



## 2021 External Quality Review

### Performance Improvement Projects

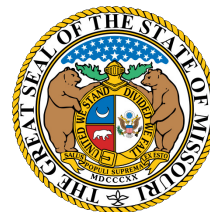


home state health.

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## 1.0 OVERVIEW AND OBJECTIVE

### 1.1 Background

The Department of Social Services, Missouri HealthNet Division (MHD), operates a Health Maintenance Organization (HMO) style managed care program called Missouri (MO) HealthNet Managed Care (hereinafter stated "managed care"). Managed care is extended statewide in four regions: Central, Eastern, Western, and Southwestern to ensure all Missourians receive quality care. Participation in managed care is mandatory for the eligible groups within the regions in operation. The managed care program enables the MHD to provide Medicaid services to section 1931 children and related poverty level populations; section 1931 adults and related poverty level populations, including pregnant women; Children's Health Insurance Program (CHIP) children; and foster care children. Currently, coverage under CHIP is provided statewide through the managed care delivery system. The total number of managed care (Medicaid and CHIP combined) enrollees at the beginning of SFY 2022 was 810,775, representing an increase of 0.25% compared to the end of SFY 2021.

The MHD contracts with Managed Care Organizations (MCOs), also referred to as Managed Care Plans (MCPs)/Health Plans, to provide health care services to its managed care enrollees. Home State Health is one of the three MCOs operating in Missouri. The MHD works closely with Home State Health to monitor quality, enrollee satisfaction, and contract compliance. Quality is monitored through various ongoing methods, including MCO's Healthcare Effectiveness Data and Information Set (HEDIS®) indicator reports, annual reviews, enrollee grievances and appeals, targeted record reviews, and an annual external quality review (EQR).

The MHD contracts with Primaris Holdings, Inc. (Primaris), an External Quality Review Organization (EQRO), to perform an EQR. An EQR is the analysis and evaluation of aggregated information on quality, timeliness, and access to the health care services that a managed care plan, or its contractors, furnish to Medicaid beneficiaries (Figure 1). The review period for EQR 2021 is the calendar year (CY) 2020/Measurement Year (MY) 2020<sup>1</sup>.

### 1.2 Performance Improvement Project (PIP)

A PIP is a project conducted by an MCO designed to achieve significant improvement sustained over time in health outcomes and enrollee satisfaction. A PIP may be designed to

<sup>1</sup> Disclaimer: Home State Health stated that the Covid-19 pandemic had an impact on the delivery of healthcare services across the state during the MY 2020.

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change behavior at a member, provider, or MCO/system level. A statewide performance improvement project (PIP) is defined as a cooperative quality improvement effort by the MCO, the MHD, and the EQRO to address clinical or nonclinical topic areas relevant to the managed care program. (Ref: MHD managed care contract 2.18.8d2). The PIPs should be completed in a reasonable period to generally allow information on the success of the PIPs in the aggregate to produce new information on the quality of care every year. According to 42 Code of Federal Regulations (CFR) 438.330 (d), PIP shall involve the following:

- Measurement of performance using objective quality indicators.
- Implementation of system interventions to achieve improvement in quality.
- Evaluation of the effectiveness of the interventions.
- Planning and initiation of activities for increasing or sustaining improvement.

In EQR 2021, the MHD required Primaris to validate two PIPs conducted by Home State Health during CY 2020:

- Clinical: Improving Immunization-Childhood Immunization Status (HEDIS® CIS Combo 10).
- Nonclinical: Improving Oral Healthcare-Annual Dental Visit (HEDIS® ADV).

## 2.0 METHODOLOGY FOR PIP VALIDATION

Primaris followed the guidelines established by the Centers for Medicare & Medicaid Services (CMS) in the EQR Protocol 1 (revised version, Oct 2019): Validation of Performance Improvement Projects. Primaris elicited the MHD managed care contract requirements and confirmed the scope of work with the MHD.

Documents submission: Primaris requested Home State Health to submit their PIPs at Primaris' web-based secure file storage site (AWS S3 SOC-2).

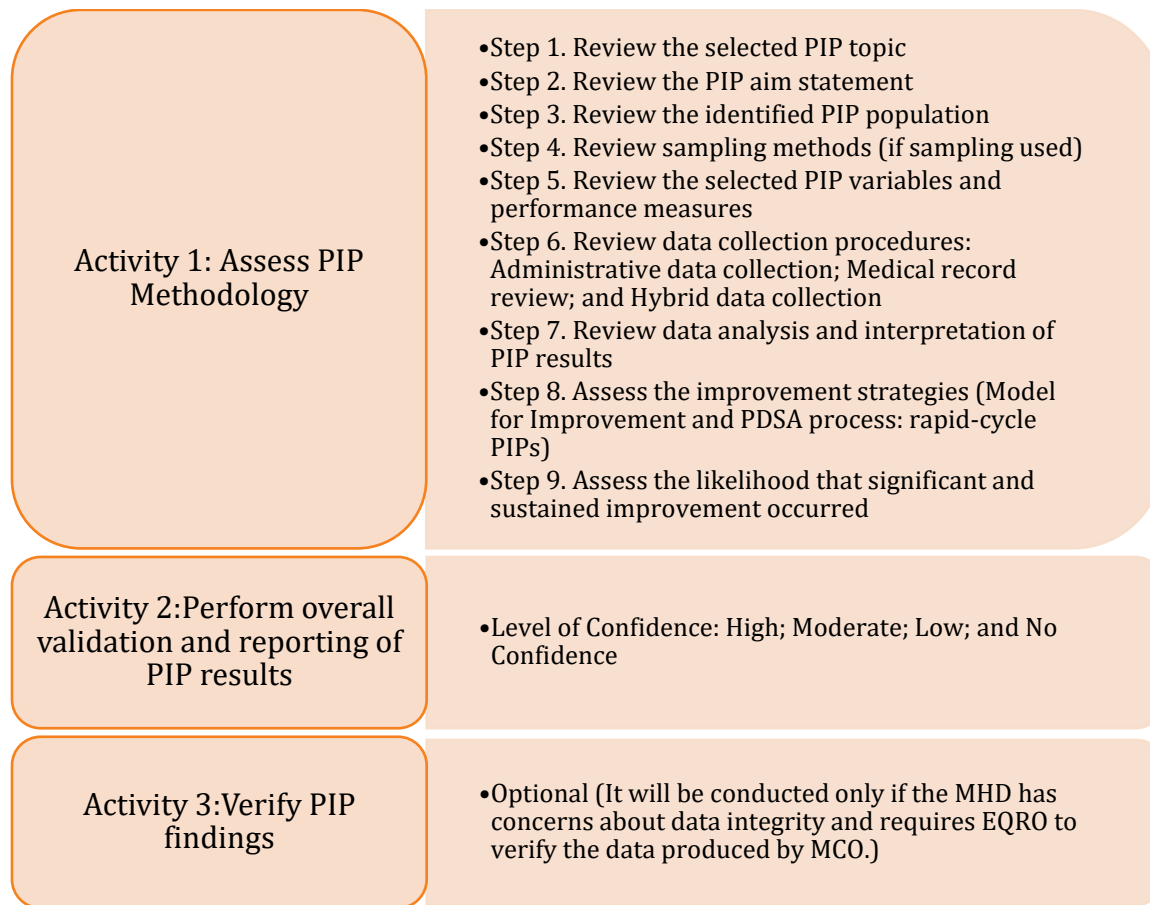
Interview: Primaris conducted a virtual meeting with Home State Health officials<sup>2</sup> on July 27, 2021, to understand their concept, approach/methodology adopted, interventions, and results. Reference to the CMS' PIPs: A How-To Manual for Health Plans (July 2015)<sup>3</sup>, EQR protocol, Institute for Healthcare Improvement's (IHI) Model of Improvement and Plan-Do-Study-Act (PDSA) cycles-as an approach for PIPs was emphasized. Primaris provided feedback/technical assistance on the PIPs for the areas requiring improvement in the future, and submission of additional information, if any, was discussed.

<sup>2</sup> Senior Director, Care Management; Senior Vice President, Population Health and Clinical Operations; Manager, Project Management; and Director, Data Analytics.

<sup>3</sup> <https://www.medicaid.gov/medicaid/benefits/downloads/pip-manual-for-health-plans.pdf>

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PIPs validation process included the following activities (Figure 1):



**Figure 1. PIP Activities**

Primaris assessed the overall validity and reliability of the PIP methods and findings to determine whether it has confidence in the results. The validation rating is based on the EQRO's assessment of whether Home State Health adhered to an acceptable methodology for all phases of design and data collection, conducted accurate data analysis and interpretation of the PIP results, and produced significant evidence of improvement (statistically significant change in performance is noted when  $p \text{ value} \leq 0.05$ ).

The level of confidence is defined as follows:

- High Confidence = the PIP was methodologically sound, achieved the SMART (Specific, Measurable, Attainable, Relevant, Time-bound) Aim, and the demonstrated improvement was clearly linked to the quality improvement processes implemented.
- Moderate Confidence = the PIP was methodologically sound, achieved the SMART Aim, and some of the quality improvement processes were clearly linked to the demonstrated improvement; however, there was not a clear link between all quality improvement processes and the demonstrated improvement.

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- Low Confidence = (A) the PIP was methodologically sound; however, the SMART Aim was not achieved; or (B) the SMART Aim was achieved; however, the quality improvement processes and interventions were poorly executed and could not be linked to the improvement.
- No Confidence = The SMART Aim of the PIP was not achieved, and the PIP methodology was not an acceptable/approved methodology.

### 3.0 FINDINGS

#### 3.1 Clinical PIP: Improving Childhood Immunization Status

The MHD contract section 2.18.8d2 requires the MCO to conduct a PIP with a goal to improve HEDIS® CIS Combo 10 each year by at least two percentage points in alignment with the Quality Improvement Strategy. Vaccines and recommended doses in HEDIS® CIS Combo 10 include: DTaP (4); IPV (3); MMR (1); HiB (3); HepB (3); VZV (1); PCV (4); HepA (1); RV (2/3); and Flu (2).

##### 3.1.1 Summary

Table 1(A-D) summarizes the clinical PIP information submitted by Home State Health in the format adopted from the CMS EQR Protocol 1.

**Table 1(A-D). Summary: Improving Childhood Immunization Status**

##### A. General PIP Information

<b>PIP Title:</b> Improving Childhood Immunization Status (HEDIS® CIS Combo 10 rate)		
<b>PIP Aim Statement:</b> Increase Home State Health's MY 2019 National Committee for Quality Assurance (NCQA) HEDIS® CIS Combo 10 rate by 2% by December 31, 2020.		
<b>Was the PIP state-mandated, collaborative, statewide, or plan choice?</b>		
<input checked="" type="checkbox"/>	State-mandated (state required plans to conduct a PIP on this specific topic)	
<input type="checkbox"/>	Collaborative (plans worked together during the planning or implementation phases)	
<input checked="" type="checkbox"/>	Statewide (the PIP was conducted by all MCOs within the state)	
<input type="checkbox"/>	Plan choice (state allowed the plan to identify the PIP topic)	
<b>Target age group (check one):</b>		
<input checked="" type="checkbox"/>	Children only (ages 0–17) *	<input type="checkbox"/> Adults only (age 18 and over) <input type="checkbox"/> Both adults and children
*If PIP uses different age thresholds for children, specify age range here: 0-2 years.		
<b>Target population description, such as duals, LTSS, or pregnant women (specify):</b> All members eligible for HEDIS® CIS Combo 10 measure (ages 0-2). Home State Health PIP also included a targeted Rapid Cycle improvement initiative for High Risk pregnant mothers and their newborns ."		
Programs: <input type="checkbox"/> Medicaid (Title XIX) only <input type="checkbox"/> CHIP (Title XXI) only <input checked="" type="checkbox"/> Medicaid and CHIP		



**B. Improvement Strategies or Interventions (Changes tested in the PIP)**

<input checked="" type="checkbox"/> Member-focused interventions (member interventions are those aimed at changing member practices or behaviors, such as financial or non-financial incentives, education, and outreach): Pacify application (app) vendor was contacted to enhance the robustness of push notifications through the app to remind new moms about the importance of immunizations.
<input type="checkbox"/> Provider-focused interventions (provider interventions are those aimed at changing provider practices or behaviors, such as financial or non-financial incentives, education, and outreach): None.
<input checked="" type="checkbox"/> MCO-focused interventions/system changes (MCO/system change interventions are aimed at changing MCO operations; they may include new programs, practices, or infrastructures, such as new patient registries or data tools): Care managers were re-educated on addressing the importance of immunizations with new moms and offering the members to enroll on the app.

