Mathematica
Progress Together

HCBS Quality Measures Issue Brief

Debra J. Lipson, Senior Fellow, Mathematica

Measures of State Long-Term Services and Supports System Rebalancing

The National Quality Forum (NQF) defines home and community-based services (HCBS) as "an array of services and supports delivered in the home or other integrated community setting that promote the independence, health and well-being, self-determination, and community inclusion of a person of any age who has significant, long-term physical, cognitive, sensory, and/or behavioral health needs" (NQF 2016). More than 4.5 million people with disabilities used Medicaid-funded HCBS in 2017 (Musumeci et al. 2019). This number is expected to grow as the population ages and advances in medical technology allow people with disabilities to live longer.

State Medicaid programs are the primary payers of long-term services and supports (LTSS), including HCBS, so state program managers need reliable measures to assess the quality of Medicaid HCBS provided to beneficiaries and to identify areas that need improvement. State Medicaid LTSS systems are evaluated by the outcomes they achieve. One of the most important outcomes is the extent to which the system is "rebalanced," which is commonly defined as a more equitable balance between the share of spending and use of services delivered in home and community-based settings relative to institutional care, where the majority of LTSS has been provided historically.

About this series

In the last five years, the Centers for Medicare & Medicaid Services (CMS), the National Quality Forum (NQF), and private sector groups have issued reports that describe home and community-based services (HCBS) quality measure frameworks, inventories of HCBS quality measures now in use, and key measure gaps. CMS, other federal agencies, and measure developers have also developed and rigorously tested new HCBS quality measures, several of which recently became available to state Medicaid agencies.

This issue brief series describes recent HCBS quality measure developments, covering three critical processes and outcomes of high quality care:

1. **Person-centered assessments and care plans**
2. **Person-reported outcomes, including choice and decision making, community participation, and experience of care**
3. **Rebalancing the long-term services and supports (LTSS) system toward HCBS**

These briefs are intended to orient state Medicaid agencies to the measures currently available to: monitor, improve, and evaluate HCBS quality; inform the selection of appropriate measures for different HCBS programs and populations; and highlight current measure gaps.

This brief describes the history and evolution of measures in this arena as well as recent advances in **state LTSS system rebalancing measures** that go beyond the share of spending on HCBS and service use. These new measures offer additional ways to understand the extent to which state Medicaid LTSS systems enable beneficiaries to live independently in a home or community residence as long as possible. After discussing the development of new rebalancing measures, this brief offers considerations for using these measures with different types of Medicaid HCBS programs and population groups, and it highlights remaining measure gaps. Several key points emerge from this review:

- State Medicaid agencies and state departments of aging and disability have used myriad measures to track LTSS system rebalancing. The most common measure is one that computes the share of HCBS spending as a proportion of total Medicaid LTSS expenditures. By this measure, the nation has made great strides since the early 1980s, when less than 10 percent of total Medicaid LTSS expenditures went toward HCBS. By 2016, the proportion of LTSS spending devoted to HCBS rose to 57 percent.
- Several alternative measures of state Medicaid LTSS system rebalancing provide a more nuanced picture of state progress. These measures include: (1) the share of beneficiaries receiving services in institutions versus home and community settings; (2) the share of newly eligible Medicaid LTSS beneficiaries who use HCBS first; and (3) the supply of direct care workers, assisted living and residential care units, and subsidized housing, which together constitute the infrastructure for serving more people in home and community settings.
- The Centers for Medicare & Medicaid Services (CMS) recently released new LTSS system rebalancing measures specifically designed to evaluate the performance of managed LTSS (MLTSS) plans. These measures complement state-level measures for assessing LTSS system rebalancing. The new measures include: (1) admissions to institutions among MLTSS plan enrollees who receive HCBS; (2) minimizing institutional length of stay; and (3) successful transition to home or community residence after a long-term institutional stay. The measures, which meet scientific reliability and validity standards, can be adjusted for differences in the characteristics of MLTSS health plan enrollees that affect the risk of institutionalization.

