Medi-Cal Managed Care Value-Based Payment (VBP) Program Evaluation for Measurement Years (MY) 1 – 4: January 1, 2019 – December 31, 2022

DHCS

CALIFORNIA DEPARTMENT OF
HEALTH CARE SERVICES

Background

In November 2016, California passed Proposition 56 measure, known as the California Healthcare Research and Prevention Tobacco Tax Act, to support access to health care for low-income Californians covered by the Medi-Cal program. Proposition 56 raised the excise tax rate on cigarettes and other tobacco products to fund specific Department of Health Care Services (DHCS) health care programs, including the Family Planning, Access, Care and Treatment program, women's health services, dental and physician services, developmental and trauma screenings, non-emergency medical transportation, and more.[1]

For state fiscal year (SFY) 19 - 20, the Governor's Budget proposed a Value-Based Payment (VBP) program tied to Proposition 56 that directs managed care health plans (MCPs) to provide incentive payments to providers for meeting specific measures aimed at improving care for certain high-cost or high-need populations. These risk-based incentive payments were targeted at eligible network providers that meet specific achievement on metrics targeting areas in four specified domains:

- Prenatal/postpartum care
- Early childhood preventive care
- Chronic disease management
- Behavioral health care

DHCS implemented the VBP Program on July 1, 2019. The program was authorized by the Centers for Medicare & Medicaid Services (CMS) and the California State Legislature to operate from July 1, 2019, through June 30, 2022. [2]

In accordance with §438.6(c)(2)(i)(D), the state is required to carry out evaluation activities to assess performance and results within the context of VBP implementation efforts.

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[1] California Proposition 56
[2] Proposition 56 Value Based Payment Program

Evaluation Purpose and Plan

The purpose of this evaluation is to determine the impact of the multi-year directed payments made through DHCS's Medi-Cal MCPs to network providers for the VBP program. The VBP program is intended to incentivize provider behaviors and improvements in individual providers' standards of practice related to the delivery of care in the four specified domains. In addition, this program incentivizes improved data quality and completeness, which can help to inform future health care policy for Medi-Cal beneficiaries.

The CMS-approved evaluation design featured three evaluation questions focused on progress related to access and quality as well as data quality and timeliness:

1. To what extent do payments to individual providers influence patient-centered behaviors? For example, if visits for pre- and postnatal care and well-child checks increase, it will likely be due either to efforts to schedule and/or re-schedule recommended visits or to take advantage of an unplanned health care visit to satisfy well-child visit requirements.
2. How quickly will providers respond to payments aimed at decreasing MCP reliance on chart reviews for the calculation of CMS Core Set measures?
3. How quickly will providers respond to payment requirements that a Type 1 National Provider Identifier (NPI) must be entered for a payment to occur? The Centers for Medicare & Medicaid Services (CMS) developed the National Plan and Provider Enumeration System (NPPES) to assign unique identifiers to health care providers. The NPPES manages two types of health care providers: Entity Type 1 health care providers are individuals, including physicians, dentists, and all sole proprietors. Entity Type 2 health care providers are organizations, including physician groups, hospitals, nursing homes, and the corporation formed when an individual incorporates him/herself. For this evaluation, DHCS assessed whether the rendering provider's NPI and taxonomy code data fields were populated and if there was a change in the completion rate across years. DHCS also assessed the Entity Type of the rendering provider (whether/not the NPI was associated with a Type 1 or Type 2 provider), although the change in the distribution by Entity Type across years was not evaluated.

Evaluation Data Sources and Measures

This evaluation addresses these questions mainly through quantitative analysis of encounter data extracted from the DHCS Management Information System/Decision Support System (MIS/DSS) and external data received from the Managed Care Accountability Sets (MCAS) for quality score reporting and service dates in calendar year (CY) 2019 through CY 2022 for VBP performance measures. DHCS calculated the measure rates using measures from either the Centers for Medicare & Medicaid Services (CMS) Child and Adult Core Set (MY 2021/FFY2022) or Healthcare Effectiveness Data and Information Set/ National Quality Forum (HEDIS/NQF) specifications after applying the exclusion criteria from the VBP program specifications (see Appendix 1).
For measures involving immunizations, the immunizations reported through the California Department of Public Health (CDPH) California Immunization Registry (CAIR) 2.0 and CDPH Regional Immunization Data Exchange (RIDE) were used as supplementary data sources for performance periods 2019 - 2022. The CAIR immunization data for MY 2018 was not available and the CIS-CH-Combination 10 measure was considered incomplete for that year. Because the statewide CAIR data was included in MY 2019 – 2022 data, MY 2019 was used as an alternative baseline period for the CIS measure because it was more complete/comparable to the performance years.

