Final Evaluation Report: Testing Experience and Functional Tools in Home and Community-Based Services Demonstration Program

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Disclaimer: The contents of this document are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Medicare & Medicaid Services or any of its affiliates. This project has also been referred to as the Demonstration Grant for Testing Experience and Functional Assessment Tools in Community-Based Long-Term Services and Supports.

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I. Testing Experience and Functional Tools Demonstration Overview

The Centers for Medicare & Medicaid Services (CMS) established the Testing Experience and Functional Tools (TEFT) Demonstration[1] to pilot new health information technology (IT), quality measurement, and functional assessment tools with individuals, providers, and state Medicaid agencies for home and community-based services (HCBS) programs. TEFT's goals align with the National Quality Strategy, Section 3011 of the Patient Protection and Affordable Care Act (ACA), and CMS' priorities to achieve better care, a healthier population, and more affordable care. Specifically, TEFT furthers adult quality measurement activities under Section 2701 of the ACA. While TEFT supports state Medicaid agencies in collecting and reporting on adult core measures, TEFT also enables CMS to promote the use of health IT in HCBS systems for the first time. TEFT presents states with the opportunity to leverage and integrate other opportunities available under the Health Information Technology for Economic and Clinical Health (HITECH) Act and the ACA. States also leveraged several provisions under the ACA, including the Community First Choice state plan option (Section 2401 of the ACA), the Money Follows the Person (MFP) (Section 2403 of the ACA), the Balancing Incentive Program (Section 10202 of the ACA), and the Health Homes for Enrollees with Chronic Conditions option (Section 2703 of the ACA).

Nine TEFT states assisted with the design, testing, and validation of four tools. CMS' program design allowed participating states to determine their preferred approaches for testing the tools. This design implicitly recognizes the variation across states, HCBS programs, and HCBS providers. The resulting diversity in state pilot activities has provided CMS and states with information on the approaches that show promise in improving quality, service planning, or care coordination in HCBS programs. Nine states tested at least one of four tools (referred to as the "TEFT tools" in this report). These tools included:

- **Experience of Care (EoC) Survey:** This cross-disability survey tool elicits feedback on beneficiaries' experience with services they receive in HCBS programs. States field tested two rounds of the EoC Survey with multiple HCBS programs for validity and reliability. Some states tested the trademarked Consumer Assessment of Healthcare Providers and Systems Home and Community Based Services (HCBS CAHPS®) Survey once endorsed. Through testing, CMS obtained the CAHPS® trademark and National Quality Forum (NQF) endorsement for 19 measures.
- **Functional Assessment Standardized Items (FASI):** FASI includes a new set of functional assessment items, which originated from the Continuity Assessment Record and Evaluation (CARE) tool created for post-acute care settings. States field tested two rounds of this modified set of functional assessment items for use with beneficiaries of HCBS programs. CMS incorporated FASI into the CMS Data Element Library, a centralized resource for CMS assessment instrument data elements and their associated health IT standards.[2] CMS is also collaborating to prepare two performance measures related to FASI for NQF endorsement.

[1] CMS. (2013). *Planning and Demonstration Grant for Testing Experience and Functional Tools in Community-Based Long-Term Services and Supports*. Funding Opportunity Number: CMS-1H1-13-001. https://www.medicaid.gov/affordable-care-act/downloads/teft-foa-9-10.pdf

[2] CMS. (2018). Data Element Library. https://del.cms.gov/DELWeb/pubHome

- **Personal Health Records (PHRs):** States built or procured a PHR that provided Medicaid HCBS beneficiaries access to a system containing select information about their HCBS programs, case managers, or services. Generally, states aimed to give beneficiaries access to social services information to support service delivery decision-making. Once launched, states identified Medicaid HCBS beneficiaries, case managers, and providers to use the PHRs. The PHR features and information varied by state, but states commonly included information from care plans in the PHR. Several states that piloted PHRs continue to offer the PHR to individuals receiving HCBS.
- **Electronic Long-Term Services and Supports (eLTSS) Plan:** States participated in the Office of the National Coordinator for Health Information Technology (ONC) Tech Lab (previously known as the Standards & Interoperability (S&I) Framework) eLTSS initiative to identify, evaluate, and harmonize an eLTSS dataset. The grantees facilitated two rounds of pilots to exchange the eLTSS dataset across HCBS settings and organizations to improve care coordination. Based on weekly discussions and testing, TEFT states, non-TEFT stakeholders, and ONC created an eLTSS dataset with 56 core data elements. A TEFT state and ONC submitted the dataset to a standards development organization for public comment in August 2018 with the goal of becoming a standard. Activities related to the eLTSS standards process will continue through September 2019.

CMS utilized several TEFT contractors to support the pilot demonstrations through technical assistance, subject matter expertise, and monitoring and evaluation. The two primary contractors worked closely together, one focused on monitoring and conducting a program evaluation of state activities, and the other developed and facilitated field tests of the TEFT tools. The TEFT contractors included IBM Watson Health (formerly known as Truven Health Analytics), the technical assistance contractor, and the lead for testing the EoC Survey and FASI; and The Lewin Group (Lewin), the monitoring and evaluation contractor. Lewin conducted an independent evaluation and was not involved in the implementation of the TEFT Demonstration. IBM Watson Health subcontracted with the American Institutes for Research for the EoC Survey, and George Washington University to support FASI. The ONC worked with CMS to lead the identification, testing, and validation of an eLTSS data standard for capturing and exchanging person-centered LTSS service plan data between medical and social service providers.

Lewin conducted a rapid-cycle program evaluation of the TEFT Demonstration. The evaluation consisted of close program monitoring and detailed feedback, lessons learned, and recommendations to states. Lewin's evaluation framework includes three evaluation areas—formative, systems outcomes, and beneficiary outcomes (see **Evaluation Approach** section). Annually, Lewin produced a report examining state TEFT activities completed during the year, and drawing from quarterly monitoring reports, site visits, and monthly project officer calls with CMS. Lewin also produced systems maps of state HCBS systems, structures, and processes, and a measure of information exchange for each state. These monitoring tools captured quarterly progress, annual progress, as well as progress over the four-year period related to TEFT and other systems' initiatives.

Lewin's final evaluation report uses data from multiple sources to describe the experience of TEFT states during the first four years of the program, from March 2014 through August 2018. Since CMS permitted TEFT states to extend some required grant activities through March 2019 in a no

cost extension, the report does not include all no cost extension activities. Lewin's results indicate that TEFT states remain on track to complete the pilot demonstration by providing key information regarding the implementation and testing of emerging assessments and measures to CMS, in addition to adopting some of the TEFT tools and applying lessons from their experiences to other state health IT and quality improvement initiatives.

A. State Participation in the TEFT Demonstration

With the TEFT Demonstration, CMS provided state grantees an opportunity to conduct on-the-ground testing of a new set of tools designed to increase the use of health IT in the HCBS system and improve quality measurement and service planning in Medicaid HCBS programs. CMS initially released the funding opportunity announcement in October 2012, and re-issued the funding opportunity in 2013 to provide states more flexibility with which tools to test. In March 2014, CMS awarded four-year TEFT grants to Arizona, Colorado, Connecticut, Georgia, Louisiana,[6] Kentucky, Minnesota, Maryland, and New Hampshire. The states began with a six-month planning period to develop a work plan for the grant period. After CMS approved state work plans, the states focused on testing and implementing the selected tools. The end of the original four-year grant period was March 2018. As of August 2018, seven of eight states are continuing required grant activities through no cost extensions set to end in March 2019. Each state participates in at least one TEFT activity and some states have modified their participation (see **Exhibit 1**). For states who selected a HITECH component, either PHR or eLTSS, they were required to participate in both HITECH components.

Exhibit 1: State Participation in TEFT Demonstration, by Activity

State	EoC	FASI	PHR	eLTSS
Arizona[3]	X	X	-	-
Colorado	X	X	X	X
Connecticut	X	X	X	X
Georgia	X	X	X	X
Kentucky	X	X	X	X
Maryland	X	-	X	X
Minnesota[4]	-	X	X	X
New Hampshire[5]	X	-	-	-

B. Monitoring and Evaluation Approach

In an effort to identify ongoing progress and support continuous program improvements, Lewin designed the monitoring and program evaluation to collect and provide CMS and TEFT states with rapid-cycle feedback. Lewin assessed state pilot efforts to develop and test the potential of new HCBS tools. Lewin also assessed the potential impact of the TEFT tools on the states' HCBS systems and on Medicaid HCBS beneficiaries. Specifically, Lewin's evaluation objectives (see **Exhibit 2**) included three areas—formative, systems outcomes, and beneficiary outcomes—to assess:

- The progress of the TEFT Demonstration, with a focus on: 1) ensuring the elements of the program were in place and operating according to the CMS vision for the program and states' work plans, and 2) monitoring and providing ongoing feedback to TEFT states (formative evaluation);

[3] Arizona elected to withdraw from the PHR and eLTSS activities.
[4] Minnesota participated in the first round of the EoC Survey and elected not to participate in the second round.
[5] New Hampshire concluded its TEFT activities in March 2018 and a 90-day contract closeout period in June 2018.
[6] Louisiana participated in the first round of the EoC Survey testing then withdrew from TEFT.

- Changes in policies, structures, or operations of the medical and social services networks in the TEFT states associated with the TEFT Demonstration (systems outcomes evaluation); and
- The impact on the end users of the new tools, particularly outcomes from the use of PHRs for the different populations enrolled in Medicaid HCBS programs (beneficiary outcomes evaluation).

Exhibit 2: Lewin's Monitoring and Evaluation Methods

Method	Purpose	Data Collection and Sources
Formative Evaluation	Program monitoring and rapid-cycle provision of feedback, information, lessons learned, and recommendations to states and CMS	Quarterly Monitoring Report web portal, and CMS and TEFT contractor meetings
Systems Outcomes Evaluation	Map and monitor changes in state HCBS systems, structures, and processes	HCBS Systems Maps, Information Exchange Scans, and site visits
Beneficiary Outcomes Evaluation	Review each state's PHR features and functions, and survey users to understand their experience with the PHR	Lewin's PHR User Survey

This final report includes findings from Lewin's evaluation framework and data sources, including quarterly state monitoring reports, monthly calls, site visits, a PHR User Survey, and contractor interviews. TEFT states provided quarterly updates on their activities in Lewin's web portal, which contained uniform questions about project management, stakeholder engagement, project planning, and project implementation (see **Appendix A** for a list of acronyms and **Appendix B** for Quarterly Monitoring Report questions). Lewin also gathered updates during monthly CMS project officer calls, monthly technical assistance trainings, and annual site visits. During Lewin's site visits, we reviewed Medicaid system documentation and discussed details of the states' HCBS processes and IT systems with state leaders. The resulting documents were HCBS Systems Maps and Information Exchange Scans, which we examine in this report (see the **HCBS Systems** section and **Appendix C** for a sample map). Finally, after TEFT states implemented their PHRs and gave HCBS beneficiaries at least one month to gain experience using them, Lewin worked with states to field a PHR User Survey. Lewin's survey assessed HCBS beneficiaries' experience using their state's PHR (see **Appendix D** for the PHR User Survey and **Appendix E** for the PHR Planning and Implementation Tool). Prior to launching the survey, Lewin worked with CMS to develop and submit a PHR User Survey Paperwork Reduction Act (PRA) package, which received approval from the Office of Management and Budget (OMB). This report also includes select findings from the PHR User Survey.

Since the TEFT Demonstration tested and piloted several emerging HCBS tools, and there were variations in how states implemented them, the Lewin evaluation relied on research questions to organize and identify program outcomes, beneficiary outcomes, and potential impact. The research questions are at the center of this final report. **Exhibit 3** below outlines how the evaluation research questions are the guiding structure for the remainder of this report.

Exhibit 3: How this Report Aligns with Lewin's Evaluation Research Questions and Indicators

Report Section (Evaluation Area)	Evaluation Research Questions	Evaluation Indicators
Development and Testing of New TEFT Tools (Formative and Beneficiary Outcomes)	How and to what extent were states able to test the EoC Survey?	EoC Survey testing and training strategy and response rate for each state
	How and to what extent were states able to test and adopt elements of FASI?	FASI testing and training strategy and completion rate for each state
	How and to what extent were states able to launch, enroll users into, and administer PHRs?	PHR launch, marketing, and enrollment strategy; PHR user survey feedback
	How and to what extent do individuals receiving HCBS, their families, and their health care providers use a PHR?	Percentage of individuals receiving HCBS who created a PHR account and then reported using it
	What was the impact of a PHR (e.g., improved care coordination, improved service quality, improved quality of life)?	PHR user ratings of quality of life and health status
	What PHR features and functions do users find most useful?	PHR user ratings of different features
	How and to what extent were states able to participate in and contribute to the ONC eLTSS Tech Lab initiative, and to pilot the eLTSS dataset?	Strategy for engaging stakeholders (specifically HCBS providers) in ONC Tech Lab process; stakeholder input on final core dataset
Stakeholder Engagement (Formative)	How and to what extent did states involve partners, stakeholders, and individuals in the planning, design, development, and implementation of these new tools?	Stakeholder group membership (if applicable); methods for gathering input from stakeholders
HCBS Systems (Systems Outcomes)	How did a state's HCBS policies, structures, and operations influence the development and testing of the TEFT tools?	Composition of HCBS Systems Map
	How did a state's HCBS policies, structures, and operations have the potential to change as a result of the TEFT tools?	Number of HCBS programs adopting HCBS CAHPS® Survey or adopting FASI as part of state's assessment tool; number of PHR users; number of states adopting eLTSS dataset; changes to HCBS Systems Map and Information Exchange Scan
Overall Accomplishments and Challenges (Formative)	What were state implementation strategies?	Implementation strategies associated with highest rates of response, testing, participation, and utilization
	What challenges were involved in testing and implementing TEFT tools?	Challenges associated with delays and/or lower rates of response, testing, participation, and utilization

II. Development and Testing of New TEFT Tools

This section summarizes the initiatives leading up to the TEFT Demonstration that influenced the design of the four TEFT tools–EoC Survey, FASI, PHR, and eLTSS dataset. This section also summarizes activities led by TEFT states and contractors, such as IBM Watson Health, and documents TEFT state results and overall program accomplishments from 2014 to 2018. Some activities evolved or TEFT states stopped participating because of challenges discussed in this section. This report does not include activities that occurred after August 2018.

A. Experience of Care Survey

EoC Survey
Evaluation Research Question

- How and to what extent are states able to test the EoC Survey?

Program Accomplishments

- Results from Round 1 EoC Survey testing were used to obtain the CAHPS® trademark
- NQF endorsed 19 measures derived from the HCBS CAHPS® Survey
- Connecticut is adopting the HCBS CAHPS® Survey for all of the state's Medicaid HCBS programs
- Including some of the TEFT states, 17 states have expressed interest in implementing or begun to implement the HCBS CAHPS® Survey

The EoC Survey gathered feedback from Medicaid HCBS beneficiaries on their experiences with HCBS providers and case managers. The survey focused on experience with services, and captured how an individual valued his or her services. The survey was for adult beneficiaries in any HCBS program. Medicaid quality improvement staff could compare results across programs that target different adults with disabilities, including older adults, individuals with physical disabilities, individuals with intellectual and developmental disabilities, individuals with acquired brain injuries, and individuals diagnosed with severe mental illnesses.

During the TEFT Demonstration, IBM Watson Health led the process of piloting and modifying the EoC Survey to obtain the CAHPS® trademark and NQF endorsement. IBM Watson Health worked with TEFT states through two rounds of field tests. The Round 1 EoC Survey test involved nine TEFT states–Arizona, Colorado, Connecticut, Georgia, Kentucky, Louisiana, Maryland, Minnesota, and New Hampshire. Round 1 began in October 2014 and ended in February 2015. Results from Round 1 helped obtain the CAHPS® trademark and NQF endorsement. The EoC Survey received a CAHPS® trademark in June 2016, and NQF endorsed 19 measures derived from the HCBS CAHPS® Survey in November 2016. The Round 2 HCBS CAHPS® Survey test involved seven TEFT states – Arizona, Colorado, Connecticut, Georgia, Kentucky, Maryland, and New Hampshire. Round 2 began in October 2016. Three states completed activities by March 2018 and some states have continued with Round 2 through the summer of 2018. Some states elected to use the final HCBS CAHPS® Survey once endorsed. In Round 2, the states aimed to use the results to assess and improve program quality. Overall, TEFT states targeted the same program populations as in Round 1, although some states changed specific programs. Survey administration differed in the two rounds, with IBM Watson Health contracting directly with survey vendors in each TEFT state for Round 1 and overseeing an aggregate-level survey analysis. In Round 2, TEFT states either contracted with survey vendors or identified state staff to conduct the survey and analyze their state-level survey results. TEFT states submitted analysis reports to CMS to conclude the EoC Survey activities.

In addition to describing the above activities in more detail, this section reviews the federal authorities associated with the EoC Survey, examines the content of the EoC Survey, outlines other long-term services and supports (LTSS) survey initiatives, and identifies lessons learned and considerations for future use of the HCBS CAHPS® Survey.

1. Federal Authority and Survey Development Background

The EoC Survey aligns with CMS' work on a national quality strategy and the core set of adult health care quality measures for Medicaid. CMS aimed for the EoC Survey for HCBS, an area in need of national measures. Section 2701 of the ACA (which added a new Section 1139B to the Social Security Act) authorizes this work on adult quality measures. Other federal regulations and programs that align with the EoC Survey include:

- Balancing Incentive Program, Section 10202 of the ACA–one program requirement is to collect and utilize experience surveys, which the HCBS CAHPS® Survey could fulfill.
- Health Homes for Enrollees with Chronic Conditions, Section 2703 of the ACA–requires collection of experience surveys from individuals within health homes. States could evaluate the HCBS CAHPS® Survey for possible use in their health home programs.

The foundational survey development work for the EoC Survey began as part of CMS' National Quality Enterprise (NQE) grant to IBM Watson Health.[7] IBM Watson Health provided technical assistance and training to state Medicaid programs on HCBS quality systems. IBM Watson Health also reviewed experience surveys to develop an item library and gathered input from Medicaid HCBS beneficiaries, providers, and other stakeholders to identify key domains for an HCBS experience survey. IBM Watson Health then drafted a survey, conducted testing to ensure the survey was suitable for populations with cognitive disabilities, and pursued OMB approval of a PRA package. OMB approved the PRA package for a pilot field test in February 2013, and Tennessee and Louisiana volunteered to conduct the survey between fall 2013 and winter 2014.

EoC Survey Milestones

- **2010:** Initial research, survey development, and testing
- **2013:** OMB Approval of Survey PRA Package
- **2013-2014:** Pilot field test in Louisiana and Tennessee
- **2014-2015:** TEFT EoC Survey Round 1
- **2016:** CAHPS® Consortium review, CAHPS® trademark, and NQF endorsement of 19 measures derived from the HCBS CAHPS® Survey
- **2016-2018:** TEFT EoC Survey/HCBS CAHPS® Survey Round 2

Following the alpha testing, CMS and IBM Watson Health worked with TEFT states to continue the field tests and refinement of the survey. There were several key milestones between 2010 and 2018 associated with the preliminary activities and TEFT field tests (see **EoC Survey Milestones**).

[7] Truven. (2017). *The Development, Testing, and Credentialing of the CAHPS® Home and Community-Based Services Survey: Final Report.*

2. EoC Survey Attributes

The EoC Survey, now the HCBS CAHPS® Survey, explored several aspects of a beneficiary's experience choosing and receiving services. The survey instrument contains 96 questions across 10 domains of care (see **HCBS CAHPS® Survey Domains**). As participants report on their experiences with HCBS programs, they respond to a maximum of 69 items, based on skip patterns in the survey. Compared to other experience and satisfaction surveys, the EoC Survey was broadly applicable to all adults with disabilities and specifically did not include questions about satisfaction. Available in both English and Spanish, states tested the HCBS CAHPS® Survey in person and via telephone. One TEFT state also tested an electronic survey tool.

HCBS CAHPS® Survey Domains

The 96 questions fall into the following domains of care:

- Getting Needed Services from Personal Assistant and Behavioral Health Staff
- How Well Personal Assistant and Behavioral Health Staff Communicate and Treat You
- Getting Needed Services from Homemakers
- How Well Homemakers Communicate and Treat You
- Your Case Manager
- Choosing Your Services
- Transportation
- Personal Safety
- Community Inclusion & Empowerment
- Employment (supplemental survey)

3. Other LTSS Beneficiary Surveys

Historically, states have used quality improvement tools that they either developed or adopted from national programs to collect feedback from LTSS program beneficiaries. Tools developed at the national level include the MFP Quality of Life (QoL) Survey,[8] the National Core Indicators-Aging and Disabilities (NCI-AD®) Survey,[9] and the National Core Indicators-Developmental Disabilities (NCI-DD®) Survey.[10] **Exhibit 4** below summarizes the survey audience, intended survey uses, and survey attributes of the MFP QoL, NCI-AD®, and NCI-DD® surveys.

Exhibit 4: Highlights of other LTSS Experience Surveys

Survey Name	Survey Audience	Survey Uses	Survey Attributes
MFP QoL Survey	All MFP participants within one month prior to a transition and two years post-transition	Measures overall satisfaction with life following a beneficiary's transition from an institutional setting to residing at home	Seven domains: living situation, choice and control, access to personal care, respect/dignity, community integration/inclusion, overall life satisfaction, and health status
NCI-AD® Survey	Older adults and adults with physical disabilities, including individuals with acquired brain injuries, who access LTSS services through publicly funded programs	Measure program performance and beneficiaries' care outcomes	Eighteen domains: Community Participation, Choice and Decision Making, Relationships, Satisfaction, Care Coordination, Service Coordination, Work, Self-Direction, Access, Health Care, Medications, Wellness, Rights and Respect, Safety, Everyday Living, Affordability, Future Planning, and Control

[8] Sloan, M., Irvin, C. (2007). *Money Follows the Person Quality of Life Survey*. http://www.mathematica-mpr.com/~/media/publications/PDFs/health/MFP_QoL_Survey.pdf

[9] National Association of States United for Aging and Disabilities. (n.d.). *National Core Indicators-Aging and Disabilities Survey*. https://nci-ad.org/

[10] Human Services Research Institute and The National Association of State Directors of Developmental Disabilities. (n.d.). *National Core Indicators*. https://www.nationalcoreindicators.org/

Survey Name	Survey Audience	Survey Uses	Survey Attributes
NCI-DD® Survey	Individuals with developmental disabilities who access LTSS services through publicly funded programs	Measure program performance and beneficiaries' care outcomes	Eighteen domains: Community Participation, Choice and Decision Making, Relationships, Satisfaction, Care Coordination, Service Coordination, Work, Self-Direction, Access, Health Care, Medications, Wellness, Rights and Respect, Safety, Everyday Living, Affordability, Future Planning, and Control

4. EoC Survey Field Test Processes

IBM Watson Health led the Round 1 field test with the goal to evaluate the reliability and validity of the EoC Survey by analyzing response options and interview approaches. The field test included individuals with disabilities in 24 programs across nine states–Arizona, Colorado, Connecticut, Georgia, Kentucky, Louisiana, Maryland, Minnesota, and New Hampshire. The programs served several populations, including older adults, individuals with physical disabilities, individuals with intellectual and developmental disabilities, individuals with acquired brain injuries, and individuals diagnosed with severe mental illnesses. **Exhibit 5** below identifies the Medicaid programs and populations that participated in the Round 1 EoC Survey field tests, as well as the Medicaid funding authorities, or program types, aligned with the programs.

Exhibit 5: EoC Survey Round 1 Participating Medicaid Programs and Populations

State	Program	Target Populations	Medicaid Funding Authority
Arizona	Arizona Long Term Care System, Elderly and Physically Disabled expansion	Aged, Physical Disability	1115 demonstration
	Arizona Long Term Care System, Developmental Disability	Developmental Disability	1115 demonstration
Colorado	HCBS Waiver for Persons who are Elderly, Blind, and Disabled	Aged, Physical Disability	1915(c)
	Supported Living Services Waiver	Developmental Disability	1915(c)
Connecticut	Connecticut Home Care Program for Elders	Aged	1915(c)
	Acquired Brain Injury Waiver	Brain Injury	1915(c)
	Personal Care Assistance Waiver	Physical Disability	1915(c)
Georgia	Independent Care Waiver Program	Aged, Physical Disability, Dementia	1915(c)
	Community Care Services Program	Aged, Physical Disability	1915(c)
Kentucky	Home and Community Based Waiver	Aged, Physical Disability	1915(c)
	Supports for Community Living Waiver	Developmental Disability	1915(c)
	Acquired Brain Injury Waiver	Brain Injury	1915(c)

State	Program	Target Populations	Medicaid Funding Authority
Louisiana	Adult Day Health Care Waiver (pilot test)	Aged, Physical Disability	1915(c)
	Community Choices Waiver (pilot test)	Aged, Physical Disability	1915(c)
	Long Term Personal Care Services Program	Aged, Physical Disability	1905(a)(24)
	New Opportunities Waiver	Developmental Disability	1915(c)
Maryland	Community Options Waiver	Aged, Physical Disability	1915(c)
Minnesota	Personal Care Assistance Program	Serious Mental Illness	1905(a)(24)
	Elderly Waiver	Aged	1915(c)
	Brain Injury Waiver	Brain Injury	1915(c)
New Hampshire	Developmental Disabilities Waiver	Developmental Disability	1915(c)
	Acquired Brain Disorder Waiver	Brain Injury	1915(c)
	Choices for Independence Home and Community Based Care Waiver	Aged, Physical Disability	1915(c)
	Bureau of Behavioral Health / Community Mental Health Services	Serious Mental Illness	1905(a)(13)

Beneficiaries of the programs listed above commonly receive case management, personal care, homemaker services, transportation, home health aide services, adult day care, respite care, day and residential habilitation services, and vocational and employment assistance.

In Round 1, IBM Watson Health contracted with survey vendors to lead data collection efforts in each state. **Exhibit 6** below lists the Round 1 survey vendors. The survey vendors conducted data collection, as prescribed by IBM Watson Health. First, vendors mailed letters that notified eligible respondents to expect a telephone call about the survey and assured them that CMS and their state endorsed the survey. Vendor staff then placed initial telephone calls to beneficiaries introducing the survey and requesting consent to participate. If staff received consent, he or she scheduled the interview. The interviews for Round 1 surveys took place in person and via telephone.

Exhibit 6: EoC Survey Round 1 Survey Vendors

State	EoC Survey Vendors
Arizona	Thoroughbred Research Group
Colorado	Thoroughbred Research Group
Connecticut	University of Connecticut
Georgia	The A.L. Burruss Institute of Public Service and Research at Kennesaw State University
Kentucky	IQS Research
Maryland	The Schaefer Center for Public Policy
Minnesota	Vital Research
New Hampshire	The University of New Hampshire Survey Center

The EoC Survey interviews varied based on random selection, with 50 percent of participants receiving standard CAHPS®-style response options and 50 percent receiving alternative response options. The different response options were part of IBM Watson Health's cognitive testing, with

response options used in CAHPS® surveys (e.g., never, sometimes, usually, always) and alternative response options (e.g., mostly yes, mostly no). IBM Watson Health also compared results between in person and telephone interviews. IBM Watson Health randomly assigned 80 percent of participants to an in person interview and 20 percent to a telephone interview, but allowed participants to switch, as needed.

When the TEFT states pulled current Medicaid HCBS program enrollment lists for IBM Watson Health and the survey vendors, they followed similar sample criteria. All states, except Georgia, excluded beneficiaries who were under 21 years old. Georgia excluded beneficiaries under 18 years old. Additionally, states excluded beneficiaries who were hospitalized or in an institution at the time of the survey. States excluded beneficiaries who had recently participated in, or been selected for, an upcoming Medicaid survey, from the EoC Survey samples as well. HCBS beneficiaries also had to have received at least one HCBS service for three months or longer. These criteria were consistent in the first and second round field tests.

The Round 1 field test required a minimum total sample size of 2,000 individuals to produce reliable survey results and to enable comparison across HCBS populations. IBM Watson Health adjusted the sample based on the expected response rate and estimated a goal of 4,500 surveys. TEFT states sent their entire enrollment lists to IBM Watson Health in Round 1, excluding the beneficiaries who did not meet sample eligibility rules. IBM Watson Health then pulled random samples from each state list and sent them to the survey vendors.

Before survey vendors contacted beneficiaries, TEFT states checked sample lists for missing information that could prevent vendor staff from reaching people. Among the various checks, Colorado and Connecticut reviewed for complete names and telephone numbers, and consulted state IT systems for missing data. States also sought help from case managers. States identified the assigned case managers in a case management system, and contacted them via telephone or email.

IBM Watson Health initially instructed survey vendors not to permit proxy participants (e.g., guardian, parent of beneficiary) because the CAHPS® Consortium typically sought responses directly from individuals receiving services. However, parents or guardians of individuals with intellectual or developmental disabilities, who are usually involved in interviews like the EoC Survey, denied respondent participation in the survey in several states. Following this challenge, IBM Watson Health allowed and tracked proxies in Round 1. Prior to Round 2, the CAHPS® Consortium approved the use of proxies for the HCBS CAHPS® Survey going forward.

EoC Survey Round 1 Complete Survey Response Totals

Survey Mode

- **In person:** 2,282 surveys
- **Telephone:** 721 surveys

Response Option

- **CAHPS®:** 1,471 surveys
- **Alternate:** 1,532 surveys

Round 1 Total: 3,003 surveys

Based on 3,003 complete survey responses (see **EoC Survey Round 1 Complete Survey Response Totals**), IBM Watson Health modified the EoC Survey following Round 1 to prepare

for CAHPS® certification and NQF endorsement. See IBM Watson Health's Final Report for details from the Round 1 survey analysis and the credentialing phase.[11]

At the beginning of Round 2 in October 2016, the seven participating TEFT states (Arizona, Colorado, Connecticut, Georgia, Kentucky, Maryland, and New Hampshire) determined their own data collection processes and goals. The states planned to use the results of Round 2 in consideration for adopting the HCBS CAHPS® Survey after the TEFT Demonstration. Colorado also aimed to assess whether electronic surveys were a good mode option for Medicaid surveys. Most TEFT states changed survey vendors for Round 2, when they contracted with the vendors directly. Connecticut and Maryland were the only states to hire the survey vendors from Round 1. **Exhibit 7** below lists the states' Round 2 survey vendors.

Exhibit 7: Round 2 EoC Survey/HCBS CAHPS® Survey Vendors by TEFT State

State	Round 2 EoC Survey Vendors
Arizona	Health Services Advisory Group
Colorado	Vital Research, OMNI Institute, University of Wyoming
Connecticut	University of Connecticut
Georgia	Georgia Tech Research Institute
Kentucky	Kentucky Department of Aging and Independent Living
Maryland	The Schaefer Center for Public Policy
New Hampshire	Vital Research

All states except one kept the same programs and populations for Round 2. Maryland added the Brain Injury Waiver for Round 2, and adopted a unique peer interviewer approach for survey respondents with brain injuries. **Exhibit 8** below captures the programs, populations, sample sizes, and response rates for each participating state.

