Primaris
Healthcare Business Solutions

2021 External Quality Review

Performance Improvement Projects

UnitedHealthcare®

Measurement Period: Calendar Year 2020
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MoHealthNet

CONTENTS

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. UnitedHealthcare is one of the three MCOs operating in Missouri. The MHD works closely with UnitedHealthcare to monitor quality, enrollee satisfaction, and contract compliance. Quality is monitored through various ongoing methods, including MCO's Healthcare Effectiveness Data and Information Set (HEDIS®) indicator reports, annual reviews, enrollee grievances and appeals, targeted record reviews, and an annual external quality review (EQR).

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

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

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

change behavior at a member, provider, or MCO/system level. A statewide performance improvement project (PIP) is defined as a cooperative quality improvement effort by the MCO, the MHD, and the EQRO to address clinical or nonclinical topic areas relevant to the managed care program. (Ref: MHD managed care contract 2.18.8d2). The PIPs should be completed in a reasonable period to generally allow information on the success of the PIPs in the aggregate to produce new information on the quality of care every year. According to 42 Code of Federal Regulations (CFR) 438.330d, 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 UnitedHealthcare 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 UnitedHealthcare submit their PIPs at Primaris' web-based secure file storage site (AWS S3 SOC-2).

Interview: Primaris conducted a virtual meeting with UnitedHealthcare Clinical Quality Team on July 30, 2021, to understand their concept, approach/methodology, interventions, and results. Reference to the CMS' PIPs: A How-To Manual for Health Plans (July 2015)[2], 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] https://www.medicaid.gov/medicaid/benefits/downloads/pip-manual-for-health-plans.pdf

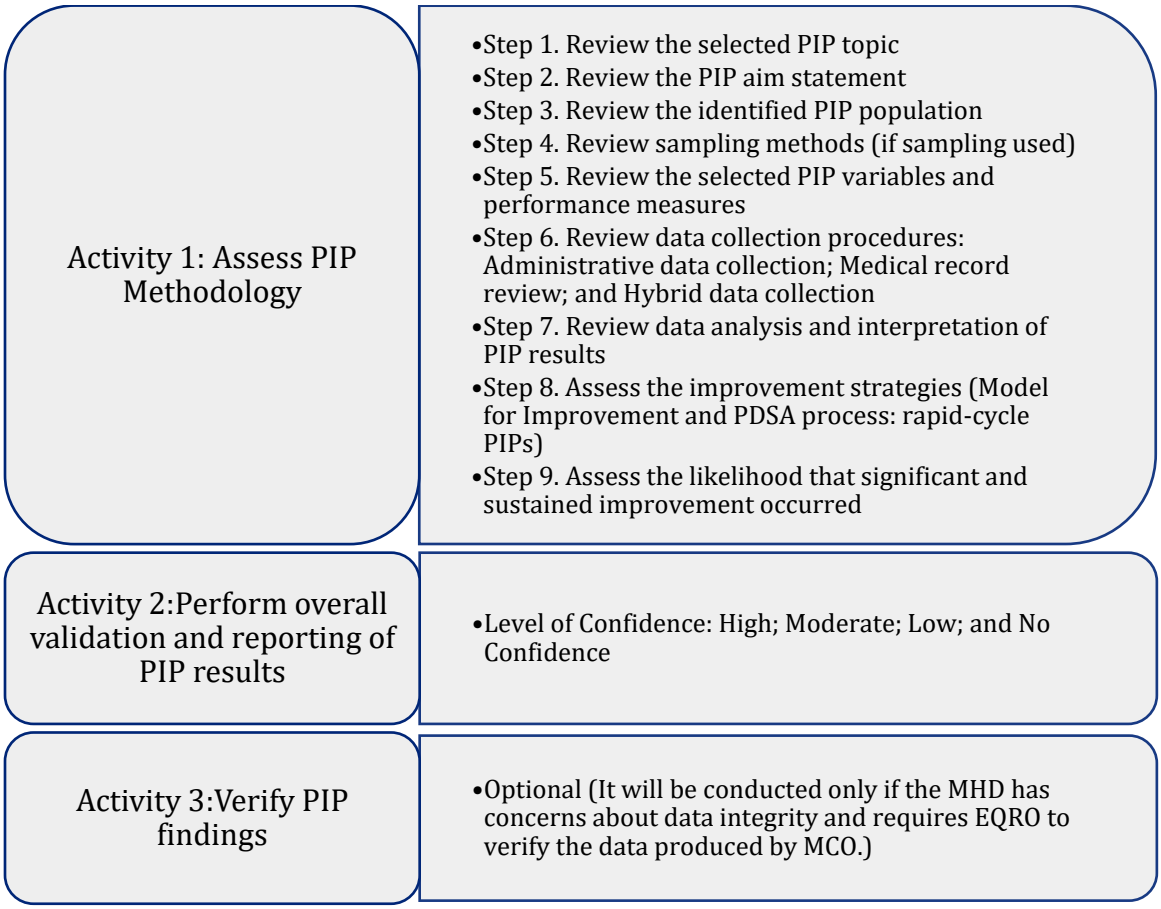

Figure 1. PIP Activities

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

3.0 FINDINGS

3.1 Clinical PIP: Improving Childhood Immunization Status

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

3.1.1 Summary

Table 1(A-D) summarizes the clinical PIP information submitted by UnitedHealthcare 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: By December 31, 2020, increase the percentage of UnitedHealthcare members aged two and under who are eligible for and receive CIS Combo 10 vaccines from 25.06% to 27.06%.
Was the PIP state-mandated, collaborative, statewide, or plan choice? ☑ State-mandated (state required plans to conduct a PIP on this specific topic) ☐ Collaborative (plans worked together during the planning or implementation phases) ☑ Statewide (the PIP was conducted by all MCOs within the state) ☐ 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) ☐ 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): The primary measure study population included all UnitedHealthcare members who were eligible based on the National Committee for Quality Assurance's (NCQA) HEDIS® CIS Combo 10 Technical Specifications. For the secondary measure, the study population consisted of 4,310 members who turned two years old in measurement year (MY) 2020

and were eligible based on NCQA's HEDIS® CIS Pneumococcal Conjugate Vaccine (PCV13) Technical Specifications.
Programs: ☐ Medicaid (Title XIX) only ☐ CHIP (Title XXI) only ☑ Medicaid and CHIP

1B. 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): The Pfizer Missed Dose Postcard reminder was mailed to the members who were not compliant with PCV13 and were under the age of 2 years old.
☐ 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.

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	25.06% No sampling	MY 2020	36.25% No sampling	Yes	Yes p=0.0005
PCV13 vaccine compliance-secondary measure	Apr 2020	41.08% No sampling	Dec 2020	45.28% No sampling	Yes	Yes p=0

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: UnitedHealthcare should have clarity on the concepts of target population/project population/PIP variables and clearly define and apply these in the PIP. The PIP should have variables/secondary measures that can assess the performance of the PIP intervention based on PDSA cycles. The demonstrated improvement should be clearly linked to the quality improvement processes implemented. (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 UnitedHealthcare.