For the Blood Lead Screening measure, the blood lead test results reported through the CDPH Response and Surveillance System for Childhood Lead Exposure II (RASSCLEII) were used as a supplementary data source.

The baseline period was January 1 - December 31, 2018. The first measurement year was January 1, 2019 - December 31, 2019, which had six months of payments (starting July 2019). The last measurement year was January 1, 2022 - December 31, 2022, which also has six months of payments (through June 2022). Generally, service dates represent each measurement year ranging from January 1 to December 31 of each calendar year. The specific time periods differ by measure.

DHCS compared each measurement year to the baseline year to identify whether there were more services provided to managed care members from eligible network MCP providers. The Two-Proportion Z-test was used to determine if there were a significant change in rates, comparing MY 2022 to MY 2018, with a p value of ≤ 0.05.

Evaluation Results

California directed MCPs to make value-based enhanced payments to eligible network providers for specific events tied to performance on 17 measures across four domains: prenatal/postpartum care, early childhood preventive care, chronic disease management, and behavioral health care. DHCS calculated summary metrics to describe and compare health care services utilization over the duration of the VBP program (MY 2019 to MY 2022), compared to the MY 2018 baseline.

Domain: Prenatal/Postpartum Care

The following five measures aimed at improving the content, quality, and timeliness of prenatal and postpartum care:

- PR-Pertussis - Prenatal Pertussis ('Whooping Cough') Vaccine describes the percentage of women who are pregnant during the measurement year that received the pertussis vaccination during the pregnancy.
- PPC-CH - Prenatal Care Visit - describes the percentage of deliveries of live births on or between October 8 of the year prior to the measurement year and October 7 of the measurement year that received a prenatal care visit in the first trimester, on or before the enrollment start date or within 42 days of enrollment in Medi-Cal.
- PPC-AD - Postpartum Care Visits - describes the percentage of deliveries of live births on or between October 8 of the year prior to the measurement year and October 7 of the measurement year that had a postpartum visit on or between 7 and 84 days after delivery.
- CCP-MMEC - Postpartum Birth Control: with a most effective or moderately effective method of contraception - describes the percentage of postpartum women ages 15 to 44 provided a most effective or moderately effective method of contraception within 60 days of delivery.
- CCP-LARC - Postpartum Birth Control: with a long-acting reversible method of contraception - describes the percentage of postpartum women ages 15 to 44 provided a long-acting reversible method of contraception within 60 days of delivery.

Table 1: Prenatal/Postpartum Care Measures – by Measure Year

Measurement		2018 (baseline)	2019	2020	2021	2022
PR-Pertussis	Numerator	70,658	77,637	87,358	86,209	101,511
	Denominator	248,479	238,585	242,149	251,945	270,884
	Rate (%)	28.4	32.5	36.1	34.2	37.5
PPC-CH	Numerator	106,529	100,343	106,698	109,770	116,555
	Denominator	126,114	110,437	121,416	125,350	131,623
	Rate (%)	84.5	90.9	87.9	87.6	88.6
PPC-AD	Numerator	84,143	85,644	95,765	102,022	107,803
	Denominator	126,114	110,437	121,416	125,350	131,623
	Rate (%)	66.7	77.6	78.9	81.4	81.9
CCP-MMEC	Numerator	40,907	38,048	40,517	40,002	41,616
	Denominator	113,410	109,605	110,323	113,530	126,748
	Rate (%)	36.1	34.7	36.7	35.2	32.8
CCP-LARC	Numerator	11,349	11,163	12,804	12,784	12,624
	Denominator	113,410	109,605	110,323	113,530	126,748
	Rate (%)	10.0	10.2	11.6	11.3	10.0

Table 2: Prenatal/Postpartum Care Measures – Change Across Time Comparing MY 2018 (Baseline Period) and MY 2022 (Current Reporting Period)

Measure	2018 Rate (baseline)	2022 Rate	Percentage Point Difference	Percentage Change	2018 – 2022 Comparison
PR-Pertussis	28.4	37.5	9.1	32.0	▲
PPC-CH	84.5	88.6	4.1	4.9	▲
PPC-AD	66.7	81.9	15.2	22.8	▲
CCP-MMEC	36.1	32.8	-3.3	-9.1	▼
CCP-LARC	10.0	10.0	0.0	0.0	—

▲ Indicates a statistically significant improvement in the 2022 rate compared to baseline.
▼ Indicates a statistically significant worsening in the 2022 rate compared to the baseline.
— Indicates that the difference was not statistically significant.

- PR-Pertussis - The prenatal pertussis (whooping cough) vaccination rate significantly increased between MY 2018 and MY 2022. The MY 2022 rate was 9.1 percentage points higher than MY 2018, a 32.0 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from 4.1 to 9.1 percentage points.