**C. Performance Measures and Results**

Performance measures (be specific and indicate measure steward and NQF number if applicable)	Baseline year	Baseline sample size and rate	Most recent remeasurement year (if applicable/ Not applicable-PIP is in planning or implementation phase, results not available)	Most recent remeasurement sample size and rate (if applicable)	Demonstrated performance improvement (Yes/No)	Statistically significant change in performance (Yes/No) Specify P-value (<0.01/<0.05)
HEDIS® CIS Combo 10 (NQF 0038)	MY 2019	30.17% No sampling	MY 2020	27.01% No sampling	No	No (P=0.31732)
MMR vaccination rate	MY 2019	82.97% No sampling	MY 2020	80.29% No sampling	No	Not reported
Hepatitis A vaccination rate	MY 2019	73.72% No sampling	MY 2020	72.26% No sampling	No	Not reported

**D. PIP Validation Information**

<b>Was the PIP validated?</b> <input checked="" type="checkbox"/> Yes/ <input type="checkbox"/> No "Validated" means Primaris reviewed all relevant part of each PIP and made a determination as to its validity. In many cases, this will involve calculating a score for each relevant stage of the PIP and providing feedback and recommendations.
<b>Validation phase (check all that apply):</b> <input checked="" type="checkbox"/> PIP submitted for approval <input type="checkbox"/> Planning phase <input type="checkbox"/> Implementation phase <input type="checkbox"/> First remeasurement <input type="checkbox"/> Second remeasurement <input type="checkbox"/> Other (specify)

Validation rating: ☒ No confidence

"Validation rating" refers to the Primaris' overall confidence that the PIP adhered to acceptable methodology for all phases of design and data collection, conducted accurate data analysis and interpretation of PIP results, and produced significant evidence of improvement.

**EQRO recommendations for improvement of PIP:** Home State Health must have a concise aim statement, have clarity on the concepts of target population/project population/PIP variables/secondary measures, and define and apply these in the PIP. The data collection plan should be linked to the data analysis plan, and intervention should tie to an improvement by correct analysis and interpretation based on PDSA cycles. (For details, refer to section 5.0)

### ***3.1.2 PIP Description***

Primaris evaluated the PIP activities per the CMS EQR Protocol 1-Worksheet in Appendix A. This report section briefly describes the PIP design, intervention(s), and results submitted by Home State Health.

Intervention: Home State Health utilized Pacify app for the pregnant population that started in September 2018. Pacify is a pregnancy support app that members can download on their phones. A member must interact with a care management staff to access the app to obtain an access code. Enrollment in care management is not required. The app provides live support with a Lactation Consultant, a direct line to our care management team, a direct link to the 24 Hour Nurse Advice Line, healthy pregnancy education postings, and push notifications for healthcare reminders, including well-child visits and immunization reminders. The app is available to pregnant members during pregnancy and after delivery up to the child's first birthday.

In Quarter 1-2020, the senior director of care management coordinated her training resources to develop a re-training for the nurses on the importance of educating members about childhood immunization. At the same time, a re-education was provided on offering members the Pacify app and how to enroll members on the app.

Performance Measures/variables: HEDIS® CIS Combo 10 was the performance measures selected for the PIP. The calculations were based on the NCQA HEDIS® Technical Specification definitions for numerator and denominator. Home State Health stated that they focused on sub measures-Measles, Mumps, Rubella (MMR), and Hepatitis A.

Data Collection (Administrative): Data was reported through Home State Health's NCQA certified HEDIS® software, QSI-XL. Input to QSI-XL was from various sources (claims, supplemental data (ShowMeVax portal), charts in the form of paper copies or Electronic



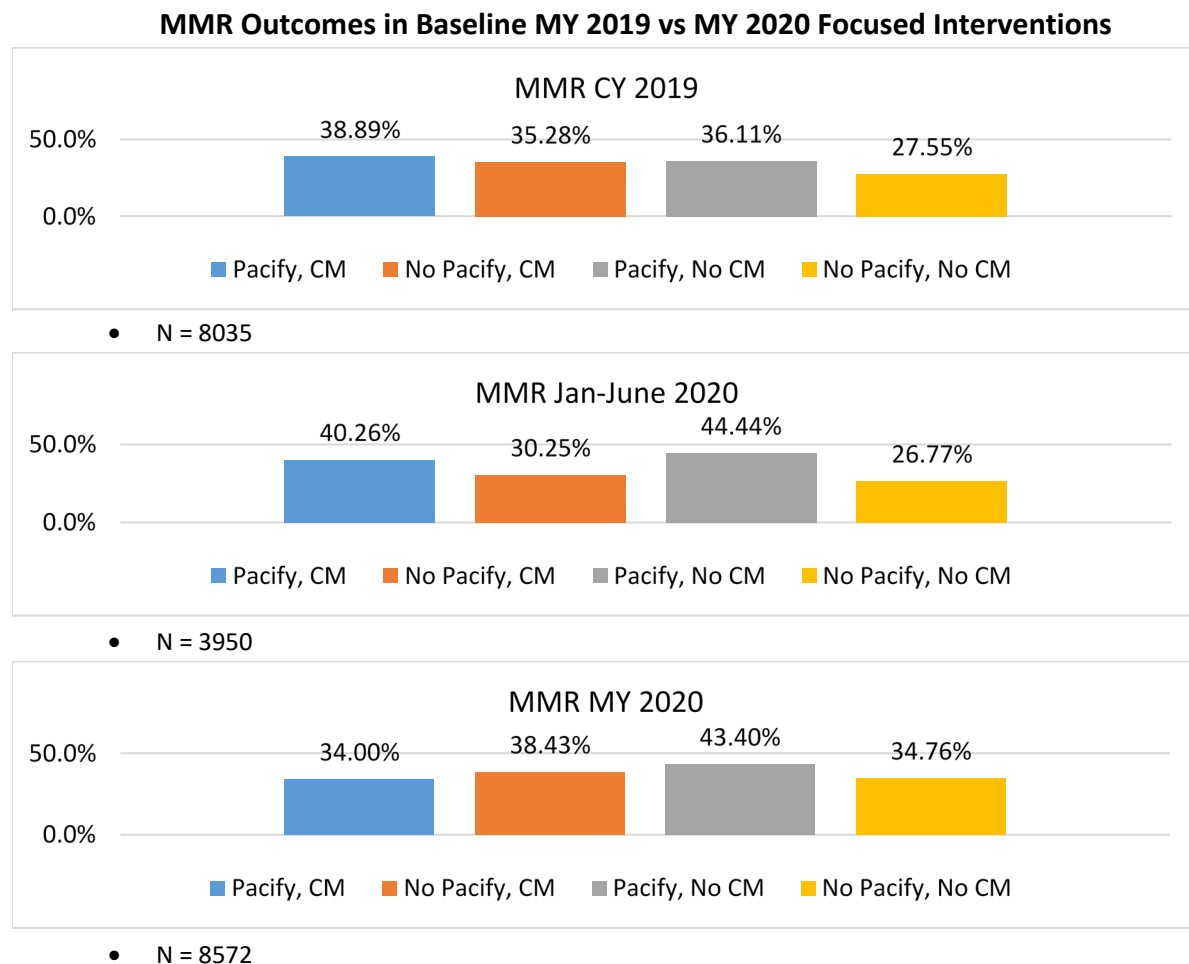
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Health Records) and provider types (primary care providers, specialty care providers, and ancillary providers).

Findings: The data was divided into four categories:

- New moms who were utilizing the Pacify app and also enrolled in care management.
- New moms who were enrolled in care management but not using the Pacify app.
- New moms who were utilizing the Pacify app but not enrolled in care management.
- New moms who had neither the Pacify app nor were enrolled in care management.

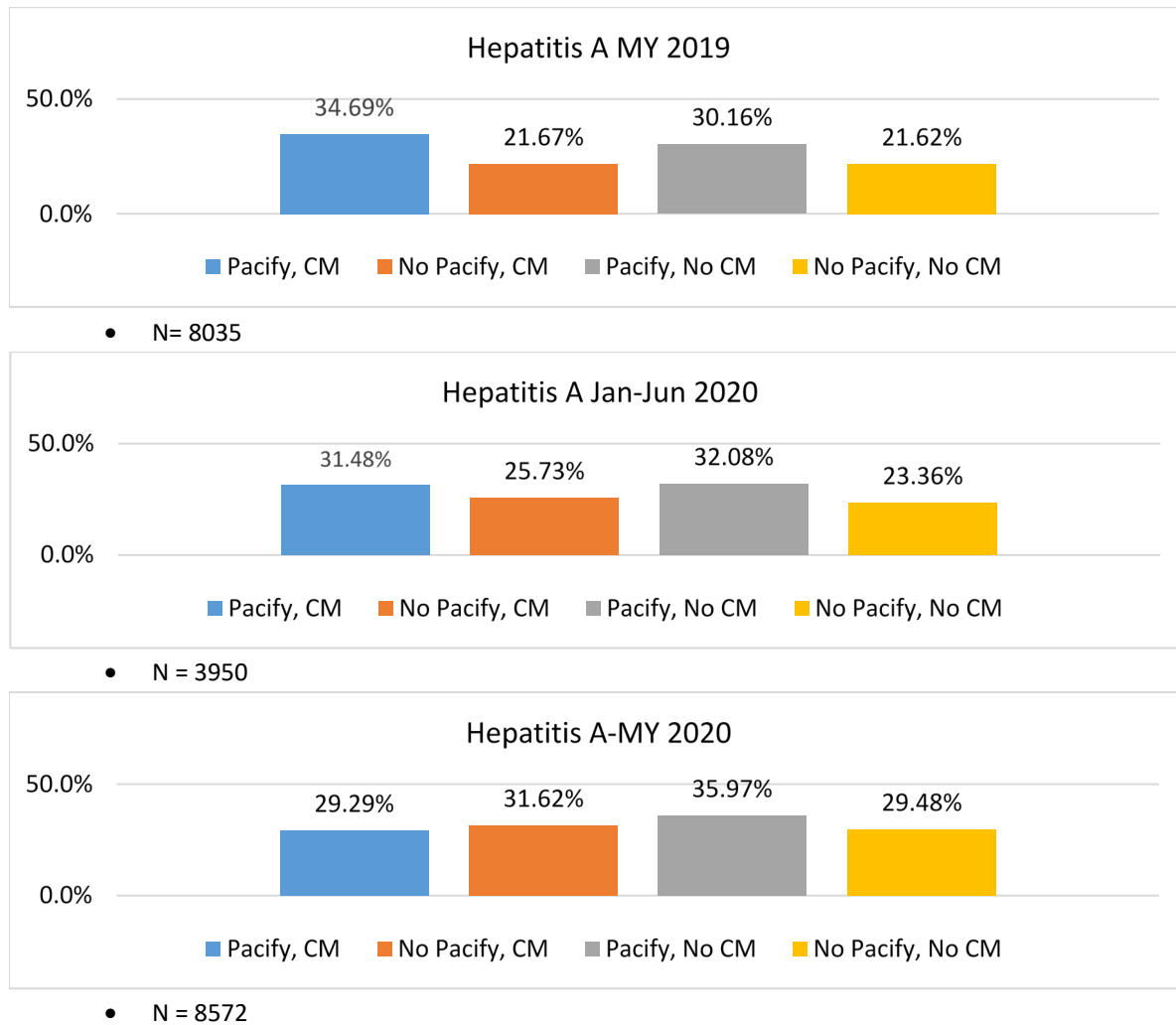
Figures 2 and 3 show the outcomes from Home State Health's NCQA certified HEDIS® software, QSI-XL.