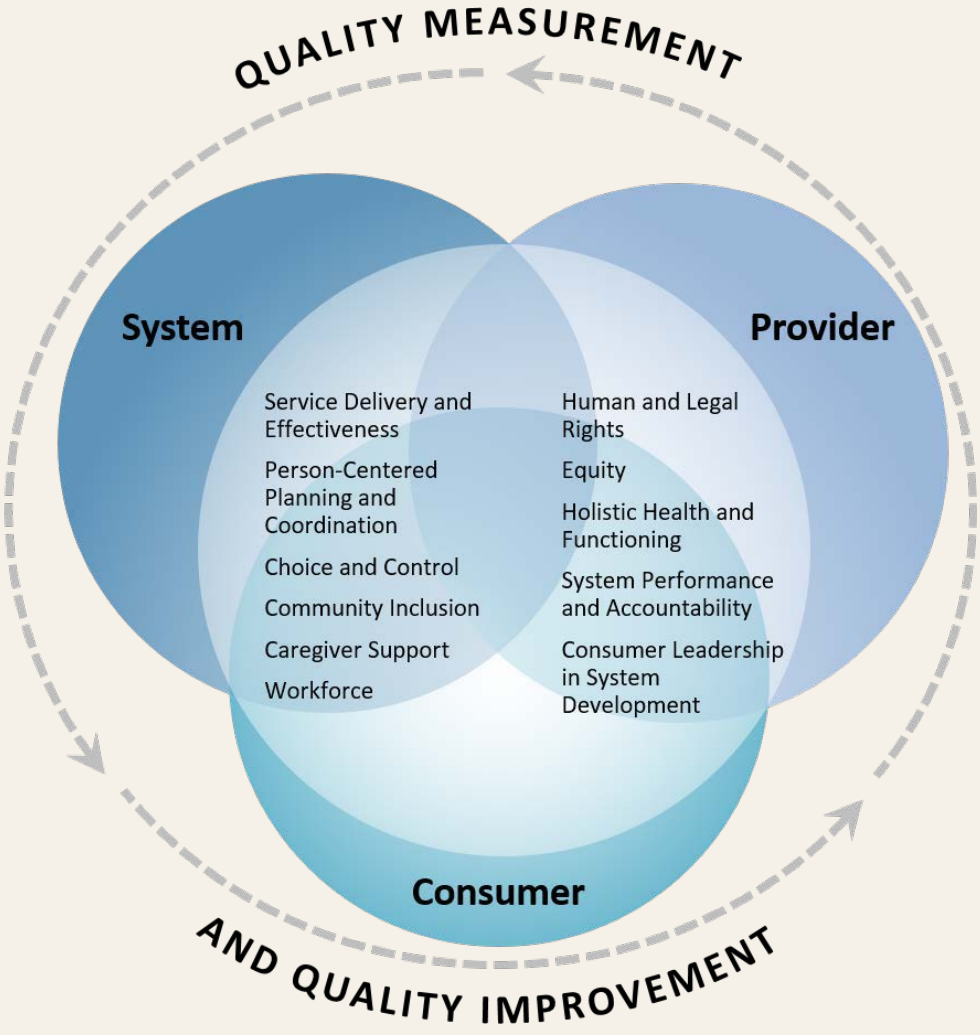
1. Importance of rebalancing measures

Medicaid LTSS systems consist of many interrelated components, including the processes used to assess beneficiaries' needs and goals, the scope of benefits covered, and the models used to deliver services to beneficiaries. One of 11 quality domains of the NQF HCBS Quality Framework (see Exhibit 1)—System Performance and Accountability—focuses on the extent to which state Medicaid LTSS systems as a whole meet the needs of the people they serve and effectively achieve desired outcomes.

Within this domain, the financing and service delivery structures subdomain identifies rebalancing as a key outcome, defined as "The level to which the system is appropriately financed and has the infrastructure in place to increase the proportion of people served in home and community settings and to meet the needs of consumers."

Measuring progress toward LTSS system rebalancing is important for several reasons. First, greater spending on and use of HCBS indicates a commitment to meeting state obligations under the 1999 Supreme Court Olmstead decision, which ruled that the Americans with Disabilities Act requires state Medicaid programs to give people with disabilities the opportunity to receive services in their home or a community residence, where many people with disabilities prefer to live. Second, HCBS is generally more cost-effective than serving the same person in an institution when taking into account Medicaid costs alone (MACPAC 2014).[i] Consequently, states can serve more people who need the same level of LTSS by spending more on HCBS than institutional care.