- PPC-CH – The prenatal care visit rate significantly increased between MY 2018 and MY 2022. The MY 2022 rate was 4.1 percentage points higher than MY 2018, a 4.9 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from 3.1 to 6.4 percentage points.
- PPC-AD - The postpartum care visit rate significantly increased between MY 2018 and MY 2022. The MY 2022 rate was 15.2 percentage points higher than MY 2018, a 22.8 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from 10.9 percent to 15.2 percentage points.
- CCP-MMEC - The rate of postpartum birth control with a most effective or moderately effective method of contraception significantly decreased between MY 2018 and MY 2022. The MY 2022 rate was 3.3 percentage points lower than MY 2018, a 9.1 percent decrease. The percentage point difference, comparing measurement years to the baseline year, ranged from -3.3 percent to 0.6 percentage points.
- CCP-LARC – The rate of postpartum birth control with a long-acting reversible method of contraception did not change significantly between MY 2018 and MY 2022. The percentage point difference, comparing measurement years to the baseline year, comparing measurement years to the baseline period, ranged from 0.0 to 1.6 percentage points.

Domain: Early Childhood Preventive Care

The following five measures aimed at increasing the number of well-child visits and improving rates of childhood vaccination, identification and treatment of high blood lead levels, and preventive dental care were reported:

- W30-CH - Well Child Visits First 15 months of Life describes the percentage of children who had six or more well-child visits with a primary care practitioner (PCP) in the first 15 months.
- WCV-CH - Child and Adolescent Well-Care Visits describes the percentage of children ages 3 to 11 who had at least one comprehensive well-care visit with a primary care practitioner (PCP) or an obstetrician/gynecologist (OB/GYN) during the measurement year.

- CIS-CH - All Childhood Vaccines for Two Year Olds (CIS-Combination 10) describes the percentage of children 2 years of age who had a combination of four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV); one measles, mumps and rubella (MMR); three haemophilus influenza type B (HiB); three hepatitis B (Hep B), one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (HepA); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday.
- LSC - Blood Lead Screening describes the percentage of children 2 years of age who had one or more capillary or venous lead blood test for lead poisoning by their second birthday.
- TFL-CH - Dental Fluoride Varnish describes the percentage of children ages 1 to 20 who received at least two fluoride applications on unique dates of service as a dental service or oral health service (non-dental provider).

Table 3: Early Childhood Preventive Care Measures – by Measure Year

Measure		2018 (baseline)	2019	2020	2021	2022
W30-CH	Numerator	8,365	8,745	8,862	9,665	10,663
	Denominator	81,801	91,470	88,726	85,571	85,953
	Rate (%)	10.2	9.6	10.0	11.3	12.4
WCV-CH	Numerator	688,008	701,679	607,590	725,750	735,232
	Denominator	1,953,152	1,867,316	1,955,883	2,061,596	2,131,793
	Rate (%)	35.2	37.6	31.1	35.2	34.5
CIS-CH	Numerator	3,727	34,026	40,311	50,462	48,390
	Denominator	194,009	186,199	183,384	198,120	189,313
	Rate (%)	1.9	18.3	22.0	25.5	25.6
LSC	Numerator	142,461	130,961	120,117	112,790	107,854
	Denominator	236,163	219,184	209,705	220,555	212,058
	Rate (%)	60.3	59.7	57.3	51.1	50.9
TFL-CH	Numerator	750,005	808,635	528,198	826,260	932,713
	Denominator	4,490,369	4,345,999	4,616,474	4,931,069	5,110,769
	Rate (%)	16.7	18.6	11.4	16.8	18.2

Table 4: Early Childhood Preventive Care Measures – Change Across Time Comparing MY 2018 (Baseline Period) to MY 2022 (Current Reporting Period)

Measure	2018 Rate (baseline)	2022 Rate	Percentage Point Difference	Percentage Change	2018 – 2022 Comparison
W30-CH	10.2	12.4	2.2	21.6	▲
WCV-CH	35.2	34.5	-0.7	-2.0	▼
CIS-CH [3]	18.3 [3]	25.6	7.3	39.9	▲
LSC	60.3	50.9	-9.4	-15.6	▼
TFL-CH	16.7	18.2	1.5	9.0	▲

▲ Indicates a statistically significant improvement in the 2022 rate compared to baseline.
▼ Indicates a statistically significant worsening in the 2022 rate compared to the baseline.

