MILLIMAN REPORT

Evaluation of State Medicaid Scorecard Data

2020 Scorecard Update

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Introduction

This report provides an analysis of the recently released 2020 Centers for Medicare and Medicaid Services (CMS) Medicaid and Children's Health Insurance Program (CHIP) Scorecard (Scorecard). This is the third annual release of the Scorecard. As in our analysis of previous years' Scorecards, we primarily focus on the quality measures included in the Scorecard, based on the Child and Adult Core Set data. Due to material differences in how states report these measures to CMS, our analysis controls for key differences in state-level reporting methodologies to enable meaningful comparisons. For a more complete review of these topics, the reader is referred to Appendix 1, an excerpt from our analysis of the 2018 Scorecard.[1] For states with available data, performance rates have been summarized into state profile reports (provided in separate documents), which illustrate how each state's performance rates measure relative to other states, controlling for variances in reporting methodologies and underlying populations for each quality measure. For those readers who may be unfamiliar with the state profile reports, Appendix 2 provides an overview of the layout and information included.

We provide a brief overview of the Scorecard and our analysis below. We also highlight a few upcoming policy changes related to the Child and Adult Core Sets: additional directed payment guidance and the new 42 CFR 438.6(c) preprint, as well as mandatory reporting of certain Core Set measures in the future. Additionally, this year we have enhanced our review of state-specific comments for each rate reported in the Core Sets. These notes were manually reviewed for indications of data quality issues, and all rates with potentially material issues were excluded from the report.

> The January 8, 2021 letter to State Medicaid Directors recommends the use of Child and Adult Core Set measures to satisfy quality related requirements of directed payment arrangements.

Overview of the Scorecard

CMS released the initial version of the Scorecard in June 2018, with a stated goal to improve transparency and track progress of performance and outcomes within the Medicaid program. CMS released the first annual update to the Scorecard on November 7, 2019,[2] followed by the second annual update on October 30, 2020.[3] This third iteration of the Scorecard represents not only a data refresh but also a continued evolution in terms of the information included. As we describe the various elements of the Scorecard below, we will highlight some of these new changes.

The Scorecard includes data about state and federal metrics arranged in four sections: state administrative accountability, federal administrative accountability, national context, and state health system performance (SHSP).[4]

- **State administrative accountability.** This portion of the Scorecard measures the timeliness of states' managed care rate certifications to CMS in relation to the start of the contract period, as well as the number of days it takes for a state to respond to questions from CMS regarding the managed care rates. Other measures focus on the approval periods for State Plan Amendments (SPAs) and waiver requests, renewals, and amendments. Additionally, CMS provides state-level information regarding timeliness of annual 372(S) reporting, Medicaid Modified Adjusted Gross Income (MAGI) and CHIP application processing times, the number of unresolved high priority Transformed Medicaid Statistical Information System (T-MSIS) data quality issues, and state participation with CMS's Unified Program Integrity Contractors and the Healthcare Fraud Prevention Partnership. Those measures are all carried over from last year's Scorecard. In addition, in 2020 a new measure was added that reports the total number of days a managed care contract action is under CMS review. This measure is designed to reflect how long it takes for (1) CMS to review state documentation, (2) the state to respond to CMS questions and supply completed submissions, and (3) CMS and the state to collaborate on reviews.[5]

[1] For more information, please see https://www.milliman.com/en/insight/Evaluation-of-State-Medicaid-Scorecard-Data.

[2] CMS (November 7, 2019). CMS issues first annual update to the Medicaid and CHIP program Scorecard. Press release. Retrieved December 12, 2019. https://www.cms.gov/newsroom/press-releases/cms-issues-first-annual-update-medicaid-and-chip-program-scorecard.

[3] CMS (October 30, 2020). CMS provides transparency on cost and quality in state Medicaid and CHIP Programs. Press release. Retrieved February 18, 2021. https://www.cms.gov/newsroom/press-releases/cms-provides-transparency-cost-and-quality-state-medicaid-and-chip-programs

[4] Medicaid. Medicaid & CHIP Scorecard. Retrieved February 18, 2021, from https://www.medicaid.gov/state-overviews/scorecard/index.html.

[5] Medicaid. Medicaid & CHIP Scorecard. Retrieved February 18, 2021, from https://www.medicaid.gov/state-overviews/scorecard/state-administrative-accountability/index.html.

- **Federal administrative accountability.** Complementing the state administrative accountability measures, the federal administrative accountability measures focus on the length of time required by CMS to review and approve managed care rates. Other measures regarding SPAs and waiver requests overlap with the state administrative accountability section. In 2020, new measures include the number of days that a managed care contract action is under CMS review, as well as the number of days that CMS takes to approve advance planning documents (APDs) for enhanced federal funding.[6]
- **National context.** This section provides information related to enrollment of different populations, approaches to delivering care, and program expenditures. These high-level statistics are intended to help the user understand and consider differences among states as they evaluate the detailed metrics in the other sections of the Scorecard. Information added for 2020 includes Medicaid and CHIP enrollment by state, enrollment by eligibility group and dual eligible status, state transition plans for home and community-based services (HCBS), and improper payments in Medicaid and CHIP.[7]

For the first three sections of the Scorecard, state-specific information is generally not provided. Rather, national median statistics or histograms are used to illustrate results, with a few exceptions generally displayed as nationwide heat maps. In future analyses of the Scorecard, we may incorporate applicable state-specific data points from these sections into the state profile reports.

- **State health system performance.** The final section of the Scorecard provides state-specific statistics on SHSP based on quality measures contained in the Child and Adult Core Sets.[8]
  - **Child Core Set.** The Child Core Set was developed from the Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA), which required the U.S. Department of Health and Human Services (HHS) to develop a set of quality measures for Medicaid and CHIP programs based on voluntary reporting by states.[9]
  - **Adult Core Set.** Section 1139B of the Patient Protection and Affordable Care Act (ACA) established the impetus for the Adult Core Set. The measures were first published by CMS in January 2012.[10]

To support states' efforts to report these measures, CMS established the Technical Assistance and Analytic Support (TA/AS) program.[11] Annual updates are made to the Core Sets based on changes in clinical guidelines and discussion between state and federal officials, providers, health plans, and patient advocates.[12] These annual updates sometimes are not immediately reflected in the Core Set data, as at least 25 states must report on a measure and internal data quality standards must be met for it to meet the minimum reporting standard, so there is frequently a lag for new measures.

[6] Medicaid. Medicaid & CHIP Scorecard. Retrieved February 18, 2021, from https://www.medicaid.gov/state-overviews/scorecard/federal-administrative-accountability/index.html.

[7] Medicaid. Medicaid & CHIP Scorecard. Retrieved February 18, 2021, from https://www.medicaid.gov/state-overviews/scorecard/national-context/index.html.

[8] Core Set data is available from https://data.medicaid.gov/.

[9] CMS. Children's Healthcare Quality Measures. Retrieved February 18, 2021, from https://www.medicaid.gov/medicaid/quality-of-care/performance-measurement/child-core-set/index.html.

[10] CMS. Adult Healthcare Quality Measures. Retrieved February 18, 2021, from https://www.medicaid.gov/medicaid/quality-of-care/performance-measurement/adult-core-set/index.html.

[11] Medicaid/CHIP (February 2018). Fact Sheet: About the Technical Assistance and Analytic Support Program. Retrieved February 18, 2021, from https://www.medicaid.gov/medicaid/quality-of-care/downloads/tafactsheet.pdf.

[12] CMS (November 19, 2020). 2021 Updates to the Child and Adult Core Healthcare Quality Measurement Sets. CMCS Informational Bulletin. Retrieved February 18, 2021, from https://www.medicaid.gov/federal-policy-guidance/downloads/cib111920.pdf.

