for which little supporting data exists. The result would be less accurate cost estimates.

However, comparing health outcomes across time for the same group of members presents significant issues in identifying PAP impacts. Health outcomes can change over time in the absence of any programmatic changes simply as individuals age and as changes to the entire health care system. When the same members are tracked over time, it becomes difficult to distinguish the impact of the PAP from those changes that occur as a result of changes to the entire health care system and individuals aging. By using a comparison group separate from the treatment group, changes unrelated to participation in the PAP can be controlled for and the result is a more accurate estimate of PAP estimates.

Since the financial measure will be effectively comparing the experience of the same groups of individuals over time, the comparability of the treatment and comparison groups is virtually assured. For this reason, matching methods, such as the propensity score matching method described above, are not necessary for the financial populations.

Financial Measures Analytical Approach

In order to provide a comprehensive picture of the relative costs associated with the PAP and to compare the *actual* experience of the Bridge program population to the *actual* experience of the PAP, two approaches were used to estimate the relative medical costs.

The first method involved comparing the medical component from the hypothetical capitation rate projections for the Bridge program to the average medical cost component from Exchange premiums, Cost Sharing Reduction (CSR) payment, deductible funding, and the cost of wraparound services for the PAP population.

For the PAP population, the average PAP medical cost was based on the carriers' filed premium rates as well as other documents prepared by Milliman for the Department of Health and Human Services (DHHS) to estimate medical costs as well as adjusting for other medical cost components such as CSR payments, deductible funding, and the cost of wraparound services. For the comparison group, medical cost projections were developed based on calendar year (CY) 2015 Bridge program encounter data and trended and adjusted for demographic changes, acuity differences, etc.

The second method involved comparing the hypothetical Bridge program medical cost component from the capitation rate projections to the carriers' actual medical cost of covering the PAP population in the exchange.

For the PAP population, the average PAP medical cost was aggregated from the 2016 New Hampshire Comprehensive Healthcare Information System (CHIS) database to determine the medical cost. The hypothetical Bridge program medical cost projections were developed from CY 2015 Bridge program experience data adjusted for items listed above as necessary.

Administrative costs are based on estimated based on administrative amounts included in PAP premium rates filings and hypothetical Bridge program rates, had the program continued, since the allocation of actual administrative costs for the PAP and Bridge program members is difficult for the carriers and MCOs to estimate.

For the treatment group, administrative costs were taken directly from the PAP rate filing information. For the comparison group, administrative costs were estimated by developing hypothetical Bridge program capitation rates had the program continued based on hypothetical Bridge program capitation rates for CY 2016.

Total costs for both groups were the sum of the Medical and administrative costs estimates. This resulted in two different total cost estimates for each group, one for each of the approaches used to estimate medical costs.

Supplemental Tables and Results

The following section provide additional details and results of Measure 14-2 and Measure 14-3.

Measure 14-2

Approach #1 Study Group Medical Cost Development

For the first approach, Milliman calculated the medical cost for the study group using the medical loss ratios from carriers' exchange rate filings. These ratios were applied to the actual PAP premiums and estimated cost sharing reduction payments to develop the medical costs for these two components. Milliman then included the full value of the deductible and wrap-around services.

Table D-1 below shows the development of the medical cost for the study group under Approach #1.

Table D-1: Medical Cost Development for Study Group – Approach #1

Component	Total Cost	Medical Loss Ratio	Medical Cost
PAP Premium	$408.57	77.4%	$316.43
Estimated Cost Sharing Reduction	$148.12	100.0%	$148.12
Deductible	$4.47	100.0%	$4.47
Wrap-Around Services	$18.12	100.0%	$18.12
Total	**$579.28**	**84.1%**	**$487.14**

Approach #2 Study Group Cost Development:

For the second approach, Milliman calculated the medical cost for the study group cost using the carriers' actual cost of covering the PAP population in the exchange as reported in the CHIS data.

Table D-2 below shows the development of the projected medical costs for the study group under Approach #2.

