The Value of Medicaid Managed Care in Quality Improvement:

A Comparison of Quality Outcomes Across State Medicaid Program Delivery Models

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Abstract/Introduction

As more States have transitioned Medicaid beneficiaries from fee-for-service (FFS) to managed care organizations (MCOs) over the last ten years with the stated goals of cost savings and quality improvement, few studies have examined the differences in performance on quality measures between the models. Health Management Associates (HMA) conducted an analysis to quantify the impact of Medicaid managed care on key quality indicators. Leveraging the 2019 Centers for Medicare & Medicaid Services (CMS) Core Set of Adult and Child metrics that cross the care continuum (behavioral health, chronic conditions, medication adherence, etc.), we developed a standardization model aimed at classifying quality outcomes on a State-by-State basis, based on the percent of members in direct FFS arrangements, MCOs, and primary care case management (PCCM, a third care delivery model used by a minority of State Medicaid programs).

HMA found that MCOs outperformed FFS and PCCM models for both Child and Adult Core Set measures, once the quality data was normalized with respect to beneficiary distribution in each model. These performance differences could be attributed to the fact MCOs have structured care coordination and specialized programs, such as disease management, population health programs, and social determinants of health programs in place. As HMA drilled down into sub-sections of the Core Set related to key domains such as preventive care, women's health, disease management, and behavioral health (BH), our findings were consistent in that MCOs tended to perform higher overall when compared to FFS and PCCM across all major domain categories. That is, while measure-specific results varied, MCOs produced better quality results on an aggregate/domain level.

Overall, HMA's findings suggest that the growth of Medicaid managed care plans has led to higher quality scores in several core areas of adult and child measures, lending support to the idea that managed care has had a positive impact overall on the quality of care for Medicaid members across the country. As managed care plans develop strong benefit structures that focus on "high touch" care management for vulnerable members and appropriate utilization of services, they deliver better outcomes. HMA's review of the data and our understanding of State oversight of managed care programs suggests that when a State strongly embraces a quality improvement framework as a long-term strategy and partners with its managed care plans on performance-based contracts, quality scores and outcomes may be stronger. We further suggest that stronger State efforts to work with managed care plans to develop clear expectations and collaboration, while also leveraging MCOs' access to clinical and quality data sources, may contribute to higher quality scores.

Objectives and Methodology

To better understand how different care delivery and payment models in State Medicaid programs perform, HMA conducted an analysis of performance quality measures comparing the three existing models:

- **Managed Care through Managed Care Organizations (MCOs):** Representing managed care health plans contracted with the State for Medicaid and CHIP services.

- **Direct Fee-for-Service (FFS):** Representing members enrolled directly in the State Medicaid program with benefits paid on a fee-for-service basis.

- **Primary Care Case Management (PCCM):** Representing a model of health care delivery that generally requires a Medicaid enrollee to choose a primary care provider (PCP) who is responsible for coordinating the enrollee's care and is paid a monthly fee for doing so, on top of fee-for-service payments for providing medical services.

We focused on 2019 Child and Adult Core Set measures maintained and required by the CMS. These measure sets utilize several Healthcare Effectiveness Data and Information Set (HEDIS) measures developed by the National Committee for Quality Assurance (NCQA) and CMS-required specific measures that are publicly reported. The CMS 2019 Child Core Set consists of 26 total measures of which we were able to draw comparisons across the different delivery models for 21, and the Adult Core Set consists of 33 total measures of which we were able to draw comparisons across the different delivery models for 28 (see Appendix A for list of measures and results). We also analyzed the measure sets to compare performance in four domains:

1) *Preventive Health:* Measures linked to the prevention of a disease such as cancer screening, child well care visits and immunizations

2) *Women's Health:* Measures related to care for women such as breast cancer screening and prenatal/postpartum care

3) *Disease Management:* Measures related to managing disease and chronic conditions such as cardiovascular disease and diabetic care

4) *Behavioral Health (BH):* Measures related to the utilization of mental health and substance use disorder services, such as follow-up after hospitalization for mental illness and BH medication adherence

Data sources. For our analysis, we used publicly available quality measures from a Mathematica analysis of MACPro and Form CMS-416 reports for the federal fiscal year (FFY) 2019 reporting cycle[1]. We also used a 2019 analysis from the Kaiser Family Foundation Survey of Medicaid Officials in 50 States that detailed the distribution of Medicaid members attributed to each delivery model in each State[2]. (See Appendix B for table of model distribution by State and additional details of methodology). The FFY 2019 Core Set was the most recent reporting year data available at the time of this analysis. State Core Set reporting for FFY 2019 generally covers care furnished to children and adults in Medicaid and CHIP in calendar year 2018[3]. This data precedes any effects that may have been observed from the COVID-19 pandemic.

Addressing Methodological Challenges. Our analysis addressed the following issues:

- Mix of models by State: Virtually all States use some combination of MCOs, FFS, and PCCM, and each State combined the performance rates across models for individual measures. We addressed this by applying relative weights to performance rates based on the portion of Medicaid members enrolled in each model (see Appendix B State Normalization for weights used). Distribution of models can be summarized as follows:
  - o 35 States have greater than 65% of their Medicaid membership in MCOs
  - o 8 States have at least 60% of their membership in PCCM.
  - o 5 States have greater than 50% of their membership in traditional FFS.
  - o The 2 remaining States, Massachusetts and North Dakota, have more even distribution across all three MCO, PCCM and FFS models.
- Uneven reporting: Some States excluded specific populations for some measures, so we adjusted the relative weighting to ensure the excluded populations were not counted for those identified measures or States (e.g., a specific State might have 90% MCO and 10% FFS, but FFS was excluded for that measure, so the measure was weighted 100% for MCO).
- Mix of data reporting/collection methods: States used either administrative data (primarily claims and encounter data) or a hybrid of administrative data and sample medical record review; these methods varied within States for different performance measures. Because the

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[1] https://data.medicaid.gov/browse?category=Quality&limitTo=datasets&sortBy=newest&tags=performance+rates
https://www.medicaid.gov/state-overviews/state-profiles/index.html
[2] Sources: Kaiser Family Foundation Survey of Medicaid Officials in 50 states and DC (https://www.kff.org/medicaid/report/a-view-from-the-states-key-medicaid-policy-changes-results-from-a-50-state-medicaid-budget-survey-for-state-fiscal-years-2019-and-2020/) conducted by Health Management Associates, October 2019.
[3] https://www.medicaid.gov/medicaid/quality-of-care/downloads/ffy-2019-core-set-reporting.pdf

hybrid approach and administrative approach result in vastly different results (hybrid tends to result in much higher rates), we only compared results coming from the same collection method. Ensuring we had a sufficient sample within each model to draw comparisons, this resulted in most of our measures being compared based on the administrative reporting method.

