Quality Measurement for Home and Community Based Services (HCBS) and Behavioral Health in Medicaid

Environmental Scan and Synthesis

Prepared for:
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Summary of Key Findings

Individuals with behavioral health conditions and needs for home and community based services (HCBS) are among the most expensive and vulnerable Medicaid beneficiaries. Quality improvement and measurement efforts for this population are also less well developed than those for individuals with only physical health care needs. The Medicaid and CHIP Payment and Access Commission (MACPAC) contracted with the State Health Access Data Assistance Center (SHADAC) within the University of Minnesota's School of Public Health to conduct a comprehensive scan of state-level quality measurement initiatives related to HCBS and behavioral health in Medicaid. Key findings include:

All states are engaged in some type of behavioral health measurement for Medicaid, and public reporting of these measures is fairly common. Many states monitor behavioral health quality for a broad cross-section of Medicaid enrollees. A common source of this monitoring comes from managed care quality reporting. Some states are also conducting quality measurement for behavioral health for more targeted initiatives, such as the duals financial alignment demonstrations, health homes, and benefit plans that carve out behavioral health services. Nearly half of all states—23 in total—are also engaged in public reporting of behavioral health quality measures.

There is consistency across states in the most commonly used behavioral health measures, and core measure sets and required reporting for federal initiatives appear to drive this. The 2016 Healthcare Effectiveness Data and Information Set (HEDIS), the Centers for Medicare and Medicaid Services (CMS) core measure sets as well as mandatory reporting requirements for Medicaid health homes, and duals financial alignment waivers all include behavioral health quality measures (see Box 1 for more information about each initiative). The most commonly reported measure in our review was *follow-up after hospitalization for mental illness*, with 40 states reporting. This measure is included in all of the core measure sets and the reporting requirements for both federal initiatives that we reviewed. *Alcohol and drug dependence treatment* and *antidepressant medication management* were also quite commonly reported, and are included in three of the five measure sets.

Few substance use measures are included in core measure sets and reporting requirements for federal initiatives, but certain states have developed their own measures to fill this gap. The core measure sets and national initiatives we reviewed include a limited number of substance use measures: *initiation and engagement of alcohol or other drug dependence treatment; identification of alcohol and other drug dependence treatment*; and *use of opioids at high doses*. Some states have developed their own measures to fill this gap, and Kansas and New Hampshire emerged as leaders in this area. Kansas monitors a range of substance use measures for KanCare that draw from a diverse range of data including claims, electronic health record review and survey data. New Hampshire also monitors a range of measures related to substance use, that are primarily based on utilization rather than assessing compliance with evidence-based practices and/or desirable patient outcomes.

Most quality measurement activity related to HCBS in Medicaid is based on CMS reporting requirements for states with 1915 (c) waivers, and these measures tend to be process oriented. 1915(c) of the Social Security Act allows states to waive certain statutory requirements in order to offer home and community based services to Medicaid beneficiaries who would otherwise receive long term care in institutional settings. Based on our scan, 48 states have at least one 1915(c) waiver in place. States are required to identify performance measures to evaluate progress on waiver activities across six domains. In general, these measures are process based and focus on the extent to which states and providers demonstrate compliance with a range of policies and procedures that are associated with better outcomes (e.g., specific provider qualifications, inclusion of personal goals in service plans, level of care assessment process) rather than measuring the health, wellbeing or functional status of an individual or population.

HCBS measurement outside of 1915(c) waiver requirements focuses on rebalancing of services from institutional to community based settings. Some states are monitoring HCBS quality for other initiatives, such as managed long term services and supports (MLTSS) and reform initiatives that seek to align payment and delivery of a range of physical, behavioral, and long term care services. The most common measures are those assessing the extent to which services are being "rebalanced" from institutional to community based settings, e.g., *movement of members starting and ending in the community during the measurement year*; *nursing facility diversion*; *number and percent of individuals receiving HCBS versus institutional services*.

Aligning measures across core measure sets and federal reporting requirements could address important gaps in Medicaid behavioral health and HCBS quality measurement. A clear finding from this work is that federal reporting requirements and core measure sets appear to be the primary driver of state measurement activity. Measures represented in multiple core measure sets and/or required reporting were far more likely to be reported by states. This suggests that measurement gaps might be filled by both aligning measure lists across federal initiatives and by prioritizing new measurement in key gap areas. For example, if there is consensus that a specific measure related to opioid abuse is a priority, this measure should be included in all of the core measure sets and added to the reporting requirements for relevant federal initiatives.

Box 1
HCBS and Behavioral Health: Core Measure Sets and Federal Reporting Requirements

CMS Adult Core recommended measures set
The CMS Adult Core Set of quality measures is developed and published by the Secretary of Health and Human Services as required by the Affordable Care Act (§ 1139B of the ACA). The measures set is designed specifically to reflect the Medicaid population and draws in part from HEDIS. The Behavioral Health Core Set is a subset of the adult and child core sets and includes eight adult behavioral health measures. These measures focus primarily on the use of antipsychotics and access to behavioral health care.

CMS Child Core recommended measures set
The CMS Child Core Set of quality measures is developed and published by the Secretary of Health and Human Services pursuant the Children's Health Insurance Program Reauthorization Act. The Behavioral Health Core Set includes five child behavioral health measures that focus primarily on screening and medication use.

NCQA HEDIS measures set
The National Committee for Quality Assurance's (NCQA) 2016 HEDIS is a specifically-defined measure set used by over 90 percent of health plans (commercial, Medicare, and Medicaid) in the United States for quality measurement. HEDIS serves as a template for quality measurement in broad and targeted initiatives across the country. The set consists of 81 measures across seven domains. We identified 14 measures related to behavioral health under the following domains: effectiveness of care (9 measures), access/availability of care (2 measures), utilization and risk adjusted utilization (2 measures), and measures collected using electronic clinical data systems (1 measure).

Box 1 cont.

Medicaid Health Home required measures set (Health Home)
States are permitted to elect a new Health Homes service option through a Medicaid State Plan Amendment to integrate care for enrollees with chronic conditions, including behavioral health conditions, under the Patient Protection and Affordable Care Act (§ 2703 of the ACA, P.L. 111-148, as amended). Medicaid health home programs are required by CMS to submit a set of core measures designed to evaluate and monitor state home health programs across the country. The set of eleven measures primarily draws from the Healthcare Effectiveness Data and Information Set (HEDIS) measures, as well as two targeted utilization measures developed by CMS. States also have the option to track additional quality measures.

