



2020 External Quality Review

Performance Improvement Projects



home state health.

Measurement Period: Calendar Year 2019

Validation Period: Aug-Sept 2020

Publish Date: Dec 30, 2020

Table of Contents

Topic	Page
1.0 Purpose and Overview.....	3
1.1 Background	3
1.2 Performance Improvement Project (PIP).....	3
2.0 Methodology for PIP Validation.....	4
3.0 Findings.....	6
3.1 Clinical PIP: Improving Childhood Immunization Status.....	6
3.1.1 Summary	7
3.1.2 Description of PIP	8
3.1.3 PIP Result	11
3.2 Nonclinical PIP: Improving Oral Healthcare.....	11
3.2.1 Summary	12
3.2.2 Description of PIP	14
3.2.3 PIP Result	17
4.0 Overall Conclusions.....	17
4.1 Strengths and Weaknesses.....	18
4.2 Improvement by Home State Health.....	20
5.0 Recommendations.....	22
Appendix A. Performance Improvement Project Validation Worksheet.....	24
Appendix B. Performance Improvement Project Validation Worksheet.....	36

1.0 Purpose and Overview

1.1 Background

The Department of Social Services, Missouri HealthNet Division (MHD), operates a Health Maintenance Organization (HMO) style Managed Care Program called MO HealthNet Managed Care (hereinafter stated “Managed Care”). To ensure all Missourians receive quality care, Managed Care is extended statewide in four regions: Central, Eastern, Western, and Southwestern. The goal is to improve access to needed services and quality of healthcare services in the Managed Care and state aid eligible populations, while controlling the program’s cost. Participation in Managed Care is mandatory for certain eligibility groups within the regions in operation. Total number of Managed Care (Medicaid and CHIP combined) enrollees by end of SFY 2020 was 657,492 which was an increase of 10.20% as compared to end of SFY 2019.

MHD contracts with Managed Care Organizations (MCOs), also referred to as Managed Care Plans, to provide health care services to its Managed Care enrollees. Home State Health is one of the three MCOs operating in Missouri (MO). MHD works closely with Home State Health to monitor services for quality, enrollee satisfaction, and contract compliance. Quality is monitored through various ongoing methods including, but not limited to, 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).

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. EQR 2020 evaluates activities conducted by Home State Health during calendar year (CY) 2019.

1.2 Performance Improvement Project (PIP)

A PIP is a project conducted by the MCO that is designed to achieve significant improvement, sustained over time, in health outcomes and enrollee satisfaction. A PIP may be designed to change behavior at a member, provider, and/or MCO/system level. A statewide performance improvement project (PIP) is defined as a cooperative quality improvement effort by the MCO, MHD, and the EQRO to address clinical or non-clinical topic areas relevant to the Managed Care Program. (Ref: MHD-Managed Care Contract 2.18.8 (d) 2). Completion of PIPs should be in a reasonable period to generally

PIPs: Home State Health

allow information on the success of PIPs in the aggregate to produce new information on 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.

For EQR 2020, MHD required Primaris to validate two PIPs conducted by Home State Health during CY 2019:

- 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 guidelines established by Centers for Medicare & Medicaid Services (CMS) EQR Protocol 1 (revised version Oct 2019): Validation of Performance Improvement Projects. (Note: Since this new version of EQR protocol was released in Feb 2020 and PIPs were conducted in CY 2019, introduction of new criteria or new worksheets for evaluation were marked as “Not applicable (N/A)” for EQR 2020. Credit was also given if an MCO followed guidelines from the older version.) Primaris gathered PIPs’ requirements from MHD and Managed Care contract. Subsequently, Primaris obtained information from Home State Health through:

- Documents submission: Home State Health was requested to submit their PIPs at Primaris’ web-based secure file storage site (AWS S3 SOC-2).
- Interview: A virtual meeting with Home State Health officials was conducted on Aug 19, 2020 to understand their concept, approach, methodology adopted, implementation and results of the PIP intervention. The following personnel attended the session:
 - Megan Barton, BSN, MSHA, Senior VP, Population Health and Clinical Outcomes
 - Lucian Nevatt, Director, Quality Improvement
 - Susan Nay, Ph.D., CCM, Senior Quality Management Specialist
 - Sara Katz, Data Analyst III

Technical Assistance regarding PIP methodology per revised version of EQR protocol 1, was provided on Apr 03, 2020. Additionally, areas requiring improvement, correction, and submission of additional information, if any, were discussed during interview.

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

PIPs: Home State Health

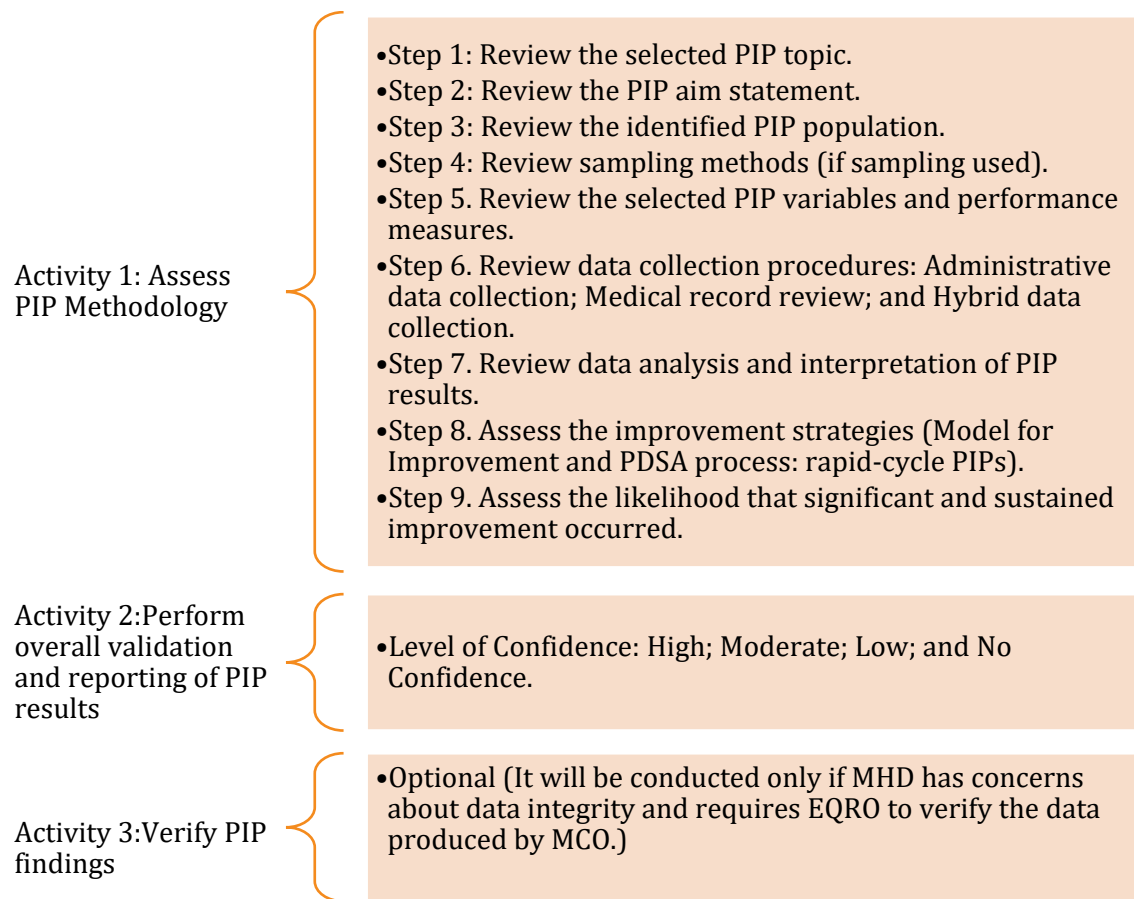


Figure 1. PIP Activities

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 the MCO 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.