Intervention: Missed Dose Postcards were mailed out monthly to parents or guardians of children ages 6, 8, and 16 months who missed one or more CIS Combo 10 immunizations. These ages were selected by Pfizer, a manufacturer of the pneumococcal conjugate vaccine (PCV13), one of the CIS Combo 10 vaccines. According to the Centers for Disease Control and Prevention (CDC) immunization periodicity schedule, PCV13 should be administered at months 2, 4, 6, and again between 12 and 18 months of age. Members who receive the postcard are behind on receiving PCV13 and possibly other CIS Combo 10 vaccines. Typically, over 1000 postcards are mailed to UnitedHealthcare members each month.

Performance Measures/variables: The primary and the secondary performance measures selected for the PIP were HEDIS® CIS Combo 10 and PCV13 Vaccine Compliance, respectively. The variable used in the PIP focused on members who turned two years old in MY 2020 and who were non-compliant with the PCV13.

Data Collection (Administrative): UnitedHealthcare used ClaimSphere and Inovalon, HEDIS® -certified software engines to generate the HEDIS® CIS Combo 10 and PCV13 compliance rates. Data for HEDIS® CIS Combo 10 rate were collected quarterly and annually, and the PCV13 compliance rates were collected quarterly. The data for the intervention were collected monthly from the program vendor by the UnitedHealthcare Clinical Program Delivery team and analyzed internally against claims. The data included a list of member names, ages, and member IDs targeted by the intervention in MY 2020. First, UnitedHealthcare contacted their national Clinical Program Delivery team and requested a list of members and member IDs of those mailed a Pfizer Missed Dose Postcard. The date the postcards were mailed and the date range of eight weeks after the mailing were

recorded for each month. Next, UnitedHealthcare submitted an internal request (Missouri) to the senior business analyst to compare the member IDs to medical claims within a stated period, using the specific Current Procedural Terminology (CPT) codes for immunizations. Note: The final HEDIS® CIS Combo 10 rate submitted by UnitedHealthcare was based on the hybrid methodology (medical record review).

Findings: Table 2 shows that 18,602 Missed Dose Postcards were mailed to the members during January through November 2020 and the number of members who received one or more CIS Combo 10 vaccines within eight weeks of mailing the postcards.

Table 2. Intervention Data for the Clinical PIP

Postcard Date	Number of Missed Dose Postcards Mailed	Missed Dose Reminder Effectiveness Report Timeframe	Received One or More CIS Combo 10 Vaccination(s) Within 8 Weeks*	Response %
1/16/2020	1462	1/16/2020-3/12/2020	147	10.05%
2/18/2020	1462	2/18/2020-4/14/2020	105	7.18%
3/17/2020	1538	3/17/2020-5/12/2020	65	4.22%
4/30/2020	1586	4/30/2020-6/25/2020	82	5.17%
5/27/2020	1702	5/27/2020-7/22/2020	90	5.28%
6/29/2020	1606	6/29/2020-8/24/2020	93	5.79%
7/22/2020	1623	7/22/2020-9/16/2020	86	5.29%
8/27/2020	1801	8/27/2020-10/22/2020	81	4.49%
10/1/2020	1813	10/1/2020-11/26/2020	62	3.41%
11/2/2020	2294	11/2/2020-12/28/2020	73	3.18%
11/23/2020	1715	11/23/2020-12/31/2020	35	2.04%
Total	**18602**		**919**	**4.94%**

*Dates of service through December 31, 2020.
September postcards were not mailed until October 1, 2020, and October postcards were not mailed until November 2, 2020.

Figure 2 compares the CIS Combo 10 immunization results for the same intervention during the previous year (MY 2019).

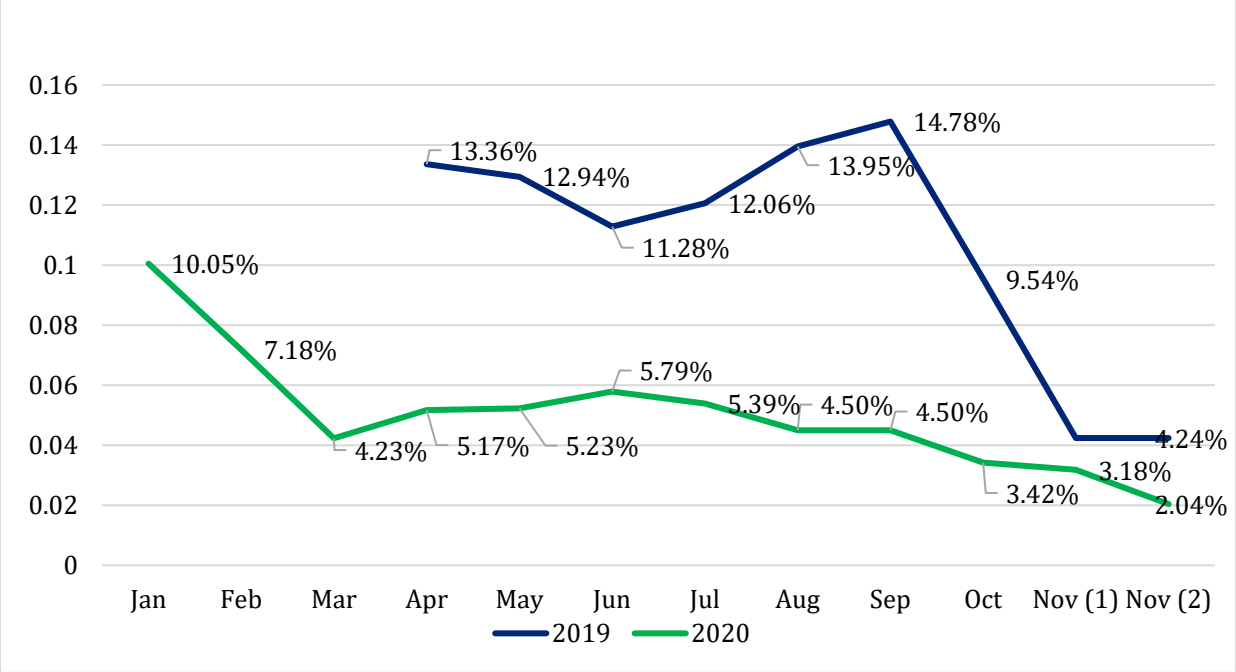

Figure 2. MY 2019 and MY 2020 CIS Combo 10 Rates after Pfizer Missed-Dose Post-Cards were mailed.

Table 3 and Table 4 show the rates for PCV13 (secondary) and HEDIS® Combo 10 (primary) measures and the statistical significance of the changes every quarter.

Table 3. Quarterly Compliance Rates-PCV13

MY 2020	Number of Members	Number of Compliant Members	Compliant	Statistical Significance
April (Baseline) Claims as of 3/22/20	4355	1789	41.08%	N/A
July (Remeasurement-RM 1) Claims as of 6/22/20	4354	1877	43.11%	No (Baseline- RM 1)
October (RM-2) Claims as of 9/22/20	4326	1930	44.61%	No (RM1-RM2
December (RM-3) Claims as of 12/7/20*	4318	1955	45.28%	No (RM2-RM3)**

*Claims as of 12/22/20 are not included due to a change in software in the next data cycle.