- W30-CH - The Well Child Visit rate significantly increased between MY 2018 and MY 2022. The MY 2022 rate was 2.2 percentage points higher than MY 2018, a 21.6 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from –0.6 to 2.2 percentage points.
- WCV-CH - The Child and Adolescent Well-Care Visit rate significantly decreased between MY 2018 and MY 2022. The MY 2022 rate was 0.7 percentage points lower than MY 2018, a 2.0 percent decrease. The percentage point difference, comparing measurement years to the baseline year, ranged from –4.1 to 2.4 percentage points.
- CIS-CH –The Combination 10-Childhood Vaccines for Two Year Olds rate significantly increased between MY 2019 and MY 2022. The MY 2022 rate was 7.3 percentage points higher than MY 2019, a 39.9 percent increase. The percentage point difference, comparing measurement years to the baseline year (MY 2019), ranged from 3.7 to 7.3 percentage points. (See data note above, underneath Table 4.)
- LSC - The Blood Lead Screening rate significantly decreased between MY 2018 and MY 2022. The MY 2022 rate was 9.4 percentage points lower than MY 2018, a 15.6 percent decrease. The percentage point difference, comparing measurement years to the baseline year, ranged from -0.6 to -9.4 percentage points.

[3] For CIS-CH, MY 2019 rate was the baseline year. The CAIR immunization data for MY 2018 was not available and the CIS-CH-Combination 10 measure was considered incomplete for that year. CAIR data was included in MY 2019 – 2022 data so MY 2019 was used as an alternative baseline period for the CIS measure because it was more complete/comparable to the performance years.

- TFL-CH - The Dental Fluoride Varnish rate significantly increased between MY 2018 and MY 2022. The MY 2022 rate was 1.5 percentage points higher than MY 2018, a 9.0 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from -5.3 to 1.9 percentage points.

Domain: Chronic Disease Management

- CBP-AD - Controlling High Blood Pressure describes the percentage of members ages 18 to 85 who had a diagnosis of hypertension and whose blood pressure (BP) was adequately controlled (< 140/90 mm Hg) during the measurement year.
- HPC-AD - Diabetes Care describes the percentage of members ages 18 to 75 with diabetes (type 1 and type 2) who had hemoglobin A1c (HbA1c) in poor control (> 9.0%). [Lower rates are better]
- AMR - Control of Persistent Asthma describes the percentage of members ages 5 to 64 who were identified as having persistent asthma and had a ratio of controller medications to total asthma medications of 0.50 or greater during the measurement year.
- TUS - Tobacco Use Screening describes the percentage of members ages 12 and older screened or counseled for tobacco use during an outpatient visit one or more times during the measurement year.
- AD-FLU - Adult Influenza ('Flu') Vaccine describes the percentage of members ages 19 and older seen for a visit during the measurement year who received an influenza immunization.

Table 5: Chronic Disease Management Measures – by Measure Year

Measure		2018 (baseline)	2019	2020	2021	2022
CBP-AD	Numerator	301,227	402,173	327,546	347,734	391,396
	Denominator	474,595	617,797	560,788	577,157	622,002
	Rate (%)	63.5	65.1	58.4	60.2	62.9
HPC-AD	Numerator	145,051	148,822	190,933	184,435	192,000
	Denominator	415,506	434,743	460,116	491,832	539,323
	Rate (%)	34.9	34.2	41.5	37.5	35.6
AMR	Numerator	63,323	63,496	65,719	60,536	59,230
	Denominator	101,386	102,313	102,709	94,956	86,106
	Rate (%)	62.5	62.1	64	63.8	68.8
TUS	Numerator	92,215	145,015	195,039	303,347	317,767
	Denominator	3,566,174	3,611,449	3,701,673	4,342,986	4,985,932
	Rate (%)	2.6	4.0	5.3	7.0	6.4
AD-FLU	Numerator	585,509	642,356	598,822	569,966	833,213
	Denominator	3,032,562	3,085,166	3,023,542	3,320,386	3,656,606
	Rate (%)	19.3	20.8	19.8	17.2	22.8

Table 6: Chronic Disease Management Measures – Change Across Time Comparing MY 2018 (Baseline Period) to MY 2022 (Current Reporting Period)

Measure	2018 Rate (baseline)	2022 Rate	Percentage Point Difference	Percentage Change	2018 – 2022 Comparison
CBP-AD	63.5	62.9	-0.6	-0.9	▼
HPC-AD [4]	34.9	35.6	0.7	2.0	▼
AMR	62.5	68.8	6.3	10.1	▲
TUS	2.6	6.4	3.8	146.2	▲
AD-FLU	19.3	22.8	3.5	18.1	▲

▲ Indicates a statistically significant improvement in the 2022 rate compared to baseline.

▼ Indicates a statistically significant worsening in the 2022 rate compared to the baseline.

- CBP-AD - The Controlling High Blood Pressure rate decreased significantly between MY 2018 and MY 2022. The MY 2022 rate was 0.6 percentage points lower than MY 2018, a 0.9 percent decrease. The percentage point difference, comparing measurement years to the baseline year, ranged from -5.1 to 1.6 percentage points.