- BH carve-outs: We excluded BH measures in States that carve out BH outpatient services from MCO coverage (including measures abbreviated as ADD, APP, AMM, SSD, FUM and SAA). In analyzing measures for MCOs, we excluded the follow-up after hospitalization (FUH) measures in States that carved out either outpatient or inpatient BH services. We also excluded measures for high dosage opioid use (OHD) and emergency department visits for alcohol and substance abuse with follow-up (ED) in States that carved out outpatient SUD services. See Table B.2 in the Appendix B for further details.

Comparing Models. Applying the above and other adjustments to promote "apples to apples" comparisons, we calculated rates for each performance measure attributed to each of the three models (MCO, FFS, or PCCM). For each measure we then applied a point system (better=3, second=2, and worse=1) to determine which model performed better, then summed the points for different performance measure categories, including Adult, Child, Preventive Health, Women's Health, Disease Management, and BH. This resulted in the identification of the model that performed better, on average, among each category by performing better in more measures within the specific category.

METHODOLOGY
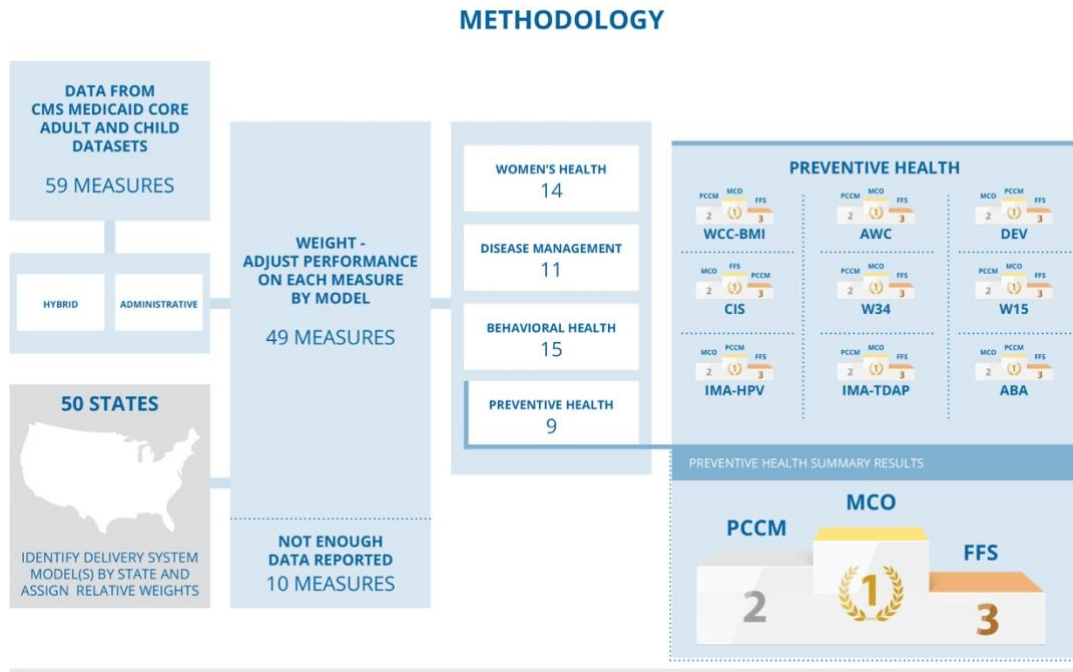
Results

CMS Core Set Measures: MCOs performed better than FFS and PCCM in overall Child Core Set measures and Adult Core Set measures (Measures analyzed are detailed in Appendix A).
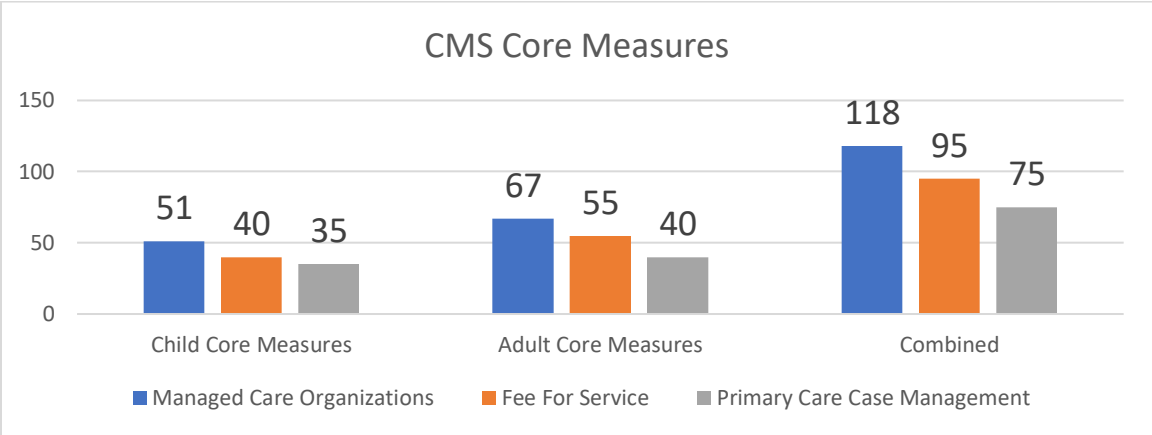
Measure Cohort Categories: MCOs performed better among all the Cohort categories: Preventive Health, Women's Health, Disease Management, and Behavioral Health Cohort measures, followed by either FFS or PCCM.   The BH measures analysis excluded MCO rates in States where BH services were not carved into managed care contracts as mentioned in the Objectives and Methodology section above (Measures analyzed are detailed in Appendix C).
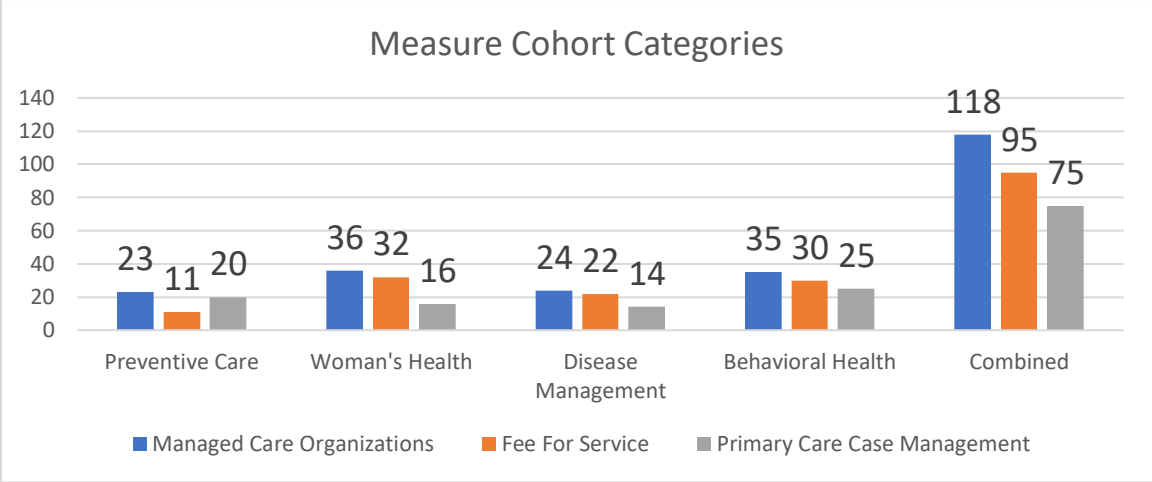
Barriers and Limitations