Exhibit 1. National Quality Forum home and community-based services quality measurement framework



Source: National Quality Forum. *Quality in Home- and Community-based Services to Support Community Living: Addressing Gaps in Performance Measurement Final Report.* September 2016.

2. Origins of LTSS system rebalancing measures

Historically, CMS has evaluated and compared state progress in rebalancing the LTSS system using a metric that computes the share of total Medicaid LTSS expenditures that are spent on HCBS. The metric was first calculated nearly 40 years ago and remains the most widely used measure of rebalancing. CMS tallies the national and state-by-state balance of Medicaid LTSS spending on HCBS in annual LTSS expenditure reports. The Medicaid and CHIP Scorecard reports the same measure. AARP's LTSS State Scorecard, which it published in 2011, 2014, and 2017, reports this measure for a

subset of Medicaid beneficiaries—older adults and people with physical disabilities. The widespread use of the measure is attributable to several factors, including long-standing reporting, readily available data, and its face validity, that is, intuitively, most people agree that greater spending on HCBS as a share of total Medicaid LTSS expenditures indicates greater access to and availability of HCBS.

In the early 1980s, the percentage of total Medicaid LTSS spending on HCBS was less than 10 percent nationally (Wenzlow et al. 2016), so achieving a more equal balance—close to 50 percent—was viewed as ambitious. The 50 percent benchmark has played an important role in several initiatives designed to rebalance the Medicaid LTSS system. The Money Follows the Person (MFP) Rebalancing Demonstration, which began in 2006, awarded grants to states to help beneficiaries residing in institutions transition to the community and to support states' efforts to rebalance the LTSS system toward HCBS. Many states made attaining or exceeding 50 percent of total Medicaid LTSS spending on HCBS an explicit goal of their MFP grant programs. In addition, CMS's Balancing Incentive Program, which ran from 2011 to 2015, targeted states whose share of Medicaid spending on HCBS was less than 50 percent and gave them an incentive to expand the availability of HCBS by providing an enhanced federal matching rate for qualified HCBS expenditures.

In federal fiscal year 2013, the national average spent on HCBS exceeded 50 percent for the first time (Eiken et al. 2015), which was a widely heralded achievement. The trend has continued such that by 2016, 57 percent of national Medicaid LTSS expenditures were for HCBS (Eiken et al. 2018).

Although the share of total Medicaid expenditures that are spent on HCBS is the most common measure of state LTSS system performance, state Medicaid agencies can create additional measures to monitor and evaluate their progress. Federal law permits state Medicaid agencies to develop their own performance indicators for beneficiaries served through section 1915(c) waiver programs as well as those receiving HCBS under regular state plan options, such as section 1915(i) HCBS state plan benefits, section 1915(j) self-directed personal assistance services, and section 1915(k) Community First Choice.

States that operate Medicaid MLTSS programs (see Exhibit 2) similarly have some flexibility to develop their own quality and performance measures. Federal Medicaid managed care regulations adopted in 2016, however, require states that contract with managed care plans to provide LTSS to measure three facets of plan performance: (1) beneficiary

Exhibit 2. Medicaid managed long-term services and supports (MLTSS) and integrated care programs

Historically, state Medicaid agencies covered LTSS by paying providers directly on a fee-for-service basis, but Medicaid delivery and payment systems have undergone a sea change in the last 10 years. In 2018, nearly two dozen states contracted with private managed care plans to cover LTSS, three times the number that did so 10 years earlier. Under these models, states pay each plan a fixed monthly amount for each Medicaid enrollee. In exchange for these capitated payments, MLTSS plans deliver services to enrollees through networks of providers, such as nursing homes, home health agencies, adult day centers, residential care homes, and personal care aides.

In addition to Medicaid MLTSS programs, several integrated care programs for Medicare-Medicaid dual eligibles also cover HCBS benefits, such as the Medicare-Medicaid Financial Alignment Initiative capitated model demonstration and the Program of All-Inclusive Care for the Elderly. Each of these programs has unique federal reporting requirements and performance measures, some of which vary by state (Giovannetti et al. 2013).

quality of life, (2) community integration, and (3) rebalancing [42 CFR 438.330(c)(1)(ii)]. Because the federal rule neither defined the term rebalancing nor instructed how to measure it, states are free to develop their own metrics for this purpose.