DIRECTED PAYMENT GUIDANCE

On January 8, 2021, CMS published a letter to State Medicaid Directors providing additional guidance regarding state directed payments in Medicaid managed care. Based on its review of many directed payment arrangements over the years, CMS felt additional guidance was warranted in a few areas. One specific target was to "remind states of the quality related requirements that must be met to secure CMS approval."[13]

There has always been a quality component for the approval criteria, as mentioned in the original guidance from November 2, 2017.[14] States have the ability to select performance measures they deem appropriate for assessing quality improvement, but CMS encourages the use of existing measures such as those found in the Core Sets. Using these well-known, pre-existing measures could facilitate 438.6(c) preprint review due to stakeholders' familiarity with them, and also could reduce the administrative burden if these measures were already being collected for other purposes.

Along with the new State Medicaid Director letter, CMS also released a revised version of the Section 438.6(c) preprint form, to be used for all state-directed payment requests for contract rating periods beginning on or after July 1, 2021.[15] The preprint has been expanded with the goal of facilitating review and reducing turnaround time, but of particular note here is that the quality questions on the template now specifically **recommend** the use of the Child and Adult Core Set measures and include links directly to the Core Set websites.

MANDATORY REPORTING IN 2024

Starting in FFY 2024, reporting of the Child Core Set and the Behavioral Health measures on the Adult Core Set will be required. State reporting of the Child Core Set was made mandatory by Section 50102(b) of the Bipartisan Budget Act of 2018, while state reporting of the Behavioral Health measures on the Adult Core Set was made mandatory by Section 5001 of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act (SUPPORT Act) of 2018. Further guidance on the mandatory Core Set reporting is to be provided by the Center for Medicaid and CHIP Services (CMCS).[16] For detail on state reporting as of FFY 2018 and FFY 2019, please see the section below, "Measure Reporting Completeness," and Figure 1.

MEASURE REPORTING COMPLETENESS

In anticipation of the mandatory reporting, we reviewed measure reporting completeness and the associated changes from FFY 2018 to FFY 2019. This review only included measures that were common between the two years – 'Additions' and 'Retirements' for FFY 2019, as described below, were not included. For this analysis, a state was considered to have reported a measure if the state reported it for at least one population and the rate was not indicated as having potential data issues (please see the "Data quality review" section for further detail).

In FFY 2018, across all states a total of 1,238 Child Core Set measures were reported. This increased to 1,316 reported measures in FFY 2019. For both years, the number of total possible measures in the Child Core Set was 1,683, indicating 73.6% of possible measures were reported in FFY 2018 and 78.2% in FFY 2019, an increase of 4.6%. Similarly, in FFY 2018, a total of 1,214 Adult Core Set measures were reported across all states, which increased to 1,366 reported measures in FFY 2019. For the Adult Core Set, the number of total possible measures is 1,989, indicating 61.0% of possible measures were reported in FFY 2018, and 68.7% in FFY 2019, an increase of 7.6%.

Figure 1 below summarizes the reporting completeness and improvements by measure domain. For example, the 77.1% percent reported in FFY 2018 for the Child Core Set behavioral health domain was calculated by dividing the number of reported measures in the domain, 236, by the number of total possible measures, 306 (six possible measures for each of the 51 reporting states [including the District of Columbia]).

[13] CMS (January 8, 2021). Additional Guidance on State Directed Payments in Medicaid Managed Care. CMS State Medicaid Director letter. Retrieved February 18, 2021, from https://www.medicaid.gov/Federal-Policy-Guidance/Downloads/smd21001.pdf.

[14] CMS (November 2, 2017). Delivery System and Provider Payment Initiatives under Medicaid Managed Care Contracts. CMCS Informational Bulletin. Retrieved February 18, 2021, from https://www.medicaid.gov/federal-policy-guidance/downloads/cib11022017.pdf.

[15] CMS. Section 42 CFR 438.6(c) Preprint – January 2021. Retrieved February 18, 2021, from https://www.medicaid.gov/medicaid/managed-care/downloads/sdp-4386c-preprint-template.pdf.

[16] CMS (November 19, 2020). 2021 Updates to the Child and Adult Core Healthcare Quality Measurement Sets. CMCS Informational Bulletin. Retrieved February 18, 2021, from https://www.medicaid.gov/federal-policy-guidance/downloads/cib111920.pdf.

FIGURE 1: REPORTING IMPROVEMENTS FOR COMMON MEASURES

	Child Core Set				Adult Core Set			
Domain	Common Measures	Percent Reported in FFY 2018	Percent Reported in FFY 2019	Change	Common Measures	Percent Reported in FFY 2018	Percent Reported in FFY 2019	Change
Behavioral	6	77.1%	78.1%	1.0%	18	62.0%	71.8%	9.8%
Maternal	8	58.1%	67.2%	9.1%	5	59.2%	60.0%	0.8%
Primary Care	13	82.1%	83.9%	1.8%	4	75.5%	80.4%	4.9%
Acute and Chronic	4	68.1%	80.4%	12.3%	12	55.6%	63.7%	8.2%
Dental	2	80.4%	81.4%	1.0%	NA	NA	NA	NA
Total	**33**	**73.6%**	**78.2%**	**4.6%**	**39**	**61.0%**	**68.7%**	**7.6%**

FFY 2019 CORE SET UPDATES

In our review of the FFY 2019 Child and Adult Core Sets—which is the information reported in the 2020 Scorecard update—we note the following changes from last year. The additions may represent either brand-new measures added to the Core Sets or measures that meet the inclusion criteria for the first time. High-level measure categories are displayed for brevity, but some of these may refer to several similar measures where ages or timeframes vary (for example, "Follow-up After Emergency Department Visit for Mental Illness" below refers to two separate measures). A complete listing of all Child and Adult Core Set measures is provided in Appendices 3 and 4, respectively.

ADDITIONS

- Use of Opioids at High Dosage in Persons Without Cancer
- Children Receiving a Measles, Mumps, and Rubella (MMR) Vaccination by their Second Birthday (note that this is a new sub-measure under the Childhood Immunization Status measure)

RETIREMENTS

- Use of Antenatal Steroids in Women at Risk of Preterm Delivery, Prior to Delivering Preterm Newborns

MODIFICATIONS

- Follow-up After Emergency Department Visit for Mental Illness or Alcohol and Other Drug Abuse or Dependence has been split into two different measures: Follow-up After Emergency Department Visit for Alcohol and Other Drug Abuse or Dependence, and Follow-up After Emergency Department Visit for Mental Illness

As in our previous report, we would again like to bring attention to the Behavioral Health and Maternity Core Sets first created in 2018.[17,18] These do not contain new information, as they are targeted subsets of measures taken from both the Child and Adult Core Sets. However, these selective groupings allow for easy identification of the measures most relevant to CMS's efforts in these high priority areas of care.

All newly reported measures as well as those identified in the Behavioral Health and Maternity Core Sets are indicated accordingly in Appendices 3 and 4 of this report.

For our report this year, we have also enhanced our review of state-specific comments for indications of data quality issues that may affect the rates. Rates with notes that indicated potentially material issues were excluded from the analysis. Please refer to the "Data quality review" section at the end of this report for further detail on our approach.

[17] CMS. 2020 Core Set of Behavioral Health Measures for Medicaid and CHIP. Retrieved February 18, 2021, from https://www.medicaid.gov/medicaid/quality-of-care/downloads/performance-measurement/2020-bh-core-set.pdf.

[18] CMS. 2020 Core Set of Maternal and Perinatal Health Measures for Medicaid and CHIP. Retrieved February 18, 2021, from https://www.medicaid.gov/medicaid/quality-of-care/downloads/performance-measurement/2020-maternity-core-set.pdf.

Assessing variances in reporting between states

Upon announcement of the first iteration of the Scorecard, the National Association of Medicaid Directors (NAMD) issued a press release expressing caution when using and interpreting the Scorecard's SHSP measures.[19] The Medicaid Directors' concerns primarily related to the following factors:

- Reporting completeness (number of rates reported by a state)
- Methodology employed by a state to report a particular rate (claims-based or claims and medical record review)
- Variances in the populations underlying the reported rates (e.g., non-disabled vs. dual-eligible populations)

To better understand the available data contained in the SHSP section of the Scorecard, for the 2018 Scorecard, we explored the issues identified by NAMD and the extent to which they may limit the ability for users to compare state Medicaid program performance. Complete results of this analysis are provided in Appendix 1, an excerpt from our 2018 Scorecard report.[20]

Taking into consideration the state-level differences NAMD has highlighted, we control for the reporting methodology and underlying population for each rate when drawing comparisons in the state profile reports, which are discussed in more detail in Appendix 2.