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.
- 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 PIP methodology was not an acceptable/approved methodology for all phases of design.

3.0 Findings

3.1 Clinical PIP: Improving Childhood Immunization Status

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). This is a Home State Health Quality Strategic Initiative as well for the following reasons: Children age two or below represent 13.5% of Home State Health's population; and Immunizations are one of the safest and most effective ways to protect children from a variety of potentially serious childhood diseases. Failure to immunize not only exposes children to the dangers of disease, but also significantly impacts the cost of healthcare and lost school and workdays (National Quality Measures Clearinghouse, www.qualitymeasures.ahrq.gov).¹

National Immunization Survey Data notes that children of parents who do not have health insurance take their children to the doctor at a lesser rate than those with health insurance.² The Missouri Association for Community Action 2015 Annual Report poses a concerning rate of uninsured residents in our state. As of the 2013 U.S. Census, 773,000 Missouri residents did not have health insurance. Based on that statistic, it is not surprising that Missouri immunization rates for rates in DTP and PCV decrease between the third and fourth doses.³ This is also consistent with national concern for parents pursuing fewer pediatric visits for their children after their first birthday. As reflected in Home State Health's Early Periodic Screening and Diagnostic Testing (EPSDT) participation ratio, the population served by Home State Health exhibits this same pattern of seeking preventive services less frequently after the age of one. From July 2016 through April 2017, Home State Health's statewide EPSDT participation ratio revealed a rate of 94% for children under one (1) year of age. This rate decreased to 70% for those children 1-2 years of age and to 53% for children 3-5 years of age. These findings support the importance of

¹ National Quality Measures Clearinghouse. [www.qualitymeasures.ahrq.gov] February 2, 2016.

² Haller, MD, Kenneth. Immunizations 411: Missouri's Pediatric Immunization Rate Using ShowMeVax, Vaccines for Children Program Assessment and National Immunization Survey Data. May 21, 2015.

³ Missouri Association for Community Action (<http://www.communityaction.org>). February 3, 2016.

PIPs: Home State Health

implementing an effective parental engagement strategy to increase preventive care for young children, especially regarding immunization for those under two years old.

3.1.1 Summary

Table 1(A-D) presents summary of the PIP based on the format adopted from CMS EQR Protocol 1.

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

A. General PIP Information

PIP Title: Improving Childhood Immunization Status-HEDIS® (CIS) Combo 10		
PIP Aim Statement: To increase the rate of CIS Combo-10 immunizations for members who turn two during CY 2019, from 21.65% to 23.65% or above, by Dec 31, 2019.		
Was the PIP state-mandated, collaborative, statewide, or plan choice?		
<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)	
Target age group (check one):		
<input checked="" type="checkbox"/>	Children only (ages 0–17) *	Adults only (age 18 and over) Both adults and children
*If PIP uses different age threshold for children, specify age range here: Ages 0-2		
Target population description, such as duals, LTSS or pregnant women (specify): All members eligible for HEDIS® CIS Combo 10 measure (ages 0-2).		
Programs: Medicaid (Title XIX) only	CHIP (Title XXI) only	<input checked="" type="checkbox"/> Medicaid and CHIP

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

Member-focused interventions (member interventions are those aimed at changing member practices or behaviors, such as financial or non-financial incentives, education, and outreach): None.
<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): A provider group (a system of community health centers) was contracted to provide supplemental data on immunizations.
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.

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)	CY 2018	21.65% No sampling	CY 2019	30.17% No sampling	Yes	Yes P(0.005)

D. PIP Validation Information

Was the PIP validated? ☒ Yes/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.

Validation phase (check all that apply):

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

Validation rating: ☒ Low 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 should have variables/secondary measures with clear and concise definitions of data elements (including numerical definitions and units of measure) that would be collected after intervention. Data collection plan should be linked to the data analysis plan and an intervention should tie to an improvement by correct analysis and interpretation. (For details, refer to section 5.0)

3.1.2 Description of PIP

Primaris evaluated all steps of PIP activities and reported in worksheet (Appendix A). This

PIPs: Home State Health

section presents information regarding intervention(s) and results submitted by Home State Health.

Target population: All Home State Health members who turn two years of age during the measurement year who meet the HEDIS eligibility requirements for CIS Combo 10 measure. The member must have been continuously enrolled in Medicaid in the 12 months prior to their second birthday with no more than a one-month gap in coverage.

PIP Population: Intervention was applied to all eligible members ages zero through two at the time of intervention. No sampling was done.

Intervention: The Supplemental Data System (SuDS) project was selected as an intervention utilized to improve the CY 2019 HEDIS® CIS Combo 10 rate. A provider group (a system of community health centers) was contracted to provide supplemental data on immunizations. The SuDS project would increase access to member medical data to obtain records of compliancy with the measure.

Performance Measures: Primary Measure-HEDIS® CIS Combo 10 rate.

Numerator: Home State Health members in the denominator who met the measure specification requirements for CIS Combo 10 as defined by the HEDIS Technical Specifications.⁴

Denominator: Home State Health members who turned two years of age during the measurement year, who were continuously enrolled for the 12 months prior to their second birthday with no more than a one-month gap in enrollment.

Secondary Measure/variable-None.

Data Collection Plan: HEDIS CIS Combo 10 rate was determined using administrative claims and non-claims clinical data. Additionally, HSH retrieved medical records from a variety of providers in order to capture documentation of immunizations administered which might not have been submitted to the Missouri Department of Health and Senior Services' ShowMeVax immunization registry. These medical records were accounted for through the HEDIS Hybrid Technical Specifications. Home State Health monitored this study indicator throughout the year to evaluate the effectiveness of the intervention and to determine if additional interventions are needed.

The contracted provider group received a monthly roster of Home State Health's members. The provider group then pulled information within the electronic medical record

⁴ National Committee for Quality Assurance (NCQA) HEDIS 2020: Healthcare Effectiveness Data and Information Set. Vol.2, Technical Specifications.

PIPs: Home State Health

system and reviews the information for quality measure compliance, including the CIS measure. This compiled information was then submitted via secure data transfer to Centene where the data was reviewed for accuracy. Information was then processed through Centene's Enterprise Data Warehouse (EDW) and Quality Spectrum Insight (QSI) to measure compliance with HEDIS® CIS Combo 10 measure.

Data, Analysis, and Interpretation: In the monthly review of the CIS measure, Home State Health reported that HEDIS® CIS Combo 10 rate increased each month (Table 2).

Additionally, the rate for CY 2019 was consistently above the CIS rate for the same month in CY 2018. As a result, no changes to the intervention mid-year were required.

Table 2. Monthly HEDIS® CIS Combo 10 Rate (%)

CY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Final Hybrid Rate
2018				11.02	11.02	11.99	10.27	11.46	11.58	11.70	11.72	10.96	21.65
2019	12.68	14.60	15.70	17.00	18.62	19.93	20.33	20.58	20.88	20.95	21.35	21.78	30.17

The progress of SuDS intervention was monitored on a quarterly basis (Table 3). In CY 2019, the provider group was able to provide supplemental data to convert 359 members from non-compliant to compliant with CIS Combo 10 vaccines, as opposed to converting 54 members in CY 2018.

Table 3. Members Compliant for Combo 10 Vaccines via SuDS

Quarter	CY 2018	CY 2019
Q1	39	89
Q2	1	171
Q3	14	33
Q4	0	66
Total	54	359

Table 4 presents the records (in %) provided by the SuDS provider group (Compliant Hits) to substantiate that immunization was provided to Home State Health members.