3. Additional LTSS system rebalancing measures

National organizations, state Medicaid agencies, and researchers have developed other types of Medicaid LTSS system rebalancing measures that go beyond the proportion of LTSS spending on HCBS. One of the most widely known set of measures is part of AARP's LTSS State Scorecard, which ranks states' LTSS system performance using a multidimensional framework consisting of 25 indicators grouped into five areas (Reinhard et al. 2017). As AARP explains, "no single indicator fully captures state performance, but taken together they provide a useful measure of how state LTSS systems compare across a range of important dimensions." The dimension named choice of setting and provider, which addresses LTSS system rebalancing, includes six indicators:

- **Medicaid spending on HCBS:** percentage of Medicaid and state-funded LTSS spending going to HCBS for older people and adults with physical disabilities
- **New Medicaid beneficiaries receiving HCBS:** percentage of new Medicaid aged or disabled LTSS users first receiving services in the community
- **Participant direction:** number of people receiving participant-directed services per 1,000 people (all ages) with any disability
- **Home health and personal care aide supply:** number of home health and personal care aides per 100 people ages 18 and older with an activity of daily living disability
- **Assisted living and residential care supply:** assisted living and residential care units per 1,000 people ages 75 and older
- **Subsidized housing opportunities:** subsidized housing opportunities including place-based (tied to a specific residence) subsidized units and vouchers as a percentage of all housing units

The indicators other than Medicaid spending on HCBS point to the importance of structural elements that support the ability of people with disabilities to receive LTSS in home and community residences. For example, a higher share of new Medicaid LTSS users who first receive HCBS when their need for assistance initially qualifies them for nursing home level of care indicates an efficient HCBS screening process and the availability of services when they are newly needed. Greater supply of home health and personal care aides, assisted living and residential care units, and subsidized housing comprise the infrastructure required to increase the proportion of people served in home and community settings. Because the latter four measures are not restricted to Medicaid-eligible people, they assess LTSS system capacity for all people with disabilities within a state so they are not direct measures of Medicaid LTSS system performance.

Another commonly used rebalancing measure is the **share of Medicaid-eligible people served by a state's LTSS system (or the share of MLTSS enrollees) who receive care in home or community settings compared with the share receiving care in institutions.** For example, since the early 1990s, the state of Washington has closely monitored the share of clients served in each setting. The proportion of older adults and people with physical disabilities served in nursing homes in the state dropped from 47 percent of the total in 1992 to 15 percent in 2015 (Rector 2016). Several factors have led to a steady decline over time in the absolute number of nursing home residents and the share of all LTSS beneficiaries in nursing homes. These factors include presumptive eligibility for Medicaid through fast-track processes and an electronic comprehensive assessment tool that allows caseworkers to expedite access to in-home and residential services to clients (Xing et al. 2018). Many states with MLTSS programs also measure progress in LTSS system rebalancing by comparing the share of MLTSS members who use HCBS with the share residing in institutions over time (NQF 2016). Measuring the number of people served in each setting can indicate progress

toward rebalancing, even if the proportion of LTSS spending on HCBS suggests otherwise. For example, if nursing home reimbursement rates are high and protected by state regulation, spending on institutional care could remain high, even as more beneficiaries gained access to HCBS.

A prevalent measure of rebalancing used by many states is the **number of people who transition from a nursing home or other institution to the community each year.** CMS required states receiving MFP Rebalancing Demonstration grants to report this number in their monthly progress reports and the national total was featured prominently in MFP national evaluation reports. For example, the cumulative number of people who transitioned to the community through MFP between January 2008 and December 2016 totaled 75,151 (Coughlin et al. 2017). The more Medicaid beneficiaries that state MFP programs helped transition from institutions to the community, the more they could earn in enhanced federal matching funds, which had to be used to support rebalancing initiatives. Many other states track the number of all Medicaid beneficiaries who transition from an institution whether or not they are MFP participants.