** The change from the Baseline-RM 3 is reported to be statistically significant (p=0).

Table 4. Quarterly Rates-HEDIS® CIS Combo 10

MY 2020	Numerator	Denominator	CIS Combo 10 Rate	Statistical Significance	Goal
April (Baseline) Claims as of 3/22/20	574	4355	13.18%	N/A	27.06%
July (Remeasurement-RM 1) Claims as of 6/22/20	641	4354	14.72%	Yes, P=0.0378 (Baseline-RM1)	27.06%
October (RM-2) Claims as of 9/22/20	667	4326	15.42%	No (RM1-RM2	27.06%
December (RM-3) Claims as of 12/7/20	689	4318	15.96%	No (RM2-RM3)*	27.06%

***The change from the Baseline-RM 3 is reported to be statistically significant (p=0.0002).

3.1.3 PIP Result

The aim of the PIP was met. UnitedHealthcare's statewide rate for HEDIS® CIS Combo 10 increased from 25.06% (MY 2019) to 36.25% (MY 2020), which is an increment of 11.19% points (Table 5). The improvement is of statistical significance, p value=0.0005 (p≤0.05 is significant).

Table 5. Statewide HEDIS® CIS Combo 10 Trend (MY 2018-2020)

MY	Numerator	Denominator	CIS Combo 10 Rate	NCQA Benchmark (50th Percentile)	Goal
MY 2018	89	411	21.65%	35.28%	N/A
MY 2019	103	411	25.06%	34.79%	23.65%
MY 2020	149	411	36.25%	37.47%	27.06%

3.2 Nonclinical PIP: Improving Oral Health

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

3.2.1 Summary

Table 6(A-D) summarizes the nonclinical PIP information submitted by UnitedHealthcare in the format adopted from the CMS EQR Protocol 1.

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

6A. General PIP Information

PIP Title: Improving Oral Health (HEDIS® ADV rate)
PIP Aim Statement: By December 31, 2020, increase the percentage of UnitedHealthcare members between ages 2–20 years old who are eligible for and receive an annual dental visit from 53.70% to 55.70%.
Was the PIP state-mandated, collaborative, statewide, or plan choice? ☑ State-mandated (state required plans to conduct a PIP on this specific topic) ☐ Collaborative (plans worked together during the planning or implementation phases) ☑ Statewide (the PIP was conducted by all MCOs within the state) ☐ 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) ☑ *Both adults and children * Specify age range here: Aged 0-20 years
Target population description, such as duals, LTSS, or pregnant women (specify): The study population for the primary measure consisted of UnitedHealthcare members who were eligible based on NCQA's HEDIS® ADV Technical Specifications. The criteria specify Medicaid members aged 2-20 years as of 12/31/2020 who are continuously enrolled throughout the measurement year with no more than one gap in enrollment as the eligible population. The study population for the secondary measure consisted of 18,602 members who were attributed to one of the top 20 FQHCs with the highest number of non-compliant members for the ADV measure.
Programs: ☐ Medicaid (Title XIX) only ☐ CHIP (Title XXI) only ☑ Medicaid and CHIP

6B. Improvement Strategies or Interventions (Changes tested in the PIP)

☐ Member-focused interventions (member interventions are those aimed at changing member practices or behaviors, such as financial or non-financial incentives, education, and outreach): None.
☑ Provider-focused interventions (provider interventions are those aimed at changing provider practices or behaviors, such as financial or non-financial incentives, education, and outreach): Provide Dental Care Opportunity Report (DCOR) to the top 20 Federally Qualified Healthcare Centers (FQHCs) with the highest volume of non-compliant members for the FQHCs to outreach non-compliant members identified in the report.
☐ 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.

6C. 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	53.70% No sampling	MY 2020	41.18% No sampling	No	Yes p=0
ADV rate for 20 FQHCs-secondary measure	July 2020	20.73% No sampling	Nov 2020	33.98%	Yes	Yes p=0

6D. 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: UnitedHealthcare should have clarity on the concepts of target population/project population/PIP variables and clearly define and apply them in their PIP. UnitedHealthcare should focus on data collection around a variable (a measurable characteristic, quality, trait, or attribute of a particular individual, object, or situation being studied) such that intervention can be directly linked to the projected improvement in primary/secondary measures 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 UnitedHealthcare.

Intervention: The DCOR is a customized reporting tool that reflects practice level performance data and assists dental providers in identifying member engagement and educational opportunities related to key dental quality outcome measures. The original plan for the DCOR intervention for the PIP was to implement in February, May, and August 2020. Due to the Covid-19 Pandemic, the February and May interventions could not be completed. In July 2020, the Quality Team initiated the first DCOR intervention with the intention of assisting FQHCs in identifying members who needed to be seen for dental care. At this point, it was deemed too late in the year to complete a second intervention for the PIP due to the need for monitoring claims past 12/31/20.

Performance Measures/variables: The primary measure selected for the PIP was HEDIS® ADV and the secondary measure selected was ADV rate for the top 20 FQHCs. The PIP variable selected was defined as UnitedHealthcare members ages 2-20 years who have historically used a FQHC for dental services.

Data Collection: UnitedHealthcare used Inovalon, a HEDIS®-certified software engine, to generate on an annual basis the HEDIS ® ADV measure. Regarding the secondary measure, UnitedHealthcare used ClaimSphere, a HEDIS®-certified software engine, to generate quarterly the ADV measure rates and member-level detail (MLD) reports. The Clinical Quality Consultant used the ADV MLD data to extract the rates for the top 20 FQHCs used in the DCOR intervention. After the distribution of the July DCOR, the reports were run 90 days after the DCOR was distributed to identify members who had no dental visit in the previous 12 months and who had a visit within 90 days after the intervention. The final 90-day results were received and reviewed midway through November. The DCOR and the DCOR Outcome Report data are extracted from claims data received from the dental vendor.

Findings: A total of 4,566 members were included in the DCOR report that was distributed to 20 FQHCs in July 2020. In November 2020, the Quality Team received and reviewed the DCOR Outcome report with the results shown in Table 7 below.

Table 7. DCOR Intervention

DCOR Outcome Report		Dental Exam (D0120)		Preventive Dental Visit (D1120)		Oral Sealant Applied (D1351)		
Intervention	**Number of members with no visit in previous 12 months**	**Number of members with a dental visit within 90 days**	**% of members with any dental visit within 90 days**	**Number of members with preventive service within 90 days**	**% of members with preventive service within 90 days**	**Number of members aged 6 to 9 with no visit in previous 12 months**	**Number of members with sealant applied within 90 days**	**% of members with sealant applied within 90 days**
July 2020	4,566	575	12.59%	510	11.17%	1,115	44	3.95%

UnitedHealthcare presented quarterly ADV rates of 20 FQHCs (Table 8) and Statewide (Table 9) as follows:

Table 8. Quarterly ADV Rates-20 FQHCs

MY 2020	Numerator	Denominator	ADV Rate	Statistical Significance
July (Baseline) Claims as of 6/22/20	3,535	17,052	20.73%	N/A
September (Remeasurement-RM 1) Claims as of 8/22/20	4,526	16,963	26.68%	Yes, p=0 (Baseline- RM 1)
November (RM 2) Claims as of 9/22/20	5,688	16,737	33.98%	Yes, p=0 (RM1-RM2)*

*The change from the baseline-RM 2 is also reported to be statistically significant (p=0).