CMS Medicare-Medicaid Financial Alignment Initiative required measures set
The Medicare-Medicaid Financial Alignment Initiative allows states to test models to better align financing and integrate primary, acute, behavioral, and long term services and supports for individuals dually eligible for Medicare and Medicaid. States are required to submit certain quality withhold measures in year one of the program and another set in years two and three. Year one reports include administrative and consumer experience measures as well as encounter data. Years two and three reports require seven more specific measures, a subset of which relate to behavioral health. The three behavioral health measures are *follow-up after hospitalization for mental illness, antidepressant medication management, and screening for clinical depression*. States have the option to track additional quality measures.

1915 (c) Home and Community Based Waivers:
1915 (c) of the Social Security Act allows states to waive certain statutory requirements in order to offer home and community based services to Medicaid populations that would otherwise receive long term care in institutional settings. States are required to identify performance measures to evaluate progress on waiver activities in six domains of measurement: administrative authority, level of care, qualified providers, service plan, health and welfare, and financial accountability.

Introduction

Individuals with behavioral health care conditions and needs for home and community based services (HCBS) are among the most expensive and vulnerable Medicaid beneficiaries. These individuals often have multiple comorbidities and service needs, but frequently find themselves in disjointed systems resulting in poor access to care, gaps in receiving needed care, inappropriate use of services, poor health status, and increased costs. Although many states have undertaken efforts to coordinate care delivery for individuals with behavioral health care conditions, needs for HCBS, and those who are dually eligible for Medicare and Medicaid, fragmented care for these patients persists (Thomas et al. 2005, Kessler et al. 2005, Kitchener et al. 2005).

Quality improvement and measurement efforts for these populations are also less well developed than those for individuals with only physical health care needs. Although some of the barriers to quality measurement exist in all settings (e.g., lack of interoperable electronic health records, process versus outcomes orientation), there are additional barriers to quality measurement and benchmarking for HCBS and behavioral health. For example, the range and diversity of patients and services under the umbrella of HCBS has created challenges for building consensus on core principles and desired outcomes for measuring quality. There are also challenges related to data quality, sharing, and infrastructure that inhibit meaningful quality measurement. Benchmarking is also more complicated because these populations exhibit a higher prevalence of certain conditions and co-morbidities (e.g., depression and tobacco use in populations with disabilities). As a result, quality targets may need to be risk adjusted in order to equitably compare their outcomes to other populations.

In order to better understand the range of quality measurement activities related to behavioral health and HCBS in Medicaid across states, the Medicaid and CHIP Payment and Access Commission (MACPAC) contracted with the State Health Access Data Assistance Center (SHADAC) within the University of Minnesota's School of Public Health to conduct a review of quality measurement frameworks and a comprehensive scan of state-level quality measurement initiatives. This project included two primary activities:

1. First, we **scanned quality measurement activities** focused on individuals with behavioral health care conditions or needs for HCBS in Medicaid programs in all fifty states and the District of Columbia. Key findings are described in this document along with summary tables.

2. Second, we **reviewed quality frameworks** addressing priorities, gaps, and challenges for quality measurement related to behavioral health and/or HCBS. Findings from this review are detailed in Appendix 1.

State Catalogue of Relevant Quality Measurement Activity

We developed catalogues of quality measurement activities related to HCBS and behavioral health in Medicaid for 50 states and the District of Columbia. Initiatives were identified through a web search of publicly available information using the following search terms: Medicaid quality; behavioral health quality; Medicaid health homes and HCBS quality. Detailed information about the methodology of our scan is available in Appendix 2.

Given the breadth and depth of the state-level activities contained in these catalogues, we have synthesized state findings in a series of summary tables and descriptive text. Although there was some overlap in the initiatives that included quality measurement for HCBS and behavioral health, more often they were tied to separate initiatives. For example, behavioral health measures are frequently included in Medicaid managed care reporting, but HCBS measures are less common in this context. Conversely, 1915(c) waiver measures focus on HCBS, but less frequently include behavioral health measures. As a result, we summarize our findings for behavioral health and HCBS separately. This section closes with a summary of state activities related to the public reporting of quality measurement information and the extent to which this information is shared with providers. It is important to note that the information presented below is limited to documentation that was available on state web sites and other public domains.

Behavioral Health Quality Measurement: Key Findings

We considered behavioral health measurement to include the monitoring of both care related to mental health and substance use. In order to structure our review and synthesis, we separated quality measurement related to behavioral health in Medicaid into two categories:

1. Broad initiatives: We found that many states are reporting on behavioral health measures as part of quality monitoring for programs that include a broad cross-section of Medicaid enrollees. For example, states may be monitoring follow-up after mental health hospitalizations as part of Managed Care Organization (MCO) reporting, or tracking similar measures for a primary care medical home program.
2. Targeted initiatives: We also found that states are measuring the quality of behavioral health care through more targeted initiatives, including duals financial alignment demonstrations, health homes, 1915(c) waivers, quality measurement of services delivered through behavioral health carve out benefits, and state agency performance monitoring. Other, less frequent approaches include Managed Long Term Services and Supports (MLTSS) tracking of behavioral health measures, state reporting for all residents receiving behavioral health services that include break outs for Medicaid beneficiaries, and care coordination and bundled payment programs that target behavioral health conditions.

Table 2 summarizes our state-level findings related to quality measurement aimed at behavioral health. At a high level, we found evidence that every state is engaged in some type of behavioral health measurement for Medicaid. Forty-six states are conducting behavioral health measurement as part of broader reporting, most commonly as part of required MCO reporting. Nineteen states are participating in behavioral health homes and twelve in the duals financial alignment demonstrations. Eight states conduct quality measurement as part of a behavioral health carve out program, and ten have 1915(c) waivers that target individuals with behavioral health conditions.

Table 2: Behavioral Health Quality Measurement, by State

State	Broad Initiatives	Targeted Initiatives				
		Behavioral Health Homes	Behavioral Health Carve Out Reporting	Duals Financial Alignment Demos	1915(c)	Other
AL	✓	✓				
AK						Provider grant program
AZ	✓					State agency reporting
AR	✓					Episode payment program for children with ADHD
CA			✓	✓		
CO	✓	✓		✓		MLTSS
CT	✓	✓			✓	
DE	✓					
DC	✓	✓				
FL	✓					
GA	✓		✓			
HI	✓					
ID	✓		✓			
IL	✓			✓		
IN	✓				✓	
IA	✓	✓			✓	
KS	✓				✓	
KY	✓					
LA	✓				✓	
ME	✓	✓				
MD	✓	✓			✓	
MA	✓		✓	✓		
MI		✓		✓	✓	MLTSS
MN	✓	✓		✓		
MS	✓				✓	
MO	✓	✓				
MT	✓				✓	
NE			✓			
NV	✓					Care management program for high cost or high need individuals; State agency reporting
NH	✓					
NJ	✓	✓				MLTSS
NM	✓	✓				
NY	✓	✓	✓	✓		
NC			✓			
ND	✓					
OH	✓	✓		✓		
OK	✓	✓				
OR	✓					
PA	✓		✓			
RI	✓	✓		✓		
SC	✓			✓		
SD	✓	✓				
TN	✓					
TX	✓			✓		
UT	✓					
VT	✓	✓				
VA	✓			✓		
WA	✓			✓		State agency reporting
WV	✓	✓				
WI	✓					
WY	✓				✓	
Total	**46**	**19**	**8**	**13**	**10**	**8**

Source: SHADAC analysis of relevant state quality monitoring activity.

