National Quality Forum

Driving measurable health improvements together

Measure Worksheet

This document summarizes the evaluation of the measure as it progresses through NQF's Consensus Development Process (CDP). The information submitted by measure developers/stewards is included after the Brief Measure Information, Preliminary Analysis, and Pre-meeting Public and Member Comments sections.

To navigate the links in the worksheet: Ctrl + click link to go to the link; ALT + LEFT ARROW to return

Brief Measure Information

NQF #: 3734

Corresponding Measures:

Measure Title: Alignment of Person-Centered Service Plan (PCSP) with Functional Assessment Standardized Items (FASI) Needs

Measure Steward: Centers for Medicare & Medicaid Services

sp.02. Brief Description of Measure:

The percentage of home and community-based services (HCBS) recipients aged 18 years or older whose PCSP documentation addresses needs in the areas of self-care, mobility, and instrumental activities of daily living (IADL) as determined by the most recent FASI assessment

For the purposes of this measure application, the term *home and community-based services* also will refer to community-based long-term services and supports (CB-LTSS). This approach aligns with the definition used by the NQF (NQF, 2016) as well as the way the Centers for Medicare & Medicaid Services (CMS) defines CB-LTSS.

National Quality Forum (NQF). (2016). Quality in Home and Community-Based Services to Support Community Living: Addressing Gaps in Performance Measurement. National Quality Forum website. Retrieved from: https://www.qualityforum.org/Publications/2016/09/Quality_in_Home_and_Community-Based_Services_to_Support_Community_Living__Addressing_Gaps_in_Performance_Measurement.aspx

1b.01. Developer Rationale:

Current estimates suggest that 10 million individuals who require assistance to perform activities of daily living or IADL are living in the community, including in private or group homes.[1] A 2017 CMS report[2] showed that more than 3.7 million individuals receive Medicaid-funded HCBS. Federal and state governments finance more than 60 percent of paid HCBS costs in the United States through the Medicaid program. HCBS are expected to grow because of the aging U.S. population and the current move away from institutional-based care.[3] As significant continued growth is expected in cost and use of HCBS, including through managed care contracting, greater scrutiny on quality also is expected.

CMS regulations 1915(c) and 1915(i) require that all persons receiving HCBS be engaged in a person-centered planning process, which leads to development of their individualized PCSP.[4] PCSPs must reflect the services and supports important for HCBS participants to meet their needs identified through assessment as well as their personal preferences for delivery of such services and supports. The documented service plan must reflect that the setting in which the person resides is chosen by the person and must address the person's long-term care needs. FASI forms part of a comprehensive

assessment for identifying functional need. The personal priorities reflect the person's preferences for each domain of daily function.

This proposed measure aims to improve the alignment of service plans for individuals receiving HCBS with functional needs based on standardized functional assessment items. Aligning service plans with functional needs is important in HCBS populations because it facilitates improved outcomes, but measurement gaps exist, limiting the ability to assess this key aspect of person-centered supports and services. First, understanding a person's functional needs requires a standard, reliable assessment, yet at least 124 functional assessment tools were used by state Medicaid programs for LTSS in 2015.[5] The NQF conducted a broad environmental scan of HCBS quality measurement across all payers.[6] The resulting recommendations prioritized "assessment"—a process that should gather all of the information needed to inform the person-centered planning process—as one of three subdomains within the person-centered planning and coordination domain for which quality measurement can be improved. However, the current HCBS environment lacks standardized measurements of function (e.g., self-care, mobility, IADL) across settings that may form the basis of a high-quality service plan.[5] Furthermore, at least 21 states had functional assessment tools for specific populations in 2015 that were not also used to plan care services.[7]

After an individual is assessed, the identified functional needs must be addressed in the HCBS service plan. The Medicaid and Children's Health Insurance Program (CHIP) Payment Access Commission recently funded a comprehensive scan related to HCBS and behavioral health.[8] The results showed that most state-level quality measurement activity related to HCBS in Medicaid was based on CMS reporting requirements for 1915(c) waiver programs. These measures generally are process oriented and intended to demonstrate state and provider compliance with a range of policies and procedures. One of six key domains for the measures is "service plan," for which the focus is ensuring that plans reflect needs and participants receive services consistent with the plans. A common example of a service plan measure employed by state waiver programs is the percentage of service plans updated or revised as warranted by changes in participant needs. This concept is a critical concept to measure, and it is different from looking at whether a service plan addresses all current identified functional needs regardless of whether needs have changed. Additionally, the NQF has not endorsed existing service plan measures.

The absence of a performance measure identifying the alignment between the functional assessment and the PCSP at any given time—not only when needs change—reflects a gap at the measurement level. The proposed measure incorporates a standardized approach to assess functional needs that was found to be reliable and valid in measuring self-care, mobility, and IADL in the HCBS population. The performance measure subsequently fills an NQF-identified gap by measuring the alignment of those needs with the service plan—an important step toward providing high-quality and person-centered service to individuals receiving HCBS.

1. Kaye, H.S., & Harrington, C. (2015). Long-term services and supports in the community: Toward a research agenda. *Disability and Health Journal*, 8(1) 3–8. Retrieved from http://proxygw.wrlc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2014-55175-002&site=eds-live&scope=site&authtype=ip,uid&custid=s8987071.

2. Eiken, S. (2017). Medicaid long-term services and supports beneficiaries in 2013. Centers for Medicare & Medicaid Services. Retrieved from https://www.medicaid.gov/sites/default/files/2019-12/ltss-beneficiaries-2013.pdf.

3. Ng, T., Harrington, C., Musumeci, M., & Reaves, E. (2015). Medicaid home and community-based services programs: 2012 data update. Kaiser Family Foundation. Retrieved from https://www.kff.org/medicaid/report/medicaid-home-and-community-based-services-programs-2012-data-update.

4. Center for Medicaid and CHIP Services. Person-Centered Planning. http://www.advancingstates.org/sites/nasuad/files/CMS-Person-Centered%20Planning.pdf5.

5. Medicaid and CHIP Payment and Access Commission. (2016). June 2016 report to Congress on Medicaid and CHIP, Functional assessments for long-term services and supports. Retrieved from https://www.macpac.gov/publication/june-2016-report-to-congress-on-medicaid-and-chip.

6. Caldwell, J., & Kaye, H.K. (2016). Quality in home and community-based services to support community living: Addressing gaps in performance measurement. National Quality Forum; 2016:1–59. Retrieved from https://www.qualityforum.org/Publications/2016/09/Quality_in_Home_and_Community-Based_Services_to_Support_Community_Living__Addressing_Gaps_in_Performance_Measurement.aspx.

7. Medicaid and CHIP Payment and Access Commission. (2017) Inventory of the state functional assessment tools for long-term services and supports. Retrieved from https://www.macpac.gov/publication/inventory-of-the-state-functional-assessment-tools-for-long-term-services-and-supports.

8. Hartman, L., & Lukanen, E. (2016). Quality measurement for home and community based services (HCBS) and behavioral health in Medicaid. *Medicaid and CHIP Payment and Access Commission*; 2016:1–30. Retrieved from https://www.macpac.gov/publication/quality-measurement-for-home-and-community-based-services-and-behavioral-health-in-medicaid.

sp.12. Numerator Statement:

The number of HCBS recipients aged 18 years or older with documented needs in the areas of self-care, mobility, or IADL as determined by the most recent FASI assessment within the previous 12 months and with documentation that the subsequent PCSP addresses the FASI-based functional needs in self-care, mobility, and IADL.

Details on codes used to identify the numerator population are available in the **sp.12** attachment.

sp.14. Denominator Statement:

The number of HCBS recipients aged 18 years or older with documented needs in the areas of self-care, mobility, or IADL as determined by the most recent FASI assessment within the previous 12 months.

Details on codes used to identify the denominator population are available in the **sp.12** attachment.

sp.16. Denominator Exclusions: Exclusions inherent in the denominator definition include individuals younger than 18 years, individuals who have not had a FASI assessment within the previous 12 months, and individuals who have had a FASI assessment, but no functional needs were identified in the areas of self-care, mobility, or IADL. In addition, individuals without three months of continuous HCBS enrollment are excluded.

Measure Type: Process

sp.28. Data Source:

Assessment Data

Instrument-Based Data

Electronic Health Records

Paper Medical Records

sp.07. Level of Analysis:

Other

Population: Regional and State

IF Endorsement Maintenance – Original Endorsement Date:

Most Recent Endorsement Date:

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

sp.03. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?:

Preliminary Analysis: New Measure

Criteria 1: Importance to Measure and Report

1a. Evidence

1a. Evidence. The evidence requirements for a ***structure, process, or intermediate outcome*** measure are that it is based on a systematic review (SR) and grading of the body of empirical evidence in which the specific focus of the evidence matches what is being measured. For measures derived from a patient report, the evidence also should demonstrate that the target population values the measured process or structure and finds it meaningful.

The developer provides the following description for this measure:

- This is a new process measure at the population, regional and state level that measures the percentage of home and community-based services (HCBS) recipients aged 18 years and older whose Person-Centered Service Plan (PCSP) documentation addresses needs in self-care, mobility, and instrumental activities of daily living (IADL) as determined by the most recent Functional Assessment Standardized Items (FASI) assessment.
- The developer provides a logic model that depicts that if self-care, mobility, and IADL needs are addressed by an individual's PCSP, then it can lead to short term outcomes such as facilitation of responsivity to unmet needs, increased standardization of assessing functional needs, and accurate alignment between needs and PCSP and long term outcomes such as address unmet needs to prevent poor outcomes, set goals to benchmark progress on quality measure, and facilitate increased service satisfaction for individuals served and their families.

The developer provides the following evidence for this measure:

- SR of the evidence specific to this measure?   ☐ Yes   ☒ No
- Quality, Quantity, and Consistency of evidence provided?   ☐ Yes   ☒ No
- Evidence graded?   ☐ Yes   ☒ No

Summary:

- The measure developer conducted a literature review by searching through academic journal articles, grey literature, and federal and state agency reports published in the past 20 years using PubMed, Scopus, Google, Google Scholar, and personal libraries.
- The developer noted that determining an individual's needs and providing services are key to the success of enabling individuals to remain in their homes and communities. Further, state agencies use the assessment of an individual's unmet needs to determine eligibility for services and to create the service plan for providing HCBS. Because of this, quality of care is impacted if services fail to meet the individual's needs or expectations.

- The developer cited studies that show a link between individuals who are frail or elderly or have physical disabilities and unmet needs, it leads to adverse outcomes such as increased hospitalizations, emergency department visits, discomfort and injuries, and caregiver stress.
- The developer also cited studies that showed that increased prioritization, pursuit, and attainment of personalized goals in care plans are linked to improved physical outcomes and well-being.
- The developer stated that the FAFSI has been determined to be reliable, valid, and appropriate for use with individuals receiving HCBS.
- The developer also stated that PCSPs are part of a systematic approach to providing services tailored to an individual's strengths, needs, and goals. The developer attested that according to the literature PCSPs for individuals with intellectual and developmental disabilities should focus on support rather than on compliance, and they should indicate which supports must be modified or maintained to meet the individuals' needs and to facilitate their personal goals.
- Literature also suggested that goal setting for an individual's needs and goals requires development of a personalized care plan and that when programs are tailored to a patient preferences and needs, the patients reported higher satisfaction with the program.

Exception to evidence

- N/A

Questions for the Standing Committee:

- *What is the relationship between this measure and patient outcomes?*
- *How strong is the evidence for this relationship?*
- *Is the evidence directly applicable to the process of care being measured?*

Guidance From the Evidence Algorithm

Measure does not assess performance on a health outcome or PRO (Box 1) → Evidence is not based on a systematic review and grading body of empirical evidence (Box 3) → Empirical evidence is submitted without systematic review and grading of the evidence (Box 7) → Empirical evidence summarized includes all studies in the body of evidence (Box 8) → Submitted evidence indicates high-moderate quality (Box 9) → Moderate

Preliminary rating for evidence: ☐ **High** ☒ **Moderate** ☐ **Low** ☐ **Insufficient**

1b. Gap in Care/Opportunity for Improvement and disparities

1b. Performance Gap. The performance gap requirements include demonstrating quality problems and opportunity for improvement.

- The developer examined data from June and July 2018 where the measure was tested in nine organizations across four different states located in geographically diverse regions of the country that serve different populations.
- The developer noted that performance measure scores ranged from 42.5 percent for individuals with intellectual or developmental disability to 85.5 percent for individuals with an acquired brain injury.
- The developer further stated that the mean of the performance measure scores across programs was 66.3 percent.

- The developer presented descriptive statistics for the total FASI-based needs for individuals in the denominator of the performance measure and conducted a one-way ANOVA to compare the program type on the summed total number of FASI-based needs identified across all programs.
  - The developer determined that there was a significant effect of program type on the summed total of all FASI-based needs identified (F equals 22.97, p less than 0.0001).
  - The developer further noted that comparison using Tukey's honestly significant difference (HSD) test found that the mean number of needs for the older adult and physical disability groups were significantly different each other and the other three groups, but that the mean number of needs for the other three programs were not statistically different from each other.
- The developer also presented descriptive statistics on the total number of needs addressed by the PCSP for individuals in the denominator.
  - The developer also conducted a one-way ANOVA and found that there was significant effect of program type on the summed total of all needs addressed (F equals 30.33, p-value less than 0.0001).
  - Again, using Tukey's HSD test the developer found the same results, two of the groups were significantly different than each other and the other three groups, but the other three groups were not statistically different from each other.

Disparities

- To examine disparities, the developer assessed measures scores by race and ethnicity.
  - The developer categorized race into three groups (those who identified as African American or Black; those who identified as American Indian, Alaska Native, Asian, or another race; those who identified as white).
    - When race was not known or not designated, the participant was categorized into a separate category.
  - Ethnicity was categorized as Latinx or non-Latinx.
- The developer reported that there were significant differences in scores by race (Pearson chi squared (3) equaled 27.3272, the probability of (Pr) equaled 0.0001). African American or Black category had the highest performance measure score at 80.2 percent, while Race Unknown (46.2 percent) and White (50.0 percent) had the lowest performance measure scores.
- The developer also reported that no significant differences by ethnicity were seen (Pearson chi squared (1) equaled 0.7737, Pr equaled 0.379).
- The developer noted that the results suggest a possible racial disparity exists in PCSP use but that caution is advised in generalizing the scores as further exploration is needed due to small sample sizes of some racial or ethnic groups.

Questions for the Standing Committee:

- *Is there a gap in care that warrants a national performance measure?*

Preliminary rating for opportunity for improvement: ☐ **High** ☒ **Moderate** ☐ **Low** ☐ **Insufficient**

Criteria 2: Scientific Acceptability of Measure Properties

Complex measure evaluated by the Scientific Methods Panel (SMP)? ☐ **Yes** ☒ **No**

Evaluators: Staff

2a. Reliability: [Specifications](#) and [Testing](#)

2a1. Specifications require the measure, as specified, to produce consistent (i.e., reliable) and credible (i.e., valid) results about the quality of care when implemented.

2a2. Reliability testing demonstrates whether the measure data elements are repeatable and producing the same results a high proportion of the time when assessed in the same population in the same time period, and/or whether the measure score is precise enough to distinguish differences in performance across providers.

Specifications:

- Measure specifications are clear and precise.

Reliability Testing:

- Reliability testing conducted at the Patient/Encounter Level:
  - The developer conducted a field test from March 2017 to September 2017, during which reviewers interviewed and observed individuals enrolled in one of the five program types, talked with primary caregivers, guardians, or both, and reviewed cased notes. After that, the reviewers coded the FASI functional items based on the person's usual need for assistance in the past three days and their dependent performance in the past month.
  - Testing and analysis involved 478 unique individuals eligible to receive services from Medicaid HCBS programs within four geographically diverse states.
  - The developer conducted reliability testing by comparing the data from the 2017 FAFSI field test and the results of a review of a subset of the forms from the field test by 2 reviewers and calculating a Kappa statistic.
    - The results indicated a Kappa statistic of 1.0000 (p-value less than 0.001) for the level of agreement between FASI-based needs and documented needs. The developer ran additional analysis to determine agreement by program type:
      - For older adults, physical disability, and intellectual or development disability program, responses to both FASI-based needs and documented needs were 'yes' which the developer stated indicates complete agreement on need.
      - For acquired brain injury and behavioral health condition programs has a Kappa statistic of 1.0000 (p-value less than 0.001).
  - To evaluate consistency in the number of FASI-based needs and total needs addressed in the PCSP identified by each pair of reviewers, the Bland-Altman limits of agreement (LOA) was used.
    - The LOA for FASI-based needs identified by pairs of reviewers were between -10.05 to 10.80 and 4.2 percent of all records fell outside of these LOA after removing a reviewer who was consistently outside the LOA.
      - The percentage of records that fell within the 95 percent confidence intervals ranged from 93.1 percent to 96.4 percent by program type.
    - The LOA for total pairs of records reflecting that needs were addressed by the PCSP were between -9.94 and 10.47.
      - The percentage of pairs within LOA ranged from 91.6 percent to 94.1 percent by program type.

- Further, analysis of total pairs of records indicated 95.1 percent were within the LOA using 95 percent confidence interval after removing a reviewer who was consistently outside the LOA.
  - To evaluate the concordance between the number of FASI-based needs addressed and the reviewers' assessment that the numerator had been met, the developer calculated a Kappa statistic. The developer also examined the IRR using a Kappa statistic for when reviewers evaluated whether a record did or did not meet the definition of the performance measure.
    - The developer reported the results indicate very good agreement that was statistically significant (0.8130 with a p-value of less than 0.001).
    - Additional analysis was run to determine agreement by program type. The Kappa values ranged from 0.67 to 0.96.
    - The developer reported the results indicate good agreement that was statistically significant (0.5759 with a p-value of less than 0.001).

Additional analysis was run to determine agreement by program type. The Kappa values ranged from 0.02 to 0.78.

Questions for the Standing Committee regarding reliability:

- *Do you have any concerns that the measure cannot be consistently implemented (i.e., are the measure specifications adequate)?*

Guidance From the Reliability Algorithm

Submitted specifications are precise, unambiguous, and complete (Box 1) → Empirical reliability testing conducted using statistical tests as measure is specified (Box 2) → Testing was not conducted at the accountable entity level (Box 4) → Testing was conducted on all critical patient/data elements (Box 8) → Method was appropriate for assessing the reliability of all critical patient/encounter level elements (Box 9) → Moderate certainty or confidence that the critical patient/encounter level data elements used in the measure are reliable (Box 10a) → Moderate

Preliminary rating for reliability: ☐ **High** ☒ **Moderate** ☐ **Low** ☐ **Insufficient**

2b. Validity: Validity Testing; Exclusions; Risk Adjustment; Meaningful Differences; Comparability; Missing Data

2b2. Validity testing should demonstrate that the measure data elements are correct and/or the measure score correctly reflects the quality of care provided, adequately identifying differences in quality.

2b2-2b6. Potential threats to validity should be assessed/addressed.

Validity Testing

- Validity testing conducted at the Accountable Entity Level:
  - The developers conducted face validity for the measure by surveying a technical expert panel (TEP) as well as the reviewers who participated in the reliability testing.
    - The developers asked reviewers to complete a survey after they had reviewed either at least ten data abstraction forms or at the end of data collection.
    - The developers also convened a TEP consisting of 22 subject matter experts and stakeholders where preliminary results were shared and the TEP members were asked to provide feedback in an online form.