The scope of this analysis did not include a full examination of the correlation between State-mandated value-based payment (VBP) arrangements in provider contracts with managed care entities, or within MCO contracts with State Medicaid agencies, with respect to their impact on quality improvement. Nor did the analysis include information about whether the States paid quality-related incentives to FFS or PCCM providers. While we understand that many States (43 in total as of 2019) offer some form of incentive-based structure, these are important areas for future investigation.

Fifteen States reported one or more measures using a mixed administrative and hybrid methodology to derive a combined rate, so we excluded these specific measures for these States because we had no opportunity to separate the methodologies, and they would not be comparable.

As described above, in the States that utilized mixed models (MCO, FFS and PCCM), we used membership weighting to draw comparisons. Several States excluded FFS and PCCM from reporting specific measures, which resulted in fewer States within these categories. Weighting was adjusted per measure to keep comparisons consistent.

We recommend that in the future that CMS encourage States to provide rates separately by model so they can be more directly compared. This type of model-specific data reporting would eliminate the need for weighting and enable regional and other types of analysis.

Discussion

The first stratification performed was to review the Adult and Child Core Set measures across the State landscape. We noted that MCOs far outperformed FFS (and PCCM) in Child measures by 11 points. This margin was larger in the Adult Core Set measures with MCOs coming out 12 points ahead of Fee for Service Medicaid; both FFS and MCO were significantly higher than the PCCM model which was 28 points lower compared to MCOs. Within this initial stratification we make several observations about the States included within this analysis. While MCOs receive capitated (per member per month) reimbursement, many of the States we reviewed have performance-based contract provisions with roughly 1-3% contract withholds that are tied to performance-based measures. Value-based contracts within these States vary greatly, but one commonality is that almost all of these States offer incentive programs that often correlate directly to the CMS Core Set metrics. These withholds create small upside or downside reimbursement incentives aimed at improving specific performance measures. For example, the New York, Indiana, and Pennsylvania contracts incentivize health plans to improve a

variety of HEDIS, CAHPS and custom-built State utilization metrics (many of which are aligned with a variety of quality rating programs including CMS Core Set, Medicare Stars, NCQA Stars, and custom State Medicaid-based rating system programs).

Additionally, reliance on capitated rates means that MCOs must rely heavily on preventive care, utilization monitoring, and working through integrating clinical data beyond claims (such as EMR, disease registry and care management system information) to drive performance and achieve higher capitation and cost savings from better coordinated care outcomes and measurement performance. Thus, through both capitation and additional pay-for-performance arrangements, State governments can push their managed care plans to offer better member engagement and clinical outcomes, which also drive higher quality scores.

When reviewing the large variance in the child-based measures, we note that one of the most incentivized sets of measures within State Medicaid programs for both health plans and providers are Early Prevention Screening Detection and Treatment (EPSDT) measures that cover key areas such as well child visits, lead screenings, and immunization status. These EPSDT measures are commonly used by Medicaid agencies in quality performance programs and are required to be submitted by managed care plans. They are heavily linked to either pay for performance programs or come with State mandated requirements around performance standards and expectations. It is not uncommon for States to emphasize these services in their Request for Proposals (RFPs) during procurements or in contract requirements tied to sanctions, payment penalties, bonuses, or performance expectations. This push over the years in childhood wellness has widely shown to be effective and is a good example of States adopting these types of requirements to improve performance on these quality metrics. As a result, MCOs are expected to perform well on these EPSDT measures or risk financial and regulatory penalties.

Our next level of analysis involved stratification of measures into four major domains: Preventive Health, Women's Health, Disease Management, and Behavioral Health (please see Appendix C for a list of measures by domain). Below we discuss observations from the results for each domain and the individual measures that made up that data set.

Preventive Health Measures:

The preventive health category is broad, encompassing a range of childhood measures from well child visits (W15 and W34) to adult preventive medicine metrics like BMI assessments and cancer screening. Within this measure domain, MCOs performed 3 points better than PCCM and 12 points better than FFS Medicaid. Managed care's higher performance in these categories may be due to performance-based contract incentives, especially as they relate to integrated member and provider outreach programs. States often require MCOs to be accredited by bodies such as NCQA, URAC, AAAHC, or other entities that have specifications around provider and member outreach efforts focused on improving health outcomes. Coupled with the fact that preventive measures are often the easiest for a health plan to target with member and provider incentives, a lot of MCO effort can be placed on closing preventive care gaps. PCCM programs are also heavily geared towards prevention and care coordination and often rely on a robust network of provider interactions and support in addressing member care. FFS models, on the other hand, may have providers encouraging beneficiaries to access preventive care, but generally lack stronger incentives to drive members to these services or the care coordination features of PCCM and MCOs. Other factors may be that FFS populations tend to have a higher percentage of aged, blind, LTSS and disabled members where the focus on preventive care is not the highest priority. This is due to the fact that these populations are often carved out of a standard managed Medicaid contract and either provided by FFS or delegated to managed care organizations through other procurement-based means.