Table 9. Statewide Quarterly Rates-HEDIS® ADV

MY 2020	Numerator	Denominator	ADV Rate	Statistical Significance	Goal
April (Baseline) Claims as of 3/22/20	19,217	116,832	16.45%	N/A	55.70%
July (Remeasurement-RM 1) Claims as of 6/22/20	24,792	115,988	21.37%	Yes, p=0 (Baseline-RM1)	55.70%
October (RM-2) Claims as of 9/22/20	35,564	114,806	30.98%	Yes, p=0 (RM1-RM2)	55.70%
December (RM-3) Claims as of 12/7/20	42,807	112,630	38.01%	Yes, p=0 (RM2-RM3)*	55.70%

***** The change from the Baseline-RM3 is also reported to be statistically significant (p=0).

3.2.3 PIP Result

The aim of the PIP was not met. UnitedHealthcare's statewide rate for HEDIS® ADV decreased from 53.70% (MY 2019) to 41.18% (MY 2020), which is a decline of 12.52% points (Table 10). The change in performance is of statistical significance, p value=0 (p≤0.05 is significant).

Table 10. Statewide HEDIS® ADV Rate Trend (MY 2018-2020)

Measurement Period (MY)	Numerator	Denominator	ADV Rate	NCQA Benchmark (50th Percentile)	Goal
MY 2018	44,368	91,969	48.24%	56.60%	N/A

MY 2019	42,772	79,656	53.70%	58.03%	50.24%
MY 2020	46,380	112,635	41.18%	60.15%	55.70%

4.0 OVERALL CONCLUSIONS

PIPs Score

- Clinical PIP: Improving Childhood Immunization Status

Even though the aim of the PIP was met, and UnitedHealthcare's HEDIS® CIS rate increased from 25.06% to 36.25% (11.19% points), which is statistically significant (p=0.0005), 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 aim of the PIP was not met, and UnitedHealthcare's HEDIS® ADV rate significantly declined (p=0) from 53.70% to 41.18% (12.52% 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."

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 11). Note: Definitions of Met/Partially Met/Not Met are based on the CMS EQR Protocol 3.

Table 11. 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 12 summarizes the strengths and weaknesses identified during the evaluation of the PIPs.

Table 12. Strengths and Weaknesses of PIPs

Evaluation Criteria	Strength	Weakness
1. Selection of PIP topic	N/A	N/A

(the MHD provided the topic, hence marked as Not/Applicable-N/A)		
2. Writing an Aim statement	The PIP aim statement defined the improvement strategy, population, and period.	
3. Identifying the study population		UnitedHealthcare 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)	UnitedHealthcare's national Quality Solutions Delivery (QSD) team manages all HEDIS®-related activities, including vendor training and state-specific reporting. There is an overread process for all HEDIS® hybrid measures and final validation by an NCQA-certified auditor.	Even though UnitedHealthcare reported using variables in the PIPs, they were incorrectly defined. Furthermore, the intervention was not directed towards those variables. The secondary measures were either inappropriate as the intervention was not directed towards those or not defined.
6. Data collection	The data collection plan and analysis plan were linked. ClaimSphere and Inovalon, HEDIS®-certified software engines were used to collect the data for the primary measures.	Data elements collected after the intervention were not clearly and accurately defined along with units of measure. UnitedHealthcare provided partial information when questioned by Primaris regarding the data sources: if they used data for inpatients, primary care providers, specialty care providers, ancillary service providers, Electronic Health Records (EHR); and if the data collection included encounter/utilization data for all the services provided.
7. Data analysis and interpretation of results		Data collected after the intervention was insufficient

		and not linked to the change in performance of the primary and secondary measures.
8. Improvement strategies	The improvement strategies selected for the PIPs were evidence-based.	The improvement strategy was unsuccessful and not tested using the PDSA cycle even though this methodology is stated in the PIPs. The vaccination rates reported for MY 2020 as a result of postcard intervention was 4.94% as compared to the same intervention in MY 2019 (10.83%). The ADV rate reported as a result of DCOR intervention was less in MY 2020 (12.59%) than the same intervention in MY 2019 (16.20% for 14 FQHCs). (Primaris noted this figure from previous year's PIP).
9. Significant and sustained improvement	HEDIS® CIS Combo 10 rate for MY 2020 increased from 25.06% (MY 2019) to 36.25% (MY 2020). This is an improvement of 11.19% points which is statistically significant (p=0.0005). Quarterly HEDIS® ADV rates and FQHC dental visit rates showed improvement through repeated measurements which were statistically significant.	HEDIS® ADV rate showed a statistically significant (p=0) decline of 12.52% points from 53.70% (MY 2019) to 41.18% (MY 2020). HEDIS® CIS Combo 10 rates measured quarterly showed sustained improvement. However, it was not statistically significant quarter over quarter. The reported improvement is not likely to be a result of the selected intervention for both the PIPs.

4.2 Improvement by UnitedHealthcare

For the MY 2020, the statewide rates for HEDIS® CIS Combo 10 increased by 11.19%

points, and HEDIS® ADV declined by 12.52% points from the previous year (MY 2019). Table 13 shows UnitedHealthcare's response to the previous year's (EQR 2020) recommendations by EQRO and non-compliant items from EQR 2019.

Table 13. UnitedHealthcare's Response to Previous Year's Recommendations

Previous Recommendation	Action by UnitedHealthcare	Comment by EQRO
EQR 2020		
1. Even though the MHD mandates an overarching goal, UnitedHealthcare can select a topic within specified parameters. To ensure a successful PIP, UnitedHealthcare should find early and regular opportunities to obtain input from staff, providers, and members on improving care delivery.	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.
2. UnitedHealthcare 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).	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.
3. UnitedHealthcare should select a variable (a measurable characteristic, quality, trait, or attribute of a particular individual, object, or situation being studied) that could identify UnitedHealthcare's performance on the PIPs and track improvement over time. UnitedHealthcare can use focus groups, surveys, and interviews to collect qualitative insights from members, MCO and provider staff, and key external partners. Qualitative measures can serve as the secondary measures or supplement the overall measurement set, providing information that will aid PIP planning and implementation.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.

4. UnitedHealthcare should have variables/secondary measures that should tie an intervention to improvement. For example, after sending DCOR reports in ADV PIP, UnitedHealthcare should measure the % of appointments scheduled from the DCOR list and % of members responding by visiting a dentist.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.
5. Repeat measurements (at least two) in short intervals (unlike 90-day intervals selected in ADV PIP) should be conducted to determine whether significant performance changes relative to baseline measurement were observed.	There was no improvement towards this step in the methodology of PIP in EQR 2021 compared to EQR 2020.	The same recommendation applies to EQR 2021.
6. 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.
7. When analyzing multiple data points over time, UnitedHealthcare should consider tools such as time series, run chart, control chart, data dashboard, and basic trend analyses.	UnitedHealthcare presented data for the CIS Combo 10 rates as a result of intervention using run charts.	UnitedHealthcare should use these tools for both the PIPs in the future to show the intervention results.
EQR 2019		
1. UnitedHealthcare 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.
2. The interventions should be planned specifically for PIP required by the MHD Contract.	Intervention is ongoing each month since 2017 for CIS Combo 10 PIP. DCOR intervention is probably ongoing as it included nine FQHCs in the initiation of PIP.	The same intervention continues year over year. This year 20 FQHCs were included. The same

		recommendation applies to EQR 2021.
3. The results should be tied to the interventions.	Analysis of results to link with intervention is not explained.	The same recommendation applies to EQR 2021.