- Of the 22 TEP members, 12 provided feedback including seven potential FASI PM users, two advocacy group representatives, two self-advocates, and one potential FAFSI PM user.
  - Using a four-level Likert scale, the developer evaluated face validity of the critical data elements (identifying needs on FASI and identifying whether the alignment of needs to personal service plan is important to quality) and of the measure as an indicator of quality.
    - For the critical data elements
      - The reviewers consistently gave the elements a 90 percent 'agree' or 'strongly agree' rating.
      - The TEP usually gave the elements a 90 percent 'agree' or strongly agree' rating with the exception of the question that asked "A reviewer will determine whether the PCSP addressed the identified self-care, mobility and/or IADL needs. This means that there is a service (paid or unpaid) and/or action steps associated with all the unmet needs identified using a FASI assessment" which had a 66.7 percent agreement rate.
    - For evaluating the measure as an indicator quality:
      - Agreement on questions from reviewers ranged from 81 percent to 95.2 percent.
        - The lowest agreement for reviewers was on the question "Performance on this measure provides important information for assessing whether groups of CB-LTSS recipients are receiving person-centered services."
        - The highest agreement was on the question "A PCSP that addresses identified functional needs is an important step to creating person-centered services because it addresses the individual's needs."
      - Agreement on questions from the TEP ranged from 66.7 percent to 91.7 percent.
        - The lowest agreement for the TEP members occurred for two questions "Performance on this measure provides important information for assessing whether groups of CB-LTSS recipients are receiving person-centered services" and "Performance on this measure provides important information assessing whether groups of CB-LTSS recipients are receiving high quality services."
        - The highest agreement for the TEP members occurred for two questions "A PCSP that addresses identified functional needs is an important step to creating person-centered services because it addresses the individual's needs" and "A PCSP that addresses identified functional needs is an important step towards high quality services because the reviewer can create a plan to address the individual's needs."

Exclusions
- The measure does not use exclusions.
- While the measure does not use exclusions, the developer stated that individuals who did not have a FASI-based need were excluded from the measure to ensure that only individuals with functional

needs in self-care, mobility, and IADL were included in testing. The developer noted that because FASI evaluates only functional needs, there may be other reasons an individual is receiving HCBS services that may not be manifested as a functional need.

- The developer found that only three out of the 478 sample had no FASI-based functional need. These individuals were part of the programs serving those with an acquired brain injury and those with a behavioral health condition.

- The developer concluded that individuals with an acquired brain injury, a behavioral health condition, or an intellectual or a developmental disability may not have functional disabilities that limit their participation in everyday activities. The developer stated that it is reasonable that these individuals, have no FASI-based needs.

Risk Adjustment

- The measure is not risk-adjusted or stratified.

Meaningful Differences

- To evaluate statistically and clinically meaningful differences, the developer conducted a chi-square test. The developer stated that the test found a statistically significant difference in performance measure scores (chi-square (4) equaled 53.5, p-value less than 0.0001). The developer noted that this result indicates that the differences are not due to random chance.

- The developer stated that while the chi-square result is statistically significant, they are not able to determine how clinically or practically meaningful the results are as the measure is not routinely implemented in HCBS programs.

Missing Data

- The developer stated that during the pairing of FASI field test data and data abstraction forms, 36 data abstraction forms were not able to be paired with FASI field test forms. The developer stated that the inability for the forms to be aligned was due to incorrect form and reviewer identifiers and not a result of data missing from the fields on the abstraction form. The developer further attested that missing data were minimal and results were therefore not biased by missing data/

Comparability

- The measure only uses one set of specifications for this measure.

Questions for the Standing Committee regarding validity:

- *Do you have any concerns regarding the validity of the measure (e.g., exclusions, risk adjustment approach, etc.)?*

Guidance From the Validity Algorithm

Potential threats to validity were empirically assessed (Box 1) → Empirical validity testing was not conducted (Box 2) → Face validity was assessed at the accountable entity level (Box 3) → Moderate agreement that the accountable entity level from the measure as specified can be used to distinguish quality (Box 4) → Moderate

Preliminary rating for validity: ☐ **High** ☒ **Moderate** ☐ **Low** ☐ **Insufficient**

Criterion 3: [Feasibility](#)

3. Feasibility is the extent to which the specifications, including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

- The developer stated that the data elements are abstracted from a record by someone other than the person obtaining original information and that some data elements are in defined fields in electronic sources.
- The developer further stated that the measure requires two sources of data, the FASI and the PCSP and that the data-entry process depends on the provider organization's resources.
- The developer noted that reviewers, TEP members, and researchers identified two difficulties in data collection
  - Some reviewers and TEP members noted that the measure's language was unclear specifically concerning the PCSP, the measure did not address other needs, and the lack of clarity around the difference between developing goals and service planning.
  - Some reviewers expressed difficulty with the administrative burden of the measure as service plan information can be found in a variety of documents. Additionally, some reviewers noted that the variances in training among states may affect the user's understanding and time to complete the measure.
- The developer offered solutions to these difficulties stating that they implemented a training program and a weekly roundtable to discuss the measure. They did note that with this additional information from the TEP members and reviewers, the training should include a module on best practices to effectively engage individuals receiving HCBS in a discussion about their goals and needs.
- The developer also offered a solution for the amount of time to gather data by suggesting the creation of a streamlined data abstraction form by removing unnecessary items used for the testing and modifying the FASI to an electronic system. They further suggested the organizations may consider developing a standardized PCSP form.
- The developer also suggested the use of standard sampling techniques to decrease the time needed for the analysis of the measure.

Questions for the Standing Committee:

- *Are the required data elements routinely generated and used during care delivery?*
- *Are the required data elements available in electronic form (e.g., EHR or other electronic sources)?*
- *Is the data collection strategy ready to be put into operational use?*

Preliminary rating for feasibility: ☐ **High** ☒ **Moderate** ☐ **Low** ☐ **Insufficient**

Criterion 4: Use and Usability

4a. Use (4a1. [Accountability and Transparency](#); 4a2. [Feedback on measure](#))

4a. Use evaluates the extent to which audiences (e.g., consumers, purchasers, providers, and policymakers) use or could use performance results for both accountability and performance improvement activities.

4a.1. Accountability and Transparency. Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If they are not in use at the time of initial endorsement, then a credible plan for implementation within the specified time frames is provided.

Current uses of the measure

Publicly reported? ☐ Yes ☒ No

Current use in an accountability program? ☒ Yes ☐ No ☐ UNCLEAR

Planned use in an accountability program? ☒ Yes ☐ No ☐ NA

Accountability program details

- The developer stated that the measure is in use or being considered for use in three states. The developer also stated that the measure is currently used with the Veteran's Health Administration (VHA) particularly for their Program of Comprehensive Assistance for Family Caregivers as part of their Veteran Functional Assessment Instrument (VFAI). The VHA program is intended to promote the health and well-being of caregivers of veterans through education, resources, support, and services. The developer stated that the measure is publicly reported but it does not appear that the listed programs have a public reporting component.

- The developer also stated that CMS, the measure steward, intends to share information about the availability and potential utility of this measure for public reporting through several communication channels. The developer also states that the measure may support states in their efforts to meet Medicaid's Section 1915(c) Home and Community-Based Services Waiver Program Assurances, which requires participants to have a service plan appropriate for their need and to receive the services, supports, or both specified in the plan.

- The developer further noted that because the measure is derived from the HCBS FASI set, it is expected that states will use the measures in the set for their internal assessment of HCBS program quality and related quality and improvement projects and public reporting. The developer also attested that the measure will likely be included in CMS' HCBS quality measure set for voluntary adoption by states' HCBS programs.

4a.2. Feedback on the measure by those being measured or others. Three criteria demonstrate feedback: (1) Those being measured have been given performance results or data, as well as assistance with interpreting the measure results and data; (2) Those being measured, and other users have been given an opportunity to provide feedback on the measure performance or implementation; and (3) This feedback has been considered when changes are incorporated into the measure.

Feedback on the measure provided by those being measured or others

- The developer noted that a method for distribution of the results of organization's performance on the measure was not included in the measure testing. The developer stated that CMS will share information about the availability and utility of the measure through various communication channels and that data, results, and guidelines will be addressed in the implementation plan.

- The developer further noted that although results were not shared with participating organizations, they were submitted to CMS to review and develop future activity.

- The developer obtained feedback on the measure performance and implementation from the reviewers and TEP members.
    - The developer stated that a majority of reviewers agree that the documents and sources needed for the measure are readily available, clearly specified, and the time to complete the

measure is reasonable. The developer noted that the qualitative comments received noted inconsistencies in the PCSP documents.

- The developer stated that majority of TEP members agreed with the performance measure feasibility and usability statements. The members agreed that the guidelines for the measure are clearly stated and that the time to collect the information is reasonable, however, a smaller majority agreed that the information needed to implement this measure for groups of CB-LTSS recipients is readily available.

    - The developer noted that the level of agreement among the TEP members was generally less than that of the reviewers. The developer noted that the greatest difference was the agreement on the statements regarding the availability of information. The developer stated that this discrepancy could be due to a lower number of TEP respondents and the lack of experience using the measure in the field.

- The developer concluded that feedback from the reviewers was positive and the concerns from the TEP were mostly focused on data accessibility. The developer noted that this concern will be addressed as more states centralized electronic records. The developer noted that the specifications and implementation were not modified to address this specific issue.

Questions for the Standing Committee:

- *How have (or can) the performance results be used to further the goal of high quality, efficient healthcare?*
- *How has the measure been vetted in real-world settings by those being measured or others?*

Preliminary rating for Use: ☒ **Pass**   ☐ **No Pass**

4b. Usability (4b1. Improvement; 4b2. Benefits of measure)

4b. Usability evaluates the extent to which audiences (e.g., consumers, purchasers, providers, and policymakers) use or could use performance results for both accountability and performance improvement activities.

4b.1 Improvement. Progress toward achieving the goal of high quality, efficient healthcare for individuals or populations is demonstrated.

Improvement results

- The developer stated that the performance measure was not measured over time and therefore changes because of implementation could not be determined.

4b2. Benefits versus harms. The benefits of the performance measure in facilitating progress toward achieving high quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

Unexpected findings (positive or negative) during implementation

- The developer noted that they were positively surprised by the extent of TEP and reviewer agreement on the importance of the measure for aligning functional needs with service planning.

Potential harms

- The developer also attested that unexpected benefits are not well understood yet because the measure has not been implemented.

Additional Feedback:

- N/A

Questions for the Standing Committee:

- *How can the performance results be used to further the goal of high quality, efficient healthcare?*
- *Do the benefits of the measure outweigh any potential unintended consequences?*

Preliminary rating for Usability: ☐ **High** ☒ **Moderate** ☐ **Low** ☐ **Insufficient**

Criterion 5: Related and Competing Measures

Related Measures

- NQF #2624 Functional Outcome Assessment
- NQF #2631 Percent of Long-Term Care Hospital (LTCH) Patients With an Admission and Discharge Functional Assessment and a Care Plan That Addresses Function
- NQF #2967 CAHPS® **Home and C**ommunity-Based Services Measures

Harmonization

- The developer attested that NQF #2624 and NQF #2631 are similar in concept but are in a different setting from NQF #3734 and that NQF #2967, the general population is the same. However, the developer stated that no further harmonization is possible due to the differences between the related measures and NQF #3734.

Criteria 1: Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria

1a. Evidence

1a.01. Provide a logic model.

Briefly describe the steps between the healthcare structures and processes (e.g., interventions, or services) and the patient's health outcome(s). The relationships in the diagram should be easily understood by general, non-technical audiences. Indicate the structure, process or outcome being measured.

[Response Begins]

Table 1 presents a logic model which delineates inputs, processes as well as long term outcomes that the FASI PM2 measure is designed to accomplish.

Table 1. Logic Model for FASI PM2

Inputs	Processes	Output	Short-Term Outcomes	Long-Term Outcomes
• Individuals eligible for HCBS	• HCBS program staff assesses individual using the FASI. • FASI identifies and documents support need or needs on Self-Care, Mobility, IADL sections.	• This process measure identifies whether self-care, mobility, and IADL needs as measured by the FASI are addressed by the individual's PCSP.	• Facilitate responsivity to unmet needs • Facilitate accurate alignment between needs and PCSP • Facilitate increased standardization of assessing functional needs in HCBS • Identify what is needed for reviewers to align PCSP with the individual's needs	• Address unmet needs to prevent poor outcomes • Set goals to benchmark progress on quality measure across program or unit of analysis • Facilitate increased service satisfaction for individuals served and their families

[Response Ends]

1a.02. Select the type of source for the systematic review of the body of evidence that supports the performance measure.

A systematic review is a scientific investigation that focuses on a specific question and uses explicit, prespecified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies. It may include a quantitative synthesis (meta-analysis), depending on the available data.

[Response Begins]

Other (specify)

[Other (specify) Please Explain]

The measure developer summarizes evidence identified through a structured search of the peer-reviewed and gray literature later in this section.

[Response Ends]

If the evidence is not based on a systematic review, skip to the end of the section and do not complete the repeatable question group below. If you wish to include more than one systematic review, add additional tables by clicking "Add" after the final question in the group.

Evidence - Systematic Reviews Table (Repeatable)

Group 1 - Evidence - Systematic Reviews Table

1a.03. Provide the title, author, date, citation (including page number) and URL for the systematic review.

[Response Begins]

Not applicable.

[Response Ends]

1a.04. Quote the guideline or recommendation verbatim about the process, structure or intermediate outcome being measured. If not a guideline, summarize the conclusions from the systematic review.

[Response Begins]

Not applicable.

[Response Ends]

1a.05. Provide the grade assigned to the evidence associated with the recommendation, and include the definition of the grade.

[Response Begins]

Not applicable.

[Response Ends]

1a.06. Provide all other grades and definitions from the evidence grading system.

[Response Begins]

Not applicable.

[Response Ends]

1a.07. Provide the grade assigned to the recommendation, with definition of the grade.

[Response Begins]

Not applicable.

[Response Ends]

1a.08. Provide all other grades and definitions from the recommendation grading system.

[Response Begins]

Not applicable.

[Response Ends]

1a.09. Detail the quantity (how many studies) and quality (the type of studies) of the evidence.

[Response Begins]

Not applicable.

[Response Ends]

1a.10. Provide the estimates of benefit, and consistency across studies.

[Response Begins]

Not applicable.

[Response Ends]

1a.11. Indicate what, if any, harms were identified in the study.

[Response Begins]

Not applicable.

[Response Ends]

1a.12. Identify any new studies conducted since the systematic review, and indicate whether the new studies change the conclusions from the systematic review.

[Response Begins]

Not applicable.

[Response Ends]

1a.13. If source of evidence is NOT from a clinical practice guideline, USPSTF, or systematic review, describe the evidence on which you are basing the performance measure.

[Response Begins]

Not applicable.

[Response Ends]

1a.14. Briefly synthesize the evidence that supports the measure.

[Response Begins]

Determining the individual's needs and providing appropriate services and supports for those identified needs are keys to the success of enabling individuals to remain in their homes and community. In fact, state agencies use the assessment of the individual's unmet needs to determine eligibility for services and to create the service plan for providing publicly funded HCBS. Consequently, the quality of care is compromised if services fail to meet the individuals' needs or expectations.[1,2] For individuals who are frail elderly or have physical disabilities, adverse outcomes, such as increased hospital admissions, emergency department visits, discomfort and injuries, and caregiver stress, are well documented consequences of a failure to meet the individual's needs.[3–6] Several studies demonstrate that increased prioritization,

pursuit, and attainment of personalized goals in individual care plans are linked to improved physical outcomes and well-being. For example, incorporating physical activity as a self-care priority is associated with improvements in frailty status, fall rates, and health-related quality of life.[7–9] The proposed performance measure helps address CMS's requirements for Health and Welfare assurances and sub-assurances under 1915(c) waiver programs, thus potentially leading to enhanced quality.[10]

Additionally, the reliable and valid determination of an individual's needs for support in self-care, mobility, and IADL is an important step toward aligning identified needs with subsequent service plans. In a comprehensive review of the literature, Williams, Lyons, and Rowland suggest that accurate and consistent measurement of functional and performance limitations are primary issues to determining unmet needs.[11] Work conducted by Li, Chadiha, and Morrow-Howell also highlights the variability of methods and sources of information used to identify unmet needs, including functional needs, in eligible populations.[6] Current measures have not been adequately tested for reliability and validity, thus leading to unwarranted variations in practice that compromise continuity and quality of care. Thompson, Schalock, and Tasse indicate that defensible resource allocations must be based on results that come from assessment tools that are reliable, valid, and standardized.[12]

On the basis of a national field test, the FASI have been found to be reliable, valid, and appropriate for use with individuals receiving HCBS. The FASI includes three core factors of function: self-care, mobility, and IADL. Thus, completion of the FASI assessment provides a standardized and reliable method of identifying service needs in eligible individuals who require assistance or support to meet daily mobility, self-care, or IADL to sustain their capacity to remain in the home and community environment.

Intended to support HCBS participants' functional needs, PCSPs are part of a systematic approach to providing services tailored to an individual's strengths, needs, and goals. According to Schalock, Thompson, and Tasse, PCSPs for individuals with intellectual and developmental disabilities should focus on support rather than on compliance, and they should indicate which supports must to be modified or maintained to meet the individuals' needs and to facilitate their personal goals.[12] Similarly, Hannan et al. determined that goal setting frameworks depend on environmental and personal factors.[13] The researchers concluded from clinician feedback on personalized goal setting that patients with emotional distress should prioritize identity development in their person-centered goal frameworks. Further, variation in an individual's needs and goals requires development of a personalized care plan.[14] Rietkerk et al. found that when comprehensive geriatric assessment programs were tailored to patient preferences and needs, the majority of participants reported high program satisfaction.[15]

[Response Ends]

1a.15. Detail the process used to identify the evidence.

[Response Begins]

The project team conducted a structured literature review of studies using the following search terms: performance measure, person-centered supports and services, functional assessment, personal priorities, home and community-based service, and community-based long-term services and supports. The team searched academic journal articles, grey literature, and federal and state agency reports published in the past 20 years using PubMed (U.S. National Library of Medicine, National Institutes of Health), Scopus®, Google, Google Scholar, and personal libraries.

[Response Ends]

1a.16. Provide the citation(s) for the evidence.

[Response Begins]

1. MaloneBeach, E.E., Zarit, S.H., & Spore, D.L. (1992). Caregivers' perceptions of case management and community-based services: Barriers to service use. *Journal of Applied Gerontology*, 11(2),146–159. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/10171017.

2. Morgan, D.G., Semchuk, K.M., Stewart, N.J., & D'Arcy, C. (2002). Rural families caring for a relative with dementia: Barriers to use of formal services. *Social Science Medicine*, 55(7), 1,129–1,142. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/12365526.

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7. Haider, S., Grabovac, I. & Dorner, T.E. (2019). Effects of physical activity interventions in frail and prefrail community-dwelling people on frailty status, muscle strength, physical performance and muscle mass: A narrative review. *Journal of the American Geriatrics Society*, 131(11–12), 244–254. doi: 10.1111/jgs.15312

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9. Von Berens, A., Fielding, R.A., Gustafsson, T., Kirn, D., Laussen, J., Nydahl, M., Reid, K., Travison, T.G., Zhu, H., Cederholm, T., & Koochek, A. (2018). Effect of exercise and nutritional supplementation on health-related quality of life and mood in older adults: The VIVE2 randomized controlled trial. *BMC Geriatrics*, 18(1), 286. doi: 10.1186/s12877-018-0976-z

10. Centers for Medicare & Medicaid Services. (2015). Application for a §1915(c) home and community-based waiver: Instructions, technical guide, and review criteria. Retrieved from https://www.medicaid.gov/medicaid-chip-program-information/by-topics/waivers/downloads/ technical-guidance.pdf.

11. Williams, J., Lyons, B., & Rowland, D. (1997). Unmet long-term care needs of elderly people in the community: A review of the literature. *Home Health Care Services Quarterly*, 16(1–2), 93–119. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/10168492.

12. Thompson, J.R., Schalock, R.L., & Tasse, M.J. (2018). How support needs can be used to inform allocation of resources and funding decisions. *American Association on Intellectual and Developmental Disabilities*. Retrieved from https://aaidd.org/docs/default-source/sis-docs/supportneeds.pdf?sfvrsn=a88b3021_0.