Exhibit 8: EoC Survey/HCBS CAHPS® Survey Round 2 Participating Programs and Populations, with Survey Sample and Response Totals

State	Program	Target Populations	Sample Size	Complete Surveys	Response Rate
Arizona	Arizona Long Term Care System, Elderly and Physically Disabled expansion	Aged, Physical Disability	1,365	74	5%
	Arizona Long Term Care System, Developmental Disability	Developmental Disability			
Colorado	HCBS Waiver for Persons who Elderly, Blind, and Disabled	Aged, Physical Disability	3,474	526	15%
	Supported Living Services Waiver	Developmental Disability			
Connecticut	Connecticut Home Care Program for Elders	Aged	1,761	1,113	63%
	Acquired Brain Injury Waiver	Brain Injury			
	Personal Care Assistance Waiver	Developmental Disability			

[11] Truven. (2017). *The Development, Testing, and Credentialing of the CAHPS® Home and Community-Based Services Survey: Final Report.*

State	Program	Target Populations	Sample Size	Complete Surveys	Response Rate
Georgia	Independent Care Waiver Program	Aged, Physical Disability, Dementia	2,486	378	15%
	Community Care Services Program	Aged, Physical Disability			
Kentucky	HCBS Waiver	Aged, Physical Disability	400	32 *(in progress)*	N/A
Maryland	Community Options Waiver	Aged, Physical Disability	838	224	27%
	Brain Injury Waiver	Brain Injury			
New Hampshire	Developmental Disability Waiver	Developmental Disability	1,432	361	20%
	Acquired Brain Disorder Waiver	Brain Injury	231	39	20%
	Choices for Independence Home and Community Based Care Waiver	Aged, Physical Disability	1,360	347	35%
	Bureau of Behavioral Health / Community Mental Health Services	Serious Mental Illness	1,432	354	15%

In Round 2, states had more flexibility to test the survey modes (i.e., in person, telephone). States opted for different allocations of modes and one state introduced electronic surveys. Connecticut, Georgia, and New Hampshire administered both in person and telephone surveys. Arizona administered only telephone surveys. Colorado deployed an online version in addition to the in person and telephone surveys, as it sought to learn more about beneficiaries' modality preferences. Although Colorado encountered issues around using the cognitive screening tool for the electronic survey, the state received technical assistance from IBM Watson Health on how to apply the cognitive screen efficiently. Colorado changed two of the cognitive screening questions for the online survey from open-ended to close-ended response options so that proxy respondents could opt out of the cognitive screen.

The states' survey vendors followed similar outreach and recruitment techniques from Round 1. States sent pre-notification letters and conducted introductory calls. Connecticut, Georgia, and New Hampshire implemented a new phased approach to recruit beneficiary participants so they did not overcommit to interviews. Connecticut also permitted vendor staff to conduct the survey at the end of the introductory call, if beneficiaries agreed. Even if beneficiaries opted for an in person interview, Connecticut's vendor staff conducted the cognitive screen part of the survey during the introductory call. New Hampshire's pre-notification letter included a telephone number for questions, or if a beneficiary wanted to take the survey immediately via telephone.

Similar to New Hampshire's immediate opt-in option to participate in the survey, Maryland's beneficiaries in the Community Options waiver program could call the survey vendor or the Maryland Department of Health to consent to participate in the survey, rather than waiting for the vendor's call. For Maryland's Brain Injury waiver beneficiaries, the survey vendor coordinated with beneficiaries' day program providers to organize times for site visits for the surveys. Vendor staff subcontracted with interview staff with brain injuries (i.e., peer interviewers) to conduct the site visits and administer the survey. The day program providers

offered a private space for the interviews. Peer interviewers found efficiencies with conducting several interviews in the same setting.

While states could allow proxies in Round 2, several states placed conditions on who could serve as a proxy and one state did not allow proxies. Connecticut, Georgia, Maryland, and New Hampshire excluded proxies that received compensation as providers. Kentucky did not allow proxies in Round 2 because most of the older adults and individuals with physical disabilities in the HCBS waiver program were self-directed participants; Kentucky did not want individuals who received compensation for assisting with self-directed services to be proxies.

Other conditions on proxies in Colorado, Connecticut, Georgia, Maryland, and New Hampshire included Colorado requiring proxies to be 18 years or older. Colorado also required that proxies were a family member, close friend, or legal guardian, and knew the beneficiary well. In Georgia, proxies had to be 18 years or older, living with the beneficiary, or involved in daily care coordination. Maryland permitted beneficiaries to indicate who could be a proxy, but had a preference toward legal guardians. Finally, an individual in New Hampshire could serve as a proxy if the person was a family member or could answer questions about a beneficiary's services and supports.

States established their own sample sizes in Round 2 based on what they needed for statistical significance or other measures in their analyses. As displayed in **Exhibit 8** above, total state sample sizes ranged from 400 to 4,455 individuals. As of August 2018, all states have completed Round 2, except Kentucky, which aims to finish in September 2018.

Following Round 2, states have made different decisions regarding the HCBS CAHPS® Survey. Connecticut decided to adopt the HCBS CAHPS® Survey to measure quality in all of the state's HCBS programs. Specifically, Connecticut plans to measure provider performance and compliance in all its programs. While Connecticut contracts with a vendor for most case management services, the state plans to use survey results to assess case managers in the Department of Social Services. It also will use part of the HCBS CAHPS® Survey for the 60-day compliance survey administered to new HCBS beneficiaries. Connecticut is currently programming the HCBS CAHPS® Survey into the state's online Computer-Aided Telephone Interviewing program, and training Medicaid quality assurance staff and case management agencies to conduct the surveys. With these new initiatives, Connecticut will replace the MFP QoL Survey with the HCBS CAHPS® Survey, but include approximately 10 questions from its current MFP QoL Survey. This will allow for a meaningful comparison of MFP participant outcomes with Medicaid HCBS beneficiary outcomes. Colorado, Georgia, Maryland, and Minnesota will continue using NCI® Surveys for Medicaid HCBS programs. Arizona, Kentucky, and New Hampshire are undecided at this time, as they review their Round 2 results and consider whether the survey addresses important gaps in their other surveys. These states are open to both partial and full implementation of the HCBS CAHPS® Survey. In particular, New Hampshire is interested in having managed care organizations conduct the HCBS CAHPS® Survey after the state moves Medicaid LTSS from a fee-for-service to a managed care model. If New Hampshire elects to implement the HCBS CAHPS® Survey, the state will use its field test results as a baseline to compare quality between the delivery models.

Including some of the TEFT states, 17 states have expressed interest in implementing or begun to implement the HCBS CAHPS® Survey. For example, Pennsylvania will implement the HCBS

CAHPS® Survey in phases in fee-for-service HCBS waiver programs to establish a quality baseline for its Medicaid LTSS transition to managed care starting in 2018. CMS and Agency for Healthcare Research and Quality (AHRQ) have published the HCBS CAHPS® Survey for other states on the Medicaid website.[12,13]

5. EoC Survey Lessons Learned and Best Practices

TEFT states reported several lessons learned from participating in, then overseeing, the EoC Survey field tests. The states applied many of the Round 1 lessons to planning their Round 2 efforts. States interested in the HCBS CAHPS® Survey might use these findings in their planning.

a. Lessons Learned

- States received constructive feedback about their programs from the survey, including beneficiaries' interest in opportunities for community activities and getting together with family and friends (Connecticut and New Hampshire), the need for environmental home modifications[14] (Georgia), and requests for clarification on services offered and program contacts (Georgia).
- States identified many issues in the Medicaid HCBS program enrollment data, from deceased beneficiaries to inaccurate contact information and guardian names. States emphasized the importance of maintaining up-to-date enrollment data and reviewing survey sample data closely.
- Some stakeholders and providers resisted or did not understand the survey field test. For example, beneficiaries were skeptical of the notification letters because they came from companies they did not recognize (Arizona and New Hampshire). States recommended stating CMS' support clearly in notification letters and verbal communications. States also noted that survey staff should reiterate often that the choice to participate or not would not negatively affect their services.
- Several states had challenges surveying beneficiaries in the Brain Injury population group. Maryland sought to address a low response rate among this population by using peer interviewers. Challenges with peer interviewers might include additional transportation needs and officially hiring or contracting individuals. However, Maryland recommended this survey approach.
- One state tested an electronic survey mode and found that beneficiaries with guardians were most likely to take the online survey over other survey modes (Colorado). The perceived non-intrusive nature of the online survey led many respondents to select it over the other modes. Following Round 2, Connecticut created an electronic tool for interviewers to collect the HCBS CAHPS® Survey responses. Other states might consider developing an electronic survey tool for interviewers or beneficiaries.

[12] CMS. (n.d.). *CAHPS® Home and Community Based Services Survey*. https://www.medicaid.gov/medicaid/quality-of-care/performance-measurement/cahps-hcbs-survey/index.html

[13] AHRQ. (February 2018). *CAHPS® Home and Community-Based Services Survey*. http://www.ahrq.gov/cahps/surveys-guidance/hcbs/index.html

[14] In Georgia, 25 percent of beneficiaries surveyed needed one or more environmental home modifications.

b. Best Practices

- Contract with experienced vendors or use experienced agency staff to conduct the survey interviews, and train survey staff. States recommended including in the training detailed explanations of the survey structure, content, and the states' expectations of survey staff. Georgia also included role-play practice in its training, where survey staff participated as beneficiaries and interviewers, helping them respond to beneficiary questions.
- Plot the best times of year to implement the survey, avoiding major holidays, winter (if the state is prone to inclement weather), and other scheduled surveys.
- Develop survey messaging for all stakeholders who might receive questions about the survey. Colorado and Georgia targeted announcements to case managers. States reported that stakeholder engagement likely reduced data collection delays and increased response rates.
- Maintain a close administrative connection to the survey vendor or agency. For example, Georgia held weekly status meetings. New Hampshire collaborated with its vendor on website postings about the survey schedule and other updates. This approach ensured convenient access to information for stakeholders.

B. Functional Assessment Standardized Items

FASI was designed to supplement existing Medicaid comprehensive assessment tools with new assessment items that measure functional status and need for assistance. It built on efforts to standardize data across Medicaid and Medicare programs, aligning with standard items for measuring function already used in the Medicare program. If adopted across a state's Medicaid HCBS programs, functional status information can follow an individual between programs for continuity and cross-program analysis.

FASI
Evaluation Research Question

- How and to what extent are states able to successfully test and adopt elements of FASI?

Program Accomplishments

- Four technical expert panels, an Alpha test, and two rounds of field tests in six states to refine FASI
- Preparing for NQF endorsement of two performance measures derived from FASI
- Colorado plans to adopt FASI for its Medicaid HCBS programs
- CMS is adding FASI to the Data Element Library

During the TEFT Demonstration, IBM Watson Health led the process of developing and testing FASI. IBM Watson Health worked with TEFT states on the first field test. The Round 1 FASI test involved six TEFT states–Arizona, Colorado, Connecticut, Georgia, Kentucky, and Minnesota. Round 1 began in March 2017 and ended in September 2017. The states targeted the full range of HCBS beneficiaries, similar to the EoC Survey field tests. IBM Watson Health reviewed the results from Round 1 with a technical expert panel (TEP) and refined the tool for the next round. The same six TEFT states led Round 2, beginning in January 2018 and ending at different periods based on state timelines (ranging from March 2018 through March 2019). Management of the two rounds of field tests was designed for IBM Watson Health to contract with data collection entities in each state in Round 1, and states to customize their approaches and contract with vendors or identify staff in Round 2. To mark the completion of the Round 2 FASI test, CMS has required states to submit analysis reports. As of August 2018, Colorado plans to

adopt FASI and Georgia continues to consider using FASI. Other states have reported that they will not pursue implementation of FASI due to investments of time and resources in other comprehensive assessment tools. Currently, CMS is adding FASI to the Data Element Library, a central database containing assessment questions, responses, and their associated health IT standards.[15] CMS is also working with IBM Watson Health and George Washington University to prepare two FASI-related performance measures for NQF endorsement in 2019.

This section includes a history of the development and refinement of FASI, FASI attributes, a review of state field test processes and lessons learned, and takeaways for other states seeking to test or implement FASI.

1. Federal Authority and Survey Development Background

Like the EoC Survey work, FASI aligns with CMS' work on quality measures authorized by Section 2701 of the ACA. Before the ACA, in 2005, the Deficit Reduction Act (Public Law 109-171, Sec. 5008) required CMS to develop standardized assessment items across post-acute care settings (see **FASI Milestones**). Specifically, Congress mandated the Post-Acute Care Payment Reform Demonstration to collect uniform information about individuals discharged from acute hospitals to post-acute care settings. CMS then developed the CARE tool to evaluate and document health and functional status of Medicare beneficiaries. Various organizations could access and share this new complete assessment at different points in time, decreasing burden on providers who collected the same information in different settings. The Post-Acute Care Payment Reform Demonstration also required CMS to promote health IT interoperability standards for CARE items, allowing the items to be included in electronic health records and other IT systems.[16]

FASI Milestones

- **2005:** Deficit Reduction Act called upon CMS to use standardized patient information for Medicare
- **2006 – 2011:** CMS development of the CARE tool, a model for FASI
- **2014:** TEFT grants awarded and TEP #1 convened
- **2015:** TEP #2 and alpha test in Connecticut
- **2016:** OMB Package Approved
- **March–September 2017:** TEFT FASI Round 1
- **November–December 2017:** TEP #3 and final FASI released
- **2018:** TEFT FASI Round 2 and TEP #4

CMS and IBM Watson Health based FASI on the CARE tool, modifying it for Medicaid LTSS. Standardizing functional assessment items for Medicaid LTSS programs allows for cross-program comparisons, enables electronic exchange of LTSS data, and allows data to follow an individual. With FASI, CMS also aimed to align TEFT work with the Balancing Incentive Program (Section 10202 of the ACA). In the Balancing Incentive Program, states must implement a core standardized assessment and collect functional assessment information. FASI could be integrated with a state's comprehensive assessment to fulfill these requirements. The process of developing FASI included several milestones from preliminary development and to TEFT field tests. From 2012 through 2014, CMS contracted with Research Triangle International to revise the CARE for HCBS populations. Research Triangle International identified and compiled items from the

[15] CMS. (n.d.). *Data Element Library Overview*. https://del.cms.gov/DELWeb/pubHome

[16] Research Triangle International. (n.d.). *Overview of the Medicare Post-Acute Care Payment Reform Initiative*. https://innovation.cms.gov/Files/Migrated-Medicare-Demonstration-x/PACPR_RTI_CMS_PAC_PRD_Overview.pdf

existing CARE item set to create an item set for TEFT. Research Triangle International facilitated the first TEP in September 2014 with 19 experts, including TEFT states. TEP members recommended several modifications to the CARE items and identified new items necessary for HCBS assessments. **Exhibit 9** below summarizes the TEP discussion and resulting changes. The item set also became FASI following the first TEP.

Exhibit 9: Outcomes of the First FASI TEP (September 2014)

Topic	TEP Outcome
Data Collection Mode	In person interviews would be the primary data collection mode. The interview would include pre-determined questions where the beneficiary resides. Due to the cost and logistics of direct observation, they would not include or would limit this mode.
Service Needs	The tool would include more items for service need

After the first TEP, CMS contracted with IBM Watson Health to continue developing FASI. IBM Watson Health enlisted George Washington University to lead the work on FASI, including a second TEP, convened in October 2015 to discuss, change, and confirm several elements of the FASI tool. Similar to the exhibit above, **Exhibit 10** below summarizes the second TEP's discussion and subsequent FASI changes.

Exhibit 10: Outcomes of the Second FASI TEP (October 2015)

Topic	TEP Outcome
Functional Abilities	The tool would include items on chewing and swallowing foods.
Rating Scale	The tool would include the six point rating scale, ranging from independent to dependent, like the CARE tool. The tool also would include yes or no questions with a skip pattern, as needed.
Reference Period	The look-back period for functional questions would be the last three days. The open text area on beneficiary goals would have a six-month look-back period.
Beneficiary Preferences	The tool would include a free-text personal preference field at the end of each section for the assessor to document the individual's goals and preferences relating to that section.

In December 2015, IBM Watson Health tested the proposed FASI in an alpha test with five assessors and nine beneficiaries from Connecticut. IBM Watson Health focused on the assessors' perceptions of FASI's clarity, usability, and feasibility. Connecticut identified beneficiaries from all HCBS waiver populations. After the alpha test, IBM Watson Health gathered feedback from the assessors and modified FASI. **Exhibit 11** below summarizes the assessors' feedback and resulting changes.

Exhibit 11: Outcomes of the FASI Alpha Test (December 2015)

Topic	Alpha Test Outcome
Response Options	The tool would include a response option for "has needs, but declines assistance".
Caregiver Type	The tool would include a column for unpaid caregiver assistance and a column for paid caregiver assistance.
Data Collection Mode	Assessors supported using observation and interviews in the assessment.
Reference Period	Assessors did not think that a three-day look-back period accounted for certain needs experienced by beneficiaries. The tool would include a 30-day look-back period instead.

Topic	Alpha Test Outcome
Functional Abilities	The tool would include a perineal hygiene question.
Living Arrangements	The tool would distinguish full meals and hot meals, and define "clean environment".

IBM Watson Health documented additional guidance for facilitating FASI during an assessment based on the alpha test experience. IBM Watson Health then collaborated with CMS to submit a PRA package to conduct FASI field tests for OMB approval. CMS submitted the PRA package in March 2016 and received OMB approval of the PRA package in December 2016.

2. FASI Attributes

FASI has three sections: Functional Abilities and Goals, Assistive Devices, and Living Arrangements. Each section contains specific items for assessors to evaluate. Assessors either evaluate the assistance a person needs on a scale ranging from independent to dependent, or through answers to yes or no questions with skip patterns. Assessors can complete FASI by conducting interviews with prospective or enrolled beneficiaries and their helpers, reviewing written records, and observing performance. Each section includes space for assessors to document up to two skills or tasks that beneficiaries wish to accomplish or improve in the next six months. FASI does not collect information on beneficiaries' medical treatments and procedures, health conditions, or current level of care.

3. FASI Field Test Processes

The TEFT states began the Round 1 field test in January 2017, after OMB approved the PRA package. CMS' original timeline for FASI field tests had planned for Round 1 to begin in summer 2015.[17] The delay was due to an extended development process with a change in contractors and a longer-than-expected OMB approval period. Once Round 1 began, IBM Watson Health coordinated with states to obtain samples. The assessment entities conducted the assessments, and George Washington University analyzed the aggregate-level data. IBM Watson Health and George Washington University created an assessment training module for Round 1 that they shared with states. Data collection could not begin until states addressed their state-level Institutional Review Board requirements, which took up to three months. IBM Watson Health's 13 assessment entities began working in March 2017 in all states except Georgia. Georgia's data collection began in April 2017. The assessment entities followed similar processes, as prescribed by IBM Watson Health. Vendors mailed pre-notification letters and followed up with telephone calls to schedule in-home assessments. Assessors entered data collected from assessments into IBM Watson Health's electronic data collection tool, and uploaded data to IBM Watson Health each week via secure electronic file transfer. IBM Watson Health then sent de-identified data for George Washington University's analysis, which focused on overall and population-level results. In Round 1, IBM Watson Health focused on evaluating FASI's validity and reliability. IBM Watson Health finished Round 1 in September 2017. **Exhibit 12** identifies the FASI Round 1 assessment entities and target populations, and examines states' Round 1 completion rates.

[17] Research Triangle International. (2014). *TEFT Demonstration – CARE Items*. http://www.nasuad.org/sites/nasuad/files/TEFT%20Demonstration%20-%20How%20CMS%20is%20Supporting%20Measures%20Development%20and%20Health%20Information%20Technology%20Advancements%20in%20Community%20Based%20LTSS%20System.pdf

Exhibit 12: FASI Round 1 Assessment Entities, Participating Populations, and Results

State	Assessment Entities	Target Populations	Total Assessment Target	Complete Assessments	Completed Relative to Target Number of Assessments
Arizona	Bridgeway Health Solutions	Aged, Physical Disability	238	264	111%
Colorado	Single Entry Points, Community Centered Boards	Brain Injury, Intellectual and Developmental Disabilities, Serious Mental Illness	393	261	66%
Connecticut	Connecticut Community Care	Aged, Physical Disability, Serious Mental Illness	230	231	100%
Georgia	Georgia Medical Care Foundation, Legacy Link Area Agency on Aging (AAA)	Aged, Physical Disability, Brain Injury	183	213	116%
Kentucky	Buffalo Trace AAA, Kentuckiana AAA	Aged, Physical Disability	194	194	100%
Minnesota	Vital Research	Brain Injury, Intellectual and Developmental Disability, Serious Mental Illness	332	227	68%

After Round 1, IBM Watson Health convened the third TEP in November 2017. Through statistical analyses, IBM Watson Health and George Washington University determined that the FASI items were generally valid and reliable. IBM Watson Health proposed several modifications during the TEP, and released a final FASI for the Round 2 field test in December 2017.[18] **Exhibit 13** below summarizes the third TEP's discussion and resulting changes.

Exhibit 13: Outcomes of the Third FASI TEP (November 2017)

Topic	Alpha Test Outcome
Functional Abilities	The tool would clarify "simple financial management" by adding online banking as an example.
Assistive Devices	The tool would include reacher/grabber, glucometer, continuous positive airway pressure, sock aid, oxygen concentrator, and raised toilet seat in the list of assistive devices; and eliminate crutches and prosthetics.
Personal Priorities	The tool would separate the sections for priorities for living arrangements and priorities for caregiver assistance.
Personal Priority Instructions	The assessor instructions for completing the priorities sections would include updated instructions to encourage individuals to identify at least one personal priority.

The FASI Round 2 field test began in December 2017, with the same TEFT states. The states led data collection and analysis in this round, which had more variation–from data collection timelines

[18] Mallinson, T., Dietrich, C., Harwood, K., et al. (March 2018). *FASI Final Report* submitted by Truven and George Washington University. https://mn.gov/dhs/assets/FASI-final-report_tcm1053-340779.pdf

to the roles of assessment entities–than in Round 1. Most states, except Connecticut and Minnesota, requested no cost extensions to continue working on FASI beyond March 2018, the end of the initial TEFT Demonstration period. Connecticut and Minnesota both finished their data collection in March 2018.

Due to the date states received the final FASI tool, states had a short time frame to implement FASI Round 2. Some states also had internal factors contributing to timeline delays. Georgia's contracting process took longer than expected. The state also required additional time to review the current guardianship status of sampled beneficiaries in the Independent Care Waiver Program. Georgia initially planned to complete data collection by March 2018, but finished by June 2018. The other TEFT states, Arizona, Colorado, and Kentucky, all adjusted their plans, postponing their data collection by six or more months (starting in July, November, and July 2018, respectively).

The states selected their assessment entities through a competitive solicitation or by selecting an agency or vendor with existing relationships in Medicaid. Colorado was the only state to use a request for proposal (RFP) to establish its contract with HCBS Strategies. Like other states, Colorado's contracts with Medecision and DXC Technology to create an electronic FASI tool were extensions of work they were doing for the state. Other states turned to existing relationships with state agencies or contractors, such as Georgia and Kentucky with AAAs. Arizona's assessors came from its three Medicaid managed care organizations that were already under contract with the state. Finally, some states, including Arizona, Colorado, Connecticut, and Georgia, also collaborated with training staff to lead the trainings for assessors. **Exhibit 14** below identifies the state-selected assessment entities for Round 2 and distinguishes their roles since most states partnered with multiple entities.

Exhibit 14: TEFT State FASI Round 2 Assessment Entities, with Roles

State	Assessment Entity	Vendor/Agency's Roles
Arizona	Health Services Advisory Group	Train assessors, analyze data
	Managed LTSS Managed Care Organizations	Collect data
Colorado	HCBS Strategies	Sample, collect, and analyze data
	DXC Technology, Medecision	Automate the assessment tool
	To be determined	Train assessors
Connecticut	University of Connecticut	Train assessors, analyze data
	State agency assessors for each target population	Collect data
Georgia	Georgia Medical Care Foundation, Legacy Link AAA	Collect data
	Georgia Tech Research Institute	Train assessors, analyze data
Kentucky	Pennyrile AAA, Northern Kentucky AAA	Collect data
	Kentucky Office of Health Data and Analytics	Analyze data
Minnesota	Vital Research	Collect data, analyze data

TEFT states introduced new types of vendors in FASI Round 2, including trainers. Two states modified IBM Watson Health's training for assessors from Round 1 and contracted the responsibility for training and technical assistance to a vendor. Arizona and Georgia each established a contract for training, coaching/technical assistance, and communications. These vendors were the points of contact for the assessors. Specifically, in Georgia, the vendor held a one-day training session for assessors and reviewers one week before starting assessments, and then facilitated weekly coaching calls. Colorado has reported that it will enlist a contractor for training as well. The state plans to issue a RFP in August 2018. In addition to training, Connecticut's assessment vendor provided assessors with an information sheet about FASI to share with potential participants. Minnesota uniquely focused on communications and messaging to lead program assessors and providers by including updates in community meetings and newsletters, such as the Care Providers of Minnesota.

States also selected which Medicaid programs and populations to include in FASI Round 2. Most states kept the same programs they used in Round 1. Minnesota changed all of its programs and populations in Round 2 to target individuals less likely to have guardians because Minnesota experienced a high refusal rate in Round 1. Minnesota continued to report challenges in Round 2 with missing data in its Medicaid enrollment data from Medicaid Management Information System (MMIS). Specifically, most phone numbers were missing for beneficiaries in one program. The state manually searched each beneficiary in the state's case management system to populate the data. The only other state to change its target programs between rounds was Connecticut, which added the Mental Health HCBS Waiver program in Round 2. **Exhibit 15** presents the state programs and populations that participated in Round 2.

Exhibit 15: FASI Round 2 Participating Medicaid Programs and Populations

State	Program	Target Populations	Medicaid Funding Authority
Arizona	Arizona Long Term Care System, Elderly and Physically Disabled expansion	Aged, Physical Disability	1115 demonstration
Colorado	Brain Injury Waiver	Brain Injury	1915(c)
	Developmental Disabilities Waiver	Developmental Disability	1915(c)
	Community Health Supports Waiver	Mental Illness	1915(c)
	Supported Living Services Waiver	Developmental Disability	1915(c)
Connecticut	Money Follows the Person	Aged, Physical Disability, Brain Injury, Mental Illness	1915(c)
	Mental Health HCBS Waiver	Behavioral Health	1915(c)
Georgia	Independent Care Waiver Program	Aged, Physical Disability, Dementia	1915(c)
	Community Care Services Program	Aged, Physical Disability	1915(c)
Kentucky	Home and Community Based Waiver	Aged, Physical Disability	1915(c)
Minnesota	Community Access for Disability Inclusion	Physical Disability	1915(c)
	Elderly Waiver	Aged	1915(c)

Colorado, Connecticut, Georgia, and Minnesota sought CMS approval to provide incentives to encourage the beneficiaries to participate in FASI. CMS allowed the following examples on a case-by-case basis, permitting incentives for beneficiaries only, not others. Colorado gave incentives in Round 1, and their completion rate was over 100 percent. Colorado plans to continue giving incentives, valued at 25 dollars each, in Round 2. Connecticut and Georgia also gave 25 dollar incentives. In some cases, Georgia awarded 50 dollars total when beneficiaries participated in two assessments. Minnesota gave small gift cards as incentives.

TEFT states set Round 2 targets for the total number of assessments they wanted, based on their goals for the analysis. The states that aimed to compare FASI with an existing assessment tool had different field test processes than the other states. Connecticut prepared for data collection by creating a new version of the state's Universal Assessment with a FASI addendum. Connecticut assessors had both the common Universal Assessment and the version containing FASI. When the assessors visited beneficiaries for the observation and interview, they conducted and recorded both versions. Colorado plans to follow this approach of conducting two versions in one visit. Colorado plans to compare FASI with an adaptation of MnCHOICES, another assessment tool for adults and children created in Minnesota. Georgia's data collection involved two visits. Nurses performed the existing assessment first (i.e., Patient Assessment Form or Multi-Data Set-Homecare Form, depending on the program). Different nurses returned after approximately three weeks to perform a version containing FASI, which Georgia referred to as FASI-incorporated. Georgia also created an electronic tool for the FASI-incorporated assessments that nurses could complete either online or offline.

Targets currently range from 50 to 240 assessments. Colorado has not reported its target because it is in early planning for its November 2018 start date. Connecticut, Georgia, and Minnesota, which have completed their data collection, achieved 58 percent, 99 percent, and 98 percent completion rates, respectively. Connecticut accepted a lower completion rate than other states because it was unlikely to find additional beneficiaries in one of its programs who resided in the community instead of a facility. Connecticut also had a time-consuming process. The state aimed to compare the FASI tool with its current assessment, and its assessors facilitated both assessments on each beneficiary in the sample. When combined efforts yielded 35 assessments, Connecticut had enough data to compare results between the assessments. Just before Georgia began its data collection, the state doubled its target from 100 to 200 total assessments. Like Connecticut, Georgia's assessors conducted two versions of assessments, using the current assessment and a new version that included FASI. For Georgia's comparison analysis, it needed to complete more assessments than Connecticut.

Some states that have not completed data collection also have changed their targets. Arizona originally planned to collect 300 assessments from each of the three managed care organizations. The state reduced the target to 30 assessments each because it decided to focus its analysis on assessor experience with FASI as a replacement tool. To measure assessor experience, Arizona did not need as large a sample.

4. FASI Round 2 Data Analysis

With different objectives for Round 2, states' data analysis and final reports for CMS will vary widely. Arizona, Connecticut, Georgia, and Kentucky were interested in the assessors' experience using FASI. Medicaid program leadership will weigh the assessors' feedback, especially if assessors have strong positive experiences with FASI compared to the existing functional assessment items. In Arizona's managed LTSS structure, the state will consider the managed care organizations' experience before incorporating FASI into performance measure reporting requirements between managed care organizations and the state Medicaid agency. Connecticut asked beneficiaries for feedback on the assessment experience through focus group sessions and distributed surveys to assessors. Additionally, Georgia and Kentucky plan to distribute surveys to the assessors to collect input. Kentucky reported that it plans to analyze the input from assessors, and then present the results to program leadership to determine whether to consider FASI as part of the existing new assessment, Kentucky Home Assessment Test.

While Minnesota did not conduct two assessments with beneficiaries, like Connecticut and Georgia, its objective was still to compare FASI with its existing assessment, MnCHOICES. The state performed a crosswalk between FASI and MnCHOICES, and submitted the crosswalk to the MnCHOICES team for consideration. Colorado will follow a similar approach when it finishes data collection. The state is interested specifically in incorporating parts of FASI, focused on Eligibility Verification and Functioning, into its new assessment tool. Colorado is also reviewing and executing new program eligibility thresholds, and plans to use Round 2 data in that analysis.

5. NQF Endorsement Process

As some states continue to focus on FASI Round 2, IBM Watson Health, George Washington University, and CMS are collaborating to establish FASI-based performance measures and submit these measures for NQF endorsement. This effort is occurring independently of FASI Round 2, but TEFT states have provided input. IBM Watson Health led TEPs in February and July 2018 to refine two proposed FASI performance measures. These performance measures will use data from assessments conducted with FASI to measure operational quality related to person-centered planning in HCBS programs. Additionally, if multiple programs have adopted FASI, state Medicaid agencies can compare performance measure results across HCBS programs. **Exhibit 16** presents the two proposed performance measures.

Exhibit 16: Proposed Performance Measures Related to FASI

Focus Area	Performance Measure
Alignment of individuals' services with needs as documented by FASI	Percentage of individuals 18 years or older who received community-based LTSS with documented needs determined by a FASI and who have at least three personal priorities related to self-care, mobility, or instrumental activities of daily living functional needs within the reporting period
Alignment of person-centered service plans with functional needs as determined by FASI	Percentage of individuals 18 years or older who received community-based LTSS with documented needs as determined by the FASI assessment and documentation of a person-centered service plan that addressed functional needs within the reporting period

Separate from Round 2, IBM Watson Health and George Washington University oversaw field tests in five states (Colorado, Connecticut, Georgia, Kentucky, and Maryland) to help finalize the

performance measures. IBM Watson Health plans to submit the final measures to NQF by spring 2019.

