



2021 External Quality Review

Performance Improvement Projects

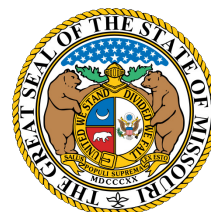


Healthy Blue

Measurement Period: Calendar Year 2020

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1.0 OVERVIEW AND OBJECTIVE

1.1 Background

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

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

The MHD contracts with Primaris Holdings, Inc. (Primaris), an External Quality Review Organization (EQRO), to perform an EQR. An EQR is the analysis and evaluation of aggregated information on quality, timeliness, and access to the health care services that a managed care plan, or its contractors, furnish to Medicaid beneficiaries (Figure 1). The review period for EQR 2021 is the calendar year (CY) 2020/Measurement Year (MY) 2020¹.

1.2 Performance Improvement Project (PIP)

A PIP is a project conducted by an MCO designed to achieve significant improvement sustained over time in health outcomes and enrollee satisfaction. A PIP may be designed to change behavior at a member, provider, or MCO/system level. A statewide performance

¹ Disclaimer: Healthy Blue stated that the Covid-19 pandemic had an impact on the delivery of healthcare services across the state during the MY 2020.

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

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

In EQR 2021, the MHD required Primaris to validate two PIPs conducted by Healthy Blue during CY 2020:

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

2.0 METHODOLOGY FOR PIP VALIDATION

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

Documents submission: Primaris requested that Healthy Blue submit their PIPs at Primaris' web-based secure file storage site (AWS S3 SOC-2).

Interview: Primaris conducted a virtual meeting with Healthy Blue officials² on July 28, 2021, to understand their concept, approach/methodology, interventions, and results. Reference to the CMS' PIPs: A How-To Manual for Health Plans (July 2015)³, EQR protocol, Institute for Healthcare Improvement's (IHI) Model of Improvement and Plan-Do-Study-Act (PDSA) cycles-as an approach for PIPs was emphasized. Primaris provided feedback/technical assistance on the PIPs related to the areas requiring improvement in the future, and submission of additional information, if any, was discussed.

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

² Senior Director, Quality Improvement; Manager, Quality Improvement; and Clinical Quality Program Administrator.

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

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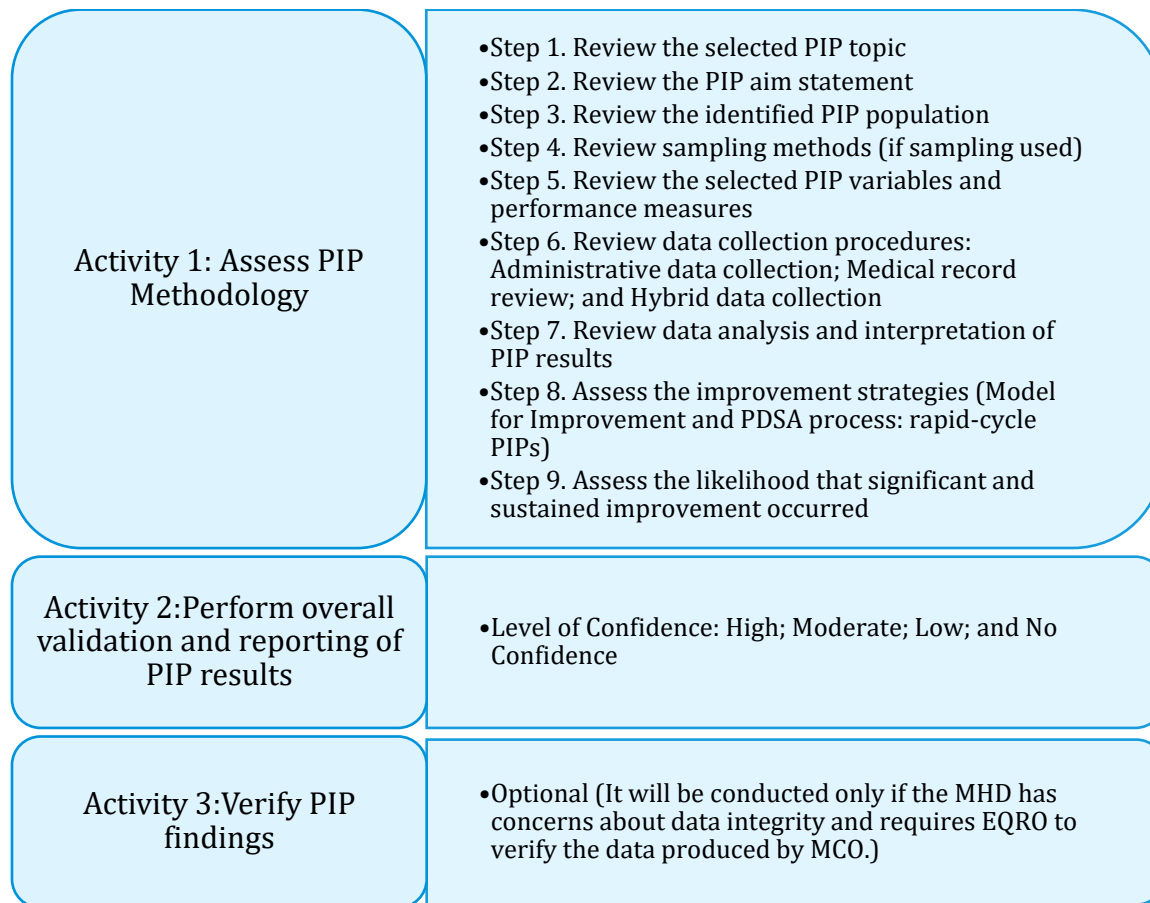


Figure 1. PIP Activities

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 Healthy Blue adhered to an acceptable methodology for all phases of design and data collection, conducted accurate data analysis and interpretation of the PIP results, and produced significant evidence of improvement (statistically significant change in performance is noted when $p \text{ value} \leq 0.05$).

The level of confidence is defined as follows:

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

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Aim was not achieved; or (B) the SMART Aim was achieved; however, the quality improvement processes and interventions were poorly executed and could not be linked to the improvement.

- No Confidence = The SMART Aim of the PIP was not achieved, and the PIP methodology was not an acceptable/approved methodology.

3.0 FINDINGS

For Attention of the MHD: Healthy Blue responded enthusiastically to the Primaris' feedback during the site meeting, rectified some activities, and resubmitted their PIPs. Primaris commends their positive approach towards the technical assistance; however, the resubmission was not evaluated. The findings are based on the original submission.

3.1 Clinical PIP: Improving Childhood Immunization Status

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

3.1.1 Summary

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

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

1A. General PIP Information

PIP Title: Improving Childhood Immunization Status (HEDIS® CIS Combo 10 rate)
PIP Aim Statement: Healthy Blue reported two aim statements as follows: Primary AIM Statement: To increase Healthy Blue's statewide HEDIS® MY 2019 CIS Combo 10 rate of 27.49% (by two percentage points) to 29.49% by HEDIS® MY 2020. Secondary AIM Statement: To increase Mercy East's MY 2019 influenza vaccination rate of 17.86% (by two percentage points) to 19.86% for eligible members with gaps in care after the pilot program with Patient Centered Care Consultants (PCCCs) and Mercy East by December 31, 2020.
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)

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<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)* <input type="checkbox"/> Adults only (age 18 and over) <input type="checkbox"/> Both adults and children *If PIP uses different age thresholds for children, specify age range here: 0-2 years.
Target population description, such as duals, LTSS, or pregnant women (specify): Healthy Blue reported two statements about the project population/study population as follows: "The study population included all Healthy Blue members two years of age in MY 2020, and had 12 months of continuous enrollment prior to their 2nd birthday. No more than one gap in enrollment of up to 45 days during the 12 months prior to the child's 2nd birthday was allowed to be considered continuously enrolled." "The study population also focused on the members who turned two years of age in MY 2020 and were assigned to PCPs at Mercy East who met the above criteria."
Programs: <input type="checkbox"/> Medicaid (Title XIX) only <input type="checkbox"/> CHIP (Title XXI) only <input checked="" type="checkbox"/> Medicaid and CHIP

1B. Improvement Strategies or Interventions (Changes tested in the PIP)

<input 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): 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): Healthy Blue's PCCCs offered a targeted list of members needing influenza vaccines during MY 2020 flu season and reviewed CIS HEDIS® Technical Specifications with providers at Mercy East from October 1, 2020, to December 31, 2020.
<input type="checkbox"/> MCO-focused interventions/system changes (MCO/system change interventions are aimed at changing MCO operations; they may include new programs, practices, or infrastructures, such as new patient registries or data tools): None.