Data quality review

We conclude this report with a deeper dive into the data quality limitations that we have implemented this year to mitigate the effect of certain data outliers on state performance comparisons. In reviewing the notes supplied for each rate reported in the Core Sets, we looked for indications that the rate reported by the state may be materially affected by data quality issues.

Rates were deemed to have data quality issues if they fell into any of the following categories:

- **Distinct age thresholds:** CHIP rates included were restricted to a smaller age band than 0–19. All such observations in both 2018 and 2019 were associated with a single state.
  - **Example:** CHIP rate includes fee-for-service (FFS) and primary care case management (PCCM) populations ages 6 to 17.
- **Differing methodology:** The state methodology differed from Core Set specifications, the state was unable to calculate accurate weighted averages for its managed care organizations (MCOs), or the state did not include pertinent data (e.g., not including vaccinations administered at pharmacies). The increase in 2019 for this data issue (as shown in Figure 2 below) is largely attributed to one state, which did not report any issues in 2018.
  - **Example:** The state is unable to calculate weighted rates for its MCOs, resulting in an overweight for some plans that serve beneficiaries with multiple chronic conditions.
- **Provider coding issue:** Inconsistent coding or lack of complete coding on the part of providers.
  - **Example:** Rates include FFS and PCCM populations. State attributes lower performance to services being under-reported due to providers not using immunization codes during well-care visits.
- **Unreliable data:** Missing or potentially inaccurate data; may be missing significant provider or claim detail information.
  - **Example:** For managed care population, state limited numerator to claims identified as dental claims because managed care claims do not contain specific provider information. State is unable to distinguish "dental hygienists who provide services under the supervision of a dentist" from all dental hygienists in claims.

[19] NAMD (June 4, 2018). NAMD Statement on the CMS Scorecard. Retrieved February 18, 2021, from http://medicaiddirectors.org/wp-content/uploads/2018/06/Scorecard-1.0-NAMD-Statement_FINAL.pdf.

[20] For more information, please see https://www.milliman.com/en/insight/Evaluation-of-State-Medicaid-Scorecard-Data.

Figure 2 below illustrates the number of data exclusions made for the 2018 and 2019 Core Sets, by type of issue.

FIGURE 2: SUMMARY OF DATA ISSUES

Issue	2018 Count	2019 Count
Distinct age thresholds	4	8
Differing methodology	12	37
Provider coding issue	7	7
Unreliable data	50	17
Total	**73**	**69**

For the 2019 Core Sets, there were a total of 3,096 observations, of which we excluded 69 (2.2%) for having potentially material data quality issues. Of those 69 observations excluded, 40 (58.0%) were associated with two states. For the 2018 Core Sets, there were a total of 2,826 observations, of which we excluded 73 (2.6%). Of those 73 observations excluded, 48 (65.7%) were associated with two states.

Acknowledgments

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Appendix 1: 2018 Scorecard analysis

For reference, we have included the following excerpt related to comparing Medicaid program performance across states from our report on the 2018 Scorecard.[21]

AVAILABLE MEASURES AND COMPLETENESS OF REPORTING

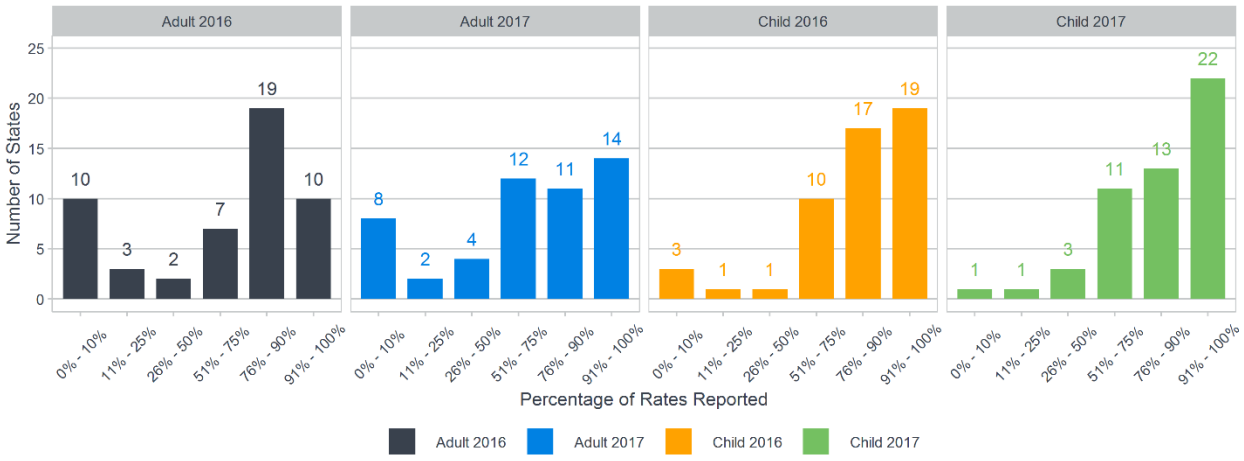
There are 48 unique metrics (rates) measured within the SHSP portion of the 2017 Scorecard based on the Child and Adult Core Sets. These metrics can be broken down into the two "Core Sets" as well as five different domains, as illustrated in Figure 3. Metrics may be added or removed to the Core Sets each year. A full list of the metrics included in the 2016 and 2017 Core Sets (including identification of annual changes) is provided in the appendices of this report.

FIGURE 3: NUMBER OF CHILD AND ADULT CORE SET MEASURES BY DOMAIN

	2016			2017		
Domain	**Child**	**Adult**	**Total**	**Child**	**Adult**	**Total**
Behavioral Health Care	5	8	13	5	8	13
Care of Acute and Chronic Conditions	5	5	10	4	8	12
Dental and Oral Health Services	2	0	2	2	0	2
Maternal and Perinatal Health	3	1	4	3	1	4
Primary Care Access and Preventive Care	13	4	17	13	4	17
All Domains	**28**	**18**	**46**	**27**	**21**	**48**

Figure 4 summarizes the number of states reporting various percentages of the Core Set measures in 2016 and 2017, separately for child and adult measures.

FIGURE 4: PERCENTAGE OF CHILD AND ADULT CORE SET MEASURES COMPLETED BY STATES



The following key observations can be made regarding the completeness of state reporting:

- Reporting for 2017 is slightly more complete than for 2016.
  - Twenty-two states reported more than 90% of measures in the 2017 Child Core Set relative to 19 states for the 2016 Child Core Set.
  - Fourteen states reported more than 90% of measures in the 2017 Adult Core Set relative to 10 states for the 2016 Adult Core Set.

[21] For more information, please see https://www.milliman.com/en/insight/Evaluation-of-State-Medicaid-Scorecard-Data.

  - Two states completed 25% or fewer of 2017 Child Core Set measures, versus four states for the 2016 Child Core Set measures.
  - Ten states completed 25% or fewer of 2017 Adult Core Set measures, versus 13 states for the 2016 Adult Core Set measures.
- Child reporting is more complete than adult
  - Thirty-five states reported more than 75% of measures in the 2017 Child Core Set relative to only 25 states for the 2017 Adult Core Set.
  - Only two states completed 25% or fewer of 2017 Child Core Set measures, versus 10 states for the 2017 Adult Core Set measures.
  - While the reporting of the 2017 Adult Core Set measures is less complete than the Child Core Set measures, 37 states still reported more than 50% of the measures.
  - Similar observations also apply for federal fiscal year (FFY) 2016.
- Factors driving low reporting of measures
  - In general, states with low Medicaid membership reported on fewer of the quality measures. For example, North Dakota and South Dakota are states with the lowest number of measures reported. Both of these states also have relatively low Medicaid membership.
  - The Child Core Set may be more complete due to CHIPRA preceding the ACA.