**Figure 2. MMR Vaccination Rates MY 2019-MY 2020**

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### Hepatitis A Vaccination Outcomes in Baseline MY 2019 vs MY 2020 Focused Interventions



**Figure 3. Hepatitis A Vaccination Rates MY 2019-MY 2020**

Home State Health reported that Pacify was successful in increasing the MMR and Hepatitis A rates. In January 2020, the statewide HEDIS® CIS Combo 10 rates were higher by 2.77% points compared to the corresponding month in MY 2019, and each consecutive month in MY 2020 had a higher rate than MY 2019 (Table 2). However, Home State Health stated that they did not reach the goal of obtaining a 2% increase in the HEDIS® CIS Combo10 rate due to the impact of the Covid-19 Pandemic.

**Table 2. Monthly Statewide HEDIS® CIS Combo 10 Rates\***

Month	Month Over Month CIS Combo 10 Rates							
	CY2019				CY2020			
	Denom	Numer	Rate	Percentile	Denom	Numer	Rate	Percentile**
January	6981	885	12.68%	<5th	5365	829	15.45%	<5th
February	6902	1008	14.60%	<5th	5419	905	16.70%	<5th
March	6751	1060	15.70%	<5th	5085	939	18.47%	<5th
April	6594	1121	17.00%	<5th	5094	995	19.53%	<5th
May	6460	1203	18.62%	<5th	5093	1031	20.24%	<5th
June	6318	1259	19.93%	5th	5085	1085	21.34%	<5th
July	6266	1274	20.33%	5th	4847	1047	21.60%	<5th
August	6269	1290	20.58%	5th	5051	1122	22.21%	<5th
September	6107	1275	20.88%	5th	5057	1131	22.37%	<5th
October	6068	1271	20.95%	5th	5046	1144	22.67%	<5th
November	6051	1292	21.35%	5th	5044	1147	22.74%	<5th
December	5928	1291	21.78%	5th	5044	1151	22.82%	<5th
Final Admin	5928	1291	21.78%	5th	5044	1161	23.02%	<5th

\* These are administrative rates. See Table 3 for final hybrid rates.

### 3.1.3 PIP Result

The aim of the PIP is not met. Home State Health's statewide rate for HEDIS® CIS Combo 10 decreased from 30.17% (MY 2019) to 27.01% (MY 2020), which is a decline of 3.16% points (Table 3). However, the decline is not of statistical significance, p value=0.31732 (p≤0.05 is significant).

**Table 3. Statewide HEDIS® CIS Combo 10 Trend (MY 2018-2020)**

Measurement Year (MY)	HEDIS® CIS Combo 10 Rate (%)	NCQA Quality Compass 50th Percentile
MY 2018	21.65	35.28%
MY 2019	30.17	34.79%
MY 2020	27.01	37.47%

## 3.2 Nonclinical PIP: Improving Oral Health

The MHD contract section 2.18.8d2 requires the MCO to conduct a PIP with a goal to improve HEDIS® Annual Dental Visit (ADV) rate for two to twenty-year-olds each year by at least two percentage points in alignment with the Quality Improvement Strategy.

### 3.2.1 Summary

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Table 4(A-D) summarizes the nonclinical PIP information submitted by Home State Health in the format adopted from the CMS EQR Protocol 1.

### Table 4(A-D). Summary: Improving Oral Health

#### 4A. General PIP Information

<b>PIP Title:</b> Improving Oral Health (HEDIS® ADV rate)		
<b>PIP Aim Statement:</b> Increase Home State Health's calendar year 2019 NCQA HEDIS® Annual Dental Visit (ADV) rate by 2% by December 31, 2020.		
<b>Was the PIP state-mandated, collaborative, statewide, or plan choice?</b>		
<input checked="" type="checkbox"/>	State-mandated (state required plans to conduct a PIP on this specific topic)	
<input type="checkbox"/>	Collaborative (plans worked together during the planning or implementation phases)	
<input checked="" type="checkbox"/>	Statewide (the PIP was conducted by all MCOs within the state)	
<input type="checkbox"/>	Plan choice (state allowed the plan to identify the PIP topic)	
<b>Target age group (check one):</b>		
<input type="checkbox"/>	Children only (ages 0–17)	<input type="checkbox"/> Adults only (age 18 and over) <input checked="" type="checkbox"/> *Both adults and children
* Specify age range here: Aged 0-20 years		
<b>Target population description, such as duals, LTSS, or pregnant women (specify):</b>		
The study population included all Home State Health members ages two through twenty who meet the HEDIS® eligibility requirements for the HEDIS® ADV measure. Home State Health also stated that their study population included members, two to nine years old, assigned to Affinia, a large Federally Qualified Health Center (FQHC), as their Primary Care Physician.		
Programs: <input type="checkbox"/> Medicaid (Title XIX) only <input type="checkbox"/> CHIP (Title XXI) only <input checked="" type="checkbox"/> Medicaid and CHIP		

#### 4B. Improvement Strategies or Interventions (Changes tested in the PIP)

<input checked="" type="checkbox"/>	Member-focused interventions (member interventions are those aimed at changing member practices or behaviors, such as financial or non-financial incentives, education, and outreach): Home State Health's vendor, AlphaPointe, outreached to the noncompliant members for the annual dental visit via phone calls.
<input checked="" type="checkbox"/>	Provider-focused interventions (provider interventions are those aimed at changing provider practices or behaviors, such as financial or non-financial incentives, education, and outreach): Home State Health partnered on a member-campaign with a Affinia, FQHC in the St. Louis area that offered dental care.
<input type="checkbox"/>	MCO-focused interventions/system changes (MCO/system change interventions are aimed at changing MCO operations; they may include new programs, practices, or infrastructure, such as new patient registries or data tools): None.

#### 4C. Performance Measures and Results

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Performance measures (be specific and indicate measure steward and NQF number if applicable)	Baseline year	Baseline sample size and rate	Most recent remeasurement year (if applicable/ Not applicable-PIP is in planning or implementation phase, results not available)	Most recent remeasurement sample size and rate (if applicable)	Demonstrated performance improvement (Yes/No)	Statistically significant change in performance (Yes/No) Specify p-value (<0.01/<0.05)
HEDIS® ADV-primary measure	MY 2019	53.24% No sampling	MY 2020	41.39% No sampling	No	Yes P<0.00001

**4D. PIP Validation Information**

**Was the PIP validated?** ☒ Yes/☐ No

"Validated" means Primaris reviewed all relevant parts of each PIP and made a determination as to its validity. In many cases, this will involve calculating a score for each relevant stage of the PIP and providing feedback and recommendations.

**Validation phase (check all that apply):**

☒ PIP submitted for approval ☐ Planning phase ☐ Implementation phase  
☐ First remeasurement ☐ Second remeasurement ☐ Other (specify)

Validation rating: ☒ No confidence

"Validation rating" refers to the Primaris' overall confidence that the PIP adhered to an acceptable methodology for all phases of design and data collection, conducted accurate data analysis and interpretation of PIP results, and produced significant evidence of improvement.

**EQRO recommendations for improvement of PIP:** Home State Health must have a concise aim statement, have clarity on the concepts of target population/project population/PIP variables/secondary measures, and define and apply these in the PIP. The data collection plan should be linked to the data analysis plan, and intervention should tie to an improvement by correct analysis and interpretation using the PDSA cycles. (For details, refer to section 5.0)

**3.2.2 PIP Description**

Primaris evaluated the PIP activities per the CMS EQR Protocol 1-Worksheet in Appendix B. This report section briefly describes the PIP design, intervention(s), and results submitted by Home State Health.

**Interventions:**

1. Statewide: AlphaPointe is a sheltered workshop in the Kansas City area that performs various outreach campaigns to Home State Health members to understand their benefit,

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schedule health care appointments, and perform screening. Home State contacted AlphaPointe to request a targeted outbound call campaign for noncompliant members' annual dental visits. AlphaPointe was asked to provide members with information on the member incentive and transportation benefit during any phone call where they were able to speak with a member. AlphaPointe began making the dental outreach calls in October 2020.

2. In Quarter 3-2020, Home State Health collaborated with Affinia Healthcare, a large FQHC with three locations in the St. Louis area which offer dental care, to focus on dental interventions in the St. Louis area. The goal of this partnership was to increase the rate of compliance on the ADV measure for Home State Health members, 2 to 9 years old, who were assigned to Affinia as their Primary Care Physician.

The following actions were taken:

- Demographic information was exchanged between Affinia and Home State Health to determine the most recent demographic information on file to locate Home State Health members better.
- Home State Health sent dental text reminder/education messages to members assigned to Affinia as their PCP who were noncompliant with their dental visit.
- Affinia sent dental text reminder/education messages to their assigned members who were noncompliant with their dental visit.
- Affinia provided re-education to their frontline staff and scheduling team to remind them to address dental appointments and benefits information with members.
- Home State supplied additional brochures, including information on member incentives and transportation for the Affinia staff to reference and give to its members.
- Home State Health donated personal protective equipment (PPE) to Affinia for their staff and members.

Performance Measures/variables: HEDIS® ADV was the performance measure selected for the PIP. The calculations were based on the NCQA HEDIS® Technical Specification definitions for numerator and denominator.

Data Collection: Data was reported through Home State Health's NCQA certified HEDIS® software, QSI-XL. Input to QSI-XL was from various sources (claims, supplemental data, charts in paper copies, or Electronic Health Records) and provider types, including dentists and dental practitioners.

Findings: Intervention 1-Home State Health reported that AlphaPointe called 51,007



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members and was able to speak with 5,259 (10.31%) members about dental visits and benefits information. Of the 5,259 members they spoke with, 41.41% had dental visits the following month (Table 5). This rate is higher than the 10.97% success rate achieved after AlphaPointe performed outreach to members in MY 2019 for well-visits (Table 6).

**Table 5. AlphaPointe 2020 outreach metrics to members for Annual Dental Visit reminders**

MY 2020 Month	Members Outreached During Initiative Month	Successful Outreach Rates	Percentage of Successful Outreach Members Who Became Compliant in Following Month
October	20,834	10.00% (2095/20834)	38.52% (807/2095)
November	13,435	9.65% (1297/13435)	44.56% (578/1297)
December	16,738	11.15% (1867/16738)	42.47% (793/1867)
<b>Total</b>	<b>51,007</b>	<b>10.31% (5259/51007)</b>	<b>41.41% (2178/5259)</b>

**Table 6. AlphaPointe 2019 outreach metrics to members for Annual Dental Visit reminders**

MY 2019 Month	Members Outreached During Initiative Month	Successful Outreach Rates	Percentage of Successful Outreach Members Who Became Compliant in Following Month
January	15658	6.07% (950/15658)	7.26% (69/950)
November	12932	9.92% (1283/12932)	13.02% (167/1283)
December	12416	8.06% (1001/12416)	11.89% (119/1001)
<b>Total</b>	<b>41006</b>	<b>7.89% (3234/41006)</b>	<b>10.97% (355/3234)</b>

Intervention 2-The noncompliant member count at the beginning of the initiative was 1045. The collaboration between Affinia and Home State Health resulted in 21% ADV visit compliance (Table 7).

**Table 7. ADV closure rates during Affinia and Home State Health Collaboration**

Month-MY 2020	Noncompliant member count
July	947
August	905
September	862
October	825

**Table 8. Monthly Statewide HEDIS® ADV Rates\***

Month	MY 2019			MY 2020		
	Denominator	Numerator	Rate	Denominator	Numerator	Rate
January	187985	3470	1.85%	167006	2494	1.49%
February	185836	15414	8.29%	168632	16808	9.97%
March	179930	25565	14.21%	157359	24044	15.28%
April	170957	39096	22.87%	157211	29575	18.81%
May	163943	44121	26.91%	156891	30637	19.53%
June	156867	50888	32.44%	156320	32981	21.10%
July	153970	54381	35.32%	150042	37622	25.07%
August	154460	60901	39.43%	155190	43737	28.18%
September	137753	59503	43.20%	154599	47948	31.01%
October	133219	62323	46.78%	153749	48458	31.52%
November	129532	63878	49.31%	153310	54680	35.67%
December	129532	63877	49.31%	152809	59816	39.14%

See Table 9 for final administrative rates.