1C. 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)-primary measure	MY 2019	27.49% No sampling	MY 2020	36.01% No sampling	Yes	Yes (> 95% confidence interval 23.06%-31.93%)

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Influenza vaccination rate at Mercy East-secondary measure	MY 2019	17.86% No sampling	MY 2020	21.05% No sampling	Yes	No (rate is within 95% confidence interval 1.89%-33.83%)
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1D. PIP Validation Information

Was the PIP validated? ☒ Yes/☐ No

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

Validation phase (check all that apply):

☒ PIP submitted for approval ☐ Planning phase ☐ Implementation phase

☐ First remeasurement ☐ Second remeasurement ☐ Other (specify)

Validation rating: ☒ Low confidence

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

EQRO recommendations for improvement of PIP: Healthy Blue must have a concise aim statement, have clarity on the concepts of target population/project population/PIP variables, define and apply these in the PIP. The intervention should tie to an improvement by correct analysis and interpretation based on PDSA cycles. (Refer to section 5.0 of this report for the details.)

3.1.2 PIP Description

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

Intervention: Healthy Blue's PCCC's piloted a program with providers at Mercy East by offering education, as well as a targeted list of members needing influenza vaccine during 2020 flu season starting October 1, 2020, to December 31, 2020.

Performance Measures/variables: HEDIS® CIS Combo 10 statewide was the primary measure. The influenza vaccination rate for Mercy East was used as a secondary measure. Additionally, HEDIS® CIS Combo 10 rate for Mercy East was also tracked to see the impact of the intervention.

The Mercy East's influenza vaccination rate was defined as follows:

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Numerator-Members who received an influenza vaccination during October 1, 2020, to December 31, 2020.

Denominator-Members who needed an influenza vaccination on or after October 1, 2020, to December 31, 2020.

The Mercy East's CIS Combo 10 rate was defined as follows:

Numerator: Total number of compliant CIS Combo-10 members assigned to Mercy East providers.

Denominator: Total number of eligible CIS Combo-10 members assigned to Mercy East providers.

Data Collection: Healthy Blue utilized Inovalon, a National Committee for Quality Assurance (NCQA)-certified vendor, to collect the administrative data for HEDIS® CIS measure according to the HEDIS® Technical Specifications. Claims, encounter data, and the state's immunization registry were utilized for data sources. The final statewide HEDIS® rate also includes hybrid data from HEDIS® medical record review. Healthy Blue monitored monthly influenza vaccination rates from claims/encounter data and monthly HEDIS® CIS Combo 10 Rates for Mercy East.

Findings: Figure 2 shows monthly influenza vaccination rates for children below two years old during the intervention period. Healthy Blue reported that Mercy East's annual influenza vaccination rate increased from 17.86% (baseline rate-MY 2019) to 21.05% (final rate-MY 2020) by 3.19% points. Furthermore, this large provider group experienced an increase in their CIS Combo 10 rate by 2.91% points from the prior year (statistically insignificant) (Figure 3).

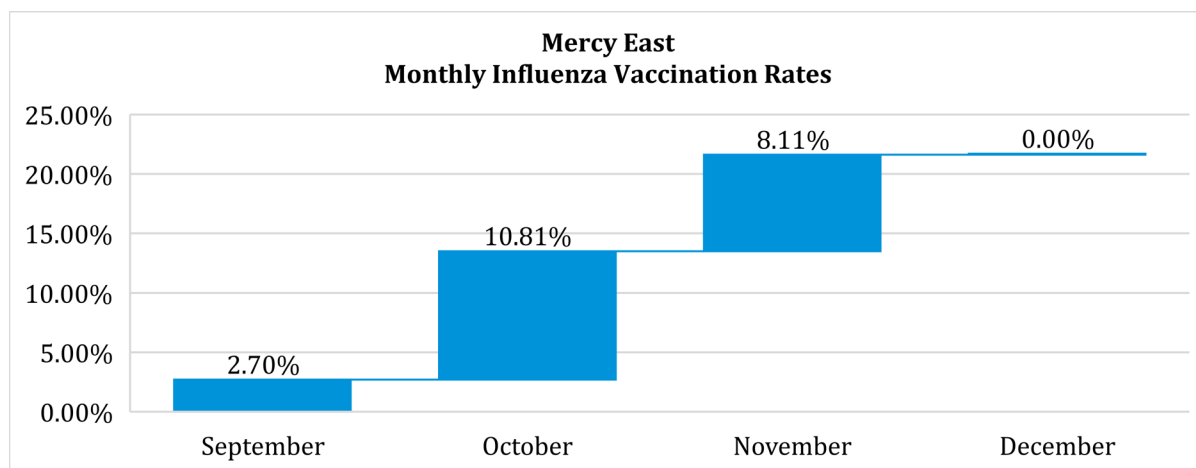


Figure 2. Mercy East Influenza Vaccination Rates October-December 2020

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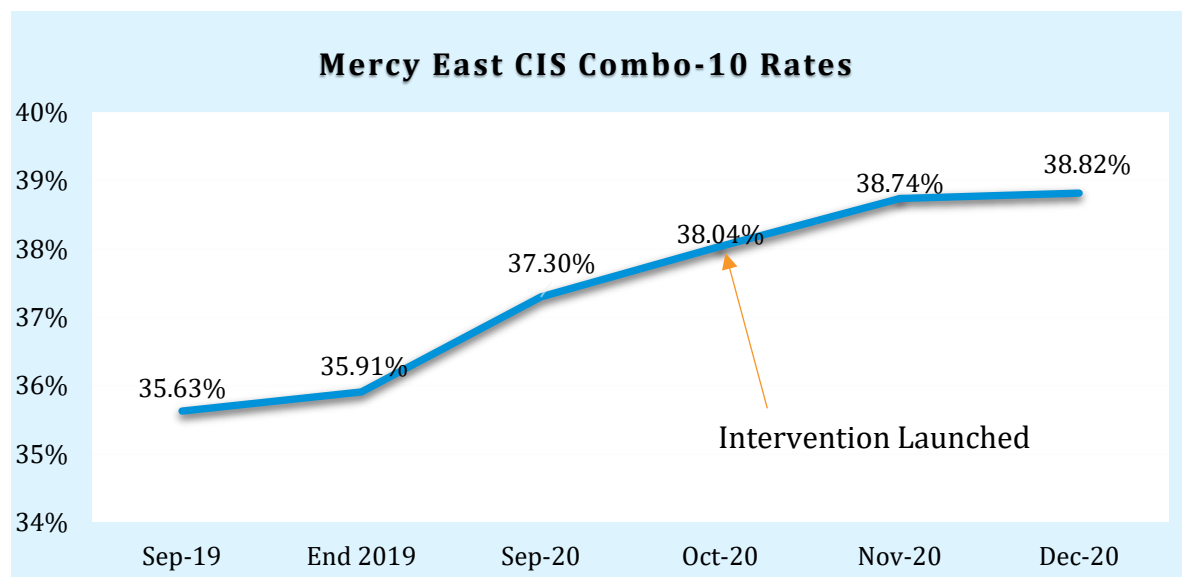


Figure 3. Mercy East Combo 10 Rates for baseline and intervention period

Healthy Blue reported a statewide increase in HEDIS® CIS Combo 10, which will exceed the 2% points improvement goal in Table 2.

Table 2. Statewide HEDIS® CIS Combo 10 Rate (MY 2019-2020)

HEDIS® Quarterly Measurements	HEDIS® MY 2019	HEDIS® MY 2020
Quarter 1	16.76%	20.60%
Quarter 2	21.38%	23.43%
Quarter 3	22.43%	24.59%
Quarter 4	22.81%	24.73%
Final Rate	27.49%	36.01%

3.1.3 PIP Result

The state goal to increase Healthy Blue's HEDIS® CIS rate by 2% points from the previous year was met. The HEDIS® CIS rate statewide increased from 27.49% to 36.01% (8.52% points), which was statistically significant (> 95% confidence interval, 23.06%-31.93%) (Table 3). The aim to increase Mercy East's MY 2019 Influenza vaccination rate of 17.86% by 2% points also was met. The annual Influenza vaccination rate increased from 17.86% to 21.05% (3.19% points) for eligible members with gaps in care, which was not statistically significant.

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

Measurement Year (MY)	HEDIS® CIS Combo 10 Rate (%)	NCQA Quality Compass 50th Percentile
MY 2018	27.49%	35.28%
MY 2019	27.49%	34.79%
MY 2020	36.01%	37.47%

3.2 Nonclinical PIP: Improving Oral Health

3.2.1 Summary

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

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

4A. General PIP Information

PIP Title: Improving Oral Health (HEDIS® ADV rate)	
PIP Aim Statement: Healthy Blue reported two aim statements as follows: Primary AIM Statement: To increase the Healthy Blue's statewide HEDIS® MY 2019 Annual Dental Rate (ADV) rate of 58.87% to 60.87% (by two percentage points), by HEDIS® MY 2020. Secondary AIM Statement: To increase Healthy Blue's monthly average of members completing an annual dental visit of 2.01% to 4.01% (by 2% points) in December 2020.	
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): Children only (ages 0–17) Adults only (age 18 and over) <input checked="" type="checkbox"/> *Both adults and children * Specify age range here: Aged 0-20 years	
Target population description, such as duals, LTSS, or pregnant women (specify): Healthy Blue reported two statements about the project population/study population as follows: "The study population follows NCQA HEDIS® Technical Specification guidelines, which includes all Healthy Blue members 2-20 years of age who had at least one dental visit during the measurement year and are continuously enrolled during the measurement year with no more than one gap in enrollment of up to 45 days. The study population also focuses on members eligible for the HEDIS® ADV Measure who received the DentaQuest Dental Home letter. Letters were sent to all eligible Healthy Blue members in the State of Missouri.	