Women's Health:

The women's health measure domain consists of core metrics such as prenatal and post-partum care, as well as other women's health-based measures such as cervical cancer and chlamydia screening rates. When reviewing this measure domain, we note that both MCO and FFS scores are relatively closer to one another (MCOs scoring 4 points higher than FFS). This is contrasted with PCCM performance that is more than 16 points below both FFS and MCO scores. A strong factor is the method by which pregnancy is captured, coded, and billed from an outcome perspective. These measures require very specific preventive screenings and check-ups both during and after pregnancy. These services are often billed as bundled or global payments that can cause problems in reviewing and capturing the required data elements for quality reporting in claims data. MCOs have spent considerable time developing training and education for providers on these items and developed methods of advanced data capture

through sources such as health information exchange and electronic medical record integration. Data capture programs facilitate interventions that help close clinical gaps.

Additionally, many MCOs have developed care management and provider engagement programs aimed at supporting complex and high-risk pregnancy. These programs leverage multiple data sources and build stratification algorithms that identify high-risk members for outreach.   When coupled with State-directed programs such as Indiana's Notification of Pregnancy requirements (expectations placed on MCOs to incentivize notification of pregnancy) or Pennsylvania's Obstetrics Need Assessment Form (ONAF, a form used by MCOs to support more robust collection of provider pregnancy data), we see greater alignment of MCOs and State agencies in supporting women's health measures that allow for stronger results over time.

Disease Management:

The disease management domain includes chronic condition-based measures related to conditions such as COPD, diabetes, and cardiovascular disease.   Our analysis showed a very close 2-point margin between MCOs and FFS.   Several of the measures in this category such as HbA1C Control and Controlling High Blood Pressure are heavily based on tools that require data that tends to not be present on a claim. For example, providers often bill for an HbA1C test, but the results of the test generally do not get placed on a claim even though there are several CPT II codes that could capture the test result range (less than 7 or greater than 9). This requires a large investment in supplemental data capture techniques and a robust support system built on sharing provider data and capturing lab results. Unless State Medicaid agencies invest heavily in large data warehouses and contractual agreements with lab vendors to capture all this information, it is extremely difficult to build data-driven quality interventions. Health plans, on the other hand, as part of their annual HEDIS submissions, often have developed solutions that integrate large amounts of this data or identify where a test result is missing and proactively work toward finding and leveraging the results.

Nationally, we have also seen several indicators across both Medicare and Medicaid that demonstrate MCOs have been improving quality scores over the past several years in these key measures. HEDIS measures such as A1C control, diabetic eye exams, and blood pressure have steadily risen several percentage points over the past 5-7 years, demonstrating the impact managed care entities have had in tracking down and working with a more robust clinical data set. These results can be observed by looking at managed care scores using data and quality reports published by NCQA on an annual basis such as their "State of Health Care Quality" annual reports.   States looking to accomplish

similar results should be looking to either remove barriers within their MCOs to achieving this, or heavily investing in the technology and infrastructure needed for this in a FFS or PCCM environment.

Behavioral Health:

The measures included in the BH domain include several medication adherence-based metrics for antipsychotic medications and medications prescribed for ADHD, as well as follow-up measures such as follow up after hospitalization for mental illness. On this domain, MCOs performed slightly better than the FFS model by 1 point. With BH measures, our research indicates that this is where we find some of the largest disparities in quality measures. This is widely due to many barriers that currently exist nationally around the use of BH information and data gaps. These complex measures require MCOs, Medicaid Agencies, and providers to blend multiple forms of disparate data from both physical health and BH settings to be impactful. Additionally, a scan of measures conducted by NCQA in May of 2021 showed that there are over 1,400 BH measures currently used today in a variety of settings. This shows an inconsistent approach as to the appropriate way to measure the impact of quality interventions in BH as a whole. This serves as an opportunity area for States to collectively look at the infrastructure they have created around BH, including better data sharing arrangements and encouraging early identification programs such as the use of Admission, Discharge and Transfer (ADT) data that can be used for early follow-up care and medication adherence.

Additionally, looking for correlations at the individual measure level, we saw MCOs performed better at measures including follow-up after ER or hospitalizations for mental illness and medication adherence measures related to disease process, which indicate integrated case management and strong coordination of care processes. FFS performed better among follow-up after ER visits for alcohol and other drug use measures. MCOs may have performed better overall because of their integrated and strong care management programs. As MCOs and FFS performed relatively similar in this area, it leads to an important opportunity for MCOs to examine access to BH services and look for opportunities to add value-based payment incentives for BH measures so they can further show value over traditional FFS and PCCMs in the future. States looking to improve BH quality scores may consider the alleviation of barriers that have impeded collaboration between MCOs, providers and primary care. States can work to foster partnerships between BH providers and managed care organizations to ensure consistency in approach.

HMA has seen that a "measurement-based care approach" to BH is often one that leads to strong outcomes and better-quality scores. Because much of the data used in BH is either narrative or

unstructured on assessment forms, measuring true outcomes can often be difficult. To improve these overall low performing measures will require cross disciplinary engagement and shared incentives between Medicaid State Agencies, MCOs, and BH providers to create new forms of value-based care programs and align on core measure sets as has been the case in physical health areas.

Conclusion

In summary, the analysis performed by HMA shows MCOs delivering higher performance on quality indicators when compared to FFS models and significantly higher when compared to PCCM programs. While results vary for individual measures, at an overall and aggregate level, MCOs track higher in all the core measure domains that were analyzed from the CMS Core Set. Additionally, we find that a State's decision to move to managed care can be highly effective when the right incentive programs, risk-based arrangements, and data sharing agreements have been put in place to foster a continuous improvement mindset. This also suggests that MCOs provide States a higher cost efficiency as compared to an unmanaged FFS or PCCM environment.

The position of Medicaid agencies in adopting a culture of quality improvement suggests a strong role in quality performance monitoring and has the strongest impact when coupled with a robust managed care framework. We find the highest quality scores tend to occur when all the players are serving their core functions at their highest potential. This includes States acting as enablers to quality, MCOs serving as the strategic delivery of those measures, and providers supported and enabled to deliver high value patient care.

MCOs should continue supporting States in adding value by offering the care coordination, population health, cost/utilization savings, and network relations needed to create a quality-driven ecosystem in which member engagement results in the highest levels of performance. States, conversely, should be looking for ways to empower their MCOs to create arrangements that favor improvements in nationally based quality measures, specifically in those that are underperforming across the board. As CMS, MCOs, and State Medicaid agencies continue expanding managed care to long-term care, intellectual and developmental disability (IDD) populations, and Medicaid Star Ratings, they should benefit from lessons learned around the value of strong relationships and alignment in improving clinical quality.