Table D-2: Medical Cost Development for Study Group – Approach #2

Service Category	Per Capita Monthly Paid Cost	IBNR Adjustment	Projected Per Capita Monthly Paid Cost
Hospital Inpatient	$120.92	1.0103	$122.16
Hospital Outpatient	$147.21	1.0103	$147.72
Professional and Other Services	$130.45	1.0103	$131.79
Community Mental Health Center	$1.73	1.0103	$1.75
Prescription Drugs	$100.25	1.0103	$101.27
Wraparound Services	$18.12	1.0000	$18.12
Total	**$518.68**	**1.0099**	**$523.81**

Base Data

To develop the study group medical cost, Milliman used CY 2016 claims data from the CHIS database to identify the PAP participants and summarize their enrollment and claims information. There are no outside data sources to validate the data collected in the CHIS database, so there could be inconsistencies between the data collected and

carrier financial statements. However, Milliman found no strong indication that such discrepancies exist and believe the encounter data is of appropriate quality and completeness to use in this analysis.

The base experience data covers over 482,000 member months generating more than $240 million in claims for a base experience period PMPM cost of $500.56. As discussed below, wraparound services are not included in the CHIS data and were added separately.

Wraparound Service Costs

Milliman added $18.12 per member per month (PMPM) for wraparound services not included in the CHIS data using a special report provided by DHHS. Wraparound services for PAP enrollees are paid by DHHS directly to providers from their Medicaid Management Information System (MMIS).

Incurred But Not Reported (IBNR) Adjustment

Milliman made a 1.0103 IBNR claims adjustment to capture outstanding claims liability beyond the June 2017 paid through date. Milliman's *Claim Reserve Estimation Workbook (CREW)* was used to calculate the 1.0103 completion factor. CREW calculates IBNR reserve estimates using generally accepted actuarial standards and practices. Wraparound services costs were assumed to be complete. Therefore, no IBNR adjustment was used for those services.

Comparison Group Cost Development

Milliman used the same comparison group for both approaches, which consists of the medical cost component of the hypothetical Bridge program capitation rate as if the program had continued beyond 2015.

Table D-3 shows the development of the projected medical costs for the comparison group. The following sections provide additional details related to the adjustments shown in Table D-3.

Table D-3: Comparison Group Cost Development Base Data CY 2015

Benefits	CY 2015 Per Capita Monthly Paid Cost	Acuity Adjustment	IBNR Adjustment	Utilization Trend Factors	Unit Cost Trend Factors	Expanded Mental Health Services	Projected Per Capita Monthly Paid Cost
Hospital Inpatient	$62.22	1.0000	1.0049	1.0000	1.0200	$0.21	$63.98
Hospital Outpatient	$134.95	1.0000	1.0049	1.0200	1.0400	$0.00	$143.86
Professional and Other Services	$136.93	1.0000	1.0049	1.0300	1.0050	$0.00	$142.43
Mental Health Center	$12.49	1.0000	1.0049	1.0300	1.0050	$2.68	$15.67
Prescription Drugs	$76.56	1.0000	1.0049	0.9989	1.1114	$0.00	$85.41
All Services	**$423.15**	**1.0000**	**1.0049**	**1.0168**	**1.0373**	**$2.89**	**$451.35**

Base Data

To develop the hypothetical capitation rate, Milliman used CY 2015 encounter data from the New Hampshire Health Protection Program (NHHPP) and excluded all Medically Frail individuals since they are ineligible to enroll in a Qualified Health Plan (QHP) under the PAP. The MCO encounter data and sub-capitated expenditures were obtained directly from the participating MCOs. Milliman did not identify any material concerns with the quality or availability of the data with respect to total claims in aggregate or by major service category. The data reconciliation efforts are consistent with Actuarial Standard of Practice #23. Milliman believes the encounter data is of appropriate quality and completeness to use as the primary basis for developing hypothetical capitation rates.

Milliman summarized detailed MCO encounter claims data with dates of service between January 2015 and December 2015 with dates of payment through November 2016 with the following specifications:

- The cost and utilization data reflect the claim header information for claims paid at the header level and line item detail for claims paid at the detail level.
- Claims for Federally Qualified Health Centers (FQHC) and Rural Health Clinics (RHC) providers reflect their normal prospective per encounter rates.
- Prescription drug claims reflect gross ingredient cost and dispensing fees prior to any pharmacy rebates.

The base experience data covers over 380,000 member months generating more than $160 million in claims for a base experience period PMPM cost of $423.15.