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Programs: ☐ Medicaid (Title XIX) only ☐ CHIP (Title XXI) only ☒ Medicaid and CHIP

4B. 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): Through a partnership with a dental vendor, DentaQuest, all eligible members in the State of Missouri were assigned a dental home, and a mailing was sent out in October 2020, notifying them of the dental home, educating, and encouraging them to receive dental services by Dec 2020.

☐ 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 infrastructures, such as new patient registries or data tools): None.

4C. 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-primary measure	MY 2019	58.87% No sampling	MY 2020	44.18% No sampling	No	Yes (> 95% confidence interval, 58.58%-59.16%)

4D. PIP Validation Information

Was the PIP validated? ☒ Yes/☐ No

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

Validation phase (check all that apply):

☒ PIP submitted for approval ☐ Planning phase ☐ Implementation phase

☐ First remeasurement ☐ Second remeasurement ☐ Other (specify)

Validation rating: ☒ No confidence

"Validation rating" refers to the Primaris' overall confidence that the PIP adhered to an

acceptable methodology for all phases of design and data collection, conducted accurate data analysis and interpretation of PIP results, and produced significant evidence of improvement.

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

3.2.2 PIP Description

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

Interventions: Healthy Blue noticed that, on average, only 2.01% of members completed an annual dental visit each month. An opportunity was identified to partner with DentaQuest, to assign members dental homes and mail out letters identifying the dental homes, and encouraging members to receive annual dental care. Letters were sent to the majority of Healthy Blue's membership in October 2020 (272,062 letters), which identified the member's dental home, the advantages of a dental home, and dental benefits available to the member. The letters included the dentist's name, address, phone number of the dental home, and the customer service number. It also contained the explanation of a Dental Home, which will see the member every six months and as needed to provide needed dental care to stay healthy. The impact of the mailing was analyzed in December 2020. A goal was set to increase dental visits by two percentage points by December 2020.

Performance Measures/variables: HEDIS® ADV measure was selected as a primary measure. The number of members eligible for the HEDIS® ADV Measure who completed an annual dental visit by December 2020, after mailing the DentaQuest dental home letter, was tracked, as well as average monthly compliance rates prior to the mailing.

Numerator: Members compliant with an annual dental visit after the DentaQuest Dental Home letter was mailed.

Denominator: Members eligible for the HEDIS® ADV Measure who were mailed a DentaQuest Dental Home letter.

Data Collection: Sources of data used in this study included claims-based software and NCQA-certified software, Inovalon to collect and calculate the HEDIS® ADV rate. Claims and encounter data were utilized. The statewide HEDIS® ADV rates were tracked quarterly, and ADV compliance rates were tracked prior to the mailing and analyzed again in December 2020.

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Findings: Healthy Blue reported that the DentaQuest dental home initiative demonstrated effectiveness in encouraging members to receive preventative dental care, which increased the average monthly rate of dental visits from 2.01% (January–September 2020) to 4.45% (December 2020) (Figure 4).

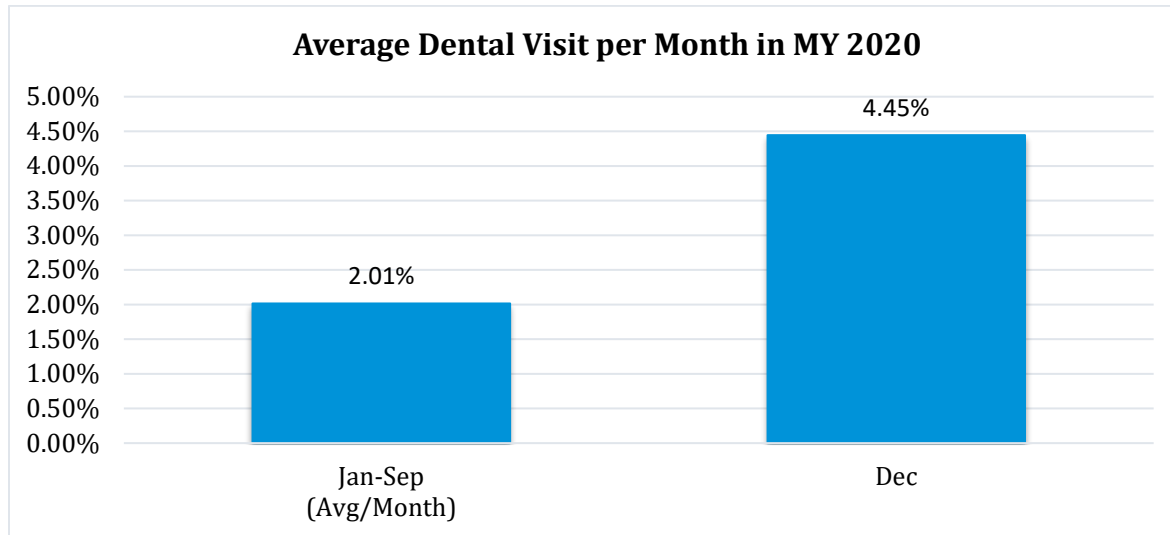


Figure 4. Average Dental Visit Before and After Dental Home Letter Intervention

Figure 5 and Table 5 show statewide HEDIS® ADV rate monthly and quarterly, respectively. Healthy Blue's HEDIS® ADV rate is trending to decline and did not meet its goal of a 2% points increase, which Healthy Blue anticipated due to the Covid-19 pandemic.

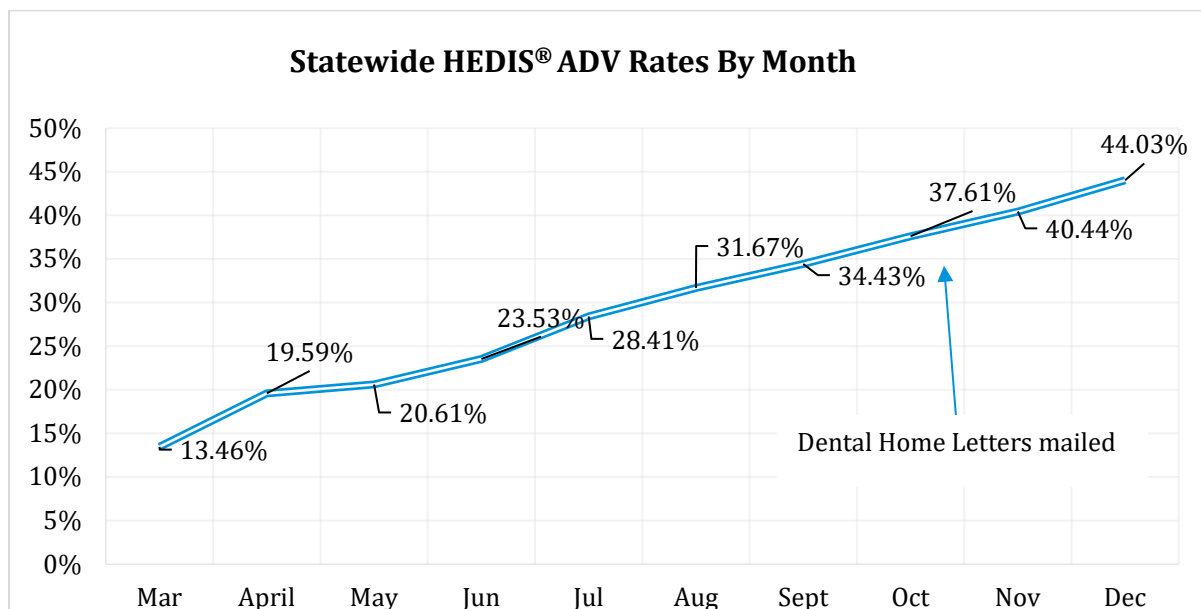


Figure 5. Monthly Statewide HEDIS® ADV Rates MY 2020

Table 5. Statewide HEDIS® ADV Rate (MY 2019-2020)

HEDIS® Quarterly Measurements	HEDIS® MY 2019	HEDIS® MY 2020
Quarter 1	13.18%	13.46%
Quarter 2	28.86%	23.53%
Quarter 3	39.14%	34.43%
Quarter 4	56.86%	42.67%
Final Rate	58.87%	44.18%

3.2.3 PIP Result

The state goal to increase the HEDIS® ADV by 2% points from the previous year was not met. Healthy Blue's HEDIS® ADV rate significantly declined (> 95% confidence interval, 58.58%-59.16%) from 58.87% (MY 2019) to 44.18% (MY 2020) by 14.69% points (Table 6). The aim to increase Healthy Blue's monthly average of members completing an annual dental visit of 2.01% by 2% points in December 2020 (4.45%) was met.