We found consistency across states in the most frequently reported behavioral health measures. Table 3 summarizes the extent to which some of the more common measures are being monitored across states, and crosswalks them to relevant federal reporting requirements and core measure sets. The most commonly reported measure was *follow-up after hospitalization for mental illness*, with 40 states reporting. This measure is included in all of the core measure sets and reporting requirements for both of the federal initiatives that we reviewed. Measures related to alcohol or drug dependence treatment and antidepressant medication management were included in three of the five measure sets. Although less common in our review, many states are using measures that assess compliance with evidence-based screenings or practices for chronic physical conditions *and* serious mental illnesses (e.g., diabetes and cardiovascular screening/monitoring for people with schizophrenia and/or bipolar disorders). We also found that eight states are tracking a measure of the use of first-line psychosocial care for children with behavioral health conditions. Finally, ten states are tracking behavioral health care readmissions, despite the fact that this measure is not currently included in any of the core sets that we reviewed.

Table 3: Most Commonly Used Behavioral Health Quality Measures Across States

	Initiatives and Core Measure Sets						State Use of Measure	
Measure	**HEDIS**	**CMS Adult Core**	**CMS Child Core**	**Health Home**	**Duals**	**Number of States**	**States**
Follow-up after hospitalization for mental illness	✓	✓	✓	✓	✓	41	AL; CA; CO; CT; DC; DE; FL; GA; HI; IL ; IN; IA; KS; KT; LA; ME; MD; MA; MN; MO; NC; ND; NH; NJ; NM; NV; NY; OH; OK; OR; RI; SC; SD; TN; TX; UT; VT; VA; WA; WI; WV
Initiation and engagement of alcohol or other drug dependence treatment	✓	✓		✓		34	CA; CO; CT; DC; DE; GA; FL; HI; IL; KS; ME; MD; MA; MN; NC; ND; NH; NJ; NM; NV; NY; OH; OK; OR; RI; SC; SD; TN; TX; UT; VA; VT; WA; WV
Antidepressant medication management	✓	✓			✓	32	AL; CA; CO; CT; DC; DE; GA; FL; HI; IL; IA; KS; KT; LA; MD; MA; MN; ND; NH; NJ; NV; NY; OH; PA; RI; SC; TN; TX; UT; VT; VA; WA
Follow-up care for children prescribed ADHD medication	✓		✓			31	AL; AR; CO; CT; DC; FL; GA; HI; IL; IA; KS; KT; LA; ME; MD; MA; NV; NH; NY; ND; OH; OK; OR; PA; RI; SC; TN; TX; UT; WA; WY
Screening for clinical depression and follow-up care		✓		✓	✓	26	AL; AZ; CA; CO; CT; DC; DE; IA; IL; KS; ME; MN; MT; ND; NJ; NM; NY; OH; OK; OR; RI; SC; SD; VA; VT; WA
Adherence to antipsychotic medications for individuals with schizophrenia	✓	✓				23	AL; CO; DC; DE; GA; HI; ID; IL; IA; KS; KT; LA; ME; MD; MA; NH; NM; NY; ND; PA; TN; UT; WV
Diabetes screening for people with schizophrenia or bi-polar disorder who are using antipsychotic medications	✓	✓				17	AL; CO; DC; GA; IO; KS; KT; LA; MD; MA; NH; NM; NY; PA; TN; UT; WA
Diabetes monitoring for people with diabetes and schizophrenia	✓					14	CO; DC; IO; KS; KT; LA; MD; MA; NH; NM; NY; PA; UT; WA
Cardiovascular monitoring for people with cardiovascular disease and schizophrenia	✓					13	CO; DC; IO; KS; KT; LA; MD; NH; NY; PA; TN; UT; WA
Use of multiple concurrent antipsychotics in children and adolescents	✓		✓			12	CO; DC; IO; KS; KT; LA; MA; NV; NH; NY; TN; UT
Metabolic monitoring for children and adolescents using antipsychotic medications	✓					10	CT; IO; KS; KT; LA; NH; NY; OH; TN; UT
Behavioral Health Readmission						10	AL; AZ; FL; GA; IL; MD; ME; MO; NC; WA
Use of first-line psychosocial care for children and adolescents using antipsychotic medications	✓					8	DC; IO; KS; LA; NH; OH; TN; UT

Source: SHADAC analysis of relevant state quality monitoring initiatives with CMS 2016, 2015a, 2015b, 2014; NCQA 2015.

The core measure sets and requirements of national initiatives include a limited number of substance use measures: *initiation and engagement of alcohol or other drug dependence treatment; identification of alcohol and other drug dependence treatment*; and *use of opioids at high doses*. As shown in Table 3, *initiation and engagement of alcohol or other drug dependence treatment* is included in the HEDIS, core Medicaid adult, and behavioral health home measure sets; 33 states are reporting on this measure. Based on our review, two states are monitoring *identification of alcohol and other drug services* and we did not find any evidence of states monitoring the opioids measure.

Several states are, however, monitoring the quality of substance use disorder care using other measures including *substance abuse readmissions*; *alcohol or drug treatment retention; 7 and 30 day follow-up after residential treatment placement.*

Kansas and New Hampshire are unique in that they track a large number of substance use disorder (SUD) measures, many of which are developed by the state.

Kansas monitors a range of substance use measures for KanCare[1], which draw from a diverse range of data including claims, electronic health record review and survey data. In addition, several measures assess connections to social supports and other socioeconomic outcomes, such as employment status (KDHE 2014). The measures include:

- *screening for unhealthy alcohol use*
- *improved living arrangements for those with SUD*
- *improved criminal justice involvement for those with SUD*
- *decreased drug and/or alcohol use for those with SUD*
- *increased attendance of self-help meetings for those with SUD*
- *higher rates of employment for those with SUD*

New Hampshire also monitors a range of measures related to substance use. The measurement focuses on utilization more than assessing processes of care and/or patient outcomes (NHDHHS 2015). They are tracking 26 measures in total[2], examples include:

- *rate of ED visits for substance use disorder*
- *general acute care inpatient withdrawal services used by age group*
- *opioid treatment center services used by age group*
- *7 and 30 day follow-up after residential treatment placement*

HCBS Quality Measurement: Key Findings

1915(c) of the Social Security Act allows states to waive certain statutory requirements in order to offer HCBS to Medicaid populations that would otherwise receive long term care in institutional settings (CMS 2015c). States have increasingly shifted care to community based settings; in 2013, the majority of Medicaid LTSS spending was for HCBS and it is projected to reach 63% by 2020 (RWJF 2015).