13. Hannan, P., Castelino, R., Prescott, S., & Fleming, J. (2018). Rehabilitation goal setting with community dwelling adults with acquired brain injury: A theoretical framework derived from clinicians' reflections on practice. *Postgraduate Medicine*, 40(20), 2,388–2,399. doi: 10.1080/00325481.2018.1502016

14. Maurer, C., Draganescu, S., Mayer, Gattinger, H. (2019). Attitudes and needs of residents in long-term care facilities regarding physical activity: A systematic review and synthesis of qualitative studies. *Journal of Clinical Nursing*, 28(13–14), 2,386–2,400. doi: 10.1111/jocn.14761

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[Response Ends]

1b.01. Briefly explain the rationale for this measure.

Explain how the measure will improve the quality of care, and list the benefits or improvements in quality envisioned by use of this measure.

[Response Begins]

Current estimates suggest that 10 million individuals who require assistance to perform activities of daily living or IADL are living in the community, including in private or group homes.[1] A 2017 CMS report[2] showed that more than 3.7 million individuals receive Medicaid-funded HCBS. Federal and state governments finance more than 60 percent of paid HCBS costs in the United States through the Medicaid program. HCBS are expected to grow because of the aging U.S. population and the current move away from institutional-based care.[3] As significant continued growth is expected in cost and use of HCBS, including through managed care contracting, greater scrutiny on quality also is expected.

CMS regulations 1915(c) and 1915(i) require that all persons receiving HCBS be engaged in a person-centered planning process, which leads to development of their individualized PCSP.[4] PCSPs must reflect the services and supports important for HCBS participants to meet their needs identified through assessment as well as their personal preferences for delivery of such services and supports. The documented service plan must reflect that the setting in which the person resides is chosen by the person and must address the person's long-term care needs. FASI forms part of a comprehensive assessment for identifying functional need. The personal priorities reflect the person's preferences for each domain of daily function.

This proposed measure aims to improve the alignment of service plans for individuals receiving HCBS with functional needs based on standardized functional assessment items. Aligning service plans with functional needs is important in HCBS populations because it facilitates improved outcomes, but measurement gaps exist, limiting the ability to assess this key aspect of person-centered supports and services. First, understanding a person's functional needs requires a standard, reliable assessment, yet at least 124 functional assessment tools were used by state Medicaid programs for LTSS in 2015.[5] The NQF conducted a broad environmental scan of HCBS quality measurement across all payers.[6] The resulting recommendations prioritized "assessment"—a process that should gather all of the information needed to inform the person-centered planning process—as one of three subdomains within the person-centered planning and coordination domain for which quality measurement can be improved. However, the current HCBS environment lacks standardized measurements of function (e.g., self-care, mobility, IADL) across settings that may form the basis of a high-quality service plan.[5] Furthermore, at least 21 states had functional assessment tools for specific populations in 2015 that were not also used to plan care services.[7]

After an individual is assessed, the identified functional needs must be addressed in the HCBS service plan. The Medicaid and Children's Health Insurance Program (CHIP) Payment Access Commission recently funded a comprehensive scan related to HCBS and behavioral health.[8] The results showed that most state-level quality measurement activity related to HCBS in Medicaid was based on CMS reporting requirements for 1915(c) waiver programs. These measures generally are process oriented and intended to demonstrate state and provider compliance with a range of policies and procedures. One of six key domains for the measures is "service plan," for which the focus is ensuring that plans reflect needs and participants receive services consistent with the plans. A common example of a service plan measure employed by state

concept is a critical concept to measure, and it is different from looking at whether a service plan addresses all current identified functional needs regardless of whether needs have changed. Additionally, the NQF has not endorsed existing service plan measures.

The absence of a performance measure identifying the alignment between the functional assessment and the PCSP at any given time—not only when needs change—reflects a gap at the measurement level. The proposed measure incorporates a standardized approach to assess functional needs that was found to be reliable and valid in measuring self-care, mobility, and IADL in the HCBS population. The performance measure subsequently fills an NQF-identified gap by measuring the alignment of those needs with the service plan—an important step toward providing high-quality and person-centered service to individuals receiving HCBS.

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4. Center for Medicaid and CHIP Services. Person-Centered Planning. http://www.advancingstates.org/sites/nasuad/files/CMS-Person-Centered%20Planning.pdf5.

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6. Caldwell, J., & Kaye, H.K. (2016). Quality in home and community-based services to support community living: Addressing gaps in performance measurement. National Quality Forum; 2016:1–59. Retrieved from https://www.qualityforum.org/Publications/2016/09/Quality_in_Home_and_Community-Based_Services_to_Support_Community_Living__Addressing_Gaps_in_Performance_Measurement.aspx.

7. Medicaid and CHIP Payment and Access Commission. (2017) Inventory of the state functional assessment tools for long-term services and supports. Retrieved from https://www.macpac.gov/publication/inventory-of-the-state-functional-assessment-tools-for-long-term-services-and-supports.

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[Response Ends]

1b.02. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis.

Include mean, std dev, min, max, interquartile range, and scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include. This information also will be used to address the sub-criterion on improvement (4b) under Usability and Use.

[Response Begins]

The scores from recent tests of the proposed measure indicate a sizeable gap in the performance of accountable HCBS programs in aligning PCSPs of participants with FASI-based functional needs. During June and July 2018, this measure was tested in nine organizations from four different states located in geographically diverse regions of the country. These organizations serve different populations, including individuals who are older adults and individuals with a physical disability, an intellectual or a developmental disability, an acquired brain injury, or a behavioral health condition. The FASI field testing demonstrated that functional needs differed depending on HCBS program type (e.g., individuals who are older adults had different types and numbers of needs than individuals with mental health and substance use disorders).

To reflect these differences, **Table 2** presents the numerator, denominator, and score for this measure by program type. The denominator is defined as those individuals receiving HCBS with documented need on the Self-Care, Mobility, or IADL sections of the FASI. The numerator is defined as the percentage of individuals aged 18 years or older who receive HCBS with documented functional needs as determined by the FASI assessment *and* documentation of a PCSP that addresses the identified functional needs. The sample consisted of 475 individuals who had a FASI-based need (denominator). The score varied depending on the program; the lowest score was found in individuals with an intellectual or a developmental disability (42.5 percent) and the highest score in individuals with an acquired brain injury (85.5 percent). The relatively low scores across programs suggest room for improvement exists in aligning the functional needs and service plan, offering a means to improve HCBS. **Table 3** presents the minimum and maximum scores as well as the scores by quintile; the mean is 66.3 percent.

Table 2. Alignment of PCSP with FASI-Based Needs: Denominator, Numerator, and Score by Program Type

Measure Component	Individuals in Programs Serving Those Who Are Older Adults (row%)	Individuals in Programs Serving Those with a Physical Disability (row%)	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability (row%)	Individuals in Programs Serving Those with an Acquired Brain Injury (row %)	Individuals in Programs Serving Those with a Behavioral Health Condition (row%)	TOTAL
Total Unique Individuals	117 (24.5)	119 (24.9)	106 (22.2)	70 (14.6)	66 (13.8)	478 (100)
Does not Have a FASI-Based Need	0 (0.0)	0 (0.0)	0 (0.0)	1 (33.3)	2 (66.7)	3 (100)
Denominator *Has a FASI-Based Need (% of Sample)*	117 (24.6)	119 (25.1)	106 (22.3)	69 (14.5)	64 (13.5)	475 (100)
Numerator *Has at Least 1 FASI-Based Need; PCSPs Address all Needs*	68	94	45	59	49	315
Performance Measure Score, %	58.1	79.0	42.5	85.5	76.6	66.3

Table 2 shows how the development of a person-centered service plan using needs identified through the FASI can be calculated by HCBS population served. Performance scores vary from 42.5 percent (for persons with intellectual and developmental disabilities) to 85.5 percent (for persons with acquired brain injuries).

Table 3. **Alignment of PCSP with FASI-Based Needs: Minimum, Maximum, and Quintile Scores**

Measure Score	Minimum and First Quintile	Second Quintile	Third Quintile	Fourth Quintile	Maximum and Fifth Quintile
Performance Measure Score, %	42.5	58.1	76.6	79.0	85.5

The calculation of this performance measure includes determining whether the PCSP addressed the individual's functional needs, as documented using the FASI. **Table 4** presents descriptive statistics of total FASI-based needs for individuals in the denominator of the performance measure. A one-way ANOVA was conducted to compare the effect of program type on the summed total number of FASI-based needs identified across all five programs. There was a significant effect of program type on the summed total of all FASI-based needs identified ($F[4, 470]=22.97$, $p<0.0001$). Post-hoc comparisons using the Tukey's honestly significant difference (Tukey's HSD) test indicate that the mean number of needs for the older adult and physical disability groups were significantly different from each other and the remaining three groups. However, the mean number of needs for individuals with an intellectual or a development disability, an acquired brain injury, or a behavioral health condition were not statistically different from each other.

Table 4. **Descriptive Statistics for Total Number of FASI-Based Needs Identified by Program Type**

Program Type	n	Mean (SD)	Median	25th and 75th Percentiles	IQR	Min and Max Values
Total Unique Individuals	475	16.0 (10.2)	16	7, 16	16	1, 44
Individuals in Programs Serving Those who are Older Adults	117	21.3 (9.6)	22	13, 28	15	1, 44
Individuals in Programs Serving Those with a Physical Disability	119	17.9 (8.4)	19	12, 24	12	2, 37
Individuals in Programs Serving Those with an Intellectual or a Developmental Disability	106	13.2 (10.9)	10	4, 20	16	1, 39
Individuals in Programs Serving Those with an Acquired Brain Injury	69	14.4 (8.7)	14	6, 22	16	1, 34
Individuals in Programs Serving Those with a Behavioral Health Condition	64	8.9 (8.0)	7	2, 13	11	1, 30

Table 5 presents descriptive statistics on the total number of needs addressed by the PCSP for individuals in the denominator of the performance measure. A one-way ANOVA was conducted to compare the effect of program type on the summed total of all needs addressed across all five programs. There was a significant effect of program type on the summed total of all needs addressed ($F[4, 470]=30.33$, $p<0.0001$). Post-hoc comparisons using the Tukey's HSD test indicated that the mean number of needs addressed for the older adult and physical disability groups were significantly different from each other and the remaining three groups. However, the mean number of needs addressed for individuals

with an intellectual or a development disability, an acquired brain injury, and a behavioral health condition were not statistically different from each other.

Table 5. **Descriptive Statistics for Total Number of FASI-Based Needs Addressed in PCSP by Program Type**

Program Type	n	Mean (SD)	Median	25th and 75th Percentiles	IQR	Min and Max Values
All Individuals	475	14.3 (9.5)	13	6, 21	15	0, 40
Individuals in Programs Serving Those who are Older Adults	117	19.1 (9.7)	19	12 26	14	1, 40
Individuals in Programs Serving Those with a Physical Disability	119	17.3 (8.5)	18	11, 24	13	0, 37
Individuals in Programs Serving Those with an Intellectual or a Developmental Disability	106	9.5 (7.5)	8	3, 14	11	0, 30
Individuals in Programs Serving Those with an Acquired Brain Injury	69	13.9 (8.5)	13	6, 21	15	1, 31
Individuals in Programs Serving Those with a Behavioral Health Condition	64	8.0 (7.6)	6	2, 10	8	0, 30

[Response Ends]

1b.03. If no or limited performance data on the measure as specified is reported above, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement. Include citations.

[Response Begins]

Not applicable. Data have been included for Question **1b.02**.

[Response Ends]

1b.04. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability.

Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included. Include mean, std dev, min, max, interquartile range, and scores by decile. For measures that show high levels of performance, i.e., "topped out", disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b) under Usability and Use.

[Response Begins]

Differences in performance measure scores based on race and ethnicity were investigated. To perform the analysis, participant race was collapsed to form three groups: individuals who identified as African American or Black; individuals who identified as American Indian, Alaska Native, Asian, or another race; and individuals who identified as white.

Participants for whom race was not designated or was unknown were placed into a separate category. Categories for participant ethnicity were Latinx and non-Latinx.

Results indicated significant differences in scores by race (Pearson chi^2(3)=27.3272, Pr=0.0001). However, no significant differences occurred by ethnicity (Pearson chi^2(1)=0.7737, Pr=0.379). These results suggest that a possible racial disparity existed in PCSP use; however, caution in generalizing these scores is advised and further exploration is needed because some of the racial or ethnic groups contain only small numbers of participant cases. Table 6 summarizes these results.

Table 6. **Alignment of PCSP with FASI-Based Needs—Denominator, Numerator, and Score by Race**

Measure Component	African American or Black	American Indian, Alaska Native, Asian, or Other Race	White	Race Unknown	All Individuals*
Denominator *Has a FASI-Based Need (% of Sample)*	106 (22.4)	84 (17.7)	245 (51.7)	39 (8.2)	474 (100)
Numerator *Has at Least 1 FASI-Based Need; PCSPs Address all Needs*	85	42	170	18	315
Performance Measure Score, %	80.2	50.0	69.4	46.2	66.5

*One individual from the intellectual or developmental disability program category was missing information on race and ethnicity. Pearson chi^2(3) = 27.3272, Pr=0.0001.

[Response Ends]

1b.05. If no or limited data on disparities from the measure as specified is reported above, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in above.

[Response Begins]

Not applicable. Performance data is provided for Question **1b.4**.

[Response Ends]

Criteria 2: Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.

sp.01. Provide the measure title.

Measure titles should be concise yet convey who and what is being measured (see [What Good Looks Like](#)).

[Response Begins]

Alignment of Person-Centered Service Plan (PCSP) with Functional Assessment Standardized Items (FASI) Needs

[Response Ends]

sp.02. Provide a brief description of the measure.

Including type of score, measure focus, target population, timeframe, (e.g., Percentage of adult patients aged 18-75 years receiving one or more HbA1c tests per year).

[Response Begins]

The percentage of home and community-based services (HCBS) recipients aged 18 years or older whose PCSP documentation addresses needs in the areas of self-care, mobility, and instrumental activities of daily living (IADL) as determined by the most recent FASI assessment

For the purposes of this measure application, the term *home and community-based services* also will refer to community-based long-term services and supports (CB-LTSS). This approach aligns with the definition used by the NQF (NQF, 2016) as well as the way the Centers for Medicare & Medicaid Services (CMS) defines CB-LTSS.

National Quality Forum (NQF). (2016). Quality in Home and Community-Based Services to Support Community Living: Addressing Gaps in Performance Measurement. National Quality Forum website. Retrieved from[: https://www.qualityforum.org/Publications/2016/09/Quality_in_Home_and_Community-Based_Services_to_Support_Community_Living__Addressing_Gaps_in_Performance_Measurement.aspx](https://www.qualityforum.org/Publications/2016/09/)

[Response Ends]

sp.04. Check all the clinical condition/topic areas that apply to your measure, below.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Surgery: General*

[Response Begins]

Behavioral Health: Other Serious Mental Illness

Other (specify)

   [Other (specify) Please Explain]

Home and community-based services

[Response Ends]

sp.05. Check all the non-condition specific measure domain areas that apply to your measure, below.

[Response Begins]

Care Coordination

Health and Functional Status

Health and Functional Status: Change

Health and Functional Status: Nutrition

Health and Functional Status: Obesity

Health and Functional Status: Physical Activity

Health and Functional Status: Quality of Life

Health and Functional Status: Total Health

[Response Ends]

sp.06. Select one or more target population categories.

Select only those target populations which can be stratified in the reporting of the measure's result.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Populations at Risk: Populations at Risk*

[Response Begins]

Adults (Age >= 18)

Populations at Risk: Dual eligible beneficiaries of Medicare and Medicaid

[Response Ends]

sp.07. Select the levels of analysis that apply to your measure.

Check ONLY the levels of analysis for which the measure is SPECIFIED and TESTED.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Clinician: Clinician*
- *Population: Population*

[Response Begins]

Other

Population: Regional and State

[Response Ends]

sp.08. Indicate the care settings that apply to your measure.

Check ONLY the settings for which the measure is SPECIFIED and TESTED.

[Response Begins]

Ambulatory Care

Outpatient Services

Post-Acute Care

[Response Ends]

sp.09. Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials.

Do not enter a URL linking to a home page or to general information. If no URL is available, indicate "none available".

[Response Begins]

https://www.medicaid.gov/medicaid/long-term-services-supports/teft-program/functional-assessment-standardized-items/index

[Response Ends]

sp.12. Attach the data dictionary, code table, or value sets (and risk model codes and coefficients when applicable). Excel formats (.xlsx or .csv) are preferred.

Attach an excel or csv file; if this poses an issue, [contact staff](). Provide descriptors for any codes. Use one file with multiple worksheets, if needed.

[Response Begins]

Available in attached Excel or csv file

[Response Ends]

Attachment: 3734_3734_FASI PM2 NQF Code List_2022.09.13 Update-508.xlsx

sp.13. State the numerator.

Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome).
DO NOT include the rationale for the measure.

[Response Begins]

The number of HCBS recipients aged 18 years or older with documented needs in the areas of self-care, mobility, or IADL as determined by the most recent FASI assessment within the previous 12 months and with documentation that the subsequent PCSP addresses the FASI-based functional needs in self-care, mobility, and IADL.

Details on codes used to identify the numerator population are available in the **sp.12** attachment.

[Response Ends]

sp.14. Provide details needed to calculate the numerator.

All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets.

Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.

[Response Begins]

The numerator is a portion (i.e., potential subset) of HCBS recipients in the denominator. This portion is the result of a review of PCSP documentation in conjunction with the FASI to determine whether the PCSP addresses each functional need. For the PCSP to be counted as addressing the identified functional needs in self-care, mobility, or IADL, a service (paid or unpaid) or a plan in progress must be associated with each need. Documentation of a PCSP is identified through an HCBS recipient's case record.

The frequency of data aggregation will be at the discretion of state users because CMS has determined that states will use, on a voluntary basis, the standardized items (i.e., FASI) from which the measure is derived. It is anticipated that states would calculate the measure at least annually per HCBS program. Some states may choose to calculate the measure more frequently than annually (e.g., every three or six months).

Details on codes used to identify the numerator population are available in the **sp.12** attachment. Specifically, the numerator codes include, as listed in the attached Excel file, F0900, F0900A, F0900A1, F0900A2, F0905A , F0905B, F0910, F0910A, F0910B, F0910B1, F0910B2, F0920, F0920A1, F0920A2, F0920B1, F0920B2, F0920C1, F0920C2, F0920D1, F0920D2, F0920E1, F0920E2, F0920F1, F0920F2, F0920G1, F0920G2, F0920H1, F0920H2, F0920_1, F0920_2, F0925A and F0925B.

[Response Ends]

sp.15. State the denominator.

Brief, narrative description of the target population being measured.

[Response Begins]

The number of HCBS recipients aged 18 years or older with documented needs in the areas of self-care, mobility, or IADL as determined by the most recent FASI assessment within the previous 12 months.

Details on codes used to identify the denominator population are available in the **sp.12** attachment.

[Response Ends]

sp.16. Provide details needed to calculate the denominator.

All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets.

Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.

[Response Begins]

The proposed measure focuses on the assessment of functional needs in the areas of self-care, mobility, and IADL common among adult HCBS recipients and derived from use of the FASI. The denominator is determined by items in Section GG: Functional Abilities and Goals of the FASI Set form.

Self-care needs are identified in the following items on the FASI Set form (FASI form): 6a (eating), 6b (oral hygiene), 6c (toileting hygiene), 6d (wash upper body), 6e (shower/bathe self), 6f (upper body dressing), 6g (lower body dressing), and 6h (putting on/taking off footwear).

Bed mobility and transfer needs are identified in the following items on the FASI form: 7a (roll left and right), 7b (sit to lying), 7c (lying to sitting on side of bed), 7d (sit to stand), 7e (chair/bed-to-chair transfer), 7f (toilet transfer), and 7g (car transfer).