Table 6. Statewide HEDIS® ADV Trend (MY 2018-2020)

Measurement Year (MY)	HEDIS® ADV Rate (%)	NCQA Quality Compass 50th Percentile
MY 2018	52.72%	56.60%
MY 2019	58.87%	58.03%
MY 2020	44.18%	60.15%

4.0 OVERALL CONCLUSIONS**PIPs Score**

- Clinical PIP: Improving Childhood Immunization Status

Even though the state goal to increase Healthy Blue's HEDIS® CIS Combo 10 rate by 2% points from the previous year was met, and the HEDIS® CIS Combo 10 rate increased significantly by 8.52% points, the PIP was assigned a score of "Low Confidence." The quality improvement process and intervention were poorly executed and could not be linked to the improvement.





- Nonclinical PIP: Improving Oral Health

The state goal to increase Healthy Blue's HEDIS® ADV by 2% points from the previous year was not met. Instead, the HEDIS® ADV rate significantly declined by 14.69% points. The quality improvement process and intervention were poorly executed and could not be linked to the improvement seen in the secondary rate. Therefore, the PIP is assigned a score of "No Confidence."

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Both the PIPs did not meet all the required guidelines stated in the CFR/MHD contract (42 CFR 438.330d2/MHD contract, 2.18.8d1) (Table 7). Note: Definitions of Met/Partially Met/Not Met are based on the CMS EQR Protocol 3.

Table 7. PIPs' Evaluation based on the CFR guidelines

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

4.1 Strengths and Weaknesses

Table 8 summarizes the strengths and weaknesses identified during the evaluation of the PIPs.

Table 8. Strengths and Weaknesses of PIPs

Evaluation Criteria	Strength	Weakness
1. Selection of PIP topic (the MHD provided the topic, hence marked as Not/Applicable-N/A)	N/A	N/A
2. Writing an Aim statement		Healthy Blue lacks clarity on framing a concise aim statement. Two aim statements were reported (primary and secondary), which did not specify the study population.
3. Identifying the study population		Healthy Blue lacks clarity on what constitutes the target population and the project population.
4. Sampling	N/A	N/A
5. Variables/performance measures (the MHD decided the primary measure)		The PIP variables were not selected. Secondary measures were selected; however, not accurately defined.

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6. Data collection	NCQA-certified software (Inovalon) was used to collect data for the PIPs. The data sources were specified. The data collection plan and analysis plan were linked in the clinical PIP.	Data elements to be collected after the intervention were not defined. The data collection plan and analysis plan for the secondary measure was not reported in the nonclinical PIP.
7. Data analysis and interpretation of results		The data after the intervention was presented but not analyzed. The data presented does not link to the intervention.
8. Improvement strategies	The selected strategies for both the PIPs were evidence-based.	The usefulness of the improvement strategies was not tested, and the methodology was not based on the PDSA cycle.
9. Significant and sustained improvement	Clinical PIP: The HEDIS® CIS rate statewide increased significantly. The influenza vaccination rate of Mercy East increased from 17.86% to 21.05% (3.19% points) for eligible members with gaps in care.	Clinical PIP: The influenza vaccination rate fell each month during the intervention from 10.81% (Oct 2020) to 0% (Dec 2020). The reported improvement in Mercy East's influenza vaccination rate is not likely to result from the selected intervention. Nonclinical PIP: The HEDIS® ADV rate significantly declined by 14.69% points. The aim to increase Healthy Blue's monthly average of members completing an annual dental visit of 2.01% by 2% points in December 2020 (4.45%) was met. However, it could not be validated due to insufficient/inaccurate data.

4.2 Improvement by Healthy Blue

For the MY 2020, the statewide rates for HEDIS® CIS Combo 10 increased by 8.52% points, and HEDIS® ADV decreased by 14.69% points from the previous year (MY 2019). Table 9 shows Healthy Blue's response to the previous year's (EQR 2020) recommendations by EQRO and noncompliant items from EQR 2019.

Table 9. Healthy Blue's Response to Previous Year's Recommendations

Previous Recommendation	Action by Healthy Blue	Comment by EQRO
EQR 2020		
1. Even though the MHD mandates an overarching goal, Healthy Blue can select a topic within specified parameters. To ensure a successful PIP, Healthy Blue should find early and regular opportunities to obtain input from staff, providers, and members, improving care delivery.	There was some improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020, as Healthy Blue stated in their secondary aim.	Healthy Blue should have one concise aim statement. The same recommendation applies to EQR 2021.
3. Healthy Blue should translate the aim statement to identify the focus of the PIP and establish the framework for data collection and analysis on a small scale (PDSA cycle). PIP population should be selected from a county, provider office, or a region so that results can be measured during the PDSA cycle and subsequently applied on a larger scale.	There was some improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020. Healthy Blue applied the intervention to a small scale for the clinical PIP.	The same recommendation applies to EQR 2021.
4. Healthy Blue should select a variable (a measurable characteristic, quality, trait, or attribute of a particular individual, object, or situation being studied) that could identify Healthy Blue's performance on the PIPs and track improvement over time. Healthy Blue can use focus groups, surveys, and interviews to collect qualitative insights from members, MCO and provider staff, and key external partners. Qualitative measures can	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.

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serve as the secondary measures or supplement the overall measurement set, providing information that will aid PIP planning and implementation.		
5. Healthy Blue should use variables/secondary measures that should tie an intervention to improvement. Clear and concise definitions of data elements (including numerical definitions and units of measure) should be provided for the data collected after the intervention.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.
6. Data collection plan should be linked to the data analysis plan to ensure that appropriate data would be available for the PIP.	There was some improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020. Data collection plan was linked to the data analysis plan for the clinical PIP only.	The same recommendation applies to EQR 2021.
7. A baseline rate should be presented before the start of an intervention followed by at least two remeasurements, and analysis of results should be utilized to plan the next intervention (cycle-PDSA) for future PIP. Additionally, primary and secondary measures/variables should be linked to illustrate the impact of the intervention on a project's performance.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.
9. Effectiveness of the improvement strategy should be determined by measuring a change in performance according to the predefined measures and linking to intervention.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.
10. When analyzing multiple data points over time, Healthy Blue	There was some improvement towards the	The same recommendation

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should consider tools such as time series, run chart, control chart, data dashboard, and basic trend analyses.	utilization of such tools in EQR 2021 compared to EQR 2020. The clinical PIP had data after the intervention.	applies to EQR 2021.
EQR 2019		
1. Health Blue should follow CMS EQR protocol and Medicaid Oral Health Performance Improvement Projects: A How-To Manual for Health Plans, July 2015 for guidance on methodology and approach of PIPs to obtain meaningful results.	There was some improvement in the methodology of PIP in EQR 2021 and EQR 2020.	The same recommendation applies to EQR 2021.
2. Healthy Blue must refine its skills in the development and implementation of approaches to effect change in the PIPs.	There was no improvement in the methodology of PIP in EQR 2021 and EQR 2020.	The same recommendation applies to EQR 2021.
3. The interventions should be planned specifically for the PIP required by the MHD contract.	There was some improvement in EQR 2021. The clinical PIP was designed with an intervention at a small scale and appeared to be new. However, statewide intervention for nonclinical PIP suggests that it was an operational effort reported in the PIP.	The same recommendation applies to EQR 2021.
4. The results should be tied to the interventions.	There was no improvement in the methodology of PIP in EQR 2021 and EQR 2020.	The same recommendation applies to EQR 2021.

5.0 RECOMMENDATIONS

Healthy Blue

Healthy Blue must improve the methodology adopted for their PIPs to meet the compliance requirements set in the 42 CFR 438.330d2/MHD contract, section 2.18.8d1. In addition to all the recommendations from the previous years that continue to be applicable for EQR 2021 (Table 9), Primaris recommends the following:

1. Aim Statement: Healthy Blue must have one aim statement for their PIP, which can have

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multiple objectives (if they choose). The PIP aim statement should be concise and define the improvement strategy, population, and period.

2. Study Population: Healthy Blue should articulate the concepts and clearly define the target population and PIP population. The PIP population should be selected at a small scale (e.g., from a county, provider office, or a region) so that results can be measured during the PDSA cycle and subsequently applied at a larger scale.

3. PDSA Cycles: Healthy Blue must adopt PDSA cycles that involve analysis, feedback/lessons learned from the data collected after the intervention, and application of these outcomes to plan another test cycle.

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

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

MHD

1. The PIPs' evaluations, the interview session, corrections made by Healthy Blue revealed that the Healthy Blue team has gaps in knowledge about the PIP manuals/protocol and their approach in conducting a PIP. A formal one-on-one technical assistance would help Healthy Blue close these gaps in their methodology for PIPs. An improved training, assistance, and expertise for the design, analysis, and interpretation of PIP findings are available from the EQRO, CMS publications, and research reviews.

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

(Worksheets are attached on the next page.)