VARIANCE IN REPORTING METHODOLOGY EMPLOYED BY STATES FOR INDIVIDUAL MEASURES

As indicated by NAMD, variances in reported measures may be influenced by the reporting methodology employed by the state. Core Set measures are calculated using four techniques:

- **Administrative.** The calculation of quality scores is completed using claims or encounter data. For states with risk-based managed care, incomplete encounter data may result in understated quality scores.[22] In addition to satisfying new Medicaid managed care regulations and facilitating capitation rate setting,[23] complete encounter data will also likely increase quality measurements that use only administrative data.
- **Hybrid.** The hybrid method uses a combination of administrative data and a review of medical records to calculate a quality measure. A state may use the hybrid method due to administrative data that is incomplete or missing necessary information to calculate the measure. CMS indicates the hybrid method may yield more accurate rates than administrative data alone and cites a study showing that for 15 Healthcare Effectiveness Data and Information Set (HEDIS®) measures in commercial plans, hybrid measurements were 20 percentage points higher relative to using only administrative data. However, because the hybrid method requires a review of medical records, it may be too costly for states to implement.[24]
- **Administrative and hybrid.** Some states derive rates using both administrative and hybrid method data. This is due to variance in the reporting of quality measures by MCOs, when a common means of reporting is not employed (administrative vs. hybrid).
- **Electronic health records.** Certain rates may be determined by using electronic health record (EHR) specifications. For 2017 Core Set measures, we observed Oregon reporting two adult measures based on EHR data.

[22] Medicaid/CHIP (October 2014). Technical Assistance Brief: Using the Hybrid Method to Calculate Measures From the Child and Adult Core Sets. Retrieved February 21, 2019, from https://www.medicaid.gov/medicaid/quality-of-care/downloads/hybrid-brief.pdf.

[23] Cunningham, J., Lewis, M.T., & Houchens, P.R. (May 17, 2016). Encounter Data Standards: Implications for State Medicaid Agencies and Managed Care Entities From Final Medicaid Managed Care Rule. Milliman White Paper. Retrieved February 21, 2019, from http://www.milliman.com/insight/2016/Encounter-data-standards-Implications-for-state-Medicaid-agencies-and-managed-care-entities-from-final-Medicaid-managed-care-rule/.

[24] Medicaid/CHIP (October 2014), Technical Assistance Brief, op cit.

Figures 5 and 6 illustrate the number of states reporting each measure and the reporting methodology employed across states for the Child and Adult Core Sets, respectively. Measures are grouped by domain. Note that some measures contain duplicates due to some states reporting multiple populations with distinct methodologies. As an example, the state of Texas reports Adolescent Well-Care Visit: Ages 12–21 (PC 17) for the CHIP population and Medicaid population separately. The Medicaid-only population is reported with the Administrative and Hybrid methodologies whereas the CHIP-only population is reported solely with the Hybrid methodology. Because Texas reports two rates with two methodologies for this single measure, this creates two data points in the chart. Across all states in 2017, there are only seven instances of states reporting different methodologies for a given measure between Medicaid-only and CHIP-only.

FIGURE 5: REPORTING METHODOLOGIES BY DOMAIN: 2017 CHILD CORE SET

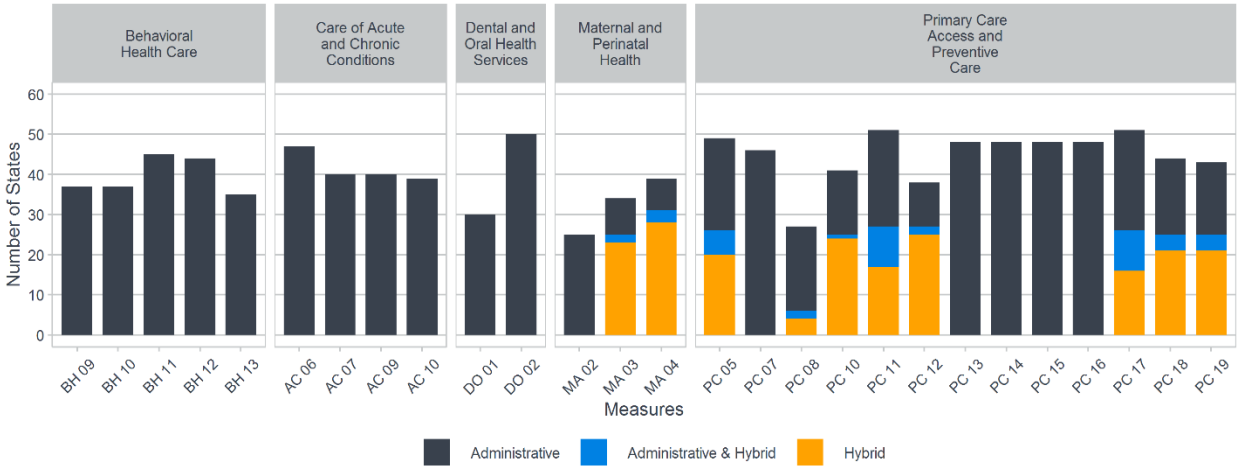
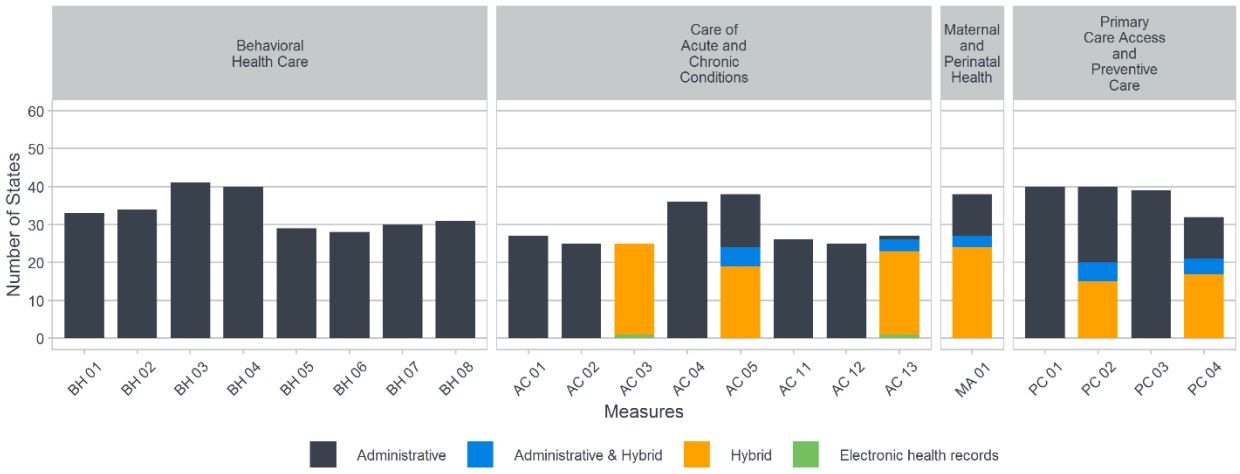


FIGURE 6: REPORTING METHODOLOGIES BY DOMAIN: 2017 ADULT CORE SET



The variance in reporting methodologies is confined to a minority of measures in both the Child and Adult Core Sets.

- **Child Core Set reporting methodologies.** For the Behavioral, Acute/Chronic, and Dental/Oral domains, reporting is entirely administrative. Within the Maternal/Perinatal and Primary/Preventive domains, a mix of reporting methodologies are employed. However, the Primary/Preventive domain has several measures that are reported entirely on an administrative basis. Within each domain except the Maternal/Perinatal, at least one measure is reported by nearly every state on an administrative basis.

- **Adult Core Set reporting methodologies.** The Behavioral Health domain is completely reported using the administrative methodology. The other domains incorporate a mixture of reporting methodologies. While overall reporting is less complete relative to the Child Core Set, there are still several measures across the domains, with approximately 35 states reporting on an administrative basis.