Table 4. CIS Combo 10 Compliance with Provider Group

CIS Immunization	Percentage of Compliant Hits by SuDS Providers	
	CY 2018	CY 2019
DTaP	7%	10%
Influenza	8%	9%
Hepatitis B	7%	10%

PIPs: Home State Health

Hepatitis A	8%	10%
H Influenza Type B	8%	9%
MMR	8%	10%
Pneumococcal Conjugate	4%	7%
OPV/IPV	5%	9%
Rotavirus	8%	8%
Chicken Pox	7%	10%

3.1.3 PIP Result

The statewide rate for HEDIS® CIS Combo 10 for the baseline year (CY 2018) was 21.65%. It has increased to 30.17% during the measurement year (CY 2019), which is an improvement of 8.52% points (Table 5). This increase is statistically significant with $p=0.005$ ($p \leq 0.05$ is significant). The aim of the PIP is met.

Table 5. Statewide HEDIS® CIS Rate (CY 2017-2019)

Measurement Year	HEDIS® CIS Combo 10 Rate (%)	NCQA Quality Compass 33rd Percentile (%)
CY 2017	27.01	Not Reported
CY 2018	21.65	30.9
CY 2019	30.17	30.17

3.2 Nonclinical PIP: Improving Oral Health

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.

Oral health is an integral component of children's overall health and well-being. Dental care is the most prevalent unmet health need among children.⁵ Statistics from the Centers for Disease Control and Prevention (CDC) reveal that 5% of children aged 6-11 and 17% of adolescents aged 12-19 years have decay in their permanent teeth.⁶ The Kaiser Commission suggests, "Oral disease has been linked to ear and sinus infection and weakened immune system, as well as diabetes, and heart and lung disease. Studies found that children with oral diseases are restricted in their daily activities and miss over 51 million hours of school each year".⁵ The connection between oral health and general health

⁵ The Kaiser Commission on Medicaid and the Uninsured: Dental Coverage and Care for Low-Income Children: The Role of Medicaid and SCHIP. August 2007. The Henry J. Kaiser Family Foundation.

⁶ Dental Caries in Permanent Teeth of Children and Adolescents. 2019 CDC Oral Health Resources.

PIPs: Home State Health

is not often made by Medicaid recipients who frequently encounter other socio-economic challenges. Access to dental services is an ongoing nationwide challenge for many health plans serving the Medicaid population. The National Committee for Quality Assurance (NCQA) Medicaid average for ADV rate in 2018 was 55.9%. Underutilization of dental services is a problem not specific to Medicaid population. Nationwide only 58% of children with private insurance receive dental care. In CY 2014, the American Dental Association predicted that the Affordable Care Act would expand dental coverage for children in both the public and private sectors; but this would not address access to care issues.⁷ Home State Health aims to address the continued disparity in access to dental care in this project on Improving Oral Health.

3.2.1 Summary

Table 6(A-D) presents summary of the PIP based on the format adopted from CMS EQR Protocol 1.

Table 6(A-D). PIP Summary: Improving Oral Health

A. General PIP Information

PIP Title: Improving Oral Health-HEDIS® ADV Rate		
PIP Aim Statement: To increase the rate of dental visits for members age 2 through 20 from 47.82% to 49.82% or above by end of Dec 31, 2019.		
Was the PIP state-mandated, collaborative, statewide, or plan choice?		
<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)	
Target age group (check one):		
<input checked="" type="checkbox"/>	Children only (ages 0–17)* /Adults only (age 18 and over)/Both adults and children	
*If PIP uses different age threshold for children, specify age range here: Ages 2-20		
Target population description, such as duals, LTSS or pregnant women (specify): All members ages 2-20 years who meet HEDIS® ADV eligibility requirements.		
Programs: Medicaid (Title XIX) only	CHIP (Title XXI) only	<input checked="" type="checkbox"/> Medicaid and CHIP

⁷ Wall, Thomas, M.B.A., Nasseh, K., PhD. and Vujicic, M. PhD. US Dental Spending Remains Flat through 2012. January 2014. Healthy Policy Institute: American Dental Association Research Brief.

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): Parent/guardian outreaches by AlphaPointe (vendor) via phone call and text messages.
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.
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.

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® ADV	CY 2018	47.82% No sampling	CY 2019	53.24% No sampling	Yes	Yes P<0.00001

D. PIP Validation Information

Was the PIP validated? <input checked="" type="checkbox"/> Yes/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.
Validation phase (check all that apply): <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: <input checked="" type="checkbox"/> Low 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 should use variables/secondary measures with clear and concise definitions of data elements (including numerical definitions and units of measure) that would be collected after intervention. Data collection plan should be linked to the data analysis plan and an intervention should tie to an improvement by correct analysis and interpretation. (For details, refer to section 5.0)

3.2.2 Description of PIP

Primaris evaluated all steps of PIP activities and reported in worksheet (Appendix B). This section presents information regarding intervention(s) implemented and results submitted by Home State Health.

Target Population and PIP Population: Population for this project includes all Home State Health members ages two through twenty who meet the eligibility requirements for HEDIS® ADV measure. Interventions are applied to all eligible members ages two through twenty at the time of intervention. Sampling was not done.

Interventions:

1. **Outbound Call:** Home State Health contracted with AlphaPointe, a sheltered workshop in Missouri, to call members regarding care gaps (this campaign was effective August 18, 2017). Members identified as not receiving their annual dental visit were contacted telephonically by AlphaPointe, a contracted vendor, to remind them of their dental benefit and, if applicable, of their benefit to receive transportation to and from their dental visits. Additionally, AlphaPointe would text members that they would receive an incentive payment on their rewards card for attending a dental visit.
2. **Texting:** Home State Health utilized an interactive text to outreach guardians of members who were not compliant with the ADV measure.

Performance Measures: Primary Measure-Primary Measure-HEDIS® ADV rate.

Numerator: Home State Health members in the denominator who had one or more dental visits with a dental practitioner during the measurement year.

Denominator: Home State Health members ages 2 through 20, enrolled on Dec 31 of the measurement year, who were continuously enrolled during the measurement year with no more than one gap in enrollment of up to 45 days during the measurement year.

Secondary Measure/Variable-None.

PIPs: Home State Health

Data Collection Plan: HEDIS® ADV rate is measured by administrative method that does not allow information to be gathered using direct chart review, but instead uses claims and enrollment information as data sources. Administrative claims processing utilizes the ADA Current Dental Terminology (CDT) and the American Medical Association's (AMA) Current Procedural Terminology (CPT) codes as well as non-claims administrative data. These supplemental data files are loaded into Centene's Enterprise Data Warehouse (EDW). Following the current HEDIS Technical Specifications, the Centene Corporate HEDIS department runs an ETL (extract, transform, and load) process of Home State Health's administrative data from the EDW into Quality Spectrum Insight XL (QSI XL) on a monthly basis. Home State Health calculates the ADV rates by using data obtained from (QSI XL). QSI XL is Home State Health's certified HEDIS software that is used to calculate the rates of this study indicator. Home State Health's Outcome Analyst then extracts the monthly preliminary HEDIS results to monitor the effectiveness of interventions based on changes in HEDIS® ADV rate. Monitoring occurs at a minimum on a quarterly basis but typically occurs monthly.

Data, Analysis, and Interpretation:

During CY 2019, the Home State Health HEDIS® ADV rate continued to rise throughout the year. When compared to the same month in the previous year, the CY 2019 HEDIS® ADV rate was more than 2% points above the HEDIS® ADV rate for CY 2018. As a result of monitoring these rates month over month, it was determined that no mid-year adjustments needed to be made for the ADV PIP (Table 7).

Table 7. Monthly HEDIS® ADV rate (%)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Final
CY2018				16.77	16.77	24.43	30.18	33.71	37.55	40.60	43.39	43.66	47.82
CY2019	1.85	8.29	14.21	22.87	26.91	32.44	35.32	39.43	43.20%	46.78	49.31	49.31	53.24

Outbound Call: In January, November, and December 2019, AlphaPointe was provided with a list of members who were not compliant with the HEDIS® ADV measure. They attempted to place calls to 41,006 members to remind them of their dental benefit. The results of these outreaches are listed in Table 8.