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APPENDIX A. PIP VALIDATION WORKSHEET IMPROVING CHILDHOOD IMMUNIZATION STATUS

Date of Evaluation/Interview: July 28, 2021

MCO Name/Mailing Address:	Healthy Blue/1831 Chestnut, St. Louis, MO, 63103
MCO Contact Name and Title:	Mark Kapp, MBA, BSN, RN, CPHQ, Sr. Director, Quality Improvement Erin Dinkel, BSN, RN, Manager, Quality Improvement Sandra Dintino, BSN, RN, Clinical Quality Program Admin.
Name of Performance Improvement Project:	Improving Childhood Immunization Status
PIP Period Date:	Jan 1, 2020-Dec 31, 2020
Programs:	Medicaid only/CHIP only/✓Medicaid and CHIP
Demographic Information:	Number of Medicaid/CHIP enrollees in MCO: 285,535 Medicaid/CHIP members included in the study: 4,874 Number of Primary Care Providers: 3,075

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	The MHD contract section 2.18.8d2 requires Healthy Blue to conduct a PIP with a goal to improve HEDIS® CIS Combo 10 each year by at least 2% points in alignment with the Quality Improvement
1.2 Did selection of the PIP topic consider performance on the CMS Child and Adult Core Set measures?	N/A	The PIP topic was selected by the MHD. However, Childhood Immunization Status is a Child Core Set measure (NQF0038).
1.3 Did the selection of PIP topic consider input from enrollees or providers who are users of, or concerned with, specific service areas? (Note: If the PIP topic was required by the state, it will be marked as N/A.)	N/A	The PIP topic was selected by the MHD.
1.4 Did the PIP topic address care of special populations or high priority services, such as: <ul style="list-style-type: none"> Children with special health care needs Adults with physical disabilities Children or adults with behavioral health issues 	●	The PIP topic focused on preventive care for all enrollees 2 years of age who were assigned PCPs at Mercy East, including but not limited to, members with special needs, behavioral health issues, intellectual or physical disabilities or behavioral health

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<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 		conditions.
1.5 Did the PIP topic align with priority areas identified by HHS and/or CMS?	N/A	The topic was selected by the MHD. However, the PIP topic focused on increasing Childhood Immunization Status, which is included in the CMS Child Core Set.
1.6 Overall assessment/recommendations for improving PIP topic.	●	Even though the overarching goal is mandated by the MHD, Healthy Blue should find early and regular opportunities to obtain input from staff, providers, and members on how to improve care delivery and decide on the focus of the PIP to make an impact on the HEDIS® CIS Combo 10 rate.

Step 2: Review the PIP Aim Statement

Component/Standard	Score	Comments
2.1 Did the PIP aim statement clearly specify the improvement strategy?	●	Two aim statements (primary and secondary) were reported. Healthy Blue specified their improvement strategy in the secondary aim to increase Mercy East's 2019 influenza vaccination rate of 17.86% (by two percentage points) to 19.86% for eligible members with gaps in care.
2.2 Did the PIP aim statement clearly specify the population for the PIP?	●	The two aim statements did not clearly specify the population. However, Healthy Blue mentioned separately that their PIP included two study populations for the primary and the secondary aim.
2.3 Did the PIP aim statement clearly specify the time period for the PIP?	●	MY 2020 (end of Dec 31, 2020).

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2.4 Was the PIP aim statement concise?	●	<p>Two aim statements (primary and secondary) were provided.</p> <p>Primary aim statement: To increase Healthy Blue's Statewide HEDIS MY 2019 Childhood Immunization Status (CIS) Combo-10 rate of 27.49% (by two percentage points) to 29.49%, by HEDIS MY 2020.</p> <p>Secondary aim statement: To increase Mercy East's 2019 influenza vaccination rate of 17.86% (by two percentage points) to 19.86% for eligible members with gaps in care after the pilot program with PCCC's and Mercy East by December 31, 2020.</p> <p>Primaris determined that the aim statement was not concise. The primary aim was the goal set by the MHD. The secondary aim should be the PIP's aim, which was incomplete as the population was not mentioned.</p>
2.5 Was the PIP aim statement answerable?	●	Aim statement (secondary) is incomplete: however, it is answerable.
2.6 Was the PIP aim statement measurable?	●	Aim statement (secondary) is incomplete: however, it is measurable.
2.7 Overall assessment/recommendations for improving the PIP aim statement.	●	Healthy Blue should frame a concise aim statement that can have multiple objectives (if they choose). The PIP aim statement should define the improvement strategy, population, and time period.

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)?	●	<p>Healthy Blue reported two statements about the project population/study population as follows: "The study population includes all Healthy Blue members 2 years of age in 2020, and had 12 months of continuous enrollment prior to their 2nd birthday. No more than one gap in enrollment of up to 45 days during the 12 months prior to the child's 2nd birthday is allowed to be considered continuously enrolled."</p> <p>"The study population also focuses on the</p>

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		members who turned 2 years of age in 2020 and were assigned to PCPs at Mercy East who met the above criteria.” The project population/target population is unclear.
3.2 Was the entire MCO population included in the PIP?	●	Same comment as above. The entire MCO population was included for the HEDIS® CIS Combo 10 measure and all members 2 years of age who were assigned to PCPs at Mercy East were included.
3.3 If the entire population was included in the PIP, did the data collection approach capture all enrollees to whom the PIP question applied?	●	Data collection was performed according to HEDIS® Technical Specifications for CIS Combo 10 measure and captured all population.
3.4 Was a sample used?	N/A	Sampling was not utilized.
3.5 Overall assessment/recommendations for identifying the project population.	●	Healthy Blue should have clarity on the concept of target population and the project/study population. Healthy Blue should continue to select PIP population 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, for all the PIPs in the future.

Step 4: Review Sampling Method

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

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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)? 	●	PIP variable was not selected. Influenza vaccination rate was selected as a secondary measure.
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?	●	HEDIS® CIS Combo 10 measure statewide was used as a primary measure and Influenza vaccination rate was used as a secondary measure. HEDIS® CIS Combo 10 rate for Mercy East was also tracked to see the impact of the intervention.
5.3 Were the performance measures appropriate based on the availability of data and resources to collect the data (administrative data, medical records, or other sources)?	●	The secondary measure selected was not appropriate it was not directed towards increasing the rate of all the vaccines involved in HEDIS® CIS Combo 10 measure.
5.4 Were the measures based on current clinical knowledge or health services research? Examples: Recommended procedures, appropriate utilization (hospital admissions, emergency department visits), adverse incidents (such as death, avoidable readmission), referral patterns, authorization requests, appropriate medication use.	●	Same comment as in section 5.2.

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<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>HEDIS® CIS Combo 10 rate and Influenza vaccination rate at Mercy East were reported monthly. Statewide HEDIS® CIS Combo 10 rate was reported quarterly. Data for other MCOs were not available to Healthy Blue (not a collaborative 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>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 calculate the measure reliably and accurately? • 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>There were no gaps in the existing measures, so new measures were not developed. The primary and secondary measures were captured using NCQA-certified software.</p>
<p>5.8 Did the measures capture changes in enrollee satisfaction or experience of care? Was there some improvement in health or functional status? (For projects in non-clinical areas such as addressing access or availability of services, measurement of health or functional status is preferred.)</p>	●	<p>Enrollee satisfaction or experience of care was not addressed in the PIP.</p>
<p>5.9 Did the measures include a strategy to ensure inter-rater reliability (if applicable)?</p>	N/A	<p>Healthy Blue reported utilizing Inovalon, a NCQA-certified vendor, to collect the administrative data for HEDIS® CIS Combo 10 measure Technical Specifications. Therefore, inter-rater reliability was not</p>

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		applicable.
<p>5.10 If process measures were used, is there strong clinical evidence indicating that the process being measured is meaningfully associated with outcomes?</p> <ul style="list-style-type: none"> • 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. 	●	Process measure used in the PIP is a CMS Child Core Set measure (NQF0038).
<p>5.11 Overall assessment/recommendations for improving the selected PIP variables and performance measures.</p>	●	Healthy Blue should select a variable (a measurable characteristic, quality, trait, or attribute of a particular individual, object, or situation being studied) and a secondary measure that could identify Healthy Blue's performance on the PIP aim objectively and reliably and use clearly defined indicators of performance. Healthy Blue can use focus groups, surveys, and interviews to collect qualitative insights from members, and provider staff, and key external partners. Qualitative measures can serve as the secondary measures and/or supplement the overall measurement set, providing information that will aid PIP planning and implementation.