5.0 RECOMMENDATIONS

UnitedHealthcare

UnitedHealthcare 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 13), Primaris recommends the following:

1. Study Population: UnitedHealthcare 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.

2. Variables/secondary measures: Data elements collected after the intervention should be clearly and accurately defined along with units of measure and correctly utilized to analyze the PIP results.

3. Data Collection: UnitedHealthcare must address the data collection sources and specify if they used data for inpatients, primary care providers, specialty care providers, ancillary service providers, Electronic Health Records (EHR), and if the data collection included encounter/utilization data for all the services provided.

4. PDSA Cycles: UnitedHealthcare 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.

5. 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.

6. Sustained improvement: After an intervention is implemented and results are analyzed,

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

MHD

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

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

(Worksheets are attached on the next page.

APPENDIX A. PIP VALIDATION WORKSHEET-IMPROVING CHILDHOOD IMMUNIZATION STATUS

Date of Evaluation/Interview: July 30, 2021

MCO Name/Mailing Address:	UnitedHealthcare/13655 Riverport Dr, Maryland Heights, MO 63043
MCO Contact Name and Title:	Lisa Overturf, RN, CPHQ, QI Director
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: 154,926 Medicaid/CHIP members included in the study: 4,310 Number of PCPs/Specialists involved in CIS Combo 10 immunizations: 1,849 individual practitioners and 428 locations including 29 FQHCs and 78 Health Departments

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

ACTIVITY 1: ASSESS THE PIP METHODOLOGY

Step 1: Review the PIP Topic

Component/Standard	Score	Comments
1.1 Was the topic selected through a comprehensive analysis of MCO enrollee needs, care, and services? (Note: If the PIP topic was required by the state, it will be marked as N/A.)	N/A	MHD contract section 2.18.8d2 requires UnitedHealthcare to conduct a PIP with a goal to improve HEDIS® CIS Combo 10 each year by at least two % points in alignment with the Quality Improvement Strategy.
1.2 Did selection of the PIP topic consider performance on the CMS Child and Adult Core Set measures?	N/A	The PIP topic was selected by the MHD. However, Childhood Immunization Status is a Child Core Set measure (NQF0038).
1.3 Did the selection of PIP topic consider input from enrollees or providers who are users of, or concerned with, specific service areas? (Note: If the PIP topic was required by the state, it will be marked as N/A.).	N/A	The PIP topic was selected by the MHD.
1.4 Did the PIP topic address care of special populations or high priority services, such as: • Children with special health care needs • Adults with physical disabilities • Children or adults with behavioral health issues • People with intellectual and developmental disabilities	●	The PIP topic focused on preventive care of all children 2 years of age including children with special healthcare needs.

• People with dual eligibility who use long-term services and supports (LTSS) • Preventive care • Acute and chronic care • High-volume or high-risk services • Care received from specialized centers (e.g., burn, transplant, cardiac surgery) • Continuity or coordination of care from multiple providers and over multiple episodes • Appeals and grievances • Access to and availability of care		
1.5 Did the PIP topic align with priority areas identified by HHS and/or CMS?	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, UnitedHealthcare has the flexibility to select a topic within specified parameters. To ensure a successful PIP, UnitedHealthcare 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?	●	Strategy was to increase the percentage of UnitedHealthcare members aged two and under who are eligible for and receive CIS Combo 10 vaccines.
2.2 Did the PIP aim statement clearly specify the population for the PIP?	●	All members two years old and under were included.
2.3 Did the PIP aim statement clearly specify the time period for the PIP?	●	The period is MY 2020 (end of Dec 31, 2020).
2.4 Was the PIP aim statement concise?	●	The aim statement is "By December 31, 2020, increase the percentage of UnitedHealthcare members aged two and under who are eligible for and receive CIS Combo 10 vaccines from 25.06% to 27.06%."
2.5 Was the PIP aim statement answerable?	●	Same comment as in section 2.4.

2.6 Was the PIP aim statement measurable?	●	Same comment as in section 2.4.
2.7 Overall assessment/recommendations for improving the PIP aim statement.	●	Even though overarching aim is provided by the MHD, UnitedHealthcare should translate aim statement that identifies the focus of the PIP and establish the framework for data collection and analysis on a small scale.

Step 3: Review the Identified Study Populations

Component/Standard	Score	Comments
3.1 Was the project population clearly defined in terms of the identified PIP question (e.g., age, length of the PIP population's enrollment, diagnoses, procedures, other characteristics)?	●	UnitedHealthcare presented two different statements about the project population as follows: "The primary measure study population includes members who were eligible based on NCQA's HEDIS® CIS Combo 10 Technical Specifications, consisting of 4,310 members." Another statement about the project population was as follows: "For the secondary measure, the study population consisted of 4,310 members who turned two years old in MY 2020 and were eligible based on NCQA's HEDIS® CIS Pneumococcal Conjugate Technical Specifications." UnitedHealthcare is not clear about the project population/target population.
3.2 Was the entire MCO population included in the PIP?	●	All members who were eligible based on NCQA's HEDIS® CIS Combo 10 Technical Specifications were included in the PIP.
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.
3.4 Was a sample used?	N/A	Sampling was not utilized.
3.5 Overall assessment/recommendations for identifying the project population.	●	UnitedHealthcare should clearly define the target population and PIP population. Primaris recommends the PIP population be selected at a small scale (e.g., from a county, provider office, or a region) so that results can be measured during PDSA cycle and subsequently applied at a larger scale.

Step 4: Review Sampling Method

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

Step 5: Review the Selected PIP Variables and Performance Measures

Component/Standard	Score	Comments
PIP Variables		
5.1 Were the variables adequate to answer the PIP question? • 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)?		Even though UnitedHealthcare reported that the variable used in the PIP was focusing on members who turned two years old in MY 2020 and who were non-compliant for the pneumococcal conjugate vaccine (PCV13), the PIP did not involve intervention and data collection related to PCV13 specifically. PCV13 vaccination rate was selected as a secondary measure even though the intervention was not specific to this 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 was used as a primary measure and PCV13 rate was selected as a secondary 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 selected was not appropriate as 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.
5.5 Did the performance measures: • 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?	🟢	Quarterly data for HEDIS® CIS Combo 10 and PCV13 rates were tracked and showed improvement. Data for other MCOs in MY 2020 was not available to UnitedHealthcare as this was not a collaborative PIP. However, the results of the intervention showed decrease from 10.05% (in Jan 2020) to 2.04% (in Nov 2020).
5.6 Did the MCO consider existing measures, such as CMS Child and Adult Core Set, Core Quality Measure Collaborative, certified community behavioral health clinics (CCBHC) measures, HEDIS®, or AHRQ measures?	🟢	CMS Child Core Set measure (HEDIS® CIS Combo 10) was used as primary indicator.
5.7 If there were gaps in existing measures, did the MCO consider the following when developing new measures based on current clinical practice guidelines or health services research? • 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)?	🟢	There were no gaps in the existing measures, so new measures were not developed. The primary and secondary measure was defined based on the NCQA technical specifications.