4. Factors driving the development of new measures of system rebalancing

In the last few years, CMS, states, and measure developers have sought to develop and test new measures of Medicaid LTSS system rebalancing that go beyond the share of spending, number of beneficiaries in each care setting, or structural factors such as those captured in the AARP indicators. Several factors have driven these efforts:

- **Measures of the overall share of spending and use of HCBS versus institutional care overlook care quality.** The share of state Medicaid spending in each setting can be influenced by factors that do not reflect quality of care for all LTSS beneficiaries. For example, states can spend more on HCBS as a share of total Medicaid LTSS expenditures by increasing HCBS provider payment rates or by decreasing institutional care payment rates (or failing to make annual inflation adjustments). The latter case can lead to lower quality of care for those who reside in institutions, which is a poor outcome for the system as a whole.
- **Aggregate state-level rebalancing measures mask differences across populations and regions within states.** The national average share of spending on HCBS differs by LTSS population group. In fiscal year 2014, the share of total Medicaid LTSS spending on HCBS was 75 percent for people with intellectual and developmental disabilities (IDD), compared with just 40 percent for frail older adults, adults younger than age 65 with physical disabilities, and people with serious mental illness and serious emotional disturbance (Wenzlow et al. 2016). State-level measures of infrastructure similarly hide geographic differences in the supply of direct care workers, home care services, and community residences within a state.
- **Factors other than state Medicaid policy influence the proportion of Medicaid LTSS beneficiaries in each setting.** Changes over time in the proportion of Medicaid LTSS beneficiaries served in each setting can be a useful indicator of system rebalancing at the state level and at the health plan level. But, even within one state or health plan, this measure can be misleading if it does not take into account changes over time in the characteristics of the LTSS population. A state with a rapidly aging population, for example, will have increasing numbers of people ages 85 and older, who are three times as likely to be long-term nursing home residents as those ages 65 to 74 (Harris-Kojetin et al. 2019). The supply of institutional facilities and beds, as well as the supply of long-term care workers, might also affect the proportion of Medicaid LTSS beneficiaries served in either setting. For example, large numbers of nursing homes closing or reducing long-term bed capacity within a short period will cause shifts in the use of institutional and HCBS that might be unrelated to state Medicaid LTSS policies.
- **Changes in state Medicaid LTSS policy affecting nursing home level of care criteria can affect**

the proportion of beneficiaries who use HCBS. Increasing shares of people who receive services in home and community-based settings is commonly attributed to greater access to and availability of HCBS, but states can achieve this same objective by restricting access to nursing homes through changes in institutional level of care eligibility criteria. For instance, states can lower allowable income and assets or increase functional level of need requirements, both of which reduce the number of people who qualify for nursing home care.

- **Fair comparison of performance across states and health plans requires risk adjustment.** Comparing state and health plan performance based on spending or the proportion of LTSS beneficiaries in either setting will be unfair if the rates are not adjusted for factors that affect the need for an institutional level of care. Numerous factors affect the profile of each state's Medicaid LTSS population, including: state Medicaid LTSS eligibility criteria; differences in the age, gender, and other characteristics of LTSS beneficiaries; number and acuity of chronic health conditions; type and severity of disability; level of functional and cognitive ability; and the supply of LTSS facilities and providers. Although it is possible to make adjustments for some of these factors to level the playing field across states and health plans, national data sets often lack state-level information on all of these variables.

5. New rebalancing measures for MLTSS plans

In 2013, CMS contracted with Mathematica and its partner, the National Committee for Quality Assurance, to develop and test standardized quality measures that would allow for apples-to-apples comparisons—within and across states—of the performance of MLTSS health plans on system rebalancing. After field testing the measures with health plans, in 2018, CMS released technical specifications for eight new MLTSS quality measures, three of which focus on the use of institutional care by MLTSS health plan members in which lower rates of facility-based care are key indicators of rebalancing the LTSS system toward HCBS (see Exhibit 3). The first measure—admission to an institution from the community—was also tested and specified for use as a quality measure for state-level Medicaid LTSS reporting and for specific Medicaid HCBS programs that operate using a fee-

Exhibit 3. New Medicaid managed long-term services and supports (MLTSS) rebalancing measures

Admission to an Institution from the Community: rate of MLTSS members receiving home and community-based services who were ever admitted to a nursing home or other long-term care institution during the measurement year per 1,000 member months.

Minimizing Institutional Length of Stay: percentage of short-term admissions to a nursing home or other long-term care institution among MLTSS members that result in a successful discharge to the community (community residence for 60 or more days).

Successful Transition after Long-Term Institutional Stay: percentage of long-term institutional facility stays among MLTSS members that result in successful transitions to the community (community residence for 60 or more days).