6. FASI Lessons Learned and Best Practices

As three states will begin or complete Round 2 data collection after August 2018, the FASI lessons learned and best practices do not reflect some key activities. However, as of August 2018, TEFT states reported the following lessons learned from participating in, then overseeing, the FASI field tests. The states applied many of the Round 1 lessons to planning their Round 2 efforts. States interested in FASI might use these findings in their planning.

a. Lessons Learned

- Some states retrieved inaccurate or missing information from their IT systems for the FASI samples (Colorado and Minnesota). This issue can affect response rates, cause delays in data collection, and require additional time and resources to fix the sample. States noted the importance of double-checking sample information before beginning data collection to correct any data as early as possible and avoid unnecessary time and effort.
- In Round 1, states had trouble securing guardian approval for beneficiaries with developmental disabilities to participate. Sometimes guardians refused to participate in the assessment or beneficiaries were difficult to contact. In some community settings, states reported that beneficiaries did not have their own phone numbers. Many states reduced the target for assessments with developmental disability populations or increased the size of the samples, and one state shifted programs between rounds.

b. Best Practices

- Provide incentives to beneficiaries to increase response rates. If pursuing this approach, consider whether every population would respond to incentives. Several states provided incentives (Colorado, Connecticut, Georgia, and Minnesota). The positive state experience with incentives in Round 1 influenced Minnesota to implement them in Round 2, and it met 98 percent of its target assessment total.
- Identify where FASI can fit into the state's existing functional assessment and case management processes before testing. FASI includes items on self-care, mobility, activities of daily living, assistive devices, and caregiving; it does not include items on behavioral health needs or clinical needs. States can use FASI for part of the assessment interview and observation process, but not as a comprehensive person-centered assessment to create a full care plan.
- Align FASI testing with other functional assessment initiatives in the state for comparison. Many TEFT states structured their Round 2 testing so they could compare FASI with another tool.

C. Personal Health Record

PHR

Evaluation Research Questions

- How and to what extent were states able to launch, enroll users into, and administer PHRs?
- How and to what extent do individuals receiving HCBS, their families, and their health care providers use a PHR?
- What was the impact of a PHR (e.g., improved care coordination, improved service quality, improved quality of life)?
- What PHR features and functions do users find most useful?

Program Accomplishments

- Colorado, Connecticut, Kentucky, and Maryland have plans to sustain their PHRs or to start new PHR initiatives after the TEFT Demonstration ends
- TEFT states built the PHRs to improve beneficiary communications and HCBS visit verification
- TEFT states piloted the PHRs with people representing all HCBS populations

CMS included PHRs in the TEFT Demonstration to test the use of IT systems by Medicaid HCBS populations accessing their medical and social service information and communicating with HCBS providers. Prior to TEFT, PHRs primarily included clinical information to meet ONC Meaningful Use requirements that patients have access to information electronically within 24 hours of its availability.[19] Since these existing PHRs did not include fields for social service information, the TEFT states sought to collaborate with vendors and design IT systems that capture and report social service information. Another CMS goal was for states to integrate the PHR with existing Health Information Exchange (HIE) activities to coordinate and communicate quality-related information. Six TEFT states (Colorado, Connecticut, Georgia, Kentucky, Maryland, and Minnesota)[20] participated in demonstrating PHRs.

States led individual efforts to launch, enroll beneficiaries into, and administer a PHR for HCBS populations. The process of vendor selection began in early 2016, followed by PHR design, implementation, and enrollment of users. All states, except Kentucky, will continue to work on their PHRs through March 2019. Kentucky completed its PHR efforts in March 2018 and submitted a final report to CMS. The state has since issued a RFP for a new state HIE, which might affect the state's IT infrastructure. As of August 2018, Connecticut has not launched its PHR, but plans to in September 2018. Four states, including Connecticut, have reported plans to adopt their PHRs beyond the TEFT Demonstration. Colorado, Kentucky, and Maryland will maintain their PHRs or start new PHR initiatives to offer the PHRs to all Medicaid HCBS beneficiaries.

This section examines the decisions states made during PHR vendor selection, design, implementation, and enrollment. It also includes lessons learned and best practices for other states and communities interested in planning PHR initiatives.

[19] CMS, HHS. Medicare and Medicaid programs; Electronic Health Record Incentive program—Stage 3 and modifications to Meaningful Use in 2015 through 2017. Final rules with comment period. Federal Register. 2015; 80(200):62761-62955.

[20] Seven states originally planned to pilot PHR systems. Arizona decided not to participate in December 2015.

1. PHR Vendor Selection

Before TEFT, the Department of Defense (DoD) implemented a PHR pilot, the Personal Healthcare Exchange Management System (iPHEMS), with a built-in survey distribution tool, HERMES. The DoD and CMS planned to expand the iPHEMS and HERMES in states as part of TEFT, and specifically referenced the DoD PHR plan in the TEFT funding opportunity announcement. While HERMES utilized Microsoft HealthVault and Google PHR as optional PHR portals, CMS encouraged states to consider any vendor. In summer 2015, this PHR model was no longer available to the TEFT grantees, and CMS encouraged states to pursue other PHR strategies, such as building or procuring a PHR. In early 2016, the states developed new work plans for their PHRs. This was among the first milestones in the states' PHR efforts; followed by PHR launches and the implementation of Lewin's PHR User Survey (see **PHR Milestones**).

PHR Milestones

- **2014-2015:** TEFT grants awarded and states planned to implement the DoD PHR
- **2016:** TEFT states began individual PHR design and planning
- **October 2016:** Minnesota first state to launch its PHR pilot
- **September 2017:** Maryland and Kentucky launch PHR pilots (including Maryland's phone tool)
- **March 2018:** Colorado and Georgia launch PHR pilots
- **September 2018:** Connecticut launches PHR pilot
- **2017-2018:** Lewin fields its PHR User Survey

Several factors influenced states' decisions about vendors, including CMS' recommended features, any pre-existing state PHR initiatives, availability of a statewide case management system, and the long-term vision for a Medicaid PHR or other health IT initiatives. States had different overall timelines and took different approaches to selecting a vendor and designing the PHR tool that would work within their pre-existing state systems and processes. CMS' recommended features stemmed from the original plans with DoD, including the ability to receive and display surveys, to access information entered by HCBS providers, and to upload information from other sources.

a. PHR Environmental Scans and Internal Planning

As states began PHR planning, they worked with stakeholders and gathered information through PHR system environmental scans and technical requirements planning meetings, such as joint administrative design sessions. Arizona, Colorado, Georgia, Maryland, and Minnesota conducted environmental scans to create requirements lists and better understand the PHR vendor market. Before withdrawing from PHR testing, Arizona reviewed 57 potential PHR systems before ultimately deciding not pursue a PHR initiative. Colorado surveyed HCBS beneficiaries and providers to create a list of important data elements and other requirements for the PHR. Maryland hired an independent contractor to review existing PHR systems and create a requirements list. Connecticut, Georgia, and Minnesota also reviewed the PHR market and analyzed which features they needed.

While some states included HCBS beneficiaries in PHR planning, others focused on internal state planning. Kentucky and Minnesota held workshops with state agency stakeholders. Kentucky considered expanding on an existing PHR pilot overseen by its state HIE, but instead partnered with the Medicaid IT staff to add a module to the statewide case management system. This system provided Kentucky with social service data for the PHR, such as program enrollment and case management contacts. Kentucky's case management system vendor led joint administrative design

sessions to develop the state's PHR requirements and design. Staff from Kentucky's HCBS programs and IT division participated in the series of sessions. Minnesota hired an independent contractor to hold similar workshops with state stakeholders and to refine its PHR requirements.

b. PHR Contracting

After developing requirements lists, states moved to the PHR contracting phase and incorporated their requirements and limitations into RFPs and other contracting tools. States assessed their available funds to develop vendor budgets. States also considered the vendors' fee structures, such as whether vendors charged a fee for every account. Two states, Minnesota and Connecticut, released RFPs. Minnesota's contractors and subject matter experts helped develop a Business Requirements Supplement for its RFP, which communicated the state's vision for the PHR. Although Minnesota only received one response to the first RFP in 2015, the community collaborative had the appropriate prior health IT experience to move forward. The Otter Tail County community collaborative's existing relationship with a PHR vendor, RelayHealth, provided an ideal environment to launch an off-the-shelf model of the RelayHealth PHR within one year. The state also issued a second RFP in 2016 and began work with another community collaborative–Southern Prairie. Connecticut differed from Minnesota by releasing a RFP for PHR system vendors rather than for communities interested in leading a PHR initiative. Connecticut's 2015 RFP included requirements for connecting to existing state IT systems. Connecticut also received few responses, and reissued the RFP in 2016. The state selected an off-the-shelf IT vendor in 2017. Contract negotiations delayed Connecticut's PHR. The state currently plans to launch in September 2018.

Some states used existing vendors already working on other state IT systems to ensure interoperability between the PHR and state's data sources. While more data were directly available in these systems, the states faced the challenge of competing state priorities. Kentucky and Maryland contracted with the vendors for their statewide case management systems. A prior experience with an off-the-shelf vendor, which the state found to be too rigid, influenced Kentucky's decision. Maryland also previously piloted a PHR that drew few users. Kentucky and Maryland aimed to have useful data straight from the case management system in their PHRs. Colorado partnered with its state HIEs, which contracted with the system vendor.

States that did not have a pre-existing statewide case management system prior to TEFT evaluated potential vendors using environmental scans and live vendor demonstrations. For example, Colorado invited PHR vendors from the state's earlier environmental scan to perform system demonstrations for a group of HCBS providers and beneficiaries. Colorado's original vision was to offer beneficiaries the choice of three PHR systems. However, the state assessed the PHR systems' features against its requirements, and selected only one PHR system. Georgia also viewed several in person vendor demonstrations, but did not find a vendor that met the state's need for customization. As a result, the state partnered with Georgia Tech Research Institute to develop a custom PHR system.

c. *Types of PHRs*

PHR platforms are generally available in either an off-the-shelf or a custom-design model. Off-the-shelf models are completely built PHR platforms that can be implemented quickly but generally offer little option for customization. Custom-design PHRs typically require more time in the design phase, as a state determines its priority features and functions. **Exhibit 17** presents the states' PHR vendors and the names of the PHR pilots. The exhibit also categorizes whether the state selected an off-the-shelf or custom design PHR system, and lists some of the states' PHR capabilities.

Exhibit 17: TEFT State PHR Vendors and System Attributes

State	PHR Name	Vendor	PHR Vendor Type	Unique Characteristics
Colorado	Colorado PHR	FEi Systems (subcontract with Colorado Regional Health Information Organization)	Off-the-Shelf	Interoperability with state HIEs
Connecticut	Connecticut PHR	InterSystems	Off-the-Shelf	Integrated into existing state workflow (e.g., IT help desk, single sign-on)
Georgia	MPower	Georgia Tech Research Institute	Custom Design	Capable of pushing data updates to a user via text
Kentucky	Waiver PHR (built but not visible to users) benefind, Medicaid Waiver Management Application (used for pilot)	Deloitte	Custom Design (within case management system)	Module of the existing state case management system (e.g., view care plan)
Maryland	MyLTSS	FEi Systems (Web-Based PHR Vendor) Xerox (Phone-Based PHR)	Custom Design (within Case Management System)	Engages users with their care team and services (e.g., flag services for review by care team)
Minnesota	RelayHealth (Otter Tail County); CareTrac (Southern Prairie)	RelayHealth (subcontracts with Otter Tail County and Southern Prairie)	Off-the-Shelf	Able to pull information from several state data sources (e.g., data aggregator)

Half the TEFT states selected off-the-shelf PHR systems; the other half pursued custom-designed PHRs. The off-the-shelf PHR vendors provided the states with pre-set features and functions that required less time to implement. For example, Minnesota was the first TEFT state to launch the PHR in October 2016 partly due to the state's choice of an off-the-shelf model. However, off-the-shelf PHRs also had their limitations. States found that the PHRs tended to focus more on clinical information and, therefore, were less user-friendly for the HCBS population. A custom-design PHR platform often required more time and resources to create, but offered states the most flexibility and options for including social service information.

2. *PHR Design*

The PHR design phase required the states to refine PHR features and functions, complete user interface and other testing, and develop a system of project and vendor management. States faced challenges working with PHR vendors to include certain features and functions. Beneficiaries

expected to view information in the PHRs that states would need to push from another IT system, such as the case manager's contact information. To do this, states needed interoperability between the PHRs and at least one IT system, such as a case management system, provider electronic health record (EHR), or MMIS. States also needed to mitigate an issue involving using email addresses to set-up PHR user accounts. Many members of HCBS populations do not regularly use a computer or maintain an email address, but most PHR systems require users to log in with an email address or verify their account via email. Several states resolved this issue; for example, Georgia signed up PHR users for email accounts and taught them how to use both an email account and the PHR. In Maryland, PHR users coordinated with case managers to share certain personal information to verify during account set-up. Several states worked with PHR users and secondary users, such as a caregiver, friend, or family member, to create accounts for secondary users with their existing email addresses. Some secondary users acted as the main user of the PHR on behalf of beneficiaries.

a. PHR Features and Functions

From the TEFT Demonstration's funding opportunity announcement, CMS expected states' PHR systems to adhere to current health IT data standards and ONC certification criteria for PHRs. Additionally, CMS expected TEFT states to address accessibility and usability considerations for the HCBS beneficiaries, such as having the capability to integrate the PHR with screen readers. The systems needed to comply with privacy standards, meet security requirements for data encryption, and track and report user and login logs. Health IT standards, such as Consolidated-Clinical Document Architecture (C-CDA), allow the exchange of information between different systems using data elements that each system can process and display. States shared several common PHR features and functions in response to CMS' expectations. **Exhibit 18** compares the general categories of PHR features and functions across the states.

Exhibit 18: PHR Features and Functions Common across TEFT States

Feature/Function Category	Colorado	Connecticut	Georgia	Kentucky	Maryland	Minnesota
Accessible Technology (e.g., screen readers, large print)	X	X	X	X	X	X
Clinical Data (e.g., laboratory results, medications)	X	X	-	-	-	X
Non-Clinical Data (e.g., personal goals, services, HCBS provider contact information)	X	-	X	X	X	X
Admissions, Discharge, Transfer Data	X	-	-	-	-	X
Care summary document	-	X	-	X	-	X
Communication with care team	X	-	X	X	-	X
Care plan	X	-	-	X	-	-
Real-time data (within 24 hours)	X	-	-	X	X	X

Within the categories presented above, states selected specific features and functions that were attainable and of interest to stakeholders. States reported how critical consistent communication between the state and vendor was to refine the PHR design and set reasonable expectations for the final PHR system. **Exhibit 19** shows these state-specific features and functions, such as data elements and accessibility features. When considering the types of data to include, states considered clinical and non-clinical (i.e., social service) information. Georgia and Maryland displayed social service information only in their PHRs. Georgia used the PHR as an opportunity to obtain more information from the beneficiary, and focused the design on more user-interactive elements; the state was willing to manually push data to the PHRs. Colorado, Kentucky, and Minnesota displayed both clinical and non-clinical data in their PHRs. Since Colorado directly involved the states' HIEs, Colorado Regional Health Information Organization and Quality Health Network, Colorado's PHR included connections with the HIE data. Connecticut, Kentucky, and Maryland also explored how to connect their PHRs to the state HIEs. Kentucky benefits from the fact that the state HIE is an agency within the state government. Connecticut's HIE is under development and any connections to the PHR will be in the future. Maryland and Kentucky also connected their PHRs into the existing statewide case management systems to directly access social service information.

Some states with custom design PHR systems incorporated stakeholder feedback into the PHR design during the TEFT Demonstration. Other states that used off-the-shelf PHRs with some customization still gathered stakeholder feedback, but compiled it as lessons learned to apply to future health IT initiatives. States used focus groups and surveys to gather feedback from stakeholders. Colorado convened focus groups in five regions to hear perspectives from HCBS case managers and beneficiaries. Georgia used surveys and one-on-one interviews to obtain input from beneficiaries before using the PHR. Maryland and its vendor, FEi Systems, held focus groups where beneficiaries used a mock system and provided feedback. The feedback received from beneficiaries and other stakeholders concerning both the PHR user interface and the available information influenced the states' PHR designs.

Exhibit 19: Detailed PHR Features and Functions

State	PHR Features
Colorado	• Accessibility: large print, adaptive software built-in, and widgets/icons • Non-clinical data: current assessment, care plan, units of service, primary care provider • Communication with care team: secure messaging with case manager • Admission, discharge, transfer data (i.e., hospital visit information, admit and discharge dates, encounter location, attending provider name) • Other: demographics, Medicaid identifier, calendar
Connecticut	• Communication with care team: direct secure messaging • Non-clinical data: calendar/service appointment reminders • Accessibility: multilingual capability • Functionalities: patient consent registry, data aggregating toolkit

State	PHR Features
Georgia	• Clinical data: health summary, health history, medications, allergies, appointment and prescription refill reminders • Non-clinical data: care team leader contact information, personal preferences, HCBS provider notes • Communication with care team: secure messaging • Functionalities: data aggregation, customized user interfaces for each user role • Other: notifications through text
Kentucky	• Accessibility: large print, adaptive software built-in • Non-clinical data: emergency contact information with wallet card, information and referral resource list, care plan • Functionalities: user consent
Maryland	***Web-Based PHR System*** • Non-clinical data: service list, service plans • Communication with care team: flag issues/concerns with HCBS services ***Phone-Based System*** • Functionalities: interactive voice response, change personal identification number • Non-clinical data: service list (no more than 31 days old), services by date and time, Medicaid announcements, supports planning agency contact information • Communication with care team: flag issues/concerns with HCBS services

3. PHR Implementation and Enrollment

a. PHR Timelines

After the design phase, states moved to the final phase of PHR implementation. Due to schedule delays, most states implemented the PHR later than they planned.

States experienced challenges adhering to the original PHR timelines set in early 2016 due to state contracting approval processes, changes in state leadership, and issues with technical requirements. Any delays in state approval processes affected PHR timelines. Some states shortened user-testing phases or removed releases of some features. Other states kept longer PHR design phases and scaled back on user enrollment and user targets. For example, Kentucky's governor changed during the TEFT Demonstration, and the new governor placed activities, including the state's PHR module, on hold for review. To meet the PHR requirements of the TEFT Demonstration, Kentucky used benefind, a case management system module with PHR-like capabilities, such as access to program enrollment information, in place of launching a different module that was built but not activated for users. Connecticut experienced contracting delays due to state contracting processes. **Exhibit 20** below presents planned state PHR launch dates and actual launch dates, with context for the delays.

Exhibit 20: PHR Implementation Schedule Launch and Delays

State	Planned Launch Date	Actual Launch Date	Reason for Delay
Colorado	November 2016	March 2018	Vendor contracting
Connecticut	October 2016	August 2018 (planned)	Vendor contracting
Georgia	June 2017	March 2018	Vendor contracting, IT security
Kentucky	October 2016	September 2017	Change in state leadership, competing IT system priorities
Maryland	July 2017	September 2017	Vendor contracting
Minnesota	Otter Tail County: October 2016 Southern Prairie: November 2017	Otter Tail County: October 2016 Southern Prairie: November 2017	N/A; launched manual process on schedule, used phased approach for adding additional fields and automated features

b. PHR Users and Pilots

Due to delays launching the PHR that resulted in a shorter period to enroll users, all states reduced their user targets. Some states set aside time to evaluate their PHRs through stakeholder engagement, such as one-on-one interviews. Some states also planned to release new PHR features after the initial implementation of the systems. **Exhibit 21** compares the targeted and actual number of PHR users. Connecticut's user target is included, but the actual is unknown after Connecticut's launch in September 2018. Additionally, Kentucky reported that 300 beneficiaries had active PHR benefind accounts in the Medicaid Waiver Management Application. These users did not create the accounts as part of PHR implementation and enrollment under the TEFT Demonstration, and the state did not have information on whether they viewed the social service information classified as the state's PHR.

Exhibit 21: Planned and Actual Number of PHR Users

State	PHR User Target	Actual Number of PHR Users
Colorado	25	17
Connecticut	150-200	N/A; planned launch September 2018
Georgia	100	11
Kentucky	300	Unknown
Maryland	18	15
Minnesota (including both communities)	28	31

States implemented the PHRs gradually, either with limited system features, or with a region or pilot group; this enabled the states to obtain user feedback and release updates throughout the implementation phase. States took different strategies to launch the PHR and enroll users. Some states decided to focus on a certain geographic region while other states conducted a statewide rollout. States also either focused on a certain waiver population or opened the PHR to all Medicaid HCBS beneficiaries. **Exhibit 22** shows which programs and populations states targeted to identify PHR users.

Exhibit 22: PHR Programs and Populations

State	Program	Target Populations
Colorado	Supported Living Services Waiver	Developmental Disability
	Elderly, Blind and Disabled Waiver	Aged
Connecticut	Money Follows the Person	Developmental Disability, Aged, Brain Injury, Serious Mental Illness
Georgia	Independent Care Waiver Program	Aged, Physical Disability, Dementia
	Community Care Services Program	Aged, Physical Disability
	Service Options Using Resources in a Community Environment Program	Severe Mental Illness
Kentucky	Home and Community Based Waiver	Developmental Disability, Elderly, Brain Injury, Physical Disability
Maryland	Community Options Waiver	Aged, Physical Disability
	Community First Choice Waiver	Aged, Physical Disability
	Community Personal Assistance Services Waiver	Elderly , Physical Disability
Minnesota	Community Access for Disability Inclusion	Physical Disability
	Elderly Waiver	Aged
	Developmental Disability Waiver	Developmental Disability
	Personal Care Assistance Waiver	Physical Disability, Mental Illness
	Brain Injury Waiver	Brain Injury
	Alternative Care	Aged
	Adult Mental Health	Mental Illness

Colorado, Georgia, Maryland, and Minnesota conducted beneficiary pilots. Colorado completed alpha testing of the PHR with eight beneficiaries and incorporated their feedback before expanding the features and functions of the PHR. Georgia formed two participant groups for the PHR pilot. One group of 11 beneficiaries actively used the platform, while the other group of 15 beneficiaries did not receive the PHR and served as the control group. Georgia surveyed and interviewed both groups of beneficiaries on their experiences. Maryland completed a pilot with 15 beneficiaries then launched the PHR to the general Medicaid HCBS population. At the beginning of Maryland's pilot, staff conducted in-person trainings and offered tablets to users to access the PHR. The state interviewed users at the end of the pilot for feedback. Although Maryland also launched a PHR phone-based tool, few users accessed the tool and the state elected not to sustain this tool after the TEFT Demonstration. Rather than focus on a statewide rollout, Minnesota implemented the PHR within one community and expanded efforts one year later to a second community. By conducting PHR design and rollout in a smaller, state-chosen environment, Minnesota's participating HCBS providers and local agencies had preexisting connections and prior experience with health IT. Minnesota created pilot groups in both communities to provide initial feedback as the state sought additional users.

4. PHR User Survey Process and Findings

a. Lewin's PHR User Survey Findings

In 2017 and 2018, Lewin conducted a survey of PHR users to understand their experiences with the PHRs (see **Appendix D**). Lewin conducted the survey with all states except for Connecticut, and received 39 total survey responses. **Exhibit 23** below presents the number of survey respondents by state and the associated survey response rates.

Exhibit 23: PHR User Survey Participation

State	PHR Users	Number of User Survey Responses	Response Rate
Colorado	17	8	47%
Georgia	11	2	18%
Kentucky	Unknown	12	N/A
Maryland	15	9	60%
Minnesota (including both communities)	31	8	26%

The following findings are from Lewin's aggregate analysis of the 39 responses. The survey asks PHR users to classify themselves as users or non-users, which they might select if they set-up an account, but did not choose to review any information. Among the survey respondents, 60 percent identified as PHR users. However, less than 45 percent found their PHRs useful as a communication tool. This may be related to the features available within the specific PHR, such as not having the capability to communicate with the care team. Fewer participants reported feeling empowered as a result of using the tool (36 percent). This indicates that the communication features and quality of real-time data in PHRs need to improve to meet users' expectations. Half of PHR users reported that they felt their information was secure in the PHR (46 percent). Further research is needed on how to ensure technology users in HCBS populations feel safe and secure; future beneficiary-related health IT initiatives should consider how to communicate security requirements to users.

In addition to cross-state findings, Lewin analyzed data on each state's PHR. Survey results for Maryland stand out in most categories. Maryland's users, who participated in user testing and training as part of a pilot group, were favorable. The respondents unanimously reported that they would like to continue to use their tool, and 86 percent agreed that they would recommend their PHR to a friend. Since Maryland's PHR also included the ability to review personal assistance services pulled from the case management system, report issues to state staff, and review service plans, these scores indicate that in addition to engagement and training, the PHR's features are key to a user's experience.

While Lewin's aggregate and state-level findings provide interesting insights, they require additional research as the sample size was limited. Further research could help confirm these findings and provide additional insights on factors that make a PHR useful for Medicaid HCBS users.

5. Ongoing PHR User Engagement

a. PHR User Engagement

States faced difficulties maintaining a consistent group of PHR users as well as recruiting additional users during the TEFT Demonstration. States engaged beneficiaries at various steps throughout the overall PHR process. Some states did not heavily involve beneficiaries in the vendor selection and design stages of the PHR, instead waiting until they implemented the PHR system to recruit users. For example, once a beneficiary agreed to participate in Minnesota, the individual received one-on-one training from the state, and an ongoing list of requested actions to test with a reminder sent through the PHR. The state asked for feedback after users engaged with the PHR system. In contrast, Colorado engaged beneficiaries early in the PHR process through regional focus groups. However, Colorado halted PHR activities in 2016 due to administrative challenges. When the state resumed engagement in 2017, many of the previously engaged beneficiaries were not interested. Colorado held several rounds of focus groups in 2017 and 2018 to recruit more PHR participants. Like Minnesota, Colorado also requested that users test certain tasks or features in the PHR.

Each state's approach to training users varied. Some states delegated training to the PHR vendors, who developed user manuals or held trainings. Other states provided training directly, either one-on-one or in groups. Georgia, Maryland, and Minnesota trained both beneficiaries and case manager users, so the case managers could support beneficiaries, if needed. Several states reported that case manager engagement was important in the pilots, as case managers were often the natural point of contact for beneficiaries needing assistance with the PHR. Case managers who participated in the PHR design could best convey the value of the PHR to beneficiaries.

b. PHR Sustainability

Colorado, Connecticut, Kentucky, and Maryland have plans to continue their PHR activities after the TEFT Demonstration. These states connected their PHR systems with existing state IT systems, and focused efforts on designing PHRs that the states wanted to use long-term. Colorado also secured funding from the Colorado General Assembly to expand the PHR to the general Medicaid population. Similarly, Connecticut received enhanced federal match through the MMIS Implementation Advanced Planning Document process that the state will use to roll out the PHR to the broader Medicaid population. Although Kentucky piloted users accessing information in its case management system, its intended PHR is not live and the state will keep the PHR in the case management system for a potential future launch. Maryland also expects to implement additional features and offer the PHR to additional agencies and programs.

Georgia and Minnesota do not have plans to sustain the PHRs in their current form, but the states will continue to use lessons learned from the PHR pilots for future state health IT initiatives and may plan new PHR initiatives. Georgia conducted user experience testing with both beneficiaries and case managers prior to designing the PHR tool. The lessons learned from this research will inform future consumer-facing tools developed by the state health department. However, since the Georgia PHR depends on manual data entry, the state realized it was not feasible to sustain the PHR in its current form. Minnesota gathered lessons learned and best practices throughout the TEFT Demonstration and compiled them into a PowerPoint presentation that state staff shares with stakeholders. Through the PHR pilot, Minnesota also gained capabilities that helped establish automated data transfer between state systems.

6. PHR Lessons Learned and Best Practices

TEFT states independently managed the PHR pilots and overcame many challenges throughout the TEFT Demonstration. CMS and IBM Watson Health led meetings for state-to-state sharing, which states used to help refine plans and mitigate risks. States and communities interested in PHR adoption will find these points helpful.

a. Lessons Learned

- States had trouble adhering to their original PHR timelines due to state contracting approval processes, changes in state leadership, and issues with technical requirements. These issues are sometimes unavoidable, but state staff should be aware of state regulations and requirements for IT system initiatives and allot time for those processes.
- Recruiting and maintaining an interested group of beneficiary users was another challenge for TEFT states. Some states wanted to build interest and momentum among beneficiaries by sharing their plans for the PHRs. However, long design and implementation periods can affect interest among potential users. The communications strategy for a beneficiary-facing health IT initiative should be deliberate and phased.
- In the pilots with HCBS beneficiaries, case managers were important stakeholders for disseminating information to beneficiaries (Colorado and Minnesota) and assisting with training or trouble-shooting (Georgia and Maryland).
- IT systems commonly require account verification through an email account as a security measure. However, many potential PHR users in the HCBS populations did not regularly use a computer or have an email address. Several states created workarounds to create PHR user accounts without email addresses (Maryland), or helped users with setting up their first email addresses (Georgia). States should consider all aspects of the beneficiary user's interaction with a system in the planning and design phases.

b. Best Practices

- Solicit input from the target populations during the design phase of an IT system (Colorado, Georgia, and Maryland), and attempt to engage users' interest in the system by requesting completion of certain tasks and activities (Colorado and Minnesota).
- Design IT systems that are responsive to the needs and capabilities of the target populations. For example, including assistive technology functions in a system for populations with blindness or other disabilities might positively influence adoption and use.

D. Electronic Long-Term Services and Supports

Through developing and testing of an eLTSS plan, CMS aimed to identify, evaluate, and harmonize an eLTSS standard for exchanging care plans in HCBS programs. The electronic exchange of care plan information can help improve care coordination of a Medicaid beneficiary's services. Six TEFT states (Colorado, Connecticut, Georgia, Kentucky, Maryland, and Minnesota) supported this effort by participating in the eLTSS initiative with ONC's Tech Lab. The final eLTSS dataset includes elements that are valuable to both medical and social service providers. CMS and ONC also aimed to incorporate beneficiary priorities, preferences, and goals in the eLTSS dataset to carry person centeredness through the initiative.

eLTSS Evaluation Research Question

- How and to what extent were states able to participate in and contribute to the ONC eLTSS Tech Lab initiative, and to pilot the eLTSS dataset?

Program Accomplishments

- Created eLTSS dataset with 56 data elements
- HL7 accepted eLTSS dataset into balloting process

For IT systems to adopt and incorporate the eLTSS dataset in the future, it needs to adhere to recognized health IT standards. CMS, ONC, and TEFT states are currently collaborating with Health Level 7 (HL7), a standards development organization, to review and include the eLTSS dataset in a standard. The eLTSS dataset consists of 56 data elements, organized in categories such as beneficiary demographics and person-centered planning (see **Core eLTSS Dataset Categories**).

This section examines the evolution from an eLTSS record to an eLTSS dataset, the role of the eLTSS initiative, the process of harmonizing and validating the dataset, and state pursuit of an eLTSS standard through HL7 collaboration.

Core eLTSS Dataset Categories

The 56 data elements fall into the following categories:

- Beneficiary Demographics
- Goals and Strengths
- Person-Centered Planning
- Plan Information
- Plan Signatures
- Risks
- Service Information
- Service Provider Information

1. Federal Authority and eLTSS Initiative Background

In addition to TEFT's alignment with health care quality provisions in the ACA, the eLTSS work also leverages opportunities under HITECH to standardize electronic exchange beyond Medicaid and Medicare eligible providers and hospitals, expanding to HCBS as an area of need of health IT standards. The eLTSS dataset also supports CMS' requirements for person-centered service plans, as defined in the HCBS 1915(c) Waiver Final Rule.[21] Other federal provisions and programs that align with the eLTSS initiative include:

- Health Homes for Enrollees with Chronic Conditions, Section 2703 of the ACA–requires coordination for individuals within health homes. States could evaluate the eLTSS dataset for potential data elements to standardize in HIE efforts.

[21] CMS. (n.d.). *Home & Community-Based Services* 1915(c). https://www.medicaid.gov/medicaid/hcbs/authorities/1915-c/index.html

- MFP Rebalancing Demonstration, Section 2403 of the ACA–provides funding to states to remove barriers and improve an individual's access to community supports and independent living arrangements. The eLTSS dataset might contain data elements of interest to support electronic exchange between providers.