Table 8. AlphaPointe Results CY 2019

Call Result	Count	% Total
No Answer	10,134	24.71%
Hang Up	7,887	19.23%
Left VM Message	7,310	17.83%
Answering Machine	4,223	10.30%

PIPs: Home State Health

Disconnected Number	3,771	9.20%
Message Delivered	3,172	7.74%
Wrong Number	1,295	3.16%
Automated Refusal	1,271	3.10%
Do Not Call	914	2.23%
Not Available	784	1.91%
Refused Validation	129	0.31%
Member Will Contact	53	0.13%
Fax/Modem	49	0.12%
Successful Transfer	9	0.02%
Language Barrier	5	0.01%
TOTAL	41,006	100%

AlphaPointe conducted calls for Home State Health in the past. Data from the previous year's outreaches (CY 2018) are compared to CY 2019 call outreaches: number of messages delivered decreased from 8.52% to 7.74%; members agreed to schedule an appointment decreased from 0.26% to 0.13%; and successful transfer decreased from 0.08% to 0.02%. However, Home State Health reports this intervention as valuable. Prior to outreach by AlphaPointe, none of the 41,006 members were compliant with dental visits. Table 9 details the results of the successful outreach attempts.

Table 9. Member compliance after outreach

Month	Members Outreached During Initiative Month	Successful Outreach Rates	Percentage of Successful Outreach Members Who Became Compliant in Following Month
Jan	15658	6.07% (950/15658)	7.26% (69/950)
Nov	12932	9.92% (1283/12932)	13.02% (167/1283)
Dec	12416	8.06% (1001/12416)	11.89% (119/1001)
Total	41006	7.89% (3234/41006)	10.97% (355/3234)

Texting: In Quarter 4 (Q4), on October 31, 2019, Home State Health sent out text reminders to members who were noncompliant with the HEDIS® ADV measure. If the member did not have a phone number in their record, had opted out of text messaging, or had already received five texts per month limit, they were excluded. Also, if there was more than one child in a family who was noncompliant with HEDIS® ADV measure, only one text was sent to the parent/guardian. As a result, of the 78,250 noncompliant members, 11,180 texts were sent. After texting, 2,056 of the texted members became compliant. This represents 18.39% of the texted members converting to a compliant status (Table 10). Prior to texting, the 11,180 members identified for texting were all noncompliant with ADV measure and

PIPs: Home State Health

Home State Health's compliance rate at the end of Q3 in CY 2019 was 43.20%. At the end of Q4 in CY 2019, the compliance rate had risen to 49.31%.

Table 10. Changes in Compliancy after Texting

Region	Sent Text	Compliant After Text	% Change
Central	2355	448	19.02%
Eastern	4874	915	18.77%
Southwestern	1832	388	21.18%
Western	1706	299	17.53%
Unknown	413	6	1.45%
Total	11180	2056	18.39%

3.2.3 PIP Result

The statewide rate for HEDIS® ADV for the baseline year (CY 2018) was 47.82%. It has increased to 53.24% during the measurement year (CY 2019), which is an improvement of 5.42% points (Table 11). This increase is statistically significant with $p < 0.00001$ ($p \leq 0.05$ is significant). The aim of the PIP is met.

Table 11. Statewide HEDIS® ADV Rate (CY 2017-2019)

Measurement Year	HEDIS® ADV Rate (%)	NCQA Quality Compass 33rd Percentile (%)
CY 2017	41.65	Not Reported
CY 2018	47.82	51.51
CY 2019	53.24	52.71

4.0 Overall Conclusions

PIPs Score

Primaris assigns a score of Low Confidence for both PIPs for the reasons explained below. However, Home State Health has achieved the aim set by MHD for both PIPs.

PIP for improving Childhood Immunization Status: Even though there is an indication that intervention has contributed to some improvement (2% points) in HEDIS® CIS Combo 10 rate, the quality improvement process, intervention, and data collection and analysis were poorly executed and could not be linked to the overall improvement.





PIP for improving oral health: HEDIS® ADV rate increased each month but was not related to outbound call intervention. The texting intervention did show a positive response; this was a one-time intervention with no remeasurement data. Thus, even though the aim was

PIPs: Home State Health

achieved, the quality improvement processes and interventions were poorly executed and could not be linked to the improvement.

PIPs did not meet all the required guidelines stated in CFR/MHD contract (Table 11). (Ref: 42 Code of federal Regulations (CFR) 438.330 (d)/MHD contract 2.18.8 d 1). Note: Definitions of Met/Partially Met/Not Met are utilized from CMS EQRO Protocol 3.

Table 11. PIPs' Evaluation based on CFR guidelines

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

4.1 Strengths and Weaknesses

Strengths

- Improving Childhood Immunization Status:

1. Improvement Strategy: Home State Health reported that the State of Missouri does not require providers who do not participate in the Vaccines for Children (VFC) program to submit immunization records to ShowMeVax immunization registry. Home State Health identified an opportunity to improve the ability to locate member medical records for compliant visits/immunizations from provider groups contributing to improved HEDIS® CIS rate.

2. Follow up activity: Provider education on claims submission or other alternative methods of obtaining immunization records may be a potential intervention for the future.

- Improving Oral Health

1. Home State Health conducted a barrier analysis for future PIP. It was determined that Home State Health would partner with the Federally Qualified Health Center (FQHC) to increase the rate of compliance on the HEDIS® ADV measure for Home State Health members age 2 to 9 years old who were assigned to the FQHC as their Primary Care Physician. Home State Health and the FQHC plan to share demographics on the members to enhance the ability to communicate with members.

PIPs: Home State Health

2. Home State Health provided a possible explanation for improved data generated as a result of texting intervention compared to outbound call intervention. Home State Health is in possession of accurate cell phone data for more members than was suggested by the Alpha Pointe response. An alternative explanation is that members respond to texting but do not answer a phone call, as many of the calls from AlphaPointe were not answered.

Weaknesses

- Improving Childhood Immunization Status:

1. PIP variable or secondary measure: A measure/variable that would help in tracking actual performance of PIP was not selected. However, Home State Health has submitted some data related to intervention. Clear and concise definitions of data elements (including numerical definitions and units of measure) were not provided.

2. Incorrect reporting of provider group activities: Home State Health reported that supplemental data accounted for a 7 to 10% points increase in compliance for each of the individual types of immunizations. This calculation is incorrect.

Primaris calculated the overall contribution of SuDS intervention towards compliance of CIS Combo 10 vaccines was 7% in CY 2018 and 9% in CY 2019, which is an improvement by 2% points.

3. Inconsistence in data reporting: HEDIS® CIS rate is reported monthly in %; data from intervention is reported in numbers (numerator only, no denominator) quarterly; Compliance Hits (% of immunization data received as a result of SuDS intervention out of total Medicaid compliance Hits) is presented annually.

4. Linking of intervention to improvement: Link between intervention and performance measure is not explained accurately. The secondary data submitted as a result of ongoing intervention on a quarterly basis does not show improvement each quarter, whereas primary measure has shown improvement month over month in CY 2019.

5. Statistical significance: Statistically significant improvement in HEDIS CIS Combo 10 rate is reported. However, statistical significance of results of intervention is not tested.

- Improving Oral Health

1. PIP variable/secondary measure: Data elements, their definitions, unit of measurement to be collected as a result of intervention was not specified. Data reported is inconsistent. Home State Health has submitted data related to intervention as “change in compliance in

PIPs: Home State Health

%” but the baseline rate prior to intervention was not reported.

2. Selected improvement strategy: There is no information or evidence presented (published or unpublished) suggesting that the test of change would be likely to lead to the desired improvement in processes.

3. Sustained improvement: Data presented for the intervention of outbound calls did not show any improvement. Other intervention of texting showed some positive response but cannot be relied on as it was measured only once.