For detailed measure technical specifications, see https://www.medicaid.gov/medicaid/managed-care/downloads/ltss/mltss_assess_care_plan_tech_specs.pdf.

for-service (FFS) model.

Health plans with better performance on these measures indicate delivery of higher quality LTSS. For example, to help new members who need LTSS and choose to remain at home or in the community, a health plan can conduct a comprehensive assessment of the individual's needs and preferences and develop person-centered care plans that meet those needs. Care coordinators can continually track changes in enrollees' care needs, modify care plans and services if their needs or situation changes, and actively coordinate services across care settings. If enrollees are admitted to a hospital, care coordinators can help to avoid transfers to nursing homes by arranging for timely and appropriate post-acute care in the home. If an enrollee is appropriately admitted to a nursing home, care coordinators can minimize the length of stay by arranging for extra home-based support to expedite a quicker discharge date and prevent readmissions. If an enrollee who has been in an institution for a long time (more than 100 days) wants to return home or to a community residence, care coordinators can ensure a successful transition by securing affordable, accessible housing and developing a plan to provide all services and supports that enable that person to remain there.

To account for differences in the characteristics and needs of enrollees in each plan, all three measures are risk adjusted or risk stratified. The measure **Admission to an Institution from the Community** is reported as 12 rates, stratified by length of stay (short, medium, and long) and by age group (younger than age 65, 65 to 74, 75 to 84 and 85 and older), which correspond to the risk of institutionalization. The other two measures—**Minimizing Institutional Length of Stay** and **Successful Transition after Long-Term Institutional Stay**—are risk adjusted using regression models that account for dual eligibility status, age and gender, chronic or disabling conditions at the time of admission to the institution, and number of hospital stays and months of enrollment in the measurement period.

The risk-adjusted rates showed significant variation among the health plans that participated in field testing after taking into account differences in enrollee characteristics. Although the model accounted for many factors that affect the risk of institutionalization, national data were not available to adjust for members' level of functional ability, another important risk factor.

6. Selection and use of measures for state Medicaid HCBS programs and populations

Because rebalancing measures are critical indicators of LTSS system performance, as well as HCBS access and availability, most states use at least one of the measures described in this brief or variants of them. With many measures to choose from, state program managers should select measures that meet three key criteria:

1. **Scientifically validated.** Measures should be tested for reliability and validity. Reliability is the degree to which measure scores are consistent and reproducible, so that differences across states or programs reflect true differences rather than being attributable to chance. Validity ensures that measures accurately assess the concepts they were intended to measure.
2. **Nationally standardized.** Use of a common set of measure specifications—the rules that spell out which populations are included and excluded from the denominators, the events that count in the numerators, and the measurement time periods—enables CMS, states, researchers, consumers, and other stakeholders to make fair comparisons of measure scores across states and health plans and to judge performance relative to national benchmarks.
3. **Risk-adjusted scores.** Outcome measures should be adjusted for population characteristics and other factors that affect the measure scores, so that states and health plans are accountable for outcomes that are directly influenced by how well they provide timely access to high quality HCBS. (Structure and process measures do not need to

be risk adjusted because they are not affected by population characteristics.)

Beyond these foundational criteria, the following additional considerations could influence states' choice and use of rebalancing measures:

- **Ability to distinguish among LTSS populations.** The rate of admissions to institutions differs considerably among Medicaid beneficiaries with different types of disability. The national prevalence of institutionalization among people with IDD has dropped significantly over the past 20 years, and some states no longer have any intermediate care facilities for people with IDD. The same is true for people with serious mental illness. Consequently, in some states, measures of institutional admission, length of stay, and transitions back to the community might be relevant only to beneficiaries who are frail older adults and adults with physical disabilities.
- **Ability to distinguish between MLTSS and FFS.** Some states operate LTSS programs using both MLTSS and FFS delivery models. Some rebalancing measures are specified for only one of these reporting levels. Others are specified for either one, which allows states and other stakeholders to compare rebalancing performance across the two delivery models. Although the events that count in the numerator, such as admissions or transitions, should be the same across the two models, the denominators could be different. For example, states might want to limit the MLTSS enrollees who are counted in the denominator to those who have been continuously enrolled for a minimum period of time to give the health plans the opportunity to develop care plans and arrange for HCBS before holding them accountable for admissions to institutions.