Home State Health stated that the rates decreased from April 2020 onwards compared to the corresponding month in MY 2019 (Table 8). This data indicated the impact of the Covid-19 Pandemic when the multiple facility and organization shut-down began starting in Mid-March 2020. Many dental offices chose to close entirely except for emergency dental needs. During the clinical teams' analysis of the data, it was found that 536 members were compliant with ADV via telehealth. In MY 2020, NCQA updated the ADV Technical Specifications to include telehealth visits in response to the pandemic.

### 3.2.3 PIP Result

The aim of the PIP was not met. Home State Health's statewide rate for HEDIS® ADV rate decreased from 53.24% (MY 2019) to 41.39% (MY 2020), which is a decline of 11.85% points (Table 9). The change in performance is of statistical significance,  $p$  value < 0.00001 ( $p \leq 0.05$  is significant).

**Table 9. Statewide HEDIS® ADV Trend (MY 2018-2020)**

Measurement Year (MY)	HEDIS® ADV Rate (%)	NCQA Quality Compass 50th Percentile (%)
MY 2018	47.82	56.60%
MY 2019	53.24	58.03%
MY 2020	41.39	60.15%

## 4.0 OVERALL CONCLUSIONS

### PIPs Score

Primaris assigned a score of "No Confidence" for both clinical and nonclinical PIPs. The aim of the PIP was not met. The quality improvement process and intervention were poorly executed and could not be linked with the results.

Both the PIPs did not meet all the required guidelines stated in the CFR/MHD contract (42 CFR 438.330d2/MHD contract, 2.18.8d1) (Table 10). Note: Definitions of Met/Partially Met/Not Met are based on the CMS EQR Protocol 3.

**Table 10. PIPs' Evaluation based on the CFR guidelines**

CFR Guidelines	Evaluation
Measurement of performance using objective quality indicators	● Partially Met
Implementation of system interventions to achieve improvement in quality	● Partially Met
Evaluation of the effectiveness of the interventions	● Not Met
Planning and initiation of activities for increasing or sustaining improvement	● Fully Met

### 4.1 Strengths and Weaknesses

Table 11 summarizes the strengths and weaknesses identified during the evaluation of the PIPs.

**Table 11. Strengths and Weaknesses of PIPs**

Evaluation Criteria	Strength	Weakness
1. Selection of PIP topic (the MHD provided the topic, hence marked as Not/Applicable-N/A)	N/A	N/A
2. Writing an Aim statement		The aim statement was incomplete. It did not specify the population and the strategy.
3. Identifying the study population		Home State Health lacks clarity on what constitutes the target population and

## Performance Improvement Projects: Home State Health

		the project population. As a result, multiple statements about the study population were provided.
4. Sampling	N/A	N/A
5. Variables/performance measures (the MHD decided the primary measure)	<p>All charts manually uploaded in the Home State Health's NCQA certified HEDIS® software, QSI-XL, are over-read by team members who have completed and passed Inter-Rater Reliability training for CIS compliance requirements; these charts are also part of random audits to ensure compliance.</p> <p>Results of member satisfaction regarding the utilization of Pacify app were presented in the clinical PIP.</p>	The PIP variables were not selected. For the clinical PIP, MMR vaccination rate and Hepatitis A vaccination rate were selected as sub measures even though the intervention was not specific to these measures.
6. Data collection		The data collection plan did not include all the information about data to be collected as a result of the PIP (primary measure, sub-measure/secondary measure, variable, interventional data) and accurate definitions of data elements. The data collection plan was not linked to the data analysis plan.
7. Data analysis and interpretation of results		A baseline rate before the start of an intervention followed by at least two remeasurements was not presented. PDSA cycles were not implemented.
8. Improvement strategies		The PIP did not provide information on whether the

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		improvement strategies selected for the PIPs were evidence-based and the test of change that would likely lead to the desired improvement in process or outcomes.
9. Significant and sustained improvement		There was no improvement in primary or secondary measures in the clinical PIP. For the nonclinical PIP, the primary measure declined, and insufficient data were reported after the intervention to determine the intervention's effectiveness.

## 4.2 Improvement by Home State Health

For the MY 2020, the statewide rates for HEDIS® CIS Combo 10 decreased by 3.16% points, and HEDIS® ADV decreased by 11.85% points from the previous year (MY 2019). Table 12 shows Home State Health's response to the previous year's (EQR 2020) recommendations by EQRO and noncompliant items from EQR 2019.

**Table 12. Home State Health's Response to Previous Year's Recommendations**

Previous Recommendation	Action by Home State Health	Comment by EQRO
<b>EQR 2020</b>		
1. While several/ongoing interventions from previous years are very informative, Home State Health should present the interventions applied for the PIPs rather than for statewide or corporate wide operations.	Home State Health improved to some extent.	The same recommendation applies to EQR 2021. Home State Health should focus on the steps involved in the PIP methodology.
2. Even though the MHD mandates an overarching goal, Home State Health has the flexibility to select a topic within specified parameters. To ensure a successful PIP, Home State Health should find early and regular opportunities to obtain input from	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.

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staff, providers, and members on improving care delivery.		
3. Home State Health should translate the aim statement to identify the focus of the PIP and establish the framework for data collection and analysis on a small scale (PDSA cycle). PIP population should be selected from a county, provider office, or a region so that results can be measured during the PDSA cycle and subsequently applied on a larger scale.	There was some improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020. One of the interventions in nonclinical PIP was on a small scale (one FQHC).	The same recommendation applies to EQR 2021.
4. Home State Health should select a variable (a measurable characteristic, quality, trait, or attribute of a particular individual, object, or situation being studied) that could identify Home State Health's performance on the PIPs and track improvement over time. Home State Health can use focus groups, surveys, and interviews to collect qualitative insights from members, MCO and provider staff, and key external partners. Qualitative measures can serve as the secondary measures or supplement the overall measurement set, providing information that will aid PIP planning and implementation.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.
5. Home State Health should use variables/secondary measures that should tie an intervention to improvement. Clear and concise definitions of data elements (including numerical definitions and units of measure) should be provided for the data collected after the intervention.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.



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6. Data collection plan should be linked to the data analysis plan to ensure that appropriate data would be available for the PIP.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.
7. A baseline rate should be presented before the start of an intervention followed by at least two remeasurements, and analysis of results should be utilized to plan the next intervention (cycle-PDSA) for future PIP. Additionally, primary and secondary measures/variables should be linked to illustrate the impact of the intervention on a project's performance.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.
8. Home State Health should assess whether the PIP resulted in sustained improvement, whether repeated measurements were conducted, and if so, whether a significant change in performance relative to baseline measurement was observed. Repeat measurements (at least two) in short intervals should be conducted to determine whether significant performance changes relative to baseline measurement were observed.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.
9. Effectiveness of the improvement strategy should be determined by measuring a change in performance according to the predefined measures and linking to intervention.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.
10. When analyzing multiple data points over time, Home State Health should consider tools such as time series, run chart, control chart, data dashboard, and basic trend analyses.	There was no improvement towards the utilization of such tools in EQR 2021 compared to EQR 2020.	Home State Health should use these tools for the PIPs in the future to show the intervention results.

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<b>EQR 2019</b>		
1. Home State Health should follow CMS EQR protocol and Medicaid Oral Health Performance Improvement Projects: A How-To Manual for Health Plans, July 2015 for guidance on methodology and approach of PIPs to obtain meaningful results.	There was no improvement in the methodology of PIP in EQR 2021 and EQR 2020.	The same recommendation applies to EQR 2021.
2. Home State Health must refine its skills in the development and implementation of approaches to effect change in the PIPs.	There was no improvement in the methodology of PIP in EQR 2021 and EQR 2020.	The same recommendation applies to EQR 2021.
3. The interventions should be planned specifically for the PIP required by the MHD contract.	Data from operations are reported in the PIP.	The same recommendation applies to EQR 2021.
4. The results should be tied to the interventions.	There was no improvement in the methodology of PIP in EQR 2021 and EQR 2020.	The same recommendation applies to EQR 2021.

## 5.0 RECOMMENDATIONS

### Home State Health

Home State Health must improve the methodology adopted for their PIPs to meet the compliance requirements set in the 42 CFR 438.330d2/MHD contract, section 2.18.8d1. In addition to all the recommendations from the previous years that continue to be applicable for EQR 2021 (Table 12), Primaris recommends the following:

1. **Aim Statement:** The PIP aim statement should define the improvement strategy, population, and period. It should be clear and concise, measurable, and answerable.
2. **Study Population:** Home State Health should articulate the concepts and clearly define the target population and PIP population. The PIP population should be selected at a small scale (e.g., from a county, provider office, or a region) so that results can be measured during the PDSA cycle and subsequently applied at a larger scale.
3. **PDSA Cycles:** Home State Health must adopt PDSA cycles that involve analysis, feedback/lessons learned from the data collected after the intervention, and application of

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these outcomes to plan another test cycle.

4. Data Analysis and Interpretation of Results: Though conclusive demonstration through controlled studies is not required, Healthy Blue should compare the results across multiple entities, such as different patient subgroups, provider sites to ascertain the change brought by the intervention.

5. Improvement Strategies: The selected improvement strategy must be evidence-based, suggesting that the test of change would likely lead to the desired improvement in processes or outcomes.

6. Sustained improvement: After an intervention is implemented and results are analyzed, Home State Health should identify strategies to create sustained improvement. This allows Home State Health to maintain the positive results of the intervention, correct negative results, and scale the intervention to support longer-term improvements or broader improvement capacity across other health services, populations, and aspects of care. Because PIPs can be resource-intensive, this phase also helps learn how to allocate more efficiently for future projects.

### **MHD**

1. The PIPs' evaluations, the interview session followed by written questions/clarifications requested by Home State Health from Primaris revealed that the Home State Health team has extensive gaps in knowledge about the PIP manuals/protocol and their approach in conducting a PIP. A formal one-on-one technical assistance would help in alleviating Home State Health questions and providing clarifications. An improved training, assistance, and expertise for the design, analysis, and interpretation of PIP findings are available from the EQRO, CMS publications, and research reviews.

2. The MHD should require Home State Health to develop a specific PIP plan, including, a timeline, SMART aim statement, names and credentials of team members conducting the PIP, key driver diagram, performance indicators (primary and secondary measures, variables), interventions planned, data collection plan by the first quarter of a given MY, for approval.

(Worksheets are attached on the next page.)

## APPENDIX A. PIP VALIDATION WORKSHEET-IMPROVING CHILDHOOD IMMUNIZATION STATUS

**Date of Evaluation/Interview: July 27, 2021**

MCO Name/Mailing Address:	Home State Health/11720 Borman Drive, St. Louis, MO 63146
MCO Contact Name and Title:	Megan Barton, Senior Vice President, Population Health and Clinical Operations
Name of Performance Improvement Project:	Improving Childhood Immunization Status
PIP Period Date:	Jan 1, 2020-Dec 31, 2020
Programs:	Medicaid only/CHIP only/✓Medicaid and CHIP
Demographic Information:	Number of Medicaid/CHIP enrollees in MCO: 255,732 Medicaid/CHIP members included in the study: 23,271 Number of Providers: 250,000/facilities-139


**Score: Fully Met** ● / **Partially Met** ● / **Not Met** ● / **Not Applicable (N/A)**

### ACTIVITY 1: ASSESS THE PIP METHODOLOGY





#### Step 1: Review the PIP Topic

Component/Standard	Score	Comments
1.1 Was the topic selected through a comprehensive analysis of MCO enrollee needs, care, and services? (Note: If the PIP topic was required by the state, it will be marked as N/A.)	N/A	The MHD contract section 2.18.8d2 requires Home State Health to conduct a PIP with a goal to improve HEDIS® CIS Combo 10 each year by at least two % points in alignment with the Quality Improvement Strategy.
1.2 Did selection of the PIP topic consider performance on the CMS Child and Adult Core Set measures?	N/A	The PIP topic was selected by the MHD. However, Childhood Immunization Status is a Child Core Set measure (NQF0038).
1.3 Did the selection of PIP topic consider input from enrollees or providers who are users of, or concerned with, specific service areas? (Note: If the PIP topic was required by the state, it will be marked as N/A.)	N/A	The PIP topic was selected by the MHD.
1.4 Did the PIP topic address care of special populations or high priority services, such as: <ul style="list-style-type: none"> <li>• Children with special health care needs</li> <li>• Adults with physical disabilities</li> <li>• Children or adults with behavioral health issues</li> <li>• People with intellectual and developmental disabilities</li> <li>• People with dual eligibility who use long-term services and supports (LTSS)</li> </ul>	<span style="color: green;">●</span>	The PIP topic focused on preventive care of all children 2 years of age including children with special healthcare needs.