The eLTSS initiative is a partnership between CMS and ONC. In 2014, CMS leadership proposed working with Medicaid beneficiaries and states to create an eLTSS record. CMS intended for an eLTSS record to resemble the functionality of an EHR with additional parties, such as social services providers and beneficiaries, contributing to the record. CMS and ONC prepared for the eLTSS initiative by issuing a call for participation, developing success criteria, and engaging stakeholders, such as HCBS provider and consumer advocacy organizations. Through the eLTSS initiative, traditional health IT and clinical communities began new dialogue with the HCBS and consumer advocacy communities.

eLTSS Milestones

- **November 2014:** eLTSS initiative began
- **October 2015–August 2016:** eLTSS Round 1 data element harmonization
- **October 2016–March 2017:** eLTSS dataset Round 2 pilots
- **May–August 2017:** Final eLTSS dataset harmonization
- **September 2017:** ONC publication of final eLTSS dataset
- **September 2018:** HL7 ballot on eLTSS dataset

The ONC Tech Lab (previously known as the S&I Framework) created the eLTSS initiative and facilitated the identification and testing of the eLTSS dataset. The ONC Tech Lab serves as a public forum to convene and collaborate with public and private sector groups on HIE and interoperability initiatives. The eLTSS initiative is one of the first ONC Tech Lab initiatives to focus on HCBS beneficiaries and settings. Previous ONC initiatives, such as the Longitudinal Coordination of Care initiative, had a related focus on electronic care planning within clinical and institutional settings.[22] The staff leading the eLTSS initiative used tools typical of an ONC Tech Lab initiative, such as a project charter, a workgroup with a specific development task, and use cases. ONC also created a Requirements Traceability Matrix to support the eLTSS pilots. The Requirements Traceability Matrix mapped proposed eLTSS dataset items to existing standards, regulations, and practices in place in TEFT states. Operationally, ONC used the Requirements Traceability Matrix to measure state participation and adherence to the eLTSS Pilot requirements. In addition to the six TEFT states, several IT companies and a social service provider participated in the initiative (e.g., Meals on Wheels of Sheboygan County, FEi Systems, Therap Services, Medical Micrographics, Netsmart). The eLTSS initiative first met in November 2014. There were several other eLTSS milestones during the TEFT Demonstration (see **eLTSS Milestones**).

2. Evolution of eLTSS Initiative

Although states have electronic Medicaid systems for authorization and payment, electronic capabilities for LTSS planning and coordination are limited and most HCBS providers use paper-

[22] The Longitudinal Coordination of Care initiative began in October 2011 as a community-led initiative to explore interoperability challenges in long-term, post-acute care transitions. The main initiative activity was to identify and validate a standards-based longitudinal care management framework built around the needs and experience of the patient. In 2014, the initiative ended by sending artifacts to HL7 workgroups. Longitudinal Coordination of Care served as the precursor to the eLTSS initiative.

based processes. Originally, the eLTSS initiative required TEFT states to produce an eLTSS record. This record would electronically exchange service or care plan data between PHRs, community-based information systems, and clinical systems. The eLTSS record was to encompass a wide variety of data sources including both clinical and non-clinical data. ONC began the eLTSS initiative with the assumption that states either already had electronic means of exchange, such as PHRs, or would be able to quickly adopt an off-the-shelf PHR as part of the TEFT Demonstration. However, as the TEFT Demonstration progressed, the PHR and eLTSS components diverged as states implemented their PHRs on different schedules.

ONC launched the eLTSS initiative in November 2014, working with community members to review and finalize a charter and review potential data elements. When the eLTSS initiative began to develop use cases and functional requirements, Minnesota advocated for the use of a three-tier system to allow states to select the tier that best reflected the state's current infrastructure for eLTSS record exchange (see **eLTSS Tiers**). States could progress through the tiers in incremental steps for testing and implementation based on the infrastructure available to them over time. The tiers were Tier I–Basic, Non-Electronic Information Exchange; Tier II–Secure, Electronic Data Exchange; and Tier III–Complete eLTSS Data Model and Exchange. Each tier built on the previous tier and had increasingly sophisticated technical requirements. The Round 1 pilot also focused on two user stories: User Story 1–LTSS Eligibility Determination, eLTSS Plan Creation, and Approval, and User Story 2–Sharing a Person-Centered eLTSS Plan. States selected either one or both user stories to pilot based on state electronic infrastructure.[23]

eLTSS Tiers

TEFT states demonstrated the shift from non-electronic testing (Tier I) of the eLTSS dataset to electronic testing (Tier II)

- **Tier I: Basic, Non-Electronic Information Exchange—**establish information infrastructure for Tiers II and III; information can be exchanged by paper, fax, or other secure method (minimum requirement for Round 1 pilot)
- **Tier II: Secure, Electronic Information Exchange—**exchange data, reports, and files defined in Tier I; leverage established content and transport standards
- **Tier III: Complete eLTSS Data Model and Exchange—**implement complete eLTSS data model; import/export eLTSS data via robust technologies

a. eLTSS Round 1 Pilot

The eLTSS Round 1 pilot started in October 2015 and ended in April 2016. The Round 1 pilot required states to complete an initial pilot presentation, identify a use case and tier, complete the Requirements Traceability Matrix by working with state staff and other stakeholders, and present a pilot report-out presentation on the All Hands Calls. TEFT states used the Requirements Traceability Matrix to analyze proposed eLTSS data elements against existing information in use in their Medicaid HCBS programs. States provided input on the data elements, such as other types of information that providers would like to see in the eLTSS plan.

Throughout the eLTSS initiative, ONC led All Hands Calls to convene the initiative's 100 committed members, including approximately 30 representatives from TEFT states. During All Hands Calls, ONC reviewed common data elements from the states' care plans and asked for the community's input. Community members labeled each data element as either "core", or necessary

[23] ONC Tech Lab. (2018). eLTSS Home. https://oncprojectracking.healthit.gov/wiki/display/TechLabSC/eLTSS+Home

for the dataset, or "non-core", which were important, but not standard to all LTSS. The result of Round 1 was an eLTSS dataset with 47 core data elements.

States found the Round 1 pilot requirements challenging as many of the data element domains required by the Requirements Traceability Matrix existed in functional HCBS assessments. Due to the proprietary nature of some functional assessments, such as InterRAI, states could not disclose all the information included in the Requirements Traceability Matrix. States brought these challenges to the ONC team, which subsequently held weekly Requirements Traceability Matrix working sessions during the All Hands Calls. When issues surrounding domain identification persisted, ONC responded by refocusing the eLTSS initiative from an eLTSS record to an eLTSS plan.

During Round 1, as ONC and community members uncovered the complexities around standardizing a record, ONC and CMS decided to change the scope of the eLTSS initiative from creating an eLTSS record to creating a harmonized dataset that can populate a care plan to facilitate the TEFT grantees work in these areas within the grant period. The community determined that it needed to focus on standardizing the components that systems exchange, which makes up a care plan, not a record was more feasible. Further, the community learned that it would be difficult to standardize the entire structure of a care plan and decided to focus on standardizing across core data elements that are in a care plan.

As the initiative progressed, states voiced concern over the effectiveness of using tiers, as states were not able to develop the capability of electronic exchange during the TEFT Demonstration. States suggested that tiers were obsolete because states would not be able to advance through the tiers during the period of the initiative. As the scope of the initiative changed, states discussed tiers less, but still maintained regular reporting on tiers.

b. eLTSS Round 2 Pilot

The Round 2 pilots spanned from September 2016 to March 2017. ONC expected TEFT states to validate 80 percent of the core dataset, or 38 of 47 elements, with at least three HCBS providers. ONC used the Round 2 pilot results from HCBS providers as input to lead another round of data element harmonization and further refine the eLTSS dataset. The final output of the eLTSS initiative was the final eLTSS dataset, consisting of 56 core data elements.

Connecticut Round 2

States identified pilot participants to validate the core dataset. Connecticut completed unique tasks in Round 2 because it aimed to test and implement the eLTSS dataset in a self-directed HCBS program. Beneficiaries in Connecticut's Community First Choice program employ and manage their own service providers. The eLTSS dataset would help them record and send standardized information to other LTSS providers. Connecticut created a crosswalk of the final eLTSS dataset to the HL7 C-CDA Release 2.1 Care Plan Document template. The C-CDA Care Plan is a standard for a care plan document. Direct Secure Messaging commonly transmits this standard. To have a starting point for creating a web-based form containing the eLTSS dataset, Connecticut analyzed the similarities between the C-CDA Care Plan structure and dataset, and the eLTSS dataset. The state worked on the crosswalk with a local care management agency supporting Medicaid HCBS programs. Connecticut developed a web form containing the eLTSS dataset. As of August 2018,

Connecticut has launched a pilot with 25 beneficiaries and select HCBS providers across the state's Medicaid HCBS programs. In preparation for the pilot, four Access Agencies tested the new system. Connecticut anticipates that the Community First Choice program will implement the web form with the eLTSS dataset into its normal operations over time.

The other TEFT states received feedback from HCBS providers in Round 2 through either a survey or a focus group. Some states asked providers to send care plans with the eLTSS dataset and then give feedback on their experience to the TEFT team. Other states developed crosswalks of the state's current care plan template with the eLTSS dataset to highlight the differences and asked providers for feedback on their preferences for one form or the other. Below is additional information about specific activities pursued by each state in Round 2 and the feedback they received.

Colorado Round 2

Colorado worked with a provider agency, a care management agency, and a public health agency. The state asked providers to enter a plan containing all the elements of the eLTSS dataset into their existing information systems. Colorado met with participants by phone and in person to seek their feedback on the eLTSS dataset. Participants expressed interest in a more comprehensive eLTSS record rather than just an eLTSS dataset. They wanted to see the dataset in a record form that several entities could maintain and add to over time.

Georgia Round 2

Georgia engaged two adult day health providers and a personal support and home health provider, all of which maintain their records in their own internal information system. Georgia obtained feedback through one-on-one provider interviews. The TEFT team asked participants to suggest additional data elements and provide comments on current data elements within the eLTSS dataset. Georgia's providers reported that the "Emergency Backup" field in the eLTSS dataset was confusing, as providers assumed this field indicated an emergency contact rather than its actual intent of seeking information about additional entities to perform backup services.

Kentucky Round 2

Kentucky engaged three AAAs as well as three case management providers, all of whom used the state's electronic case management system. The pilot participants reviewed the eLTSS dataset using a survey developed by the Kentucky TEFT team. Participants approved of all fields in the eLTSS dataset and identified beneficiary narrative as a missing item. Many of the eLTSS dataset items were already included in the state's electronic case management system.

Maryland Round 2

Maryland surveyed a supports planning agency, three personal assistance providers, and two nurse monitors from county health departments. All providers had access to the state's electronic case management system. All participants provided feedback via a survey and reported that the eLTSS dataset overall was relevant and useful to their work. Participants specified which data elements they did not think were necessary and identified other data elements they thought were missing from the dataset. For example, participants suggested including the name and contact information

of the person who initially created the care plan as well as alternate phone numbers for each listed HCBS provider.

Minnesota Round 2

Minnesota engaged partners from its two community collaboratives to provide feedback. The partners included a county public health department, a county human services department, skilled nursing facilities, assisted living facilities, hospices, home health providers, a vocational rehabilitation center, an outpatient mental health services provider, and a community hospital. Except the county human services staff, all providers used electronic systems. Minnesota sent the eLTSS dataset to the participants and asked for feedback. The participants reported that all eLTSS fields were useful, and they provided suggestions for how the state should implement the eLTSS dataset. Providers helped Minnesota problem solve how to pull data from providers' EHR systems to populate a PDF file. Providers also learned how to use the community HIE to send the PDF files with the eLTSS data to other providers.

c. *Final Dataset*

The main outcome of the eLTSS initiative was the harmonized eLTSS dataset of 56 core data elements and 36 non-core data elements, which are listed in **Exhibit 24** (see **Appendix F** for core data elements, non-core data elements, data element definitions, and datatype/format**).**[24] This dataset was the product of two rounds of piloting and harmonization that occurred between 2015 and 2017 and included feedback from all participating states. Ideally, this dataset will become part of a standard for electronic exchange of HCBS information. The next step for the TEFT states collaborating with ONC, CMS, and HL7 is to submit materials for the HL7 balloting process.

Exhibit 24: eLTSS Core and Non-Core Data Elements

Grouping	Core Data Elements	Non-Core Data Elements
Beneficiary Demographics	• Person Name, Identifier, Identifier Type, Date of Birth, Phone Number, Address • Emergency Contact Name, Relationship, Phone Number • Emergency Backup Plan	• Assessment Summary • Person Gender Identity or Birth Sex • Person Environment • Main Contact Name, Phone Number, Address • Emergency Contact Phone Type, Primary Indicator
Goals & Strengths	• Goal • Step or Action • Strength	• Goal Created Date • Goal Completed Date • Goal Status • Outcome

[24] ONC Tech Lab. (2018). eLTSS Home. https://oncprojectracking.healthit.gov/wiki/display/TechLabSC/eLTSS+Home

Grouping	Core Data Elements	Non-Core Data Elements
Person Centered Planning	• Assessed Need • Person Setting Choice Indicator, Choice Options • Plan Monitor Name, Phone Number • Preference • Service Options Given Indicator • Service Selection Indicator • Service Plan Agreement Indicator • Service Provider Options Given Indicator • Service Provider Selection Agreement Indicator	N/A
Plan Information	• Plan Effective Date	• Plan Created Date, Type/Category, Status, Comments/Narrative Text • Total Plan Cost, Budget • Plan Funding Source • Miscellaneous Budget Elements • Miscellaneous Cost Elements
Plan Signatures	• Plan Signature • Person Printed Name • Person Signature Date • Guardian/Legal Representative Signature, Printed Name, Signature Date • Support Planner Signature, Printed Name, Signature Date • Service Provider Signature, Printed Name, Signature Date	• Signature Type/Signature on File • Other Plan Signatures
Risks	• Identified Risk • Risk Management Plan	• Risk Created Date
Service Information	• Service Name • Self-Directed Service Indicator • Service Start Date, End Date • Service Delivery Address • Service Comment • Service Funding Source • Service Unit Quantity, Quantity Interval • Unit of Service Types • Service Rate per Unit • Total Cost of Service	• Service History • Service Total Units • Service Reason, Status • Service Delivery Days of the Week • Exceptions for Service • Service Type/Category
Service Provider Information	• Support Planner Name, Phone Number • Service Provider Name, Phone Number • Non-Paid Provider Relationship	• Service Provider Identifier, Address, Qualifications • Support Planner Agency Name

3. eLTSS Activities as Part of TEFT Supplemental Awards

As part of the TEFT Demonstration, CMS made available supplemental awards to three TEFT states interested in expanding their eLTSS activities in 2017 and 2018. Colorado used supplemental funding to conduct an environmental scan of health IT use among HCBS providers. The state used the results of this scan to develop a new strategy for expanding electronic data sharing among HCBS providers. Minnesota used supplemental funding to replicate its Otter Tail

County community collaborative model with Southern Prairie in 2017. The Southern Prairie collaborative tested the eLTSS dataset and provided additional feedback on its use. Southern Prairie collaborative members used Microsoft Access forms and the secure messaging feature contained in the PHR developed by the collaborative for the TEFT Demonstration, to exchange care plans that contained the eLTSS dataset. Additionally, Georgia proposed to lead a joint effort with ONC to advance the standardization of the eLTSS dataset through HL7. The eLTSS dataset needs to be validated by a standards development organization in order for the larger health IT community to recognize and include the eLTSS elements into a more comprehensive beneficiary care record. Georgia applied for and received supplemental funding in May 2017 to begin this process in collaboration with ONC and CMS.

Beginning in spring 2017, Georgia engaged Georgia Tech Research Institute to map the eLTSS dataset to available HL7 standards, including Fast Healthcare Interoperability Resources (FHIR) Care Plan Resource and C-CDA Release 2.1 Care Plan Document template. Through mapping, Georgia Tech Research Institute documented how current standards can be used to exchange the eLTSS core dataset and identified any gaps in these current standards. In September 2017, Georgia presented the eLTSS dataset to several HL7 workgroups that expressed interest in facilitating the standards process. Georgia ultimately collaborated with the Community-Based Care and Privacy Workgroup, as the eLTSS dataset is a community-based initiative. Colorado, Connecticut, and Minnesota have assisted with Georgia's work by providing input on the reference data model and participating in working sessions in 2017 and 2018. Georgia and ONC partnered in June 2018 to facilitate a FHIR mini connect-a-thon focused on testing the eLTSS dataset. ONC and Georgia engaged TEFT states in additional testing activities in August and September 2018. Georgia Tech Research Institute is following the HL7 balloting process, which includes submission of several items to the Community-Based Care and Privacy Workgroup for approval and adoption in September 2018. This includes the submission of a white paper for public comment during the HL7 September 2018 Ballot Cycle and an eLTSS reference data model from the eLTSS core dataset.[25] Additionally, ONC and Georgia provide updates to the eLTSS community through regular public meetings. Additional activities will continue through 2019 to complete HL7 balloting.

4. eLTSS Next Steps

The eLTSS initiative yielded a core dataset that provides the foundation for an HCBS-focused data standard. The eLTSS standardization phase is important for broad health IT community acceptance. If HL7 releases the eLTSS dataset as part of a standard, communication and engagement efforts will be critical to building industry awareness and support. Through participation in the eLTSS initiative, TEFT states identified areas for improvement in their efforts to promote electronic HCBS information exchange. States also gained insights from engaging stakeholders who would benefit from greater information exchange.

After the TEFT Demonstration, states plan to sustain the eLTSS efforts in various ways. Georgia will continue to work on the eLTSS standardization effort with HL7 through March 2019 and ONC will continue HL7 related balloting activities through September 2019. Kentucky learned that its current state system and care plan already contain many of the data elements in the eLTSS dataset so it will make limited changes. Connecticut will continue to use the web forms developed

[25] HL7 International. (2018). Balloting. http://www.hl7.org/participate/onlineballoting.cfm?ref=nav

to exchange information between self-directing beneficiaries and providers. Minnesota and Maryland will apply the lessons learned about information exchange to future state initiatives, and Minnesota's regional collaboratives are continuing to exchange eLTSS information in the Otter Tail County dataset, a dataset developed as part of eLTSS testing. Colorado is planning to adopt the eLTSS dataset into its new state case management system. The testing completed by the TEFT states and other participants in the eLTSS initiative has resulted in an eLTSS dataset that forms the basis of an electronic HCBS care plan. As work continues to advance the dataset towards a standard, the eLTSS dataset has the potential to enhance electronic information exchange efforts and care coordination for HCBS beneficiaries.

5. eLTSS Lessons Learned and Best Practices

Through the eLTSS initiative, CMS, ONC, and the TEFT states identified common care plan features that are beneficial to share between HCBS providers, case managers, and beneficiaries. If HL7 releases the eLTSS dataset as part of a standard, states and other stakeholders might consider these TEFT findings in their next steps.

a. Lessons Learned

- While gathering feedback about the eLTSS dataset from HCBS program stakeholders, states learned that individuals sometimes interpret care plan data elements differently (Georgia). Standard definitions for all data elements in the eLTSS dataset were important, which ONC included.
- Electronic capabilities for LTSS planning and coordination are currently limited and non-integrated in states (Colorado, Georgia, and Minnesota). Greater HIE and IT system adoption among HCBS providers and case managers will introduce efficiencies in service coordination and scheduling. PHRs represent an opportunity for improving information sharing with beneficiaries. States should continue to participate in work on health IT standards related to HCBS.

b. Best Practices

- Include HCBS stakeholders, including agency leadership, case managers, providers, and vendors, in health IT standards-related initiatives to obtain diverse viewpoints. Minnesota and other states held focus groups with HCBS providers in eLTSS Round 2, and the providers gave specific feedback on missing data elements, which elements were beneficial, and which were not relevant to providers' work. ONC invited non-TEFT stakeholders and IT vendors to the weekly All Hands Calls to gather diverse feedback and encourage open discussions between health IT and HCBS communities.
- Consider various methods of stakeholder engagement, including surveys and one-on-one meetings, and identify the methods that work best with the state's stakeholders. Colorado and Kentucky used surveys as a way to collect feedback on the eLTSS dataset. Kentucky reported that the surveys allowed for both specific and high-level feedback. An agency with existing relationships with HCBS providers in Colorado conducted the state's surveys. Georgia engaged HCBS providers in individual meetings, which provided time to answer providers' questions about the eLTSS dataset.

III. Stakeholder Engagement in Planning and Implementation of the TEFT Tools

The TEFT states deployed a variety of strategies to engage both internal and external stakeholders in the planning, design, development, and implementation of the four tools. The states devoted considerable staff time to adequately capture the current landscape, identify needs at all levels of the HCBS system, and allow for input from all relevant stakeholder groups, such as Medicaid agencies, managed care entities, consumer representatives, or advocacy groups. Each state's HCBS policies and existing HCBS stakeholders shaped its engagement strategy. Some common engagement activities for the four TEFT tools included establishing working groups, holding requirements gathering sessions, conducting environmental scans, hosting regularly scheduled in person meetings, surveying beneficiaries and other stakeholders for input, and providing incentives to facilitate participation in pilot projects. This section of the final report highlights strategies where the TEFT state teams directly engaged stakeholders in planning and implementation activities.

Stakeholder Engagement Evaluation Research Questions

- How and to what extent did states involve partners, stakeholders, and individuals in the planning, design, development, and implementation of these new tools?

Program Accomplishments

- Georgia created four working groups, one for each tool, to gather agency leadership input on planning and next steps
- Colorado, Connecticut, Minnesota, and New Hampshire developed a TEFT webpage or newsletter to disseminate information
- Minnesota established three community collaboratives to gather feedback on the PHR and eLTSS dataset

A. General Stakeholder Engagement Strategies

1. Establish Working Groups

To develop plans for and guide the implementation of the tools, one state formed TEFT-specific working groups comprised of relevant state leadership and other stakeholders. Georgia created four internal working groups with different stakeholders, which met monthly or bi-monthly to discuss goals and strategies for each tool. The working groups directed implementation efforts and provided updates on progress to waiver program representatives and the Department of Community Health administrators.

2. Engage Advisory Groups

States with existing advisory groups formed during prior initiatives, shared updates on planning and implementation activities with, and received input from, advisory members. The Connecticut TEFT team provided updates to the LTSS Rebalancing Initiatives Steering Committee (formerly the MFP Steering Committee) in its planning and implementation engagement efforts. Multiple LTSS stakeholders (e.g., assisted living facilities, American Association of Retired Persons representatives, brain injury association members, self-advocates) are represented on this committee and their recommendations were taken into consideration in approving program protocols prior to implementation of the HCBS CAHPS® Survey. The Kentucky TEFT team receives guidance from the state's eHealth Network Board, a committee of executive-level stakeholders that provides strategic support to the state's health IT initiatives. In Minnesota, the

TEFT team shared updates with the County-State Workgroup, which oversees the Minnesota TEFT team's progress on all TEFT components in addition to monitoring how Department of Human Services and other HCBS Lead Agencies collaborate on long-term care issues. States also met with disability and other advocacy groups to discuss beneficiary needs and preferences.

3. Disseminate Information via Websites or Newsletters

Several of the TEFT states used websites or newsletters to update stakeholders. Colorado's Department of Health Care Policy and Financing maintains a TEFT webpage,[26] which provides an overview of the grant and webinar recordings from across the five geographical areas, disseminates PHR newsletters and training videos, and announces major milestones related to project implementation. Similarly, the Minnesota Department of Human Services maintains the Personal Health Records for Long-Term Services and Supports Demo webpage and newsletter.[27] Through this webpage, the Minnesota TEFT team outlines the state's goals related to the TEFT Demonstration, provides updates on implementation progress, offers training materials for using the PHR, and provides an overview on the rest of the project components. New Hampshire created a website[28] in April 2017 to provide updates to public stakeholders. Through this site, the New Hampshire TEFT team provides periodic updates on the HCBS CAHPS® Survey activities and other developments. Stakeholders can access informational webinars and other resources through this site. Connecticut's Department of Social Services website[29] offers resources such as flyers on the TEFT Demonstration, ONC flyers targeting HCBS providers, and updates across the four TEFT components.

4. Gather Information on Home and Community Based Services Processes

During the TEFT Demonstration, states and Lewin engaged Medicaid HCBS program leadership, case managers, and local HCBS providers in annual stakeholder engagement efforts to understand their interest in and use of health IT systems. Lewin used the information gathered during annual site visits to develop HCBS Systems Maps and Information Exchange Scans. This allowed states to see how health IT systems progressed during the four years of TEFT and to identify future opportunities to move from paper-based exchange to electronic information exchange.

B. PHR-Specific Stakeholder Engagement Strategies

While all states reported engaging agency or beneficiary stakeholders for each tool, states had the most flexibility for the design and implementation of the PHR. As a result, states reported several PHR-specific stakeholder engagement strategies. States gathered stakeholder feedback at several points in the PHR planning, design, and implementation phases.

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[26] Colorado Department of Healthcare Policy and Financing. (2018). *Testing Experience and Functional Assessment Tools*. https://www.colorado.gov/pacific/hcpf/testing-experience-and-functional-assessment-tools-teft

[27] Minnesota Department of Human Services. (2018). *Personal Health Records for Long-term Services and Supports Demo*. https://mn.gov/dhs/partners-and-providers/news-initiatives-reports-workgroups/aging/phr-for-ltss-demo/

[28] New Hampshire Department of Health and Human Services. (2018). *CAHPS® Home and Community-Based Services (HCBS) Survey*. https://www.dhhs.nh.gov/dphs/oqai/teft.htm

[29] Connecticut Department of Social Services. (2018). *TEFT (Testing Experience and Functional Tools)*. https://portal.ct.gov/DSS/ITS/DSS-HealthIT/Business-Intelligence-and-DSS-HealthIT/Grants

1. Hold Requirements Gathering Sessions for PHR

With approval of implementation plans secured from the TEFT team, two states convened requirements gathering sessions or stakeholder meetings to gather the appropriate IT requirements needed to achieve pilot goals for the PHR. Connecticut held 12 town hall meetings between October 2014 and June 2015 to gather feedback from users and providers on the PHR pilot plans. Feedback from these stakeholder meetings resulted in a list of desired data elements, functionalities, and security requirements consumers anticipate will best meet their needs. In addition, the state leveraged information gathered from the meetings to determine appropriate requirements in its RFP for PHR vendors, which was released in September 2015. Between October 2014 and March 2015, Minnesota held a series of requirements gathering sessions open to project contractors and subject matter experts. The Minnesota TEFT team gathered and implemented feedback from the sessions. The state used the requirements to publish the RFP for the PHR Community Collaborative in April 2015.

2. Conduct Environmental Scans

The PHR states conducted environmental scans of PHR platforms to understand the necessary data, security, and functionality requirements for the PHR. Each state reviewed multiple vendor platforms, with some states having beneficiaries attend vendor demonstrations and provide input prior to the state selecting a vendor. The states arrived at different conclusions following their respective environmental scans with each state selecting a different PHR vendor or choosing to customize an existing state IT system for the PHR.

3. Conduct Focus Groups and Surveys

To collect input from beneficiaries on various aspects of the PHR, states leveraged focus groups and surveys. The Maryland TEFT team collaborated with the existing case management system vendor to gather beneficiary stakeholder feedback by first fielding a PHR interest survey to approximately 1,400 beneficiaries through supports planners conducting quarterly home visits. The case management vendor then hosted a series of focus groups in July 2016 with 25 individuals identified from the interest surveys to showcase various user interfaces developed for the MyLTSS Tool. The state collected feedback and made amendments to the design and requirements of the platform. A result of these focus groups is the development of a telephonic PHR tool in addition to a web tool, as many focus group participants stated they either felt more comfortable using a phone or did not have internet access. Connecticut disseminated its "PHR Interest Survey" to beneficiaries of the MFP program beginning in January 2016. Specifically, the Connecticut TEFT team partnered with waiver assessors to field the survey during scheduled in-home visits. The state identified 65 individuals who expressed interest in participating. In addition to providing PHR demonstrations, the Colorado TEFT team utilized the monthly and quarterly regional focus group meetings to disseminate a survey through SurveyMonkey to identify beneficiaries interested in the PHR pilot. Furthermore, beneficiaries, case managers, and providers used the survey to provide input on data elements they would like to see in the PHR, how they prefer to access the PHR, and similar technologies they currently use.

To obtain feedback on the eLTSS dataset, states conducted surveys and held in person discussions with participating providers. The Kentucky TEFT team utilized online surveys to collect feedback on ONC's eLTSS dataset from participating AAAs in February and March 2017. Maryland validated the eLTSS dataset by gathering feedback from three personal assistance agencies, one supports planning agency, and two nurse monitors from local health departments. Between October and December 2016, the state provided pilot participants with a plan of service and a short survey that listed the eLTSS Dataset and asked a few questions about each data element. Maryland used results from the survey to determine the importance and function of each eLTSS data element to the providers.

4. Facilitate Community Collaborative Meetings

In addition to engaging state leadership and other stakeholders, one state convened three local community collaborative groups to gather input on the PHR and eLTSS dataset. The Minnesota TEFT team convened monthly meetings in each collaborative to discuss PHR user feedback, eLTSS data elements, and other relevant feedback.

IV. Home and Community Based Services Systems

A. Evaluating TEFT's Impact on State IT Systems

Part of Lewin's evaluation involved assessing the level of health IT adoption during TEFT and observing the potential impact of the TEFT tools on the states' IT systems. Lewin sought to document which system changes occurring at the state and county levels were a result of TEFT, were an influencing factor on TEFT, or were unrelated but occurred during the TEFT Demonstration period (2014-2018). During Lewin's annual site visits, we reviewed Medicaid system documentation and discussed details about the states' HCBS processes, system vendors, system capabilities, individuals and their roles, and non-electronic tools for information exchange (e.g., phone, fax). The resulting documents were HCBS Systems Maps and Information Exchange Scans.

HCBS Systems

Evaluation Research Questions

- How did a state's LTSS policies, structures, and operations influence the development and testing of the TEFT tools?
- How did a state's LTSS policies, structures, and operations have the potential to change as a result of the TEFT tools?

Program Accomplishments

- Kentucky and Maryland's statewide case management systems served as the location for their PHRs
- HCBS providers in Minnesota's community initiatives began sharing service information between organizations
- Maryland is working with the state HIE to expand participation

Both tools track the flow of information from when a beneficiary applies for and then receives services (see **Pathway to HCBS**) and the levels of information exchange between the steps in the process (see **Information Exchange Levels**). To align with ONC's 10-Year Vision, states ultimately should aim to provide HCBS beneficiaries with interoperable products and services, in a way that all individuals, their families, and providers can send, receive, find, and use health information.[30]

Pathway to HCBS

1. Self-Service Access
2. Financial Eligibility
3. Functional Eligibility
4. Case Management
5. HCBS Service Provision
6. Service Billing
7. Acute Care Services

Lewin created an HCBS Systems Map (see **Exhibit 25** for an example of an HCBS Systems Map) for each TEFT state, showing the workflow behind the pathway to HCBS in a visual snapshot. States selected which Medicaid HCBS programs to include in Lewin's HCBS Systems Map; with some states, Lewin mapped several programs. Because the maps focus on the pathway to HCBS, they recognize feedback loops or recurring actions exist, but do not provide details about state processes for care plan monitoring and other monitoring and remediation of services. Lewin's conversations with stakeholders focused on the information exchange pathway and type of exchange, whether paper-based or electronic, and not the specific feedback loops for monitoring services received or re-assessment timelines and revisions to care plans.