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.)		Enrollee satisfaction or experience of care was not addressed in the PIP.
5.9 Did the measures include a strategy to ensure inter-rater reliability (if applicable)?		UnitedHealthcare's national Quality Solutions Delivery (QSD) team manages all HEDIS®-related activities, including vendor training and state-specific reporting. There is an overread process for all HEDIS® hybrid measures, as well as final validation by an NCQA-certified auditor.
5.10 If process measures were used, is there strong clinical evidence indicating that the process being measured is meaningfully associated with outcomes? • 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).
5.11 Overall assessment/recommendations for improving the selected PIP variables and performance measures.		Rationale of selecting secondary measure is not understood as the intervention is not directed towards it. UnitedHealthcare 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. UnitedHealthcare 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 UnitedHealthcare's performance on the PIP aim objectively and reliably and use clearly defined indicators of

		performance.

Step 6: Review Data Collection Procedures

Component/Standard	Score	Comments
Assessment of Overall Data Collection Procedures		
6.1 Did the PIP design specify a systematic method for collecting valid and reliable data that represents the population in the PIP?	●	ClaimSphere and Inovalon, HEDIS®-certified software engines were used generate HEDIS® CIS Combo 10 and PCV13 rates.
6.2 Did the PIP design specify the frequency of data collection? If yes, what was the frequency (for example, semi-annually)?	●	UnitedHealthcare specified quarterly data collection for primary measure and secondary measure and monthly data collection for the intervention.
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.	●	Primary measure-HEDIS® Interactive Data Submission System (IDSS). Secondary measure-Claims data, supplemental data, state immunization registry.
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).	●	Primary and secondary measures were per HEDIS® technical specifications. Definitions of data elements collected after the intervention and units of measure were not provided.
6.5 Did the data collection plan link to the data analysis plan to ensure that appropriate data would be available for the PIP?	●	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?	●	Same comment as in section 6.1.
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 that are collected as a result of intervention should be clearly defined along with units of measure.
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?	●	Administrative data for HEDIS® measures is based on the claims submitted by providers.
6.11 If specialty care data was used, did specialty care providers submit encounter or utilization data for all encounters?	N/A	Specialty care data was not used.
6.12 If ancillary data was used, did ancillary service providers submit encounter or utilization data for all services provided?	●	UnitedHealthcare used state immunization registry.
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?	●	UnitedHealthcare has not addressed this criterion in the PIP.
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 final result included MRR. UnitedHealthcare provided the names and credentials of people who were ultimately 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? •A glossary of terms for each project should be developed before data collection begins to	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.

ensure consistent interpretation among and between data collection staff. •Data collection staff should have clear, written instructions, including an overview of the PIP, how to complete each section of the form or instrument, and general guidance on how to handle situations not covered by the instructions. This is particularly important when multiple reviewers are collecting data.		

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 as planned, but was not analyzed. The primary and secondary measures were analyzed without relating it to the data collected after the intervention.
7.2 Did the analysis include baseline and repeat measurements of project outcomes?	🟡	Analysis included baseline and repeat measurements for the primary measure and secondary measure. However, analysis was not based on the results of the data collected after the intervention.
7.3 Did the analysis assess the statistical significance of any differences between the initial and repeat measurements?	🟢	Statistical significance was tested between initial and repeat measurements for both the primary and the secondary measure.
7.4 Did the analysis account for factors that may influence the comparability of initial and repeat measurements?	🔴	The effect of Covid-19 pandemic was attributed to the results however, both primary and secondary measure increased each quarter in spite of the decline in the rate of compliance after the intervention each month. The result and intervention were not linked.
7.5 Did the analysis account for factors that may threaten the internal or external validity of the findings?	🟢	UnitedHealthcare reported that no factors were identified that threatened the internal or external 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 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 rates and statistical significance of primary and secondary measures were presented. However, there is no link between primary measure, secondary measure, and the data after the intervention.

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.)		UnitedHealthcare continued intervention each month with decline in the compliance rate. At the end of the project, they have concluded that the intervention could not be tied to the increase in the secondary measure or the primary measure.
7.9 Overall assessment/recommendations for improving the analysis and interpretation of PIP results.		UnitedHealthcare must adopt PDSA cycles which involve analysis, feedback/lessons learned from the data collected after an intervention and application of 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)?		Pfizer reports an 18.2% percentage improvement in pediatric vaccination rates by using the Missed Dose Postcard. The Pfizer Missed Dose Postcard currently operates in 26 states within UnitedHealthcare Medicaid plans since 2017, including Missouri.
8.2 Was the strategy designed to address root causes or barriers identified through data analysis and quality improvement processes?		The postcard does not meet solutions outlined in the barrier analysis to educate the member on vaccination schedules or safety. The intervention serves only as a notice that a baby's vaccination is overdue.
8.3 Was the rapid-cycle PDSA approach used to test the selected improvement strategy?		Primaris determined that the intervention was not tested and methodology was not based on a PDSA cycle.
8.4 Was the strategy culturally and linguistically appropriate?		Pfizer Missed Dose Postcard was mailed with both English and Spanish languages (readability statistics reported was 5th grade).
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)?		A change in the strategy was not addressed. However, UnitedHealthcare mentioned the Covid-19 pandemic and its possible impact on the measures. Safer practices by providers to see patients in their clinics following preventive measures, social distancing, and the development of Covid-19 vaccine helped the members to feel safe in going out of their homes and catch up with the vaccination schedules.

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 improvement strategy was not successful. The vaccination rates reported this year as a result of post-card intervention was 4.94% as compared to the same intervention in MY 2019 (10.83%).
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 its link to the intervention.

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

Component/Standard	Score	Comments
9.1 Was the same methodology used for baseline and repeat measurements?		Primary and secondary measures were collected using same methodology.
9.2 Was there any quantitative evidence of improvement in processes or outcomes of care?		HEDIS® CIS Combo 10 rate for MY 2020 increased from 25.06% (MY 2019) to 36.25% (MY 2020). This an improvement of 11.19% points.
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?		The observed improvement in the primary measure is statistically significant (P=0.0005). The secondary measure only showed significant improvement in the last quarter. However, it is not a result of the intervention.
9.5 Was sustained improvement demonstrated through repeated measurements over time?		The HEDIS® CIS Combo 10 rates measured quarterly showed sustained improvement. However, it was not statistically significant quarter over quarter.
9.6 Overall assessment/recommendations for improving the significance and sustainability of improvement as a result of the PIP.		After an intervention is implemented and results are analyzed, UnitedHealthcare should review processes to create sustained improvement. This allows the MCO to maintain the positive results of the intervention, correct negative results, and/or scale the intervention to support longer-term improvements or broader improvement capacity across other health services, populations, and aspects of care. Because PIPs can be resource-intensive,

		this phase also helps learn how to allocate more efficiently for future projects. Repeat measurements in short intervals should be conducted to determine whether significant change in performance relative to baseline measurement was observed.