As shown in Table 4, 48 states have at least one 1915(c) waiver in place, and reporting requirements for these waivers emerged as the primary source of quality measurement for HCBS in Medicaid in our scan. We also found evidence of measurement activity separate from 1915(c) requirements in a few states through our review of publicly available documentation. These included measurement under MLTSS (three states), state specific monitoring of HCBS quality as part of demonstration programs to integrate care and align financing for individuals eligible for both Medicare and Medicaid (duals demonstrations, five states), and a range of other initiatives including reforms targeted at integrating care for Medicaid beneficiaries, behavioral health carve out programs, and broad MCO reporting that includes HCBS measures.

Table 4: HCBS Quality Measurement, by State

State	1915(c) reporting	Duals Financial Alignment	Health Homes	MLTSS	Other
AL	✓				
AK	✓				
AZ				✓	
AR	✓				
CA	✓				
CO	✓	✓	✓	✓	Behavioral health carve out
CT	✓				
DE	✓				
DC	✓		✓		
FL	✓				
GA	✓				
HI	✓				
ID	✓				
IL	✓	✓			Integrated Medicaid program for non-duals
IN	✓				
IA	✓				
KS	✓				MCO quality reporting
KY	✓				
LA	✓				
ME	✓				
MD	✓				
MA	✓	✓			
MI	✓				
MN	✓				Pending HCBS quality report card
MS	✓				
MO	✓				
MT	✓				
NE	✓				
NV	✓				
NH	✓				
NJ	✓			✓	
NM	✓				
NY	✓				
NC	✓				Local Management Entities-MCOs, transitioning to MLTSS by 2018
ND	✓				
OH	✓				
OK	✓				
OR	✓				
PA	✓				
RI		✓	✓		
SC	✓	✓			
SD	✓				
TN	✓				

State	1915(c) reporting	Duals Financial Alignment	Health Homes	MLTSS	Other
TX	✓				MCO reporting
UT	✓				
VT					
VA	✓				
WA	✓				Phased fully integrated Medicaid contracts
WV	✓				
WI	✓				
WY	✓				
Total	**48**	**5**	**3**	**3**	**7**

Source: SHADAC review of relevant state quality monitoring initiatives.

As shown in Table 4, most quality measurement activity related to HCBS in Medicaid is based on CMS reporting requirements for states with 1915(c) waivers. States are required to identify performance measures to evaluate progress on waiver activities in six domains of measurement. Table 5 provides an overview of the required domains of measurement for states using 1915(c) waivers to provide HCBS to beneficiaries, along with example measures. In general, these measures are process oriented, focusing on the extent to which states and providers demonstrate compliance with a range of policies and procedures. As a result, the measures do not provide much insight into the quality of care that beneficiaries receive or their health outcomes. Although states are allowed to develop their own measures for each waiver, a recent analysis conducted by the National Quality Forum found that states utilized similar measures across categories (NQF 2016).

Table 5: 1915(c) Waiver Reporting Domains and Example Measures

Domain	Example Measures
Administrative Authority: determine the state's compliance with statutory assurances made in the waiver. Measures overlap with other domains.	- # and % of critical incident investigations completed within the required timeframe - # and % of timely service plans reviewed according to waiver policy - # and % of level of care remediation actions that were properly resolved
Level of Care (LOC): document the state's processes for evaluating participants' care for consistency with what they would have received if care was provided in a hospital or nursing facility.	- 100% of LOC determinations conducted by a qualified reviewer - # and % of LOC redeterminations completed within a year of prior review - % of LOC determinations completed using the approved waiver process
Qualified Providers: assess that there is a system in place to ensure that all waiver services are being provided by qualified providers, including evaluation of the state's monitoring of initial licensure and/or certification of providers, adherence to waiver requirements, and recertification when necessary.	- # and % of approved new providers who met all applicable qualifications (e.g., licensure/certification, background and registry checks, references) prior to service provision - # and % of enrolled licensed, certified providers that met provider standards at annual review - % of waiver service providers who meet state training requirements
Service Plan: assess the state's systems for adequately reviewing the service plans of waiver participants and ensuring patients receive services laid out in plans and that plans are updated to reflect patient needs.	- # and % of participants who did not receive waiver services as detailed in the service plan by type, scope, amount, duration, and frequency - # and % of service plans that were updated/revised when warranted by changes in the participant's needs - # and % of waiver participants whose service plans reflect their personal goals

Domain	Example Measures
Health and Welfare: measures that assess the state's development and implementation of systems to address patient safety and health, including measures on incident and abuse reporting and investigations, participant education on reporting abuse, and participant safety measures such as medication errors.	- # and % of allegations regarding wrongful restraint and involuntary seclusion where investigations are conducted in accordance with regulations - # of incidents of unexpected or suspicious deaths that are investigated appropriately (timely and according to policies and procedures) - # of waiver clients for whom a report of abuse, neglect, abandonment, or financial exploitation was substantiated by Child Protection Services (CPS) by type of incident
Financial Accountability: measures that act as a method of oversight to ensure that claims are being coded and reimbursed properly and according to the methodology in the approved waiver.	- # and % of waiver claims in a representative sample paid using the correct code as specified in the Provider Bulletin and Billing Manual - # and % of reviewed claims with services specified in the participant's service plan - # and % of members who had a valid level of care on date of service delivery

Source: SHADAC review of state 1915(c) waiver documents.

We also reviewed measures that states are using to monitor the quality of HCBS services separate from 1915(c) reporting requirements. Some of the most common measures are those assessing the extent to which rebalancing of services from institutional to community based settings is occurring, e.g. *movement of members starting and ending in the community during the measurement year*; *nursing facility diversion*; *number and percent of individuals receiving HCBS versus institutional services*. Examples of other measures states are monitoring for HCBS outside of 1915(c) waivers include:

- *Members offered choice between institutional and HCBS service*
- *Abilities to make choices at home*
- *Activities meet preferences in day programs*
- *Adequate employment support for current job*
- *Follow-up after hospitalization for mental illness within 7 days for HCBS patients*
- *Progress toward independent living for members with severe mental illness*
- *Adults with developmental disabilities served, who live in a private residence alone or with a spouse or non-relative*

Key Findings: Variation across states in breadth and depth of quality measurement related to behavioral health and HCBS

We found considerable variation across states in the extent to which they are monitoring the quality of behavioral health and HCBS in Medicaid. Our reviews suggest that there are several states that could provide examples and lessons learned for other states seeking to advance work in these areas, and to policymakers and others seeking to guide Medicaid policy. These states are engaged in a range of relevant quality monitoring that extends beyond the more typical examples of mandatory managed care and 1915(c) reporting. We have profiled New York below.