[4] For HPC-AD, a lower rate is better.

- HPC-AD - For Diabetes Care, a lower rate of hemoglobin A1c (HbA1c) in poor control is better. The Diabetes Care rate increased significantly between MY 2018 and MY 2022. The MY 2022 rate was 0.7 percentage points higher (worse) than MY 2018, a 2.0 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from -0.7 to 6.6 percentage points.
- AMR - The Control of Persistent Asthma rate increased significantly between MY 2018 and MY 2022. The MY 2022 rate was 6.3 percentage points higher than MY 2018, a 10.1 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from -0.4 to 6.3 percentage points.
- TUS - The Tobacco Use Screening rate increased significantly between MY 2018 and MY 2022. The MY 2022 rate was 3.8 percentage points higher than MY 2018, a 146.2 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from 1.4 to 4.4 percentage points.
- FLU-AD - The Adult Influenza ('Flu') Vaccine rate increased significantly between MY 2018 and MY 2022. The MY 2022 rate was 3.5 percentage points higher than MY 2018, an 18.1 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from -2.1 to 3.5 percentage points.

Domain: Behavioral Health Care

The following three measures aimed at increasing screening for depression and unhealthy alcohol use and improving management of depression medications:

- CDF - Screening for Clinical Depression describes the percentage of members ages 12 and older screened for depression on the date of the encounter or 14 days prior to the date of the encounter using an age-appropriate standardized depression screening tool, and if positive, a follow-up plan is documented on the date of the eligible encounter.
- AMM - Management of Depression Medication Effective Acute Phase Treatment describes the percentage of members ages 18 and older who were treated with antidepressant medication, had a diagnosis of major depression, and who remained on antidepressant medication treatment for at least 84 days (12 weeks).
- AUS - Screening for Unhealthy Alcohol Use describes the percentage of members ages 12 and older screened for unhealthy alcohol use using a standardized screening tool one or more times during the measurement year.

Table 7: Behavioral Health Care Measures – by Measure Year

Measure		2018 (baseline)	2019	2020	2021	2022
CDF	Numerator	146,593	231,960	302,166	455,479	635,417
	Denominator	3,905,104	3,906,362	3,676,056	4,102,992	4,591,478
	Rate (%)	3.8	5.9	8.2	11.1	13.8
AMM	Numerator	57,172	64,889	66,845	73,837	74,401
	Denominator	112,681	121,516	120,814	129,037	130,119
	Rate (%)	50.7	53.4	55.3	57.2	57.2
AUS	Numerator	55,590	26,153	57,401	92,094	132,962
	Denominator	3,566,173	3,611,451	3,701,750	4,343,669	4,985,932
	Rate (%)	1.6	0.7	1.6	2.1	2.7

Table 8: Behavioral Health Care Measures – Change Across Time Comparing MY 2018 (Baseline Period) to MY 2022 (Current Reporting Period)

Measure	2018 Rate (baseline)	2022 Rate	Percentage Point Difference	Percentage Change	2018 – 2022 Comparison
CDF	3.8	13.8	10.0	263.2	▲
AMM	50.7	57.2	6.5	12.8	▲
AUS	1.6	2.7	1.1	68.8	▲

▲ Indicates a statistically significant improvement in the 2022 rate compared to baseline.
▼ Indicates a statistically significant worsening in the 2022 rate compared to the baseline.

- CDF - The Screening for Clinical Depression rate increased significantly between MY 2018 and MY 2022. The MY 2022 rate was 10.0 percentage points higher than MY 2018, a 263.2 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from 2.1 to 10.0 percentage points.
- AMM - The Management of Depression Medication Effective Acute Phase Treatment rate increased significantly between MY 2018 and MY 2022. The MY 2022 rate was 6.5 percentage points higher than MY 2018, a 12.8 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from 2.7 to 6.5 percentage points.

- AUS - The Screening for Unhealthy Alcohol Use rate increased significantly between MY 2018 and MY 2022. The MY 2022 rate was 1.1 percentage points higher than MY 2018, a 68.8 percent increase. The percentage point difference, comparing measurement years to the baseline year, ranged from -0.9 to 1.1 percentage points.

Domain: Data Quality

DHCS calculated the following measures to assess data quality:

- NPI Completeness - The incompleteness of rendering provider NPIs in Outpatient and Medical/Physician claims was assessed by identifying the number of records with missing data points and dividing by the total number of claims each year. Rates were calculated by Entity Type - whether the NPI was associated with a Type 1 (individual) or Type 2 (organization) provider.
- Taxonomy Code Completeness – for records that had a rendering provider NPI, the incompleteness of rendering provider taxonomy data was assessed by identifying the number of records with missing data points and dividing by the total number of claims with rendering provider NPIs each year. Rates were calculated by Entity Type - whether the NPI was associated with a Type 1 (individual) or Type 2 (organization) provider.