4. Analysis error: Based on the data submitted by Home State Health in Table 7: Monthly HEDIS® ADV Rates, Primaris differs with the analysis provided by Home State Health. The HEDIS® ADV rate by end of Oct 2019 (intervention began on last day of Oct 2019) was 46.78% and rate by end of Q4 was 49.31% as opposed to Home State Health’s comparison of end of Q3 rate (43.20%) with end of Q4 rate.

5. Ongoing interventions: Home State Health has presented several ongoing interventions from past years undertaken to improve HEDIS® ADV measure. The link between the specific interventions used for the purpose of this PIP and the increase in HEDIS® ADV measure is not established.

4.2 Improvement by Home State Health








The statewide CIS Combo 10 rate has increased by 8.52% points and statewide rate for HEDIS® ADV increased by 5.42% points. Table 12 shows Home State Health’s compliance with previous year’s recommendations by EQRO.

Table 12. Response to Previous EQR’s Recommendations

Recommendations	Action by Home State Health	Comment by EQRO
Primaris recommends: 1. Home State Health to follow CMS EQRO protocol and Medicaid Oral Health Performance Improvement Projects: A How-To Manual for Health Plans, July 2015 ⁴ , for guidance on methodology and approach of PIPs to obtain meaningful results.	There is some improvement by Home State Health in writing the aim statement, baseline year, measurement year, and interventions. Improvement is required in the manner the interventions should be	● Partially Met

⁴<https://www.medicaid.gov/medicaid/benefits/downloads/pip-manual-for-health-plans.pdf>

PIPs: Home State Health

	conducted and data to be collected and reported.	
2. Home State Health must continue to refine their skills in the development and implementation of approaches to affect change in their PIP.	There is not much improvement. Same interventions have been continued this year. Data presentation about intervention has improved over previous year.	 Partially Met
3. The aim and study question(s) should be stated clearly in writing (baseline rate, % increase to achieve in a defined period).	Achieved.	 Met
4. PIPs should be conducted over a reasonable time frame (a calendar year) so as to generally allow information on the success of performance improvement projects in the aggregate to produce new information on quality of care every year.	Achieved.	 Met
5. The interventions should be planned specifically for the purpose of PIP required by MHD Contract.	The interventions are continued from previous year and would continue in future as stated by Home State Health.	 Not Met
6. The results should be tied to the interventions.	Analysis of results of intervention is not linked with the outcome.	 Not Met
7. Instead of repeating interventions that were not effective, evaluate new interventions for their potential to produce desired results before investing time and money.	Interventions were repeated which did not have positive impact in CY 2018 and CY 2019 (Oral Health PIP). Home State Health has decided to continue the same in future.	 Not Met
8. A request for technical assistance from EQRO would be beneficial. Improved training, assistance and expertise for the design, analysis, and interpretation of PIP findings are available from the EQRO, CMS publications, and research review.	Achieved.	 Met

PIPs: Home State Health

9. Home State Health must utilize the PIP's process as part of organizational development to maintain compliance with the state contract and the federal protocol.	The interventions are already in use for organization development; however, they were not tested for effectiveness in the PIPs.	● Partially Met
--	---	-----------------

5.0 Recommendations

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 corporatewide operations.
2. 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.
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 (Plan-Do-Study-Act Cycle-PDSA). PIP population should be selected from a county, provider office, or a region so that results can be measured during PDSA cycle and subsequently applied on a larger scale.
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 and/or supplement the overall measurement set, providing information that will aid PIP planning and implementation.
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 that would be collected after intervention.
6. Data collection plan should be linked to the data analysis plan to ensure that appropriate data would be available for the PIP.

PIPs: Home State Health

7. Home State Health should assess whether the PIP resulted in sustained improvement, whether repeated measurements were conducted, and if so, whether 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 change in performance relative to baseline measurement was observed.

8. A baseline rate should be presented before start of an intervention followed by at least two remeasurements, and analysis of results should be utilized for planning next intervention (cycle-PDSA) for future PIP. Additionally, primary and secondary measure/variable should be linked to illustrate impact of intervention on performance of a project.

9. Effectiveness of the improvement strategy should be determined by measuring change in performance according to the predefined measures and linking to intervention.

10. When analyzing multiple data points over time, Home State Health can consider tools such as: Time series; run and control chart; data dashboard; and basic trend analyses.

11. Home State Health is advised to follow the steps in CMS EQR Protocol 1 in chronological order.

Additional Resources

https://health.mo.gov/data/InterventionMICA/OralHealth/index_5.html

https://www.chcs.org/media/OHLC-Webinar-Slides_12.18.14.pdf

(Appendices are on Next Page.)

APPENDIX A. PERFORMANCE IMPROVEMENT PROJECT VALIDATION WORKSHEET


Date of Evaluation/Interview: Aug 19, 2020

MCO Name/Mailing Address/Email ID:	Home State Health/11720 Borman Drive, St. Louis, MO 63146/Lucian.Nevatt@homestatehealth.com
MCO Contact Name and Title:	Lucian Nevatt, Director, Quality Improvement
Name of Performance Improvement Project:	Improving Childhood Immunization Status
PIP Period Date:	Jan 1, 2019-Dec 31, 2019
Programs:	Medicaid only/CHIP only/✓Medicaid and CHIP
Demographic Information:	Number of Medicaid/CHIP enrollees in MCO: 190,171 Medicaid/CHIP members included in the study: 5928 Number of Providers: 82,015

Score: Met (M)  / Partially Met (PM)  / Not Met (NM)  / 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 MCO 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	As primary measure was decided by MHD, this is marked as N/A. However, MHD did select Child Core Set measure (NQF0038) for PIP.
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	Topic was required by MHD.
1.4 Did the PIP topic address care of special populations or high priority services, such as: <ul style="list-style-type: none"> Children with special health care needs Adults with physical disabilities Children or adults with behavioral health issues People with intellectual and developmental disabilities People with dual eligibility who use long-term services and supports (LTSS) 	 M	The eligible population of PIP includes: <ul style="list-style-type: none"> All children who turned two (2) in the measurement year and were continuously enrolled 12 months prior to their second birthday. Had no more than a one-month gap in coverage during the 12 months prior to their second birthday.

<ul style="list-style-type: none"> • Preventive care • Acute and chronic care • High-volume or high-risk services • Care received from specialized centers (e.g., burn, transplant, cardiac surgery) • Continuity or coordination of care from multiple providers and over multiple episodes • Appeals and grievances • Access to and availability of care 		<ul style="list-style-type: none"> • No children with special health care needs were excluded.
1.5 Did the PIP topic align with priority areas identified by HHS and/or CMS?	● M	PIP was aimed at CMS Child Core Set Measure.
1.6 Overall assessment/recommendations for improving PIP topic.	● M	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.

Step 2: Review the PIP Aim Statement

Component/Standard	Score	Comments
2.1 Did the PIP aim statement clearly specify the improvement strategy?	● M	Increase the number of members who receive CIS Combo 10 vaccines in measurement year.
2.2 Did the PIP aim statement clearly specify the population for the PIP?	● M	All members two years old and under were included.
2.3 Did the PIP aim statement clearly specify the time period for the PIP?	● M	CY 2019 (end of Dec 31, 2019).
2.4 Was the PIP aim statement concise?	● M	The aim for CY 2019 was to increase the rate of Combo 10 immunizations (CIS) for members who turned two during CY2019, from 21.65% to 23.65% or above by December 31, 2019.
2.5 Was the PIP aim statement answerable?	● M	Same comment as in section 2.4
2.6 Was the PIP aim statement measurable?	● M	Same comment as in section 2.4.