New York Profile

New York is engaged in a range of quality monitoring activity related to behavioral health and HCBS. New York requires broad Medicaid-managed care quality reporting, and several measures relate to behavioral health. One unique feature of New York's approach is the use of the PHQ-9, a patient reported, 10-question instrument used to screen, diagnose, and measure the severity of depression (NYS DOH 2015). Under New York's Delivery System Reform Incentive Payment (DSRIP) program, participating providers are required to report clinical improvement variables related to behavioral health (e.g., *follow-up care for children prescribed ADHD* medications)[1] as well as population-wide measures (e.g.; *age-adjusted percentage of adult binge drinking during the past month*)[1], both of which are tied to payment (NYS DOH 2014a). DSRIP providers are also eligible for incentive payments based on ten high performance fund eligible measures, a subset of which relate to behavioral health (e.g., potentially preventable readmissions for behavioral health population in skilled nursing facilities (SNFs).

New York also administers quality measurement initiatives directed at specific populations. The state carves out behavioral health services and contracts with behavioral health organizations (BHOs) to deliver these services on a regional basis to Medicaid beneficiaries. BHOs are required to report 35 performance measures across five domains: 1) Continuity of care; 2) Engagement in care; 3) Readmission; 4) Medication fill; and 5) Length of stay. Results are available on a publicly accessible, interactive web site. The statewide health home program also monitors quality measures for enrollees with multiple physical chronic conditions and/or one serious mental illness. Measures include a combination of HEDIS and state-specific measures targeting both physical health (e.g., avoidable ER and inpatient use) and behavioral health (e.g., mental health clinical outcomes) (NYS OMH 2014).

The state also has specific quality measurement programs aimed at people with intellectual and developmental disabilities with unique quality monitoring requirements. The performance monitoring plan for the state's Developmental Disabilities Individual Support and Care Coordination Organizations (DISCOs), authorized under a 1915(c) waiver) includes employment, self-direction, care integration, understanding of rights, program structure, and several National Core Indicator (NCI) measures (NYS DOH 2014b).

Public and Provider Reporting

A key area of interest to policymakers is how and whether the results of quality measurement initiatives are being shared with the public and/or providers. Public reporting is typically focused on helping consumers make informed decisions about their care, for example by publishing information about provider outcomes and costs for common procedures, such as knee replacements. Provider reports include much more detailed information targeted at helping clinicians understand and improve the quality and efficiency of patient care. These reports frequently include patient-level data and allow providers to compare their performance on key measures to their peers or other benchmarks (e.g., past performance, national targets, etc.). We considered a state to be engaged in public reporting of quality measures if it maintains a web site where users can create customized reports/tables and/or publishes a static report containing quality measure results. For provider reporting, we looked for evidence that the results of the measures were being shared with providers, either through online portals or standalone reports.

Table 6 summarizes our findings related to state reporting activities. Overall, states were more likely to have public reporting of behavioral health measures compared to HCBS measures. We found evidence that 23 states support public reporting of behavioral health measures, compared to just three states that report information about HCBS quality. We also found that ten states are sharing quality information about behavioral health services with providers. Only Florida appears to be sharing HCBS quality information with providers.

Table 6: Public and Provider Reporting of Behavioral Health (BH) and HCBS Quality Measures, by State

	Public reporting		Provider reporting	
State	**BH measures**	**HCBS measures**	**BH measures**	**HCBS measures**
AZ	✓			
AR			✓	
CO	✓			
DC	✓		✓	✓
FL	✓			
GA			✓	
ID	✓		✓	
IL	✓	✓		
IA			✓	
KS			✓	
LA			✓	
ME	✓		✓	
MD	✓			
MA	✓			
MN		✓		
MS	✓	✓		
MT	✓			
NE	✓			
NV	✓			
NY	✓		✓	
OH	✓		✓	
OR	✓			
RI	✓			
SC	✓			
TN	✓			
TX	✓			
UT	✓			
VT	✓			
WA	✓			
Total	**23**	**3**	**10**	**1**

Source: SHADAC analysis of relevant quality monitoring initiatives.

We found considerable variation in the type and depth of public reporting by states. Table 7 provides more detailed information for each reporting effort, including a hyperlink to the public reporting itself, the level of analysis included in the report, and whether users are able to access an interactive web site to produce customized reports. Five states have more than one reporting initiative underway, and seven provide access to an interactive web site. The most common level of analysis for reporting was at the state and health plan level, but six states include regional breakdowns as well.

Table 7: Public Reporting Efforts, by State

State	Measure Type		Initiative	Interactive web site	Level(s) of reporting		
	BH	HCBS			State	Region	Health plan
AZ	✓		Division of Behavioral Health Services Performance Framework and Dashboard	✓	✓	✓	
CO	✓	✓	Behavioral Health Organization (BHO) quality monitoring				✓
DC	✓		Medicaid MCO quality reporting		✓		✓
FL	✓		Performance Measure Data Submissions for Medicaid				✓
ID	✓		Idaho Behavioral Health Plan		✓		✓
IL	✓		Voluntary Managed Care Organizations HEDIS Measures				✓
MA	✓		MassHealth Managed Care (MCO) Reports		✓		✓
MA	✓	✓	The Massachusetts Behavioral Health Partnership (MBHP)	✓	✓		✓
MD	✓		Maryland Medicaid Managed Care Quality Strategy (1115)		✓		✓
ME	✓		SIM Core Metrics Dashboard	✓	✓		✓
MN		✓	HCBS Report Card initiative				
MO	✓	✓	Community Mental Health Center Healthcare Home (CMHC HCH) (SPA)		✓		
MT	✓		MT PCMH (1915b)		✓		
NE	✓		Magellan of Nebraska quality measures				✓
NH	✓		NH Medicaid Quality Information System	✓	✓	✓	✓
NV	✓		NV Medicaid Behavioral Health Report Card: Performance Indicators Dashboard		✓		
NY	✓		Behavioral Health Organization Performance Measures		✓		✓
OH	✓		Medicaid Managed Care Quality Measures		✓		✓
OH	✓		Behavioral Health Homes (SPA)		✓		✓
OH	✓		Comprehensive Primary Care (CPC) Program		✓		✓
OR	✓		Oregon's Health System Transformation: CCO Metrics (1115 waiver)		✓	✓	✓
PA			PA Medicaid Managed Care Quality				✓
RI	✓		Performance Goal Program		✓		
SC	✓		South Carolina Health Plan Performance Report Card	✓	✓		✓
TN	✓		TennCare MCO Reporting		✓		✓
TX			STAR+PLUS (1115)			✓	✓
TX	✓		Texas Medicaid and CHIP Quality Indicator Dashboard				✓
UT	✓		Utah MCO HEDIS quality reporting	✓	✓		✓
VT	✓		Blueprint for Health: Hospital Service Area (HSA) Healthcare Data Profiles		✓	✓	
VT	✓		Medicaid Shared Savings Program (SSP)				✓
VT	✓		Vermont Chronic Care Initiative (VCCI)		✓		
VT	✓		Vermont Global Commitment to Health (1115)		✓		
WA	✓		Washington Apple Health Quality Report		✓	✓	✓
WA	✓		Community Checkup and WA State Common Measure Set	✓	✓		