Acuity Adjustment

Milliman did not apply an acuity adjustment to reflect health differences between the Bridge program population and the PAP population over concerns about the CHIS data quality. In fact, it appears there may be under-reporting of International Classification of Disease (ICD) codes in the CHIS data based on risk scores developed from this data. Since 80 percent of the PAP population was previously enrolled in the Bridge program, Milliman would expect similar risk scores for these two populations. However, the resulting CHIS risk scores implied that the 20 percent of the PAP population new to Medicaid had acuity levels less than half of those previously in the Bridge program.

Since the member identification numbers used in each database does not crossover, Milliman was unable to perform a side-by-side member comparison to determine if former Bridge program enrollees had a consistent risk score using the CHIS data. The Bridge program population had, on average, over 30 percent more diagnosis codes and 20 percent more prescription drug codes per member in total and by carrier. Due to these concerns, Milliman did not include an acuity adjustment in the analysis.

Using an acuity adjustment as calculated would decrease the projected medical cost for the hypothetical Bridge program capitation rates and increase the cost neutrality factor.

IBNR Adjustment

Milliman made a 1.0049 IBNR claims adjustment to capture outstanding claims liability past the November 2016 paid through date. Milliman's *Claim Reserve Estimation Workbook (CREW)* was used to calculate the 1.0049 completion factor. CREW calculates IBNR reserve estimates using generally accepted actuarial standards and practices.

Utilization and Unit Cost Trends from CY 2015 to CY 2016

Milliman applied utilization and unit cost trends from the CY 2015 base period to CY 2016 by type of service using experience with similar populations in other states and CMS projected trends. The annual trend rates used are consistent with those used to develop the initial NHHP capitation rates.

Table D-4 below shows the annual utilization and unit cost trend rates used.

Table D-4: Annual Trends from CY 2015 to CY 2016

Service Category	Utilization Trend	Unit Cost Trend
Hospital Inpatient	0.0%	2.0%
Hospital Outpatient	2.0%	4.0%

Service Category	Utilization Trend	Unit Cost Trend
Professional and Other State Plan Services	3.0%	0.5%
Prescription Drugs	-0.1%	11.1%
Community Mental Health Center	3.0%	0.5%

Expanded Mental Health Services Adjustment

Milliman made an adjustment to reflect DHHS' continuing expansion of the mental health service capacity consistent with the Community Mental Health Agreement (CMHA). The $2.89 PMPM add-on reflects the incremental increase in funding between 2015 and 2016 through the CMHA and Community Mental Health Center workforce expansion implemented in state fiscal year (SFY) 2017.

Measure 14-3 Additional Results

Study Group

For the study group, administrative expense levels are derived from the CY 2016 PAP rate filing information. The CY 2016 PAP rate filings were obtained from the System for Electronic Rates & Forms Filing (SERFF) for the five carriers offering plans to the PAP population on the Federally Facilitated Health Insurance Marketplace (the "exchange"). The five carriers include Celtic Insurance Company, Harvard Pilgrim Health Care of New England, Maine Community Health Options, Matthew Thornton Health Plan, Inc., and Minuteman Health, Inc.

The reported administrative expense load, profit & risk load, and taxes & fees allocations were applied to the PAP plan premiums to calculate the estimated administrative costs PMPM. Carriers included the following costs in each category:

General Administrative Expenses:

- Acquisition Costs
- Maintenance Costs (i.e., overhead, operations, sales, distribution, and marketing)
- Quality Improvement Expenses

Profit & Risk Margin:

- Target post-tax profit

Taxes & Fees:

- Patient-Centered Outcomes Research Institute (PCORI) fee
- Health Insurer Provider Fee
- Federally Facilitated Exchange fee
- Premium taxes
- Income taxes
- New Hampshire Vaccine Program Assessment
- New Hampshire Insurance Department (NHID) Administration Assessment
- Risk Adjustment Fee

Table D-5 below shows a high-level summary of the information collected from the 2016 rate filings.