7. Remaining measure gaps and additional measures under development

The NQF HCBS quality report identified measure gaps in all 11 domains of the HCBS quality framework (NQF 2016). In the system performance and accountability domain, NQF recommended expanding measure concepts related to rebalancing and developing standardized structure and process measures related to system performance and accountability. The NQF report also called attention to the importance of developing new measures of system financing and infrastructure to support an increase in the proportion of people served in home and community settings and to meet the needs of consumers.

To help fill these measure gaps, CMS is exploring the potential to test the scientific validity and reliability of the measure called new Medicaid LTSS beneficiaries using HCBS first—the same one that appears in AARP's LTSS State Scorecard. Rigorously testing this measure is important for a number of reasons. First, even though AARP included this measure in its 2017 LTSS Scorecard, the data for the measure were from the year 2012; national and state-level scores on the measure could have changed significantly since that time. Second, because a large number of states had incomplete or unreliable data to calculate the measure, AARP imputed the scores for those states instead of treating them as missing. Imputation using a regression model is a standard statistical method for filling in missing values, but it requires several assumptions and estimates for covariate data that are also missing or unreliable.[ii] Consequently, CMS would like to test the measure for all states using data submitted to CMS in Transformed Medicaid Statistical Information System files and test the measure's reliability and validity for LTSS beneficiaries served by MLTSS plans and through FFS models.

Conclusion

The extent to which state Medicaid programs achieve a more equitable balance of spending and use of LTSS between institutional care and HCBS is a key measure of the quality and performance of states' LTSS systems. Although federal statutes and regulations permit states to develop their own measures of rebalancing, a number of nationally standardized, validated measures are newly available for this purpose. Greater use of such measures would enable states, consumers, providers, and health plans to compare each state's performance with national benchmarks and with other states.

The nation as a whole has made strong progress in rebalancing the LTSS system, measured at least in part by the growing share of total Medicaid expenditures spent on HCBS. But additional types of rebalancing measures can provide a more nuanced picture of state progress. For example, some states that spend a greater share of total Medicaid LTSS dollars on HCBS might have a high rate of admissions to institutions among those using HCBS, indicating room for progress. Some states that spend a lower share of Medicaid LTSS expenditures on HCBS might have more success transitioning people in institutions to the community.

The measures discussed in this brief offer states additional measures of rebalancing, including the share of beneficiaries who receive care in either setting, the number of new Medicaid LTSS beneficiaries who use HCBS first, the rate of admissions to institutions among people who receive HCBS, and the share of long-term institutional residents who transition back to community residences. Using these types of LTSS system rebalancing measures, and controlling for state differences in the factors that influence the need for institutional care, can inform policymakers and program managers about what they are doing well, and how they can improve, to achieve a more balanced LTSS system.

References

Coughlin, R., J. Ward, N. Denny-Brown, B. Hagen, K. Maurer, E. Morris, J. Smoot, A. Steiner, and B. Perez. "Money Follows the Person Demonstration: Overview of State Grantee Progress, January to December 2016." Cambridge, MA: Mathematica Policy Research, September 2017. Available at https://www.mathematica-mpr.com/download-media?MediaItemId={96C0D313-A6E8-4314-8E4B-C762F7347C6A}.

Eiken S., K. Sredl, B. Burwell, and A. Amos. "Medicaid Expenditures for Long-Term Services and Supports in FY 2016." Baltimore, MD: Centers for Medicare & Medicaid Services, May 2018. Available at https://www.medicaid.gov/medicaid/ltss/downloads/reports-and-evaluations/ltssexpenditures2016.pdf.

Eiken, S., K. Sredl, B. Burwell, and P. Saucier. "Medicaid Expenditures for Long-Term Services and Supports (LTSS) in FY 2013." Report to the Centers for Medicare & Medicaid Services. Ann Arbor, MI: Truven Health Analytics, June 2015. Available at https://www.medicaid.gov/medicaid/ltss/downloads/ltss-expenditures-fy2013.pdf.