Source: SHADAC analysis of relevant quality monitoring initiatives.

Areas for Future Research

This work provides a foundation for understanding the breadth of state-level measurement initiatives aimed at behavioral health and HCBS in Medicaid, and a basic inventory of public reporting and provider data sharing. However, it does not explore the nuances of how and whether states and their stakeholders are using quality measurement information to influence care delivery. The review also does not shed light on what factors—political, budgetary, or operational—facilitated more advanced work in leading states. Future research might explore the challenges that prevent states with more limited activity from engaging in more rigorous quality initiatives in these areas, which could be helpful for guiding federal policy.

Appendix 1: Review of Quality Frameworks

In order to provide context for our scan of state-level activity, we conducted a **review of quality frameworks** addressing priorities, gaps, and challenges for quality measurement related to behavioral health and/or HCBS. The goal of this review was to identify existing frameworks aimed at measuring quality for the populations of interest and documenting their core components.

We used the following search terms to identify potential frameworks for review: HCBS quality measurement; behavioral health quality measurement; LTSS quality measurement; disability quality measurement.

Our search returned over thirty documents. We identified five frameworks for formal review that met the following criteria:

- Included expert review to identify priority areas of measurement
- Compiled an inventory of relevant measures and/or measure concepts
- Identified gaps between priority domains and existing measures

Each of the five frameworks was systematically reviewed and summarized across a standard list of dimensions, including target population and key goals; measure selection criteria, measure types (process--whether patient received a recommended services vs. outcome --whether a health outcome such as blood pressure was within recommended guidelines), scoring, and stakeholder input; and future plans and recommendations.

Table 1 provides a high-level summary of the findings from our review. Key themes from the review include:

Measure Domains and Priorities: Frameworks that targeted individuals being treated for behavioral health conditions prioritized domains that address person-centeredness, coordinated care, prevention/healthy living, and affordable/accessible care. Frameworks targeted toward individuals needing HCBS included similar domains, but also highlighted priority measurement areas unique to the broad range of services, providers (both professional and informal or family based), and vulnerable clients that characterize HCBS. For example, the HCBS frameworks highlighted measure domains related to client functioning, human rights, and caregiver support.

Criteria for Measure Inclusion: All of the frameworks highlighted the importance of using measures that were evidence-based and mapped to the priorities for high quality care in each service area. Other common criteria included feasibility, endorsement by a national body such as the National Quality Forum, and ability to account for and/or inform issues related to health disparities.

Key Gaps: All of the frameworks included in our review assessed existing measures against the priority domains for measurement and summarized key gaps. Although the language differed across frameworks, there were several conceptual similarities in the gaps identified. These included measures that assess shared decision making and consumer voice, caregiver supports, equity, and affordability/cost.

Challenges and Recommendations: For both HCBS and behavioral health, a commonly cited challenge was that the measurement science and alignment for these service areas lags behind

more traditional physical health measures. The frameworks also noted the importance of supporting measure development across the full range of priority domains and reflecting a balance of process and outcome based measures. There was also consensus about the need to develop a stronger data infrastructure to support measurement in priority areas, particularly for the diverse range of services and providers involved in HCBS.

Table 1: Review of HCBS and Behavioral Health Quality Measurement Frameworks

Framework Title: Sponsoring Organization	Goals	Populations	Criteria for measure inclusion	Priority measurement domains (example measures)	Measure scoring criteria	Key gaps	Expert review	Measure stewards and sources	Stakeholder engagement	Recommendations, next steps and timing
National behavioral health quality framework: Substance Abuse and Mental Health Services Administration (SAMSHA)	Identify and implement key behavioral health quality measures, for use in funding decisions, monitoring behavioral health and delivery of behavioral health care.	Individuals being treated for behavioral health issues	If possible, measures will: Be endorsed by NQF or other relevant national quality entities; be relevant to NQS and NBHQF priorities; address "high impact" health conditions; promote alignment with attributes across programs; reflect a mix of measurement types; apply across patient-centered episodes of care; and account for population disparities	**Evidence-based practices** (Utilization of PHQ-9 for depression and remission at 6 and 12 months) **Person-centered care** (Perceptions of Care Survey, both inpatient and outpatient) **Coordinated care** (Reconciled medication list received by discharged patients) **Healthy living for communities** (Risky behavior assessment or counseling by age 13 to prevent obesity, smoking, risky sexual behavior) **Reduction in adverse events** (Patients discharged on multiple antipsychotic medications) **Affordable/accessible care** (Compliance with requirements of parity)	None found	Shared-decision making, community level health, cost and value, and workforce capacity	SAMSHA, CMS, USPSTF, NQF, and NCQA have developed and tested measures that have been included in NBHQF.	The measures are aligned with broad aims of the National Quality Strategy and many are endorsed or have been developed in response to calls by the National Quality Forum (stewards and sources include National Committee for Quality Assurance, MN Community Measurement, MA General Hospital, AMA, American Society of Addiction Medicine, and M3 Information).	The NBHQF underwent two phases of review and input from stakeholders internal to HHS and external stakeholders, including researchers, consumers, clinicians and state agency personnel.	As evidence for new outcome measures accrues, SAMHSA and stakeholders will incorporate improvements into the NBHQF. Goals for the next few years are to increase use of NBHQF by SAMHSA and other HHS agencies to identify and track key behavioral health indicators and to develop a broader HHS behavioral health collaboration across Federal partners with the aim of tracking consistent core measures and reducing respondent burden.
Behavioral health endorsement maintenance 2014 final report - phase 3: National Quality Forum (NQF)	Improve behavioral health care delivery, clinical, and population based outcomes	Individuals being treated for behavioral health conditions	A responsible entity and process to maintain and update measure has been identified; the intended use of measure includes both public accountability and quality improvement; measure is fully specified and tested for reliability and validity; and harmonization with related measures and issues with competing measures have been considered and addressed	**Effective prevention** (Depression remission at 12 months) **Person- and family centered care** (none found) **Coordinated care** (Health screening and assessment for those with SMI; those prescribed antipsychotic medications) **Healthy living for communities** (Tobacco use screening and follow-up for people with SMI or alcohol or other drug dependence) **Safe care** (Follow-up care for children prescribed ADHD medication) **Affordable/accessible care** (none found)	Importance to measure and report, scientific acceptability of measure properties, feasibility, use/usability, and related and competing measures	Person and Family Centered Care, Affordable/ Accessible Care	Volunteer, multi-stakeholder steering committees including the CDC, the Treatment Research Institute, MDwise, AR Medicaid, National Action Alliance for Suicide Prevention, Veterans Health Administration, TruvenHealth Analytics, The Nicholson Foundation, Kaiser Permanente, HealthPartners, and several clinicians and researchers from institutions in the US.	The measures under consideration for endorsement by the NQF were stewarded by CMS, NCQA, AMA, The Joint Commission, the RAND Corporation, and Mathematica Policy Research.	Public comment is solicited during the development process.	NQF uses a formal Consensus Development Process to continually develop and endorse performance measures. The process involves eight specific steps with several sub-steps: Call for nominations, call for candidate standards, candidate consensus standard review, public and member comment, member voting, CSAC decision, board ratification and appeals.