Table 9: Percentage of claims with Type 1, Type 2, or missing rendering provider NPIs

Entity Type	2018	2019	2020	2021	2022
Type 1 NPIs	59.0	58.8	59.0	59.9	60.5
Type 2 NPIs	29.7	31.6	31.1	31.3	31.1
Missing NPI	11.3	9.7	9.9	8.7	8.4

Table 10: Percentage of claims with Type 1, Type 2, or missing rendering provider NPIs Change Across Time – Comparing MY 2018 (Baseline Period) with MY 2022 (Current Reporting Period)

Entity Type	2018 Rate (baseline)	2022 Rate	Percentage Point Difference	Percentage Change	2018 – 2022 Comparison
Type 1 NPIs	59.0	60.5	1.5	2.5	Not applicable
Type 2 NPIs	29.7	31.1	1.4	4.7	Not applicable
Missing NPI [5]	11.3	8.4	-2.9	-25.7	▲

▲ Indicates a statistically significant improvement in the 2022 rate compared to baseline.

- Rendering Providers with a Type 1 NPI - The percentage of rendering providers with a Type 1 NPI significantly increased between 2018 and 2022. The 2022 rate was 1.5 percentage points higher than 2018, a 2.5 percent increase. There were approximately two times as many Type 1 providers as Type 2 providers, across measure years.
- Rendering Providers with a Type 2 NPI – The percentage of rendering providers with a Type 2 NPI significantly increased between 2018 and 2022. The 2022 rate was 1.4 percentage points higher than 2018, a 4.7 percent increase.
- Rendering Providers with a Missing NPI - The percentage of rendering providers with a missing NPI significantly decreased between 2018 and 2022. The 2022 number was 2.9 percentage points lower than 2018, a 25.7 percent decrease.

Table 11: Percentage of claims with a rendering provider NPI with missing taxonomy – by Entity Type and Measure Year

Entity Type	2018	2019	2020	2021	2022
Type 1 NPIs	15.9	17.1	15.0	14.4	12.8
Type 2 NPIs	33.4	31.6	29.0	29.1	29.6

[5] For missing NPI, a lower rate is better.

Table 12: Percentage of claims with a rendering provider NPI with missing taxonomy – by Entity Type and Measure Year - Change Across Time - Comparing 2018 (Baseline Period) and 2022 (Current Reporting Period)

Entity Type	2018 Rate (baseline)	2022 Rate	Percentage Point Difference	Percentage Change	2018 – 2022 Comparison
Type 1 NPIs [6]	15.9	12.8	-3.1	-19.5%	▲
Type 2 NPIs [6]	33.4	29.6	-3.8	-11.4	▲

▲ Indicates a statistically significant improvement in the 2022 rate compared to baseline.

- Rendering Providers with a Type 1 NPI – The percentage of rendering providers with a Type 1 NPI with missing taxonomy codes significantly decreased between 2018 and 2022. The 2022 rate was 3.1 percentage points lower than 2018, a -19.5 percent decrease. Across measures years, there were approximately half as many Type 1 providers as Type 2 providers with missing taxonomy codes.
- Rendering Providers with a Type 2 NPI – The percentage of rendering providers with a Type 2 NPI with missing taxonomy codes significantly decreased between 2018 and 2022. The 2022 rate was 3.8 percentage points lower than 2018, a -11.4 percent decrease.

Limitations of Evaluation

The results presented here suggest that the VBP Program Performance Improvement Initiative may have had positive impacts on the delivery of primary and specialty care and on data quality across the five specified domains over the program years.

However, we cannot separate changes attributable to the VBP program from other secular changes, such as technology advancements across the health care system, provider supply, the COVID-19 pandemic, or other factors that might have impacted access/provision of care during the VBP program's period.

Conclusions

This assessment found that the VBP implementation was associated with improved performance for most measures evaluated in this report.

[6] For Missing Taxonomy, a lower rate is better.

1. Measures that achieved the goal of improved performance:

   Table 13 shows that 75 percent of the measures (15 out of 20) across five domains showed statistically significant improvement in the MY 2022 rates compared to the MY 2018 (baseline period) rates: all six measures in the behavioral health and data quality domains, three out of five measures in the prenatal/postpartum care domain, and three out of five measures in the early childhood preventive care and chronic disease management domains. This indicates that participating in the VBP program had a positive impact on the delivery of care and data quality.

2. Measures with no change in performance:

   Table 13 shows that there was no change in performance for the rate of Postpartum Birth Control with a long-acting reversible method of contraception during the VBP implementation years compared to the baseline period.