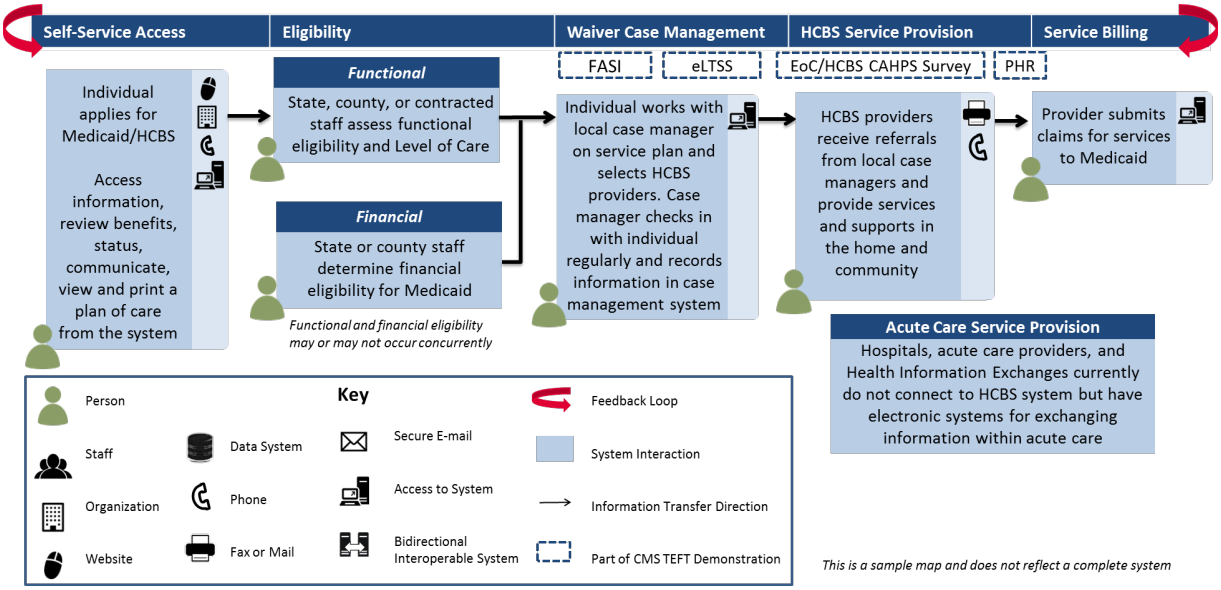
[30] ONC. (2015). Connecting Health and Care for the Nation: A 10-Year Vision to Achieve Interoperability. https://www.hhs.gov/about/leadership/secretary/speeches/2018-speeches/remarks-on-value-based-transformation-to-the-federation-of-american-hospitals.html?new

Information Exchange Levels

1. Mail, Phone, or Fax
2. Secure Email or Direct Secure Messaging
3. Access to a System
4. System to System Exchange
5. System to System Bi-Directional Exchange

The Information Exchange Scans supplement the HCBS Systems Maps and document whether the states electronically conduct HCBS processes. The Information Exchange Scans classify a process as either basic information exchange, moderate information exchange, or advanced information exchange. Basic information exchange classifies a system where all or most information exchange occurs by mail, phone, fax, or email. Moderate information exchange represents a system where all or most information exchange occurs by a recipient signing into a system and viewing a file. Advanced information exchange captures a system where all or most information exchange occurs by sending and receiving information electronically in information systems.

Exhibit 25: Example of an HCBS Systems Map



The HCBS Systems Maps and Information Exchange Scans vary significantly by state. Each state has a unique set of IT systems, unique processes for eligibility and case management, and their own services list and provider network. Lewin created baseline HCBS Systems Maps and Information Exchange Scans for each state in early 2015, and updated them annually through 2018. States reviewed and approved the documents annually. There were annual changes in every state's map because of new state IT investments or involvement in federal initiatives. Lewin also tracked each state's TEFT Demonstration efforts and determined where in the pathway to HCBS a state was changing an existing process to introduce a TEFT tool. For example, some states designed their PHRs to contain only copies of care plans, which case managers develop and fall under case management in the pathway to HCBS. Other states' PHRs contained case management information and a record of HCBS services received by HCBS beneficiaries. In the latter map, Lewin would show the TEFT Demonstration's PHR spanning case management and HCBS service provision.

The following section explains a general version of the workflow behind the pathway to HCBS and presents Lewin's findings on how state IT systems changed during the TEFT Demonstration,

including changes that were connected or unrelated to TEFT. The sections below discuss how every TEFT state's information exchange capabilities advanced during the course of the TEFT Demonstration.

B. General Home and Community Based Services Workflow

State HCBS policies, regulations, and programs are unique, and state or county staff and local providers have developed different IT systems and operational processes to record, track, and exchange information about HCBS beneficiaries. Despite the differences between the states' IT systems, Lewin found that information exchanged about or with prospective and enrolled Medicaid HCBS beneficiaries followed a similar series of steps, described below.

1. Self-Service Access

Self-service access is the first step a prospective Medicaid HCBS beneficiary takes to enroll in services, by navigating an agency website, calling 2-1-1, or visiting an agency's office. The agencies typically available to prospective beneficiaries for information and referral (I&R) to services and resources include state Medicaid Agencies, AAAs, Aging and Disability Resource Centers (ADRCs), and I&R offices. Upon making contact with an agency or an agency's website, the prospective beneficiary answers preliminary screening questions about his or her needs, such as nursing or transportation assistance. Staff conducting pre-screens and financial eligibility determinations may receive information collected at this stage, and the prospective beneficiary typically receives copies of program applications and referral information. At this step, states are aiming to gather information about a prospective beneficiary and to refer him or her onward to Medicaid eligibility determination or to an appropriate community resource.

a. Changes in Self-Service Access Systems from 2014 to 2018

At the start of the TEFT Demonstration, most states had agency websites with the capability to gather prospective beneficiary questionnaires for agency staff to review. Arizona and Colorado's websites managed the entire Medicaid application process and pushed applications into the state Medicaid eligibility systems. In Arizona, prospective beneficiaries go to Health-e Arizona PLUS, which is also the state's health insurance exchange system. In Colorado, prospective beneficiaries go to the Colorado Program and Eligibility Kit website or mobile application.

During the TEFT Demonstration period, Kentucky implemented a website similar to Arizona and Colorado, containing a portal for prospective beneficiaries to apply for services and check eligibility status. Kentucky's system, benefind, also exchanges data with the state HIE. When benefind launched in February 2016, the system streamlined Kentucky's self-service access step significantly. Previously, an applicant had to know which LTSS program to apply for and then locate, complete, and submit the forms. If the program did not accept the applicant, he or she needed to start over with a different application to apply to another program. Now, when a person accesses the benefind self-service portal, pre-screening questions determine the program and benefits for which the person may be eligible.

In many states, agency staff still conducts manual reviews of prospective beneficiaries' information, moving their files onward to Medicaid eligibility determination staff if they meet initial screening conditions. The websites in these states are not yet capable of prompting

prospective beneficiaries about eligibility or changes in their application status. These are opportunity areas for streamlining Medicaid HCBS application processes and self-service access.

b. Self-Service Access-Related Initiatives

Prior to or during the TEFT Demonstration, seven of the eight TEFT states (Colorado, Connecticut, Georgia, Kentucky, Maryland, Minnesota, and New Hampshire) received No Wrong Door (NWD) grants from the Administration for Community Living (ACL) to improve the self-service access step involving information, referral, and applications for Medicaid HCBS.[31] NWD is a federal initiative that expands on the ADRC initiative started in 2003 to develop and simplify the process of obtaining information about LTSS in a state and applying for services. Initiated in 2012, ACL's aim was for any individual seeking services to go to any agency's office, website, or telephone hotline and easily receive help applying for state services, accessing information about state and community resources, and receiving assistance completing activities of daily living and other needs. As part of NWD, TEFT states implemented new self-service access websites, restructured case management around single entry points, and improved pre-screening interviews before or during TEFT.

2. Financial Eligibility

Prospective beneficiaries must be determined financially eligible based on each state's Medicaid requirements. State agency staff, usually in the financial division of the state Medicaid agency, reviews the applications to determine financial eligibility for Medicaid. At this step, the eligibility review staff processes information through various state and federal systems to assess income levels. Eligibility reviewers have access to state eligibility information systems where they review and store supporting income documentation. Prospective beneficiaries usually receive notification of their eligibility status through mail or secure email.

a. Changes in Financial Eligibility Systems from 2014 to 2018

During the TEFT Demonstration period, two states upgraded their eligibility information systems independently of the TEFT Demonstration. The new systems push application status updates to the state case management systems to notify Medicaid HCBS program staff to perform a functional assessment. These two states also began sending eligibility determination decisions electronically to applicants. Specifically, Arizona integrated the Arizona Technical Eligibility Computer System, into Health-E Arizona PLUS, an integrated system used by both the state health insurance exchange and Medicaid financial eligibility staff and beneficiaries. Arizona's Department of Economic Security and the state Medicaid agency, Arizona Health Care Cost Containment System, previously used Arizona Technical Eligibility Computer System, which was separate from Health-E Arizona PLUS, to determine financial eligibility for Medicaid. Now, staff use Health-E Arizona PLUS to determine financial eligibility, and that information is accessible in the same system as the health insurance exchange. Additionally, as of September 2017, the Connecticut ConneCT system replaced the legacy information management system for financial eligibility. ConneCT

[31] ACL. (n.d.). Aging and Disability Resource Centers Program/No Wrong Door System. https://www.acl.gov/programs/connecting-people-services/aging-and-disability-resource-centers-programno-wrong-door

receives and stores information from an applicant's pre-screen and financial and functional eligibility determinations.

3. Functional Eligibility

The comprehensive assessments and periodic reassessments that determine eligibility for HCBS programs evaluate a person's needs to determine the need for any medical, educational, social, or other services. For example, for physical level of need, assessments evaluate how much help is needed in various instrumental activities of daily living, such as house cleaning, money management, preparing meals, shopping, taking medications, communicating, and moving about in the community; and activities of daily living like bathing, dressing, eating, mobility, toileting, and hygiene. Staff designated by the Medicaid HCBS programs, typically nurses or case managers, meets with prospective beneficiaries to observe and evaluate their physical level of need and other needs. The staff enters the assessment results into a state or county case management system. As with financial eligibility, states have different levels of requirements for eligibility based on functional need. Comprehensive functional eligibility assessments may occur before, after, or at the same time as, a financial eligibility review. At this step, functional assessors often enter recommendations for services and programs into the case management system.

a. Changes in Case Management Systems from 2014 to 2018

Prior to TEFT, most HCBS program case management systems operated at the state or county level for storing functional assessments and care plans, which specify a beneficiary's goals and the services he or she will access. Case management systems are integral in meeting records management requirements. However, while the IT systems were capable of storing documents, it was not common to rely on case management systems for many operational efficiencies. For example, agency staff could not typically record functional assessments electronically and see them automatically populate in case management systems. Instead, functional assessors conducted the assessments on paper or on a laptop, and then manually entered the information into the case management system. Rarely could an IT system automatically send a functional assessment or care plan onward to a reviewer, or send an electronic copy to a prospective or enrolled beneficiary. These exchanges of information were usually conducted through mail, fax, or phone.

Case management systems historically were more commonly implemented at the county level than the state level. During the TEFT Demonstration period, Georgia implemented a statewide case management system. Georgia's Harmony system replaced the Aging Information Management System in February 2017. The Harmony system also connects to the eligibility information system, called Gateway. Maryland had a statewide case management system, Maryland LTSS, prior to TEFT and implemented several updates during TEFT. Kentucky also had a statewide case management system, Medicaid Waiver Management Application, and began requiring AAAs, case managers, and HCBS providers to use the system during TEFT.

In addition to shifting towards statewide case management systems, states and counties also updated their existing case management systems. Most changes during the TEFT Demonstration period improved information exchange about enrolled beneficiaries when they changed programs. For example, Colorado improved the integration between the Colorado Benefits Management System and Benefits Utilization System. Previously, Medicaid HCBS waiver programs had different eligibility information systems that did not cross check or exchange information.

Colorado implemented a new Business Intelligence and Data Management system in November 2016, which supports integrated checks and functions across Colorado Benefits Management System and Benefits Utilization System. The new Business Intelligence and Data Management system also has a beneficiary portal, where enrolled beneficiaries can access their program enrollment information and care plan.

Some states also provided agency staff with electronic tools (e.g., web form for a laptop) to record functional assessments. Minnesota piloted a downloadable, electronic version of its functional assessment, MnCHOICES. This tool is capable of synchronizing automatically with the MNsure website in which prospective beneficiaries can check their Medicaid eligibility status. State staff also records financial eligibility determinations in MnCHOICES, which shares information with the state's service billing system. Similarly, New Hampshire piloted the electronic Medical Eligibility Assessment in April 2016. Nurses performing functional assessments in homes without internet may download the Medical Eligibility Assessment and use it offline.

b. Initiatives Impacting Functional Eligibility

Five TEFT states (Connecticut, Georgia, Kentucky, Maryland, and New Hampshire) participated in Medicaid's Balancing Incentive Program, which provided states with additional funding to implement NWD, adopt standardized functional assessments, and implement conflict-free case management processes.[32] As part of this program, Connecticut, Kentucky, and Maryland implemented new functional assessments and Georgia implemented a new case management system prior or during the TEFT Demonstration period. Specifically, Connecticut implemented a modified version of the InterRAI-based Universal Assessment Tool, Maryland implemented the InterRAI assessment, and Kentucky implemented the Kentucky Home Assessment Test. As discussed earlier, Georgia updated the state's case management system.

One of the TEFT Demonstration's tools, FASI, can also impact a state's functional eligibility processes. FASI is available for states to adopt to evaluate functional needs as part of their comprehensive assessments. It is suitable to use in any Medicaid HCBS program. FASI cannot serve as a standalone comprehensive assessment, but can replace or supplement the functional section. During the TEFT Demonstration, states tested FASI with enrolled HCBS beneficiaries rather than during comprehensive assessments to determine any prospective HCBS beneficiary's eligibility, as they had not yet formally adopted the tool.

4. Case Management

Once prospective beneficiaries are determined both financially and functionally eligible for Medicaid HCBS programs, beneficiaries transition to care planning with the case managers who performed their assessments, or receive referrals to case managers or case management agencies. Case managers receive notifications about eligibility decisions from state staff through phone, fax, secure email, or through accessing their state or local case management systems. Case managers work with enrolled beneficiaries to create care plans based on the comprehensive assessments that incorporate information from individuals' functional assessments. States also commonly refer to care plans as service plans, support plans, or LTSS plans. Case managers share copies of the care plans with HCBS service providers and the beneficiary. At this step, case managers are aiming to

[32] CMS. (n.d.). Balancing Incentive Program. https://www.medicaid.gov/medicaid/ltss/balancing/incentive/index.html

establish relationships with enrolled beneficiaries and understand their goals and preferences to help coordinate their services.

a. Changes in Case Management Systems from 2014 to 2018

As case management systems are used to store and share functional assessments prior to beginning active case management, the changes in case management systems are discussed above in the Functional Eligibility section.

b. Initiatives Impacting Case Management

Two TEFT Demonstration tools, the PHR and eLTSS dataset, contain case management information. Care plans and case managers' contact information are among the most common PHR features included in the TEFT states' PHR pilots. Case managers have historically needed to share copies of the care plans with enrolled beneficiaries through mail, fax, or secure email because beneficiaries could not access their IT systems. States designed the PHR pilots to provide beneficiaries with access to a system containing select information about their HCBS programs, case managers, and services. The PHR features and information varied by state, but states commonly included information from care plans in the PHR.

The eLTSS dataset, by design, intends to help standardize the information in a care plan. TEFT states piloted and reached agreement on 56 standard items for a care plan, including information on beneficiary demographics, goals and strengths, plan information, plan signatures, risks, service information, and service provider information. As TEFT states and other stakeholders work through the HL7 standardization phase for the eLTSS dataset to be recognized as a health IT standard, there is momentum behind efforts to exchange care plans electronically between local providers, case managers, and beneficiaries.[33]

5. Service Provision

Once beneficiaries have arrangements to receive services and supports from local HCBS providers, they will receive services wherever they reside. HCBS providers coordinate scheduling with case managers or directly with beneficiaries. Individuals may acknowledge receipt of services through a visit verification process, and providers send claims to the Medicaid billing system.

a. Changes in Provider IT Systems from 2014 to 2018

During the TEFT Demonstration, states and Lewin engaged local HCBS providers in several stakeholder engagement efforts to understand their interest in and use of health IT systems. Examples of health IT systems for clinical and non-clinical information include EHRs, electronic medical records (EMRs), telehealth, electronic assessments, and PHRs. The cost and resources required to implement and upgrade IT systems, as well as to train staff to use new systems, have made it difficult for HCBS providers to adopt health IT. There also have been organizational barriers for some providers that have difficulty switching from legacy, paper-based systems that they are comfortable using. Lewin interviewed select HCBS providers during site visits over the course of the TEFT Demonstration. In some states, such as Minnesota, HCBS providers in Otter Tail County, where partners piloted the PHR and eLTSS dataset, consistently used health IT

[33] ONC Tech Lab. (2018). eLTSS Home. https://oncprojectracking.healthit.gov/wiki/display/TechLabSC/eLTSS+Home

systems for recording service plans but did not share the information electronically. Otter Tail County providers had not shared information between organizations prior to TEFT, but adopted the Otter Tail County dataset to help facilitate provider-to-provider information exchange.

Generally, HCBS providers meet with beneficiaries to develop a service plan and document their services on paper forms, or input the information into an office billing system. Providers typically receive care plan information through secure email from case managers. In a few states, including Maryland and Kentucky, providers are able to access the case management system to view select information in care plans. For example, Maryland providers access the In-house Support Assurance System, a provider electronic visit verification (EVV) system integrated in Maryland's Long-Term Services and Supports System, to access and process some information about their beneficiaries. Providers rarely use electronic methods of information exchange and often only use IT systems for billing. A beneficiary usually receives a copy of the provider's service plan in person or through mail, and verifies that he or she received services in person or on a call with the case manager.

b. Initiatives Impacting Service Provision

The 21st Century Cures Act, enacted in December 2016, includes a provision that requires Medicaid personal care services programs, such as HCBS programs, to adopt an EVV system by January 2020.[34] EVV enables beneficiaries and providers to electronically record delivery of services, and shifts away from current forms of paper-based verification. Designed to combat fraud, this policy is beginning to influence IT use among HCBS providers and case managers. Prior to TEFT, Maryland developed and integrated the In-house Support Assurance System, an EVV system, into Maryland's Long-Term Services and Supports System. Maryland also made EVV one of the features of the PHR pilot it implemented for TEFT. The PHR was populated with real-time service provision data, and beneficiaries were encouraged to report incidents (i.e., services were not delivered as expected) to their case managers in the PHR.

The final TEFT Demonstration tool, the HCBS CAHPS® Survey, connects to service provision because it measures a beneficiaries' experience with their HCBS providers' services. It also asks beneficiaries to consider their case management services. The survey focuses on service experience, instead of satisfaction, and captures how an individual values his or her services. By design, the survey applies to beneficiaries in any HCBS program, which allows Medicaid quality improvement staff to compare results across programs and disability groups. The TEFT states conducted the HCBS CAHPS® Survey through in person and phone interviews. Colorado also tested an electronic version of the survey. Following the TEFT pilots of the HCBS CAHPS® Survey, Connecticut developed a web form version of the survey that it will use to collect survey responses, interviewers will still conduct the survey over the phone or in person.

6. Service Billing

After beneficiaries receive HCBS, local providers submit claims to the state Medicaid agency, usually through a MMIS or a Medicaid managed care organization's IT system. State eligibility information systems sometimes connect to the MMIS to populate basic eligibility and enrollment

[34] CMS. (December 2017). Section 12006 21st Century Cures Act Electronic Visit Verification Systems. https://www.medicaid.gov/medicaid/hcbs/downloads/training/evv-presentation-part-1.pdf

information about beneficiaries. States may send case managers and beneficiaries copies of service bills or explanations of benefits either through mail or by updating an IT system where they have access.

a. Changes in MMIS and Other Billing Systems from 2014 to 2018

Prior to TEFT, all states had a MMIS for billing. On an ongoing cycle, states submit applications to CMS to update their MMIS. Some MMIS are capable of bidirectional information exchange with case management systems, which is useful for updating service and eligibility records. During TEFT, only one state replaced its MMIS. Colorado implemented interChange in 2016-2017, replacing a system that required manual data entry and querying with a new MMIS system that automates data exchange and has a data analytics system. Connecticut and Kentucky are currently beginning the process to replace their MMIS.

b. Initiatives Impacting Service Billing

During TEFT, CMS extended the enhanced federal match provided for new MMIS and eligibility information system implementations. Issued in December 2015, the Mechanized Claims Processing and Information Retrieval Systems (90/10) Final Rule,[35] permits states to apply for enhanced match for resources spent on design, development, installation, or enhancement of Medicaid IT systems. Connecticut and Kentucky received CMS approval for their MMIS replacement projects, and are leveraging enhanced match funding for the systems.

7. Acute Care Services

While HCBS programs, by design, provide services to beneficiaries in their own home or community, beneficiaries occasionally receive acute care services following a severe injury, illness, or surgery. States aim for HCBS and acute care providers to coordinate care and share information, when needed. However, case management systems, health IT systems used by acute care providers, and the limited IT systems used by HCBS providers are not interoperable. Some states aim to connect the IT systems to exchange social service and medical information or to identify a central location to store and access information. For example, the Chesapeake Regional Information System for our Patients (CRISP), a Maryland-based health information exchange, connects to all hospitals and nearly all skilled nursing facilities in the state. CRISP built a clinical data repository, from which connected organizations can retrieve care summaries for their patients. CRISP's participating hospitals also report admit, discharge, and transfer notification information to the repository. In a future state, if HCBS providers participate in CRISP, they could access information about beneficiary status and whether a beneficiary recently visited a Maryland hospital. Through the TEFT Demonstration, the eLTSS dataset serves as a starting point to support information exchange between HCBS and acute care providers. As part of the HL7 standards development organization balloting process, the eLTSS dataset has the potential to serve as a standard for future IT systems that support information exchange. The PHRs tested during TEFT also support the future movement towards sharing both social service and medical information

[35] Federal Register. (December 2015). Medicaid Program; Mechanized Claims Processing and Information Retrieval Systems (90/10). https://www.federalregister.gov/documents/2015/12/04/2015-30591/medicaid-program-mechanized-claims-processing-and-information-retrieval-systems-9010

with beneficiaries in a central location. The HCBS provider IT system needs additional improvements before electronic HIE is possible.

V. Conclusion and Evaluation Wrap-Up

A. Tool-Specific Accomplishments

In this final evaluation report of the TEFT Demonstration, Lewin presented the decisions and processes states took to pilot the HCBS CAHPS® Survey, FASI, PHRs, and the eLTSS dataset. States have elected to adopt some of the TEFT tools and learned new insights into approaches to survey, assess, and serve Medicaid HCBS populations. These impacts reflect some of the TEFT Demonstration's overall accomplishments (see **TEFT Demonstration Accomplishments**).

TEFT Demonstration Accomplishments

EoC Survey

- Results from Round 1 EoC Survey testing were used to obtain the CAHPS® trademark
- NQF endorsed 19 measures from the HCBS CAHPS® Survey, which helps address the gaps in HCBS measurement identified by NQF
- EoC Survey testing resulted in the first trademarked and endorsed experience survey for HCBS with 17 states using the HCBS CAHPS® Survey as of August 2018
- Connecticut is adopting the HCBS CAHPS® Survey for all of the state's Medicaid HCBS programs
- AHRQ and CMS are developing a national HCBS® Survey database for state use

FASI

- Four technical expert panels, including consumer advocates, an alpha test, and two rounds of field tests in six states to refine FASI
- Colorado plans to adopt FASI for their Medicaid HCBS programs
- CMS is pursuing NQF endorsement of two performance measures derived from FASI
- CMS is adding FASI to the Data Element Library

PHR

- Colorado, Connecticut, Kentucky, and Maryland have plans to sustain their PHRs or to start new PHR initiatives after the TEFT Demonstration ends
- PHR User Survey PRA package approved by OMB to assess experience and usability
- TEFT states built the PHRs to improve beneficiary communications and HCBS visit verification
- TEFT states piloted the PHRs with people representing all HCBS populations

eLTSS

- Created eLTSS Dataset with 56 data elements
- HL7 accepted eLTSS Dataset into balloting process

State IT Systems

- Kentucky and Maryland's statewide case management systems served as the location for their PHRs
- HCBS providers in Minnesota's community initiatives began sharing service information between organizations
- Maryland is working with the state HIE to expand participation to more acute care providers

This list of accomplishments will continue to expand as the remaining TEFT activities conclude by March 2019, including HCBS CAHPS® Survey Round 2, FASI Round 2, FASI NQF endorsement, PHR pilots, and HL7 balloting of the eLTSS dataset. Prior to and during TEFT, states participated in other federal initiatives to improve care coordination for HCBS populations. However, TEFT was the first CMS initiative to focus on improving health IT tools for Medicaid HCBS populations.

States are equipped to apply the lessons learned and best practices noted in this report in other federal and state health IT and quality improvement initiatives.

B. Overall Accomplishments in the TEFT Demonstration

Based on monitoring reports and regular communication with states, CMS, and contractors, Lewin categorized the states' achievements and barriers of the TEFT Demonstration and implementation of the TEFT tools into key themes. For accomplishments, Lewin considered key activities related to informing future work and the availability of new, innovative HCBS tools. For overall challenges, Lewin considered changes in goals, scope, and timelines in the TEFT Demonstration, and implementation delays. This section examines the overall lessons of the TEFT Demonstration. The **Development and Testing of New TEFT Tools** section of includes the tool specific lessons.

1. Development and demonstration of the use of TEFT tools to inform future work

As a demonstration, TEFT allowed states to help design, test, and implement new tools that state Medicaid agencies had not previously used with the Medicaid HCBS population. As such, TEFT states focused on testing different strategies and validating the use of the TEFT tools. Once tested with a small group of Medicaid beneficiaries, several states chose to implement one or more of the tools within multiple populations (e.g., older adults, individuals with intellectual and developmental disabilities, individuals with physical disabilities, individuals with serious mental illness). States also noted that a phased approach to their various processes was helpful with the TEFT tools. For example, some states released PHR features in phases. In addition, by testing the tools in two rounds, states refined their approaches for the second round based on experiences in the first round. This also allowed states to incorporate stakeholder feedback between rounds. Since this was a demonstration, states had the opportunity to take risks or try new concepts for the ultimate purpose of learning and finding best practices to replicate or draw from for future efforts.

2. Created and validated new, person-centered tools for use in HCBS

The TEFT Demonstration made available new HCBS-specific tools for public use. Earlier tools contained different features, addressed different needs, or did not use standard measures to address HCBS needs. For example, the HCBS CAHPS® Survey and the FASI assessment offer a standardized format for assessing beneficiary experience and functional status of HCBS populations for better care coordination, quality assurance, and ease of transferring information when consumers move between HCBS programs. The PHR tool specifically aimed at improving HCBS populations' access to social service information and focused on gathering information in a centralized system to share back with individuals. The eLTSS plan was one of the first information exchange standards initiatives to focus on HCBS, rather than clinical or institution-based information exchange standards. Additionally, the TEFT tools support person-centeredness, which reflects the continued and increased emphasis on person-centered care within HCBS.

Several organizations recognized these new TEFT tools as innovative work that addresses the gaps in HCBS survey and assessment standards and health IT, including the Government Accountability Office, Medicaid and Children's Health Insurance Program Payment and Access Commission, and NQF. Specifically, a Government Accountability Office report discussed the need for improved assessments, such as FASI, and recommended that Medicaid HCBS programs have requirements

for states to address both service providers' and managed care plans' potential for conflicts of interest in conducting assessments.[36] Similarly, a Medicaid and Children's Health Insurance Program Payment and Access Commission report recognized that both Medicaid fee-for-service and managed LTSS can use the HCBS CAHPS® Survey to strengthen quality oversight and capture beneficiary experiences.[37] In a NQF report, NQF acknowledged the prioritization of measurement opportunities to address gaps in HCBS quality measurement. NQF identified several domains and subdomains to stimulate evidence-based research in support of quality measure development, guide quality improvement efforts, and highlight the important areas for measure development.[38] NQF continues to work with CMS on FASI measure endorsement.

3. Established new relationships between IT and HCBS communities

With any demonstration, improved or new relationships need to be established. Further, CMS and states often modify expectations and the scopes of the work as CMS, contractors, and stakeholders acquire knowledge. For TEFT, it took several years to begin dialogues between the health IT, IT, and clinical communities and the HCBS and social service communities. This also required stakeholders to form new ways of thinking for each of the TEFT tools. The challenge states faced with establishing these dialogues can also be seen as an accomplishment since these new relationships and dialogues will continue beyond the demonstration. For example, regarding the areas of eLTSS and PHR, it took IT vendors and HCBS stakeholders several years to develop relationships. It also took several years to develop and have HCBS instruments and measures considered (e.g., HCBS CAHPS® and FASI assessments and measures) within traditionally clinical and medical areas of work. Developing new work and new directions for existing tools takes time and resulted in some changes to the original goals, scope, and timeline for each tool.

C. Overall Challenges in the TEFT Demonstration

1. Changes in the goals, scope, and timeline of the Demonstration

As part of any demonstration, TEFT allowed for adaptations to changing circumstances, such as changes in governors, delays with contracting, and other unanticipated delays. CMS' expectations for the TEFT Demonstration also evolved. Originally, CMS designed the TEFT Demonstration to connect the TEFT tools with each other and to link them with earlier activities, such as the CARE tool. These potential connections, such as FASI informing the eLTSS plan, and the PHR administering or displaying survey results of the HCBS CAHPS® Survey, did not materialize due to timeline delays.

Additionally, the ways in which the goals and structure of the TEFT Demonstration evolved required states to redirect their activities and, in some cases, add project staff. To stay on track, states modified work plans and budgets from the initial documents submitted and approved by

[36] Government Accountability Office. (2017). CMS Should Take Additional Steps to Improve Assessments of Individuals' Needs for Home- and Community-Based Services. https://www.gao.gov/assets/690/689212.pdf

[37] *Medicaid and Children's Health Insurance Program Payment and Access Commission*. (2018). June 2018 Report to Congress on Medicaid and CHIP. https://www.macpac.gov/publication/june-2018-report-to-congress-on-medicaid-and-chip/

[38] NQF. (2016). *Quality in Home and Community-Based Services to Support Community Living: Addressing Gaps in Performance Measurement*. http://www.qualityforum.org/Publications/2016/09/Quality_in_Home_and_Community-Based_Services_to_Support_Community_Living__Addressing_Gaps_in_Performance_Measurement.aspx

CMS. For example, it was necessary to change the eLTSS initiative scope from an eLTSS record to the eLTSS plan due to limited health IT capacity to create and send an electronic record between HCBS providers, misalignment with the PHR timeline, and lack of opportunity to link their objectives. At the start of the TEFT Demonstration, states also expected a DoD PHR to be available for their pilots. Instead, the agreements needed to use the DoD tool were not obtained in time and states needed to contract with vendors to acquire or develop their own PHRs. The scope of FASI also changed, as states originally intended to test the modified CARE tool for the HCBS population as a standalone assessment for evaluating functional status and determining services for care plans. However, FASI changed to an item set that would measure functional status only. As a result, states tested FASI within other comprehensive assessments to develop a complete care plan and budget. These changes in the TEFT goals and timeline led some states to reevaluate whether they would decide to end their participation in the program or drop some of their activities.

Unanticipated delays at the federal level also affected the timeline for states to implement the TEFT tools. For example, the final approval by OMB of FASI's PRA submission took more time than expected, which delayed the states' administration of the FASI instrument for several months. This required states to pull new samples for testing, a process that is mired in formality in some states. Further, because the TEFT states and the project officers at CMS did not have a clear timeline for when OMB would approve FASI's PRA submission, it was difficult for the technical assistance team and states to modify their activity timelines or to begin some activities (e.g., posting RFPs, determining contractor start dates) in anticipation of the OMB approval. By the time of FASI's approval, the states needed to duplicate some of their earlier work.