To illustrate how values for certain measures can be influenced by the reporting methodology, we selected two measures, one each from the Child and Adult Core Sets, with approximately an even split between states using the administrative versus hybrid methods as well as several states using a combination of methodologies. These examples clearly indicate that reporting methodology materially influences the reported measure's value.

FIGURE 7: PERCENTAGE WITH 1 OR MORE WELL-CHILD VISITS WITH A PRIMARY CARE PRACTITIONER: AGES 3-6 (CHILD CORE SET) RATES BY REPORTING METHODOLOGY

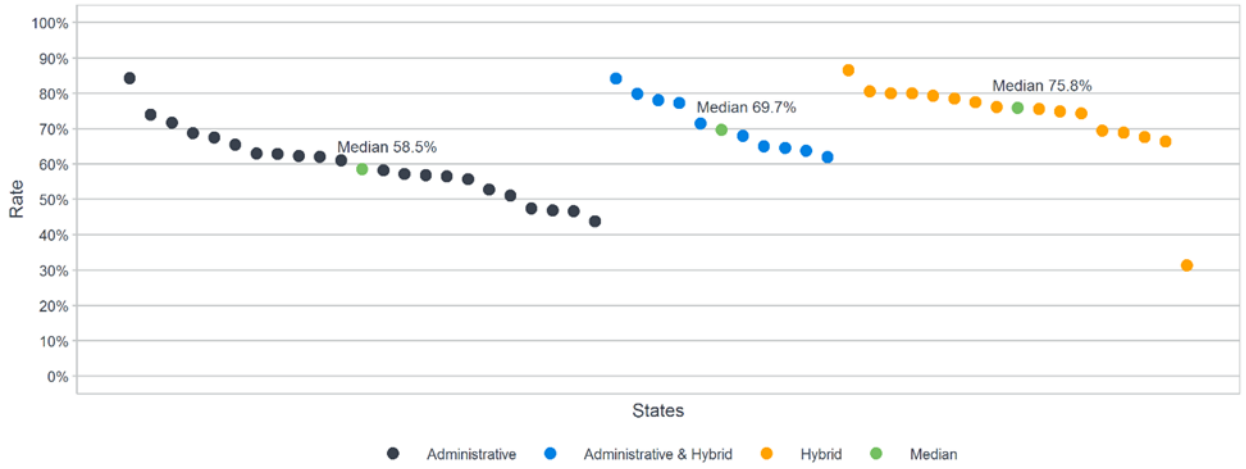
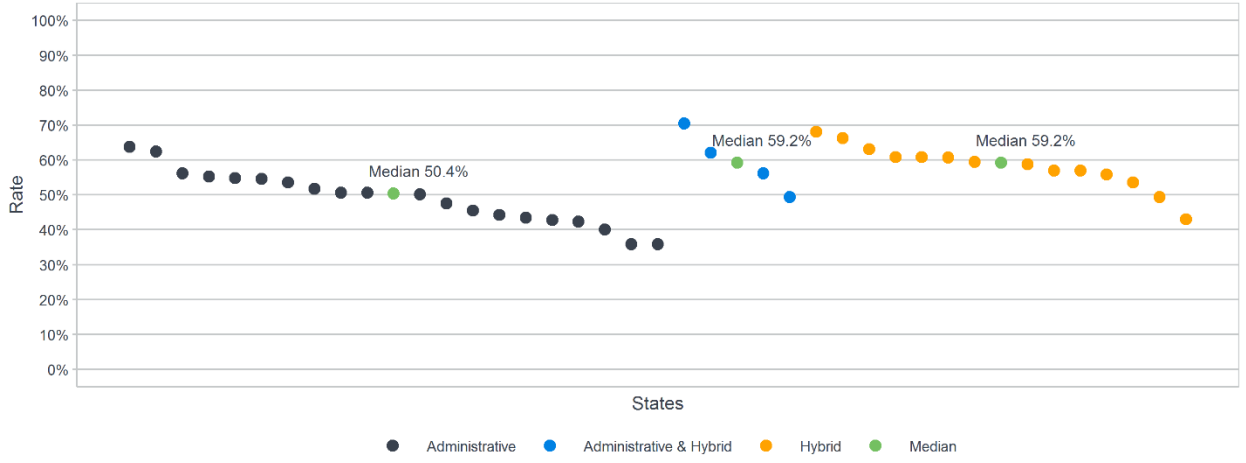


FIGURE 8: PERCENTAGE OF WOMEN SCREENED FOR CERVICAL CANCER: AGES 21-64 (ADULT CORE SET) RATES BY REPORTING METHODOLOGY



VARIANCE IN REPORTED POPULATIONS

There are variances in the underlying populations reported by each state. For the Child Core Set, states are reporting Medicaid-only, CHIP-only, or Medicaid and CHIP. For the Adult Core Set, states are reporting Medicaid and CHIP, Medicaid, Medicaid and Dual-Eligibles, or Medicaid, CHIP, and Dual-Eligibles. The differences in the reporting populations vary by state and by rate. The charts in Figures 9 and 10 show the number of populations reported for each rate within each domain and Core Set. It may be difficult to perform an accurate comparison between states reporting different populations for each rate. Note that, for the Adult Core Set, the populations for Medicaid and CHIP are included in Medicaid and the populations for Medicaid, CHIP, and Dual-Eligibles are included in Medicaid and Dual-Eligibles. Additionally, while not explicitly reported in the Core Set, states that expanded Medicaid under the ACA will likely have different mixes of adult beneficiaries relative to non-expansion states.

FIGURE 9: POPULATIONS BY DOMAIN: CHILD CORE SET

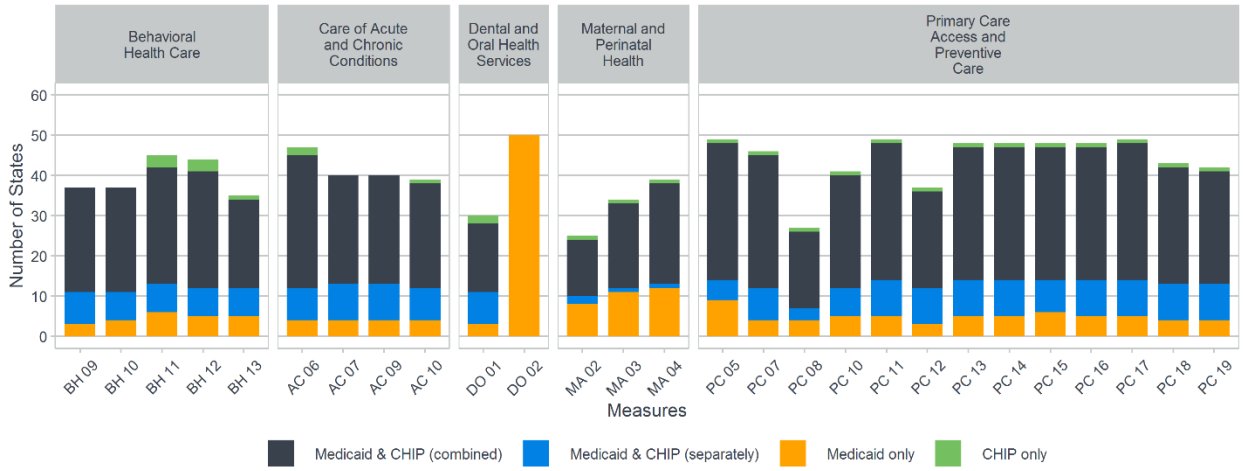
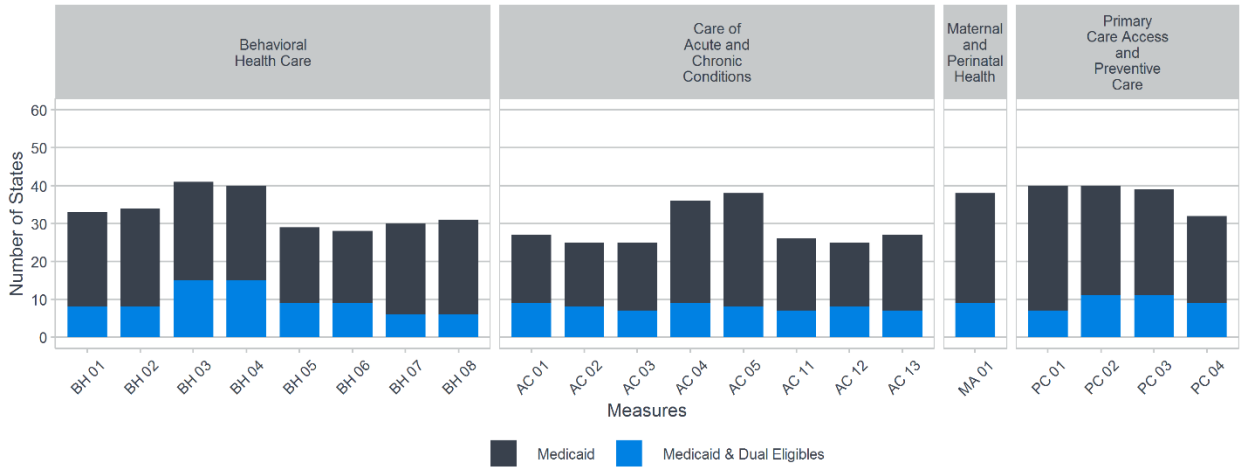