If the response to item 8 on the FASI form indicates that the person walks, ambulation needs are identified in the following items on the form: 8a (walks 10 feet), 8b (walks 50 feet with two turns), 8c (walks 150 feet), 8d (walks 10 feet on uneven surfaces), 8e (1 step [curb]), 8f (4 steps), 8g (12 steps), 8h (walks indoors), 8i (carries something in both hands), 8j (picking up object), 8k (walks for 15 minutes), and 8l (walks across a street).

If the response to item 9 on the FASI form indicates that the person uses a manual wheelchair, wheelchair mobility needs are identified in the following items on the form: 9a (wheels 50 feet with two turns), 9b (wheels 150 feet), 9c (wheels for 15 minutes) and 9d (wheels across a street).

If the response to item 10 on the FASI form indicates that the person uses a motorized wheelchair/scooter, wheelchair/scooter mobility needs are identified in the following items on the form: 10a (wheels 50 feet with two turns), 10b (wheels 150 feet), 10c (wheels for 15 minutes) and 10d (wheels across a street).

IADL are identified in the following items on the FASI form: 11a (makes a light cold meal), 11b (makes a light hot meal), 11c (light daily housework), 11d (heavier periodic housework), 11e (light shopping), 11f (telephone -answering call), 11g (telephone-placing call), 11h (medication management-oral medications), 11i (medication management-inhalant/mist medications), 11j (medication management-injectable medications), 11k (simple financial management), and 11l (complex financial management).

Details on codes used to identify the denominator population are available in the **sp.12** attachment.

[Response Ends]

sp.17. Describe the denominator exclusions.

Brief narrative description of exclusions from the target population.

[Response Begins]

Exclusions inherent in the denominator definition include individuals younger than 18 years, individuals who have not had a FASI assessment within the previous 12 months, and individuals who have had a FASI assessment, but no functional needs were identified in the areas of self-care, mobility, or IADL. In addition, individuals without three months of continuous HCBS enrollment are excluded.

[Response Ends]

sp.18. Provide details needed to calculate the denominator exclusions.

All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at sp.11.

[Response Begins]

To identify participants excluded from NQF 3734, verify the age of the person responding to questions within the FASI to ensure they are over the age of 18. Then, verify that the participant has been enrolled in HCBS continually for at least

three months during the measurement period. Finally, confirm that, while completing the FASI, functional needs were identified related to self-care, mobility, and/or IADL.

[Response Ends]

sp.19. Provide all information required to stratify the measure results, if necessary.

Include the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate. Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format in the Data Dictionary field.

[Response Begins]

The primary unit of analysis is the Medicaid HCBS program type. Programs can provide a combination of standard medical services and nonmedical services. Standard services include, but are not limited to, case management (i.e., services and supports coordination), homemaker, home health aide, personal care, adult day health services, habilitation (both day and residential), and respite care. States also can propose "other" types of services that may assist in diverting or transitioning individuals from institutional settings into their homes and community or both. (Source: Home & Community-Based Services 1915(c), https://www.medicaid.gov/medicaid/hcbs/authorities/1915-c/index.html)

These programs are designed to provide an array of services to a certain target population; as a result, each state typically operates more than one HCBS program. Five HCBS program types were used to test this measure. Their labels reflect the predominant population eligible for services under each HCBS program. However, the group of individuals served within a single HCBS program may be heterogeneous by design (e.g., the intentional combination of individuals with mental health or substance use disorders) or because of the presence of comorbidities. These program types are as listed below.

1. HCBS programs serving individuals who are older adults
2. HCBS programs serving individuals with a physical disability
3. HCBS programs serving individuals with an intellectual or a developmental disability
4. HCBS programs serving individuals with an acquired brain injury
5. HCBS programs serving individuals with a mental health or substance use disorder (collectively referred to as *behavioral health condition*)

Medicaid agencies in the states have administrative authority over these HCBS programs and determine which services and supports to offer beneficiaries deemed eligible for a given HCBS program. Although Medicaid HCBS programs are administered by state Medicaid agencies under various Medicaid legal authorities, they frequently are operated by other entities, including non-Medicaid state agencies (e.g., Department of Aging), non-state governmental entities (e.g., county), or managed care organizations. The operating entities then contract with direct services and supports providers.

[Response Ends]

sp.20. Is this measure adjusted for socioeconomic status (SES)?

[Response Begins]
 No
[Response Ends]

sp.21. Select the risk adjustment type.

Select type. Provide specifications for risk stratification and/or risk models in the Scientific Acceptability section.

[Response Begins]

No risk adjustment or risk stratification

[Response Ends]

sp.22. Select the most relevant type of score.

Attachment: If available, please provide a sample report.

[Response Begins]

Rate/proportion

[Response Ends]

sp.23. Select the appropriate interpretation of the measure score.

Classifies interpretation of score according to whether better quality or resource use is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score

[Response Begins]

Better quality = Higher score

[Response Ends]

sp.24. Diagram or describe the calculation of the measure score as an ordered sequence of steps.

Identify the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period of data, aggregating data; risk adjustment; etc.

[Response Begins]

The following steps are used to create the score for this measure.

1. Restrict the HCBS sample to individuals aged 18 years or older with continuous enrollment for at least three months and individuals who have had a FASI assessment within the previous 12 months.
2. Count the number of sampled individuals with at least one FASI-documented functional need in self-care, mobility, or IADL. Documented functional needs are based on receiving either a "05" or below (i.e., "04," "03," "02," or "01") or "88" (i.e., functional needs assessment was not attempted due to short-term medical condition or safety concerns; activity was not attempted) on any item in the Self-Care, Mobility, or IADL sections of a FASI form. See **S.2b.**, *Data Dictionary, Code Table, or Value Sets*, for value labels and **S.7**, *Denominator Details*, for the list of specific items on the FASI form that comprise the Self-Care, Mobility, and IADL sections.
3. For each individual with at least one FASI-documented functional need, determine whether the PCSP documentation indicates that there is a paid service or unpaid help for addressing each FASI-based functional need in self-care, mobility, and IADL.
4. Count the number of sampled individuals for whom the PCSP addresses all FASI-based functional needs in self-care, mobility, and IADL.
5. Calculate the percentage by dividing the resulting number in **Step 4** by the resulting number in **Step 2**.

[Response Ends]

sp.25. Attach a copy of the instrument (e.g. survey, tool, questionnaire, scale) used as a data source for your measure, if available.

[Response Begins]

Copy of instrument is attached.

[Response Ends]

Attachment: 3734_3734_FASI Set Template_(2)-508.pdf

sp.26. Indicate the responder for your instrument.

[Response Begins]

Clinician

[Response Ends]

sp.27. If measure testing is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.

Examples of samples used for testing:

- *Testing may be conducted on a sample of the accountable entities (e.g., hospital, physician). The analytic unit specified for the particular measure (e.g., physician, hospital, home health agency) determines the sampling strategy for scientific acceptability testing.*

- *The sample should represent the variety of entities whose performance will be measured. The [2010 Measure Testing Task Force](#) recognized that the samples used for reliability and validity testing often have limited generalizability because measured entities volunteer to participate. Ideally, however, all types of entities whose performance will be measured should be included in reliability and validity testing.*

- *The sample should include adequate numbers of units of measurement and adequate numbers of patients to answer the specific reliability or validity question with the chosen statistical method.*

- *When possible, units of measurement and patients within units should be randomly selected.*

[Response Begins]

The intended sample for this measure is adult Medicaid beneficiaries aged 18 years or older who currently are receiving HCBS. Sampling should be representative of all HCBS recipients and stratified by HCBS program type within each state to allow comparisons of measure results for each HCBS program type with the mean. The source of the sample frame will be the state Medicaid agency or an accountable entity delegated by the state Medicaid agency (e.g., state agency other than the Medicaid agency that operates the program, managed care organization, case management agency, state, county).

Selection of data for the FASI PM2 were collected through convenience sample, pulling data for five populations—older adults, individuals with a physical disability, individuals with an intellectual or developmental disability, individuals with an acquired brain injury, and individuals with a behavioral health diagnosis. Participants eligible for inclusion in the measure were assigned a random number, within the sample, and selected for participation to meet the minimum necessary number of cases for analysis.

Guidance on minimum case count for calculating FASI PM2 by states and managed care plans will be released in the future.

[Response Ends]

sp.28. Identify whether and how proxy responses are allowed.

[Response Begins]

Proxy responses are not applicable to the data abstraction form involved in this measure because reviewers complete it. Family members and caregivers are among the acceptable sources of information for clinicians (including case managers and other paid members of the services and supports team) who conduct the FASI assessment and make the final determination about how to complete the form. A similar situation applies to PCSP documentation.

[Response Ends]

sp.29. Survey/Patient-reported data.

Provide instructions for data collection and guidance on minimum response rate. Specify calculation of response rates to be reported with performance measure results.

[Response Begins]

Not applicable. This measure does not use a survey.

[Response Ends]

sp.30. Select only the data sources for which the measure is specified.

[Response Begins]

Assessment Data

Electronic Health Records

Instrument-Based Data

Paper Medical Records

[Response Ends]

sp.31. Identify the specific data source or data collection instrument.

For example, provide the name of the database, clinical registry, collection instrument, etc., and describe how data are collected.

[Response Begins]

FASI set. CMS developed the FASI as part of the Testing Experience and Functional Assessment Tools (TEFT) demonstration to assess the status of individuals receiving HCBS. HCBS program staff or reviewers at agencies under contract to state HCBS programs use the FASI set to assess HCBS recipients' functional ability and need for assistance. A FASI assessment commonly is performed during an in-person visit, and it can be performed in any community-based setting where HCBS recipients reside. The reviewer can use various sources of information to complete a FASI assessment, including an interview with the person, an interview with a helper, written records, and naturally occurring observation of performance. Fields for the FASI set are available within CMS's Data Element Library (DEL) and are attached in section **S.2b**.

PCSP documentation. A PCSP typically is developed by the case manager following a state-established process that considers unmet needs and informal support systems and then fills gaps with Medicaid or other services. A PCSP is put in place after the assessment is conducted. It can be created in all community-based settings, depending on the recipient's need. The format of a PCSP can vary across and within programs, though the ultimate goal of the PCSP process is to provide HCBS participants adequate information and support to ensure they can lead the planning process to their greatest ability. When an HCBS participant is unable to fully engage in developing the PCSP, the person's chosen representative participates in the PCSP as needed and as defined by the person or by state law, as required. In doing so, the person-centered planning process recognizes that the person lives in relationship with family and friends who play an important role in the person's successful community living.

Person-centered service planning may include family and peers as part of what is called relationship-centered service planning. Relationship-centered service planning is particularly relevant when HCBS participants are unable to advocate for themselves, such as people with severe cognitive or communication disabilities (e.g., disorders of consciousness, severe dementia). In such situations, person-centered and relationship-centered service planning are more, not less, important, and authorized care partners, family members, and close friends (serving as power of attorney) can effectively advocate service plans they feel the person would endorse. To ensure that patient preferences, priorities, and values are captured either directly or through authorized representatives, providers of HCBS for the person or those who have an interest in or are employed by an HCBS provider for the person are not authorized to participate in person-centered service planning. Additionally, service providers and care partners are fully trained in the principles of effective person- and relationship-centered care planning to ensure the person's values and preferences are prioritized.

PCSPs must include documentation of a specific and individualized needs assessment, the positive interventions and supports used prior to a new or revised PCSP, and the services and supports that will assist the persons in achieving their identified priorities and the providers of those services and supports.

Documentation of the PCSP must be understandable to the HCBS participant receiving HCBS services and supports and the persons (i.e., care partners) supporting the HCBS participant. PCSP must be written in plain language and in a manner accessible to persons who have disabilities and persons who are limited in English proficiency. PCSPs must be reviewed at least every 12 months, whenever a person's circumstances or needs change, or at the request of the person. Personal strengths and preferences are a requirement of PCSP documentation and should include personal goals and desired outcomes. Risk factors and measures to minimize them should also be included.

Data abstraction. Each program will apply methods of their choice for abstracting FASI data. These methods are likely to be similar to methods used by the state to generate existing quality measures derived from the same data sources. One method could be to use a data abstraction form. The Appendix contains a sample data abstraction form based on the FASI data collection instrument (see **sp.23**) used during measure testing. This form could be adapted by programs implementing the measure.

[Response Ends]

sp.32. Provide the data collection instrument.

[Response Begins]
 Available in attached appendix in Question 1 of the Additional Section
[Response Ends]

Attachment: 3734_3734_FASI Set Template_(3)-508.pdf

Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate fields in the Scientific Acceptability sections of the Measure Submission Form.

- Measures must be tested for all the data sources and levels of analyses that are specified. If there is more than one set of data specifications or more than one level of analysis, contact NQF staff about how to present all the testing information in one form.
- All required sections must be completed.
- For composites with outcome and resource use measures, Questions 2b.23-2b.37 (Risk Adjustment) also must be completed.
- If specified for multiple data sources/sets of specifications (e.g., claims and EHRs), Questions 2b.11-2b.13 also must be completed.
- An appendix for supplemental materials may be submitted (see Question 1 in the Additional section), but there is no guarantee it will be reviewed.
- Contact NQF staff with any questions. Check for resources at the [Submitting Standards webpage.](#)
- For information on the most updated guidance on how to address social risk factors variables and testing in this form refer to the release notes for the [2021 Measure Evaluation Criteria and Guidance.](#)

Note: The information provided in this form is intended to aid the Standing Committee and other stakeholders in understanding to what degree the testing results for this measure meet NQF's evaluation criteria for testing.

2a. Reliability testing demonstrates the measure data elements are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period and/or that the measure score is precise. For instrument-based measures (including PRO-PMs) and composite performance measures, reliability should be demonstrated for the computed performance score.

2b1. Validity testing demonstrates that the measure data elements are correct and/or the measure score correctly reflects the quality of care provided, adequately identifying differences in quality. For instrument based measures (including PRO-PMs) and composite performance measures, validity should be demonstrated for the computed performance score.

2b2. Exclusions are supported by the clinical evidence and are of sufficient frequency to warrant inclusion in the specifications of the measure;

AND

If patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that the exclusion impacts performance on the measure; in such cases, the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).

2b3. For outcome measures and other measures when indicated (e.g., resource use):

- an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified; is based on patient factors (including clinical and social risk factors) that influence the measured outcome and are present at start of care; 14,15 and has demonstrated adequate discrimination and calibration
- rationale/data support no risk adjustment/ stratification.

2b4. Data analysis of computed measure scores demonstrates that methods for scoring and analysis of the specified measure allow for identification of statistically significant and practically/clinically meaningful 16 differences in performance;

OR

there is evidence of overall less-than-optimal performance.

2b5. If multiple data sources/methods are specified, there is demonstration they produce comparable results.

2b6. Analyses identify the extent and distribution of missing data (or nonresponse) and demonstrate that performance results are not biased due to systematic missing data (or differences between responders and non-responders) and how the specified handling of missing data minimizes bias.

2c. For composite performance measures, empirical analyses support the composite construction approach and demonstrate that:

2c1. the component measures fit the quality construct and add value to the overall composite while achieving the related objective of parsimony to the extent possible; and

2c2. the aggregation and weighting rules are consistent with the quality construct and rationale while achieving the related objective of simplicity to the extent possible.

(if not conducted or results not adequate, justification must be submitted and accepted)

Definitions

Reliability testing applies to both the data elements and computed measure score. Examples of reliability testing for data elements include, but are not limited to: inter-rater/abstractor or intra-rater/abstractor studies; internal consistency for multi-item scales; test-retest for survey items. Reliability testing of the measure score addresses precision of measurement (e.g., signal-to-noise).

Validity testing applies to both the data elements and computed measure score. Validity testing of data elements typically analyzes agreement with another authoritative source of the same information. Examples of validity testing of the measure score include, but are not limited to: testing hypotheses that the measures scores indicate quality of care, e.g., measure scores are different for groups known to have differences in quality assessed by another valid quality measure or method; correlation of measure scores with another valid indicator of quality for the specific topic; or relationship to conceptually related measures (e.g., scores on process measures to scores on outcome measures). Face validity of the measure score as a quality indicator may be adequate if accomplished through a systematic and transparent process, by identified experts, and explicitly addresses whether performance scores resulting from the measure as specified can be used to distinguish good from poor quality. The degree of consensus and any areas of disagreement must be provided/discussed.

Examples of evidence that an exclusion distorts measure results include, but are not limited to: frequency of occurrence, variability of exclusions across providers, and sensitivity analyses with and without the exclusion.

Patient preference is not a clinical exception to eligibility and can be influenced by provider interventions.

Risk factors that influence outcomes should not be specified as exclusions.

With large enough sample sizes, small differences that are statistically significant may or may not be practically or clinically meaningful. The substantive question may be, for example, whether a statistically significant difference of one percentage point in the percentage of patients who received smoking cessation counseling (e.g., 74 percent v. 75 percent) is clinically meaningful; or whether a statistically significant difference of $25 in cost for an episode of care (e.g., $5,000 v. $5,025) is practically meaningful. Measures with overall less-than-optimal performance may not demonstrate much variability across providers.

Please separate added or updated information from the most recent measure evaluation within each question response in the Scientific Acceptability sections. For example:

Current Submission:

Updated testing information here.

Previous (Year) Submission:

Testing from the previous submission here.

2a.01. Select only the data sources for which the measure is tested.

[Response Begins]

Assessment Data

Electronic Health Records

Instrument-Based Data

Paper Medical Records

[Response Ends]

2a.02. If an existing dataset was used, identify the specific dataset.

The dataset used for testing must be consistent with the measure specifications for target population and healthcare entities being measured; e.g., Medicare Part A claims, Medicaid claims, other commercial insurance, nursing home MDS, home health OASIS, clinical registry).

[Response Begins]

The FASI field test data set was used to identify individuals for inclusion in the numerator and the denominator.

[Response Ends]

2a.03. Provide the dates of the data used in testing.

Use the following format: "MM-DD-YYYY - MM-DD-YYYY"

[Response Begins]

FASI field test data were collected 03-2017–09-2017. These data were reviewed to test this performance measure from 06-2018–07-2018.

[Response Ends]

2a.04. Select the levels of analysis for which the measure is tested.

Testing must be provided for all the levels specified and intended for measure implementation, e.g., individual clinician, hospital, health plan.

Please refrain from selecting the following answer option(s). We are in the process of phasing out these answer options and request that you instead select one of the other answer options as they apply to your measure.

Please do not select:

- *Clinician: Clinician*

- *Population: Population*

[Response Begins]

Other (specify)

   [Other (specify) Please Explain]

Medicaid Program, HCBS Program Type

Population: Regional and State

[Response Ends]

2a.05. List the measured entities included in the testing and analysis (by level of analysis and data source).

Identify the number and descriptive characteristics of measured entities included in the analysis (e.g., size, location, type); if a sample was used, describe how entities were selected for inclusion in the sample.

[Response Begins]

This process measure was tested in five Medicaid HCBS waiver program types in four different states, located in geographically diverse regions of the country. Within these four states, nine organizations collected data for participants receiving HCBS and supports through five Medicaid program types: (1) programs serving older adults, (2) programs serving individuals who have a physical disability, (3) programs serving individuals who have an intellectual or a developmental disability, (4) programs serving individuals who have an acquired brain injury, and (5) programs serving individuals who have a behavioral health condition. The four participating states offer services through all five of these HCBS program types; however, for the purposes of the original FASI field test in 2017, states selected those programs that would participate in the field test. **Table 7** describes the nine data collection organizations by state, HCBS program type, and number of FASI field test records that were reviewed for testing of this performance measure. The unit of analysis for the proposed measure is the HCBS program type.