2.7 Overall assessment/recommendations for improving the PIP aim statement.	● M	Even though overarching aim is provided by 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)?	● M	All eligible population per HEDIS® Technical Specifications for CIS Combo 10 measure was identified (see comment in section 1.4).
3.2 Was the entire MCO population included in the PIP?	● M	See comment above in section 3.1.
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 for Target population was performed according to HEDIS® Technical Specifications for CIS Combo 10 measure.
3.4 Was a sample used?	N/A	Sampling was not done.
3.5 Overall assessment/recommendations for identifying the project population.	● M	PIP population should be selected on a small scale, e.g., a county, provider office, or a region so that results can be measured during PDSA cycle and subsequently applied on 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. However, final CIS Combo 10 rate was reported using hybrid methodology per HEDIS® Technical Specifications.
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
PIP Variables		
5.1 Were the variables adequate to answer the PIP question? <ul style="list-style-type: none"> Did the PIP use objective, clearly defined, time-specific variables (e.g., an event or status that can be measured)? Were the variables available to measure performance and track improvement over time (at least semiannual basis)? 	● NM	PIP variable/secondary measure was not selected. However, Home State Health has submitted some data related to intervention.
Performance measures		
5.2 Did the performance measure assess an important aspect of care that will make a difference to enrollees' health or functional status?	● M	HEDIS® CIS Combo 10 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)?	● M	Same comment as in section 5.2.
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.	● M	Same comment as in section 5.2.

<p>5.5 Did the performance measures:</p> <ul style="list-style-type: none"> • Monitor the performance of MCO at a point in time? • Track MCO performance over time? • Compare performance among MCOs over time? • Inform the selection and evaluation of quality improvement activities? 	<p>● M</p>	<p>Statewide HEDIS® CIS Combo 10 rates were reported for each month. Data for other MCOs were not available to Home State Health (not a collaborative PIP). Since the rate increased each month, evaluation of improvement activities was not required as stated in the PIP.</p>
<p>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?</p>	<p>● M</p>	<p>CMS Child Core Set measure (HEDIS® CIS Combo 10) was used as primary indicator.</p>
<p>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?</p> <ul style="list-style-type: none"> • Did the measure address accepted clinical guidelines relevant to the PIP question? • Did the measure address an important aspect of care or operations that was meaningful to MCO enrollees? • Did available data sources allow the MCO to reliably and accurately calculate the measure? • Were all criteria used in the measure defined clearly (such as time periods, characteristics of eligible enrollees, services to be assessed, and exclusion criteria)? 	<p>N/A</p>	<p>Since this criterion is newly introduced in protocol, this will be scored in EQR 2021.</p>
<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>	<p>N/A</p>	<p>Same comment as in section 5.7</p>
<p>5.9 Did the measures include a strategy to ensure inter-rater reliability (if applicable)?</p>	<p>N/A</p>	<p>Same comment as in section 5.7</p>

5.10 If process measures were used, is there strong clinical evidence indicating that the process being measured is meaningfully associated with outcomes? <ul style="list-style-type: none"> This determination will be based on published guidelines, including citations from randomized clinical trials, case control studies, or cohort studies. 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. 	N/A	Same comment as in section 5.7
5.11 Overall assessment/recommendations for improving the selected PIP variables and performance measures.	 NM	In future, Home State Health should select a secondary measure/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 PIP aim objectively and reliably and use clearly defined indicators of performance.








Step 6: Review Data Collection Procedures


Component/Standard	Score	Comments
Assessment of Overall Data Collection Procedures		
6.1 Did the PIP design specify a systematic method for collecting valid and reliable data that represents the population in the PIP?	 M	Data collected for Primary measure consists of administrative claims gathered using the American Medical Association's (AMA) Current Procedural Terminology (CPT) codes as well as nonclaims administrative data. In addition to administrative data, Home State Health has implemented a year-round medical record retrieval program, working with County Health Departments and rural providers seeking documentation of immunizations administered which might not have been submitted to the ShowMeVax immunization registry.
6.2 Did the PIP design specify the frequency of data collection? If yes, what was the frequency (for example, semi-annually)?	 M	QI staff extract the monthly preliminary HEDIS® results to analyze and determine effectiveness of interventions based on changes in the CIS rate. Data for intervention were collected Quarterly.

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.	● M	Data sources: claims, medical records, and supplemental data from providers.
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).	● NM	Clear and concise definitions of data elements (including numerical definitions and units of measure) were not provided for the data required to be collected after intervention. Definition of HEDIS CIS Combo 10 measure was provided.
6.5 Did the data collection plan link to the data analysis plan to ensure that appropriate data would be available for the PIP?	● NM	Primary measure is reported monthly, interventional data are reported quarterly and yearly.
6.6 Did the data collection instruments allow for consistent and accurate data collection over the time periods studied?	● M	Inovalon, a HEDIS®-certified software engine, was used to generate the HEDIS® CIS Combo 10 measure rates. Data for intervention were provided by SuDS Providers (Compliant Hits).
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	Since this criterion is newly introduced in protocol, this will be scored in EQR 2021.
6.8 Overall assessment/recommendations for improving the data collection procedures.	● NM	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.
Assessment of Data Collection Procedures for Administrative Data Sources		
6.9 If inpatient data was used, did the data system capture all inpatient admissions/discharges?	N/A	Sections 6.9 to 6.14 are new additions in EQR protocol and are not reported in PIP by Home State Health. These will be evaluated in EQR 2021 for CY 2020 PIP.
6.10 If primary care data was used, did primary care providers submit encounter or utilization data for all encounters?	N/A	
6.11 If specialty care data was used, did specialty care providers submit encounter or utilization data for all encounters?	N/A	




6.12 If ancillary data was used, did ancillary service providers submit encounter or utilization data for all services provided?	N/A	
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	
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?	N/A	
Assessment of Data Collection Procedures for Medical Record Review		
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	Medical Record Review (MRR) was not the source of data collection for PIP. However, final HEDIS CIS Combo 10 is a hybrid measure and included MRR.
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"> • A glossary of terms for each project should be developed before data collection begins to ensure consistent interpretation among and between data collection staff. • 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. 	N/A	Same comment as in section 6.15

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?	 NM	Analysis of data collected as a result of intervention is not clear and the impact on primary measure is not linked.
7.2 Did the analysis include baseline and repeat measurements of project outcomes?	 PM	An ongoing intervention from last year was used for this year's PIP. Baseline and repeat measurements of Primary measure-CIS Combo 10-was included. Data as a result of intervention was reported quarterly without baseline. However, annual effect of intervention from last year was compared to this year.
7.3 Did the analysis assess the statistical significance of any differences between the initial and repeat measurements?	 PM	Statistical significance of HEDIS® CIS Combo 10 rate in CY 2018 and CY 2019 was assessed. Data collected for intervention were incorrectly analyzed and statistical significance is not reported.
7.4 Did the analysis account for factors that may influence the comparability of initial and repeat measurements?	 M	The provider group data suggests that there are immunizations occurring without claims that can be appropriately processed. Given that there may be other facilities, not in the provider group system, who are also providing immunizations that may not be represented properly in claims, it is possible that there are more children in compliance with HEDIS® CIS Combo 10 measure than the Home State Health data suggests.
7.5 Did the analysis account for factors that may threaten the internal or external validity of the findings?	 M	Home State Health followed HEDIS population requirements for this PIP. Therefore, no threats to internal or external validity exist.
7.6 Did the PIP compare the results across multiple entities, such as different patient subgroups, provider sites, or MCOs?	N/A	New addition, will be evaluated in EQR 2021.
7.7 Were PIP results and findings presented in a concise and easily understood manner?	 NM	There is inconsistency in secondary data reported quarterly and annually, and the progress is not linked with 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	 M	Home State Health has reported that Provider education on claims submission or other alternative methods of obtaining immunization records may be a potential intervention for the future.