FIGURE 10: POPULATIONS BY DOMAIN: ADULT CORE SET

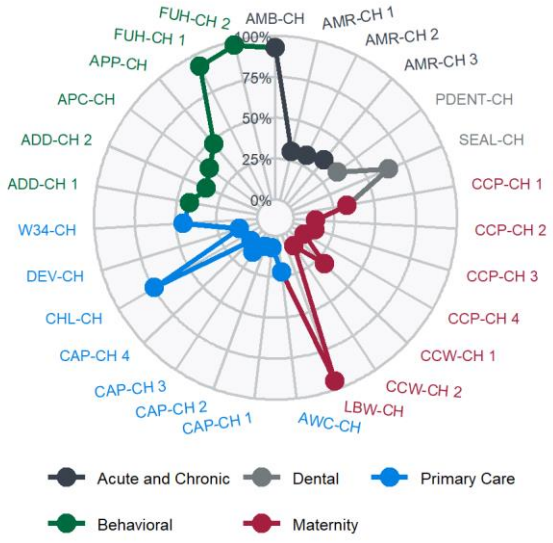


Appendix 2: State profile reports

The state profile reports provide a detailed look at each state's quality measures, in comparison to comparable states, as well as year-over-year performance changes. The state profiles are similar to last year's versions, although we now exclude certain rates if our review of state-specific comments indicate potentially material data quality issues. For each state, we indicate the number of rates excluded due to data quality concerns. We provide an overview of the components provided in each state profile below.

The reported rates are first displayed in "radar" charts. There are separate charts for the Child and Adult Core Set measures, along with the Behavioral Health and Maternity Core Sets. The radar charts are intended to illustrate performance relative to other states, limited to only those states that have reported rates on the same basis (i.e., controlling for methodology and population). An example of a state chart is shown below. The measure abbreviations below are defined in Appendix 3 and Appendix 4.

FIGURE 11: SAMPLE CHILD CORE SET RADAR CHART



HOW TO INTERPRET THE RADAR CHARTS

- The state charts display a rate on each axis (or "spoke").
- Rates are only included when there are at least 10 states using the same population and reporting methodology.
- Rates are displayed on a percentile basis (compared to those states using the same population and reporting methodology for that rate).
- Points near the outside of the circle reflect better relative performance. For example, this state reported very favorable rates for FUH-CH 1 and FUH-CH 2 (hospitalizations for mental illness with a follow-up visit within 30 or 7 days, respectively), so those points fall near the outer circle representing 100%.
- Rates are grouped and color-coded by domain to facilitate the understanding of broad, domain-level trends.

There are cases when a state reports Medicaid and CHIP populations separately. In these instances, we calculate a weighted average of the rates, using the children's enrollment report from CMS.[25] While this state's Child Core Set has a significant number of comparable measures, other states with less complete reporting or fewer comparable measures will have significantly fewer rates illustrated in the radar chart. To the extent there are fewer than three comparable rates, a radar chart cannot be created.

These charts are intended to provide brief snapshots of each state's reporting. In addition to the radar charts, each state profile report includes more detailed metrics for each rate in tabular format, such as the raw rate, equivalent percentile, number of comparable states, and select distribution statistics for the comparable rates. An example of a state table is shown in Figure 12.

[25] The FY 2019 version is available at: https://www.medicaid.gov/chip/downloads/fy-2019-childrens-enrollment-report.pdf.

FIGURE 12: SAMPLE FFY 2019 CHILD CORE SET MEASURES

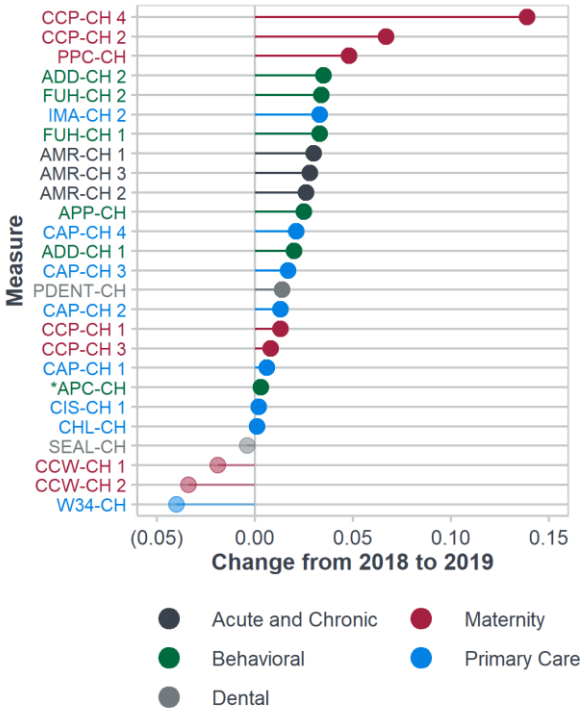
ID	Rate	# Comp.	Performance Percentile	Lowest Quartile	Median	Highest Quartile
Care of Acute and Chronic Conditions						
AMB-CH[1, 2]	33.0	44	93%	37.0	42.0	48.2
AMR-CH 1	0.710	37	31%	0.698	0.741	0.791
AMR-CH 2	0.642	36	31%	0.603	0.651	0.688
AMR-CH 3	0.682	38	35%	0.657	0.697	0.749
Dental and Oral Health Services						
PDENT-CH	0.473	51	36%	0.442	0.491	0.516
SEAL-CH	0.236	29	64%	0.204	0.227	0.253
Maternal and Perinatal Health						
CCP-CH 1[4]	0.019	22	33%	0.010	0.023	0.050
CCP-CH 2[4]	0.102	23	14%	0.141	0.165	0.196
CCP-CH 3[4]	0.024	22	14%	0.032	0.055	0.075
CCP-CH 4[4]	0.230	23	9%	0.342	0.423	0.490
CCW-CH 1[4]	0.039	21	30%	0.037	0.048	0.059
CCW-CH 2[4]	0.191	22	10%	0.216	0.292	0.322
LBW-CH[1, 4]	0.075	43	95%	0.086	0.096	0.107
PPC-CH[4]	0.608	2	NA	NA	NA	NA
Primary Care Access and Preventive Care						
AWC-CH	0.374	19	22%	0.382	0.428	0.486
CAP-CH 1	0.917	41	8%	0.943	0.955	0.966
CAP-CH 2	0.836	42	7%	0.861	0.878	0.900
CAP-CH 3	0.873	43	14%	0.892	0.912	0.935
CAP-CH 4	0.851	43	10%	0.882	0.903	0.924
CHL-CH	0.583	44	74%	0.447	0.496	0.584
CIS-CH 1[5]	0.707	7	NA	NA	NA	NA
CIS-CH 2[5]	0.893	7	NA	NA	NA	NA
DEV-CH	0.218	18	12%	0.272	0.408	0.545
IMA-CH 1	NA	NA	NA	NA	NA	NA
IMA-CH 2	0.446	6	NA	NA	NA	NA
W15-CH[4]	NA	NA	NA	NA	NA	NA
W34-CH	0.714	12	45%	0.646	0.737	0.783
WCC-CH	NA	NA	NA	NA	NA	NA
Behavioral Healthcare						
ADD-CH 1[3]	0.456	39	42%	0.419	0.484	0.537
ADD-CH 2[3]	0.560	38	35%	0.513	0.579	0.669
APC-CH[1, 3]	0.030	39	39%	0.017	0.025	0.034
APP-CH[3]	0.616	24	48%	0.576	0.622	0.691
FUH-CH 1[3]	0.837	40	92%	0.610	0.694	0.803
FUH-CH 2[3]	0.712	40	97%	0.381	0.451	0.601