Table D-5: Summary of CY 2016 Administrative Expenses from Rate Filings

Administrative Cost Components	Administrative Cost PMPM	Administrative Cost Load as a Percent of Premium Only	Administrative Cost as Percent of Total PAP Cost
General Administrative Expenses	$44.06	10.8%	7.6%
Profit and Risk Margin	$10.40	2.5%	1.8%
Taxes and Fees	$37.69	9.2%	6.5%
Total	**$92.14**	**22.6%**	**15.9%**

Comparison Group

For the comparison group, administrative cost levels are defined as the administrative cost allowance included in the hypothetical Bridge program capitation rate had the program continued into CY 2016. Three categories of administrative costs are included in the hypothetical Bridge capitation rate.

- **General administrative expenses**: The general administrative allowance is consistent with the average CY 2016 percentage administrative allowance under the New Hampshire Medicaid Care Management program for current Medicaid beneficiaries that is set based on managed care industry experience and MCO administrative cost data. The administration / margin allowance provides for a 7.4 percent load for administrative expenses. The general administrative expense allowance is consistent with that used in the September 2014 – December 2015 NHHPP Bridge program capitation rates.
- **Profit and risk margin**: The September 2014 – December 2015 NHHPP Bridge program capitation rates included a 2.0 percent load for profit and risk margin.
- **Premium tax**: The premium tax is 2.0 percent in the state of New Hampshire.
- **Health Insurance Providers Fee**: The average health insurer providers fee was calculated as 1.57 percent of premium. The health insurance providers fee is imposed on the health insurance industry under Section 9010 of the Affordable Care Act (ACA) and Section 1406 of the Reconciliation Act. One current Medicaid MCOs is subject to the fee while the other MCO is exempt. The included allowance reflects the fee being imposed on one MCO only.

Table D-6 below shows a high-level summary of the comparison group administrative cost development.

Table D-6: Summary of CY 2016 Administrative Expenses for Comparison Group

Administrative Cost Components	Administrative Cost PMPM	Administrative Cost Load
General Administrative Expenses	$37.15	7.2%
Profit and Risk Margin	$10.04	1.9%
Premium Tax	$10.04	1.9%
Health Insurance Providers Fee	$7.88	1.5%
Total	**$65.11**	**12.6%**

Appendix E. Semi-Structured Interview Qualitative Analysis

This appendix provides details on the semi-structured interviews.

Introduction

Health Services Advisory Group, Inc. (HSAG) conducted semi-structured interviews with the carriers that provided insurance coverage in the New Hampshire health insurance marketplace (the Marketplace) or its Medicaid market in 2016. These included four carriers that offered commercial individual health insurance on the Marketplace in Qualified Health Plans (QHPs) (Ambetter, Anthem, Harvard Pilgrim Health Care, and Minuteman Health), and two Managed Care Organizations (MCOs) (New Hampshire Healthy Families and Well Sense) that covered the Medicaid Managed Care (MMC) population.[E-1]

Methodology

The New Hampshire Department of Health and Human Services (DHHS) requested the plans' cooperation and introduced HSAG as the independent evaluator and interviewer. The plans were informed that the activity was designed to capture qualitative information regarding the carriers' perception of the Premium Assistance Program (PAP) impact on participation in the health insurance marketplace, continuity of plan enrollment, and administrative or other costs.

A semi-structured interview protocol was shared with the plans prior to the 45-minute telephonic interviews. HSAG explained that the information they provided would be aggregated to identify themes, but their commentary would be shared in general terms without specific attribution to the interview subject or their organization. At the same time, the plans were cautioned that given the small number of plans, specific carriers might be identifiable based on plan characteristics and/or responses. The six plans were willing to participate and proved extremely cooperative, openly sharing their insight, information, and opinions.

The interviewer and a second HSAG team member were present at each interview and took comprehensive notes. With the consent of each subject, the interviews were recorded strictly for review to ensure that note-taking was complete and accurate. The data were coded and synthesized to provide an accurate description of the plans' experience preparing for and complying with the PAP and to understand the plans' views of the strengths and weaknesses of the program.

Plan Characteristics

Each plan provided a different perspective on New Hampshire's PAP depending on its different characteristics. The plans included nonprofit and for-profit entities; some operated nationwide while others focused on smaller regional markets. Some were new entities created specifically to offer health insurance options on the health market exchanges, while others had been in existence for years and had experience in the individual insurance marketplace or with MMC. The smallest QHP plan covered approximately 2,500 Medicaid members, while the largest carrier covered approximately 88,000 Medicaid members within both its QHP offered in the Marketplace and as an MMC.[E-2]

E-1 Community Health Options, a Maine-based health insurance cooperative, withdrew from the New Hampshire market in 2017 to focus on its primary market in Maine.