2. Implementation delays due to scarcity of resources in states, including staffing and accurate information

Changes occurring in states, such as new state leadership, project staff turnover, changes in vendor options, and changes in willing user groups and samples caused delays in the TEFT Demonstration. Leadership changes, including gubernatorial elections, and turnover in project management staff created cascading timeline delays. New leadership required time to review and consider potential changes for the states' TEFT activities. Project staff turnover also required time for hiring and onboarding staff. In addition, some states reported challenges navigating federal grant management processes, which led to delays in receiving grant funds that impacted states' ability to meet project timelines.

States also encountered challenges with the accuracy of their state agency data on beneficiaries. For example, for the EoC Survey and FASI, states pulled samples of populations to interview and assess using Medicaid data. However, these administrative data often had incorrect or outdated information. One state encountered data where names and phone numbers did not match, and several states encountered out of date beneficiary lists, resulting in samples containing deceased beneficiaries. As a result, states needed to manually query and review data, or extract additional samples.

3. Implementation delays due to PHR vendor contracting and lack of familiarity with HCBS programs

PHR vendors' limited experience with HCBS meant states had to define project requirements without the benefit of leveraging prior examples or assistance. The states modified their PHR

requirements and work plans repeatedly, which caused timeline delays and smaller-than-anticipated PHR user populations. While PHR vendors for primary care have been in the field for many years, vendors were often inexperienced with or unable to offer solutions for HCBS-oriented PHRs. Several states had to modify their RFP to identify a single available PHR vendor, contributing to timeline delays. One state had to pursue several different contracting options before finally securing a PHR vendor. Another state initially planned to offer several PHR options to beneficiaries, but ultimately found it feasible to work with only one vendor. Other states faced project delays due to unexpected state contracting requirements, including reviews by state IT security staff.

TEFT states used these challenges with vendors as a learning experience for future IT initiatives. For example, when contracting with PHR vendors, several states needed to review multiple vendor systems and identify the vendor capabilities and selection criteria for the features and functions to include in the PHR. By the end of the vendor selection process, these states knew more about their states' contracting criteria and how to more efficiently contract with vendors new to HCBS.

Due to these contracting delays and subsequent timeline constraints, several TEFT states did not launch their PHR systems until 2018. As a result, states did not have time to recruit as many beneficiary participants as they planned, causing small user populations. The limited PHR user population influenced Lewin's analysis of PHR User Survey results because trends and findings lacked power for bivariate or multivariate analysis. States convened beneficiary focus groups or engaged case managers in an effort to mitigate the small sample sizes and to encourage PHR adoption.

D. Evaluation Wrap-Up

Lewin's rapid-cycle evaluation relied on several data sources to populate evaluation reports, dashboards, timelines, summary documents, presentations, systems maps, and information exchange scans. Lewin continually shared its reports and lessons learned with CMS, states, and TEFT contractors and partners, allowing states to refine their planning and implementation activities. The list below describes these evaluation tools in more detail

- Quarterly monitoring reports–states documented updates each quarter on Lewin's TEFT evaluation website.
- State dashboards and timelines–every quarter, Lewin updated summaries of each state's implementation progress on the evaluation website.
- CMS project officer calls–states provided updates to CMS every month. Lewin provided updates on recently recorded implementation milestones and challenges, developed meeting summaries, and clarified activity updates from the quarterly monitoring reports.
- Site Visits–Lewin met in person with states annually to review implementation progress. Additional state stakeholders attended meetings for each TEFT tool. Many states' PHR and case management system vendors also provided system demonstrations.
- HCBS Systems Maps and Information Exchange Scans–each year, Lewin updated visual depictions of the flow of information through the IT systems used by Medicaid HCBS programs.

- PHR User Survey and PHR Planning and Implementation Guide–Lewin developed PHR evaluation tools that might serve future initiatives.
- Other Calls and Reports–CMS, IBM Watson Health, and ONC convened additional meetings with the TEFT states, including Community of Practice calls for each TEFT tool and eLTSS All Hands meetings. Lewin attended and provided updates on the calls to understand state activities, questions, and federal guidance. IBM Watson Health developed reports with state results from the Round 1 EoC Survey and Round 1 FASI that informed Lewin's evaluation.

Lewin used its review of state activities and discussions with states to identify key lessons learned from the TEFT Demonstration. While TEFT states viewed the four tools as separate projects with different timelines, they participated in sharing their strategies with other TEFT states. The opportunities for cross-state learning allowed states to plan which stakeholders to engage, which features to include in PHRs, and how their own care plans differed from other states.

When asked about the best practices of the TEFT Demonstration, states frequently noted how useful it was now to have access to cross-disability and cross-program tools, and to common data elements to support electronic exchange. States will use the new PHR systems as a tool to support, but not drive, person-centered solutions. Through participation in the EoC Survey field tests, states have new feedback on the beneficiary experience across programs and populations. States also informed the development and implementation of future standardized tools and technologies and contributed to bridging the information gap between medical and social services.

Appendix A: Final Report Acronym List

Acronym	Definition
AAA	Area Agency on Aging
ACA	Patient Protection and Affordable Care Act
ACL	Administration for Community Living
ADRC	Aging and Disability Resource Center
AHRQ	Agency for Healthcare Research and Quality
CAHPS®	Consumer Assessment of Healthcare Providers and Systems
CARE	Continuity Assessment Record and Evaluation
C-CDA	Consolidated-Clinical Document Architecture
CMS	Centers for Medicare & Medicaid Services
CRISP	Chesapeake Regional Information System for our Patients, Maryland HIE
DoD	Department of Defense
EHR	Electronic Health Record
eLTSS	Electronic Long-Term Supports and Services
EoC	Experience of Care
EVV	Electronic Visit Verification
FASI	Functional Assessment Standardized Items
FHIR	Fast Healthcare Interoperability Resources
HCBS	Home and Community Based Services Survey
HIE	Health Information Exchange
HITECH	Health Information Technology for Economic and Clinical Health
IT	Information Technology
LTSS	Long-Term Supports and Services
MFP QoL	Money Follows the Person Quality of Life Survey
MMIS	Medicaid Management Information System
NCI-AD®	National Core Indicators-Aging and Disabilities
NCI-DD®	National Core Indicators-Developmental Disabilities
NQF	National Quality Forum
NWD	No Wrong Door
OMB	Office of Management and Budget
ONC	Office of the National Coordinator for Health Information Technology
PHR	Personal Health Record
PRA	Paperwork Reduction Act
RFP	Request for Proposals
TEFT	Testing Experience and Functional Tools
TEP	Technical Expert Panel

Appendix B: Quarterly Monitoring Report State Reporting Questions

Quarterly Monitoring Report Questions
Project Documents and Timeline
Admin.1.a. Overall Project Manager - State Staff Name
Admin.1.b. Overall Project Manager - Title
Admin.1.c. Overall Project Manager - Email
Admin.1.d. Overall Project Manager - Phone
Admin.1.e. Overall Project Manager - N/A
Admin.1.f. Check if changes were made
Admin.2.a. Experience of Care Survey - State Staff Name
Admin.2.b. Experience of Care Survey - Title
Admin.2.c. Experience of Care Survey - Email
Admin.2.d. Experience of Care Survey - Phone
Admin.2.e. Experience of Care Survey - N/A
Admin.2.f. Check if changes were made
Admin.3.a. FASI - State Staff Name
Admin.3.b. FASI - Title
Admin.3.c. FASI - Email
Admin.3.d. FASI - Phone
Admin.3.e. FASI - N/A
Admin.3.f. Check if changes were made
Admin.4.a. PHR - State Staff Name
Admin.4.b. PHR - Title
Admin.4.c. PHR - Email
Admin.4.d. PHR - Phone
Admin.4.e. PHR - N/A
Admin.4.f. Check if changes were made
Admin.5.a. eLTSS and S&I Framework - State Staff Name
Admin.5.b. eLTSS and S&I Framework - Title
Admin.5.c. eLTSS and S&I Framework - Email
Admin.5.d. eLTSS and S&I Framework - Phone
Admin.5.e. eLTSS and S&I Framework - N/A
Admin.5.f. Check if changes were made
Admin.6. Other (please specify)
Admin.6.a. Staff Name
Admin.6.b. Title
Admin.6.c. Contact Info (Email & Phone)
Admin.6.d. Check if changes were made
Admin.7. Other (please specify)
Admin.7.a. Staff Name

Quarterly Monitoring Report Questions
Admin.7.b. Title
Admin.7.c. Contact Info (Email & Phone)
Admin.7.d. Check if changes were made
Admin.8. Other (please specify)
Admin.8.a. Staff Name
Admin.8.b. Title
Admin.8.c. Contact Info (Email & Phone)
Admin.8.d. Check if changes were made
Admin.9. Other (please specify)
Admin.9.a. Staff Name
Admin.9.b. Title
Admin.9.c. Contact Info (Email & Phone)
Admin.9.d. Check if changes were made
Admin.10. Other (please specify)
Admin.10.a. Staff Name
Admin.10.b. Title
Admin.10.c. Contact Info (Email & Phone)
Admin.10.d. Check if changes were made
Admin.11. Other (please specify)
Admin.11.a. Staff Name
Admin.11.b. Title
Admin.11.c. Contact Info (Email & Phone)
Admin.11.d. Check if changes were made
EoC.1.a. Program Name
EoC.1.b. Population(s) Covered: Intellectual/Developmental Disability Aged Brain Injury Serious Mental Illness Physical Disability Other – specify:
EoC.1.b.1. If other, please specify:
EoC.1.c. Total number of people enrolled in program
EoC.1.d. Round 2 Proposed Number Surveys
EoC.1.e. Round 2 Updated Number of Surveys (if no changes, leave blank)
EoC.1.f. Explanation for Change in Number of Surveys
EoC.1.g. Round 2 Number of Completed Surveys
EoC.2.a. Program Name

Quarterly Monitoring Report Questions
EoC.2.b. Population(s) Covered: Intellectual/Developmental Disability Aged Brain Injury Serious Mental Illness Physical Disability Other – specify:
EoC.2.b.1. If other, please specify:
EoC.2.c. Total number of people enrolled in program
EoC.2.d. Round 2 Proposed Number Surveys
EoC.2.e. Round 2 Updated Number of Surveys (if no changes, leave blank)
EoC.2.f. Explanation for Change in Number of Surveys
EoC.2.g. Round 2 Number of Completed Surveys
EoC.3.a. Program Name
EoC.3.b. Population(s) Covered: Intellectual/Developmental Disability Aged Brain Injury Serious Mental Illness Physical Disability Other – specify:
EoC.3.b.1. If other, please specify:
EoC.3.c. Total number of people enrolled in program
EoC.3.d. Round 2 Proposed Number Surveys
EoC.3.e. Round 2 Updated Number of Surveys (if no changes, leave blank)
EoC.3.f. Explanation for Change in Number of Surveys
EoC.3.g. Round 2 Number of Completed Surveys
EoC.4.a. Program Name
EoC.4.b. Population(s) Covered: Intellectual/Developmental Disability Aged Brain Injury Serious Mental Illness Physical Disability Other – specify:
EoC.4.b.1. If other, please specify:
EoC.4.c. Total number of people enrolled in program
EoC.4.d. Round 2 Proposed Number of Surveys
EoC.4.e. Round 2 Updated Number of Surveys (if no changes, leave blank)
EoC.4.f. Explanation for Change in Number of Surveys
EoC.4.g. Round 2 Number of Completed Surveys
EoC.5. Please provide an update on EoC activities that occurred, particularly in the field, in this reporting period.

Quarterly Monitoring Report Questions
Eoc.5.a. How is your state coordinating EoC with other experience or quality improvement surveys (e.g., adding questions, crosswalking EoC with other surveys)?
EoC.6. Has your state finalized the methods for data collection for Round 2 of the Experience of Care Survey? Check: Yes No
EoC.6.a. Describe your state's sampling plan (e.g., methodology for drawing a representative sample of each program, plans to stratify the sample(s) by provider, region, MCO (if MLTSS in place), or other grouping):
EoC.6.b. Describe your state's plan for communicating upcoming survey activities to potential respondents and case managers, including pre-notification:
EoC.6.c. Describe your state's plan for training interview staff:
EoC.6.d. Describe your state's plan for collecting Round 2 Experience of Care Survey data (e.g., contract with survey vendor, state agency). Please specify over which month/years data collection will occur and what mode(s) (e.g., in-person, telephone, PHR, other) will be used for each population/program(s).
EoC.6.d.1. Please identify the start date for EoC data collection:
EoC.6.d.2. Please identify the end date for EoC data collection:
EoC.6.e. Describe changes your state made to your preliminary plans (e.g., sampling, survey notification, surveyor training):
EoC.7. Has your team finalized or further planned Round 2 data analysis for the Experience of Care Survey? Check: Yes No
EoC.7.a. If yes, describe:
EoC.7.b. Describe your state's plans for completing this:
EoC.8.a. How will the results from the Experience of Care Survey be used?
EoC.8.b. How will the results from the Experience of Care Survey be used beyond the TEFT Demonstration?
EoC.9. Please review and update information for the individual(s) supporting participants in the data collection for the Experience of Care Survey.
EoC.10. Please review and update changes made to the individual(s) responsible for obtaining permission and all necessary privacy documentation from the Experience of Care Survey sample. Please review and update changes to the individual(s) responsible for coordinating with the TA contractor and survey vendor regarding how the survey vendor will safeguard the Experience of Care Survey sample data.
EoC.11. Document progress your state has made in obtaining permission and all necessary privacy documentation for the Experience of Care Survey sample in this reporting period.
EoC.12. Aside from English and Spanish, what other languages is your state planning to translate the Experience of Care Survey into?
EoC.13. How are you reporting on demographic information? Are you uniformly collecting demographic information on consumers responding to the Experience of Care Survey? Is this data collection unique to the TEFT Demonstration or are you gathering information from another source?
EoC.14. Has your state held stakeholder meetings focused on the Experience of Care Survey and data collection in this reporting period? Check: Yes No
EoC.14.a. How many meetings have you held?
EoC.14.b. Please list all counties where you have held meetings: List of counties (depending on state)
EoC.14.b.1. If regional meetings were held, please specify:

Quarterly Monitoring Report Questions
EoC.14.c. Which stakeholder groups were included? Intellectual / Developmental Disability Waiver representatives Aged Waiver representatives Brain Injury Waiver representatives Serious Mental Illness Waiver representatives Physical Disability Waiver representatives Consumers Family members/guardians of consumers Advocacy organizations Acute care providers Long-term and post-acute care providers Other
EoC.14.c.1. Please specify type of acute care providers:
EoC.14.c.2. Long-term and post-acute care providers: Skilled Nursing Facility / Nursing Facility Continuing Care Retirement Community Assisted Living & Senior Housing Home Health Hospice Rehabilitation Services Home and Community Based Services Providers Adult Day Providers Care Managers Congregate Meal Programs Financial Counseling Programs Friendly Visiting Programs Homemaker or Chore Services Home-delivered Meals Information & Assistance Services Personal Care Services Respite Care Services Senior Centers State Agencies Telephone Reassurance Transportation Services
EoC.14.c.3. Other (please specify):
EoC.14.d. How did you identify these stakeholders?
EoC.14.d.1. What was the purpose of these meetings? What information did you share with the stakeholders about the Experience of Care survey?
EoC.14.d.2. What were the outcomes of the stakeholder meetings?
EoC.14.e. Do you plan to hold additional meetings?
EoC.14.f. When
EoC.14.g. Please list all counties where you plan to hold meetings: List of counties (depending on state)

Quarterly Monitoring Report Questions
EoC.15. Will your state hold stakeholder meetings? Check: Yes No
EoC.15.a. When
EoC.15.b. Please select all counties where you plan to hold meetings: List of counties (depending on state)
EoC.15.c. Which stakeholders will be included? Intellectual / Developmental Disability Waiver representatives Aged Waiver representatives Brain Injury Waiver representatives Serious Mental Illness Waiver representatives Physical Disability Waiver representatives Consumers Family members/guardians of consumers Advocacy organizations Acute care providers Long-term and post-acute care providers Other
EoC.15.c.1. Please specify type of acute care providers:
EoC.15.c.2. Long-term and post-acute care providers: Skilled Nursing Facility / Nursing Facility Continuing Care Retirement Community Assisted Living & Senior Housing Home Health Hospice Rehabilitation Services Home and Community Based Services Providers Adult Day Providers Care Managers Congregate Meal Programs Financial Counseling Programs Friendly Visiting Programs Homemaker or Chore Services Home-delivered Meals Information & Assistance Services Personal Care Services Respite Care Services Senior Centers State Agencies Telephone Reassurance Transportation Services
EoC.15.c.3. Other (please specify):
EoC.16. What are the challenges your state anticipates in conducting Round 2 data collection? How will you apply lessons learned from Round 1 into Round 2 data collection (e.g., addressing challenges, barriers, and successes from Round 1, use of CAHPS item responses and/or simple alternate responses for each population/program(s))?
EoC.17. How did you engage or inform stakeholders that the survey was going to occur or was in progress?

Quarterly Monitoring Report Questions
FASI.1.a. Program Name
FASI.1.b. Population Covered: Intellectual/Developmental Disability Aged Brain Injury Serious Mental Illness Physical Disability Other – specify:
FASI.1.b.1. If other, please specify:
FASI.1.c. Total number of people enrolled in program
FASI.1.d. Round 1: Proposed Sample Size (provided by Truven)
FASI.1.e. Round 2: Proposed Sample Size
FASI.1.f. Explanation for Change in Proposed Sample Size
FASI.1.g. Number of Completed Assessments in Round 1 (provided by Truven)
FASI.1.h. Number of Completed Assessments in Round 2
FASI.2.a. Program Name
FASI.2.b. Population Covered: Intellectual/Developmental Disability Aged Brain Injury Serious Mental Illness Physical Disability Other – specify:
FASI.2.b.1. If other, please specify:
FASI.2.c. Total number of people enrolled in program
FASI.2.d. Round 1: Proposed Sample Size (provided by Truven)
FASI.2.e. Round 2: Proposed Sample Size
FASI.2.f. Explanation for Change in Proposed Sample Size
FASI.2.g. Number of Completed Assessments in Round 1 (provided by Truven)
FASI.2.h. Number of Completed Assessments in Round 2
FASI.3.a. Program Name
FASI.3.b. Population Covered: Intellectual/Developmental Disability Aged Brain Injury Serious Mental Illness Physical Disability Other – specify:
FASI.3.b.1. If other, please specify:
FASI.3.c. Total number of people enrolled in program
FASI.3.d. Round 1: Proposed Sample Size (provided by Truven)
FASI.3.e. Round 2: Proposed Sample Size
FASI.3.f. Explanation for Change in Proposed Sample Size

Quarterly Monitoring Report Questions
FASI.3.g. Number of Completed Assessments in Round 1 (provided by Truven)
FASI.3.h. Number of Completed Assessments in Round 2
FASI.4.a. Program Name
FASI.4.b. Population Covered: Intellectual/Developmental Disability Aged Brain Injury Serious Mental Illness Physical Disability Other – specify:
FASI.4.b.1. If other, please specify:
FASI.4.c. Total number of people enrolled in program
FASI.4.d. Round 1: Proposed Sample Size (provided by Truven)
FASI.4.e. Round 2: Proposed Sample Size
FASI.4.f. Explanation for Change in Proposed Sample Size
FASI.4.g. Number of Completed Assessments in Round 1 (provided by Truven)
FASI.4.h. Number of Completed Assessments in Round 2
FASI.5. In this reporting period, how have your plans for Round 1 of FASI changed?
FASI.5.a. How did your state participate in pre-notification letter distribution?
FASI.5.b. Identify challenges/lessons learned from Round 1.
FASI.6. What has been your experience piloting the FASI component? How is your state participating in Round 2? Please explain.
FASI.7. In this reporting period, how have your plans for Round 2 of FASI changed?
FASI.7.a. Please identify the start date for Round 2 FASI data collection.
FASI.7.b. Please identify the end date for Round 2 FASI data collection.
FASI.8. Has your state finalized your target population and data collection plan for Round 2 of FASI? Check: Yes No
FASI.8.a. Describe your state's plan for FASI administration:
FASI.8.b. Describe your state's plan for pre-notification:
FASI.8.c. Describe your state's plan for training assessment staff:
FASI.8.d. For each population and program, how will FASI be administered? (check all that apply): As part of an initial assessment As part of an annual reassessment During a face-to-face monitoring visit Other
FASI.8.d.1. If other, please describe:
FASI.8.e. Describe your state's plan for collecting FASI data:
FASI.8.f. Describe your state's preliminary plans for Round 2:
FASI.9. Has your team finalized Round 2 data analysis plans for FASI? Check: Yes No
FASI.9.a. Describe your state's finalized plans:

Quarterly Monitoring Report Questions
FASI.9.b. Describe your state's preliminary plans:
FASI.10. What are your state's plans for analyzing FASI assessments and using FASI results, from either round?
FASI.11. Please review and update information to the individual(s) who will obtain IRB permission (if needed) and all related privacy documentation. Please review and update information to the individual(s) who will coordinate with the entity that will be collecting FASI (if not the state) regarding how the entity will safeguard FASI sample data.
FASI.12. Document progress your state made in this reporting period in obtaining permission and all necessary privacy documentation for the FASI sample.
FASI.13. How are you reporting on demographic information? Are assessors uniformly collecting demographic information on consumers responding to FASI? Is this data collection unique to the TEFT Demonstration or are you gathering information from another source?
FASI.14. Has your state held stakeholder meetings focused on FASI in this reporting period? Check: Yes No
FASI.14.a. How many meetings have you held?
FASI.14.b. Please select all counties where you have held meetings: List of counties depending on state
FASI.14.b.1. If you held regional meetings, please specify:
FASI.14.c. Which stakeholder groups were included? Intellectual / Developmental Disability Waiver representatives Aged Waiver representatives Brain Injury Waiver representatives Serious Mental Illness Waiver representatives Physical Disability Waiver representatives Consumers Family members/guardians of consumers Advocacy organizations Acute care providers Long-term and post-acute care providers Other
FASI.14.c.1. Please specify type of acute care providers:

Quarterly Monitoring Report Questions
FASI.14.c.2. Long-term and post-acute care providers: Skilled Nursing Facility / Nursing Facility Continuing Care Retirement Community Assisted Living & Senior Housing Home Health Hospice Rehabilitation Services Home and Community Based Services Providers Adult Day Providers Care Managers Congregate Meal Programs Financial Counseling Programs Friendly Visiting Programs Homemaker or Chore Services Home-delivered Meals Information & Assistance Services Personal Care Services Respite Care Services Senior Centers State Agencies Telephone Reassurance Transportation Services
FASI.14.c.3. Other (please specify):
FASI.14.d. How did you identify these stakeholders?
FASI.14.d.1. What was the purpose of these meetings? What information did you share with the stakeholders about FASI?
FASI.14.d.2. What were the outcomes of the stakeholder meetings?
FASI.14.e. Do you plan to hold additional meetings?
FASI.14.f. When
FASI.14.g. Please list all counties where you plan to hold meetings: List of counties (depending on state)
FASI.15. Will your state hold stakeholder meetings? Check: Yes No
FASI.15.a. When:
FASI.15.b. Please select all counties where you plan to hold meetings: List of counties depending on state

Quarterly Monitoring Report Questions
FASI.15.c. Which stakeholders will be included? Intellectual / Developmental Disability Waiver representatives Aged Waiver representatives Brain Injury Waiver representatives Serious Mental Illness Waiver representatives Physical Disability Waiver representatives Consumers Family members/guardians of consumers Advocacy organizations Acute care providers Long-term and post-acute care providers Other
FASI.15.c.1. Please specify type of acute care providers:
FASI.15.c.2. Long-term and post-acute care providers: Skilled Nursing Facility / Nursing Facility Continuing Care Retirement Community Assisted Living & Senior Housing Home Health Hospice Rehabilitation Services Home and Community Based Services Providers Adult Day Providers Care Managers Congregate Meal Programs Financial Counseling Programs Friendly Visiting Programs Homemaker or Chore Services Home-delivered Meals Information & Assistance Services Personal Care Services Respite Care Services Senior Centers State Agencies Telephone Reassurance Transportation Services
FASI.15.c.3. Other (please specify):
FASI.16. Please identify the challenges and barriers your state is facing with FASI (e.g., addressing IRB requirements, identifying guardian contact information). How are those challenges addressed?
FASI.17. What is the status of other standardized assessment initiatives in your state (e.g., BIP)?
FASI.18. Is your state cross-walking FASI with other assessment instruments?
FASI.19. In Round 2, is your state planning to keep FASI separate from other assessments or will assessors combine questions when appropriate?
FASI.20. What is your state's intended use of FASI beyond the TEFT Demonstration?
PHR.1. Please provide an update on your state's PHR activities in this reporting period.

Quarterly Monitoring Report Questions
PHR.1.a. Which populations are you targeting for your PHR? (check all that apply): Intellectual/Developmental Disability Aged Brain Injury Serious Mental Illness Physical Disability Other – specify:
PHR.1.a.1. If other, please specify:
PHR.1.a.2. How many individuals from each population are you targeting for the TEFT PHR (e.g., 100 beneficiaries from SMI waiver, 100 beneficiaries from I/DD waiver)?
PHR.2. Which PHR vendor/solution has your state selected?
PHR.2.a. Please describe any changes to your PHR system requirements in this reporting period.
PHR.2.b. Did your state conduct an environmental scan of PHR options? Yes No
PHR.2.b.1. What were the results of this scan?
PHR.2.c. Which PHR vendor options has your state reviewed?
PHR.2.c.1. Have you met with and received product demonstrations from vendors? If so, which vendors? Did you receive a live product demonstration?
PHR.2.d. What were the results of these demonstrations and PHR research? What did your state learn that helped you select a specific PHR (or set of PHRs)?
PHR.3. In this reporting period, how has your state worked with other existing HIE and PHR efforts?
PHR.3.a. In this reporting period, how has your state coordinated the PHR component of TEFT with other federal initiatives such as BIP, MFP, SIM, ADRC/NWD, etc.?
PHR.4. Are individuals and/or groups involved in these efforts included as stakeholders in the TEFT Demonstration's PHR component? Check: Yes No
PHR.4.a. Which state agencies were involved in the PHR solution activities in this reporting period?
PHR.4.b. Which stakeholder groups were involved in the PHR solution activities for the TEFT Demonstration in this reporting period? Intellectual / Developmental Disability Waiver representatives Aged Waiver representatives Brain Injury Waiver representatives Serious Mental Illness Waiver representatives Physical Disability Waiver representatives Consumers Family members/guardians of consumers Advocacy organizations Acute care providers Long-term and post-acute care providers HIE representatives Other IT representatives Other
PHR.4.b.1. Please specify type of acute care providers:

Quarterly Monitoring Report Questions
PHR.4.b.2. Long-term and post-acute care providers: Skilled Nursing Facility / Nursing Facility Continuing Care Retirement Community Assisted Living & Senior Housing Home Health Hospice Rehabilitation Services Home and Community Based Services Providers Adult Day Providers Care Managers Congregate Meal Programs Financial Counseling Programs Friendly Visiting Programs Homemaker or Chore Services Home-delivered Meals Information & Assistance Services Personal Care Services Respite Care Services Senior Centers State Agencies Telephone Reassurance Transportation Services
PHR.4.b.3. Please specify other IT representatives:
PHR.4.b.4. Other (please specify):
PHR.4.c. How did you identify these stakeholders?
PHR.4.d. How many stakeholder meetings has your state held that are focused on the PHR component of TEFT in this reporting period?
PHR.4.d.1. Please select the counties where you have held these PHR stakeholder meetings.
PHR.4.d.2. Describe the outcomes of these stakeholder meetings. Did you make changes to your state's plans for the PHR as a result of these meetings?
PHR.4.d.3. Describe how your state used this stakeholder outreach as a method to educate stakeholder groups about TEFT and the PHR component. What materials have you created for this outreach and education?
PHR.4.d.4. What is your state's plan for continued stakeholder engagement?
PHR.5. If you have not already completed the information below, will the data exchange follow a push or pull model, realizing that the NwHIN/VLER process is view-only and that this project requires true data sharing and persistence with a declared PHR (i.e., how will the PHR receive data)? (check all that apply): Push model Pull model
PHR.6.a. What data elements are you planning to show in your PHR?
PHR.6.b. What features and functionalities will you include in the PHR?
PHR.7.a. Document changes to your proposed target date for when your state's PHR system will be able to use and receive human readable representation of LTSS record, formatted as PDF or plain text document.
PHR.7.b. Document changes to your proposed target date for when your state's PHR system will be able to use and receive structured representation, formatted according to the Consolidated CDA standard.
PHR.8. Please specify the content and security standards that will be used by the PHR to securely send and receive information from providers, clients, state agencies and other data sources and repositories (e.g., Direct, External Data Representation (XDR), Cross-Enterprise Document Media Interchange (XDM)).

Quarterly Monitoring Report Questions
PHR.9. Will the PHR meet the ONC certification criterion adopted (at 45 CFR 170.314(e)(1)) for "view, download, transmit to a 3rd party" or includes equivalent functionality? This certification criterion requires that certain patient facing capabilities exist, such as: secure online access, conformance to certain web content accessibility guidelines, and the ability to view, download, and transmit to a 3rd party, a baseline set of clinical information about themselves. Yes No
PHR.9.a. Yes, please describe:
PHR.10. Has your state worked with the PHR vendor to incorporate accessibility standards (e.g., Web Content Accessibility Guidelines (WCAG) 2.0 Level AA) into the TEFT PHR?
PHR.11. What challenges did your state face in this reporting period? How did you mitigate these challenges?
PHR.12. Has your state identified any risks associated with future PHR implementation activities?
PHR.13.a. Document progress or changes your state made in addressing risks related to how beneficiaries will access and create/update their information in the PHR system (e.g., privacy, security, technical, etc.).
PHR.13.b. Has your state identified any risks associated with how providers will share sensitive information from their HIT systems with the PHR (e.g., privacy, security, technical, etc.). This can include state laws that impact HIE, HIT and/or access to information.
PHR.14. What systems/applications will your state use to support information exchange from/to the PHR (e.g., EHRs, HIE, external databases)
PHR.15. How will beneficiaries access the PHR?
PHR.16. Has your state's strategy for conducting outreach to PHR users (i.e., consumers, family members, guardians or caregivers) changed in this reporting period?
PHR.17. Has your state begun outreach to consumers and family members, guardians, or caregivers? Check: Yes No
PHR.17.a. What populations did your state target?
PHR.17.b. What marketing material has your state disseminated to this population in this reporting period?
PHR.17.c. What methods did your state use to disseminate this information (e.g., mail, video, electronic)?
PHR.17.d. Approximately how many individuals has your state conducted outreach to?
PHR.17.e. What were the results of this outreach? (e.g., were consumers engaged in this outreach? Did they have interest in PHRs? Were they concerned about using PHRs?)
PHR.17.f. What marketing material is your state planning to disseminate to this population?
PHR.17.g. What methods is your state planning to use to disseminate this information (e.g., mail, video, electronic)?
PHR.17.h. Approximately how many individuals does your state plan to conduct outreach to?
PHR.18. Has your state begun PHR outreach to LTSS providers? If yes, what marketing materials has your state disseminated to this population?
PHR.19. Does your state plan to train PHR users? If so, how?
PHR.20. Has your state identified sustainability plans for the PHR beyond the TEFT Demonstration?
eLTSS.1. Describe your state's goals, in-scope activities and timeline for your eLTSS Round 1 pilot (ended August 2016).
eLTSS.2. What Tier is your state piloting in Round 1 of the eLTSS initiative (ended August 2016)? (i.e., Tier I: Basic, Non-Electronic Information Exchange, Tier II: Secure, Electronic Data Exchange, Tier III: Complete eLTSS Data Model and Exchange)
eLTSS.2.a. Why did your state select that Tier? Will your state leverage any information systems and HIE infrastructure in the eLTSS plan pilot?