Step 6: Review Data Collection Procedures

Component/Standard	Score	Comments
Assessment of Overall Data Collection Procedures		
<p>6.1 Did the PIP design specify a systematic method for collecting valid and reliable data that represents the population in the PIP?</p>	●	<p>HEDIS® CIS Combo 10 rates and Influenza vaccination rates were measured from an administrative standpoint for all enrollees 2 years of age who were eligible and assigned PCPs at Mercy East by using HEDIS® Technical Specifications and NCQA-certified software (Inovalon).</p>

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6.2 Did the PIP design specify the frequency of data collection? If yes, what was the frequency (for example, semi-annually)?	●	Data was collected monthly for Influenza vaccination rate and HEDIS® CIS Combo 10 rate at Mercy East and quarterly statewide for HEDIS® CIS Combo 10 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.	●	Claims/encounter data for the study were queried from the claims-based software and put into NCQA-certified software (Inovalon).
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).	●	Data elements to be collected were not clearly defined. The definition of numerator and denominator of the secondary measure was incomplete.
6.5 Did the data collection plan link to the data analysis plan to ensure that appropriate data would be available for the PIP?	●	Data collection and analysis plan are linked. Same comment as in 6.2.
6.6 Did the data collection instruments allow for consistent and accurate data collection over the time periods studied?	●	Claims-based software and NCQA Certified Software (Inovalon) were used to calculate HEDIS® CIS Combo 10 rate and Influenza vaccination rate.
6.7 If qualitative data collection methods were used (such as interviews or focus groups), were the methods well-defined and designed to collect meaningful and useful information from respondents?	N/A	Qualitative data collection methods were not used.
6.8 Overall assessment/recommendations for improving the data collection procedures.	●	Data elements/secondary measure should be clearly defined and the unit of measure should be selected.

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	Inpatient data was not used.
6.10 If primary care data was used, did primary care providers submit encounter or utilization data for all encounters?	●	Healthy Blue received Primary Care Provider data through claims and encounter data and the state immunization registry.
6.11 If specialty care data was used, did specialty care providers submit encounter or utilization data for all encounters?	N/A	Healthy Blue did not use specialty care data.

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6.12 If ancillary data was used, did ancillary service providers submit encounter or utilization data for all services provided?	N/A	Healthy Blue did not use ancillary data.
6.13 If LTSS data was used, were all relevant LTSS provider services included (for example, through encounter data, case management systems, or electronic visit verification (EVV) systems)?	N/A	LTSS is excluded per the MHD contract.
6.14 If EHR data was used, were patient, clinical, service, or quality metrics validated for accuracy and completeness as well as comparability across systems?	N/A	Healthy Blue did not use EHR data.
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.)	●	Medical Record Review (MRR) was not the source of data collection for the PIP. However, HEDIS® CIS Combo 10 is a hybrid measure and the final result included MRR. Healthy Blue provided the names and credentials of people who were responsible for the PIP.
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	MRR was not the source of data collection for the PIP.
6.17 For medical record review, were guidelines for obtaining and recording the data developed? <ul style="list-style-type: none"> 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 	N/A	MRR was not conducted for the PIP. A glossary of terms for each project was not developed. The medical record review was a part of generating HEDIS® CIS Combo 10 rate as this is a hybrid measure.

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covered by the instructions. This is particularly important when multiple reviewers are collecting data.		
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Step 7: Review Data Analysis and Interpretation of PIPs Results

Component/Standard	Score	Comments
7.1 Was the analysis conducted in accordance with the data analysis plan?	●	Monthly data after the intervention was presented for the Influenza vaccination rate at Mercy East as planned, but was not analyzed. Final rate for the baseline year and MY 2020 is presented and analyzed. However, the data presented does not link to the intervention.
7.2 Did the analysis include baseline and repeat measurements of project outcomes?	●	The final rates (primary measure, secondary measure, and Mercy East CIS Combo 10 measure) for the baseline year and the MY 2020 are presented. However, baseline rate for the interventions is not presented (MY 2019 rates for Influenza vaccines from Oct-Dec 2019).
7.3 Did the analysis assess the statistical significance of any differences between the initial and repeat measurements?	●	There is no statistical significance between the final baseline year and MY 2020 Influenza vaccination rate. Statistical significance initial and every repeat measurement after the intervention is not reported.
7.4 Did the analysis account for factors that may influence the comparability of initial and repeat measurements?	●	Analysis was not done to account for factors influencing repeat measurements for the MY 2020.
7.5 Did the analysis account for factors that may threaten the internal or external validity of the findings?	●	There are no internal nor external factors that threaten the validity of the findings.
7.6 Did the PIP compare the results across multiple entities, such as different patient subgroups, provider sites, or MCOs?	●	Different patient subgroups/provider sites are not compared. Since this is not a collaborative PIP, the results are not compared to the other MCOs.
7.7 Were PIP results and findings presented in a concise and easily understood manner?	●	The information presented was easily understood. However, the Influenza vaccination rates for the months corresponding to the baseline year were not presented. Link to the intervention was not established.

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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.)	●	Healthy Blue continued intervention each month from Oct-Dec 2020 with decline in the influenza vaccine rates. Analysis or interpretation is not presented for this decline noticed during the intervention (pilot program). Healthy Blue has reported increase in the final rates for the primary and the secondary measure.
7.9 Overall assessment/recommendations for improving the analysis and interpretation of PIP results.	●	Healthy Blue must adopt PDSA cycles which involve analysis, feedback/lessons learned from the data collected after an intervention and apply these outcomes to plan another test cycle.

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)?	●	The selected strategy was evidence-based. Managed Healthcare Executive's article, "Simplify Gaps in Care and Improve Member Compliance", states "It's important to determine how we can partner with our providers to give them gaps in care reports so that when they have a patient in their office they can try to close some of those gaps."
8.2 Was the strategy designed to address root causes or barriers identified through data analysis and quality improvement processes?	●	Healthy Blue identified a cause of low influenza vaccination rate: Providers typically administer immunizations during well-child visits, but are not scheduling follow-up visit during the fall to administer the flu vaccine. Therefore, members do not become compliant for HEDIS CIS Combo-10. However, Influenza rate for Healthy Blue statewide and Mercy East is not presented to show the trend.
8.3 Was the rapid-cycle PDSA approach used to test the selected improvement strategy?	●	Information provided indicated that the intervention was not tested and methodology was not based on a PDSA cycle.
8.4 Was the strategy culturally and linguistically appropriate?	●	The intervention was directed towards the providers. However, Healthy Blue stated that they offer 6th grade reading level and language translation option on all member materials/calls.

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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)?	●	Healthy Blue reported a variation from MY 2019 to MY 2020 that could impact the repeat measurements was the global pandemic Covid-19. The Patient Centered Care Consultants (PCCCs) adapted through this pandemic by offering webinars, as a way to connect with providers during the travel ban.
8.6 Building on the findings from the data analysis and interpretation of PIP results (Step 7), did the PIP assess the extent to which the improvement strategy was successful and identify potential follow-up activities?	●	The final Influenza vaccination rates for MY 2019 and MY 2020 showed an increase by 3.19% points. Healthy Blue will continue to monitor and modify interventions, as applicable, to evaluate the effectiveness and improvement over prior year. In MY 2021, Healthy Blue plans to partner with a vendor, HealthCrowd, to launch texting member campaigns aimed at members needing wellness services, such as childhood immunizations. However, the increase in the Influenza rates cannot be linked to the intervention. Baseline rates for the same months are not presented. Each month during the intervention in MY 2020, the Influenza vaccination rates declined.
8.7 Overall assessment/recommendations for improving the implementation strategies.	●	Effectiveness of the improvement strategy should be determined by measuring change in performance according to the predefined measures, target aim, 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?	●	The methodology of data and data analysis, members examined, and tools used has remained the same since the baseline measurement (MY 2019).
9.2 Was there any quantitative evidence of improvement in processes or outcomes of care?	●	HEDIS® CIS Combo 10 rate for Mercy East increased from 35.91% (MY 2019) to 38.82% (MY 2020) by 2.91% points; the annual Influenza vaccination rate increased from 17.86% to 21.05%. The final HEDIS® CIS Combo 10 rate statewide increased from 27.49% (MY 2019) to 36.01% (MY 2020) by 8.52% points.

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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.)	●	The presented data does not support that the improvement was likely due to the intervention.
9.4 Is there statistical evidence (e.g., significance tests) that any observed improvement is the result of the intervention?	●	There is no statistical significance of the increase in the influenza vaccination rate and the HEDIS® CIS Combo 10 rate for Mercy East. The HEDIS® CIS Combo 10 rate statewide increased significantly. However, it is not the result of the intervention.
9.5 Was sustained improvement demonstrated through repeated measurements over time?	●	Repeat measurements for primary measure showed improvement but the data after the intervention did not show improvement. The influenza vaccination rate fell each month during the intervention from 10.81% (Oct 2020) to 0% (Dec 2020). The baseline rates for Oct 2019 to Dec 2019 are not presented. However, Healthy Blue reported an increase in the final rate from 17.86% to 21.05% (3.19% points).
9.6 Overall assessment/recommendations for improving the significance and sustainability of improvement as a result of the PIP.	●	Repeat measurements and test of significance should be conducted to determine whether significant change in performance relative to baseline measurement was observed in each PDSA cycle. Health Blue is expected to not only report the quantitative changes in measure rates, but also provide a narrative to accompany these changes that includes barriers faced, strategies used, and lessons learned over the course of intervention implementation. The intervention tracking activities and PDSA cycles feed directly into this narrative.