E-2 State of New Hampshire 1115 Waiver: Premium Assistance Program Annual Report: Demonstration Year 1: January 1, 2016 – December 31, 2016.

Analysis

The following sections present and discuss the observations of individual plans, noting where broader themes emerged in the discussion. The information is presented with the protocol questions that guided the discussion.

Plan perspective on the PAP impact on marketplace entry

"An important aim of the PAP was to incentivize carriers to increase their offerings on the health insurance marketplace.

- *Did your company consider the upcoming PAP program in deciding to offer plans on the health insurance marketplace in New Hampshire?"*

All of the plan representatives reported that their companies had taken the PAP into account in their final decisions regarding participation in the New Hampshire Marketplace, but they pointed out that participation was a precondition more than an incentive.

The three plans that offered only QHPs had developed commercial products for sale on the Marketplace before the PAP was implemented. Each decided to go ahead with their offerings even though that meant they had to participate in the PAP, believing that the benefits of the increased population would outweigh the additional costs of compliance with the PAP. None added a MMC line of business to their offerings, even though some provided such plans in other states.

Both of the carriers who provided MMC in New Hampshire prior to PAP were national carriers offering both MMC plans and individual insurance plans in other states. One chose to adapt its pre-existing individual insurance product from other states to use in New Hampshire specifically in response to PAP. The second did not, although it was for reasons unrelated to PAP.

When asked directly whether they had considered the PAP in deciding to participate in the Marketplace, the plans statements varied:

- Two plans stated that they had already made the decision to participant in the individual market in 2015 in New Hampshire before PAP was in development.
- A third plan stated, "We never gave the PAP a thought as far as an incentive – the New Hampshire insurance department made it clear that if an issuer wanted to participate in the marketplace, it would have to participate in PAP."
- A fourth plan stated that "PAP was a motivator" in its decision to offer a QHP in New Hampshire.

"How did the PAP program influence your thinking on that possibility?"

As mentioned, all the plans interviewed had been preparing to enter the New Hampshire health insurance marketplace in some capacity prior to the development and initiation of the PAP, and most participated in the wide-ranging policy discussions during the planning process with DHHS. Some were more eager to participate in PAP than others, but all believed their QHPs could be successful.

- *"What other issues or challenges influenced that decision?"*

The plans agreed that the primary benefit of the PAP was the large population that would gain the means to obtain health insurance under the PAP.

Concerns expressed included:

- For some plans, lack of claims experience with the Medicaid population in general, and with the New Hampshire Medicaid Expansion (Bridge) population in particular, made pricing uncertain.

- The plans offering QHPs anticipated broader care management needs for the PAP population but varied in the extent to which they were able to ramp up infrastructure to accommodate the population's needs.
- One plan pointed out that health care costs were certain to increase under PAP, since health care providers would be paid at commercial rates rather than Medicaid rates.
- One plan questioned the efficacy of market forces to drive consumers to lower premium policies, since the State was paying 100 percent of the premiums.
- The auto-enrollment process, which favored keeping individuals with prior carriers, was viewed as a benefit to those carriers that had existing relationships with the PAP population, and was further viewed as something of a detriment, at least to those who were attempting to enter the market.
- One plan mentioned the uncertainty of administrative costs for PAP members.
- More than one plan commented on the good working relationships with DHHS in shaping the PAP and applauded the high level of State engagement.
- One plan mentioned that multiple State waiver/demonstration plans were competing for its limited bandwidth, and that the organization had made prior commitments that precluded adding product lines in New Hampshire.

Plan perspective on the PAP impact on continuity of enrollment and administrative costs

"One of the basic assumptions for the design of the PAP program was that the financial assistance it provided to Medicaid expansion members to purchase private coverage on the health insurance marketplace would decrease the number of changes in plan an individual might make, leading to a more stable plan population.

- *How and to what extent did the enactment of the PAP program impact your planning and costs?"*

The consensus among the plans was that any additional administrative costs specific to the PAP population were minor compared with the cost of the population's medical care and care coordination.