Achieving high scores in quality requires collaboration and strong alignment between Federal/State regulators, their MCO partners, and the provider community as a whole. Significant investments in infrastructure, clinical data capture techniques, value-based contracting arrangements,

member/provider incentive programs, population health stratifications, and proactive outreach are often made through the implementation of managed care.   It is often a better use of the State time and resources to outsource these functions to health plans and vendors who specialize in these areas and bring years of specific expertise, staffing, and process improvement methodologies. When States leverage these mechanisms to work with MCOs and providers to create shared incentives and alignment, improvement in quality is more likely to take hold.

Appendix A- Comparative Performance by Core Set Measures

Child Core Set Measures used that were comparable

WCC-BMI: Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents - Body Mass Index Assessment for Children/Adolescents: Ages 3 to 17
- ➢ 9 States reported using the administrative reporting methodology
  - ✓ 4 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 25.8%
  - ✓ 7 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 21.5%
  - ✓ 4 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 11.5%

AWC: Adolescent Well Care Visits- Ages 12-21
- ➢ 21 States reported using the administrative reporting methodology
  - ✓ 11 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 45.7%
  - ✓ 7 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 41.7%
  - ✓ 15 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 39.2%

CHL-Chlamydia Screening in Women Ages 16 to 20
- ➢ 46 States reported using the administrative reporting methodology
  - ✓ 37 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 51.5%
  - ✓ 20 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 47.3%
  - ✓ 8 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 41.5%

DEV- Developmental Screening in the First Three Years of Life: Ages 0 to 3
- ➢ 23 States reported using the administrative reporting methodology
  - ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 43.3%
  - ✓ 15 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 41.8%
  - ✓ 15 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 35.4%

CIS- Childhood Immunization Status (Combination 3): Age 2
- ➢ 12 States reported using the administrative reporting methodology
  - ✓ 9 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 50.6%

- ✓ 6 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 47.7%
- ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 45.9%

W34- Well Child Visit 3, 4, 5 and 6 Years of Life: 3-6 Years of Age
- ➢ 22 States reported using the administrative reporting methodology
    - ✓ 12 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 65.5%
    - ✓ 7 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 63.1%
    - ✓ 15 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 58.0%

W15- Well Child Visit in the First 15 Months of Life
- ➢ 21 States reported using the administrative reporting methodology
    - ✓ 11 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 60.4%
    - ✓ 7 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 59.1%
    - ✓ 15 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 58.4%

IMA-Percentage Completing the Human Papillomavirus (HPV) Vaccine Series by Their 13th Birthday
- ➢ 15 States reported using the administrative reporting methodology
    - ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 32.0%
    - ✓ 7 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 29.4%
    - ✓ 12 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 25.8%

IMA-Percentage Completing the Meningococcal Conjugate and Tdap Vaccines (Combination 1) Vaccine Series by Their 13th Birthday
- ➢ 15 States reported using the administrative reporting methodology
    - ✓ 7 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 68.7%
    - ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 63.3%
    - ✓ 12 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 51.3%

LBW- Live Births Weighing Less Than 2,500 Grams (Lower Rate is Better)(Data is provided by CMS)
- ➢ 50 States reported using the administrative reporting methodology
    - ✓ 39 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 9.6% (tied so given 3 points)

- ✓ 46 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 9.6% (tied so given 3 points)
- ✓ 12 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 10.0% (2nd so given 2 points)

PPC- Prenatal and Postpartum Care: Timeliness of Prenatal Care
- ➢ 10 States reported using the administrative reporting methodology
  - ✓ 5 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 68.0%
  - ✓ 9 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 54.0%
  - ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 51.8%

CCP- Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 3 Days of Delivery: Ages 15 to 20
- ➢ 32 States reported using the administrative reporting methodology
  - ✓ 24 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 6.11%
  - ✓ 21 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 5.13%
  - ✓ 8 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 4.33%

CCP- Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 60 Days of Delivery: Ages 15 to 20
- ➢ 32 States reported using the administrative reporting methodology
  - ✓ 21 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 40.8%
  - ✓ 8 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 37.1%
  - ✓ 24 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 36.6%

CCP- Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 3 Days of Delivery: Ages 15 to 20
- ➢ 32 States reported using the administrative reporting methodology
  - ✓ 24 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 3.66%
  - ✓ 21 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 2.79%
  - ✓ 8 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 1.49%

CCP- Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 60 Days of Delivery: Ages 15 to 20

➢ 32 States reported using the administrative reporting methodology
- ✓ 24 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 17.1%
- ✓ 21 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 15.3%
- ✓ 8 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 13.4%

AMB- Ambulatory Care: Emergency Department (ED) Visits: Ages 0 to 19 (Rates are per 1000), (Lower rate is better)

➢ 46 States reported using the administrative reporting methodology
- ✓ 18 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 42.7%
- ✓ 38 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 43.8%
- ✓ 8 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 48.3%

ADD- Follow-Up Care for Children Prescribed ADHD Medication with at Least 2 Follow-Up Visits in the 9 Months Following the Initiation Phase: Ages 6 to 12

➢ 36 States reported using the administrative reporting methodology and outpatient Mental Health benefits are carved in
- ✓ 7 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 73.2%
- ✓ 17 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 64.0%
- ✓ 24 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 56.6%

ADD- Follow-Up Care for Children Prescribed ADHD Medication with 1 Follow-Up Visit During the 30-Day Initiation Phase: Ages 6 to 12

➢ 36 States reported using the administrative reporting methodology and outpatient Mental Health benefits are carved in
- ✓ 7 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 56.4%
- ✓ 17 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 52.1%
- ✓ 24 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 39.4%

FUH- Follow-Up After Hospitalization for Mental Illness- Follow-Up Visit Within 7 Days after Discharge: Ages 6 to 17

➢ 32 States reported using the administrative reporting methodology and were carved in for both outpatient and inpatient BH services

   ✓ 22 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 50.3%
   ✓ 26 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 39.7%
   ✓ 9 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 38.4%

FUH- Follow-Up After Hospitalization for Mental Illness- Follow-Up Visit Follow-Up Visit Within 30 Days after Discharge: Ages 6 to 17

➢ 33 States reported using the administrative reporting methodology and were carved in for both outpatient and inpatient services

   ✓ 23 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 71.1%
   ✓ 25 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 62.7%
   ✓ 10 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 57.9%