ACTIVITY 2: PERFORM OVERALL VALIDITY AND REPORTING Of PIP RESULTS

Perform Overall Validation of PIP Results

PIP Validation Rating (check one box)	Comments
☐ High confidence ☐ Moderate confidence ☑ Low confidence ☐ No confidence	Even though aim of the PIP was met and the HEDIS® CIS rate increased from 25.06% to 36.25% (11.19% points), which is statistically significant (p=0.0005), the PIP is assigned a score of "Low Confidence." The quality improvement process and intervention were poorly executed and could not be linked to the improvement.

APPENDIX B. PIP VALIDATION WORKSHEET-IMPROVING ORAL HEALTH

Date of Evaluation/Interview: July 30, 2021

MCO Name/Mailing Address:	UnitedHealthcare/13655 Riverport Dr, Maryland Heights, MO 63043
MCO Contact Name and Title:	Lisa Overturf, RN, CPHQ, QI Director
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: 154,926 Medicaid/CHIP members included in the study: 18,602 Number of Dentists/Specialists: 707 individual practitioners and 238 locations including 175 FQHCs.

Score: **Met**🟢**/ Partially Met**🟡**/Not Met**🔴**/ Not Applicable (N/A)**

ACTIVITY 1: ASSESS THE PIP METHODOLOGY

Step 1: Review the PIP Topic

Component/Standard	Score	Comments
1.1 Was the topic selected through a comprehensive analysis of MCO enrollee needs, care, and services? (Note: If the PIP topic was required by the state, it will be marked as N/A.)	N/A	The MHD contract section 2.18.8d2 requires UnitedHealthcare, at a minimum, to set a goal to improve the plan specific HEDIS® Annual Dental Visit (ADV) 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: • Children with special health care needs • Adults with physical disabilities • Children or adults with behavioral health issues	🟢	The PIP topic addressed "Access to and Availability of Care" for all UnitedHealthcare population aged 2-20 years old including those with special health care needs, physical disabilities, and behavioral health issues, as following:

• 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		• 18.07% between the ages of 2 and 5 • 43.80% within the Aid Category MO HealthNet for Kids–Poverty • 23.10% within the Aid Category MO HealthNet Families–Child • 1.08% were MO HealthNet Foster Care Kids • 22.81% African American • 0.18% whose primary language is Spanish
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, UnitedHealthcare has the flexibility to select a topic within specified parameters. To ensure a successful PIP, UnitedHealthcare 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?	●	The strategy was to increase the percentage of UnitedHealthcare members between aged 2–20 years old who are eligible for and receive an annual dental visit.
2.2 Did the PIP aim statement clearly specify the population for the PIP?	●	Entire UnitedHealthcare population ages 2-20 years old were included.
2.3 Did the PIP aim statement clearly specify the time period for the PIP?	●	The period is MY 2020 (end of Dec 31, 2020).
2.4 Was the PIP aim statement concise?	●	The aim statement is “By December 31, 2020, increase the percentage of UnitedHealthcare members between ages 2–20 years old who are eligible for and receive an annual dental visit from 53.70% to 55.70%.”

2.5 Was the PIP aim statement answerable?	●	Same comment as in section 2.4
2.6 Was the PIP aim statement measurable?	●	Same comment as in section 2.4
2.7 Overall assessment/recommendations for improving the PIP aim statement.	●	Even though overarching aim is provided by the MHD, UnitedHealthcare should translate aim statement that identifies the focus of the PIP and establish the framework for data collection and analysis on a small scale.

Step 3: Review the Identified Study Populations

Component/Standard	Score	Comments
3.1 Was the project population clearly defined in terms of the identified PIP question (e.g., age, length of the PIP population's enrollment, diagnoses, procedures, other characteristics)?	●	UnitedHealthcare presented two different statements about the project population as follows: "The study population for the primary measure consists of all UnitedHealthcare members who were eligible based on NCQA's HEDIS® Annual Dental Visit (ADV) Technical Specifications. The criteria specify Medicaid members aged 2-20 years as of 12/31/2020 who were continuously enrolled throughout the measurement year with no more than one gap in enrollment as the eligible population." Another statement about the project population was as follows: "For the secondary measure, the study population consisted of 18,602 individual members who were attributed to one of the top 20 FQHCs with the highest number of members non-compliant for ADV. The population spanned all 114 counties in Missouri." Primaris noted that UnitedHealthcare is not clear about the project population/target population.
3.2 Was the entire MCO population included in the PIP?	●	Medicaid members aged 2-20 years as of 12/31/2020 who were continuously enrolled throughout the measurement year with no more than one gap in enrollment (112,635 members).

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 approach was based on HEDIS® Technical Specifications.
3.4 Was a sample used?	N/A	Sampling was not utilized.
3.5 Overall assessment/recommendations for identifying the project population.	●	UnitedHealthcare should clearly define the target population and PIP population. Primaris recommends PIP population be selected at a small scale (e.g., from a county, provider office, or a region) so that results can be measured during PDSA cycle and subsequently applied at a larger scale.

Step 4: Review Sampling Method

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

Step 5: Review the Selected PIP Variables and Performance Measures

Component/Standard	Score	Comments
PIP Variables		
5.1 Were the variables adequate to answer the PIP question?	●	The PIP variables were not selected that could identify UnitedHealthcare's

• 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)?		performance on the PIP questions objectively and reliably and track improvement over time. However, a secondary measure (FQHC Dental Visit Rate) was selected.
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 and FQHC Dental Visit Rate was selected as a secondary measure.
5.3 Were the performance measures appropriate based on the availability of data and resources to collect the data (administrative data, medical records, or other sources)?	●	Same comment as in section 5.2.
5.4 Were the measures based on current clinical knowledge or health services research? E.g., Recommended procedures, appropriate utilization (hospital admissions, emergency department visits), adverse incidents (such as death, avoidable readmission), referral patterns, authorization requests, appropriate medication use.	●	Same comment as in section 5.2.
5.5 Did the performance measures: • 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?	●	Quarterly HEDIS® ADV rates statewide were reported which showed statistically significant improvement. Data for other MCOs in MY 2020 was not available to UnitedHealthcare as this was not a collaborative PIP. The secondary measure also showed improvement.
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?	●	The primary measure was defined based on the NCQA technical specifications. The secondary measure was not defined.