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<ul style="list-style-type: none"> <li>• Preventive care</li> <li>• Acute and chronic care</li> <li>• High-volume or high-risk services</li> <li>• Care received from specialized centers (e.g., burn, transplant, cardiac surgery)</li> <li>• Continuity or coordination of care from multiple providers and over multiple episodes</li> <li>• Appeals and grievances</li> <li>• Access to and availability of care</li> </ul>		
1.5 Did the PIP topic align with priority areas identified by HHS and/or CMS?	N/A	The PIP topic focused on increasing Childhood Immunization Status, which is included in the CMS Child Core Set.
1.6 Overall assessment/recommendations for improving PIP topic.		Even though the overarching goal is mandated by MHD, Home State Health has the flexibility to select a topic within specified parameters. Home State Health should present relevant data and information in the PIP that supports/justifies the topic. They should find early and regular opportunities to obtain input from staff, providers, and members on how to improve care delivery.





## Step 2: Review the PIP Aim Statement

Component/Standard	Score	Comments
2.1 Did the PIP aim statement clearly specify the improvement strategy?		Increasing the MY 2019 HEDIS® CIS Combo 10 rate is mentioned. Strategy is not specified.
2.2 Did the PIP aim statement clearly specify the population for the PIP?		The aim statement did not specify the population. Definition of HEDIS® Combo 10 measure is provided which states that all children 2 years of age were included in the PIP.
2.3 Did the PIP aim statement clearly specify the time period for the PIP?		MY 2020 (end of Dec 31, 2020).
2.4 Was the PIP aim statement concise?		The aim statement was “increase Home State Health’s MY 2019 NCQA HEDIS® CIS Combo 10 rate by 2% by December 31, 2020.” The aim statement was not per the requirements of the MHD. The increase in the performance measure should be 2% points. Baseline rate and rate aimed to achieve is missing from the aim statement.

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2.5 Was the PIP aim statement answerable?		The aim statement was incomplete; however, it was answerable.
2.6 Was the PIP aim statement measurable?		The aim statement was incomplete; however, it was measurable.
2.7 Overall assessment/recommendations for improving the PIP aim statement.		The PIP aim statement should define the improvement strategy, population, and time period. It should be clear, concise, measurable, and answerable. Even though overarching aim is provided by the MHD, Home State Health should translate aim statement that identifies the focus of the PIP and establish the framework for data collection and analysis on a small scale.

## Step 3: Review the Identified Study Populations

Component/Standard	Score	Comments
3.1 Was the project population clearly defined in terms of the identified PIP question (e.g., age, length of the PIP population's enrollment, diagnoses, procedures, other characteristics)?		Home State Health presented two different statements about the project population as follows: "The study population included all Home State Health members who turn two years of age during the measurement year who meet the HEDIS eligibility requirements. The intervention was applied to all eligible members aged 0 through 2 at the time of each intervention." Another statement about the project population was as follows: "A targeted Rapid Cycle improvement initiative for High Risk pregnant mothers and their newborns is included in this PIP."
3.2 Was the entire MCO population included in the PIP?		Refer to comment in section 3.1. However, Home State Health included the entire population in determining the HEDIS® CIS Combo 10 rate.
3.3 If the entire population was included in the PIP, did the data collection approach capture all enrollees to whom the PIP question applied?		Data collection was performed according to HEDIS® Technical Specifications for CIS Combo 10 measure and captured all population.
3.4 Was a sample used?	N/A	Sampling was not utilized.
3.5 Overall assessment/recommendations for identifying the project population.		Home State Health should have clarity on the target population and project population. Primaris recommends PIP population be selected at a small scale (e.g., from a county, provider office, or a region) so that results can be measured during



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		PDSA cycle and subsequently applied at a larger scale.
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**Step 4: Review Sampling Method**

Component/Standard	Score	Comments
4.1 Did the sampling frame contain a complete, recent, and accurate list of the target PIP population?	N/A	Sampling was not used in this study.
4.2 Did the sampling method consider and specify the true or estimated frequency of the event, the confidence interval to be used, and the acceptable margin of error?	N/A	Same comment as in section 4.1.
4.3 Did the sample contain a sufficient number of enrollees taking into account non-response?	N/A	Same comment as in section 4.1.
4.4 Did the method assess the representativeness of the sample according to subgroups, such as those defined by age, geographic location, or health status?	N/A	Same comment as in section 4.1.
4.5 Were valid sampling techniques used to protect against bias? Specify the type of sampling used.	N/A	Same comment as in section 4.1.
4.6 Overall assessment/recommendations for improving the sampling method.	N/A	Same comment as in section 4.1.

**Step 5: Review the Selected PIP Variables and Performance Measures**

Component/Standard	Score	Comments
<b>PIP Variables</b>		
5.1 Were the variables adequate to answer the PIP question? <ul style="list-style-type: none"> <li>Did the PIP use objective, clearly defined, time-specific variables (e.g., an event or status that can be measured)?</li> <li>Were the variables available to measure performance and track improvement over time (at least semiannual basis)?</li> </ul>	●	The PIP variables were not selected. MMR vaccination rate and Hepatitis A vaccination rate were selected as sub measures/secondary measures even though the intervention was not specific to these measures.
<b>Performance measures</b>		

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5.2 Did the performance measure assess an important aspect of care that will make a difference to enrollees' health or functional status?	●	HEDIS® CIS Combo 10 measure was used as a primary measure and MMR and Hepatitis A rates were secondary measures.
5.3 Were the performance measures appropriate based on the availability of data and resources to collect the data (administrative data, medical records, or other sources)?	●	The secondary measures selected were not appropriate as they were not directed towards increasing the rate of all the vaccines involved in HEDIS® CIS Combo 10 measure.
5.4 Were the measures based on current clinical knowledge or health services research? Examples: Recommended procedures, appropriate utilization (hospital admissions, emergency department visits), adverse incidents (such as death, avoidable readmission), referral patterns, authorization requests, appropriate medication use.	●	Same comment as in section 5.2.
5.5 Did the performance measures: <ul style="list-style-type: none"> <li>• Monitor the performance of MCO at a point in time?</li> <li>• Track MCO performance over time?</li> <li>• Compare performance among MCOs over time?</li> <li>• Inform the selection and evaluation of quality improvement activities?</li> </ul>	●	Statewide HEDIS® CIS Combo 10 rates were reported for each month. Data for other MCOs were not available to Home State Health (this was not a collaborative PIP). Home State Health compared the individual months in MY 2019 to the corresponding months in MY 2020 and determined that they were ahead of their PIP goal in the beginning of Jan 2020 by 2.27% points. Each consecutive month had a higher rate than MY 2019. So, the evaluation of improvement activities were not done. However, the final rates decreased by 3.16% points and analyzed.
5.6 Did the MCO consider existing measures, such as CMS Child and Adult Core Set, Core Quality Measure Collaborative, certified community behavioral health clinics (CCBHC) measures, HEDIS®, or AHRQ measures?	●	CMS Child Core Set measure (HEDIS® CIS Combo 10) was used as primary indicator.
5.7 If there were gaps in existing measures, did the MCO consider the following when developing new measures based on current clinical practice guidelines or health services research? <ul style="list-style-type: none"> <li>• Did the measure address accepted clinical guidelines relevant to the PIP question?</li> </ul>	●	There were no gaps in the existing measures, so new measures were not developed. The primary measure was defined based on the NCQA technical specifications.





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<ul style="list-style-type: none"> <li>Did the measure address an important aspect of care or operations that was meaningful to MCO enrollees?</li> <li>Did available data sources allow the MCO to calculate the measure reliably and accurately?</li> <li>Were all criteria used in the measure defined clearly (such as time periods, characteristics of eligible enrollees, services to be assessed, and exclusion criteria)?</li> </ul>		
<p>5.8 Did the measures capture changes in enrollee satisfaction or experience of care?</p> <p>Was there some improvement in health or functional status? (For projects in non-clinical areas such as addressing access or availability of services, measurement of health or functional status is preferred.)</p>	●	Home State Health presented information regarding the utilization of the mobile application and service satisfaction.
<p>5.9 Did the measures include a strategy to ensure inter-rater reliability (if applicable)?</p>	●	All charts which are manually uploaded in the QSI-XL are over-read by team members who have completed and passed Inter-Rater Reliability training for CIS compliance requirements; these charts are also part of random audits to ensure compliance.
<p>5.10 If process measures were used, is there strong clinical evidence indicating that the process being measured is meaningfully associated with outcomes?</p> <ul style="list-style-type: none"> <li>This determination will be based on published guidelines, including citations from randomized clinical trials, case control studies, or cohort studies.</li> <li>At a minimum, the PIP should be able to demonstrate a consensus among relevant practitioners with expertise in the defined area who attest to the importance of a given process.</li> </ul>	●	Process measure used in the PIP is a CMS Child Core Set measure (NQF0038).
<p>5.11 Overall assessment/recommendations for improving the selected PIP variables and performance measures.</p>	●	Rationale of selecting secondary measures is not understood as the intervention is not directed towards it. Home State Health should select a variable (a measurable characteristic, quality, trait, or attribute of a particular individual, object, or situation being studied)/secondary measure that could identify Home State Health's








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		performance on the PIP aim objectively and reliably and use clearly defined indicators of performance.
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**Step 6: Review Data Collection Procedures**

Component/Standard	Score	Comments
<b>Assessment of Overall Data Collection Procedures</b>		
6.1 Did the PIP design specify a systematic method for collecting valid and reliable data that represents the population in the PIP?		Data for the primary measure was reported through the NCQA certified HEDIS software, QSI-XL from various sources such as claims data, supplemental data, charts, and ShowMeVax program. Information about collecting the secondary measures is not presented. However, a statement about the source of data (NCQA certified software) for the MMR and Hepatitis A rates was noted. Information about data collection linked to the intervention was not presented.
6.2 Did the PIP design specify the frequency of data collection? If yes, what was the frequency (for example, semi-annually)?		Plan about data collection is not specified. However, Home State Health stated that they will monitor rates (HEDIS® CIS Combo 10 rates) on an ongoing basis not to exceed semi-annually. The plan for collecting the secondary measures (MMR and Hepatitis A vaccination rates) is not described. These are projected annually for MY 2019 and MY 2020. Additionally, the consolidated rates for the MMR and Hepatitis A vaccination rates were presented for Jan-Jun 2020.
6.3 Did the PIP design clearly specify the data sources? Data sources may include: Encounter and claims systems, medical records, case management or electronic visit verification systems, tracking logs, surveys, provider and/or enrollee interviews.		Data sources for HEDIS® Combo 10 rate is mentioned: claims, medical records, supplemental data from providers, and ShowMeVax program. The secondary measures source is also the NCQA software.
6.4 Did the PIP design clearly define the data elements to be collected? Accurate measurement depends on clear and concise definitions of data elements (including numerical definitions and units of measure).		PIP design mentioned only about the primary measure. Definition of HEDIS® CIS Combo 10 measure was provided. There was no plan about data collection for MMR and Hepatitis A vaccination rates, and thus concise definitions of data elements (including numerical definitions and units of measure) were not provided for the data required to be collected after intervention.