Framework Title: Sponsoring Organization	Goals	Populations	Criteria for measure inclusion	Priority measurement domains (example measures)	Measure scoring criteria	Key gaps	Expert review	Measure stewards and sources	Stakeholder engagement	Recommendations, next steps and timing
Behavioral Health and CMS' Physician Quality Reporting System: Centers for Medicare and Medicaid Services (CMS)	The Physician Quality Reporting System (PQRS) encourages eligible professionals to report information on the quality of care to Medicare. PQRS gives participating EPs and group practices the opportunity to assess the quality of care they provide to patients, helping to ensure that patients get the right care at the right time.	Medicare patients with behavioral health issues	The measure addresses an important condition/ topic with a performance gap and has a strong scientific evidence base; the measure addresses one or more of the six National Quality Strategy Priorities; promotes alignment with specific program attributes and across CMS and HHS programs; consideration for health disparities; and measure reporting is feasible	**Communication and care coordination** (Medication reconciliation for patients aged 65 years and older after discharge from inpatient facility) **Community/population health** (Maternal Depression Screening) **Effective clinical care** (Follow-Up Care for Children Prescribed ADHD Medication) **Efficiency and cost reduction** (none found) **Patient safety** (Documentation of Current Medications in the Medical Record) **Person and caregiver-centered experience and outcomes** (none found)	Importance to measure and report, scientific acceptability of measure properties, feasibility, use/usability, and related and competing measures	Person and Caregiver-Centered Experience and Outcomes	A technical expert panel is involved in the development and maintenance of the measures (members of the panel usually include clinicians, statisticians, methodologists and consumers and are chosen regularly for their expertise and training as well diversity of background and perspectives).	The Behavioral Health measures for the PQRS were stewarded by: American Psychiatric Association, AMA, NCQA, MN Community Measurement, and Health Services Advisory Group.	During measure conceptualization and development persons (non-healthcare professional) and family members should be included in the process, either through placing them on the Technical Expert Panel (TEP), creating a Person or Family-Representative only TEP, using Focus Groups, Working Groups, One-on-one interviews, Testing (e.g. concept testing), Surveys or Virtual Communities.	As of 2017, the PQRS has been replaced by the Merit-Based Incentive Payment System (MIPS).

Framework Title: Sponsoring Organization	Goals	Populations	Criteria for measure inclusion	Priority measurement domains (example measures)	Measure scoring criteria	Key gaps	Expert review	Measure stewards and sources	Stakeholder engagement	Recommendations, next steps and timing
Addressing Performance Measure Gaps in Home and Community Based Services: National Qualify Forum (NQF)	Identify and implement consistent approach to quality measurement, develop a menu of HCBS quality measures that can be incorporated into existing programs, balance of structure, process, and outcome measures across domains	Individuals receiving home and community based services	Relevant to HCBS settings; target populations, and/or service; maps to a core domain of high quality HCBS; addresses a long-term physical, cognitive, and/or behavioral health need or disability; psychometrically tested and validated surveys, scales, or other instruments directly relevant to HCBS, especially consumer and caregiver experience with HCBS and quality of life	**Service delivery and effectiveness** (Percent of individuals who express that they are able to contact appropriate Person-Centered Plan Coordinators when needed), **Choice and control** (Percent increase in enrollees that receive participant-directed personal care), **Community inclusion** (Number of people with disabilities who participate in social, recreational, community, and civic activities to the degree that they wish), **Caregiver support** (Number of caregivers of people with dementia offered psychosocial interventions, tailored to needs and preferences), **Workforce** (Number of staff at care service or facility that receive specific dementia-care training on a regular basis, at least once a year), **Human and legal rights** (Percentage of participants who are victims of substantiated abuse, neglect or exploitation), **Equity** (Percentage of patients who were homeless or unstably housed in the 12-month measurement period), **Holistic health and functioning**, **system performance and accountability**, **consumer leadership in system development**	Psychometric testing, target populations, feasibility of data collection, prevalence of current use	Consumer voice, caregiver support, and equity	Members of the expert committee were recruited from a range of institutions including AARP, University of Massachusetts Medical School, Bureau of TennCare, Kaiser Permanente, Autistic Self Advocacy Network, National Association of States United for Aging and Disabilities, National Resource Center for Participant Directed Services, the MENTOR Network, and the University of California	State programs (Minnesota, Washington, Oregon), University of Wisconsin-Madison, CMS, AMA, NCQA, University of North Carolina-Chapel Hill, The Joint Commission, George Washington University, Center for Mental Health Services, NY State Department of Health, RAND, HRSA, AHRQ, VA, Australian Council on Healthcare Standards, Administration for Community Living, Administration on Aging, Office of the Assistant Secretary for Health, Mathematica, American Association of Cardiovascular Pulmonary Rehabilitation, and American College of Cardiology	Calls for comments from public stakeholders were made during several stages of the review process and incorporated into the final measurement list	No specific next steps for the committee. However, authors highlight that NQF will continue to consider and endorse HCBS measures, and the framework and recommendations laid out through this study will inform that work.