Table 7. Data Collection by HCBS Program Type and State*

State	Individuals in Programs Serving Those Who Are Older Adults (col %)	Individuals in Programs Serving Those with a Physical Disability (col %)	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability (col %)	Individuals in Programs Serving Those with an Acquired Brain Injury (col %)	Individuals in Programs Serving Those with a Behavioral Health Condition (col %)	State Total (col %)
State A	—	—	108 (100)	29 (41.4)	57 (86.4)	194 (39.7)
State B	49 (40.2)	15 (12.2)	—	—	9 (13.6)	73 (14.9)
State C	—	67 (54.5)	—	37 (52.9)	—	104 (21.3)
State D	73 (59.8)	41 (33.3)	—	4 (5.7)	—	118 (24.1)
Total	122 (100)	123 (100)	108 (100)	70 (100)	66 (100)	489 (100)

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* The number of table cells populated is more than the nine data collection organizations because some organizations collected data for more than one HCBS program type within the state.

** Eleven of these 489 individuals had additional issues with their data abstraction forms that could not be resolved. Therefore, as shown in other tables, 478 is the total number of individuals for which data collected could be used to analyze the performance measure; furthermore, 475 (of 478) met the denominator definition for calculating the performance measure score.

[Response Ends]

2a.06. Identify the number and descriptive characteristics of patients included in the analysis (e.g., age, sex, race, diagnosis), separated by level of analysis and data source; if a sample was used, describe how patients were selected for inclusion in the sample.

If there is a minimum case count used for testing, that minimum must be reflected in the specifications.

[Response Begins]

Testing and analysis involved 478 unique individuals eligible to receive services from Medicaid HCBS programs within four states. HCBS programs enable individuals who otherwise would need institutional residential services to live in the least restrictive environment of their choosing in the community. Five populations (or HCBS programs) were represented in the testing and analysis. Those five populations included older adults, individuals with a physical disability, individuals with an intellectual or a developmental disability, individuals with an acquired brain injury, or individuals with a behavioral health condition. **Table 8** describes the HCBS program type for individuals whose FASI field test records were reviewed for testing this performance measure. Of these individuals, three did not have FASI-based needs. The final sample for analysis included 475 unique individuals in five program types, as described in **Table 9**.

Table 8. **Overall Sample Description by Program Type**

Measure	Individuals in Programs Serving Those Who Are Older Adults (row %)	Individuals in Programs Serving Those with a Physical Disability (row %)	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability (row %)	Individuals in Programs Serving Those with an Acquired Brain Injury (row %)	Individuals in Programs Serving Those with a Behavioral Health Condition (row %)	Total
Number of Forms Received	229 (23.6)	237 (24.4)	211 (21.7)	133 (13.7)	126 (13.0)	972* (100)
Number of Usable Forms	229 (24.5)	237 (25.3)	211 (22.5)	133 (14.2)	126 (13.5)	936 (100)
Individuals with No FASI-Based Need	0 (0.0)	3 (50.0)	1 (16.7.0)	0 (0.0)	2 (33.0)	6 (100)**
Individuals whose Mobility Needs Did not Align with FASI Field Testing	5 (71.4)	1 (14.3)	1 (14.3)	0 (0.0)	0 (0.0)	7 (100)
*Total Unique Individuals***	117 (24.5)	119 (24.9)	106 (22.2)	70 (14.6)	66 (13.8)	478 (100)

* Included in this total, but not shown, are 36 (3.7 percent) data abstraction forms that could not be aligned with FASI field test records because of incorrect form and reviewer identifiers and not because of data missing from the fields on the data abstraction form related to identifying the critical data elements. These forms were unusable in our analysis.

** Included in this total are two participants whose data abstraction forms were already considered unusable for other reasons.

***Identified as those who did not meet the numerator criteria (i.e., those whose mobility needs were assessed as "independent").

Table 9. Denominator Sample Description by Program Type

Measure	Individuals in Programs Serving Those Who Are Older Adults (row %)	Individuals in Programs Serving Those with a Physical Disability (row %)	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability (row %)	Individuals in Programs Serving Those with an Acquired Brain Injury (row %)	Individuals in Programs Serving Those with a Behavioral Health Condition (row %)	Total
Total Unique Individuals	117 (24.5)	119 (24.9)	106 (22.2)	70 (14.6)	66 (13.8)	478 (100)
Individual has No FASI-Based Need	0 (0.0)	0 (0.0)	0 (0.0)	1 (33.3)	2 (66.7)	3 (100)
Denominator *Has a FASI-Based Functional Need (% of Sample)*	117 (24.6)	119 (25.1)	106 (22.3)	69 (14.5)	64 (13.5)	475 (100)

The sample demographic data are summarized in **Table 10**. Fifty-six percent of the sample were female, and the average age was 55.1 years. Participants self-reported race: 51.6 percent reported white; 22.3 percent, African American or Black; 3.8 percent, Asian; 0.2 percent, American Indian or Alaska Native; and 13.7 percent, other race. Approximately 8.2 percent of race data reported were unknown or missing. Ninety-seven percent of participants reported being non-Latinx.

The program for older adults had a higher percentage of females. This program, as expected, had participants who were on average about 20 to 25 years older than those covered by the other four programs. The program for individuals who are older adults had the highest percentage who were white; the program for individuals with a physical disability had the highest percentage who were African American or Black.

Table 10. Sample Demographic Characteristics by Program Type

Characteristic	Individuals in Programs Serving Those Who Are Older Adults (row %)	Individuals in Programs Serving Those with a Physical Disability (row %)	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability (row %)	Individuals in Programs Serving Those with an Acquired Brain Injury (row %)	Individuals in Programs Serving Those with a Behavioral Health Condition (row %)	Total
Sex	—	—	—	—	—	—
Female	79 (29.8)	62 (23.4)	46 (17.4)	37 (14.0%)	41 (15.5)	265 (100)
Male	38 (18.1)	57 (27.1)	60 (28.6)	32 (15.2%)	23 (11.0)	210 (100)
Age (mean, SD)	76.0±6.2	51.5±11.6	40.2±13.9	48.0±13.3	56.1±11.4	55.1±17.2
Race	—	—	—	—	—	—
White	73 (29.8)	60 (24.5)	36 (14.7)	39 (15.9%)	37 (15.1)	245 (100)
African American or Black	24 (22.6)	50 (47.2)	9 (9.5)	20 (18.9%)	3 (2.8)	106 (100)
Asian	14 (77.8)	1 (5.6)	2 (11.1)	0 (0%)	1 (5.6)	18 (100)
American Indian or Alaska Native	0 (0)	0 (0)	0 (0)	0 (0%)	1 (100)	1 (100)
Other	6 (9.2)	3 (4.6)	39 (60.0)	4 (6.2%)	13 (20.0)	65 (100)
Unknown or Missing	0 (0)	5 (12.8)	20 (50.0)	6 (15.4%)	9 (23.1)	39 (100)
Ethnicity*	—	—	—	—	—	—
Latinx	0 (0)	1 (6.3)	5 (31.3)	4 (25.0%)	6 (37.5)	16 (100)
Non-Latinx	117 (25.6)	118 (25.8)	100 (21.8)	65 (14.2%)	58 (12.7)	458 (100)

— Cell intentionally left empty

*One individual from the intellectual or developmental disability program category was missing information on race and ethnicity.

[Response Ends]

2a.07. If there are differences in the data or sample used for different aspects of testing (e.g., reliability, validity, exclusions, risk adjustment), identify how the data or sample are different for each aspect of testing.

[Response Begins]

For calculating the measure score, all participants with at least one FASI-based need were included in the denominator (n=475). Organizations selected a percentage of these FASI records as a convenience sample on which to conduct the two sets of ratings for concordance and inter-rater reliability (IRR) testing. Of the 475 individuals included in the denominator of this performance measure, IRR ratings were available for 431, as shown in **Table 11**.

Table 11. **Number of Unique Individual Records for Denominator and IRR Testing by Program Type**

Measure	Individuals in Programs Serving Those Who Are Older Adults (row %)	Individuals in Programs Serving Those with a Physical Disability (row %)	Individuals in Programs Serving Those with an Intellectual or Developmental Disability (row %)	Individuals in Programs Serving Those with an Acquired Brain Injury (row %)	Individuals in Programs Serving Those with a Behavioral Health Condition (row %)	Total
Denominator	117 (24.6)	119 (25.1)	106 (22.3)	69 (14.5)	64 (13.5)	475 (100)
IRR Records	101 (23.4)	111 (25.8)	101 (23.4)	62 (14.4)	56 (13.0)	431 (100)

[Response Ends]

2a.08. List the social risk factors that were available and analyzed.

For example, patient-reported data (e.g., income, education, language), proxy variables when social risk data are not collected from each patient (e.g. census tract), or patient community characteristics (e.g. percent vacant housing, crime rate) which do not have to be a proxy for patient-level data.

[Response Begins]
None. Social risk factors were unavailable for testing.
[Response Ends]

Note: If accuracy/correctness (validity) of data elements was empirically tested, separate reliability testing of data elements is not required – in 2a.09 check patient or encounter-level data; in 2a.010 enter "see validity testing section of data elements"; and enter "N/A" for 2a.11 and 2a.12.

2a.09. Select the level of reliability testing conducted.

Choose one or both levels.
[Response Begins]
 Patient or Encounter-Level (e.g., inter-abstractor reliability; data element reliability must address ALL critical data elements)
[Response Ends]

2a.10. For each level of reliability testing checked above, describe the method of reliability testing and what it tests.

Describe the steps—do not just name a method; what type of error does it test; what statistical analysis was used.

[Response Begins]

Testing involved use of the FASI assessment data collected during the 2017 field test and service plans at the time of that testing. For the FASI field test, reviewers interviewed and observed individuals enrolled in one of the five program types; talked with their primary caregivers, guardians, or both; and reviewed case notes. They then coded each of the FASI function items on the basis of the person's usual need for assistance in the past three days and their most dependent performance in the past month. Codes for both the usual and most dependent items ranged from 01 (total dependence) to 06 (independent); 07 (person refused), 09 (not applicable), and 88 (not attempted) were also available. For this performance measure, individuals were identified as having a FASI-based need if they were coded as 01 to 05 or 88 on any of the FASI function items, including both usual or most dependent.[1]

The organizations that participated in the FASI field test were invited to continue their participation by testing this performance measure. Record reviewers (case managers and agency administrators) (1) reviewed each previously completed FASI, (2) completed a data abstraction form for each record reviewed, and (3) offered feedback regarding the effectiveness of this FASI-based performance measure as an indicator of service quality provided to individuals receiving HCBS. Finally, a technical expert panel (TEP) was convened to provide feedback on the results of the testing and garner subject matter expertise on this performance measure.

Reliability Testing Approach

Data abstraction forms collected during the FASI field test were studied by a reviewer at each agency. Two reviewers also independently studied a subset of the forms. Each reviewer independently accomplished the following.

a. Determined whether the record indicated any self-care, mobility, or IADL functional needs on the FASI and recorded the result on the data abstraction form (Functional need is defined as receiving a code of 05 or below or 88 on the FASI for either usual performance in the past three days or most dependent performance in the past month.)

b. Determined whether a need existed for each functional item and checked the appropriate box on the data abstraction form

c. Determined whether the PCSP addressed each functional need and checked the appropriate box on the data abstraction form

d. Indicated *yes* or *no* that the PCSP addressed all identified functional needs as determined by the FASI

Note: During the analysis described below, the development team evaluated whether individuals with greater numbers of FASI-based needs were more likely not to have all needs addressed, as documented in the PCSP.

The data were collected using a digital, fillable PDF form that administrators uploaded at each site directly to a password-protected, secure ShareFile® maintained by IBM Watson Health. From there, it was transferred to George Washington University and imported to an analytic file.

Reliability Testing Approach for Each Critical Data Element

1. **Defining need.** The development team evaluated the degree of concordance between reviewers' indication of a FASI-based need and functional need as determined by the FASI field test data. Reviewers in the current performance measure field test reviewed FASI records collected during the field test and answered *yes* or *no* to the question "Does the individual have documented needs determined by a FASI?" For the field test data, the team created a variable with a value of 1 if the individual was coded as 05 or below or 88 for either the usual or most dependent version of each item and used a value of 0 for all other scores on each specified item on the data abstraction form. Summing across the items on the form produced a total possible range from FASI-based needs of 0 to 44.

The team then created a dichotomous variable that was coded 0 if the individual had no needs or 1 if the individual had one or more FASI-based needs. The team matched each of the records reviewed during performance measure testing to the same record in the field test data set and used a Kappa statistic to evaluate the concordance between the performance measure testing and the field testing in determining whether the individual had a FASI-based need. Kappa is an inter-rater agreement statistic, which is calculated with a 95 percent confidence interval.[4] Concordance was evaluated for the entire sample and by program type.

The team did not calculate IRR for determination of a FASI-based need (i.e., reviewer response to the question "Does the individual have documented needs determined by a FASI?") because no meaningful disagreement occurred. This finding is described in subsection **2b.07**.

1. **Identifying the total number of FASI-based needs and the total needs addressed in the PCSP.** The development team used an ecologically robust and pragmatic approach to evaluating consistency in the number of FASI-based needs addressed by each pair of reviewers. The organizations assigned pairs of reviewers to independently review the same record from the field testing data set. The result was 862 paired evaluations of 431 records. The team used Bland-Altman limits of agreement (LOA) to evaluate the consistency between reviewer pairs in determining the total number of FASI-based needs and the total needs addressed in the PCSP for each individual.

The Bland-Altman LOA plot compares two measurements;[2,3] in this case, it is used for comparing measurements from two different reviewers. The differences within each pair of reviewers are plotted against the averages of each pair. The Bland-Altman displays LOA, which is defined as the average difference plus 1.96 times the standard deviation of the differences. The LOA allows identification of outliers when looking at the relationship between the difference and the average using 95 percent confidence intervals.

2. Identifying whether the individual had all FASI-based needs reported as addressed in the PCSP. The team evaluated the concordance between the number of FASI-based needs addressed and the reviewers' assessment that the numerator definition had been met. This analysis involved comparing the number of documented needs addressed with the reviewers' assessment that the record indicated all needs had been addressed. To do so, the team calculated the total number of needs addressed across each of the three FASI sections (Self-Care, Mobility, and IADL) with values ranging from 0 to 40 needs addressed. The team also calculated the total number of FASI-based needs. They compared the number of needs with the number of needs addressed. They then created a dichotomous variable, which was coded 1 if the total number of needs addressed equaled the total number of FASI-based needs and 0 if the total number of needs addressed was fewer than the total number of FASI-based needs. They compared this number with the number of *yes* or *no* responses reviewers coded to the question "After reviewing all the documents, did the individual who received CB-LTSS have a PCSP that addressed all the identified functional needs as determined by the FASI?" The team used a Kappa statistic to evaluate the level of concordance between the two evaluations where the record met the description of the numerator. **Table 12** shows the range of quantitative values for Kappa and the corresponding strength of agreement.

Table 12. **Kappa Values and Description**

Value of Kappa	Strength of Agreement
<0.20	Poor
0.21–0.40	Fair
0.41–0.60	Moderate
0.61–0.80	Good
0.81–1.00	Very Good

The team also examined the IRR with which reviewers evaluated whether a record did or did not meet the definition of this performance measure. To do so, they examined the concordance between reviewers in each pair regarding their summary assessments of whether the record indicated that all the FASI-based needs were addressed by the PCSP. These analyses were conducted for those records that had been determined to meet the criteria for the denominator; that is, there was at least one FASI-based need. The team tested IRR using a Kappa statistic.

1. Mallinson, T., Dietrich, C.N., Harwood, K., Maring, J., Lyons, L., Gaskin, S., Gorsky, A., Weaver, J., Rivard, P., & Woodward, R. (2018). FASI 2017 Field Test Final Report to the Centers for Medicare & Medicaid Services under Contract HHSM-500-2010-0025i-T006. March 30, 2018.

2. Bland, J.M, & Altman, D.G. (1986). Statistical methods for assessing agreement between two methods of clinical measurement. *The Lancet*, 1(8476), 307–310.

3. Bland, J.M., & Altman, D.G. (1999). Measuring agreement in method comparison studies. *AACN Advanced Critical Care*, 19, 223–234.

4. Fleiss, J.L., Levin, B., & Paik, M.C. (2003). *Statistical Methods for Rates and Proportions*. 3rd ed. Hoboken: John Wiley & Sons.

[Response Ends]

2a.11. For each level of reliability testing checked above, what were the statistical results from reliability testing?

For example, provide the percent agreement and kappa for the critical data elements, or distribution of reliability statistics from a signal-to-noise analysis. For score-level reliability testing, when using a signal-to-noise analysis, more than just one overall statistic should be reported (i.e., to demonstrate variation in reliability across providers). If a particular method yields only one statistic, this should be explained. In addition, reporting of results stratified by sample size is preferred (pg. 18, NQF Measure Evaluation Criteria).

[Response Begins]

Results of Reliability Testing for Each Critical Data Element

1. **Defining need.** Four hundred seventy-eight proposed data abstraction forms were analyzed to determine the level of agreement between FASI-based needs and documented needs. Results indicated perfect agreement (k=1.0000, p<0.001). Subsequent analysis was run to determine the level of agreement by program type. For older adults, physical disability, and intellectual or developmental disability programs, responses to both FASI-based needs and documented needs were *yes* (i.e., complete agreement on need). Kappa values for acquired brain injury and behavioral health condition programs indicated perfect agreement (k=1.0000, p<0.001), including agreement for both *yes* and *no* on need.

The development team did not calculate IRR for determination of a FASI-based need because no variation existed. Of the 431 pairs of records, three records concurred that no FASI-based need was present. There were eight instances of nonconcurrence, which came from the same pair of reviewers, and, in every instance, the second reviewer indicated there was no need. Checking against the FASI field test data indicated that each of these individuals had eight or more FASI-based needs. The team believes the lack of concurrence of the second reviewer was caused by a known error that occurred with the data abstraction form when a reviewer failed to reset the form to conduct a new review and instead modified an existing form.

2. Identifying the total FASI-based needs and the total needs addressed in the PCSP. Bland-Altman LOA were used to evaluate the extent to which reviewers agreed in their assessment of the number of FASI-based needs and the number of needs addressed in the PCSP for each individual. The LOA are defined by the lower and upper values and define the range between which 95 percent of values should fall. As shown in **Table 13**, the LOA for FASI-based needs identified by the pairs of reviewers were between -10.05 to 10.80. On analysis, 4.2 percent of all records fell outside these LOA after removing a reviewer who was consistently outside the LOA. The percentage of records that fell within the 95 percent confidence intervals ranged from 93.1 percent to 96.4 percent by program type.

Table 13. Agreement for Total Number of Needs

Measure	Individuals in Programs Serving Those Who Are Older Adults	Individuals in Programs Serving Those with a Physical Disability	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability	Individuals in Programs Serving Those with an Acquired Brain Injury	Individuals in Programs Serving Those with a Behavioral Health Condition	Total
Pairs of Records	102	111	101	62	56	432
LOA Range	-7.97 to 8.61	-11.29 to 9.90	-13.09 to 17.59	-4.67 to 3.57	-3.79 to 4.26	-10.05 to 10.80
% within LOA	96.1	94.6	93.1	95.2	96.4	95.8

As shown in **Table 14**, the LOA for total pairs of records reflecting that the needs were addressed by the PCSP were between -9.94 and 10.47. The percentage of pairs within LOA ranged from 91.6 percent to 94.1 percent by program type. Analysis of the total pairs of records indicated 95.1 percent were within the LOA using a 95.0 percent confidence interval after removing a reviewer who was consistently outside the LOA.