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6.5 Did the data collection plan link to the data analysis plan to ensure that appropriate data would be available for the PIP?		Primary measure is reported monthly, secondary measures are reported for six months (Jan-Jun 2020) and annually.
6.6 Did the data collection instruments allow for consistent and accurate data collection over the time periods studied?		Inovalon, a HEDIS®-certified software engine, was used to generate the HEDIS® CIS Combo 10 measure rates which includes MMR and Hepatitis A rates.
6.7 If qualitative data collection methods were used (such as interviews or focus groups), were the methods well-defined and designed to collect meaningful and useful information from respondents?	N/A	Qualitative data collection methods were not used.
6.8 Overall assessment/recommendations for improving the data collection procedures.		Primaris has no confidence in the PIP design and data collection plan. The data collection plan should be linked to the data analysis plan to ensure that appropriate data would be available for the PIP.
<b>Assessment of Data Collection Procedures for Administrative Data Sources</b>		
6.9 If inpatient data was used, did the data system capture all inpatient admissions/discharges?	N/A	Inpatient data was not used. This was confirmed by Home State Health post-site meeting.
6.10 If primary care data was used, did primary care providers submit encounter or utilization data for all encounters?		Data was reported through NCQA certified HEDIS software, QSI-XL. Data was included from various sources and provider types including Primary Care Providers, Specialty Care Providers and Ancillary Providers.
6.11 If specialty care data was used, did specialty care providers submit encounter or utilization data for all encounters?		Same comment as in section 6.10 above.
6.12 If ancillary data was used, did ancillary service providers submit encounter or utilization data for all services provided?		Same comment as in section 6.10 above.
6.13 If LTSS data was used, were all relevant LTSS provider services included (for example, through encounter data, case management systems, or electronic visit verification (EVV) systems)?	N/A	LTSS is excluded per the MHD contract.
6.14 If EHR data was used, were patient, clinical, service, or quality metrics validated for accuracy and completeness as well as comparability across systems?		Home State Health's Quality and Risk Management departments have ongoing initiatives which often require retrieving charts, paper copies or through Electronic Health Records (EHR) from providers. All

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		charts which are manually uploaded are over-read by team members who have completed and passed Inter-Rater Reliability training for CIS compliance requirements; these charts are also part of random audits to ensure compliance.
<b>Assessment of Data Collection Procedures for Medical Record Review</b>		
6.15 Was a list of data collection personnel and their relevant qualifications provided? (Note: Experienced clinical staff such as registered nurses should be used to extract data to support a judgment about whether clinical criteria are met.)		List of data collection personnel was not provided. However, Home State Health provided the titles and qualifications of personnel involved in this PIP: Quality Improvement Director, Senior Director of Care Management (a nurse with 3+ years clinical experience and 7+ years' experience in Managed Care, Project Management Manager with 4 years' experience in managed care), Senior Vice President of Population Health (a nurse with 6 years of clinical and 7 years of managed care experience).
6.16 For medical record review, was inter-rater and intra-rater reliability described? The PIP should also consider and address intra-rater reliability (i.e., reproducibility of judgments by the same abstractor at a different time).	N/A	Medical Record Review (MRR) was not the source of data collection for the PIP.
6.17 For medical record review, were guidelines for obtaining and recording the data developed? <ul style="list-style-type: none"> <li>A glossary of terms for each project should be developed before data collection begins to ensure consistent interpretation among and between data collection staff.</li> <li>Data collection staff should have clear, written instructions, including an overview of the PIP, how to complete each section of the form or instrument, and general guidance on how to handle situations not covered by the instructions. This is particularly important when multiple reviewers are collecting data.</li> </ul>	N/A	MRR was not conducted for the PIP. A glossary of terms for each project was not developed. The medical record review was a part of generating HEDIS® CIS Combo 10 rate as this is a hybrid measure.

**Step 7: Review Data Analysis and Interpretation of PIPs Results**

Component/Standard	Score	Comments
7.1 Was the analysis conducted in accordance with the data analysis plan?		Data analysis plan was not presented. Home State Health presented the rationale



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		for choosing the secondary measures; however, it was not a reasonable explanation for selecting the MMR measure. Analysis of data collected as a result of intervention is inconclusive and the impact on primary measure is not linked.
7.2 Did the analysis include baseline and repeat measurements of project outcomes?	●	Baseline and repeat measurements of Primary measure-CIS Combo 10-was included. The secondary rates are reported for the first six months (consolidated rates) and then annually for the measurement year and baseline year.
7.3 Did the analysis assess the statistical significance of any differences between the initial and repeat measurements?	●	Statistical significance (z-test) of HEDIS® CIS Combo 10 rate in MY 2019 and MY 2020 was assessed annually and not between initial and repeat measurements. Statistical significance of changes in the secondary measures was not assessed.
7.4 Did the analysis account for factors that may influence the comparability of initial and repeat measurements?	●	The data was presented. Analysis to account for factors influencing the initial and repeat measurements was not conducted for the secondary measures. For the primary measure, there was an increase in HEDIS® Combo 10 rates from the beginning of the MY 2020 (January) showing an increase in 2.7% points from MY 2019 (January) rates but dropped in the final rate by 4.14% points which was attributed to COVID-19 Pandemic.
7.5 Did the analysis account for factors that may threaten the internal or external validity of the findings?	●	Home State Health reported that they followed HEDIS population requirements for this PIP. Therefore, no threats to internal or external validity existed.
7.6 Did the PIP compare the results across multiple entities, such as different patient subgroups, provider sites, or MCOs?	●	Different patient subgroups' results are compared.
7.7 Were PIP results and findings presented in a concise and easily understood manner?	●	The PIPs included data presentation about the ongoing care management program, the progress and results were not linked to the primary measure.
7.8 To foster continuous quality improvement, did the analysis and interpretation of the PIP data include lessons learned about less-than-optimal performance? (Note: Analysis and interpretation of the PIP data should be based on a continuous improvement philosophy and reflect on lessons learned and opportunities for improvement.)	●	Annual results were reported and some speculations were made for the future PIP. Analysis or lessons learned were not included while conducting the PIPs. Even though Home State Health stated about rapid cycle improvement initiative, the methodology was not based on PDSA cycle.

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7.9 Overall assessment/recommendations for improving the analysis and interpretation of PIP results.	●	A baseline rate should be presented before start of an intervention followed by at least two remeasurements, analysis of results should be utilized for planning next intervention (PDSA cycle). At least two test cycles should be performed.

**Step 8: Assess the Improvement Strategies**

Component/Standard	Score	Comments
8.1 Was the selected improvement strategy evidence-based, that is, was there existing evidence (published or unpublished) suggesting that the test of change would be likely to lead to the desired improvement in processes or outcomes (as measured by the PIP variables)?	●	Selected intervention of care management and educating the new mothers on immunization was operational since May 1, 2017, when MHD contracted with Home State Health. Usage of a mobile application called "Pacify" for education and push notifications regarding benefits of immunization to the pregnant members was in place from Sept 2018. Home State Health did not identify the change they are testing in the PIP.
8.2 Was the strategy designed to address root causes or barriers identified through data analysis and quality improvement processes?	●	Root cause analysis was not done. All the vaccination rates included in the HEDIS® CIS Combo 10 vaccines were presented for both MY 2019 and MY 2020 and concluded to choose Hepatitis A and MMR vaccination rates as secondary measures as they did not change from MY 2019 to MY 2020.  Primaris noted that there were other vaccination rates which were lower than the selected ones. The intervention was not focused on the secondary measures perse. It was applicable to all the pregnant mothers and mothers using Pacify mobile application.
8.3 Was the rapid-cycle PDSA approach used to test the selected improvement strategy?	●	Home State Health stated that they used PDSA cycle; however, information was not provided that indicated the strategy/intervention (s) were tested and methodology was based on a PDSA cycle.
8.4 Was the strategy culturally and linguistically appropriate?	●	Home State Health stated that they provide accessible, high quality and culturally sensitive healthcare service to their members.





## Performance Improvement Projects: Home State Health

8.5 Was the implementation of the strategy designed to account or adjust for any major confounding variables that could have an obvious impact on PIP outcomes (e.g., patient risk factors, Medicaid program changes, provider education, clinic policies or practices)?	●	In MY 2020, care management had to shift away from face to face member visits due to the Covid-19 pandemic and Home State Health embraced more technology to meet the member's needs. HSH was able to increase the use of application based platforms such as Pacify which is a tool used to target a high risk obstetric population.
8.6 Building on the findings from the data analysis and interpretation of PIP results (Step 7), did the PIP assess the extent to which the improvement strategy was successful and identify potential follow-up activities?	●	The annual HEDIS® CIS Combo 10 rate dropped which was attributed to impact of Covid-19 Pandemic. Home State Health stated that the Pacify application was successful and will continue in MY 2022. Primaris noted that both MMR and Hepatitis A vaccination rates decrease in MY 2020. However, Home State Health identified potential follow up activities.
8.7 Overall assessment/recommendations for improving the implementation strategies.	●	The selected improvement strategy should be evidence-based, that is, there should be existing evidence (published or unpublished) suggesting that the test of change would be likely to lead to the desired improvement in processes or outcomes (as measured by the PIP variables). The strategy must be designed to address root causes or barriers identified through data analysis and quality improvement processes. The strategy should be tested using PDSA cycles. Effectiveness of the improvement strategy should be determined by measuring change in performance according to the predefined measures and linking to intervention.

## Step 9: Assess the Likelihood that Significant and Sustained Improvement Occurred

Component/Standard	Score	Comments
9.1 Was the same methodology used for baseline and repeat measurements?	●	Primary and secondary data were collected using same methodology.
9.2 Was there any quantitative evidence of improvement in processes or outcomes of care?	●	Primary measure declined from 30.17% (MY 2019) to 27.01% (MY 2020). Similarly, the secondary measures-MMR immunization rate declined from 82.97% to 80.29% and Hepatitis A immunization rate declined from 73.72% to 72.26%. There was no evidence of improvement.

## Performance Improvement Projects: Home State Health

9.3 Was the reported improvement in performance likely to be a result of the selected intervention? (Conclusive demonstration through controlled studies is not required.)		There was no improvement in primary or the secondary measures. The annual MMR rate presented for mothers who were enrolled in care management and used Pacify application declined from 38.89% (MY 2019) to 34.00% (MY 2020) whereas the mothers who were not enrolled in care management and did not use the Pacify application increased from 27.55% to 34.76% suggesting that there was no impact of the intervention. Similarly, the annual Hepatitis A rate in the group of mothers who were in care management and used Pacify application decreased from 34.69% (MY 2019) to 29.29% (MY 2020) rendering the intervention ineffective. The Hepatitis A immunization rates increased in the group of members who were not under the intervention (no care management and no application usage) from 21.62% to 29.48% suggesting that the intervention did not play any role.
9.4 Is there statistical evidence (e.g., significance tests) that any observed improvement is the result of the intervention?		There was no evidence of improvement in the primary and secondary measures from MY 2019 to MY 2020. However, the decline in the primary rate was not statistically significant. Refer to the comment in section 9.3 for additional information.
9.5 Was sustained improvement demonstrated through repeated measurements over time?		Repeat measurements for the primary measure has shown an increase from MY 2019 to MY 2020 with a drop in the final rate. The annual rate for the secondary measures shows a decrease from MY 2019. Refer to the comment in section 9.3 for additional information.
9.6 Overall assessment/recommendations for improving the significance and sustainability of improvement as a result of the PIP.		After an intervention is implemented and results are analyzed, Home State Health should review processes to create sustained improvement. This allows Home State Health to maintain the positive results of the intervention, correct negative results, and/or scale the intervention to support longer-term improvements or broader improvement capacity across other health services, populations, and aspects of care. Because PIPs can be resource-intensive, this phase also helps learn how to allocate more efficiently for future projects. Repeat

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		measurements in short intervals should be conducted to determine whether significant change in performance relative to baseline measurement was observed.
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**ACTIVITY 2: PERFORM OVERALL VALIDITY AND REPORTING OF PIP RESULTS****Perform Overall Validation of PIP Results**

PIP Validation Rating (check one box)	Comments
<input type="checkbox"/> High confidence <input type="checkbox"/> Moderate confidence <input type="checkbox"/> Low confidence <input checked="" type="checkbox"/> <b>No confidence</b>	<p>The aim of the PIP was not met and the HEDIS® CIS rate decreased from 30.17% (MY 2019) to 27.01% (MY 2020) by 3.16% points. This decline is not statistically significant (P=0.31732). Home State Health did not adhere to the acceptable methodology for all phases of design, data collection, data analysis, and interpretation of PIP results. Though there was an indication of monthly increase in HEDIS® CIS Combo 10 rate, the quality improvement process and intervention were poorly executed and could not be linked to the improvement. Primaris assigns a score of "No Confidence."</p>

## APPENDIX B. PIP VALIDATION WORKSHEET-IMPROVING ORAL HEALTH


Date of Evaluation/Interview: July 27, 2021

MCO Name/Mailing Address:	Home State Health/11720 Borman Drive, St. Louis, MO 63146
MCO Contact Name and Title:	Megan Barton, Senior Vice President Population Health & Clinical Operations
Name of Performance Improvement Project:	Improving Oral Health
PIP Period Date:	Jan 1, 2020-Dec 31, 2020
Programs:	Medicaid only/CHIP only/✓Medicaid and CHIP
Demographic Information:	Number of Medicaid/CHIP enrollees in MCO: 255,732 Medicaid/CHIP members included in the study: 51,007 for intervention 1 and 1045 for intervention 2. Number of Dentists/Specialists: 2300 access points, 375 provider locations.