• 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)?		
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.)		The dental rate at FQHC post-intervention was measured and the rates showed improvement over time.
5.9 Did the measures include a strategy to ensure inter-rater reliability (if applicable)?	N/A	ClaimSphere, a HEDIS® certified software engine to generate the HEDIS ® ADV measure and member-level detail (MLD) reports for the secondary measure was used. Medical Record Review was not used.
5.10 If process measures were used, is there strong clinical evidence indicating that the process being measured is meaningfully associated with outcomes? • 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.		In the future, UnitedHealthcare 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 UnitedHealthcare's

		performance on the PIP questions objectively and reliably and use clearly defined indicators of performance. UnitedHealthcare 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?		ClaimSphere, a HEDIS® certified software engine to generate the HEDIS ® ADV measure and member-level detail (MLD) reports for the secondary measure was used. The data in the DCOR and the DCOR Outcome Report was extracted from claims data received from the dental vendor.
6.2 Did the PIP design specify the frequency of data collection? If yes, what was the frequency (for example, semi-annually)?		The data collection plan included frequency of the data related to the primary measure (on a quarterly basis) but not about the secondary measure. However, UnitedHealthcare reported inconsistent information about the data collection for the secondary measure when they describe their data analysis plan (on a bimonthly basis). The data collection time was 90 days after intervention, which started in July 2020, but FQHC rates were presented bimonthly (Sept and Nov 2020).
6.3 Did the PIP design clearly specify the data sources? Data sources may include: Encounter and claims systems, medical records, case management or electronic visit verification systems, tracking logs, surveys, provider and/or enrollee interviews.		Primary measure- UnitedHealthcare uses Inovalon, a HEDIS® certified software engine to generate on an annual basis the HEDIS® ADV rates. Secondary measure-Claims data.
6.4 Did the PIP design clearly define the data elements to be collected? Accurate measurement depends on clear and concise definitions of data elements (including numerical definitions and units of measure).		The data elements for the primary measure are defined however, these are incorrectly/inaccurately defined for the secondary measure.

6.5 Did the data collection plan link to the data analysis plan to ensure that appropriate data would be available for the PIP?	●	The data collection and data analysis plan are linked. Refer to 6.2 for additional details.
6.6 Did the data collection instruments allow for consistent and accurate data collection over the time periods studied?	●	Same comment as in section 6.1.
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 collection plan should include all the information about data to be collected as a result of the PIP (primary measure, secondary measure, variable, interventional data) and accurate definitions of data elements.
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. UnitedHealthcare used dental claims data.
6.11 If specialty care data was used, did specialty care providers submit encounter or utilization data for all encounters?	N/A	Specialty care data was not used.
6.12 If ancillary data was used, did ancillary service providers submit encounter or utilization data for all services provided?	N/A	Ancillary data was not used.
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	N/A	EHR data was not used.

accuracy and completeness as well as comparability across systems?		
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 primary and the secondary measures.
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? •A glossary of terms for each project should be developed before data collection begins to ensure consistent interpretation among and between data collection staff. •Data collection staff should have clear, written instructions, including an overview of the PIP, how to complete each section of the form or instrument, and general guidance on how to handle situations not covered by the instructions. This is particularly important when multiple reviewers are collecting data.	N/A	Same comment as in section 6.15

Step 7: Review Data Analysis and Interpretation of PIPs Results

Component/Standard	Score	Comments
7.1 Was the analysis conducted in accordance with the data analysis plan?		The analysis of primary and secondary measure was done as planned. The data after one intervention was presented as planned. However, there was insufficient information to link the intervention with the progress.
7.2 Did the analysis include baseline and repeat measurements of project outcomes?		Baseline and repeat measurements for primary and secondary measures were included. However, there was no repeat measurement after the intervention to provide a useful analysis.

7.3 Did the analysis assess the statistical significance of any differences between the initial and repeat measurements?		Statistical significance (Chi-square test) was tested for both the primary and secondary measure for the initial and repeat measurements.
7.4 Did the analysis account for factors that may influence the comparability of initial and repeat measurements?		The effect of Covid-19 pandemic was attributed to the results however, both primary and secondary measure increased from the initial and repeat measurements. Only one data set was obtained after the intervention so comparability could not be studied.
7.5 Did the analysis account for factors that may threaten the internal or external validity of the findings?		No factors threatened validity of 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 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 rates and statistical significance of primary and secondary measures were presented. The results were scattered at several places in the PIP document. There is no link between primary measure, secondary measure, and the data after the intervention.
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.)		With the initial intervention being delayed until July 2020 and the results not being available until November 2020, UnitedHealthcare could capture feedback and lessons learned but could not implement it for the next cycle.
7.9 Overall assessment/recommendations for improving the analysis and interpretation of PIP results.		UnitedHealthcare must adopt PDSA cycles which involve analysis, feedback/lessons learned from the data collected after an intervention and application of these outcomes to plan another test cycle. UnitedHealthcare should link the results of data collected after the intervention with the primary and secondary measures.

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)?		A gap closure report (e.g., DCOR) is an effective strategy (stated in resources published in CMS Medicaid Oral Health Performance Improvement Projects manual).
8.2 Was the strategy designed to address root causes or barriers identified through data analysis and quality improvement processes?		Barrier analysis was submitted and key drivers and interventions were identified.
8.3 Was the rapid-cycle PDSA approach used to test the selected improvement strategy?		Even though UnitedHealthcare reported using PDSA cycle, the methodology was not correctly applied.
8.4 Was the strategy culturally and linguistically appropriate?		No issues related to strategy are reported at provider level.
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 only change in the strategy was adopted by not initiating the intervention during the Stay-Home state-wide order due to Covid-19 pandemic.
8.6 Building on the findings from the data analysis and interpretation of PIP results (Step 7), did the PIP assess the extent to which the improvement strategy was successful and identify potential follow-up activities?		Significant improvement was projected in primary measure and secondary measures. However, the link between intervention and improvement could not be established. UnitedHealthcare identified potential follow up activities.
8.7 Overall assessment/recommendations for improving the implementation strategies.		UnitedHealthcare should have variables/secondary measures that tie an intervention to improvement. Such as, after sending DCOR reports, they should measure the % of members contacted by the FQHC to schedule appointments and % of members responding by visiting to a dentist.

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

Component/Standard	Score	Comments

9.1 Was the same methodology used for baseline and repeat measurements?		Same methodology was used for repeat HEDIS® ADV rates and FQHC dental visit rates.
9.2 Was there any quantitative evidence of improvement in processes or outcomes of care?		Primary measure has shown a statistically significant (p=0) decline of 12.52% points from 53.70% (MY 2019) to 41.18% (MY 2020). The secondary measure has shown a statistically significant increase from July-Nov 2020.
9.3 Was the reported improvement in performance likely to be a result of the selected intervention? (Conclusive demonstration through controlled studies is not required.)		The primary measure did not improve. The improvement in secondary data could not 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?		Same comment as in section 9.3.
9.5 Was sustained improvement demonstrated through repeated measurements over time?		Quarterly HEDIS® ADV rates and FQHC dental visit rates showed improvement through repeated measurements which were statistically significant.
9.6 Overall assessment/recommendations for improving the significance and sustainability of improvement as a result of the PIP.		After an intervention is implemented and results are analyzed, UnitedHealthcare should make review processes to create sustained improvement. This allows the MCO to maintain the positive results of the intervention, correct negative results, and/or scale the intervention to support longer-term improvements or broader improvement capacity across other oral health services, populations, and aspects of care. Repeat measurements (at least two) in short intervals (unlike 90 days interval selected in this PIP) should be conducted to determine whether significant change in performance relative to baseline measurement was observed.

ACTIVITY 2: PERFORM OVERALL VALIDITY AND REPORTING Of PIP RESULTS

Perform Overall Validation of PIP Results

PIP Validation Rating (check one box)	Comments
☐ High confidence ☐ Moderate confidence ☐ Low confidence ☑ No confidence	The aim of the PIP was not met and the HEDIS® ADV rate significantly declined (p=0) from 53.70% to 41.18% (12.52% points). 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.”