Quarterly Monitoring Report Questions
eLTSS 2.b. If your state is piloting Tier I, have you identified business drivers that will help your state advance to electronic data exchange in the future?
eLTSS.2.c. What user story your state piloting for Round 1 of the eLTSS initiative (ended August 2016)? (check all that apply) User Story 1: Create Plan User Story 1: Approve Services User Story 2: Send/Receive Plan User Story 2: Access/View Plan User Story 2: Update Plan
eLTSS.2.d. Which Medicaid waiver program(s) is your state targeting for Round 1 of the eLTSS initiative (ended August 2016)?
eLTSS.3. Describe your state's goals, in-scope activities and timeline for your eLTSS Round 2 pilot (began September 2016).
eLTSS.3.a. Report any recent updates shared on the ONC eLTSS calls (e.g., RTM updates, data set reviews).
eLTSS.3.b. Describe your state's methods for engaging 3 or more providers/case managers in Round 2 to gather feedback on the RTM and data elements (e.g., focus groups, surveys).
eLTSS.3.c. How many individual providers or care managers has your state recruited to join the eLTSS pilot?
eLTSS.3.d. Describe your methods for engaging beneficiaries in Round 2.
eLTSS.3.d.a. How many beneficiaries does the state aim to include in the pilot?
eLTSS.3.d.b. To date, how many beneficiaries have an eLTSS plan filed as part of your pilot?
eLTSS.4. What Tier is your state piloting in Round 2 of the eLTSS initiative (began September 2016)? (i.e., Tier I: Basic, Non-Electronic Information Exchange, Tier II: Secure, Electronic Data Exchange, Tier III: Complete eLTSS Data Model and Exchange)
eLTSS.4.a. Why did your state select that Tier? Will your state leverage any information systems and HIE infrastructure in the eLTSS plan pilot?
eLTSS.4.b. If your state is piloting Tier I, have you identified business drivers that will help your state advance to electronic data exchange in the future?
eLTSS.4.c. What user story is your state piloting for Round 2 of the eLTSS initiative (began September 2016)? (check all that apply) User Story 1: Create Plan User Story 1: Approve Services User Story 2: Send/Receive Plan User Story 2: Access/View Plan User Story 2: Update Plan
eLTSS.4.d. Which Medicaid waiver program(s) is your state targeting for Round 2 of the eLTSS initiative (begins September 2016)?
eLTSS.5. Has your state contracted with any vendor(s) to participate in the pilot? If yes, please name the vendor(s). If no, are you in the procurement process?
eLTSS.6. Identify the agencies and stakeholders that are helping develop plans for your state's eLTSS pilot (e.g., representatives from other departments)
eLTSS.6.a. In this reporting period, has your state added any stakeholders to your planning efforts or any participants to the pilot? If so, please name the new participants.
eLTSS.7. How did your state decide who to recruit to participate in the eLTSS pilot? Is your state focusing on a regional implementation or a specific stakeholder group?
eLTSS.7.a. Please name any CB-LTSS providers your state recruited to participate in the pilot.
eLTSS.7.b. Please name any case management agencies your state recruited to participate in the pilot.

Quarterly Monitoring Report Questions
eLTSS.7.c. Please name any clinical providers your state recruited to participate in the pilot.
eLTSS.7.d. Please name any government agencies your state recruited to participate in the pilot.
eLTSS>7.e. Please name any HIE organizations your state recruited to participate in the pilot.
eLTSS.7.f. Please name any health care associations your state recruited to participate in the pilot.
eLTSS.8. Document changes to your process for providing eLTSS initiative information to the rest of the internal state TEFT team.
eLTSS.9. Document your process for communicating information about the initiative, eLTSS plan, and future plans/goals of the state to relevant external stakeholders.
eLTSS.10. Document changes, if any, to how CB-LTSS providers with no current access to an electronic system (e.g., EHR, HIE) will enter/access LTSS data into the eLTSS plan.
eLTSS.11. Document changes, if any, to how individuals will enter/access information into their PHR to feed information into an eLTSS plan.
eLTSS.12. What are the sources or systems of information that will be leveraged to populate the eLTSS plan? (e.g., CB-LTSS provider's notes or records about service delivery information)
eLTSS.13. How does your state plan to train or support eLTSS pilot participants?
eLTSS.14. How many training sessions/meetings does your state plan to hold for providers?
eLTSS.15. Has your state encountered any challenges during the eLTSS pilot? (check all that apply) Policy Standards Governance Processes Participant recruitment (e.g., providers, care managers or beneficiaries) Technical Contracting Alignment with Other State Initiatives (e.g., use of proprietary assessment tools) Resource Limitations (e.g., staffing) Other
eLTSS.15.a. If any were selected, how did you address these challenges?
eLTSS.16. How does your state think creation of an eLTSS plan will improve service coordination for people participating in your Medicaid HCBS programs?
eLTSS.17. How does your state plan to use the eLTSS plan process to facilitate meeting the CMS HCBS person-centered planning requirements?
eLTSS.18. What has been your state's experience with data set harmonization efforts in this reporting period?
eLTSS.19. Has your state identified sustainability plans for the eLTSS component beyond the TEFT Demonstration (e.g., build into state system, continue at regional level, pursue state policy)?
TEFT.1. Many states are working across multiple components of TEFT. Tell us how your state is linking these components together. Is there an overarching vision for the state that integrates the components of TEFT?
TEFT.2. If you are combining messaging about TEFT in your stakeholder meetings, how are you communicating the integration of the TEFT components to stakeholders?
TEFT.3. What are the plans for utilizing FASI or other state designated assessment for quality measurement?
TEFT.4. Document progress or changes your state has made with integrating quality measures through the use of HIT.
TEFT.5. Document changes to your quality measures being tested.
TEFT.6. Based on the timeline submitted in your work plan, please provide an update on your state's implementation of an eLTSS plan which would be supported by a PHR.

Quarterly Monitoring Report Questions
TEFT.6.a. How does your state anticipate that users will access and review the eLTSS plan within the PHR?
TEFT.7. How has your state considered how/if the PHR vendor can support the exchange of data related to the eLTSS plan?
TEFT.7.a. What are the specific issues related to PHR vendors' ability or inability to support the exchange of an eLTSS plan (e.g., cost, timing, too big of a change)?
TEFT.8. How has your state considered how/if the eLTSS plan will incorporate FASI items or EoC Survey responses?

Appendix C: Sample HCBS Systems Map

This appendix contains an example TEFT HCBS Systems Map for Georgia. To view the other state systems maps, please refer to the **Systems Map Report**. On an annual basis, Lewin met with state stakeholders to update these maps. State TEFT teams also reviewed and approved the updated maps. In the HCBS Systems Maps, Lewin shows the workflow behind the pathway to HCBS in a visual snapshot. States selected which Medicaid HCBS programs to include in the HCBS Systems Map. The maps track the flow of information from when a beneficiary applies for and then receives services.

A. Structure of a State's HCBS Systems Map

All systems maps have two pages: the first page contains the systems map graphic with seven steps, and the offices, providers, other staff, and beneficiaries who exchange information across the continuum of HCBS programs. The systems maps reflect the operations of either one Medicaid waiver or a set of Medicaid waivers, as noted on the first page. The icons help describe the method and direction of information exchange. The second page has a narrative description of how and what information is exchanged in the map, an icon legend, and a state-specific glossary. Since the maps focus on the pathway to HCBS, they show a feedback loop, but do not provide details about state processes for care plan monitoring and other remediation of services. Additionally, systems maps show in dotted lines the TEFT tools states demonstrated with their waiver populations.

B. Acronym Glossary

This glossary (see **Exhibit C**) contains acronyms common to all HCBS Systems Maps. State-specific acronyms are included in each state's HCBS Systems Map description.

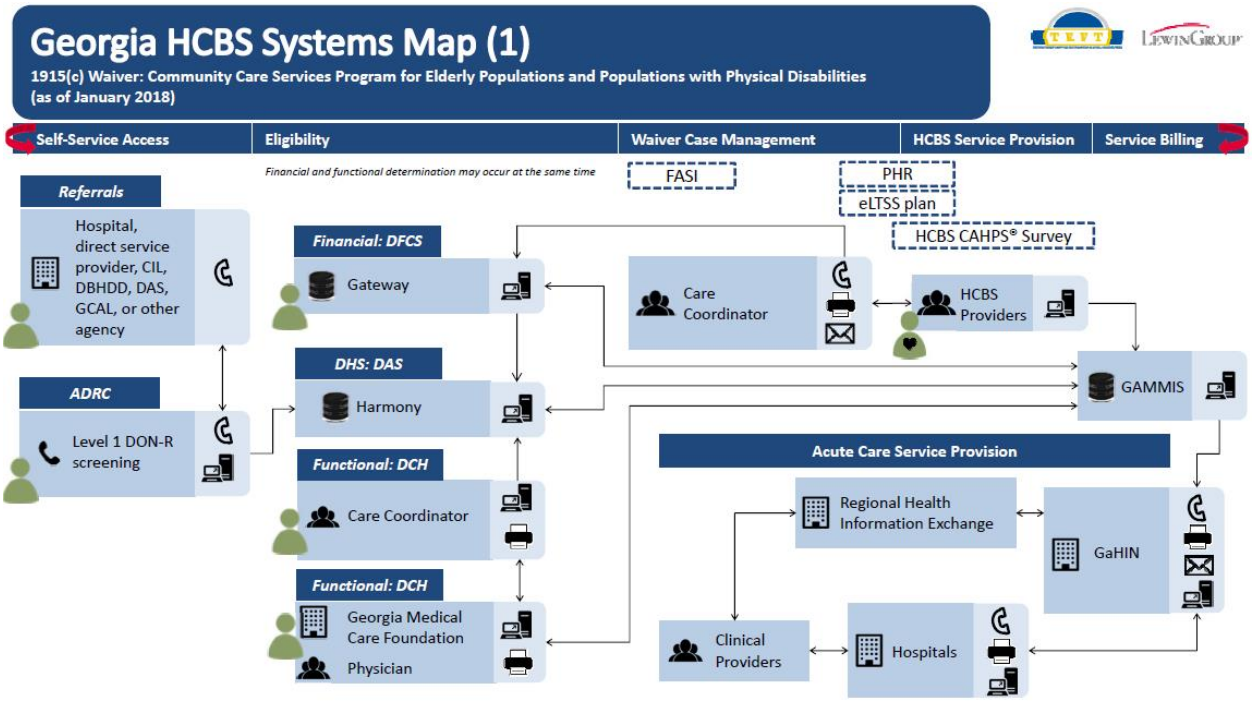
Exhibit A: General Acronym Glossary

Acronym	Definition
LTSS	Long-Term Supports and Services
EoC	Experience of Care
HCBS CAHPS® Survey	Consumer Assessment of Health Providers and Systems Home & Community-Based Services Survey
FASI	Functional Assessment Standardized Items
PHR	Personal Health Record
eLTSS	electronic Long-Term Supports and Services

C. Considerations and Further Information

While the HCBS Systems Maps seek to show how information flows between state systems, the maps do not show every system or linkage that may exist in the future. For example, while states have care plan monitoring and other feedback loops to monitor and remediate services, the current systems maps do not provide that level of detail. Additionally, the maps show how information about an individual flows during acute care service provision and how acute care systems do not currently link to HCBS systems. Although linking acute care and HCBS systems is a goal for the future, the maps do not show that tentative linkage. **Exhibit D** shows an example Georgia map.

Exhibit B: Example Georgia HCBS Systems Map



Georgia HCBS Systems Map Description (1)

Community Care Services Program

- **Self-Service Access:** Hospital, direct service provider, CIL, DBHDD, DAS, GCAL, or other agencies refer individuals to ADRC via phone. An individual calls the ADRC Gateway Counselor to discuss options. Receives options counseling. Counselor conducts pre-screen Level 1 DON-R and enters information into Harmony. Harmony replaced the AIMS Database as of February 2017.
- **Financial Eligibility:** DFCS determines financial eligibility. Gateway replaced the Compass and Success system in September 2017. DFCS staff receive a CCSP communicator form via fax or secure e-mail from Care Coordinator.
- **Functional Assessment:** RN conducts in-person assessment (MDS-HC) and determines care plan. Inputs information into Harmony. AIMS was replaced by Harmony as of February 2017. Also inputs LoC, DON-R, and CCP. Faxes physician LoC and CCP for approval. Contacts service provider (by phone) for referral. If provider accepts member, emails provider referral packet (LoC, MDS-HC, CCP). Providers can log into GAMMIS to be transferred to the Georgia Medical Care Foundation system and can download LoC documents.
  - Physician Role: Provides medical information for functional assessment. Physician signs LoC and CCP and faxes back.
- **Medicaid Waiver Case Management:** Care Coordinator develops care plan and contacts service provider (by phone, fax, e-mail) for referral.
- **Service Provision:** Provides services and supports in the home and community. After the provider receives referral (phone), the provider conducts and initial evaluation. If provider accepts referral, notify Care Coordinator via CCNF (fax). Receive referral packet via secure e-mail.
- **Service Billing:** Provider submits claims for services to GAMMIS. Individuals can login to GAMMIS. GAMMIS is connected to GaHIN unidirectional.

Key

Staff	Bidirectional Interoperable System
Phone	Access to System
Data System	Secure E-mail
Form	Phone
Website	Fax or Mail
Organization	Information Transfer
Information Received	System Interaction Point
Services Received	Information Transfer Direction
Person	Part of CMS TEFT Demonstration
	Feedback Loop

Acronym Glossary

ADRC	Aging and Disability Resource Center	DFCS	Department of Family and Children Services
AIMS	Aging Information Management System	DHS	Department of Human Services
CCNF	Community Care Notification Form	DON-R	Determination of Need Revised
CCP	Comprehensive Care Plan	GaHIN	Georgia Health Information Network
CCSP	Community Care Services Program	GCAL	Georgia Crisis and Access Line
CIL	Center for Independent Living	GAMMIS	Georgia Medicaid Management Information System
DAS	Division of Aging Services	LoC	Level of Care
DBHDD	Department of Behavioral Health and Developmental Disabilities	MDS-HC	Minimum Data Set-Home Care
DCH	Department of Community Health		

Appendix D: Personal Health Record User Survey Instrument

Introduction

This survey will ask you questions about an electronic tool for your computer or phone called [Insert state-specific PHR name]. Using the tool, you can see information about the help you get. You may also use it to talk with the people who help you. These questions will help collect information about your experiences with [Insert state-specific PHR name]. It is okay if you ask for help with your answers from someone you trust. It will take you about 20 minutes to finish. Filling out this survey is voluntary. **Your answers are anonymous and will be kept confidential**. It is your choice to answer these questions. None of your services will change if you answer them.

By clicking START SURVEY you are confirming that you read the introduction to these questions. You also confirm that you agree to participate. You also understand that your participation in this study is voluntary.

For More Information:

If you have questions about the survey or how to respond, please contact [INSERT NAME] at [INSERT NUMBER] or e-mail [INSERT EMAIL].

Survey Questions

1. Introduction

1. I am completing the survey (Check only one):
   - ☐ By myself, as a person receiving services (like meals brought to my home, self-care help with bathing and dressing, or help at home with cooking and cleaning)
   - ☐ With help from someone (like a family member or my case or care manager)
   - ☐ As a caregiver or care provider that uses the [Insert state-specific PHR name] to manage someone else's care
   - ☐ Other: _Click here to enter text._
2. How did you learn about [Insert state-specific PHR name]? (Check all that apply)
   - ☐ Family member or friend
   - ☐ Case or care manager
   - ☐ Service provider (like the agency that provides you with services like home delivered meals, personal care assistance, and/or homemaker services)
   - ☐ Doctor
   - ☐ Focus group or other community support group
   - ☐ I have not heard about [Insert state-specific PHR name] (Survey will skip to Question 15)
   - ☐ Other: _Click here to enter text._

3. Do you view or update your [Insert state-specific PHR name]? (for example, using the [Insert state-specific PHR name] could include using a paper form, texting information to someone, or logging into the Personal Health Record to view or update information)
   - ☐ Yes (Survey will continue to Question 4)
   - ☐ I did, but I do not anymore (Survey will skip to Question 15)
   - ☐ No, but I plan to start using it (Survey will skip to Question 15)
   - ☐ No (Survey will skip to Question 15)

2. Personal Health Record User Questionnaire

4. Do you agree or disagree with the following statements about [Insert state-specific PHR name]?

4a. General PHR Use

Do you agree or disagree with the following statements about [Insert state-specific PHR name]?	**Agree**	**Disagree**	**Not Applicable**
It is easy for me to find and use [Insert state-specific PHR name].	☐	☐	☐
I have physical problems (like problems with my vision) that make viewing the [Insert state-specific PHR name] hard.	☐	☐	☐
I think the information on [Insert state-specific PHR name] is safe and secure.	☐	☐	☐
I would recommend the [Insert state-specific PHR name] to a friend or family member.	☐	☐	☐
I would like to continue using the [Insert state-specific PHR name].	☐	☐	☐

4b. Social Services and Needs

My [Insert state-specific PHR name]….	**Agree**	**Disagree**	**Not Applicable**
Helps me to communicate my needs to those caring for me	☐	☐	☐
Helps me to know about the care I receive	☐	☐	☐
Helps me understand my eligibility for services at home	☐	☐	☐
Gives me contact information for my care team members	☐	☐	☐
Keeps me informed about scheduled visits for services I will receive	☐	☐	☐
Gives me access to helpful information resources	☐	☐	☐
Provides a place for my caregivers to receive information about me and my needs	☐	☐	☐

4c. Health Services and Needs

My [Insert state-specific PHR name]….	**Agree**	**Disagree**	**Not Applicable**
Helps me to know more about my health	☐	☐	☐
Helps me do things to improve my health (like improve my diet or exercise)	☐	☐	☐
Helps me make my own healthcare decisions	☐	☐	☐
Gives me access to information for doctor visits or home health visits	☐	☐	☐
Helps my caregivers to be up to date on my health information	☐	☐	☐

5. How did you learn to use [Insert state-specific PHR name]? (Check all that apply)
   - ☐ I learned on my own
   - ☐ One-on-one training (like with my case or care manager or personal aide)
   - ☐ Group training (like a group class in my community)
   - ☐ Written guide(s) (like a paper training guide with instructions)
   - ☐ Help desk (like a 1-800 number or online chat)
   - ☐ Computer lab training
   - ☐ Family member or friend
   - ☐ Other: _Click here to enter text._____

6. Where do you use [Insert state-specific PHR name]? (Please check all that apply)
   - ☐ At home (on my private computer or mobile phone)
   - ☐ When I am out of the house (using a mobile phone)
   - ☐ At a computer in a public place (like at the library)
   - ☐ Other: _Click here to enter text._____

7. Do you get help from someone to use [Insert state-specific PHR name]?
   - ☐ Yes, I always need help to use the [Insert state-specific PHR name]
   - ☐ Sometimes, I need help to use the [Insert state-specific PHR name]
   - ☐ No, I do not need help to use the [Insert state-specific PHR name]
   - ☐ Other: _Click here to enter text._____

8. How often do you view or update your [Insert state-specific PHR name]? (Please check only one)
   - ☐ Every day
   - ☐ Several times a week
   - ☐ Once a week
   - ☐ Once every few weeks
   - ☐ Once a month
   - ☐ Other: _Click here to enter text._____

9. What kinds of service information do you view or update in [Insert state-specific PHR name]? (Check all that apply)
   - ☐ Personal information (like my name, address, or birthday)
   - ☐ Services and supports data (like home delivered meals, self-care help, and/or help in my home)
   - ☐ Care plan
   - ☐ Medicaid information
   - ☐ Care team contact information
   - ☐ Care team availability
   - ☐ Other: Click here to enter text.
10. What kinds of health information do you view or update in [Insert state-specific PHR name]? (Check all that apply)
   - ☐ Doctor appointment scheduling
   - ☐ Medical records
   - ☐ Lab test results (like blood sugar levels)
   - ☐ Medication information
   - ☐ Resources about my condition
   - ☐ Other: Click here to enter text.
11. What kinds of information do you receive from your [Insert state-specific PHR name]? (Check all that apply)
   - ☐ Reminders about upcoming doctors' appointments
   - ☐ Reminders about upcoming home visits
   - ☐ Reminders about Medicaid eligibility (for receiving services at home)
   - ☐ Reminders about medication refills
   - ☐ Secure messages with my provider (like your doctor or care or case manager)
   - ☐ Other: Click here to enter text.
12. What kinds of information do you give access to from your [Insert state-specific PHR name]? (Check all that apply)
   - ☐ Allow my providers and/or caregivers to get updates about how my day is going
   - ☐ Allow my providers and/or caregivers to get updates about my health status (like doctor visits)
   - ☐ Allow my providers and/or caregivers to view information about who I am and what I care about
   - ☐ Allow my providers and/or caregivers to view information about possible health concerns
   - ☐ Allow me to easily communicate issues with my support team
   - ☐ Other: Click here to enter text.

13. I have shared (or given someone access to) information from [Insert state-specific PHR name] with: (Check all that apply)
    - ☐ Family member or friend
    - ☐ Caregiver
    - ☐ Case or care manager
    - ☐ Service provider (like the agency that provides services like meals brought to my home, self-care help, and/or help with my home)
    - ☐ Doctor
    - ☐ I have not shared (or given access to) this information
    - ☐ Other: Click here to enter text.
14. What kinds of information have you shared (or given someone access to)? (Check all that apply)
    - ☐ Personal information (like my name, address, or birthday)
    - ☐ Services and supports data (like home delivered meals, self-care help, and/or help in my home)
    - ☐ Care plan
    - ☐ Medicaid information
    - ☐ Care team contact information
    - ☐ Care team availability
    - ☐ Doctor appointment scheduling
    - ☐ Past and current medical records
    - ☐ Lab test results (like blood sugar levels)
    - ☐ Medication information
    - ☐ I do not know
    - ☐ Other: Click here to enter text.
    - ☐ I have not shared information from [Insert state-specific PHR name]

[Survey will skip to **Question 18** for PHR Users in order to complete the rest of the questionnaire.]

3. Non-User Questionnaire

It is okay that you do not use [Insert state-specific PHR name]. Please give more information about why you are not using [Insert state-specific PHR name].

15. I do not use [Insert state-specific PHR name] because: (check all that apply)
    - ☐ I did not know the [Insert state-specific PHR name] was available to me
    - ☐ I did not see value in using the [Insert state-specific PHR name]
    - ☐ I found the [Insert state-specific PHR name] difficult to use
    - ☐ I worry about the privacy and security of my information
    - ☐ It would take too much time
    - ☐ I do not like computers/internet
    - ☐ I do not have internet access

☐ I do not have a computer or mobile phone

☐ Other: Click here to enter text.

16. How interested are you in using [Insert state-specific PHR name] to look at your health and service information?

☐ Very much

☐ Somewhat

☐ Not really

17. Please mark whether you think [Insert state-specific PHR name] could be helpful for the following reasons. [Insert state-specific PHR name] would:

17a. Social Services and Needs

The [Insert state-specific PHR name] could be helpful to:	**Agree**	**Disagree**	**Not Applicable**
Communicate my needs to those caring for me	☐	☐	☐
Know about the care I receive	☐	☐	☐
Understand my eligibility for services at home	☐	☐	☐
Give me contact information for my care team members	☐	☐	☐
Keep me informed about scheduled visits for services I will receive	☐	☐	☐
Give me access to helpful information resources	☐	☐	☐
Provide a place for my caregivers to receive information about me and my needs	☐	☐	☐

17b. Health Services and Needs

The [Insert state-specific PHR name] could be helpful to:	**Agree**	**Disagree**	**Not Applicable**
Know more about my health	☐	☐	☐
Do things to improve my health (like my diet or exercise)	☐	☐	☐
Help me make my own healthcare decisions	☐	☐	☐
Give me access to information for doctor visits or home health visits	☐	☐	☐
Help my caregivers to be up to date on my health information	☐	☐	☐

[Survey will continue with **Question 18**; all respondents will be asked to complete the rest of the questionnaire.]

4. Demographic Information Questions

Thank you for answering questions about your experience with [Insert state-specific PHR name]. The last few questions focus on you. These questions will be used to help understand how different people experience the [Insert state-specific PHR name].

18. Please mark your sex.

☐ Male

☐ Female

19. Please mark what age range you are in.
    - ☐ 18-24 years old
    - ☐ 25-34 years old
    - ☐ 35-44 years old
    - ☐ 45-54 years old
    - ☐ 55-64 years old
    - ☐ 65-74 years old
    - ☐ 75- 84 years old
    - ☐ 85 years or older
20. Please mark your race or ethnicity. (Check all that apply)
    - ☐ American Indian or Alaska Native
    - ☐ Asian
    - ☐ Black or African American
    - ☐ Hispanic or Latino
    - ☐ Native Hawaiian or Other Pacific Islander
    - ☐ White
    - ☐ Other: _Click here to enter text._____
21. Please mark the highest level of education you have completed. (Check all that apply)
    - ☐ Did not complete high school
    - ☐ High school/GED
    - ☐ Some college
    - ☐ Completed college
    - ☐ Advanced college degree (Masters, JD, PhD, or MD)
    - ☐ Other: _Click here to enter text._____
22. Which of the following do you experience? (Check all that apply)
    - ☐ A vision or hearing impairment
    - ☐ A speech or language disability
    - ☐ A mobility or physical impairment
    - ☐ A learning or developmental disability
    - ☐ A cognitive impairment or dementia
    - ☐ A mental health disorder
    - ☐ A brain injury
    - ☐ Other: _Click here to enter text._____
    - ☐ None of the above

23. What do you get help with at home and in the community? (please check all that apply)
    - ☐ Daily activities (like bathing, dressing, feeding, transferring, and mobility)
    - ☐ Activities in my home (like cleaning, housekeeping, preparing meals, shopping, and managing money)
    - ☐ Activities at my work, my job, or my school
    - ☐ Activities in my community
    - ☐ Social, emotional, or behavioral needs
    - ☐ Medication or health care
    - ☐ Transportation
    - ☐ Other: Click here to enter text.
    - ☐ None of the above
24. We want to understand how fast you start using new technology. Please check all the statements that apply to you below.
    - ☐ I introduce people to new technologies
    - ☐ I have to be one of the first people to buy a new technology
    - ☐ I am afraid to use new technology
    - ☐ I am the last of my peers to begin using a new technology

5. Additional Comments

25. Please provide any additional comments or feedback about [Insert state-specific PHR name].

    Click here to enter text.

26. If you are a caregiver filling out this survey, or helping someone fill out this survey, please provide any additional comments about the [Insert state-specific PHR name].

    Click here to enter text.

Thank you for completing this survey. Your responses will be kept anonymous and confidential. Your responses will be used to understand experiences with PHRs.

Appendix E: PHR Planning and Implementation Tool

Objectives:

1. Provide considerations for the staff that plan and implement personal health record (PHR) initiatives for home and community-based services (HCBS) populations.
2. Act as a guide for facilitating discussions with internal stakeholders and vendors regarding important considerations related to the features and functions of the PHR.
3. Help identify these critical considerations, including existing HIT systems, data sources for information on HCBS populations, system functionality considerations, opportunities for stakeholder outreach and education, and other decisions related to privacy, security, and access.

Development: The Lewin Group, 2015; the topics in this document were cross-walked with the Health Level Seven International (HL7) Personal Health Record Functional Model to support state efforts to accept and exchange information in a manner that is consistent with industry standards.

Audience: State aging and disability program leadership, CMS staff

Structure:

- The first section, the *PHR Review Template* (pg. 1-16), helps identify key programmatic initiatives to align with the PHR, the medical and social services data elements to include in the PHR to meet the needs of HCBS beneficiaries, and other system considerations for the planning phase, including methods for PHR user access, account management and outreach and education.
- The second section, the *Health IT Environmental Scan* (pg. 17-21), focuses on existing state health IT infrastructure and planned state health IT system improvements. It helps assess baseline health IT infrastructure at the state and provider levels, including HIE and Medicaid Management Information Systems at the state level, and Electronic Health Record adoption and long-term services and supports providers information exchange at the provider level.

PHR Planning and Coordination with Other State Efforts

I. PHR Planning

1. What Medicaid HCBS program population(s) are/will be targeted for the PHR? Briefly describe the considerations related to each population's specific needs that may influence the ultimate design and functionalities for the PHR (e.g., multiple PHRs offered, assistive technology, data elements).

HCBS Program Name	HCBS Population	Description of Considerations Related to PHR Design
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.

2. Has the state chosen a PHR solution?

☐ Yes >>SKIP TO QUESTION 4>>

If yes, please specify the name and number of PHRs offered: Click here to enter text.

☐ No >>PROCEED TO QUESTION 3>>

3. If your state has not yet chosen a PHR solution, please describe current steps/progress in identifying a solution, including any systems that have been reviewed thus far.

Click here to enter text.

>>If the state has not selected a PHR solution, this is the final question in the PHR Review Template, skip to the HIT Environmental Scan.>>

4. What type of PHR system is/will be used? Select one:

☐ Stand-alone PHR

☐ Patient messaging portal

☐ Tethered or connected PHR

☐ Other

If other, please specify: Click here to enter text.

5. What entity is/will host the PHR? Select all that apply:

☐ State

If state, name the agency/department: Click here to enter text.

☐ Contractor/Independent third party

If Contractor/Independent third party, name the entity: Click here to enter text.

☐ Healthcare provider

If Healthcare provider, name the entity: Click here to enter text.

☐ Insurance Company

If Insurance Company, name the entity: Click here to enter text.

☐ Employer

If Employer, name the entity: Click here to enter text.

☐ Other

If other, please specify: Click here to enter text.

6. Is the PHR system operational at this time?

☐ Yes >>SKIP TO QUESTION 8>>

☐ No >>PROCEED TO QUESTION 7>>

7. If this system is not currently in place, what is the projected timeline for implementation and go-live?

Please describe: Click here to enter text.

II. PHR Standards Based Interoperability

8. Does/will the PHR adhere to HL7 PHR System Functional Model Standard or other PHR standards?

☐ Yes

If yes, please specify the PHR standards: Click here to enter text.

☐ No

9. Does/will the PHR integrate or interface with any other health information system(s)?

☐ Yes >>PROCEED TO QUESTION 10>>

If yes, please describe the system(s): Click here to enter text.

☐ No >>SKIP TO QUESTION 17>>

10. If data is exchanged, what standard(s) are/will be used for sending and receiving data?

☐ HL7
☐ CCDA/CDA
☐ DIRECT
☐ SOAP
☐ REST
☐ OpenID
☐ Oauth
☐ Other

If other, please specify: Click here to enter text.

11. What systems does/will the PHR integrate or interface with? Please specify how data is/will be exchanged through the PHR. Select all that apply:

HIT System	PHR will interface (Check if yes)	Bi-Directional	Send Data Only	Receive Data Only
HIE Organization	☐	☐	☐	☐
MMIS	☐	☐	☐	☐
EHR	☐	☐	☐	☐
Case Management IT	☐	☐	☐	☐
Other	☐	☐	☐	☐

If other, please specify: Click here to enter text.

12. What types of data are/will be exchanged through the PHR? Select all that apply:

☐ Unstructured, viewable electronic data (e.g., scans of paper forms)

Please list the users/systems exchanging data: Click here to enter text.

☐ Structured, viewable electronic data (e.g., electronically entered data that cannot be computed by other systems)

Please list the users/systems exchanging data: Click here to enter text.

☐ Computable electronic data (e.g., electronically entered data that can be computed by other systems)

Please list the users/systems exchanging data: Click here to enter text.

13. How does/will the state or HIE organization(s) match patient records or identify the account holder?

☐ Store more than one unique identifier from multiple caregivers
☐ Link unique identifier from multiple caregivers
☐ Controlled method to capture, integrate or link information stored in external systems
☐ Other

If other, please specify: Click here to enter text.

14. If data is exchanged, what identifier(s) are/will be used to match PHR data?

- ☐ Social Security Number
- ☐ Master Patient Index
- ☐ Name and Date of Birth
- ☐ Other unique ID

If other unique ID, please specify: Click here to enter text.