3. Measures that need attention

   Table 13 shows a statistically significant worsening for 20 percent of the measures (4 out of 20) across three domains. The measures were Postpartum Birth Control with a most effective or moderately effective method of contraception, Child and Adolescent Well-Care Visits, Blood Lead Screening, and Controlling High Blood Pressure. Note: these measures were based on data extracted from the DHCS Management Information System/Decision Support System (MIS/DSS) data warehouse and may be incomplete and/or missing data that would be captured in electronic health records.

Table 13: Summary of the change in rates – MY 2022 compared to the Baseline Period

Measure Name	Percentage Change	p-value	2018 [7]– 2022 Comparison
Domain: Prenatal/Postpartum Care			
PR-Pertussis - Prenatal Pertussis ('Whooping Cough') Vaccine	32.0	<0.0001	▲

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[7] For CIS-CH, MY 2019 rate was used as the baseline for comparison with MY 2022 rate.

Measure Name	Percentage Change	p-value	2018 [7]– 2022 Comparison
PPC-CH - Prenatal Care Visit	4.9	<0.0001	▲
PPC-AD - Postpartum Care Visits	22.8	<0.0001	▲
CCP-MMEC - Postpartum Birth Control (MMEC)	-9.1	<0.0001	▼
CCP-LARC - Postpartum Birth Control (LARC)	0.0	0.7005	—
Domain: Early Childhood Preventive Care			
W30-CH - Well Child Visits First 15 Months of Life	21.6	<0.0001	▲
WCV-CH - Child and Adolescent Well-Care Visits	-2.0	<0.0001	▼
CIS-CH - All Childhood Vaccines for Two Year Olds	56.1	<0.0001	▲
LSC - Blood Lead Screening	-15.6	<0.0001	▼
TFL-CH - Dental Fluoride Varnish	9.0	<0.0001	▲
Domain: Chronic Disease Management			
CBP-AD - Controlling High Blood Pressure	-0.9	<0.0001	▼
HPC-AD - Diabetes Care	2.0	<0.0001	▼ [8]
AMR - Control of Persistent Asthma	10.1	<0.0001	▲
TUS - Tobacco Use Screening	146.2	<0.0001	▲

[8] For HPC-AD and data quality/incompleteness measures, a lower rate is better.

Measure Name	Percentage Change	p-value	2018 [7]– 2022 Comparison
AD-FLU - Adult Influenza ('Flu') Vaccine	18.1	<0.0001	▲
Domain: Behavioral Health Care			
CDF - Screening for Clinical Depression	263.2	<0.0001	▲
AMM - Management of Depression Medication	12.8	<0.0001	▲
AUS - Screening for Unhealthy Alcohol Use	68.8	<0.0001	▲
Domain: Data Quality			
Percent of Claims with Rendering Provider Type 1 NPIs	2.5	Not Applicable [9]	
Percent of Claims with Rendering Provider Type 2 NPIs	4.7	Not Applicable [9]	
Percent of Claims with Rendering Provider NPIs Missing	-25.7	<0.0001	▲
Percent of Claims with Rendering Provider Type 1 NPIs with Taxonomy Code Missing	-19.5%	<0.0001	▲
Percent of Claims with Rendering Provider Type 2	-11.4	<0.0001	▲ [10]

[9] This metric was calculated for descriptive purposes, a change does not indicate better or worse quality.
[10] This metric was calculated for descriptive purposes, a change does not indicate better or worse quality.

Measure Name	Percentage Change	p-value	2018 [7]– 2022 Comparison
NPIs with Taxonomy Code Missing			

Appendix 1 – Measure Specifications

Measure	Measure Name	Source - ID
Domain: Prenatal/Postpartum Care		
PR-Pertussis	Prenatal Pertussis ('Whooping Cough') Vaccine	HEDIS PRS-E
PPC-CH	Prenatal Care Visit	CMS Core Measure PPC-CH
PPC-AD	Postpartum Care Visits	CMS Core Measure PPC-AD
CCP	Postpartum Birth Control	CMS Core Measure CCP
Domain: Early Childhood Preventive Care		
W30-CH	Well Child Visits First 15 Months of Life	CMS Core Measure W30-CH
WCV-CH	Child and Adolescent Well-Care Visits	CMS Core Measure WCV-CH
CIS-CH	All childhood Vaccines for Two Year Olds	CMS Core Measure CIS-CH (Combo10)
LSC	Blood Lead Screening	CMS Core Measure LSC-CH
TFL-CH	Dental Fluoride Varnish	CMS Core Measure TFL-CH
Domain: Chronic Disease Management		
CBP-AD	Controlling High Blood Pressure	CMS Core Measure CBP-AD
HPC-AD	Diabetes Care	CMS Core Measure HPC-AD
AMR	Control of Persistent Asthma	CMS Core Measure AMR
TUS	Tobacco Use Screening	HEDIS MSC/NQF 0028
AD-FLU	Adult Influenza ('Flu') Vaccine	HEDIS AIS-E/NQF 0041
Domain: Behavioral Health Care		