The plans also agreed that PAP had two other major impacts on their costs:

- The plans had to invest significant money, time, and effort in the first few months of PAP to create a separate internet portal for the PAP program. This was seen as a cost above that associated with simple participation in the individual commercial market, with separate IT and reporting requirements, separate benefits, and separate plan features.
- QHP plans also attributed significant additional costs to training their staffs on how to handle enrollment, finance, member services, and care coordination for the PAP population.

- *What were your assumptions about the cost of members changing plans?*

There was variation among the plans on how they estimated costs and what they expected for the PAP program.

- One plan expected a higher level of transfer in and out of the Marketplace plan than it experienced.
- One plan estimated administrative costs in general at around 10 cents on the premium dollar and found them not much different under the PAP.
- One plan stated they knew costs would be higher, but not by how much because of their lack of experience with the population.

- *What was your experience with continuity of enrollment among premium assistance beneficiaries under the PAP program?*

Several plans agreed that this population's transient living arrangements demanded a different approach to staying in contact with their members.

- Frequent address changes and homelessness affected a higher proportion of this population than the commercial carriers were accustomed to dealing with.
- Plans experimented with patient incentives and new ways of marketing services, such as reaching out with information provided in soup kitchens and community centers.
- One plan collaborated with a partner to create a separate entity to help reach PAP members.

When asked specifically about their experiences with churn:

- While the plans were aware that there was churn, they could not say whether it was greater or lesser than that experienced by the non-PAP population or whether it changed as a result of the PAP.
- One plan commented that churn did not seem to have changed as a result of PAP and volunteered that in its experience, churn had been higher in some other states where it operated.
- One plan acknowledged that churn was significant but stated it did not seem to change over time as a result of the PAP.
- Two plans observed that the State dealt more directly with the issue of churn or continuity than the carriers did, since it handled redeterminations. They both thought there had been a missed opportunity to allow the carriers to manage outreach to the population. For example, the timing of DHHS' annual redetermination of eligibility for PAP members might depend on their original application date which was unknown to the plan. This prevented the plan from reaching out to the member to ensure uninterrupted coverage.
- One plan estimated the average enrollment for PAP members at six months, while the average for non-PAP members was nine months.
- Another plan estimated that from the inception of PAP, about 9 percent of PAP members were "intermittent," defined as having at least one break in PAP coverage and then coming back. It did not measure whether individuals in the PAP population stayed with them longer than those enrolled in other plans.

- *Do you believe you achieved cost savings as a result of the PAP program? Can you describe or quantify those savings?*

The PAP did not require plans to measure the extent of administrative costs related to the PAP population or to changes in members' eligibility and enrollment over time, and none of the plans identified specific cost savings attributed to that factor. In fact, the plans were shielded somewhat from the impact of these costs by the State's role as the ultimate source of authority for eligibility and contact information as well as the conductor of annual eligibility redeterminations.

There was also a consensus among the insurance providers that whatever increased administrative costs may have been required for PAP members, the increased cost of medical care and other services required under PAP were a greater factor in profitability. All agreed that improved care management, while costly in the short term, was crucial for some members of this population and was vital to any long-term reductions in healthcare costs.

At least one plan felt it had demonstrated lower readmissions, lower utilization of hospital and emergency departments, better medication compliance, and more appropriate specialist utilization among PAP beneficiaries over time, which it attributed to better care management.

Not surprisingly, those plans that were already experienced with Medicaid populations were best prepared for the increased care management costs and already had the experience and infrastructure to handle them.

- *What other issues or challenges did you encounter related to Medicaid expansion members' changes in eligibility over time*

There was a general feeling that PAP had inspired the private commercial plans to offer better coordination of care than they might have done otherwise, and that this should result in lower costs and better health care. Some plans mentioned seeking partnerships with third parties, such as independent urgent care chains or primary care provider groups operating out of retail storefronts, to assist in serving the population.

One plan pointed out that the requirement of reauthorization of the program by the New Hampshire Legislature every two years was a challenge, since its strategic planning normally considers longer time frames.

Plan Feedback on the PAP program

"We would like to know your views on the PAP program, including comments on the basic program design, whether you think its goals could have been achieved more efficiently, whether it resulted in unexpected consequences, and how similar programs might be improved in the future.