Framework Title: Sponsoring Organization	Goals	Populations	Criteria for measure inclusion	Priority measurement domains (example measures)	Measure scoring criteria	Key gaps	Expert review	Measure stewards and sources	Stakeholder engagement	Recommendations, next steps and timing
Environmental Scan of Measures for Medicaid Title XIX Home and Community Based Services: Agency for Healthcare Research and Quality (AHRQ) and Truven Health Analytics (Thomson Reuters)	Develop a menu of HCBS measures quality that can be incorporated into existing programs	Broad definition of HCBS services and populations, including populations such as adults with severe and persistent mental illness	Analysis of measures was guided by concepts of importance, scientific soundness and feasibility; stakeholders provided feedback on the importance of selected measure constructs; and after compiling and analyzing feedback, threshold evaluation criteria to rate candidate measures were developed	**Client functioning** (Percentage of new service recipients whose ADL or IADL assessment score has maintained or improved), **Client satisfaction** (Proportion of people indicating that most support staff treat them with respect), **Program performance** (Ability to identify case manager/support coordinator)	psychometric testing, target populations, feasibility of data collection, prevalence of current use	Consensus preventive measure set applicable across Medicaid HCBS programs and access and use of case management services	The Technical Expert Panel included members from: Miami University of Ohio, Auerbach Consulting, Virginia Commonwealth University, RAND, National Association of State Medicaid Directors, University of Southern Maine, University of Maryland, Mathematica, Boston University, Johns Hopkins University, AARP, ANCOR, University of Minnesota, Pennsylvania Office of Mental Retardation, NASDDDS, Visiting Nurse Services of New York, George Mason University, National Association of State Units on Aging, Baruch College, University of Massachusetts, The Arc, and South Carolina Department of Health and Services	Administration on Aging, AHRQ, Aging and Disability Resource Centers, CMS, HRSA, National Institute on Disability Research and Rehabilitation, SAMHSA, Center for Health Care Strategies, ANCOR, American College of Mental Health Administrators, Mount Sinai Medical Center, Home Care Association of Washington, American Managed Behavioral Healthcare Association, Foundation for Accountability, NCQA, NQF, Commission on Accreditation of Rehabilitation Facilities, Council on Quality and Leadership, as well as a wide range of nationally recognized universities and several state and provider initiatives	The Measure Scan project received regular input throughout from three distinct groups of stakeholders (consisting of consumers, health and social service providers, and other professionals knowledgeable about long-term care services and supports)	Develop a comprehensive set of individual demographic and disability measures related to individual functioning, along with environmental service variables. Develop consensus set of recommended preventive services across Medicaid HCBS programs Assess appropriateness of preventable hospitalization and patient experience measures for HCBS populations Develop standardized definitions for abuse, neglect, and exploitation Revisit measures that were under development at the time of the scan and explore proprietary measures not submitted in response to the Call for Measures. The evolving nature of Medicaid HCBS programs, including the growing role of self-directed services, argues for flexible measures that anticipate future delivery models and client expectations. Based on the environmental scan, AHRQ is now tasked with developing measures in the three domains to assess the quality of Medicaid HCBS programs nationwide and publishing best practices information as a result of comparative analyses.

Source: SHADAC analysis of relevant quality frameworks NQF 2016, 2015; Mental First Aid 2014; SAMHSA 2014; AHRQ 2010

Appendix 2: State Catalogue Methods

After reviewing quality frameworks, we next identified initiatives for the state catalogues through a web search of publically available information using the following search terms: Medicaid quality; behavioral health quality; Medicaid health homes and HCBS quality. As our scan progressed, we found that our search terms typically led to a centralized state Medicaid or human services web site that became the focus of our review for relevant initiatives. We also found that our searches were more fruitful when done in the context of relevant state specific programs. So, for example, once we discovered the name of a state's Medicaid program (e.g., STAR in Texas), we tailored our search for relevant quality information using the program name.

Our scan also uncovered initiatives that were relevant across states, including 1915(c) waivers, duals financial alignment demonstrations, and behavioral health homes (CMS 2016, CMS 2015c, 2014). As a result, we systematically compiled information about these initiatives across all states.

While we did not systematically review contracts between states and managed care plans, our scan did capture three initiatives in cases where states included sufficiently detailed documentation of managed care quality measure or reporting requirements available on their web sites or in other public domains. It is possible that a detailed review of MLTSS contracts may yield additional information about these activities in other states.

We applied the following criteria to determine whether to include each initiative that emerged from the scan in our catalogue:

- Was a list of measures publically available? We did not include initiatives for which we could only find high-level categories or domains of measures.
- Were relevant measures analyzed in a way that supported separating results for the Medicaid population? For example, if a statewide scorecard compiled measures of interest but did not analyze the results separately for Medicaid, we excluded the initiative.
- Was there evidence that the initiative was implemented or likely to be implemented? We excluded initiatives that were in early stages of planning.

For each initiative that met our inclusion criteria, we systematically reviewed the publically available documentation and summarized it across a standard list of dimensions:

Initiative name and description

Populations included or targeted by the initiative:

We differentiated between broad initiatives that included all or the majority of the Medicaid population (e.g., MCO reporting) and initiatives that targeted one or more of the following populations: HCBS, behavioral health, duals, physical disability, intellectual disability.

Measure types: We noted whether the initiative included measures related to behavioral health, physical health, and/or HCBS.

Measure domains: For targeted initiatives, we collected information about measure domains, such as "prevention", "patient satisfaction", "chronic disease", etc.

Individual measures: For broad initiatives, such as MCO quality monitoring, we compiled all HCBS and/or behavioral health measures.

Key Uses: We reviewed sources for evidence about whether relevant measures for each initiative were being used for payment, public reporting, and/or provider reporting.

Level of analysis for public reporting: We compiled information about the level of analysis included in public reporting: state, sub-state, health plan, provider, other.

Measure categories: We reviewed relevant measures and noted whether the measure set included process, outcome, structure, and/or consumer experience measures.

Data sources: To the extent the information was available, we noted whether relevant measures were drawn from claims/encounter, clinical/EHR, surveys, and/or other data sources.

Measure links and citations: We provided links to the list of relevant measures and a formal citation.

The result of this work was the creation of tables for all fifty states and DC that provide uniform details about relevant quality measurement.

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[1] The full list of measures can be found on pages 125-138 of the following document: http://www.kancare.ks.gov/download/Attachment_J_State_Quality_Strategy.pdf

[2] The full list of New Hampshire Medicaid Quality substance use disorder measures can be found here: https://medicaidquality.nh.gov/measures-topic-list#substance-use-disorder-care