Giovannetti, E., J. Briefer-French, E. Anderson, D. Rey, and D. Lipson. "Development of Assessment and Care Planning Measures for Use in Medicaid Managed Long Term Services and Supports (MLTSS) Programs." Including Appendix 1, Environmental Scan of Assessment and Care Planning Quality Measures. Prepared for the Centers for Medicare & Medicaid Services. Washington, DC: National Committee for Quality Assurance and Washington, DC: Mathematica Policy Research, September 2013.

Harris-Kojetin L., M. Sengupta, J.P. Lendon, V. Rome, R. Valverde, and C. Caffrey. "Long-Term Care Providers and Services Users in the United States, 2015–2016." Vital and Health Statistics, vol. 3, no. 43, February 2019. Available at https://www.cdc.gov/nchs/data/series/sr_03/sr03_43-508.pdf.

Medicaid and CHIP Payment and Access Commission (MACPAC). "Report to Congress on Medicaid and CHIP." Chapter 2: Medicaid's Role in Providing Assistance with Long-Term Services and Supports. Washington, DC: MACPAC, June 2014. Available at https://www.macpac.gov/wp-content/uploads/2015/01/2014-06-13_MACPAC_Report.pdf.

Musumeci, M.B., P. Chidambaram, and M. O'Malley Watts, "Medicaid Home and Community-Based Services Enrollment and Spending." Issue Brief. San Francisco, CA:

Kaiser Family Foundation, April 2019. Available at http://files.kff.org/attachment/Issue-Brief-Medicaid-Home-and-Community-Based-Services-Enrollment-and-Spending.

National Quality Forum (NQF). "Quality in Home- and Community-Based Services to Support Community Living: Addressing Gaps in Performance Measurement." Final Report. Washington, DC: NQF, September 2016. Available at http://www.qualityforum.org/Publications/2016/09/Quality_in_Home_and_Community-Based_Services_to_Support_Community_Living_Addressing_Gaps_in_Performance_Measurement.aspx.

Rector, B. "Success of Washington's Rebalancing Efforts." Presentation to the AAA Advisory Council/State Council on Aging Annual Meeting, Olympia, Washington, October 26, 2016. Available at http://www.agingwashington.org/files/2014/11/Success-of-Washington%E2%80%99s-Rebalancing-Efforts-Keynote-Presentation-by-Bea-Rector.pdf.

Reinhard, S.C., J. Acci`us, A. Houser, K. Ujvari, J. Alexis, and W. Fox-Grage. "Picking Up the Pace of Change, 2017: A State Scorecard on Long-Term Services and Supports for Older Adults, People with Physical Disabilities, and Family Caregivers." Washington DC: AARP, June 14, 2017. Available at http://www.longtermscorecard.org/2017-scorecard.

Wenzlow, A., S. Eiken, and K. Sredl. "Improving the Balance: The Evolution of Medicaid Expenditures for Long-Term Services and Supports (LTSS), FY 1981-2014." Report to the Centers for Medicare & Medicaid Services. Ann Arbor, MI: Truven Health Analytics, 2016. Available at https://www.medicaid.gov/medicaid/ltss/downloads/evolution-ltss-expenditures.pdf.

Xing, J., D. Mancuso, and B. Felver. "The Changing Patterns of Long-Term Services and Supports Use in Washington State." Washington State Department of Social and Health Services, Research and Data Analysis Division. RDA Report 8.34. Olympia, WA: Washington State Department of Social & Health Services, March 2018. Available at https://www.dshs.wa.gov/sites/default/files/SESA/rda/documents/research-8-34.pdf.

Endnotes

[i] Although average per-beneficiary Medicaid costs are lower for HCBS than for institutional care, Medicaid payments to institutions cover room and board for each resident, while Medicaid payments for home and community-based services exclude such expenses, so the costs are not directly comparable.

[ii] For details on the AARP imputation method, see the 2017 State LTSS Scorecard Methodology Overview and Detailed Indicator Descriptions, available at http://www.longtermscorecard.org/~/media/Microsite/Files/2017/2_RankingMethodology_June12_v2.pdf.

Acknowledgments

This brief was prepared with support from the Centers for Medicare & Medicaid Services (CMS) under contract number: HHSM-500-2010-00026I. The author thanks Maggie Samra, Jessica Ross, and Erin Weir Lakhmani, all at Mathematica, and Jennifer Bowdoin, Melanie Brown, and Jean Close at CMS, for their review and comments.