Score: Met  / Partially Met  / Not Met  / Not Applicable (N/A)

## ACTIVITY 1: ASSESS THE PIP METHODOLOGY





## Step 1: Review the PIP Topic

Component/Standard	Score	Comments
1.1 Was the topic selected through a comprehensive analysis of MCO enrollee needs, care, and services? (Note: If the PIP topic was required by the state, it will be marked as N/A.)	N/A	MHD contract section 2.18.8d2 requires Home State Health, at a minimum, to set a goal to improve the plan specific HEDIS® ADV rate for two to twenty year-olds each year by at least two % points in alignment with the Quality Improvement Strategy.
1.2 Did selection of the PIP topic consider performance on the CMS Child and Adult Core Set measures?	N/A	HEDIS® ADV measure was selected by the MHD. This is not CMS Core Set measure.
1.3 Did the selection of PIP topic consider input from enrollees or providers who are users of, or concerned with, specific service areas? (Note: If the PIP topic was required by the state, it will be marked as N/A.)	N/A	The PIP topic was selected by the MHD.
1.4 Did the PIP topic address care of special populations or high priority services, such as: <ul style="list-style-type: none"> <li>Children with special health care needs</li> <li>Adults with physical disabilities</li> <li>Children or adults with behavioral health issues</li> </ul>		The PIP topic addressed "Access to and Availability of Care" for all Home State Health members ages two through twenty who met the HEDIS eligibility requirements, including, members with special health care needs.

## Performance Improvement Projects: Home State Health

<ul style="list-style-type: none"> <li>• People with intellectual and developmental disabilities</li> <li>• People with dual eligibility who use long-term services and supports (LTSS)</li> <li>• Preventive care</li> <li>• Acute and chronic care</li> <li>• High-volume or high-risk services</li> <li>• Care received from specialized centers (e.g., burn, transplant, cardiac surgery)</li> <li>• Continuity or coordination of care from multiple providers and over multiple episodes</li> <li>• Appeals and grievances</li> <li>• Access to and availability of care</li> </ul>		
1.5 Did the PIP topic align with priority areas identified by HHS and/or CMS?	N/A	The topic was selected by the MHD. The PIP was aimed at improving oral health. The CMS Child Core Set measures have two measures related to improving oral health.
1.6 Overall assessment/recommendations for improving PIP topic.		Even though overarching goal is mandated by MHD, Home State Health has the flexibility to select a topic within specified parameters. To ensure a successful PIP, Home State Health should find early and regular opportunities to obtain input from staff, providers, and members on how to improve care delivery. Primaris recommends Home State Health to specifically mention about inclusion of special population and members with high priority services requirements.

## Step 2: Review the PIP Aim Statement

Component/Standard	Score	Comments
2.1 Did the PIP aim statement clearly specify the improvement strategy?		Increasing the MY 2019 HEDIS® ADV rate is mentioned. Strategy is not specified.
2.2 Did the PIP aim statement clearly specify the population for the PIP?		The aim statement did not specify the population. Definition of HEDIS® Combo 10 measure is provided which states that members aged 2-20 years were included in the PIP.
2.3 Did the PIP aim statement clearly specify the time period for the PIP?		MY 2020 (end of Dec 31, 2020).
2.4 Was the PIP aim statement concise?		The aim statement was “increase Home State Health’s MY 2019 NCQA HEDIS® ADV rate by 2% by December 31, 2020.”



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		The aim statement was not per the requirements of the MHD. The increase in the performance measure should be 2% points. Baseline rate and rate aimed to achieve is missing from the aim statement.
2.5 Was the PIP aim statement answerable?	●	The aim statement was incomplete; however, it was answerable.
2.6 Was the PIP aim statement measurable?	●	The aim statement was incomplete; however, it was measurable.
2.7 Overall assessment/recommendations for improving the PIP aim statement.	●	The PIP aim statement should define the improvement strategy, population, and time period. It should be clear, concise, measurable, and answerable. Even though overarching aim is provided by the MHD, Home State Health should translate aim statement that identifies the focus of the PIP and establish the framework for data collection and analysis on a small scale.

**Step 3: Review the Identified Study Populations**

Component/Standard	Score	Comments
3.1 Was the project population clearly defined in terms of the identified PIP question (e.g., age, length of the PIP population's enrollment, diagnoses, procedures, other characteristics)?	●	Home State Health presented three different statements about the project population as follows: "The study population included all members aged two through twenty who meet the HEDIS® eligibility requirements. The interventions were applied to all eligible members aged two through twenty at the time of each intervention. Another statement about the project population was as follows: "A targeted Rapid Cycle improvement initiative for members assigned to a specific FQHC is included in this PIP." Third statement mentioned about the intervention involving FQHC targeted members two-nine years old.
3.2 Was the entire MCO population included in the PIP?	●	Refer to comment in section 3.1. However, Home State Health included the entire population in determining the HEDIS® ADV rate.
3.3 If the entire population was included in the PIP, did the data collection approach capture all enrollees to whom the PIP question applied?	● M	Data collection was performed according to HEDIS® Technical Specifications for ADV measure and captured all population.

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3.4 Was a sample used?	N/A	Sampling was not done.
3.5 Overall assessment/recommendations for identifying the project population.	●	The target population and the project population need more clarity. Primaris recommends PIP population be selected at a small scale (e.g., from a county, provider office, or a region) so that results can be measured during PDSA cycle and subsequently applied at a larger scale.

**Step 4: Review Sampling Method**

Component/Standard	Score	Comments
4.1 Did the sampling frame contain a complete, recent, and accurate list of the target PIP population?	N/A	Sampling was not used in this study.
4.2 Did the sampling method consider and specify the true or estimated frequency of the event, the confidence interval to be used, and the acceptable margin of error?	N/A	Same comment as in section 4.1.
4.3 Did the sample contain a sufficient number of enrollees taking into account non-response?	N/A	Same comment as in section 4.1.
4.4 Did the method assess the representativeness of the sample according to subgroups, such as those defined by age, geographic location, or health status?	N/A	Same comment as in section 4.1.
4.5 Were valid sampling techniques used to protect against bias? Specify the type of sampling used.	N/A	Same comment as in section 4.1.
4.6 Overall assessment/recommendations for improving the sampling method.	N/A	Same comment as in section 4.1.




**Step 5: Review the Selected PIP Variables and Performance Measures**

Component/Standard	Score	Comments
<b>PIP Variables</b>		
5.1 Were the variables adequate to answer the PIP question? <ul style="list-style-type: none"> <li>Did the PIP use objective, clearly defined, time-specific variables (e.g., an event or status that can be measured)?</li> <li>Were the variables available to measure performance and track improvement over time (at least semiannual basis)?</li> </ul>	●	The PIP variables were not identified.

## Performance Improvement Projects: Home State Health

<b>Performance measures</b>		
5.2 Did the performance measure assess an important aspect of care that will make a difference to enrollees' health or functional status?	●	HEDIS® ADV measure was used as a primary measure.
5.3 Were the performance measures appropriate based on the availability of data and resources to collect the data (administrative data, medical records, or other sources)?	●	Same comment as in section 5.2.
5.4 Were the measures based on current clinical knowledge or health services research? E.g., Recommended procedures, appropriate utilization (hospital admissions, emergency department visits), adverse incidents (such as death, avoidable readmission), referral patterns, authorization requests, appropriate medication use.	●	Same comment as in section 5.2.
5.5 Did the performance measures: <ul style="list-style-type: none"> <li>• Monitor the performance of MCO at a point in time?</li> <li>• Track MCO performance over time?</li> <li>• Compare performance among MCOs over time?</li> <li>• Inform the selection and evaluation of quality improvement activities?</li> </ul>	●	Statewide HEDIS® ADV rates were reported for each month. Data for other MCOs were not available to Home State Health (not a collaborative PIP). In the first quarter of the MY 2020, the HEDIS® ADV rate was higher than the first quarter of the previous year. However, there was a decrease from April 2020 onwards. At the end of 2020, Home State Health's overall ADV rate decreased by 11.85% percentage points from CY2019 to CY2020. The results were attributed to the impact of Covid-19 Pandemic. The improvement activities did not have an impact on the performance measure.
5.6 Did the MCO consider existing measures, such as CMS Child and Adult Core Set, Core Quality Measure Collaborative, certified community behavioral health clinics (CCBHC) measures, HEDIS®, or AHRQ measures?	●	HEDIS® ADV measure was used as primary indicator.
5.7 If there were gaps in existing measures, did the MCO consider the following when developing new measures based on current	●	There were no gaps in the existing measures, so new measures were not developed. The primary measure was




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<p>clinical practice guidelines or health services research?</p> <ul style="list-style-type: none"> <li>• Did the measure address accepted clinical guidelines relevant to the PIP question?</li> <li>• Did the measure address an important aspect of care or operations that was meaningful to MCO enrollees?</li> <li>• Did available data sources allow the MCO to calculate the measure reliably and accurately?</li> <li>• Were all criteria used in the measure defined clearly (such as time periods, characteristics of eligible enrollees, services to be assessed, and exclusion criteria)?</li> </ul>		defined based on the NCQA technical specifications.
<p>5.8 Did the measures capture changes in enrollee satisfaction or experience of care? Was there some improvement in health or functional status? (For projects in non-clinical areas such as addressing access or availability of services, measurement of health or functional status is preferred.)</p>		<p>The HEDIS® ADV measure decreased from 53.24% (MY 2019) to 41.39% (MY 2020). There was no improvement in the measure.</p>
<p>5.9 Did the measures include a strategy to ensure inter-rater reliability (if applicable)?</p>	N/A	<p>NCQA certified HEDIS software, QSI-XL was used to report the primary measure.</p>
<p>5.10 If process measures were used, is there strong clinical evidence indicating that the process being measured is meaningfully associated with outcomes?</p> <ul style="list-style-type: none"> <li>• This determination will be based on published guidelines, including citations from randomized clinical trials, case control studies, or cohort studies.</li> <li>• At a minimum, the PIP should be able to demonstrate a consensus among relevant practitioners with expertise in the defined area who attest to the importance of a given process.</li> </ul>		<p>HEDIS® ADV measure is used in the PIP.</p>
<p>5.11 Overall assessment/recommendations for improving the selected PIP variables and performance measures.</p>		<p>In the future, Home State Health should select a variable (a measurable characteristic, quality, trait, or attribute of a particular individual, object, or situation being studied)/secondary measure that could identify Home State Health's performance on the PIP questions</p>






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		objectively and reliably and use clearly defined indicators of performance. Home State Health can use focus groups, surveys, and interviews to collect qualitative insights from members, and provider staff, and key external partners. Qualitative measures can serve as the secondary measures and/or supplement the overall measurement set, providing information that will aid PIP planning and implementation.
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**Step 6: Review Data Collection Procedures**

Component/Standard	Score	Comments
<b>Assessment of Overall Data Collection Procedures</b>		
6.1 Did the PIP design specify a systematic method for collecting valid and reliable data that represents the population in the PIP?		Data for the primary measure was reported through Home State Health's NCQA certified HEDIS software, QSI-XL. Data is input into QSI-XL from various sources, namely, claims data, supplemental data, and medical records. Information about data collection linked to the intervention was not presented. Post-site meeting Home State Health informed Primaris that even though it is not a hybrid measure, charts can be gathered during the year and uploaded if they meet the NCQA requirements for the ADV measure.
6.2 Did the PIP design specify the frequency of data collection? If yes, what was the frequency (for example, semi-annually)?		Data collection plan for the primary measure or related to the intervention was not presented. However, statewide HEDIS® ADV rate was reported on a monthly basis and regionwide HEDIS® ADV rate was presented on an annual basis.
6.3 Did the PIP design clearly specify the data sources? Data sources may include: Encounter and claims systems, medical records, case management or electronic visit verification systems, tracking logs, surveys, provider and/or enrollee interviews.		Data sources for HEDIS® Combo 10 rate is mentioned: claims, medical records, supplemental data from providers, and data from Quality and Risk Management department (charts).