Measure	Measure Name	Source - ID
CDF	Screening for Clinical Depression	CMS Core Measure CDF
AMM	Management of Depression Medication	CMS Core Measure AMM-AD
AUS	Screening for Unhealthy Alcohol Use	HEDIS ASF-E/NQF 2152

CMS - Centers for Medicare & Medicaid Services. Core Set of Children's and Adults' Health Care Quality Measures for Medicaid and CHIP Technical Specifications and Resource Manual. Unless noted below, specifications were based on Federal Fiscal Year (FFY) 2022 / MY2021.

- CMS Core Set (Children's) FFY 2023:
    - LSC-CH
    - TFL-CH

HEDIS – Healthcare Effectiveness Data and Information Set

- HEDIS MY 2021:
    - Prenatal Immunization Status (PRS-E): Tdap
    - Adult Immunization Status (AIS-E): Influenza
- HEDIS MY 2022:
    - Medical Assistance with Smoking and Tobacco Use Cessation (MSC)
    - Unhealthy Alcohol Use Screening and Follow-Up (ASF-E)

NQF – National Quality Forum

- NQF 2020, Version 4.0, November 2019
    - 0041 Preventive Care and Screening: Influenza Immunization
- NQF 2023, Version 7.0, November 2022
    - 0028 Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention
    - 2152 Preventive Care and Screening: Unhealthy Alcohol Use: Screening and Brief Counseling

Appendix 2 – Methodology

The Two-Proportion Z-test was used to determine if there were a significant change in rates, comparing MY 2022 rates to MY 2018 rates, with a p value of ≤ 0.05.

▲ Indicates a statistically significant improvement in the 2022 rate compared to baseline.
▼ Indicates a statistically significant worsening in the 2022 rate compared to the baseline.
 — Indicates that the difference was not statistically significant.

The percentage point difference was calculated by subtracting the MY 2018 rate from the MY 2022 rate.

The percentage change was based on this formula:

$$Percentage\ Change = \frac{(Reporting\ Period\ Rate - Baseline\ Period\ rate)}{Baseline\ Period\ rate\ (MY\ 2018)} \times 100$$

The VBP exclusion criteria are listed below:

- Members not enrolled in Medi-Cal MCPs with network providers participating the VBP program.
- Members with Medicare Part B.
- Encounters occurring at Federally Qualified Health Centers (FQHCs), Rural Health Clinics, American Indian Health Clinics, and Cost Based Reimbursement Clinics.

Exclusion criteria were applied as the VBP measures were calculated. The criteria were not used for the four health services measures derived from MCAS (PPC-CH, PPC-AD, CCP CBP-AD, and HPC-AD) nor for the two data quality measures. These measures are representative of the overall change of this program and stratified MCAS measures could not be calculated.

Appendix 3 – Annual Percentage Point Change from Baseline, by Measure and Measure Year

Measure	2018 (baseline)	2019	2020	2021	2022
Domain: Prenatal/Postpartum Care					
PR-Pertussis	28.4	4.1	7.7	5.8	9.1
PPC-CH	84.5	6.4	3.4	3.1	4.1
PPC-AD	66.7	10.9	12.2	14.7	15.2
CCP-MMEC	36.1	-1.4	0.6	-0.9	-3.3
CCP-LARC	10.0	0.2	1.6	1.3	0.0
Domain: Early Childhood Preventive Care					
W30-CH	10.2	-0.6	-0.2	1.1	2.2
WCV-CH	35.2	2.4	-4.1	0	-0.7
CIS-CH*	-	16.4 [11]	3.7	7.2	7.3
LSC	60.3	-0.6	-3	-9.2	-9.4
TFL-CH	16.7	1.9	-5.3	0.1	1.5
Domain: Chronic Disease Management					
CBP-AD	63.5	1.6	-5.1	-3.3	-0.6
HPC-AD	34.9	-0.7	6.6	2.6	0.7
AMR	62.5	-0.4	1.5	1.3	6.3
TUS	2.6	1.4	2.7	4.4	3.8
AD-FLU	19.3	1.5	0.5	-2.1	3.5
Domain: Behavioral Health Care					
CDF	3.8	2.1	4.4	7.3	10.0
AMM	50.7	2.7	4.6	6.5	6.5
AUS	1.6	-0.9	0.0	0.5	1.1

[11] For CIS-CH, MY 2019 rate was used as the baseline.