on a continuous improvement philosophy and reflect on lessons learned and opportunities for improvement.)		
7.9 Overall assessment/recommendations for improving the analysis and interpretation of PIP results.	 NM	Primaris recommends following step 7 of CMS EQR Protocol. 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 (cycle-PDSA) for future PIP. Additionally, primary and secondary measure/variable should be linked to determine 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)?	 M	Home State Health reported that State of Missouri does not require providers who do not participate in the Vaccines For Children (VFC) program to submit immunization records to ShowMeVax immunization registry. Improving the ability to locate member medical records for compliant visits/immunizations from providers would contribute to HEDIS® CIS rate.
8.2 Was the strategy designed to address root causes or barriers identified through data analysis and quality improvement processes?	 M	Home State Health conducted a barrier analysis and identified that there are insufficient processes/systems to support the reporting of immunization supplemental data following NCQA specification; and auditor approval to support HEDIS reporting requirements. Opportunity was identified for access to medical records and/or supplemental data obtained through sources such as a provider group.
8.3 Was the rapid-cycle PDSA approach used to test the selected improvement strategy?	N/A	This criterion was newly introduced in EQR protocol and will be evaluated in EQR 2021.
8.4 Was the strategy culturally and linguistically appropriate?	 M	The VFC program provides access to materials for both members and providers that help reduce cultural barriers and beliefs that may adversely impact vaccinations rates, such as guidance to show no relationship between vaccines

		and autism. The VFC program materials are published by the Missouri Department of Health and Senior Services in accordance with the National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health and Health Care.
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)?	N/A	This is not addressed in PIP. This criterion was newly introduced in EQR protocol and will be evaluated in EQR 2021.
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?	● PM	The data submitted as a result of ongoing intervention on a quarterly basis did not show improvement each quarter, whereas primary measure has shown improvement month over month in CY 2019.
8.7 Overall assessment/recommendations for improving the implementation strategies.	● PM	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?	● M	Primary and secondary data were collected using same methodology.
9.2 Was there any quantitative evidence of improvement in processes or outcomes of care?	● M	Primary measure has shown improvement from 21.65% (CY 2018) to 30.17% (CY 2019). Secondary data collected (Compliance Hits) shows 2% points increase from CY 2018.
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.)	● PM	The reported improvement in performance measure is 8.52% points. The data from intervention shows an increase of 2% points only.
9.4 Is there statistical evidence (e.g., significance tests) that any observed improvement is the result of the intervention?	● PM	There is statistically significant ($P=0.005$) improvement in HEDIS® CIS Combo 10 rate. However, significance of intervention is not tested.
9.5 Was sustained improvement demonstrated through repeated measurements over time?	● PM	Repeated measurements for performance measure showed improvement. However, quarterly data collected as a result of

		intervention did not show improvement overtime.
9.6 Overall assessment/recommendations for improving the significance and sustainability of improvement as a result of the PIP.	 PM	Repeat measurements in short intervals should be conducted to determine whether significant change in performance relative to baseline measurement was observed.

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	Even though aim of the PIP is met and the HEDIS® CIS rate has increased from 21.65% to 30.17% (8.52% points), which is statistically significant (P=0.005), the PIP is assigned a score of “Low Confidence.” Though there is an indication that intervention has some contribution to increment in HEDIS CIS Combo 10 rate, the quality improvement process and intervention were poorly executed and could not be linked to the improvement.
<input type="checkbox"/> Moderate confidence	
<input checked="" type="checkbox"/> Low confidence	
<input type="checkbox"/> No confidence	

APPENDIX B. PERFORMANCE IMPROVEMENT PROJECT VALIDATION WORKSHEET


Date of Evaluation/Interview: Aug 19, 2020

MCO Name/Mailing Address/Email ID:	Home State Health/11720 Borman Drive, St. Louis, MO 63146/Lucian.Nevatt@homestatehealth.com
MCO Contact Name and Title:	Lucian Nevatt, Director, Quality Improvement
Name of Performance Improvement Project:	Improving Oral Health
PIP Period Date:	Jan 1, 2019-Dec 31, 2019
Programs:	Medicaid only/CHIP only/✓Medicaid and CHIP
Demographic Information:	Number of Medicaid/CHIP enrollees in MCO: 190,171 Medicaid/CHIP members included in the study: 123,035 Number of Dentists/Specialists: 6,353

Score: Met (M)  / Partially Met (PM)  / Not Met (NM)  / 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 MCO, at a minimum, to set a goal to improve the plan specific HEDIS® Annual Dental Visit rate for two (2) to twenty (20) 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 (as required by the MHD). This is not CMS coresets 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	Topic was required by MHD.
1.4 Did the PIP topic address care of special populations or high priority services, such as: <ul style="list-style-type: none"> • Children with special health care needs • Adults with physical disabilities • Children or adults with behavioral health issues 	 M	The study population included all Home State Health members ages two through twenty who met the HEDIS eligibility requirements. Home State Health did not specifically mention this point in this PIP.

<ul style="list-style-type: none"> • People with intellectual and developmental disabilities • People with dual eligibility who use long-term services and supports (LTSS) • Preventive care • Acute and chronic care • High-volume or high-risk services • Care received from specialized centers (e.g., burn, transplant, cardiac surgery) • Continuity or coordination of care from multiple providers and over multiple episodes • Appeals and grievances • Access to and availability of care 		
1.5 Did the PIP topic align with priority areas identified by HHS and/or CMS?	● M	PIP was aimed at improving oral health.
1.6 Overall assessment/recommendations for improving PIP topic.	● M	<p>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.</p> <p>Primaris recommends Home State Health to specifically mention about inclusion of special population and members with high priority services requirements.</p>

Step 2: Review the PIP Aim Statement

Component/Standard	Score	Comments
2.1 Did the PIP aim statement clearly specify the improvement strategy?	● M	Members who had a dental visit in measurement year was the improvement strategy.
2.2 Did the PIP aim statement clearly specify the population for the PIP?	● M	All Home State Health members ages two through twenty who met the HEDIS eligibility requirements were included.
2.3 Did the PIP aim statement clearly specify the time period for the PIP?	● M	CY 2019 (end of Dec 31, 2019).
2.4 Was the PIP aim statement concise?	● M	Aim was to increase the rate of dental visits for members age 2 through 20 from 47.82% to 49.82% or above during CY2019 (by December 31, 2019).

2.5 Was the PIP aim statement answerable?	● M	Same comment as in section 2.4
2.6 Was the PIP aim statement measurable?	● M	Same comment as in section 2.4
2.7 Overall assessment/recommendations for improving the PIP aim statement.	● M	Even though overarching aim is provided by 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)?	● M	The study population included all Home State Health members ages two through twenty who met the HEDIS eligibility requirements. Interventions were applied to all eligible members ages two through twenty at the time of each intervention.
3.2 Was the entire MCO population included in the PIP?	● M	See comment above in section 3.1.
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 for Target population was performed according to HEDIS® Technical Specifications for ADV measure.
3.4 Was a sample used?	N/A	Sampling was not done.
3.5 Overall assessment/recommendations for identifying the project population.	● M	PIP population should be selected at a small scale, e.g., a county, provider office, or a region so that results can be measured during PDSA cycle and subsequently applied on 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	N/A	Same comment as in section 4.1.

event, the confidence interval to be used, and the acceptable margin of error?		
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
PIP Variables		
5.1 Were the variables adequate to answer the PIP question? <ul style="list-style-type: none"> Did the PIP use objective, clearly defined, time-specific variables (e.g., an event or status that can be measured)? Were the variables available to measure performance and track improvement over time (at least semiannual basis)? 	 NM	PIP variable/secondary measure was not selected. However, Home State Health has submitted some data related to intervention.
Performance measures		
5.2 Did the performance measure assess an important aspect of care that will make a difference to enrollees' health or functional status?	 M	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)?	 M	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	 M	Same comment as in section 5.2.