1. Lower rates are better for these measures.
2. These measures are not expressed as percentages.
3. These measures are part of the Behavioral Health Core Set.
4. These measures are part of the Maternity Core Set.
5. These measures are newly available in the 2019 Core Set. They could be either new measures entirely, or did not previously meet reporting thresholds.

Note that, for select measures, a lower rate indicates a higher performance level. These measures are marked by a "1" in the appendices. For these measures, the "Lowest Quartile" reflects better performance relative to the Median and "Highest Quartile."

In addition, we include another type of chart that displays performance changes over time. These charts display the change in actual performance rates from year to year, illustrating the state's performance relative to its recent past instead of benchmarking against other states. An example is shown in Figure 13.

FIGURE 13: SAMPLE CHILD CORE SET PERFORMANCE CHANGES FROM 2018 TO 2019



- Only measures that are reported on a percentage basis are included, to better allow for interpretability of the magnitude of change.
- There is a vertical line at zero, indicating no change in performance.
- Performance changes are displayed in order of largest improvement to smallest improvement (or greatest decline, if performance has deteriorated).
- Measures where a lower rate is more desirable, e.g., low birth weights, are indicated with an asterisk and have the respective changes flipped, such that a decrease is appropriately reflected on the positive (right) side of the chart.
- Similar to the radar charts, the measures are color-coded by domain to facilitate review.

Finally, key considerations when evaluating the information contained in the state profile reports include:

- **Social determinants.** Low performance percentiles do not necessarily indicate the Medicaid program is operating poorly relative to other states. As the health policy community has gained a better understanding of how social determinants of health influence healthcare outcomes, such disparities between states should be recognized when evaluating results and opportunities for improvement.
- **Non-Medicaid health policy.** Differences in state performance on certain measures may also be influenced by variation in overall statewide health policy such as state health department regulations. The distinct approaches and areas of emphasis among states should also be considered when reviewing the Scorecard results.
- **Data reliance.** The performance rates made available by CMS are dependent upon the underlying data behind the rates. To the extent a state has difficulty in reporting a measure or incomplete data, it will influence the quality measure's performance rate. Data for this report was obtained through data.medicaid.gov in October 2020. Values are displayed without modification, although some data points were excluded upon review of comments provided by the states.
- **Future reporting.** As CMS refines the Core Set measures and states are able to provide more complete reporting, the usability of the Core Set data is likely to improve. Future performance assessments are likely to be impacted by these changes and may provide more robust benchmarking opportunities.

Appendix 3: Child Core Set Measures

ID	Definition
Care of Acute and Chronic Conditions	
AMB-CH[1, 2]	Emergency Department Visits per 1,000 Beneficiary Months: Ages 0-19
AMR-CH 1	Percentage with Persistent Asthma who had a Ratio of Controller Medications to Total Asthma Medications of 0.50 or Greater: Ages 5-11
AMR-CH 2	Percentage with Persistent Asthma who had a Ratio of Controller Medications to Total Asthma Medications of 0.50 or Greater: Ages 12-18
AMR-CH 3	Percentage with Persistent Asthma who had a Ratio of Controller Medications to Total Asthma Medications of 0.50 or Greater: Ages 5-18
Dental and Oral Health Services	
PDENT-CH	Percentage with at Least 1 Preventive Dental Service: Ages 1-20
SEAL-CH	Percentage at Elevated Risk of Dental Caries (Moderate or High Risk) who Received a Sealant on a Permanent First Molar Tooth: Ages 6-9
Maternal and Perinatal Health	
CCP-CH 1[4]	Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 3 Days of Delivery: Ages 15-20
CCP-CH 2[4]	Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 60 Days of Delivery: Ages 15-20
CCP-CH 3[4]	Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 3 Days of Delivery: Ages 15-20
CCP-CH 4[4]	Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 60 Days of Delivery: Ages 15-20
CCW-CH 1[4]	Percentage of Women at Risk for Unintended Pregnancy Provided a Long-Acting Reversible Method of Contraception: Ages 15 to 20
CCW-CH 2[4]	Percentage of Women at Risk for Unintended Pregnancy Provided a Most Effective or Moderately Effective Method of Contraception: Ages 15 to 20
LBW-CH[1, 4]	Percentage of Live Births that Weighed Less than 2,500 Grams
PPC-CH[4]	Percentage of Women Delivering a Live Birth with a Prenatal Care Visit in the First Trimester or within 42 Days of Enrollment in Medicaid or CHIP

1. Lower rates are better for these measures.
2. These measures are not expressed as percentages.
3. These measures are part of the Behavioral Health Core Set.
4. These measures are part of the Maternity Core Set.
5. These measures are newly available in the 2019 Core Set. They could be either new measures entirely, or did not previously meet reporting thresholds.

Appendix 3: Child Core Set Measures (cont.)

ID	Definition
Primary Care Access and Preventive Care	
AWC-CH	Percentage with at Least 1 Well-Care Visit with a Primary Care Practitioner or an Obstetrical/Gynecological Practitioner: Ages 12-21
CAP-CH 1	Percentage with a PCP Visit in the Past Year: Ages 12-24 Months
CAP-CH 2	Percentage with a PCP Visit in the Past Year: Ages 25 Months-6 Years
CAP-CH 3	Percentage with a PCP Visit in the Past Two Years: Ages 7-11 Years
CAP-CH 4	Percentage with a PCP Visit in the Past Two Years: Ages 12-19 Years
CHL-CH	Percentage of Sexually Active Women Screened for Chlamydia: Ages 16-20
CIS-CH 1[5]	Percentage Up-to-Date on Immunizations (Combination 3) by their Second Birthday
CIS-CH 2[5]	Percentage who had a Measles, Mumps, and Rubella (MMR) Vaccination by their Second Birthday
DEV-CH	Percentage Screened for Risk of Developmental, Behavioral, and Social Delays Using a Standardized Screening Tool: Ages 0-3
IMA-CH 1	Percentage Receiving Meningococcal Conjugate and Tdap Vaccines (Combination 1) by their 13th Birthday
IMA-CH 2	Percentage Completing the Human Papillomavirus (HPV) Vaccine Series by Their 13th Birthday
W15-CH[4]	Percentage of Children who had 6 or More Well-Child Visits with a Primary Care Practitioner during the First 15 Months of Life
W34-CH	Percentage who had 1 or More Well-Child Visits with a Primary Care Practitioner: Ages 3-6
WCC-CH	Percentage who had an Outpatient Visit with a Primary Care Practitioner or Obstetrical/Gynecological Practitioner who had Body Mass Index Percentile Documented in the Medical Record: Ages 3-17
Behavioral Healthcare	
ADD-CH 1[3]	Percentage Newly Prescribed ADHD Medication with 1 Follow-Up Visit During the 30-Day Initiation Phase: Ages 6-12
ADD-CH 2[3]	Percentage Newly Prescribed ADHD Medication with at Least 2 Follow-Up Visits in the 9 Months Following the Initiation Phase: Ages 6-12
APC-CH[1, 3]	Percentage on Two or More Concurrent Antipsychotic Medications: Ages 1-17
APP-CH[3]	Percentage who had a New Prescription for an Antipsychotic Medication and had Documentation of Psychosocial Care as First-Line Treatment: Ages 1-17
FUH-CH 1[3]	Percentage of Hospitalizations for Mental Illness with a Follow-Up Visit Within 30 Days of Discharge: Ages 6-17
FUH-CH 2[3]	Percentage of Hospitalizations for Mental Illness with a Follow-Up Visit Within 7 Days of Discharge: Ages 6-17

1. Lower rates are better for these measures.
2. These measures are not expressed as percentages.
3. These measures are part of the Behavioral Health Core Set.
4. These measures are part of the Maternity Core Set.
5. These measures are newly available in the 2019 Core Set. They could be either new measures entirely, or did not previously meet reporting thresholds.