Table 14. Agreement Number of Needs Addressed by Program Type

Measure Component	Individuals in Programs Serving Those Who Are Older Adults	Individuals in Programs Serving Those with a Physical Disability	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability	Individuals in Programs Serving Those with an Acquired Brain Injury	Individuals in Programs Serving Those with a Behavioral Health Condition	Total
Pairs of Records	102	111	101	62	56	432
LOA Range	-10.49 to 8.92	-13.80 to 14.09	-7.52 to 8.86	-6.79 to 8.73	-6.32 to 8.14	-9.94 to 10.47
% within LOA	93.1	92.3	94.1	93.5	91.6	93.8
% within LOA (Removal of Reviewer A)	93.1	95.4	94.1	98.3	91.6	95.1

3. Identifying whether the individual had all FASI-based needs reported as addressed in the PCSP. Four hundred seventy-one data abstraction forms were analyzed to determine the LOA (or Kappa) between needs addressed as determined by the FASI versus needs determined by the reviewer summary report. Results indicated very good agreement that was statistically significant (k=0.8130, p<0.001). Subsequent analysis was run to look at strength of

agreement by program type (Kappa). Results ranged from good to strong levels of agreement. **Table 15** presents the results by program type.

Table 15. **Agreement between FASI-Based Needs Addressed and Reviewer Evaluation That Numerator Definition Was Met**

Measure	Individuals in Programs Serving Those Who Are Older Adults (row %)	Individuals in Programs Serving Those with a Physical Disability (row %)	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability (row %)	Individuals in Programs Serving Those with an Acquired Brain Injury (row %)	Individuals in Programs Serving Those with a Behavioral Health Condition (row %)
Kappa (p-value)	0.67 (< 0.001)	0.75 (< 0.001)	0.96 (< 0.001)	0.88 (< 0.001)	0.69 (< 0.001)

IRR was evaluated for the concordance between reviewers' overall assessment that the record indicated all FASI-based needs were addressed. These analyses were conducted for records that had been determined to meet the criteria for the denominator (i.e., at least one FASI-based need existed). Four hundred twenty-four individuals with two data abstraction forms were analyzed to determine the strength of agreement (Kappa) between two reviewers. Results indicated good agreement that was statistically significant (k=0.5759, p<0.001). Subsequent analysis was run to determine LOA by program type. Results ranged from moderate to good LOA with the exception of the program for individuals with an intellectual or a developmental disability, as shown in **Table 16**.

Table 16. **Concordance between Reviewers' Overall Assessment That Record Indicated PCSP Addressed All Identified FASI-Based Needs**

Measure	Individuals in Programs Serving Those Who Are Older Adults (row %)	Individuals in Programs Serving Those with a Physical Disability (row %)	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability (row %)	Individuals in Programs Serving Those with an Acquired Brain Injury (row %)	Individuals in Programs Serving Those with a Behavioral Health Condition (row %)
Kappa (p-value)	0.78 (< 0.001)	0.76 (< 0.001)	0.02 (< 0.001)	0.69 (< 0.001)	0.56 (< 0.001)

[Response Ends]

2a.12. Interpret the results, in terms of how they demonstrate reliability.

(In other words, what do the results mean and what are the norms for the test conducted?)

[Response Begins]

Overall, these results indicate that reviewers were able to consistently identify whether an individual had a FASI-based need (denominator), identify the total number of needs (preparatory to determining the numerator) and the needs addressed by the PCSP, and identify whether individuals met the requirements of the numerator. The development team

investigated whether increasing numbers of FASI-based needs resulted in an increased likelihood of needs not being addressed by the PCSP. The development team found a two percent increase in the likelihood of needs not being addressed for each additional need.

Cohen's kappa measures agreement between two raters corrected for how often the raters may agree by chance. While interpretation may vary, values between 0.10 and 0.20 may be considered to reflect "slight" agreement, while values below 0.10 are considered as having poor agreement. However, low sample sizes can impact kappa values making interpretation challenging. Additionally, very high prevalence of one or more responses being rated may create a situation where kappa values are low even when percent of agreement is high—this is known as the "kappa paradox" (Feinstein & Cicchetti, 1990).

Results for individuals in programs serving those with an intellectual or developmental disability are lower than expected (with compared to results for programs serving other populations). The developer team will explore reasons why results for this group are low and provide additional details to the Standing Committee as they become available.

1. Cicchetti, D.V. & Feinstein, A.R. (199). High agreement but low kappa: Resolving the paradoxes. *J Clin Epidemiol*. 1990;43(6):551–558. doi: 10.1016/0895-4356(90)90159-m.

[Response Ends]

2b.01. Select the level of validity testing that was conducted.

[Response Begins]

Systematic assessment of face validity of performance measure score as an indicator of quality or resource use (i.e., is an accurate reflection of performance on quality or resource use and can distinguish good from poor performance)

[Response Ends]

2b.02. For each level of testing checked above, describe the method of validity testing and what it tests.

Describe the steps—do not just name a method; what was tested, e.g., accuracy of data elements compared to authoritative source, relationship to another measure as expected; what statistical analysis was used.

[Response Begins]

Reviewers and TEP members were surveyed on a series of questions to assess the face validity of the proposed measure. After reviewing at least 10 data abstraction forms, or at the end of data collection, reviewers were asked to complete a one-time feedback form on a secure online survey. The feedback form was designed to allow reviewers the opportunity to share opinions and experiences in completing the performance measure and to provide critique on the measure's usability, appropriateness of content as a performance measure, and specifications of the measures (validity). In addition, a TEP consisting of 22 subject matter experts and stakeholders was convened and preliminary results were presented. Following the TEP meeting, members also completed the online feedback form. Twelve of the 22 TEP members provided feedback including 7 potential FASI PM users, 2 advocacy group representatives, 2 self-advocates and 1 potential FASI PM user.

Face validity of the critical data elements was tested by summarizing percent agreement of applicable survey questions on the reviewer and TEP feedback forms.

1. **Identifying needs on FASI.** Reviewers and TEP members indicated whether they thought the statements in the survey regarding the performance measure definition of need were clear and appropriate.

2. **Identifying whether the alignment of needs to personal service plan is important to quality.** Reviewers and TEP members indicated to what extent they agreed with survey questions regarding the alignment of needs and the PCSP as important to high-quality care.

Face validity of the performance measure as a measure of the quality of person-centered services and supports was tested by summarizing percent agreement of applicable survey questions on the feedback forms.

Use of face validity to evaluate measures seeking initial endorsement consideration (see *Measure developer guidebook for submitting measures to NQF*, 2022, page 42).

[Response Ends]

2b.03. Provide the statistical results from validity testing.

Examples may include correlations or t-test results.

[Response Begins]

The feedback form used a four-level Likert-type scale that included anchors from "strongly disagree," "disagree," "agree," and "strongly agree." For ease of presentation, the results of the critical data elements and the systematic assessment of face validity sections are presented as a dichotomized list that combined "strongly disagree" with "disagree" and "strongly agree" with "agree."

Results of Validity Testing of Each Critical Data Element

1. **Identifying needs on FASI.** The performance measure denominator, "All individuals 18 years or older who received CB-LTSS with documented functional needs determined by a FASI within the reporting period," had a high level of endorsement by the reviewers (90.5 percent) and TEP members (92.0 percent) as a clear and appropriate specification. Reviewers (90.0 percent) and TEP members (100 percent) strongly agreed or agreed with the statement "documented functional needs will be based on receiving 05 or below, or 88," indicating they considered the performance measure definition valid as a measure of function using the FASI scale, as shown in **Table 17**.

2. **Identifying whether the alignment of needs to PCSP is important to quality.** A series of questions was asked regarding whether the performance measure was important to the quality of HCBS care. Reviewers (88 percent) and TEP members (75 percent) agreed with the statement that a PCSP that addresses functional needs is an important step toward high-quality services because the assessment entity can deliver services and supports important to the person. Similarly, reviewers (83 percent) and TEP members (92 percent) agreed with the statement that a PCSP that addresses identified functional needs is an important step toward high-quality services because the reviewer can create a plan to address the individual's needs. Finally, the reviewers (81 percent) and TEP members (67 percent) agreed with the statement about whether performance on this measure provides important information for assessing whether groups of HCBS recipients are receiving high-quality services. Overall, reviewers and TEP members had high to moderate agreement on the questions regarding whether the performance measure is important to providing high-quality care in HCBS, as shown in **Table 18**.

Table 17. Reviewer and TEP Member Responses to Performance Measure Definition, Clarity, and Critical Data Element Questions on Feedback Survey

Question No.	Survey Question (or aspect of measure definition being addressed)	Reviewer*	—	TEP**	—
—	—	*Strongly Disagree and Disagree freq (%)*	*Strongly Agree and Agree freq (%)*	*Strongly Disagree and Disagree freq (%)*	*Strongly Agree and Agree freq (%)*
10	The definition of the numerator is easy to understand.	4 (9.5)	38 (90.5)	0 (0.0)	12 (100)
11	The definition of the denominator is easy to understand.	4 (9.5)	38 (90.5)	1 (8.3)	11 (91.7)
12A	The performance measure reporting period is defined as 12 months.	3 (7.1)	39 (92.9)	0 (0.0)	12 (100)
12B	This performance measure may be reported by the state or contracted [assessment] entity.	3 (7.1)	39 (92.9)	0 (0.0)	12 (100)
12C	Documented functional needs will be based on receiving a 5 or below, or 88.	4 (9.5)	38 (90.5)	0 (0.0)	12 (100)
12D	Documentation of a PCSP will be identified through the individual's case record. (PCSP may vary within and across [assessment] entities; each [assessment] entity will use its forms for the PCSP.)	3 (7.1)	39 (92.9)	0 (0.0)	12 (100)
12E	A reviewer will determine whether the PCSP addressed the identified self-care, mobility and/or IADL needs. This means that there is a service (paid or unpaid) and/or action steps associated with all the unmet needs identified using a FASI assessment.	3 (7.1)	39 (92.9)	4 (33.3)	8 (66.7)

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*N for reviewer respondents to each question was 42 (100 percent).

**N for TEP respondents to each question was 12 (54.5 percent).

Systematic Assessment of Face Validity. Reviewers and TEP members were asked a series of questions about the clarity and definitions of the performance measure and whether the measure is important to providing person-centered services and supports. Results from each group are described separately (also see **Table 18**).

Reviewer Results. One hundred percent of reviewers completed the feedback form. Reviewers had high agreement with the statements regarding the wording of the performance measure numerator (91 percent), denominator (91 percent), timing (93 percent), and assessment entity (i.e., provider organization) (93 percent). There also was high agreement with identifying the PCSP through the individual's case record (92.9 percent) and whether the reviewer will determine whether the PCSP addresses the functional needs identified through the FASI (93 percent).

Regarding whether the performance measure will promote person-centered services and supports, the reviewers agreed with the statements that (1) a PCSP that addresses identified functional needs is an important step to creating person-centered services because it addresses the individual's needs (95 percent); and (2) a PCSP that addresses identified functional needs is an important step to creating person-centered services because the reviewer can create goals addressing the individual's needs (83 percent). They also agreed that performance on this measure provides important information for assessing whether groups of HCBS recipients are receiving person-centered services (81 percent).

TEP Results. Fifty-five percent of the TEP members completed the feedback form. The feedback form used the same Likert scale and rating merging methods. TEP members were asked the same questions as the reviewers.

TEP members had high agreement on the statements regarding the wording of the performance measure numerator (100 percent), denominator (92 percent), timing (100 percent), and the assessment entity (provider organization) (100 percent). There also was high agreement on identifying the PCSP through the individual's case record (100 percent) and whether the reviewer will determine whether the PCSP addressed the functional needs that were identified through the FASI (66.7 percent).

Regarding the performance measure's effect on person-centered services and supports, TEP members agreed with the following statements: (1) A PCSP that addresses identified functional needs is an important step to creating person-centered services because it addresses the individual's needs (92 percent); and (2) A PCSP that addresses identified functional needs is an important step to creating person-centered services because the reviewer can create goals addressing the individual's needs (75 percent). They also agreed that performance on this measure provides important information for assessing whether groups of HCBS recipients are receiving person-centered services (67 percent).

Table 18. **Reviewer and TEP Member Agreement on Quality and Person-Centered Questions**

Question No.	Survey Question (or aspect of measure definition being asked about)	Reviewers*	—	TEP**	—
—	—	*Strongly Disagree and Disagree freq (%)*	*Strongly Agree and Agree freq (%)*	*Strongly Disagree and Disagree freq (%)*	*Strongly Agree and Agree freq (%)*
14A	A PCSP that addresses identified functional needs is an important step to creating person-centered services because it addresses the individual's needs.	2 (4.8)	40 (95.2)	1 (8.3)	11 (91.7)
14B	A PCSP that addresses identified functional needs is an important step to creating person-centered services because the reviewer can create goals addressing the individual's needs.	7 (16.7)	35 (83.3)	3 (25.0)	9 (75.0)
14C	Performance on this measure provides important information for assessing whether groups of CB-LTSS recipients are receiving person-centered services.	8 (19.)	34 (81.0)	4 (33.3)	8 (66.7)

Question No.	Survey Question (or aspect of measure definition being asked about)	Reviewers*	—	TEP**	—
14D	A PCSP that addresses identified functional needs is an important step towards high quality services because the [assessment] entity can deliver services and supports important to the individual.	5 (11.9)	37 (88.1)	3 (25.0)	9 (75.0)
14E	A PCSP that addresses identified functional needs is an important step towards high quality services because the reviewer can create a plan to address the individual's needs	7 (16.7)	35 (83.3)	1 (8.3)	11 (91.7)
14F	Performance on this measure provides important information assessing whether groups of CB-LTSS recipients are receiving high quality services.	7 (16.7)	35 (83.3)	4 (33.3)	8 (66.7)

— Cell intentionally left empty

*N for reviewer respondents to each question was 42 (100 percent).

**N for TEP respondents to each question was 12 (54.5 percent).

[Response Ends]

2b.04. Provide your interpretation of the results in terms of demonstrating validity. (i.e., what do the results mean and what are the norms for the test conducted?)

[Response Begins]

Reviewers and TEP members generally had high agreement on the importance of the performance measure to person-centered services and supports and its potential as a measure of quality care for HCBS. In addition, there was high to moderate agreement on the performance measure definitions, the timing of the performance measure, and the importance of aligning the functional needs to the PCSP.

Results from the *Performance Measure Definition*, *Clarity*, and *Critical Data Element* Questions on Feedback Survey

Overall, there was good endorsement for the **Performance Measure Definition**, **Clarity**, and **Critical Data Element** questions. TEP members provided qualitative feedback asking for clarification on "may be reported by the state or contracted entity" means. Two members liked the flexibility of the PCSP definition, but felt it was burdensome to determine whether the PCSP addressed the identified needs. One TEP member wrote, "it may be burdensome to hunt through case notes and case notes do not equal a PCSP. An individual's unmet needs may be large, and requiring action steps for all, even if they are not a priority for the [individual], may veer from being person-centered." The reviewers also requested clarification on terminology (e.g., PCSP) and two reviewers commented on the confusion over the coding scheme in FASI (e.g., 01, 09, 88). One reviewer (case manager or services coordinator supervisor) wrote, "Due to different forms for each person, different writers of PCSP, and different trainings across agencies, there appears to be not enough objectivity."

Results from the *Quality and Person-Centered Agreement* Questions for Review and TEP Member Agreement

Overall, there was good endorsement for the Reviewer and TEP member agreement on **Quality** and **Person-Centered** questions. Five reviewers and two TEP members had comments that the assessor should not be creating goals, but that

the goals should come from the individual being assessed. In addition, one reviewer felt that additional performance areas needed to be included: "It would be helpful to create measures related to other assessed needs. It would also be helpful to indicate times when a recipient might have an assessed need, but refuses support in that area." A TEP member supports this sentiment by stating, "Person centered services goes well beyond meeting functional needs."

Some participants commented on how two concepts—"person-centered" and "high quality services"—are separate and that a high performance measure percentage may not reflect that the client is receiving quality care. A TEP member stated, "This assesses how well the assessor documents what is required. The participant identifies quality and should create their own goals. This process misses how the goals can be used to improve service delivery. How do they goals improve the person-centeredness of daily staff interactions and quality of care?"

[Response Ends]

2b.05. Describe the method for determining if statistically significant and clinically/practically meaningful differences in performance measure scores among the measured entities can be identified.

Describe the steps—do not just name a method; what statistical analysis was used? Do not just repeat the information provided in Importance to Measure and Report: Gap in Care/Disparities.

[Response Begins]

The statistical analysis method we used to determine statistically significant and clinically meaningful differences for the performance measure scores was the chi-square statistical test. The chi-square test compares observed results with expected results to determine whether differences between the two are due to chance or due to valid relationship between the variables.

[Response Ends]

2b.06. Describe the statistical results from testing the ability to identify statistically significant and/or clinically/practically meaningful differences in performance measure scores across measured entities.

Examples may include number and percentage of entities with scores that were statistically significantly different from mean or some benchmark, different from expected; how was meaningful difference defined.

[Response Begins]

The chi-square results revealed a statistically significant difference in the performance measure scores ($\chi^2(4)=53.5$, $p<0.0001$), indicating that the differences observed are not merely due to random chance. **Table 19** shows that the highest performance measure score is from the acquired brain injury, physical disability, and behavioral health condition program types (85.5 percent, 79.0 percent, and 76.6 percent, respectively), whereas the lowest performance measure scores are from the older adult and intellectual or developmental disability program types (58.1 percent and 42.5 percent, respectively).

Table 19. **Aligning PCSP with FASI-Based Needs: Score by Program Type**

Measure Score	Individuals in Programs Serving Those Who Are Older Adults (row %)	Individuals in Programs Serving Those with a Physical Disability (row %)	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability (row %)	Individuals in Programs Serving Those with an Acquired Brain Injury (row %)	Individuals in Programs Serving Those with a Behavioral Health Condition (row %)	Total
Performance Measure Score	58.1	79.0	42.5	85.5	76.6	66.3

[Response Ends]

2b.07. Provide your interpretation of the results in terms of demonstrating the ability to identify statistically significant and/or clinically/practically meaningful differences in performance across measured entities.

In other words, what do the results mean in terms of statistical and meaningful differences?

[Response Begins]

Although the chi-square result ($\chi^2(4)=53.5$, $p<0.0001$) is statistically significant, we cannot ascertain how clinically or practically meaningful these results are because this measure is not routinely implemented in HCBS programs. As a result, experience is insufficient to identify what counts as a meaningful difference in the score across program types.

[Response Ends]

2b.08. Describe the method of testing conducted to identify the extent and distribution of missing data (or non-response) and demonstrate that performance results are not biased due to systematic missing data (or differences between responders and non-responders). Include how the specified handling of missing data minimizes bias.

Describe the steps—do not just name a method; what statistical analysis was used.

[Response Begins]

In theory, using the FASI field test data ensured that missing data were not an issue in terms of the critical data elements. However, data abstracted onto the data abstraction forms had to be merged with the FASI field test data to determine HCBS program type and demographics. The developer team found 36 data abstraction forms that could not be paired with FASI field test forms. Without matching the measure test data to the FASI field test data, the team was unable to determine their program type, which is the unit of analysis.

[Response Ends]

2b.09. Provide the overall frequency of missing data, the distribution of missing data across providers, and the results from testing related to missing data.

For example, provide results of sensitivity analysis of the effect of various rules for missing data/non-response. If no empirical sensitivity analysis was conducted, identify the approaches for handling missing data that were considered and benefits and drawbacks of each).

[Response Begins]

Missing data were minimal for this performance measure. The 36 data abstraction forms that could not be aligned with FASI field test records were a result of incorrect form and reviewer identifiers and not a result of data missing from the fields on the abstraction form related to identifying the critical data elements.

[Response Ends]

2b.10. Provide your interpretation of the results, in terms of demonstrating that performance results are not biased due to systematic missing data (or differences between responders and non-responders), and how the specified handling of missing data minimizes bias.

In other words, what do the results mean in terms of supporting the selected approach for missing data and what are the norms for the test conducted; if no empirical analysis was conducted, justify the selected approach for missing data.

[Response Begins]

Performance results were not biased because of missing data in the critical data elements.