department visits), adverse incidents (such as death, avoidable readmission), referral patterns, authorization requests, appropriate medication use.		
<p>5.5 Did the performance measures:</p> <ul style="list-style-type: none"> • Monitor the performance of MCO at a point in time? • Track MCO performance over time? • Compare performance among MCOs over time? • Inform the selection and evaluation of quality improvement activities? 	● M	Statewide HEDIS® ADV rates were reported for each month. Data for other MCOs were not available to Home State Health (not a collaborative PIP). Since the rate increased each month, evaluation of improvement activities was not required as stated in the PIP.
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?	● M	HEDIS® ADV measure was used as primary indicator.
<p>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?</p> <ul style="list-style-type: none"> • Did the measure address accepted clinical guidelines relevant to the PIP question? • Did the measure address an important aspect of care or operations that was meaningful to MCO enrollees? • Did available data sources allow the MCO to reliably and accurately calculate the measure? • Were all criteria used in the measure defined clearly (such as time periods, characteristics of eligible enrollees, services to be assessed, and exclusion criteria)? 	N/A	Since this criterion is newly introduced in protocol, this will be scored in EQR 2021.
<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>	N/A	Same comment as in section 5.7

5.9 Did the measures include a strategy to ensure inter-rater reliability (if applicable)?	N/A	Same comment as in section 5.7
5.10 If process measures were used, is there strong clinical evidence indicating that the process being measured is meaningfully associated with outcomes? <ul style="list-style-type: none"> This determination will be based on published guidelines, including citations from randomized clinical trials, case control studies, or cohort studies. 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. 	N/A	Same comment as in section 5.7
5.11 Overall assessment/recommendations for improving the selected PIP variables and performance measures.	 NM	Home State Health should select a secondary measure/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 PIP questions objectively and reliably and use clearly defined indicators of performance.

Step 6: Review Data Collection Procedures








Component/Standard	Score	Comments
Assessment of Overall Data Collection Procedures		
6.1 Did the PIP design specify a systematic method for collecting valid and reliable data that represents the population in the PIP?	 M	Administrative claims processing utilizes the ADA Current Dental Terminology (CDT) and the American Medical Association's (AMA) Current Procedural Terminology (CPT) codes as well as non-claims administrative data.
6.2 Did the PIP design specify the frequency of data collection? If yes, what was the frequency (for example, semi-annually)?	 M	Home State Health's Outcome Analyst extracts the monthly preliminary HEDIS results to monitor the effectiveness of interventions based on changes in ADV rate.


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.	● M	See comment above in section 6.1.
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).	● NM	Data elements, their definitions, unit of measurement that would be collected as a result of intervention 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?	● NM	Primary measure was reported on a monthly basis. One intervention was carried out in Jan, Nov, and Dec. and another intervention was on Oct 31, 2019. 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?	● M	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	Since this criterion is newly introduced in protocol, this will be scored in EQR 2021.
6.8 Overall assessment/recommendations for improving the data collection procedures.	● NM	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.
Assessment of Data Collection Procedures for Administrative Data Sources		
6.9 If inpatient data was used, did the data system capture all inpatient admissions/discharges?	N/A	Sections 6.9 to 6.14 are new additions in EQR protocol and are not reported in PIP by Home State Health. These will be evaluated in EQR 2021 for CY 2020 PIP.
6.10 If primary care data was used, did primary care providers submit encounter or utilization data for all encounters?	N/A	
6.11 If specialty care data was used, did specialty care providers submit encounter or utilization data for all encounters?	N/A	

6.12 If ancillary data was used, did ancillary service providers submit encounter or utilization data for all services provided?	N/A	
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	
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?	N/A	
Assessment of Data Collection Procedures for Medical Record Review		
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. Medical records were not reviewed for data collection.
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"> • A glossary of terms for each project should be developed before data collection begins to ensure consistent interpretation among and between data collection staff. • 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 	N/A	Same comment as in section 6.15





particularly important when multiple reviewers are collecting data.		
---	--	--

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?	 NM	There is no data collection plan. Primary measure is projected monthly and data are collected once after interventions.
7.2 Did the analysis include baseline and repeat measurements of project outcomes?	 PM	An ongoing intervention from last year was used for this year's PIP. Baseline and repeat measurements of Primary measure-ADV was included. Data generated as a result of intervention were reported annually/one time for any intervention. However, annual effect of intervention from last year was compared to this year for one of the two interventions.
7.3 Did the analysis assess the statistical significance of any differences between the initial and repeat measurements?	 PM	Statistical significance of HEDIS ADV rate in CY 2018 and CY 2019 was assessed. Statistical significance of data collected as a result of intervention was not reported.
7.4 Did the analysis account for factors that may influence the comparability of initial and repeat measurements?	 M	There were no repeat measurements; however, there were measurements reported after each intervention and factors influencing results were reported.
7.5 Did the analysis account for factors that may threaten the internal or external validity of the findings?	 M	No threats to external validity exist. As no sampling occurred, no threats to internal validity exist.
7.6 Did the PIP compare the results across multiple entities, such as different patient subgroups, provider sites, or MCOs?	N/A	New addition, will be evaluated in EQR 2021.
7.7 Were PIP results and findings presented in a concise and easily understood manner?	 NM	There was no information about the secondary data measurement: units, interpretation, and link with 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.)	 PM	Home State Health projected some explanation for the results. The outbound call intervention did not show any improvement, yet they decided to continue the same in future PIP. The texting intervention showed a possible reason for improvement in ADV rate and that would also be continued in future PIP.

7.9 Overall assessment/recommendations for improving the analysis and interpretation of PIP results.	 NM	Primaris recommends following step 7 of CMS EQR Protocol. 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 (cycle-PDSA) for future PIP. 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)?	 NM	This information is not presented in the PIP. The intervention of outbound calls did not show any improvement. Other intervention of texting showed some positive response but cannot be relied on as it was measured only once.
8.2 Was the strategy designed to address root causes or barriers identified through data analysis and quality improvement processes?	 M	Barrier analysis was performed and a strategy identified to address members' lack of knowledge of dental benefit, access to dental care, and transportation benefit.
8.3 Was the rapid-cycle PDSA approach used to test the selected improvement strategy?	N/A	This criterion was newly introduced in EQR protocol and will be evaluated in EQR 2021.
8.4 Was the strategy culturally and linguistically appropriate?	 M	Language barrier during phone calls were reported to be 0.01%.
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)?	N/A	This is not addressed in PIP. This criterion was newly introduced in EQR protocol and will be evaluated in EQR 2021.
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?	 PM	Home State Health projected improvement in ADV rates month over month in CY 2019, but its relationship with interventions are not correctly linked. They would continue the same interventions next year and have identified an opportunity to partner with

		FQHC to increase compliance on ADV measure.
	●	

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

9.1 Was the same methodology used for baseline and repeat measurements?	● M	Same methodology was used for repeat measurements (when provided).
9.2 Was there any quantitative evidence of improvement in processes or outcomes of care?	● M	Primary measure has shown improvement from 47.82% (CY 2018) to 53.24% (CY 2019).
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.)	● NM	There is no evidence of improvement from the data presented as a result of intervention.
9.4 Is there statistical evidence (e.g., significance tests) that any observed improvement is the result of the intervention?	● PM	There is statistically significant (P=0.00001) improvement in HEDIS® ADV rate. However, significance of intervention is not tested, or no improvement is evident.
9.5 Was sustained improvement demonstrated through repeated measurements over time?	● PM	Repeated measurements for performance measure showed improvement. However, quarterly data collected as a result of intervention did not show improvement.
	●	

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	Even though aim of the PIP is met and the HEDIS® ADV rate has increased from 47.82% to 53.24% (5.42% points), which is statistically significant (P<0.00001), the PIP is assigned a score of “Low Confidence.” The improvement process and intervention were poorly executed and could not be linked to the improvement in the HEDIS® ADV rate.
<input type="checkbox"/> Moderate confidence	
<input checked="" type="checkbox"/> Low confidence	
<input type="checkbox"/> No confidence	

(End of Worksheets for PIPs)