APP- Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics: Ages 1 to 17

➢ 25 States reported using the administrative reporting methodology

   ✓ 15 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 69.6%
   ✓ 19 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 63.5%
   ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 60.2%

Adult Core Set Measures used that were comparable

ABA: Adult BMI Assessment: Ages 18 to 74
➢ 11 States reported using the administrative reporting methodology
- ✓ 4 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 37.9%
- ✓ 7 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 36.8%
- ✓ 8 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 28.3%

BCS- Breast Cancer Screening: Ages 50 to 74
➢ 42 States reported using the administrative reporting methodology
- ✓ 35 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 54.5%
- ✓ 19 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 48.6%
- ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 43.1%

CCS- Cervical Cancer Screening: Ages 21 to 64
➢ 17 States reported using the administrative reporting methodology
- ✓ 14 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 52.6%
- ✓ 15 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 45.6%
- ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 41.3%

CHL- Chlamydia Screening: Ages 21 to 24
➢ 43 States reported using the administrative reporting methodology
- ✓ 37 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 60.2%
- ✓ 20 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 58.4%
- ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 49.1%

CCP- Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 3 Days of Delivery: Ages 21 to 44
➢ 29 States reported using the administrative reporting methodology
- ✓ 21 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 12.1%
- ✓ 22 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 11.0%

- ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 8.8%

CCP- Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 60 Days of Delivery: Ages 21 to 44
- ➢ 29 States reported using the administrative reporting methodology
  - ✓ 21 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 40.5%
  - ✓ 22 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 35.6%
  - ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 34.4%

CCP- Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 3 Days of Delivery: Ages 21 to 44
- ➢ 29 States reported using the administrative reporting methodology
  - ✓ 22 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 2.1%
  - ✓ 21 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 2.0%
  - ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 1.0%

CCP- Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 60 Days of Delivery: Ages 21 to 44
- ➢ 29 States reported using the administrative reporting methodology
  - ✓ 22 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 13.4%
  - ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 11.7%
  - ✓ 21 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 11.6%

CBP- Controlling High Blood Pressure: Ages 18 to 85
- ➢ 30 States reported using the hybrid reporting methodology
  - ✓ 21 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 60.0%
  - ✓ 22 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 55.1%
  - ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 38.0%

CDC-HPC- Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%): Ages 18 to 75 HbgA1c >9 (Lower Rate is better)

➢ 26 States reported using the hybrid reporting methodology
- ✓ 1 State included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 26.0%
- ✓ 24 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 38.4%
- ✓ 3 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 41.1%

HbgA1c Testing

➢ 26 States reported using the hybrid reporting methodology
- ✓ 23 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 87.0%
- ✓ 3 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 85.7%
- ✓ 1 State included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 26.0%

PQI01: Diabetes Short-Term Complications Admission Rate: Age 18 and Older (per 100,000, lower rates are better)

➢ 30 States reported using the administrative reporting methodology
- ✓ 21 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 19.2/1000
- ✓ 24 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 19.3/1000
- ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 31.3/1000

PQI05: Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate: Age 40 and Older (Rate per 100,000) (lower rate is better)

➢ 25 States reported using the administrative reporting methodology
- ✓ 19 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 76.2/1000
- ✓ 18 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 81.5/1000
- ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 113.5/1000

PQI08: Heart Failure Admission Rate: Age 18 and Older (Rate per 100,000) (lower rate is better)

➢ 26 States reported using the administrative reporting methodology
- ✓ 19 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 24.9/1000
- ✓ 20 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 30.9/1000

✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 44.2/1000

PQI15: Asthma in Younger Adults Admission Rate: Ages 18 to 39 (Rate per 100,000) (lower rate is better)
➢ 26 States reported using the administrative reporting methodology
   ✓ 21 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 5.3/1000
   ✓ 18 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 8.3/1000
   ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 11.2/1000

PCR- Plan All-Cause Readmissions: Ages 18 to 64 (O/E Ratio Reported) (lower rate is better)
➢ 30 States reported using the administrative reporting methodology
   ✓ 26 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 0.8304
   ✓ 4 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 0.9032
   ✓ 14 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 0.9863

AMR- Asthma Medication Ratio: Ages 19 to 64
➢ 38 States reported using the administrative reporting methodology
   ✓ 17 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 57.0%
   ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 55.2%
   ✓ 33 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 55.0%

AMM- Diagnosed with Major Depression who were Treated with and Remained on Antidepressant Medication for 6 Months: Ages 18 to 64

➢ 31 States reported using the administrative reporting methodology
   ✓ 22 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 36.8%
   ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 35.9%
   ✓ 22 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 34.2%

FUH- Follow-Up After Hospitalization for Mental Illness: Age 18 and Older- 7 days
➢ 36 States reported using the administrative reporting methodology
  ✓ 24 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 35.9%
  ✓ 22 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 34.4%
  ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 28.9%

FUH- Follow-Up After Hospitalization for Mental Illness: Age 18 and Older- 30 days
➢ 34 States reported using the administrative reporting methodology
  ✓ 24 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 55.7%
  ✓ 22 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 52.3%
  ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 46.6%

SSD- Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications: Ages 18 to 64
➢ 32 States reported using the administrative reporting methodology
  ✓ 23 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 80.1%
  ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 79.3%
  ✓ 19 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 78.9%

OHD- Use of Opioids at High Dosage in Persons Without Cancer: Age 18 and Older (Lower Rate is better)
➢ 23 States reported using the administrative reporting methodology
  ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 5.6%
  ✓ 12 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 7.4%
  ✓ 17 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 9.9%

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 to 64
➢ 33 States reported using the administrative reporting methodology
  ✓ 18 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 24.0%
  ✓ 26 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 21.1%

- ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 15.4%

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 to 64
- ➢ 34 States reported using the administrative reporting methodology
    - ✓ 18 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 16.2%
    - ✓ 27 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 14.5%
    - ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 10.2%

FUM- Follow-Up After Emergency Department Visit for Mental Illness: Age 18 and Older- 7 days
- ➢ 32 States reported using the administrative reporting methodology
    - ✓ 24 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was
    - ✓ 43.1%19 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 42.1%
    - ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 32.8%

FUM- Follow-Up After Emergency Department Visit for Mental Illness: Age 18 and Older- 30 days
- ➢ 32 States reported using the administrative reporting methodology
    - ✓ 24 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 56.7%
    - ✓ 19 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 54.5%
    - ✓ 6 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 46.3%

SAA- Adherence to Antipsychotic Medications for Individuals With Schizophrenia: Ages 19 to 64
- ➢ 31 States reported using the administrative reporting methodology
    - ✓ 5 States included PCCM model representing all or a percentage of that State and their weighted average rate for the measure was 66.6%
    - ✓ 20 States included FFS model representing all or a percentage of that State and their weighted average rate for the measure was 64.2%
    - ✓ 24 States included MCOs representing all or a percentage of that State and their weighted average rate for the measure was 59.1%

Appendix B – State Normalization

We captured the percentage of Medicaid membership per State that are attributed to MCO, FFS or PCCM models as of July 1, 2019. We utilized the 2019 percentages to match the FFY 2019 Core Data Set available from CMS, the most recent year available. Our model breakdowns are detailed in Table B.1 below.