- *What would you like to say about your experience with the PAP program?"*

The plans generally perceived PAP as successful in that it expanded insurance coverage and provided important real-world experience with the strengths and weaknesses of the attempted private sector solution. The plans agreed that PAP benefited the newly insured Medicaid population since it provided access, especially to behavioral health and substance use disorder services, just at the time these were needed most.

At least one plan suspected that the population would have been better served by steering PAP members to carriers with the experience and infrastructure to meet their needs, rather than assigning them to QHPs randomly.

One plan suggested that a bifurcated risk pool would better reflect the true experience of the population, and would provide better, more cost-effective care to both the PAP and non-PAP populations.

One carrier pointed out that it might have been useful to track where an individual went when they left PAP coverage so the State would be able to tell whether the person was dropping out of the system altogether, was moving between an MMC and a QHP, or was moving out of the PAP to employer-based insurance. The carriers pointed out that some instability in the population was to be expected as the economy improved and people found work or moved up the ladder at work and earned more.

- *Please describe any unexpected consequences (positive or negative) that your company experienced in conjunction with the PAP program.*

One plan identified several aspects of PAP that may have actually led to higher health care costs:

- One-hundred percent reimbursement of PAP premiums left individuals without an incentive to choose the least expensive plan, while rewarding plans that set their premiums higher.
- Random assignment of new consumers to QHPs without regard to cost, experience, or infrastructure was not cost efficient and did not serve the patients best.

  - The effect of PAP was to shift health care costs to the State and those insured individuals who did not qualify for premium assistance. In the long run this would lead to many (non-PAP) individuals losing insurance because they could not afford coverage.
  - The ultimate impact would be to drive small carriers out of the market, stifling innovation and reducing competition.

Another plan offered insight into challenges expressed by PAP members:

  - A major source of consumer confusion and dissatisfaction centered on the high demand for methadone treatment combined with the failure to require the QHP networks to include methadone clinics. The plan believed this was an important aspect of substance use disorder (SUD) treatment and could have been addressed through the PAP network requirements.
  - Another issue was that children (who were covered by an MMC) and parents (who were covered by a QHP) often had different copay structures, different transportation arrangements, and different provider networks despite the promises that they would be covered by one carrier.
  - Under PAP, the QHPs provided fewer services to the SUD population than had the Bridge program.

One plan suggested that the State missed an opportunity to enable direct comparisons between the carriers by aligning measures. Such comparisons were hampered by the MMCs and QHPs having different reporting requirements, which interfered with the ability to compare quality, trends, and return on investment. They were also managed by different departments of State government.

One plan cautioned against using an individual's voluntary declaration of being "medically frail" as a proxy for identifying "high-cost beneficiaries" when attempting to measure cost savings or efficiency.

One plan mentioned unexpected fluctuations in the population that it had no ability to manage, such as prisoners who left prison to have surgery and entered the PAP population briefly, only to leave right away.

- *Is there anything else you would like to tell us about lessons learned or challenges encountered with the PAP program?*

The most critical issue the carriers faced in planning for the future was not PAP, but uncertainty regarding the federal government's intentions in the health care space.

Generally, the plan providers appreciated the working relationships developed with New Hampshire's public policy makers, regulators, and Legislature. More than one person mentioned feeling engaged in development and finding the State a responsive partner.

More than one plan acknowledged the difficulty of teasing out the economic impacts of PAP from changes in demand for medical services resulting from the opioid epidemic, as well as changes in eligibility for premium assistance related to improvement in the economy. Another pointed out that while costs had increased substantially because of the opioid epidemic, PAP had done a great service for the population by providing health insurance when it was most needed.

One plan remarked that it found education regarding the right to care and how to access care was a huge part of the successful care of the PAP population. It noted that it was able to engage a collaborator who worked directly with the PAP members to help improve the 90 percent of social determinants of health that aren't directly related to medical care. These collaborators were embedded in providers' offices, where possible, and shared electronic medical record data across providers, creating efficiencies.

Another plan observed that the influence of MCOs in the PAP space had changed the model for the commercial marketplace to include more care management, and that initiating single points of contact for coordination and integration of services would be good for the members, good for the market, and would result in cost savings.

One carrier questioned whether PAP had been a good investment, observing that it had disrupted the individual market and was the primary cause of the 40 percent rate increases the QHPs were seeking at the time of the interview.