[Response Ends]

Note: This item is directed to measures that are risk-adjusted (with or without social risk factors) OR to measures with more than one set of specifications/instructions (e.g., one set of specifications for how to identify and compute the measure from medical record abstraction and a different set of specifications for claims or eCQMs). It does not apply to measures that use more than one source of data in one set of specifications/instructions (e.g., claims data to identify the denominator and medical record abstraction for the numerator). Comparability is not required when comparing performance scores with and without social risk factors in the risk adjustment model. However, if comparability is not demonstrated for measures with more than one set of specifications/instructions, the different specifications (e.g., for medical records vs. claims) should be submitted as separate measures.

2b.11. Indicate whether there is more than one set of specifications for this measure.

[Response Begins]

 No, there is only one set of specifications for this measure

[Response Ends]

2b.12. Describe the method of testing conducted to compare performance scores for the same entities across the different data sources/specifications.

Describe the steps—do not just name a method. Indicate what statistical analysis was used.

[Response Begins]
[Response Ends]

2b.13. Provide the statistical results from testing comparability of performance scores for the same entities when using different data sources/specifications.

Examples may include correlation, and/or rank order.

[Response Begins]
[Response Ends]

2b.14. Provide your interpretation of the results in terms of the differences in performance measure scores for the same entities across the different data sources/specifications.

In other words, what do the results mean and what are the norms for the test conducted.

[Response Begins]
[Response Ends]

2b.15. Indicate whether the measure uses exclusions.

[Response Begins]
 N/A or no exclusions
[Response Ends]

2b.16. Describe the method of testing exclusions and what was tested.

Describe the steps—do not just name a method; what was tested, e.g., whether exclusions affect overall performance scores; what statistical analysis was used?

[Response Begins]
Individuals who did not have a FASI-based need were excluded from the performance measure, ensuring that only individuals with functional needs in self-care, mobility, and IADL were included in its testing. The majority of HCBS recipients were individuals with functional needs in one of these three areas; however, because FASI evaluates only functional needs, there may be other reasons an individual is receiving HCBS services (cognitive, behavioral, or emotional needs) that may not be manifested as a functional need.
[Response Ends]

2b.17. Provide the statistical results from testing exclusions.

Include overall number and percentage of individuals excluded, frequency distribution of exclusions across measured entities, and impact on performance measure scores.

[Response Begins]
Three individuals, out of the 478 sample, had no FASI-based functional need, results for which are presented in **Table 20**. Although this occurrence is to be expected, that only a small group of individuals had no functional need is reassuring. These individuals with an acquired brain injury or a behavioral health condition may be receiving services because of

cognitive, behavioral, or emotional needs. FASI is only one component of a comprehensive, person-centered assessment for individuals receiving HCBS.

Table 20. Number of Unique Individuals and Number Identified as Having No FASI-Based Need

Measure	Individuals in Programs Serving Those Who Are Older Adults (row %)	Individuals in Programs Serving Those with a Physical Disability (row %)	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability (row %)	Individuals in Programs Serving Those with an Acquired Brain Injury (row %)	Individuals in Programs Serving Those with a Behavioral Health Condition (row %)	Total
Unique Individuals	117 (24.5)	119 (24.9)	106 (22.2)	70 (14.6)	66 (13.8)	478 (100)
Individuals with no FASI-Based Need	0 (0.0)	0 (0.0)	0 (0.0)	1 (33.3)	2 (66.7)	3 (100)

[Response Ends]

2b.18. Provide your interpretation of the results, in terms of demonstrating that exclusions are needed to prevent unfair distortion of performance results.

In other words, the value outweighs the burden of increased data collection and analysis. Note: If patient preference is an exclusion, the measure must be specified so that the effect on the performance score is transparent, e.g., scores with and without exclusion.

[Response Begins]
Individuals with an acquired brain injury, a behavioral health condition, or an intellectual or a developmental disability may not have functional disabilities that limit their participation in everyday activities. Thus, it is reasonable that these individuals, although needing HCBS for other reasons (e.g., behavioral needs), have no FASI-based needs. That FASI data elements capture only one aspect (i.e., function) of a comprehensive, person-centered assessment is important to note

[Response Ends]

2b.19. Check all methods used to address risk factors.

[Response Begins]
 No risk adjustment or stratification

[Response Ends]

2b.20. If using statistical risk models, provide detailed risk model specifications, including the risk model method, risk factors, risk factor data sources, coefficients, equations, codes with descriptors, and definitions.

[Response Begins]

[Response Ends]

2b.21. If an outcome or resource use measure is not risk-adjusted or stratified, provide rationale and analyses to demonstrate that controlling for differences in patient characteristics (i.e., case mix) is not needed to achieve fair comparisons across measured entities.

[Response Begins]

Not applicable. This process measure is not risk adjusted.

[Response Ends]

2b.22. Select all applicable resources and methods used to develop the conceptual model of how social risk impacts this outcome.

[Response Begins]
[Response Ends]

2b.23. Describe the conceptual and statistical methods and criteria used to test and select patient-level risk factors (e.g., clinical factors, social risk factors) used in the statistical risk model or for stratification by risk.

Please be sure to address the following: potential factors identified in the literature and/or expert panel; regression analysis; statistical significance of $p<0.10$ or other statistical tests; correlation of x or higher. Patient factors should be present at the start of care, if applicable. Also discuss any "ordering" of risk factor inclusion; note whether social risk factors are added after all clinical factors. Discuss any considerations regarding data sources (e.g., availability, specificity).

[Response Begins]
[Response Ends]

2b.24. Detail the statistical results of the analyses used to test and select risk factors for inclusion in or exclusion from the risk model/stratification.

[Response Begins]
[Response Ends]

2b.25. Describe the analyses and interpretation resulting in the decision to select or not select social risk factors.

Examples may include prevalence of the factor across measured entities, availability of the data source, empirical association with the outcome, contribution of unique variation in the outcome, or assessment of between-unit effects and within-unit effects. Also describe the impact of adjusting for risk (or making no adjustment) on providers at high or low extremes of risk.

[Response Begins]
[Response Ends]

2b.26. Describe the method of testing/analysis used to develop and validate the adequacy of the statistical model or stratification approach (describe the steps—do not just name a method; what statistical analysis was used). Provide the statistical results from testing the approach to control for differences in patient characteristics (i.e., case mix) below. If stratified ONLY, enter "N/A" for questions about the statistical risk model discrimination and calibration statistics.

Validation testing should be conducted in a data set that is separate from the one used to develop the model.

[Response Begins]
[Response Ends]

2b.27. Provide risk model discrimination statistics.

For example, provide c-statistics or R-squared values.

[Response Begins]
[Response Ends]

2b.28. Provide the statistical risk model calibration statistics (e.g., Hosmer-Lemeshow statistic).

[Response Begins]
Not applicable. This process measure is not risk adjusted.
[Response Ends]

2b.29. Provide the risk decile plots or calibration curves used in calibrating the statistical risk model.

The preferred file format is .png, but most image formats are acceptable.

[Response Begins]
[Response Ends]

2b.30. Provide the results of the risk stratification analysis.

[Response Begins]
[Response Ends]

2b.31. Provide your interpretation of the results, in terms of demonstrating adequacy of controlling for differences in patient characteristics (i.e., case mix).

In other words, what do the results mean and what are the norms for the test conducted?

[Response Begins]
[Response Ends]

2b.32. Describe any additional testing conducted to justify the risk adjustment approach used in specifying the measure.

Not required but would provide additional support of adequacy of the risk model, e.g., testing of risk model in another data set; sensitivity analysis for missing data; other methods that were assessed.

[Response Begins]
[Response Ends]

Criteria 3: Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3.01. Check all methods below that are used to generate the data elements needed to compute the measure score.

[Response Begins]
Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)
[Response Ends]

3.02. Detail to what extent the specified data elements are available electronically in defined fields.

In other words, indicate whether data elements that are needed to compute the performance measure score are in defined, computer-readable fields.
[Response Begins]
Some data elements are in defined fields in electronic sources
[Response Ends]

3.03. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using data elements not from electronic sources.

[Response Begins]
This proposed measure requires two sources of data—the FASI and the PCSP. The data-entry process for each source of data will depend on the provider organization's resources. For the FASI, some organizations likely will use the electronic version of the FASI in their records; others, however, may rely on paper versions. For the PCSP, a variety of documents may be used to document the PCSP; in fact, it has been recognized in the performance measure that each state organization may have its own system. During measure testing, reviewers recorded where they obtained the data for the measure; their responses are summarized in **Table 21**. Although data were obtained from only a subset of all provider organizations, the variety of electronic and paper-based sources demonstrates the reality of the environment. The most common source for each program type was an electronic service plan.

Table 21. **Sources of Documentation Used in Producing Performance Measure by Program Type**

Source	Individuals in Programs Serving Those Who Are Older Adults (row %)	Individuals in Programs Serving Those with a Physical Disability (row %)	Individuals in Programs Serving Those with an Intellectual or a Developmental Disability (row %)	Individuals in Programs Serving Those with an Acquired Brain Injury (row %)	Individuals in Programs Serving Those with a Behavioral Health Condition (row %)
Electronic Service Plan	59/117 (50.4)	87/119 (73.1)	106/106 (100.0)	65/69 (50.0)	63/64 (98.4)
Paper Service Plan	44/117 (37.6)	19/119 (16.0)	9/106 (8.5)	2/69 (2.9)	0/64 (0.0)
Case Notes	52/117 (44.3)	80/119 (67.2)	36/106 (34.0)	39/69 (56.5)	11/64 (17.2)
Administrative or Claims Data	0/117 (0.0)	47/119 (39.5)	0/106 (0.0)	19/69 (27.5)	0/64 (0.0)
Other	6/117 (5.1)	2/119 (1.7)	23/106 (21.7)	5/69 (7.3)	10/64 (15.6)

*Reviewers were instructed to "check all that apply" when indicating sources of documentation used; thus, for some records, multiple sources of documentation were selected. As a result, columns do not total to 100 percent.

[Response Ends]

3.04. Describe any efforts to develop an eCQM.

[Response Begins]

Currently, no efforts underway to develop an eCQM for the FASI PCSP. Different approaches to data capture and program differences across states make the standardization of data capture across these disparate states currently unfeasible for measure expression in eCQM format.

[Response Ends]

3.06. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

[Response Begins]

Reviewers, TEP members, and researchers identified the following difficulties in data collection.

- **Understanding the FASI tool and performance measure instructions.** A few reviewers and TEP members considered the performance measure's language unclear, especially concerning the PCSP; however, this opinion was among the minority in the total survey results. (See **Table 17** in the *Scientific Acceptability: Validity Testing* section of this submission.) In addition, reviewer and TEP member comments showed concern that the performance measure did not address other needs. They stated that it is common for other issues, such as

housing and transportation, to be main considerations in the individual's ability to stay in the home or community. Finally, many comments were received about the difference between developing goals and service planning. One concern was that the process used to determine needs and goals should have a person-centered approach (e.g., "I feel that the client should determine their own goals, not the assessor;" "The assessor should not be creating goals or plans to address the individual's needs, that should be done starting with the customer and all team members involved for support"). The other general concern was the association between addressing needs, service planning, and quality. Some reviewers and TEP members recognized the differences between the individual's "wants" and "needs" and their association with quality (e.g., "What if, for example, an individual doesn't like roommates but is receiving HCBS residential services in a group home? The group home may be addressing all of their identified needs, but it's not a person-centered service [they don't like roommates] and may or may not be a high quality residential service"). Others recognized the need to prioritize (e.g., "those [functional] needs may not be addressed if there are other, more serious needs that the client has identified"). The latter concerns may be addressed by appropriate training to help the reviewers understand the intent of the performance measure—namely to isolate functional needs and their association with service planning—while emphasizing that other needs are important but require the use of other tools that are not addressed in this performance measure. In addition, training should address how reviewers are engaging the individuals being served and their families in the discussion of needs and service planning. A proposed training program is described below.

- **Administrative burden (accessibility of information, time to complete measure)**. A majority of comments suggested that reviewing service plan information would be difficult for the provider organization because it is described in a variety of documents (e.g., case notes, service planning forms). (See **Table 21** in the *Feasibility* section of this submission). As a result, some organizations needed a significant amount of time to collect all relevant information to complete the performance measure. However, this sentiment was not shared by all; some respondents reported that the PCSP was easily accessible. The perception of the administrative burden most likely depends on the provider organization. Finally, some reviewers suggested that the variance in training among states may affect the user's understanding and the time needed to complete the performance measure.

To mitigate these difficulties, the following recommendations are provided.

- **Training.** The training program the development team used in the testing included a 90-minute Microsoft® PowerPoint presentation with time for questions and discussion. The content included (1) FASI set description and purpose, (2) performance measure foundational principles, (3) detailed description of the performance measure with examples, and (4) instructions on completing the data abstraction form. The FASI team also included a weekly roundtable during implementation to discuss the performance measure. An online, accessible presentation (asynchronous or synchronous) is recommended. A possible addition to the FASI training may include methods to elicit and record functional needs from all individuals in HCBS and more detail on how to obtain the PCSP. To address the concern about person-centered services and supports, the training should include a module on best practices to effectively engage individuals receiving HCBS in a discussion about their goals and needs.

- **Time to gather data.** Reviewers voiced concern about the amount of time it took to complete the data abstraction form. Possible solutions include creating a streamlined data abstraction form by removing all unnecessary items used for the testing and modifying the FASI to an electronic system. State and provider organizations may consider developing a standardized form for the PCSP.

- **Sampling.** Use of standard sampling techniques is recommended to allow for scientifically sound analysis and maintenance of data integrity while decreasing the time needed for the analysis. Possible methods include using a randomized or stratified random sampling of eligible candidates.

[Response Ends]

Consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

3.07. Detail any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm),

Attach the fee schedule here, if applicable.

[Response Begins]

Not applicable. No fees or licensing are required.

[Response Ends]

Criteria 4: Use and Usability

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making.

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement, in addition to demonstrating performance improvement.

4a.01. Check all current uses. For each current use checked, please provide:

- **Name of program and sponsor**
- **URL**
- **Purpose**
- **Geographic area and number and percentage of accountable entities and patients included**
- **Level of measurement and setting**

[Response Begins]

 Public Reporting

  [Public Reporting Please Explain]

Name of Program and Sponsor: Centers for Medicare & Medicaid Services for HCBS populations whose care is paid through Medicaid

URL: https://www.medicaid.gov/medicaid/long-term-services-supports/teft-program/functional-assessment-standardized-items/index

Summary of FASI PM2 Use: FASI supports CMS's long-term strategy of developing standardized interoperable assessment items[1] that fulfill the mission of the Improving Medicare Post-Acute Care Transformation (IMPACT) Act of 2014.[1] Interoperability facilitates the exchange of health information for individuals across the care continuum and allows continuity of care, ensuring that health information follows the person wherever they are receiving health care. A critical challenge in realizing interoperability, in the HCBS care setting, is the harmonization of standardized assessments and quality measures utilized in HCBS. HCBS is not specifically listed as an entity that is required to utilize standardized data

elements and quality measures. However, FASI demonstrates its value by being interoperable with the standardized patient assessment data elements required for Long-Term Care Hospitals, Skilled Nursing Facilities, Home Health Agencies, and Inpatient Rehabilitation Facilities. Ultimately, FASI connects the healthcare continuum for Medicaid participants and enables "data to follow the person," by use of functional data elements which can be transferred electronically across care settings to provide a holistic historical picture of the person that follows them throughout their care journey. This allows timely information that is expressed in the same coding language on function, as well as how a person's acute and post-acute functional ability and needs are described.

The utility of FASI PM2, in addition to its link to interoperable data, is further supported by HCBS stakeholders and technical experts who have assessed the measure as making a meaningful addition to the HCBS field (see **Scientific Acceptability: Validity** for more information). This measure will enable the comparison of Medicaid waiver programs within and across states. The cross-program, intrastate, and interstate comparisons that this quality measure facilitates will enable HCBS participants to make decisions about where they access care.

FASI PM2 promotes person-centered care by ensuring that care plans align with documented participant preferences. Existing literature suggests that using a person-centered approach in developing service plans can lead to higher satisfaction and more engagement of persons in their care.[2,3] FASI PM2 accomplishes this by building on FASI PM1 (NQF 3593), which focuses on including the person (i.e., participant) in the functional assessment process through documentation of their personal priorities for care. FASI PM2 further assesses if care plans are documented which address the preferences and priorities identified in FASI PM1. In concert, the two measures have the potential to enhance care coordination related to functional status and service planning waiver sub assurances. Currently, both FASI measures are being used in or considered for use in three states; additional outreach by CMS to states is ongoing to promote adoption. More broadly, the FASI is used within the Veterans Health Administration, where the FASI self-care items are used by the Program of Comprehensive Assistance for Family Caregivers as part of their Veteran Functional Assessment Instrument (VFAI).

References

1. Centers for Medicare & Medicaid Services. (n.d.) IMPACT Act Standardized Patient Assessment Data Elements https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Post-Acute-Care-Quality-Initiatives/IMPACT-Act-of-2014/-IMPACT-Act-Standardized-Patient-Assessment-Data-Elements

2. Kim, K.M., Fox, M.H., & White, G.W. (2006). Comparing outcomes of persons choosing consumer-directed or agency-directed personal assistance services. *Journal of Rehabilitation.* 72(2):32-43. https://www.scopus.com/inward/record.uri?eid=2-s2.0-33746260088&partnerID=40&md5=58a765b4ec9338cd00fa66c8d4613cf9

3. Ratti, V., Hassiotis, A., Crabtree, J., Deb, S., Gallagher, P., & Unwin, G. (2016). The effectiveness of person-centered planning for people with intellectual disabilities: A systematic review. *Research in Developmental Disabilities.* 57:63–84. http://www.sciencedirect.com/science/article/pii/S089142221630138X

Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

[Quality Improvement with Benchmarking (external benchmarking to multiple organizations) Please Explain]

Name of Program and Sponsor: Centers for Medicare & Medicaid Services for HCBS populations whose care is paid through Medicaid

URL: https://www.medicaid.gov/medicaid/long-term-services-supports/teft-program/functional-assessment-standardized-items/index

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References

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2   Kim, K.M., Fox, M.H., & White, G.W. (2006). Comparing outcomes of persons choosing consumer-directed or agency-directed personal assistance services. *Journal of Rehabilitation.* 72(2):32-43. https://www.scopus.com/inward/record.uri?eid=2-s2.0-33746260088&partnerID=40&md5=58a765b4ec9338cd00fa66c8d4613cf9

3   Ratti, V., Hassiotis, A., Crabtree, J., Deb, S., Gallagher, P., & Unwin, G. (2016). The effectiveness of person-centered planning for people with intellectual disabilities: A systematic review. *Research in Developmental Disabilities.* 57:63–84. http://www.sciencedirect.com/science/article/pii/S089142221630138X

Quality Improvement (Internal to the specific organization)

[Quality Improvement (Internal to the specific organization) Please Explain]

Name of Program and Sponsor: Centers for Medicare & Medicaid Services for HCBS populations whose care is paid through Medicaid

URL: https://www.medicaid.gov/medicaid/long-term-services-supports/teft-program/functional-assessment-standardized-items/index

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3   Ratti, V., Hassiotis, A., Crabtree, J., Deb, S., Gallagher, P., & Unwin, G. (2016). The effectiveness of person-centered planning for people with intellectual disabilities: A systematic review. *Research in Developmental Disabilities*. 57:63–84. http://www.sciencedirect.com/science/article/pii/S089142221630138X

[Response Ends]

4a.02. Check all planned uses.

[Response Begins]

Public reporting

Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

Quality Improvement (internal to the specific organization)

[Response Ends]

4a.03. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing), explain why the measure is not in use.

For example, do policies or actions of the developer/steward or accountable entities restrict access to performance results or block implementation?