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	The state goal to increase the HEDIS® CIS Combo 10 rate by 2% points from the previous year was met. The HEDIS® CIS rate statewide increased from 27.49% to 36.01% (8.52% points), which was statistically significant (> 95% confidence interval, 23.06%-31.93%). The aim to increase Mercy East's MY 2019 Influenza vaccination rate of 17.86% by 2% points also was met. The Influenza vaccination rate
<input type="checkbox"/> Moderate confidence	
<input checked="" type="checkbox"/> Low confidence	
<input type="checkbox"/> No confidence	

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	increased from 17.86% to 21.05% (3.19% points) for eligible members with gaps in care. However, the quality improvement process and intervention were poorly executed and could not be linked to the improvement. The PIP is assigned a score of "Low Confidence."
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APPENDIX B. PIP VALIDATION WORKSHEET IMPROVING ORAL HEALTH

Date of Evaluation/Interview: July 28, 2021

MCO Name/Mailing Address:	Healthy Blue/1831 Chestnut, St. Louis, MO, 63103
MCO Contact Name and Title:	Mark Kapp, MBA, BSN, RN, CPHQ, Sr. Director, Quality Improvement Erin Dinkel, BSN, RN, Manager, Quality Improvement Sandra Dintino BSN, RN, Clinical Quality Program Admin.
Name of Performance Improvement Project:	Improving Oral Health
PIP Period Date:	Jan 1, 2020-Dec 31, 2020
Programs:	Medicaid only/CHIP only/✓Medicaid and CHIP
Demographic Information:	Number of Medicaid/CHIP enrollees in MCO: 285,535 Medicaid/CHIP members included in the study:145,396 Number of Dentists: 1,035 Dentists

Score: Met ● / Partially Met ● / Not Met ● / Not Applicable

ACTIVITY 1: ASSESS THE PIP METHODOLOGY

Step 1: Review the PIP Topic

Component/Standard	Score	Comments
1.1 Was the topic selected through a comprehensive analysis of MCO enrollee needs, care, and services? (Note: If the PIP topic was required by the state, it will be marked as N/A.)	N/A	The MHD contract section 2.18.8d2 requires Healthy Blue, at a minimum, to set a goal to improve the plan specific HEDIS® Annual Dental Visit rate for two to twenty year-olds each year by at least 2% points in alignment with the Quality Improvement Strategy.
1.2 Did selection of the PIP topic consider performance on the CMS Child and Adult Core Set measures?	N/A	The PIP topic was selected by the MHD. This is not CMS Core Set measure.
1.3 Did the selection of PIP topic consider input from enrollees or providers who are users of, or concerned with, specific service areas? (Note: If the PIP topic was required by the state, it will be marked as N/A.)	N/A	The PIP topic was selected by the MHD.
1.4 Did the PIP topic address care of special populations or high priority services, such as: <ul style="list-style-type: none"> Children with special health care needs Adults with physical disabilities 	●	The PIP topic addressed “Access to and Availability of Care” for all enrollees from 2-20 years of age, including, but not limited to members with special health care needs,

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<ul style="list-style-type: none"> 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) 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 		physical disabilities, behavioral health conditions and/or intellectual or developmental disabilities.
1.5 Did the PIP topic align with priority areas identified by HHS and/or CMS?	N/A	The topic was selected by the MHD. The PIP was aimed at improving oral health. The CMS Child Core Set measures have two measures related to improving oral health.
1.6 Overall assessment/recommendations for improving PIP topic.	●	Even though overarching goal is mandated by MHD, Healthy Blue has the flexibility to select a topic within specified parameters. To ensure a successful PIP, Healthy Blue 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?	●	Two aim statements (primary and secondary) were presented. Healthy Blue specified their improvement strategy in the secondary aim to increase the monthly average of members completing an annual dental visit from 2.01 to 4.01% points in Dec 2020.
2.2 Did the PIP aim statement clearly specify the population for the PIP?	●	The two aim statements did not clearly specify the population. However, Healthy Blue mentioned separately that all eligible members ages 2-20 years old in MY 2020 were included in the PIP.
2.3 Did the PIP aim statement clearly specify the time period for the PIP?	●	Dec 2020 is the period for the PIP.

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2.4 Was the PIP aim statement concise?	●	<p>Two aim statements (primary and secondary) were provided.</p> <p>Primary aim statement: To increase the Healthy Blue's statewide HEDIS MY 2019 Annual Dental Rate (ADV) rate of 58.87% to 60.87% (by two percentage points), by HEDIS MY 2020.</p> <p>Secondary aim statement: To increase Healthy Blue's monthly average of members completing an annual dental visit of 2.01% to 4.01% (by two percentage points), in December 2020.</p> <p>The aim statement was not concise. The primary aim was the goal set by the MHD. The secondary aim should be the PIP's aim, which was incomplete as the population was not mentioned.</p>
2.5 Was the PIP aim statement answerable?	●	The aim statement (secondary) is incomplete: however, it is answerable.
2.6 Was the PIP aim statement measurable?	●	The aim statement (secondary) is incomplete: however, it is measurable.
2.7 Overall assessment/recommendations for improving the PIP aim statement.	●	Healthy Blue must have a concise aim statement, which can have multiple objectives (if they choose). The PIP aim statement should define the improvement strategy, population, and time period.

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)?	●	<p>Healthy Blue presented two different statements about the project population/study population as follows:</p> <p>"The study population includes all Healthy Blue members 2 through 20 years of age who had at least one dental visit during the measurement year and were continuously enrolled during the measurement year with no more than one gap in enrollment of up to 45 days."</p> <p>"The study population also focuses on the members eligible for the HEDIS® ADV Measure who received the DentaQuest Dental Home letter."</p>

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		The project population/target population is not clearly defined.
3.2 Was the entire MCO population included in the PIP?	●	See comment above in section 3.1. The entire MCO population was included for the HEDIS® ADV measure. Majority of the Healthy Blue members (272,062) were mailed a letter from DentaQuest vendor (intervention).
3.3 If the entire population was included in the PIP, did the data collection approach capture all enrollees to whom the PIP question applied?	●	Data collection was performed according to HEDIS® Technical Specifications for HEDIS® ADV measure which captured all population.
3.4 Was a sample used?	N/A	Sampling was not utilized.
3.5 Overall assessment/recommendations for identifying the project population.	●	The concepts of the target population and the project/study population are not clear. The 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.
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.

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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)? 	●	A PIP variable was not selected. A secondary measure was selected which was not accurately defined.
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?	●	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)?	●	The secondary measure was stated but information data was not presented.
5.4 Were the measures based on current clinical knowledge or health services research? Examples: Recommended procedures, appropriate utilization (hospital admissions, emergency department visits), adverse incidents (such as death, avoidable readmission), referral patterns, authorization requests, appropriate medication use.	●	Same comment as in section 5.2.
5.5 Did the performance measures: <ul style="list-style-type: none"> Monitor the performance of MCO at a point in time? Track MCO performance over time? Compare performance among MCOs over time? 	●	Statewide HEDIS® ADV rate was reported quarterly. Data for other MCOs were not reported as this was not a collaborative PIP. Healthy Blue reported an increase in average members reporting for a dental visit by Dec 2020.

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<ul style="list-style-type: none"> Inform the selection and evaluation of quality improvement activities? 		
5.6 Did the MCO consider existing measures, such as CMS Child and Adult Core Set, Core Quality Measure Collaborative, certified community behavioral health clinics (CCBHC) measures, HEDIS®, or AHRQ measures?	●	HEDIS® ADV measure was used as primary indicator.
5.7 If there were gaps in existing measures, did the MCO consider the following when developing new measures based on current clinical practice guidelines or health services research? <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 calculate the measure reliably and accurately? Were all criteria used in the measure defined clearly (such as time periods, characteristics of eligible enrollees, services to be assessed, and exclusion criteria)? 	●	The primary measure was defined based on the NCQA technical specifications. The secondary measure was not defined correctly.
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.)	●	There was a decline in HEDIS® ADV rate. However, Healthy Blue presented an increase in average number of members receiving dental visit in Dec 2020.
5.9 Did the measures include a strategy to ensure inter-rater reliability (if applicable)?	N/A	Healthy Blue reported utilizing Inovalon, a NCQA-certified vendor, to collect the administrative data for HEDIS® ADV measure Technical Specifications. Therefore, inter-rater reliability was not applicable.

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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. 	●	HEDIS® ADV measure was used in the PIP.
5.11 Overall assessment/recommendations for improving the selected PIP variables and performance measures.	●	Healthy Blue should select a variable (a measurable characteristic, quality, trait, or attribute of a particular individual, object, or situation being studied)/secondary measure that could identify Healthy Blue's performance on the PIP aim objectively and reliably and use clearly defined indicators of performance. Healthy Blue can use focus groups, surveys, and interviews to collect qualitative insights from members, and provider staff, and key external partners. Qualitative measures can serve as the secondary measures and/or supplement the overall measurement set, providing information that will aid PIP planning and implementation.

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?	●	The data collected included the entire eligible population of HEDIS® ADV claims/encounter data according to HEDIS technical specifications for the measurement year (MY)2020. The data collected was based on the same HEDIS® technical specifications for the HEDIS® ADV measure, but focusing on members in which the DentaQuest dental letter was mailed.