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6.4 Did the PIP design clearly define the data elements to be collected? Accurate measurement depends on clear and concise definitions of data elements (including numerical definitions and units of measure).		The PIP design mentioned only about the primary measure. Definition of HEDIS® ADV measure was provided. Data elements to be collected after the intervention, their definitions, unit of measurement were not specified.
6.5 Did the data collection plan link to the data analysis plan to ensure that appropriate data would be available for the PIP?		Data collection plan was not submitted. Primary measure was reported on a monthly basis. One intervention was carried out in Q4-MY 2020 and another intervention was in Q3-2020. The data collection plan was not linked to analysis.
6.6 Did the data collection instruments allow for consistent and accurate data collection over the time periods studied?		Inovalon, a HEDIS®-certified software engine, was used to generate the HEDIS® ADV measure rates.
6.7 If qualitative data collection methods were used (such as interviews or focus groups), were the methods well-defined and designed to collect meaningful and useful information from respondents?	N/A	Qualitative data collection methods were not used.
6.8 Overall assessment/recommendations for improving the data collection procedures.		A data collection plan should be presented that includes all the information about data to be collected as a result of the PIP (primary measure, secondary measure, variable, interventional data) and accurate definitions of data elements. Secondary measure, units of measure/rate, if statewide or at a region/location should be stated. Data collection plan should be linked to the data analysis plan to ensure that appropriate data would be available for the PIP.
<b>Assessment of Data Collection Procedures for Administrative Data Sources</b>		
6.9 If inpatient data was used, did the data system capture all inpatient admissions/discharges?	N/A	Inpatient data was not used as confirmed by Home State Health post-site meeting.
6.10 If primary care data was used, did primary care providers submit encounter or utilization data for all encounters?		Data from provider types including dentists and dental practitioners were included. Any Primary Care, Specialist, or Ancillary Services Provider would need to have the required dental licensure for the dental visit to be included in the data.

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6.11 If specialty care data was used, did specialty care providers submit encounter or utilization data for all encounters?	●	Same comments as in section 6.10 above.
6.12 If ancillary data was used, did ancillary service providers submit encounter or utilization data for all services provided?	●	Same comments as in section 6.10 above.
6.13 If LTSS data was used, were all relevant LTSS provider services included (for example, through encounter data, case management systems, or electronic visit verification (EVV) systems)?	N/A	LTSS is excluded per the MHD contract.
6.14 If EHR data was used, were patient, clinical, service, or quality metrics validated for accuracy and completeness as well as comparability across systems?	●	Home State Health's Quality and Risk Management departments have ongoing initiatives which often require retrieving charts, paper copies or through Electronic Health Records (EHR), from providers; if dental visit data is found in these charts they are uploaded manually into their system and uploaded in QSI-XL.
<b>Assessment of Data Collection Procedures for Medical Record Review</b>		
6.15 Was a list of data collection personnel and their relevant qualifications provided? (Note: Experienced clinical staff such as registered nurses should be used to extract data to support a judgment about whether clinical criteria are met.)	N/A	HEDIS® ADV is an administrative measure.
6.16 For medical record review, was inter-rater and intra-rater reliability described? The PIP should also consider and address intra-rater reliability (i.e., reproducibility of judgments by the same abstractor at a different time).	N/A	Same comment as in section 6.15
6.17 For medical record review, were guidelines for obtaining and recording the data developed? <ul style="list-style-type: none"> <li>• A glossary of terms for each project should be developed before data collection begins to ensure consistent interpretation among and between data collection staff.</li> <li>• Data collection staff should have clear, written instructions, including an overview of the PIP, how to complete each section of the form or instrument, and general</li> </ul>	N/A	Same comment as in section 6.15



## Performance Improvement Projects: Home State Health

guidance on how to handle situations not covered by the instructions. This is particularly important when multiple reviewers are collecting data.		
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**Step 7: Review Data Analysis and Interpretation of PIPs Results**

Component/Standard	Score	Comments
7.1 Was the analysis conducted in accordance with the data analysis plan?	●	Data collection plan was not submitted. Analysis of data collected as a result of the two interventions is inconclusive and the impact on primary measure is not linked.
7.2 Did the analysis include baseline and repeat measurements of project outcomes?	●	Baseline and repeat measurements of Primary measure-ADV was included. Data generated as a result of one intervention were reported from last year and compared to this year. For the second intervention the baseline was not reported. The final result of the intervention was provided.
7.3 Did the analysis assess the statistical significance of any differences between the initial and repeat measurements?	●	Statistical significance (z-test) of HEDIS ADV rate in MY 2019 and MY 2020 was assessed. Statistical significance of data collected as a result of the interventions was not assessed.
7.4 Did the analysis account for factors that may influence the comparability of initial and repeat measurements?	●	Factors that may have influenced the results of interventions were reported.
7.5 Did the analysis account for factors that may threaten the internal or external validity of the findings?	●	Home State Health did not address this criterion.
7.6 Did the PIP compare the results across multiple entities, such as different patient subgroups, provider sites, or MCOs?	●	Different patient subgroups/provider sites were not compared. Since this was not a collaborative PIP, the results were not compared to the other MCOs.
7.7 Were PIP results and findings presented in a concise and easily understood manner?	●	The PIP was limited to data presentation after the interventions. The findings after the second intervention were insufficient to draw any conclusion. This data could not be linked to the primary measure.
7.8 To foster continuous quality improvement, did the analysis and interpretation of the PIP data include lessons learned about less-than-optimal performance? (Note: Analysis and interpretation of the PIP data should be based on a continuous improvement philosophy and	●	The interpretation of results was not conclusive and not tied with the primary measure.

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reflect on lessons learned and opportunities for improvement.)		
7.9 Overall assessment/recommendations for improving the analysis and interpretation of PIP results.	●	A baseline rate should be presented before start of an intervention followed by at least two remeasurements, analysis of results , feedback/lessons learned from the data collected after an intervention should be utilized for planning next intervention (cycle-PDSA). At least two cycles should be conducted. Additionally, primary and secondary measure/variable should be linked to determine the impact of intervention on performance of a project.

**Step 8: Assess the Improvement Strategies**

Component/Standard	Score	Comments
8.1 Was the selected improvement strategy evidence-based, that is, was there existing evidence (published or unpublished) suggesting that the test of change would be likely to lead to the desired improvement in processes or outcomes (as measured by the PIP variables)?	●	This information is not presented in the PIP.
8.2 Was the strategy designed to address root causes or barriers identified through data analysis and quality improvement processes?	●	Barrier analysis was not conducted. However, region-wise population data was accessed to determine the focus of one of the interventions.
8.3 Was the rapid-cycle PDSA approach used to test the selected improvement strategy?	●	PDSA cycle approach was not used.
8.4 Was the strategy culturally and linguistically appropriate?	●	This criterion was not addressed.
8.5 Was the implementation of the strategy designed to account or adjust for any major confounding variables that could have an obvious impact on PIP outcomes (e.g., patient risk factors, Medicaid program changes, provider education, clinic policies or practices)?	●	Members were considered compliant for HEDIS® ADV services provided via Telehealth during Covid-19 Pandemic.
8.6 Building on the findings from the data analysis and interpretation of PIP results (Step 7), did the PIP assess the extent to which the	●	Home State Health's HEDIS® ADV rate decreased by 11.85% points from the previous year which was attributed to the Covid-19 Pandemic. Home State Health was

## Performance Improvement Projects: Home State Health

improvement strategy was successful and identify potential follow-up activities?		satisfied with their interventions and have identified follow-up activities. However, data was inconclusive to determine the success in the strategy.
8.7 Overall assessment/recommendations for improving the implementation strategies.	●	The selected improvement strategy should be evidence-based, that is, there should be existing evidence (published or unpublished) suggesting that the test of change would be likely to lead to the desired improvement in processes or outcomes (as measured by the PIP variables). Effectiveness of the improvement strategy should be determined by measuring change in performance according to the predefined measures, target aim, and linking to intervention. The statistical significance of the change should be measured.

**Step 9: Assess the Likelihood that Significant and Sustained Improvement Occurred**

Component/Standard	Score	Comments
9.1 Was the same methodology used for baseline and repeat measurements?	●	Same methodology was used baseline and repeat measurement for the primary measure.
9.2 Was there any quantitative evidence of improvement in processes or outcomes of care?	●	HEDIS® ADV measure declined from 53.24% (MY 2019) to 41.39% (MY 2020).
9.3 Was the reported improvement in performance likely to be a result of the selected intervention? (Conclusive demonstration through controlled studies is not required.)	●	Same comment as in section 9.2. The data from the intervention was considered a success by Home State Health but Primaris could not determine the success due to insufficient data.
9.4 Is there statistical evidence (e.g., significance tests) that any observed improvement is the result of the intervention?	●	There is statistically significant ( $P < 0.00001$ ) decline in the HEDIS® ADV rate. However, significance of intervention is not tested.
9.5 Was sustained improvement demonstrated through repeated measurements over time?	●	There is no sustained improvement in the primary measure.
9.6 Overall assessment/recommendations for improving the significance and sustainability of improvement as a result of the PIP.	●	After an intervention is implemented and results are analyzed, Home State Health should review processes to create sustained improvement. This allows Home State Health to maintain the positive results of the intervention, correct negative results, and/or scale the intervention to support

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		longer-term improvements or broader improvement capacity across other oral health services, populations, and aspects of care. Repeat measurements in short intervals should be conducted to determine whether significant change in performance relative to baseline measurement was observed.
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**ACTIVITY 2: PERFORM OVERALL VALIDITY AND REPORTING OF PIP RESULTS****Perform Overall Validation of PIP Results**

PIP Validation Rating (check one box)	Comments
<input type="checkbox"/> High confidence <input type="checkbox"/> Moderate confidence <input type="checkbox"/> Low confidence <input checked="" type="checkbox"/> <b>No confidence</b>	<p>The aim of the PIP was not met and the HEDIS® ADV rate significantly declined (<math>p &lt; 0.00001</math>) from 53.24% (MY 2019) to 41.39% (MY 2020) by 11.85% points. Home State Health did not adhere to the acceptable methodology for all phases of design, data collection, data analysis, and interpretation of PIP results. The improvement process and intervention were poorly executed and could not be linked to the improvement in the HEDIS® ADV rate. The PIP is assigned a score of “No Confidence.”</p>