Appendix 4: Adult Core Set Measures

ID	Definition
Care of Acute and Chronic Conditions	
AMR-AD 1	Percentage with Persistent Asthma who had a Ratio of Controller Medications to Total Asthma Medications of 0.50 or Greater: Ages 19-50
AMR-AD 2	Percentage with Persistent Asthma who had a Ratio of Controller Medications to Total Asthma Medications of 0.50 or Greater: Ages 19-64
AMR-AD 3	Percentage with Persistent Asthma who had a Ratio of Controller Medications to Total Asthma Medications of 0.50 or Greater: Ages 51-64
CBP-AD	Percentage who had a Diagnosis of Hypertension and Whose Blood Pressure was Adequately Controlled During the Measurement Year: Ages 18-64
HA1C-AD	Percentage with Diabetes (Type 1 or Type 2) who had a Hemoglobin A1c (HbA1c) Test: Ages 18-64
HPC-AD[1]	Percentage with Diabetes (Type 1 or Type 2) who had Hemoglobin A1c in Poor Control (>9.0%): Ages 18-64
MPM-AD	Percentage who Received at Least 180 Treatment Days of Ambulatory Medication Therapy and Annual Monitoring: Ages 18-64
PCR-AD[1, 2]	Ratio of Observed All-Cause Readmissions to Expected Readmissions: Ages 18-64
PQI01-AD[1, 2]	Inpatient Hospital Admissions for Diabetes Short-Term Complications per 100,000 Beneficiary Months: Ages 18-64
PQI05-AD[1, 2]	Inpatient Hospital Admissions for Chronic Obstructive Pulmonary Disease (COPD) or Asthma per 100,00 Beneficiary Months: Ages 40-64
PQI08-AD[1, 2]	Inpatient Hospital Admissions for Heart Failure per 100,000 Beneficiary Months: Ages 18-64
PQI15-AD[1, 2]	Inpatient Hospital Admissions for Asthma per 100,000 Beneficiary Months: Ages 18-39
Maternal and Perinatal Health	
CCP-AD 1[4]	Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 3 Days of Delivery: Ages 21-44
CCP-AD 2[4]	Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 60 Days of Delivery: Ages 21-44
CCP-AD 3[4]	Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 3 Days of Delivery: Ages 21-44
CCP-AD 4[4]	Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 60 Days of Delivery: Ages 21-44
PPC-AD[4]	Percentage of Women Delivering a Live Birth who had a Postpartum Care Visit on or Between 21 and 56 Days after Delivery
Primary Care Access and Preventive Care	
ABA-AD	Percentage who had an Outpatient Visit with a BMI Documented in the Medical Record: Ages 18-64 Years
BCS-AD	Percentage of Women who had a Mammogram to Screen for Breast Cancer: Ages 50-64
CCS-AD	Percentage of Women Screened for Cervical Cancer: Ages 21-64
CHL-AD	Percentage of Sexually Active Women Screened for Chlamydia: Ages 21-24

1. Lower rates are better for these measures.
2. These measures are not expressed as percentages.
3. These measures are part of the Behavioral Health Core Set.
4. These measures are part of the Maternity Core Set.
5. These measures are newly available in the 2019 Core Set. They could be either new measures entirely, or did not previously meet reporting thresholds.

Appendix 4: Adult Core Set Measures (cont.)

ID	Definition
Behavioral Healthcare	
AMM-AD 1[3]	Percentage Diagnosed with Major Depression who were Treated with and Remained on Antidepressant Medication for 12 Weeks: Ages 18-64
AMM-AD 2[3]	Percentage Diagnosed with Major Depression who were Treated with and Remained on Antidepressant Medication for 6 Months: Ages 18-64
FUA-AD 1[3]	Percentage of Emergency Department (ED) Visits for Alcohol and Other Drug Abuse or Dependence with a Follow-Up Visit Within 30 Days of the ED Visit: Ages 18-64
FUA-AD 2[3]	Percentage of Emergency Department (ED) Visits for Alcohol and Other Drug Abuse or Dependence with a Follow-Up Visit Within 7 Days of the ED Visit: Ages 18-64
FUH-AD 1[3]	Percentage of Hospitalizations for Mental Illness with a Follow-Up Visit Within 30 Days of Discharge: Ages 18-64
FUH-AD 2[3]	Percentage of Hospitalizations for Mental Illness with a Follow-Up Visit Within 7 Days of Discharge: Ages 18-64
FUM-AD 1[3]	Percentage of Emergency Department (ED) Visits for Mental Illness with a Follow-Up Visit Within 30 Days of the ED Visit: Ages 18-64
FUM-AD 2[3]	Percentage of Emergency Department (ED) Visits for Mental Illness with a Follow-Up Visit Within 7 Days of the ED Visit: Ages 18-64
IET-AD 1[3]	Percentage with a New Episode of Alcohol or Other Drug Abuse or Dependence who Initiated Alcohol or Other Drug Treatment within 14 Days of the Diagnosis: Ages 18-64
IET-AD 2[3]	Percentage with a New Episode of Alcohol or Other Drug Abuse or Dependence who Engaged in Alcohol or Other Drug Treatment within 34 Days of the Initiation Visit: Ages 18-64
IET-AD 3[3]	Percentage with a New Episode of Alcohol Abuse or Dependence who Initiated Alcohol or Other Drug Treatment within 14 Days of the Diagnosis: Ages 18-64
IET-AD 4[3]	Percentage with a New Episode of Alcohol Abuse or Dependence who Initiated and Engaged in Alcohol or Other Drug Treatment within 34 Days of the Initiation Visit: Ages 18-64
IET-AD 5[3]	Percentage with a New Episode of Opioid Abuse or Dependence who Initiated Alcohol or Other Drug Treatment within 14 Days of the Diagnosis: Ages 18-64
IET-AD 6[3]	Percentage with a New Episode of Opioid Abuse or Dependence who Initiated and Engaged in Alcohol or Other Drug Treatment within 34 Days of the Initiation Visit: Ages 18-64
IET-AD 7[3]	Percentage with a New Episode of Other Drug Abuse or Dependence who Initiated Alcohol or Other Drug Treatment within 14 Days of the Diagnosis: Ages 18-64
IET-AD 8[3]	Percentage with a New Episode of Other Drug Abuse or Dependence who Initiated and Engaged in Alcohol or Other Drug Treatment within 34 Days of the Initiation Visit: Ages 18-64
OHD-AD[1, 3, 5]	Percentage of Adults Without Cancer with Two or More Opioid Prescription Claims with an Average Daily Dosage Greater than or Equal to 90 Morphine Milligram Equivalents Over 90 Consecutive Days or More: Ages 18 to 64
SAA-AD[3]	Percentage with Schizophrenia who were Dispensed and Remained on Antipsychotic Medication for at Least 80 Percent of their Treatment Period: Ages 19-64
SSD-AD[3]	Percentage with Schizophrenia or Bipolar Disorder who were Dispensed an Antipsychotic Medication and had a Diabetes Screening Test: Ages 18-64

1. Lower rates are better for these measures.
2. These measures are not expressed as percentages.
3. These measures are part of the Behavioral Health Core Set.
4. These measures are part of the Maternity Core Set.
5. These measures are newly available in the 2019 Core Set. They could be either new measures entirely, or did not previously meet reporting thresholds.