Table B.1- Percentage Medicaid Members by Model 2019[4]

State	Percentage of MCO	Percentage of PCCM	Percentage of FFS
Alabama	--	85%	15%
Alaska	--	--	100%
Arizona	94%	--	6%
Arkansas (1)	5%	45%	50%
California	81%	--	19%
Colorado (2)	10%	91%	0%
Connecticut (3)	--	--	100%
Delaware	97%	--	3%
Florida	90%	--	10%
Georgia	75%	--	25%
Hawaii	100%	--	0%
Idaho (4)	--	84%	16%
Illinois	81%	--	19%
Indiana	78%	--	22%
Iowa	94%	--	6%
Kansas	99%	--	1%
Kentucky	91%	--	9%
Louisiana	90%	--	10%
Maine	--	60%	40%
Maryland	86%	--	14%
Massachusetts	42%	26%	32%
Michigan	77%	--	24%
Minnesota	83%	--	17%
Mississippi	65%	--	35%
Missouri	73%	--	27%
Montana	--	87%	13%
Nebraska	100%	--	0%
Nevada	74%	--	26%
New Hampshire	98%	--	2%

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[4] Sources: [Kaiser Family Foundation Survey of Medicaid Officials in 50 states and DC] (https://www.kff.org/medicaid/report/a-view-from-the-states-key-medicaid-policy-changes-results-from-a-50-state-medicaid-budget-survey-for-state-fiscal-years-2019-and-2020/) conducted by Health Management Associates, October 2019.

New Jersey	95%	--	5%
New Mexico	81%	--	19%
New York	77%	--	23%
North Carolina	--	90%	10%
North Dakota	23%	44%	34%
Ohio	94%	--	6%
Oklahoma	--	75%	26%
Oregon (5)	91%	--	9%
Pennsylvania	89%	--	11%
Rhode Island	90%	--	10%
South Carolina (6)	77%	--	23%
South Dakota	--	80%	20%
Tennessee	100%	--	0%
Texas	94%	--	6%
Utah	75%	--	25%
Vermont	--	--	100%
Virginia	98%	--	2%
Washington	93%	1%	6%
West Virginia	77%	--	23%
Wisconsin	78%	--	22%
Wyoming	--	--	100%

1. In Arkansas, most expansion adults are served by Qualified Health Plans through "Arkansas Works" premium assistance waiver.

2. In Colorado, PCCM enrollees are part of the State's Accountable Care Collaboratives (ACCs).

3. Connecticut does not have capitated managed care arrangements, but does carry out many managed care functions, including ASO arrangements, payment incentives based on performance, intensive care management, community workers, educators, and linkages with primary care practices.

4. Idaho's Medicaid-Medicare Coordinated Plan (MMCP) has been recategorized by CMS as an MCO but is not counted here as such since it is secondary to Medicare.

5. In Oregon, MCO enrollees include those enrolled in the State's Coordinated Care Organizations (CCOs).

6. South Carolina uses PCCM authority to provide care management services to approximately 200 medically complex children.

Table B.2 - BH Services Covered Under Acute Care MCO Contracts in All 50 States, as of July 1, 2019

States	Specialty OP Mental Health	Inpatient Mental Health	Outpatient SUD	Inpatient SUD
Alabama	--	--	--	--
Alaska	--	--	--	--
Arizona*	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Arkansas	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
California	Always Carved-out	Always Carved-out	Always Carved-out	Always Carved-out
Colorado	Always Carved-out	Always Carved-out	Always Carved-out	Always Carved-out
Connecticut	--	--	--	--
Delaware	Varies	Varies	Varies	Varies
Florida	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Georgia	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Hawaii	Always Carved-out	Always Carved-out	Always Carved-in	Always Carved-in
Idaho	--	--	--	--
Illinois	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Indiana	Varies	Always Carved-in	Always Carved-in	Always Carved-in

Iowa	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Kansas	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Kentucky	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Louisiana	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Maine	--	--	--	--
Maryland	Always Carved-out	Always Carved-out	Always Carved-out	Always Carved-out
Massachusetts	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Michigan	Always Carved-out	Always Carved-out	Always Carved-out	Always Carved-out
Minnesota	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Mississippi	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Missouri	Always Carved-out	Varies	Varies	Varies
Montana	--	--	--	--
Nebraska	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Nevada	Always Carved-in	Varies	Always Carved-in	Always Carved-in
New Hampshire	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
New Jersey	Varies	Always Carved-in	Varies	Always Carved-in
New Mexico	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
New York	Varies	Always Carved-in	Always Carved-in	Always Carved-in
North Carolina	--	--	--	--
North Dakota	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Ohio	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Oklahoma	--	--	--	--
Oregon	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Pennsylvania	Always Carved-out	Always Carved-out	Always Carved-out	Always Carved-out
Rhode Island	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
South Carolina	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
South Dakota	--	--	--	--
Tennessee	Always Carved-in	Always Carved-in	Always Carved-in	Always Carved-in
Texas	Varies	Always Carved-in	Always Carved-in	Always Carved-in
Utah	Always Carved-out	Always Carved-out	Always Carved-out	Always Carved-out
Vermont	--	--	--	--
Virginia	Always Carved-out	Varies	Always Carved-in	Varies
Washington	Varies	Varies	Varies	Varies
West Virginia	Always Carved-in	Always Carved-in	Always Carved-in	Varies
Wisconsin	Varies	Always Carved-in	Always Carved-in	Always Carved-in
Wyoming	--	--	--	--
Always Carved-in	23	28	29	29
Always Carved-out	10	7	7	6
Varies	7	5	4	5

NOTES: OP - Outpatient. SUD - Substance Use Disorder. "--" indicates there were no MCOs operating in that State's Medicaid program in July 2019. For beneficiaries enrolled in an MCO for acute care benefits, States were asked to indicate whether these benefits are always carved-in (meaning virtually all services are covered by the MCO), always carved-out (to PHP or FFS), or whether the carve-in varies (by geography or other factor). "Specialty outpatient mental health" refers to services utilized by adults with Serious Mental Illness (SMI) and/or youth with serious emotional disturbance (SED) commonly provided by specialty providers such as community mental health centers. *AZ: Foster care children have separate MCOs for Acute and BH, all other populations are in an integrated MCO.