[Response Begins]

CMS intends to share information about the availability and potential utility of this measure for public reporting through numerous communication venues. The measure may support states in their efforts to meet Medicaid's Section 1915(c) Home and Community-Based Services Waiver Program Assurances, particularly the Service Plan Assurance, which requires participants to have a service plan appropriate for their need and to receive the services, supports, or both specified in the plan. States must establish performance measures and remediation and quality improvement strategies in their waiver program application. Once approved by CMS, a state must demonstrate that it is monitoring its program by submitting evidence reports to CMS using the approved performance measures. CMS has also established sub-assurances, which are how the assurances are operationalized. The first sub-assurance is that service plans address all participants' assessed needs (including health and safety risk factors) and personal goals, either by providing waiver program services or through other means. FASI PM2 could be used to help address this first sub-assurance. For more information on the waiver program assurances, see https://www.govinfo.gov/content/pkg/CFR-2012-title42-vol4/pdf/CFR-2012-title42-vol4-sec441-302.pdf.

In addition, the FASI data elements are included in CMS's DEL, which may increase the likelihood of uptake by stakeholders seeking information about functional assessment data elements that can be used across settings.

[Response Ends]

4a.04. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes: used in any accountability application within 3 years, and publicly reported within 6 years of initial endorsement.

A credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.

[Response Begins]

The measure in this submission is derived from the HCBS FASI set, which is available publicly through the CMS Data Element Library. Because the FASI set was developed for voluntary use in Medicaid HCBS, it is expected that states will likely use the measures derived from the assessment tool for their internal assessment of HCBS program quality and related quality and improvement projects as well as for public reporting at the state level. These measures will likely be included in CMS's HCBS quality measures set for voluntary adoption by states' HCBS programs.

[Response Ends]

4a.05. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

Detail how many and which types of measured entities and/or others were included. If only a sample of measured entities were included, describe the full population and how the sample was selected.

[Response Begins]

This process measure was tested in nine organizations in four different states, located in geographically diverse regions of the country. These organizations participated in the 2017 FASI field test and agreed to continue their participation by testing this performance measure. These organizations serve different populations, including individuals who are older adults and those with physical disabilities, intellectual or developmental disabilities, acquired brain injury, or behavioral health conditions. Individuals included in the testing and analysis were eligible to receive services under Medicaid HCBS programs within the four states. HCBS programs enable individuals who otherwise would need institutional residential services to live in the least restrictive environment of their choosing in the community.

Measure testing focused on the reliability and face validity of the measure and did not include a method to give the participating organizations the results of the testing, their performance on the measure, or interpretative guidelines. In the future, CMS plans to share information about the availability and potential utility of the measure for reporting through numerous communication venues. Communication of the performance data, results, and interpretative guidelines will be addressed in the implementation plan.

[Response Ends]

4a.06. Describe the process for providing measure results, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

[Response Begins]

Measure testing focused on the reliability and face validity of the measure and did not include a method to give the participating organizations the results of the testing. The results of the testing were submitted to CMS to review and to use to develop future activity. The measure was tested as including an annual (12-month) reporting period to coincide with the reporting requirements in Medicaid's Section 1915(c) Home and Community-Based Services Waiver Program Assurances and Sub-Assurances. CMS will use various communication vehicles to provide performance measure results, reporting instructions, and educational material needed to calculate the measures.

[Response Ends]

4a.07. Summarize the feedback on measure performance and implementation from the measured entities and others. Describe how feedback was obtained.

[Response Begins]

During performance measure testing, the reviewers who abstracted the FASI data completed a feedback form. After reviewing at least 10 data abstraction forms, or at the end of data collection, reviewers completed a one-time feedback form on a secured, online platform (SurveyMonkey®). The feedback form was designed to allow reviewers the opportunity to share opinions and experiences in completing the performance measure and to provide a critique on the usability, appropriateness of content as a performance measure, and specifications of the measure (i.e., validity). In addition, a TEP consisting of 22 subject matter experts and stakeholders was convened. They reviewed the performance measure and preliminary results and provided feedback. Following the TEP, members also completed the online feedback form. The results of the feedback are summarized in the next three subsections of the application.

[Response Ends]

4a.08. Summarize the feedback obtained from those being measured.

[Response Begins]

In the feedback survey, the reviewers were asked a series of questions regarding the feasibility of the performance measure, the clarity of the rules and measure description, and whether the measure would assist in measuring quality of care. One hundred percent of the reviewers completed the feedback form. **Table 22** summarizes the questions and results addressing the feasibility and usability of the measure. A more detailed analysis of the feedback is provided under *Scientific Acceptability: Validity Testing* in this submission (see subsections 2b.01 through 2b.04).

Table 22. **Reviewer Ratings of Usability and Feasibility Questions**

Question Number	Survey Statements *Usability and Feasibility*	N (%)	Strongly Disagree and Disagree (%)*	Strongly Agree and Agree (%)*
16A	The information needed to implement this PM for groups of CB-LTSS recipients is readily available.	42 (100)	1 (2.4)	41 (97.6)
16B	The measurement guidelines clearly specify the documents or sources needed to implement this PM.	42 (100)	3 (7.1)	39 (92.9)
16C	The time necessary to collect the information for each CB-LTSS recipient included in the PM is reasonable (does not cause undue burden for the [assessment] entity or state).	42 (100)	8 (19.1)	34 (81.0)
16D	This PM will assist the [assessment] entity or state with continuous improvement under its CB-LTSS quality management system.	42 (100)	4 (9.5)	38 (90.5)

Abbreviations: CB-LTSS, community-based long-term services and supports; PM, performance measure.

* The column sums the frequency of the Likert scale responses *strongly disagree* and *disagree* into one category and *strongly agree* and *agree* into the second category.

A substantial majority of the reviewers believed that the documents and sources needed for the performance measure are readily available (97.6 percent) and clearly specified (92.9 percent) and that the time necessary to complete the measure is reasonable (81.0 percent). Qualitative comments did note inconsistencies in PCSP documentation depending on who performs the PCSP and on the provider organization; however, a large majority of reviewers agreed that the information needed was readily available. The reviewers also were asked whether they thought the performance measure would assist the provider organization or state with continuous improvement activities (Question 16D). A strong majority of the reviewers (90.5 percent) agreed.

[Response Ends]

4a.09. Summarize the feedback obtained from other users.

[Response Begins]

Feedback was solicited from the TEP members using the same feedback form provided to the reviewers. The TEP consisted of 22 members, whose perspectives represented provider organizations, state Medicaid agencies, advocacy

groups, self-advocates, and potential users. Twelve of the 22 TEP members provided feedback, including 8 potential FASI performance measure users (e.g., states, managed LTSS plans), 2 advocacy group representatives, and 2 self-advocates. TEP members reviewed the performance measure and the preliminary results of performance measure testing before completing the feedback form. LOA for the usability and feasibility statements are summarized in **Table 23**.

Table 23. **TEP Member Ratings of Usability and Feasibility Questions**

Question Number	Survey Statements Usability and Feasibility	N (%)	Strongly Disagree and Disagree (%)*	Strongly Agree and Agree (%)*
16A	The information needed to implement this PM for groups of CB-LTSS recipients is readily available.	12 (54.5)	5 (41.7)	7 (58.3)
16B	The measurement guidelines clearly specify the documents or sources needed to implement this PM.	12 (54.5)	1 (8.3)	11 (91.7)
16C	The time necessary to collect the information for each CB-LTSS recipient included in the PM is reasonable (does not cause undue burden for the [assessment] entity or state).	12 (54.5)	3 (25.0)	9 (75.0)
16D	This PM will assist the [assessment] entity or state with continuous improvement under its CB-LTSS quality management system.	12 (54.5)	2 (16.7)	10 (83.3)

Abbreviations: CB-LTSS, community-based long-term services and supports; PM, performance measure.

* The column sums the frequency of the Likert scare responses "strongly disagree" and "disagree" into one category and "strong agree" and "agree" into the second category.

A majority of the TEP respondents agreed with the performance measure feasibility and usability statements. TEP members strongly agreed that the guidelines for the measure are clearly stated (91.7 percent) and that the time necessary to collect the information for the performance measure is reasonable (75.0 percent); a smaller majority (58.3 percent), however, agreed with the statement, "The information needed to implement this performance measure for groups of CB-LTSS recipients is readily available." TEP member comments provided some rationale for this discrepancy. Some TEP members recounted the variability of provider organization accessibility of documents and trained staff as supported by the statement "States do not have standardized electronic care plans or quality assurance staff already funded to do this very labor-intensive process." Others described the need to conduct an extensive documents review to find the important information, as supported by two statements: one individual pointed out "The need to do fairly in-depth record review to determine whether the PCSP addressed the identified . . . needs" and the second individual thought it "results in a labor-intensive measure."

Similar to the reviewer response of more than 90 percent, more than 83 percent of TEP members agreed with the statement, "This [performance measure] would assist the provider organization or state with continuous improvement activities" (Question 16D).

The level of agreement among the TEP respondents generally was less than the agreement among reviewers. The greatest difference in percent agreement between the TEP and reviewer respondents was regarding statements on the availability of information. This difference may be due to the relatively lower number of TEP respondents and their lack of experience in using the performance measure in the field. There was close agreement, however, that the guidelines to complete the performance measure were clearly specified and that the performance measure will assist the provider organization or state with continuous quality improvement for HCBS.

[Response Ends]

4a.10. Describe how the feedback described has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

[Response Begins]

The feedback from reviewers was especially positive. The feedback from TEP members primarily focused on concerns about data accessibility related to the disparate documentation of PCSPs. This issue will be addressed as more states move to centralized electronic records to facilitate access to information in PCSPs. Given this reality, the performance measure specifications or implementation were not modified to address this specific issue.

[Response Ends]

4b.01. You may refer to data provided in Importance to Measure and Report: Gap in Care/Disparities, but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included). If no improvement was demonstrated, provide an explanation. If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

[Response Begins]

The proposed performance measure was developed to address a foundational responsibility of HCBS provider organizations, to assess individual needs, and to align these needs with the service plan. The literature supports the need to develop performance measures in HCBS environments, and aligning functional needs to the service planning process in a standardized manner is a current performance gap. The results of the testing and feedback from reviewers and TEP members generally support the measure's importance, its reliability, and its potential role in quality improvement and person-centered service plans.

Four short-term outcomes are expected to be associated with the implementation of practices aligned with the performance measure.

1. Using the performance measure may facilitate responsivity of the provider organization to the unmet needs of the individual.

2. The performance measure may facilitate an accurate alignment between the individual's needs and the service plan.

3. Using the FASI set may increase standardization of assessing functional needs within HCBS environments.

4. Using the performance measure may provide information to reviewers to determine what is needed to align the PCSP to the individual's needs.

The attainment of the short-term outcomes may lead to longer-term goals such as better service outcomes, including increased satisfaction and the potential of establishing realistic, scientifically based benchmarks for performance.

The performance measure was not measured over time; therefore, changes because of its implementation were not determined. Data collected during performance measure testing indicates, however, that improvement is needed.

Programs have a relatively low measure score on the performance measure, with an average measure score of 66.3 percent and a range from 42.5 percent for individuals with an intellectual or a developmental disability to 85.5 percent for individuals with an acquired brain injury (see **Table 2**). In addition, reviewer and TEP feedback demonstrated that the performance measure definitions were clear, the time to complete the performance measure was reasonable, and aligning individual functional needs to the service plan was important to providing high-quality, person-centered services.

[Response Ends]

4b.02. Explain any unexpected findings (positive or negative) during implementation of this measure, including unintended impacts on patients.

[Response Begins]

The team was positively surprised by the extent of reviewer and TEP agreement (no less than 83.3 percent) regarding the importance of this potential performance measure for aligning functional needs with service planning. (See **Table 18** in the *Scientific Acceptability: Validity Testing* section of this submission.)

[Response Ends]

4b.03. Explain any unexpected benefits realized from implementation of this measure.

[Response Begins]

Unexpected benefits are not yet well understood because this measure has not been implemented over a long-term. However, the immediate benefits are that the reviewers gain increased awareness of the need to assess functional needs and to align them with service plans, which are foundational responsibilities of provider organizations and measures of person-centered services and supports. In addition, aligning needs to service plans is a component of CMS reporting requirements for Medicaid's Section 1915(c) Home and Community-Based Services Waiver Program, so the measure scores also may be used to address these reporting requirements.

[Response Ends]

Criteria 5: Related and Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

If you are updating a maintenance measure submission for the first time in MIMS, please note that the previous related and competing data appearing in question 5.03 may need to be entered in to 5.01 and 5.02, if the measures are NQF endorsed. Please review and update questions 5.01, 5.02, and 5.03 accordingly.

5.01. Search and select all NQF-endorsed related measures (conceptually, either same measure focus or target population).

(Can search and select measures.)

[Response Begins]

2624: Functional Outcome Assessment

2631: Percent of Long-Term Care Hospital (LTCH) Patients With an Admission and Discharge Functional Assessment and a Care Plan That Addresses Function

2967: Home and Community-Based Services (HCBS) Consumer Assessment of Healthcare Providers and Systems (CAHPS®) Measures

[Response Ends]

5.02. Search and select all NQF-endorsed competing measures (conceptually, the measures have both the same measure focus or target population).

(Can search and select measures.)

[Response Begins]

[Response Ends]

5.03. If there are related or competing measures to this measure, but they are not NQF-endorsed, please indicate the measure title and steward.

[Response Begins]

Not applicable. There are no other non-NQF–endorsed measures that conceptually address the same measure focus and same target population.

[Response Ends]

5.04. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s), indicate whether the measure specifications are harmonized to the extent possible.

[Response Begins]

 Yes

[Response Ends]

5.05. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

[Response Begins]

The three measures listed below are related but not competing. The first two related measure are similar in concept but different in setting from the proposed measure. For the third related measure, the general population is the same.

- **NQF#2624 Functional Outcome Assessment** is conceptually related to alignment between assessments and PCSPs because the proposed measure focuses on whether individuals aged 18 years and older have documentation of a functional outcome assessment as well as a care (or service) plan based on the identified deficiencies. It is used in physician quality programs focused on the performance of individual, group, and practice-level clinicians in an outpatient setting.

- **NQF#2631 Percent of Long-Term Hospital Patients with an Admission and Discharge Functional Assessment and a Care Plan That Addresses Function** also is noted because it addresses the presence of at least one self-care or mobility goal in the patient's care plan based on a functional assessment for an inpatient post-acute care population. The inpatient post-acute care population includes skilled nursing facility residents, whose level of need can be comparable to that of HCBS recipients.

- **NQF#2967 CAHPS® Home and Community-Based Services Measures** is related, at a high level, in terms of the target population because it applies to individuals aged 18 years and older who receive HCBS.

No further harmonization is possible. Both the proposed measure and NQF 2624 rely on a standardized functional assessment to specify the numerator, although the target populations differ. The proposed measure relies on the FASI assessment, which has been tested and validated specifically in HCBS populations, and NQF 2624 specifies use of any standardized assessment tool that has been normalized and validated (e.g., Oswestry Disability Index, Patient-Reported Outcomes Measurement Information System, Knee Outcome Survey Activities of Daily Living Scale). FASI meets the NQF 2624 specification requirement for a standardized assessment tool that has been normalized and validated.

Like the proposed measure, NQF 2631 requires both a complete functional assessment (using the Long-Term Care Hospital Continuity Assessment Record and Evaluation Data Set Version 3.00) and a minimum level of alignment between the assessed needs, goals, or both and the care services.

NQF 2967 focuses specifically on individuals continuously enrolled in HCBS for three months or longer who pass a cognitive screen and their proxies. The proposed measure, although necessarily focusing on a subset of HCBS recipients who have documented functional needs as measured by the FASI, also excludes individuals who do not have three months of continuous HCBS enrollment.

[Response Ends]

5.06. Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality). Alternatively, justify endorsing an additional measure.

Provide analyses when possible.

[Response Begins]

Not applicable. There are no other NQF-endorsed measures that conceptually address the same measure focus and same target population.

[Response Ends]

Appendix

Supplemental materials may be provided in an appendix.:

Available in attached file

Contact Information

Measure Steward (Intellectual Property Owner): Centers for Medicare & Medicaid Services

Measure Steward Point of Contact: Dollar-Maples, Helen, helen.dollar-maples@cms.hhs.gov

Measure Developer if different from Measure Steward: The Lewin Group

Measure Developer Point(s) of Contact: McKiernan, Colleen, colleen.mckiernan@lewin.com

Additional Information

1. Provide any supplemental materials, if needed, as an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be collated one file with a table of contents or bookmarks. If material pertains to a specific criterion, that should be indicated.

[Response Begins]

Available in attached file

[Response Ends]

2. List the workgroup/panel members' names and organizations.

Describe the members' role in measure development.

[Response Begins]

The research team involved in the development of the measures includes the following.

Centers for Medicare & Medicaid Services

Kerry Lida, PhD

Other Investigators

Pat Rivard, MBA, IBM Watson Health

Rebecca Woodward, PhD, IBM Watson Health

Susan Raetzman, MSPH, IBM Watson Health

Christine Noelle Dietrich, MS, George Washington University

Kenneth Harwood, PT, PhD, CIE, George Washington University

Trudy Mallinson, PhD, OTR/L, George Washington University

Joyce Maring, EdD, DPT, George Washington University

Jennifer Weaver, MA, George Washington University

Additional research assistance was provided by Karen Schlumpf, MHP, EdDc, George Washington University.

The current developers for this measure include:

The Lewin Group (Lewin)

The National Committee for Quality Assurance (NCQA)

Qlarant

George Washington University (GW) School of Medicine and Health Sciences

Marymount University

The TEP members involved in the development of the measures are listed below. TEP members attended meetings in February 2018, July 2018, or both. They provided stakeholder feedback regarding measure concepts and measure specifications, including aspects such as value for quality improvement and potential implementation feasibility.

- Brian Bennett, Louisiana TEFT Grantee
- Mary Lou Bourne, National Association of State Directors of Developmental Disabilities Services
- Joe Caldwell, National Council on Aging
- Marcus Canaday, West Virginia Medicaid
- Tim Cortez, Colorado TEFT Grantee

- Danielle Darby, Revitalizing Community Membership of Washington
- Camille Dobson, National Association of States United for Aging and Disabilities
- Pam Erkel, Minnesota TEFT Grantee
- Chester Finn, self-advocate, New York Office for People with Developmental Disabilities
- Nancy Flinn, Courage Kenny Rehabilitation Institute
- Wendy Fox-Grage, AARP Public Policy Institute
- Dolores Frantz, Pennsylvania Developmental Disabilities Agency
- Michelle Goody, Massachusetts Medicaid
- Kendra Hanley, Health Services Advisory Group
- Celeste Januszewski, University of Illinois at Chicago
- Angela Kimball, National Alliance on Mental Illness
- Rachel LaCroix, Florida Agency for Health Care Administration
- Steve Lutzky, HCBS Solutions
- Michael Monson, Centene Corporation
- Teri Morgan, Virginia Medicaid
- Lorraine Nawara, Maryland TEFT Grantee
- Bonnie Neighbour, Peer Specialist
- Jim O'Neill, self-advocate
- Jake Reuter, North Dakota Medicaid
- Julie Robison, Connecticut TEFT Grantee
- Jennifer VanderNoot, New Hampshire TEFT Grantee
- Dave Zacks, self-advocate

[Response Ends]

3. Indicate the year the measure was first released.

[Response Begins]

The FASI final testing report was released March 30, 2018.

[Response Ends]

4. Indicate the month and year of the most recent revision.

[Response Begins]

Not applicable. The specifications have not been revised.

[Response Ends]

5. Indicate the frequency of review, or an update schedule, for this measure.

[Response Begins]

Specifications for this measure will be reviewed and updated annually.

[Response Ends]

6. Indicate the next scheduled update or review of this measure.

[Response Begins]

The next planned maintenance review for this measure is in spring 2022.

[Response Ends]

7. Provide a copyright statement, if applicable. Otherwise, indicate "N/A".

[Response Begins]

N/A

[Response Ends]

8. State any disclaimers, if applicable. Otherwise, indicate "N/A".

[Response Begins]

N/A

[Response Ends]

9. Provide any additional information or comments, if applicable. Otherwise, indicate "N/A".

[Response Begins]

N/A

[Response Ends]