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6.2 Did the PIP design specify the frequency of data collection? If yes, what was the frequency (for example, semi-annually)?	●	HEDIS® ADV rate was calculated and monitored quarterly. The frequency of data collection for the secondary measure was not stated.
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.	●	The sources of data used in the PIP included claims-based software and NCQA Certified Software (Inovalon) to calculate the HEDIS ADV rate.
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).	●	Data elements for intervention were not clearly defined.
6.5 Did the data collection plan link to the data analysis plan to ensure that appropriate data would be available for the PIP?	●	Primary measure was reported on a quarterly basis. The data collection plan and analysis plan for the secondary measure was not reported.
6.6 Did the data collection instruments allow for consistent and accurate data collection over the time periods studied?	●	Claims-based software and NCQA Certified Software (Inovalon) to calculate HEDIS® ADV rate.
6.7 If qualitative data collection methods were used (such as interviews or focus groups), were the methods well-defined and designed to collect meaningful and useful information from respondents?	N/A	Qualitative data collection methods were not used.
6.8 Overall assessment/recommendations for improving the data collection procedures.	●	Secondary measure, units of measure/rate, should be selected and the data collection plan should be linked to the data analysis plan.
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	Inpatient data was not used.
6.10 If primary care data was used, did primary care providers submit encounter or utilization data for all encounters?	N/A	Primary Care data was not used.

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6.11 If specialty care data was used, did specialty care providers submit encounter or utilization data for all encounters?	N/A	Healthy Blue did not use specialty care data.
6.12 If ancillary data was used, did ancillary service providers submit encounter or utilization data for all services provided?	N/A	Healthy Blue has not used ancillary data.
6.13 If LTSS data was used, were all relevant LTSS provider services included (for example, through encounter data, case management systems, or electronic visit verification (EVV) systems)?	N/A	LTSS is excluded per the MHD contract.
6.14 If EHR data was used, were patient, clinical, service, or quality metrics validated for accuracy and completeness as well as comparability across systems?	N/A	Healthy Blue has not used EHR data.
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. However, Healthy Blue provided the names and credentials of people who were responsible for the PIP.
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 	N/A	Same comment as in section 6.15

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covered by the instructions. This is particularly important when multiple reviewers are collecting data.		
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Step 7: Review Data Analysis and Interpretation of PIPs Results

Component/Standard	Score	Comments
7.1 Was the analysis conducted in accordance with the data analysis plan?	●	Per the data analysis plan, the primary measure was reported on a quarterly basis. The data collection plan and analysis plan for the secondary measure was not reported. Additionally, statewide HEDIS® ADV rate was presented on a monthly basis which was not in the data analysis plan.
7.2 Did the analysis include baseline and repeat measurements of project outcomes?	●	Baseline and repeat measurements were presented for statewide HEDIS® ADV rate. Repeat measurements for intervention were not presented.
7.3 Did the analysis assess the statistical significance of any differences between the initial and repeat measurements?	●	Statistical significance of baseline rate and final rate is done for primary measure. No data presented for initial and repeat measurement for the intervention.
7.4 Did the analysis account for factors that may influence the comparability of initial and repeat measurements?	●	The methodology of data and data analysis, members examined, and tools used have remained the same since the baseline measurement (MY 2019) and measurement year (MY 2020).
7.5 Did the analysis account for factors that may threaten the internal or external validity of the findings?	●	There are no internal factors that threatened the validity of the findings. External factor was Covid-19 Pandemic that impacted the HEDIS® ADV rate.
7.6 Did the PIP compare the results across multiple entities, such as different patient subgroups, provider sites, or MCOs?	●	Different patient subgroups/provider sites were not compared. Since this was not a collaborative PIP, the results were not compared to the other MCOs.
7.7 Were PIP results and findings presented in a concise and easily understood manner?	●	The information presented was easily understood. However, insufficient data from the intervention (secondary measure/variables) was presented. The final result of intervention does not link to the primary measure.
7.8 To foster continuous quality improvement, did the analysis and interpretation of the PIP data include lessons learned about less-than-optimal performance? (Note: Analysis and interpretation of the PIP data should be based	●	Healthy Blue continued the intervention from Oct-Dec 2020 and reported the final result of ADV compliance in Dec 2020. Lessons learned/feedback from the intervention was not applied in the PIP.

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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.	●	Healthy Blue must adopt PDSA cycles which involve analysis, feedback/lessons learned from the data collected after an intervention and apply the outcomes to plan another test cycle. Analysis should be conducted for secondary measures/variables and then linked to primary measure.

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)?	●	Evidence supports the advantages of dental homes, which includes early dental care and intervention, anticipatory guidance for the parents, as well as episodic care as needed. According to the Scholars Journal of Dental Sciences, dental homes increase the opportunities for preventive care that can improve children's overall health. By assigning members a dental home and offering education, members' health outcomes will improve as evidenced by an increase annual dental visits after the dental home mailing.
8.2 Was the strategy designed to address root causes or barriers identified through data analysis and quality improvement processes?	●	Healthy Blue has identified the following root causes for members not being compliant for completing an annual dental visit: lack of understanding the importance of annual dental visits; lack of awareness of dental benefits available; lack of safety, or perception of safety, due to global pandemic, COVID-19, causing people to delay preventative dental visits.
8.3 Was the rapid-cycle PDSA approach used to test the selected improvement strategy?	●	The intervention was not tested and methodology was not based on a PDSA cycle.
8.4 Was the strategy culturally and linguistically appropriate?	●	To ensure interventions meet and support members cultural and linguistic needs, Healthy Blue offers 6th grade reading level and language translation option is available on all member materials/calls. The

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		readability index of the letter mailed to the members was 4.7.
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)?	●	The change in the strategy was to suspend initiating the intervention during the Stay-Home state-wide order due to Covid-19 pandemic. The intervention started in Oct-Dec 2020. However, Tele-dentistry is a covered code for Healthy Blue.
8.6 Building on the findings from the data analysis and interpretation of PIP results (Step 7), did the PIP assess the extent to which the improvement strategy was successful and identify potential follow-up activities?	●	The final data presented as a result of intervention showed an increase in average ADV compliance from 2.01% (Jan-Sept 2020) to 4.45% (Dec 2020). The monthly data for HEDIS® ADV rate was increasing month over month (Mar 2020-13.46%) to Dec 2020-44.03% at a steady rate. However, the quarterly HEDIS® ADV rate in MY 2020 declined each corresponding quarter from the baseline year MY 2019. No link between the intervention and the HEDIS® ADV rate is evident.
8.7 Overall assessment/recommendations for improving the implementation strategies.	●	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?	●	The methodology of data and data analysis, members examined, and tools used have remained the same since the baseline measurement (MY 2019).
9.2 Was there any quantitative evidence of improvement in processes or outcomes of care?	●	Primary measure has shown a significant decline from 58.87% (MY 2019) to 44.18% (MY 2020). The average ADV compliance rate for Dec 2020 reportedly increased by 2.44% points from the monthly average in Jan-Sept 2020. The monthly data for HEDIS® ADV rate was increasing month over month (Mar 2020-13.46%) to Dec 2020-44.03% at a steady rate. This data monthly increment does not support the average rate of 2.1% ADV compliance from Jan-Sept 2020.

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9.3 Was the reported improvement in performance likely to be a result of the selected intervention? (Conclusive demonstration through controlled studies is not required.)	●	Same comment as in section 9.3 above. The reported improvement cannot be linked to the intervention.
9.4 Is there statistical evidence (e.g., significance tests) that any observed improvement is the result of the intervention?	●	There is statistically significant (confidence level >95%) decline in HEDIS® ADV rate. Significance of data as a result of intervention is not tested.
9.5 Was sustained improvement demonstrated through repeated measurements over time?	●	Repeat measurements for performance measure during MY 2020 showed improvement. Repeat data was not presented for the intervention.
9.6 Overall assessment/recommendations for improving the significance and sustainability of improvement as a result of the PIP.	●	Repeat measurements and test of significance should be conducted to determine whether significant change in performance relative to baseline measurement was observed in each PDSA cycle. Healthy Blue is expected to not only report the quantitative changes in measure rates, but also provide a narrative to accompany these changes that includes barriers faced, strategies used, and lessons learned over the course of intervention implementation. The intervention tracking activities and PDSA cycles feed directly into this narrative.

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	The state goal to increase the HEDIS® ADV by 2% points from the previous year was not met. The HEDIS® ADV rate significantly declined (> 95% confidence interval) from 58.87% (MY 2019) to 44.18% (MY 2020) (14.69% points). The aim to increase Healthy Blue's monthly average of members completing an annual dental visit of 2.01% by 2% points in December 2020 (4.45%) was met but could not be validated due to insufficient/inaccurate data. The quality improvement process and intervention were poorly executed and could not be linked to the improvement seen in the secondary rate. The PIP is assigned a score of "No Confidence."
<input type="checkbox"/> Moderate confidence	
<input type="checkbox"/> Low confidence	
<input checked="" type="checkbox"/> No confidence	