SOURCE: Kaiser Family Foundation Survey of Medicaid Officials in 50 States and DC conducted by Health Management Associates, October 2019.

The measure statistics were taken from Mathematica analysis of MACPro and Form CMS-416 reports for the FFY 2019 reporting cycle[5].

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[5]https://data.medicaid.gov/browse?category=Quality&limitTo=datasets&sortBy=newest&tags=performance+rates https://www.medicaid.gov/state-overviews/state-profiles/index.html

We utilized the above table B.1 to apply the specific population weights for each measure based on the model population percentages. In many cases the States that had multiple model populations had excluded a specific population and in those cases the weighting was adjusted to the populations that were reported.

We utilized Table B.2 for analysis of BH and Substance Abuse measures based on those MCO states that have these services carved in for coverage. If they did not have these services carved in for coverage we did not count them for MCO. If the State reported these carve out States for FFS or PCCM in the Mathematica analysis notes they were counted for those payment methodologies as appropriate.

The data collection methodology for each measure is described in Appendix A, but most measures compared the administrative reporting method because enough States reported this method within the individual models to draw comparisons. Only a few measures used the hybrid method to compare because more States reported hybrid in those specific measures.

Appendix C – Measures by Domain

Preventive Care Measures
- WCC-BMI: Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents - Body Mass Index Assessment for Children/Adolescents: Ages 3 to 17
- AWC: Adolescent Well Care Visits- Ages 12-21
- DEV- Developmental Screening in the First Three Years of Life: Ages 0 to 3
- CIS- Childhood Immunization Status (Combination 3): Age 2
- W34- Well Child Visit 3, 4, 5 and 6 Years of Life: 3-6 Years of Age
- W15- Well Child Visit in the First 15 Months of Life
- IMA-Percentage Completing the Human Papillomavirus (HPV) Vaccine Series by Their 13th Birthday
- IMA-Percentage Completing the Meningococcal Conjugate and Tdap Vaccines (Combination 1) Vaccine Series by Their 13th Birthday
- ABA: Adult BMI Assessment: Ages 18 to 74

Women's Health Measures
- CHL-Chlamydia Screening in Women Ages 16 to 20
- LBW- Live Births Weighing Less Than 2,500 Grams (Lower Rate is Better), (Data is provided by CMS)
- PPC- Prenatal and Postpartum Care: Timeliness of Prenatal Care
- CCP- Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 3 Days of Delivery: Ages 15 to 20
- CCP- Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 60 Days of Delivery: Ages 15 to 20
- CCP- Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 3 Days of Delivery: Ages 15 to 20
- CCP- Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 60 Days of Delivery: Ages 15 to 20
- BCS- Breast Cancer Screening: Ages 50 to 74
- CCS- Cervical Cancer Screening: Ages 21 to 64
- CHL- Chlamydia Screening: Ages 21 to 24
- CCP- Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 3 Days of Delivery: Ages 21 to 44
- CCP- Percentage of Postpartum Women Provided a Most Effective or Moderately Effective Method of Contraception Within 60 Days of Delivery: Ages 21 to 44
- CCP- Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 3 Days of Delivery: Ages 21 to 44
- CCP- Percentage of Postpartum Women Provided a Long-Acting Reversible Method of Contraception Within 60 Days of Delivery: Ages 21 to 44

Disease Management Measures:

- AMB- Ambulatory Care: Emergency Department (ED) Visits: Ages 0 to 19 (Rates are per 1000), (Lower rate is better)
- CBP- Controlling High Blood Pressure: Ages 18 to 85
- CDC-HPC- Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%): Ages 18 to 75, HbgA1c >9 (Lower Rate is better)
- HbgA1c Testing
- PQI01: Diabetes Short-Term Complications Admission Rate: Age 18 and Older (per 100,000, lower rates are better)
- PQI05: Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate: Age 40 and Older (Rate per 100,000) (lower rate is better)
- PQI08: Heart Failure Admission Rate: Age 18 and Older (Rate per 100,000) (lower rate is better)
- PQI15: Asthma in Younger Adults Admission Rate: Ages 18 to 39 (Rate per 100,000) (lower rate is better)
- PCR- Plan All-Cause Readmissions: Ages 18 to 64 (O/E Ratio Reported) (lower rate is better)
- AMR- Asthma Medication Ratio: Ages 19 to 64

BH Measures:

- ADD- Follow-Up Care for Children Prescribed ADHD Medication with at Least 2 Follow-Up Visits in the 9 Months Following the Initiation Phase: Ages 6 to 12
- ADD- Follow-Up Care for Children Prescribed ADHD Medication with 1 Follow-Up Visit During the 30-Day Initiation Phase: Ages 6 to 12
- FUH- Follow-Up After Hospitalization for Mental Illness- Follow-Up Visit Within 7 Days after Discharge: Ages 6 to 17
- FUH- Follow-Up After Hospitalization for Mental Illness- Follow-Up Visit Follow-Up Visit Within 30 Days after Discharge: Ages 6 to 17
- APP- Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics: Ages 1 to 17
- Diagnosed with Major Depression who were Treated with and Remained on Antidepressant Medication for 6 Months: Ages 18 to 64
- FUH- Follow-Up After Hospitalization for Mental Illness: Age 18 and Older- 7 days
- FUH- Follow-Up After Hospitalization for Mental Illness: Age 18 and Older- 30 days
- SSD- Diabetes Screening for People with Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications: Ages 18 to 64
- OHD- Use of Opioids at High Dosage in Persons Without Cancer: Age 18 and Older
- 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 to 64
- 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 to 64
- FUM- Follow-Up After Emergency Department Visit for Mental Illness: Age 18 and Older- 7 days
- FUM- Follow-Up After Emergency Department Visit for Mental Illness: Age 18 and Older- 30 days
- SAA- Adherence to Antipsychotic Medications for Individuals with Schizophrenia: Ages 19 to 64