15. Will the PHR link to the state or regional HIE organization(s) in the long term?

- ☐ Yes

If yes, please explain how the HIE organization will be connected and what key data will be exchanged: Click here to enter text.

- ☐ No

III. PHR Security and Information Management

16. What security measures are/will be in place to protect the privacy of users and ensure confidentiality of PHR information? Please select all that apply:

- ☐ Users are required to set up a password-protected personal account
- ☐ Users must set password that meets minimum security standards
- ☐ Users must enter DOB, Zip Code, SSN or other identifying information
- ☐ Secure message standards
- ☐ Other

If other, please specify: Click here to enter text.

17. What storage method is/will be used for PHR data? Select one:

- ☐ Internet-accessible database
- ☐ Within a provider's EHR
- ☐ On the consumer's personal computer
- ☐ Using a portable device such as a thumb drive or smart card
- ☐ In a privately maintained database
- ☐ Cloud
- ☐ Other

If other, please specify: Click here to enter text.

18. Does/will a record or log of the information shared and information recorded (or entered) exist in the PHR, including a record of who entered, accessed, or modified the information?

- ☐ Yes >>PROCEED TO QUESTION 20>>
- ☐ No >>SKIP TO QUESTION 22>>

19. If a record or log of the information shared and information recorded in the PHR exists, what data is included in the log based on standards (e.g., ASTM 2147.024, RFC 3881)? Please check all that apply:

- ☐ Date and time of event
- ☐ Individual identification
- ☐ User identification
- ☐ Access device
- ☐ Type of action
- ☐ Event outcome indicator
- ☐ Identification of the data that was accessed
- ☐ Source of access
- ☐ Reason for access
- ☐ Other

If other please specify Click here to enter text.

20. If a record or log of the information shared and information recorded in the PHR exists, who has access to this information?

Please specify: Click here to enter text.

Personal Health Information

IV. Types of Data Accessible in the PHR

21. What method is/will be used to populate the PHR with data? Select one:

- ☐ Push model
- ☐ Pull model
- ☐ Push and Pull model

22. Please indicate the types of data that are/will be accessible in the PHR. Please check all that apply:

- ☐ Demographic information
- ☐ Current and historical clinical data
- ☐ Social services information
- ☐ Functional assessment data
- ☐ Cognitive assessment data
- ☐ Wellness preventive medicine and/or self-care data
- ☐ Data to support managing health education
- ☐ Decision-support tools
- ☐ Support to manage encounters with providers (e.g., discharge instructions)
- ☐ Other

If other, please specify: Click here to enter text.

23. Please indicate the types of demographic information that are/will be accessible in the PHR and the method for gathering data including auto-populated, and/or manually entered or updated by providers or users. Please check all that apply:

Data Type	Accessible in the PHR	Auto-Populated	Manually entered or updated by providers	Manually entered or updated by users
Personal identification (name, DOB, SSN, or state identifier)	☐	☐	☐	☐
Emergency contact information	☐	☐	☐	☐
Provider contact information	☐	☐	☐	☐
Health insurance/benefit information	☐	☐	☐	☐
Other	☐	☐	☐	☐
If other, please specify:	Click here to enter text.			

24. Please indicate the types of data that are/will be accessible in the PHR and the method for gathering data including auto-populated, sent from other external systems, and/or manually entered or updated by providers or users. Please check all that apply:

Data Type	Accessible in the PHR	Auto-Populated	Manually entered or updated by providers	Manually entered or updated by users
Family history (Important events, dates, hereditary conditions)	☐	☐	☐	☐
Medical history	☐	☐	☐	☐
Surgical history	☐	☐	☐	☐
Genetic information	☐	☐	☐	☐
Social history	☐	☐	☐	☐
Behavioral health history	☐	☐	☐	☐
History present illness	☐	☐	☐	☐
Eye records	☐	☐	☐	☐
Dental records	☐	☐	☐	☐
Physical exam	☐	☐	☐	☐
Test results	☐	☐	☐	☐
Lab results	☐	☐	☐	☐
Health summary	☐	☐	☐	☐
Problems	☐	☐	☐	☐
Conditions/Chronic disease	☐	☐	☐	☐
Symptoms	☐	☐	☐	☐
Medication history/Current pharmacy data	☐	☐	☐	☐
Patient instructions	☐	☐	☐	☐
Review of systems	☐	☐	☐	☐
Social services history	☐	☐	☐	☐
Functional assessment data	☐	☐	☐	☐
Cognitive assessment data	☐	☐	☐	☐
Physical and occupational therapy services received	☐	☐	☐	☐
Receipt of durable medical equipment, homemaker, and other services	☐	☐	☐	☐
Vital Signs	☐	☐	☐	☐
Consult(s), Assessment(s), and Plan(s) Recommendations	☐	☐	☐	☐
Other	☐	☐	☐	☐
If other, please specify:	Click here to enter text.			

25. Please indicate the types of wellness preventative medicine and/or self-care data that are/will be accessible in the PHR and the method for gathering data including auto-populated and/or manually entered or updated by providers or users. Please check all that apply:

Data Type	Accessible in the PHR	Auto-Populated	Manually entered or updated by providers	Manually Entered or updated by users
Medication list	☐	☐	☐	☐
Immunizations	☐	☐	☐	☐
Allergies	☐	☐	☐	☐
Personal health data	☐	☐	☐	☐
Personal health journals	☐	☐	☐	☐
Other	☐	☐	☐	☐
If other, please specify:	Click here to enter text.			

26. What types of data to support managing health education are/will be accessible in the PHR? Please check all that apply:

- ☐ Automatically connects users to specific health content for each test result or health issue
- ☐ Encyclopedia
- ☐ Glossary
- ☐ Virtual coaching
- ☐ Automated Health Programs (ex. diet, exercise, disease management)
- ☐ Other

If other, please specify: Click here to enter text.

27. What types of decision-support tools are/will be accessible in the PHR? Please check all that apply:

- ☐ Automatically triggers alert to call doctor for abnormal results
- ☐ Ability to query external clinical decision support services
- ☐ Ability to query case manager contact information
- ☐ Provide clinical decision support appropriate to use of PHR in self-care, home health and remote settings
- ☐ Population-specific decision-support tools for physical and developmental disabilities
- ☐ Other

If other, please specify: Click here to enter text.

28. What types of data to support managing encounters with providers are/will be auto-populated and/or manually entered or updated by providers or users in the PHR? Please check all that apply:

Data Type	Auto-Populated	Manually entered or updated by providers	Manually entered or updated by users
Case manager contact information	☐	☐	☐
Living Wills and Advance Directives	☐	☐	☐
Guardianship Forms	☐	☐	☐
Power of Attorney	☐	☐	☐
Formal and/or informal caregiver contact information	☐	☐	☐
Budget (Utilization of available services)	☐	☐	☐
Service Agreements	☐	☐	☐
Care Management Plans	☐	☐	☐
Personal Care Planning	☐	☐	☐
Organ Donor Authorization	☐	☐	☐
Permission forms for release of information	☐	☐	☐
Correspondence with provider(s)	☐	☐	☐
Other	☐	☐	☐
If other, please specify:	Click here to enter text.		

29. If fields are auto-populated, how do/will account holders (e.g., PHR users, HCBS beneficiaries, family members, guardians, LTSS providers) correct an error? Please check all that apply:

- ☐ Account holders can review the data and select which information is stored
- ☐ Account holders can edit the information
- ☐ Account holders can annotate records or leave a comment on each page but are not permitted to change or destroy data populated by other systems
- ☐ Account holders can email the provider to change the information
- ☐ Account holders do not have an option to edit or correct information

V. Types of PHR Features and Functions Available to Users

30. What scheduling and appointment features and functions are/will be available to users through the PHR? Please select all that apply:

- ☐ Request appointment

  Please specify types of appointments available, including the types of providers and LTSS services that might be accessed, through this functionality: Click here to enter text.
- ☐ Schedule appointment in real-time
- ☐ Manage or cancel appointment
- ☐ Appointment reminders
- ☐ Calendar with appointments
- ☐ Reminder to complete forms for appointment
- ☐ Review personal health benefit information
- ☐ Identify available services
- ☐ Estimate/Compare health care costs
- ☐ Other

  If other, please specify: Click here to enter text.

31. What secure messaging features and functions are/will be available to users through the PHR? Please select all that apply:

- ☐ Send secure messages to health care providers and clinicians
- ☐ Receive secure messages from health care providers and clinicians
- ☐ Send secure messages to LTSS providers and/or care managers
- ☐ Receive secure messages from LTSS providers and/or care managers
- ☐ Other consumer/provider communication tools (aside from secure messaging)

If other, please specify: Click here to enter text.

32. What disease and self-management features and functions are/will be available to users through the PHR? Please select all that apply:

- ☐ Order new or renew prescriptions
- ☐ Prescription refill reminders
- ☐ Electronic notifications when new or changed information appears
- ☐ Medication management tools
- ☐ Decision support tools
- ☐ Personal goal setting tools
- ☐ Chronic disease self-management tools
- ☐ Consumer education
- ☐ Graphing vital signs and health status
- ☐ Hyperlinks that define technical terms
- ☐ Aids to assess significance of laboratory and other diagnostic tests
- ☐ Document storage
- ☐ Other

If other, please specify: Click here to enter text.

33. Does/will your state integrate an individual's eligibility determination information into the PHR system?

- ☐ Yes
- ☐ No

34. What clinical or LTSS features and functions are/will be available to users through the PHR? Please select all that apply:

- ☐ View personal clinical data
- ☐ Edit existing personal health or clinical data
- ☐ Enter or create new personal health data (i.e., user generated data)
- ☐ Personal health journal
- ☐ View EHR data
- ☐ Transfer data to or from a provider's EHR
- ☐ View social service and other LTSS data
- ☐ Edit existing social service or other LTSS data
- ☐ Guideline based reminders
- ☐ Drug-drug interactions
- ☐ Formulary management
- ☐ Clinical trial eligibility
- ☐ Other

If other, please specify: Click here to enter text.

PHR Users

VI. PHR Account Holder Profile

35. How will users establish a PHR account?

Please describe: Click here to enter text.

36. Do/will PHR users complete a consent form before first use of the PHR?

☐ Yes

☐ No

37. Can/will users assign secondary PHR access account holders?

☐ Yes >>PROCEED TO QUESTION 38>>

If yes, please describe what individuals, including caregivers and/or family members that could be granted this access: Click here to enter text.

☐ No >>SKIP TO QUESTION 41>>

38. If users are/will be able to designate secondary PHR access, what types of data will these additional account holders be able to access?

Please describe: Click here to enter text.

39. Can/will PHR users select or authorize who has access to clinical and other LTSS information available through the PHR?

☐ Yes >>PROCEED TO QUESTION 40>>

If yes, please explain: Click here to enter text.

☐ No >>SKIP TO QUESTION 41>>

40. Can/will users select some information to share and restrict access to other personal health information or results?

☐ Yes

If yes, which sections can be restricted: Click here to enter text.

☐ No

41. Do/will PHR users have the ability to access the PHR in languages other than English?

☐ Yes >>PROCEED TO QUESTION 42>>

☐ No >>SKIP TO QUESTION 43>>

42. If the system will operate in languages other than English, please list those other languages.

☐ Spanish

☐ Other language

If other, please specify: Click here to enter text.

VII. PHR Outreach and Education

43. Who is/will be responsible for conducting outreach and education about the PHR? Please select all that apply:

- ☐ State
- ☐ Independent third party
- ☐ Healthcare provider
- ☐ LTSS provider
- ☐ Insurance company
- ☐ Employer
- ☐ Other

If other, please specify: Click here to enter text.

44. What methods are/will be used to inform PHR users of their privacy and security rights?

- ☐ Privacy notice on vendor website
- ☐ Privacy notice within PHR
- ☐ Email
- ☐ Other

If other, please specify: Click here to enter text.

45. Does/will the state or responsible entity inform PHR users if privacy practices and notices change?

- ☐ Yes
- ☐ No

46. What type(s) of marketing strategy(ies) does/will the state or responsible party use to market the PHR to users? Please select all that apply:

- ☐ Community outreach
- ☐ Print campaign (flyers, newspaper)
- ☐ TV
- ☐ Radio
- ☐ Email
- ☐ Internet
- ☐ Social media (Facebook, Twitter)
- ☐ Other

If other, please specify: Click here to enter text.

47. Does/will the state or responsible party use population-specific materials in PHR outreach and education or marketing strategies?

- ☐ Yes

If yes, please list the populations: Click here to enter text.

- ☐ No

48. Does the agency/organization responsible for overseeing PHR outreach and education have a dedicated website?

- ☐ Yes >>SKIP TO QUESTION 50>>

If yes, please provide the link to the website: Click here to enter text.

- ☐ No >>PROCEED TO QUESTION 49>>

49. If the agency/organization does not have a dedicated website, does the agency/organization plan to develop a website for this project?

- ☐ Yes
- ☐ No

50. If the agency/organization has a dedicated website, do they plan to disseminate information and resources about the PHR on the website?

- ☐ Yes

  If yes, please describe what information will be shared: Click here to enter text.
- ☐ No

51. Who is/will be responsible for educating users on how to register and use the system once users learn about the PHR? Please select all that apply:

- ☐ State
- ☐ Independent third party
- ☐ Healthcare provider
- ☐ LTSS provider
- ☐ Insurance company
- ☐ Employer
- ☐ Caregiver or family member
- ☐ Other

  If other, please specify: Click here to enter text.

52. How does/will the state or responsible party educate users on how to register and use the PHR system? Select all that apply:

- ☐ User guide available within PHR
- ☐ User guide on vendor website
- ☐ User guide mailed to providers or users when requested
- ☐ Training available online (webinar, video demonstration)
- ☐ Training available in-person or one-on-one in home
- ☐ Training is not available
- ☐ Customer support call-center
- ☐ No formal direction provided
- ☐ Other

  If other, please specify: Click here to enter text.

53. How does/will the agency/organization responsible for PHR outreach and education support users that are not comfortable with computers and technology?

Please describe the strategy: Click here to enter text.

54. How does/will the state or responsible party communicate the value of a PHR to users?

- ☐ Develop materials (pamphlet or user guide) for providers to distribute
- ☐ Develop ads for TV, newspaper, radio, billboards
- ☐ Conduct literature review and share with providers to increase awareness
- ☐ Share Success stories (website, newspaper, interview on TV, etc.) of families/individuals who have benefited
- ☐ Develop short video series that shows users accessing information
- ☐ Perform demonstration in hospital or other facility in the community
- ☐ In-home one-on-one discussions with individuals/caregivers
- ☐ Other

If other, please specify: Click here to enter text.

55. Does/will LTSS provider staff receive training in use of PHR to assist consumers?

- ☐ Yes
- ☐ No

56. How does/will the state or responsible party monitor the progress and implementation of the PHR system (e.g., PHR usability testing, user feedback for modifying PHR)?

Please describe: Click here to enter text.

57. Does/will the state or responsible party conduct an evaluation of the progress and implementation?

- ☐ Yes

If yes, please describe the evaluation plan/measures: Click here to enter text.

- ☐ No

VIII. PHR Access and Support

58. What tools does/will the state employ to support broad access by intended users including blind, physically disabled, individuals with low literacy, and individuals with barriers to use of technology? Please check all that apply:

- ☐ Design meets or exceeds 508 compliance
- ☐ Font size adaptation for on screen viewing
- ☐ Tags for images and pictures
- ☐ Instructions tailored for users with cognitive disabilities
- ☐ Definitions for fields and terms used
- ☐ Help features
- ☐ Appropriate literacy levels
- ☐ Other

If other, please specify: Click here to enter text.

59. What platforms are/will be available for account holders to access the PHR? Please check all that apply:

- ☐ Paper
- ☐ Personal computer
- ☐ Internet
- ☐ Smartphone mobile application
- ☐ PHR smart card
- ☐ Other

If other, please specify: Click here to enter text.

60. Describe the types of devices or assistive technology that are/will be supported for the HCBS beneficiary to access their PHR.

Click here to enter text.

61. Does/will the PHR generate reports or dashboards for users to view information in a concise/user-friendly way?

- ☐ Yes

If yes, please describe the reports generated: Click here to enter text.

- ☐ No

62. Can/will PHR users print reports or forms from the PHR?

- ☐ Yes
- ☐ No

63. Is there any cost to the user for accessing the PHR?

- ☐ Yes

If yes, please describe the cost to the user: Click here to enter text.

- ☐ No

64. Can/will users download or transfer information from the PHR to another PHR?

- ☒ Yes

If yes, please describe the information that can be transferred: Click here to enter text.

- ☐ No

65. What kind of consent model is being used?

- ☐ Opt-out
- ☐ Opt-out with exceptions
- ☐ Opt-in
- ☐ Opt-in with restriction
- ☐ No consent
- ☐ Other

If other, please specify: Click here to enter text.

66. What kinds of technical support will the state provide for PHR users? Please select all that apply:

- ☐ Self-Help Support (e.g., state-developed user manual, FAQ)
- ☐ Existing call center (800 number)
- ☐ *If existing call center, please list vendor name:* Click here to enter text.
- ☐ New call center (800 number)
- ☐ *If new call center, please list vendor name:* Click here to enter text.
- ☐ 3-1-1
- ☐ Dedicated email
- ☐ In-home staff to assist individual/caregiver with PHR data entry and data review
- ☐ Website
- ☐ Other

If other, please specify: Click here to enter text.

67. What support does the vendor offer for users of the PHR? Please select all that apply:

- ☐ Self-Help Support (e.g., Website, Downloadable guides, FAQ)
- ☐ In-home staff to assist individual/caregiver with PHR data entry and data review
- ☐ Create user names
- ☐ Password reset
- ☐ Troubleshoot data entry
- ☐ None
- ☐ Other

If other, please specify: Click here to enter text.

68. How do users contact vendor customer service? Please select all that apply:

- ☐ Customer service (24/7)
- ☐ Customer service (Business Hours)
- ☐ Chat feature within PHR
- ☐ Dedicated email
- ☐ No customer service available
- ☐ Other

If other, please specify: Click here to enter text.

IX. PHR Administrative Management

69. What does/will the state budget through state initiatives as far as costs associated with updating and maintaining the software and hardware for the PHR system? Please describe the high-level financial cost. This total cost may include hiring new staff, purchasing new software/hardware, or supporting additional features (mobile phone, appointments).

Click here to enter text.

70. Do third parties have access to health information data for research purposes?

- ☐ Yes >>PROCEED TO QUESTION 71>>
- ☐ No >>If third parties do not have access to data, this is the last question in the PHR Review Template, skip to HIT Environmental Scan.>>

71. How is PHR information shared for secondary use?

- ☐ Personally identifiable
- ☐ Statistical/de-identifiable
- ☐ Other

If other, please specify: Click here to enter text.

72. Are PHR users informed when information is shared for secondary use or accessed by a third party?

- ☐ Yes
- ☐ No

73. How does/will the state or responsible entity inform account holders about the potential secondary uses and disclosures of personally identifiable health information? Please select all that apply:

- ☐ Account holders mailed notice
- ☐ PHR website displays PHR Model Privacy Notice
- ☐ Account holders emailed notice
- ☐ Account holders are not informed
- ☐ Other

If other, please specify: Click here to enter text.

HIT Environmental Scan

I. State HIT Infrastructure

A. Health Information Exchange

1. Does your state have an operational HIE organization(s), including HIOs or HISPs?

- ☐ Yes >> SKIP TO QUESTION 3>>
- ☐ No >>PROCEED TO QUESTION 2>>

2. If your state does not currently have an operational HIE organization, does your state plan to facilitate HIE in the future?

- ☐ Yes >>SKIP TO QUESTION 5>>

  If yes, please specify the planned timeline: Click here to enter text.
- ☐ No >>SKIP TO QUESTION 9>>

3. What type of HIE is currently operated in the state?

- ☐ One centralized HIE for the state

  If centralized, please specify the name: Click here to enter text.
- ☐ Regional HIE(s)

  If regional, please specify region(s): Click here to enter text.
- ☐ Private HIE(s)

  If private, please specify the organizational name: Click here to enter text.
- ☐ Hybrid HIE (Centralized and decentralized model)

  If hybrid, please specify the name: Click here to enter text.

4. What types of providers and organizations currently participate in the HIE? Select all that apply. Please indicate the total number of participants by type of provider or organization.

	Participate in HIE	Total Number of Participating Organizations
Hospital	☐	Click here to enter text.
Hospital Affiliated Clinic	☐	Click here to enter text.
Federally Qualified Health Center	☐	Click here to enter text.
Mental or Behavioral Health Center	☐	Click here to enter text.
Psychiatric Treatment Facility	☐	Click here to enter text.
Accountable Care Organization	☐	Click here to enter text.
Managed Care Organization	☐	Click here to enter text.
Mid to Large Medical Group	☐	Click here to enter text.
Physician Office	☐	Click here to enter text.
Dialysis Center	☐	Click here to enter text.
Imaging Center	☐	Click here to enter text.
School Health Clinic	☐	Click here to enter text.
Home Health agencies	☐	Click here to enter text.
Hospice agencies	☐	Click here to enter text.
Pharmacies	☐	Click here to enter text.
Medicaid providers	☐	Click here to enter text.
Medicare providers	☐	Click here to enter text.
Long Term Care providers	☐	Click here to enter text.
Skilled Nursing Facility/Rehabilitation providers	☐	Click here to enter text.
Respite providers	☐	Click here to enter text.
Other Health Care providers	☐	Click here to enter text.
Other Ancillary Service providers (e.g.; lab or radiology providers)	☐	Click here to enter text.
Health Plan or Insurance Company	☐	Click here to enter text.
Other payers	☐	Click here to enter text.
State Health Agency	☐	Click here to enter text.
Local Health Department	☐	Click here to enter text.
Community/Non-Profit Organization	☐	Click here to enter text.
College or University	☐	Click here to enter text.
Other	☐	Click here to enter text.
If other, please specify:	Click here to enter text.	

Refer to **questions 5 to 8** if the state HIE organization(s) is operational or planned. If more than one HIE organization is operational or planned in the state, provide the **names for each HIE organization in question 5** and **complete questions 6 to 8 for each HIE organization**.

5. Please identify the name(s) of the HIE organizations?

Click here to enter text.

6. What types of services are/will be available through the HIE organization(s)?

- ☐ Patient portals
- ☐ Clinical messaging
- ☐ Clinical data interoperability services
- ☐ Testing and results reporting
- ☐ Other clinical documentation sharing
- ☐ Electronic health record
- ☐ Personal health record
- ☐ Record locating services
- ☐ Administrative services (claims, authorization, payment systems)
- ☐ Disease management services
- ☐ Community and public health reporting
- ☐ Other

If other, please specify: Click here to enter text.

7. What types of data are/will be exchanged through the HIE organization(s)? Select all that apply:

- ☐ Unstructured, viewable electronic data (e.g., scans of paper forms)

  Please list the organizations exchanging data: Click here to enter text.
- ☐ Structured, viewable electronic data (e.g., electronically entered data that cannot be computed by other systems)

  Please list the organizations exchanging data: Click here to enter text.
- ☐ Computable electronic data (e.g., electronically entered data that can be computed by other systems)

  Please list the organizations exchanging data: Click here to enter text.

8. What types of data (e.g., unstructured, viewable electronic data; structured, viewable electronic data; computable electronic data) are/will be available through the HIE organization(s)?

Data	**Unstructured, viewable electronic data** (e.g., scans of paper forms)	**Structured, viewable electronic data** (e.g., electronically entered data that cannot be computed by other systems)	**Computable electronic data** (e.g., electronically entered data that can be computed by other systems)
Inpatient and outpatient	☐	☐	☐
Emergency department	☐	☐	☐
Pathology	☐	☐	☐
Radiology	☐	☐	☐
Disease management	☐	☐	☐
Pharmacy	☐	☐	☐
Laboratory	☐	☐	☐
Quality measures/data analytics	☐	☐	☐
Medicaid Enrollment/ Eligibility	☐	☐	☐
Medicaid Claims/MMIS	☐	☐	☐
HCBS functional assessment	☐	☐	☐
Person-centered plan	☐	☐	☐
LTSS service provision history	☐	☐	☐
Other	☐	☐	☐
If other, please specify:	Click here to enter text.	Click here to enter text.	Click here to enter text.

B. Medicaid Management Information System

9. Describe the current Medicaid Management Information System.

Click here to enter text.

10. Who has access to MMIS? Describe the features or functions users can access.

Users	Yes	No	*If yes, describe features or functions users can access:*
Beneficiaries	☐	☐	Click here to enter text.
HCBS Providers	☐	☐	Click here to enter text.
Care or Case Managers	☐	☐	Click here to enter text.
Acute Care Providers	☐	☐	Click here to enter text.
Other healthcare provider	☐	☐	Click here to enter text.
If other, please specify:	Click here to enter text.		

11. What systems are/will be integrated with the MMIS system?

System	Yes	No	*If yes, describe the features or functions that are/will be integrated:*
HIE	☐	☐	Click here to enter text.
EHR	☐	☐	Click here to enter text.
PHR	☐	☐	Click here to enter text.
Other IT system	☐	☐	Click here to enter text.
If other, please specify:	Click here to enter text.		

II. Provider HIT Infrastructure

A. Electronic Health Record

12. What percentage of acute care providers in your state have certified EHRs?

Click here to enter text.

13. What percentage of hospitals in your state have certified EHRs?

Click here to enter text.

14. What percentage of long-term care providers in your state have certified EHRs?

Click here to enter text.

15. What percentage of home health agencies in your state have certified EHRs?

Click here to enter text.

16. What percentage of hospice agencies in your state have certified EHRs?

Click here to enter text.

17. What percentage of behavioral health providers in your state have certified EHRs?

Click here to enter text.

B. Long-Term Services and Supports Providers

18. What methods are currently used to exchange health information between LTSS providers? Select all that apply:

- ☐ Information is not shared regularly
- ☐ Fax/Mail/Phone
- ☐ Secure e-mail or Direct Secure Messaging
- ☐ Access to IT system
- ☐ Other

If other, please specify: Click here to enter text.

Appendix F: Final Core and Non-Core eLTSS Dataset Elements

Exhibit F-1 includes the 56 core elements of the eLTSS Dataset. The eLTSS community agreed upon these elements as core to a service plan.

Exhibit F-1: Core eLTSS Dataset Elements

Grouping	Data Element Name	Data Element Definition *(includes examples, expected list of values and usage note where applicable)*	Datatype / Format
Beneficiary Demographics	Person Name	The name of the person whom the plan is for.	String / First Name, MI, Last Name
Beneficiary Demographics	Person Identifier	A string of character(s) used to identify the person whom the plan is for. This may be the Medicaid ID number where applicable.	String / Free Text
Beneficiary Demographics	Person Identifier Type	The type of unique identifier used to identify the person whom the plan is for. Values include: Medicaid Number, State ID, Claim Number, Medical Record Number, Other (free text)	String / List of Values
Beneficiary Demographics	Person Date of Birth	The birth date of the person whom the plan is for.	Date / MM/DD/YYYY
Beneficiary Demographics	Person Phone Number	The primary phone number of the person whom the plan is for, or his/her legal representative, where applicable.	Number / 111-111-1111
Beneficiary Demographics	Person Address	The address of the person whom the plan is for.	String / Street, City, State, Zip Code, County
Beneficiary Demographics	Emergency Contact Name	The name of the individual or entity identified to contact in case of emergency.	String / First Name, MI, Last Name
Beneficiary Demographics	Emergency Contact Relationship	The relationship (e.g., spouse, neighbor, guardian, daughter) of the individual identified to contact in case of emergency.	String / Free Text
Beneficiary Demographics	Emergency Contact Phone Number	The primary phone number (and extension when applicable) of the individual or entity identified to contact in case of emergency.	Number / 111-111-1111 x1111
Beneficiary Demographics	Emergency Backup Plan	Description of how to address unforeseen events, emergency health events, emergency events, problems with medical equipment and supplies, and unavailable staffing situations for critical services that put the person's health and safety at risk. This can be included as free text or attachment.	String / Free Text
Goals & Strengths	Goal	A statement of a desired result that the person wants to achieve.	String / Free Text
Goals & Strengths	Step or Action	A planned measurable step or action that needs to be taken to accomplish a goal identified by the person.	String / Free Text

Grouping	Data Element Name	Data Element Definition *(includes examples, expected list of values and usage note where applicable)*	Datatype / Format
Goals & Strengths	Strength	A favorable attribute of the person, his/her support network, environment and/or elements of his/her life.	String / Free Text
Person Centered Planning	Assessed Need	The clinical and/or community-based necessity or desire as identified through an assessment that should be addressed by a service.	String / Free Text
Person Centered Planning	Person Setting Choice Indicator	Indicator that reflects the setting in which the person resides is chosen by the individual.	Boolean / Yes, No
Person Centered Planning	Person Setting Choice Options	The alternative home and community-based settings that were considered by the individual.	String / Free Text
Person Centered Planning	Plan Monitor Name	The name of the person responsible for monitoring the plan.	String / First Name, MI, Last Name
Person Centered Planning	Plan Monitor Phone Number	The primary phone number (and extension when applicable) of the plan monitor.	Number/ 111-111-1111 x1111
Person Centered Planning	Preference	Presents the person's personal thoughts about something he or she feels is relevant to his or her life experience and may be pertinent when planning.	String / Free Text
Person Centered Planning	Service Options Given Indicator	States whether or not the person was given a choice of services outlined in the plan.	Boolean / Yes, No
Person Centered Planning	Service Selection Indicator	States whether or not the person participated in the selection of the services outlined in the plan.	Boolean / Yes, No
Person Centered Planning	Service Plan Agreement Indicator	States whether or not the person agrees to the services outlined in the plan.	Boolean / Yes, No
Person Centered Planning	Service Provider Options Given Indicator	States whether or not the person was offered a choice of providers for each service.	Boolean / Yes, No
Person Centered Planning	Service Provider Selection Agreement Indicator	States whether or not the person feels he/she made an informed choice in selecting the provider for each service.	Boolean / Yes, No
Plan Information	Plan Effective Date	The date upon which the plan goes into effect. Start date is required, end date is optional.	Date Interval/ MM/DD/YYYY–MM/DD/YYYY
Plan Signatures	Person Signature	The depiction of the person's signature as proof of identity and intent for the plan.	String / Signature

Grouping	Data Element Name	Data Element Definition *(includes examples, expected list of values and usage note where applicable)*	Datatype / Format
Plan Signatures	Person Printed Name	The printed or typed name of the person.	String / Free Text
Plan Signatures	Person Signature Date	The date the person signed the plan.	Date / MM/DD/YYYY
Plan Signatures	Guardian / Legal Representative Signature	The depiction of the guardian or legally authorized representative's signature as proof of identity and intent for the plan.	String / Signature
Plan Signatures	Guardian / Legal Representative Printed Name	The printed or typed name of the guardian or legally authorized representative.	String / Free Text
Plan Signatures	Guardian / Legal Representative Signature Date	The date the guardian or legally authorized representative signed the plan.	Date / MM/DD/YYYY
Plan Signatures	Support Planner Signature	The depiction of the support planner's signature as proof of identity and intent for the plan.	String / Signature
Plan Signatures	Support Planner Printed Name	The printed or typed name of the support planner.	String / Free Text
Plan Signatures	Support Planner Signature Date	The date the support planner signed the plan.	Date / MM/DD/YYYY
Plan Signatures	Service Provider Signature	The depiction of the service provider's signature as proof they agree to the services they will provide.	String / Signature
Plan Signatures	Service Provider Printed Name	The printed or typed name of the service provider.	String / Free Text
Plan Signatures	Service Provider Signature Date	The date the service provider signed the plan.	Date / MM/DD/YYYY
Risks	Identified Risk	An aspect of a person's life, behavior, environmental exposure, personal characteristic, or barrier that increases the likelihood of disease, condition, injury to self or others, or interaction with the criminal justice system.	String / Free Text
Risks	Risk Management Plan	Description of planned activities to minimize identified risks that endanger the person's health and safety. This can be included as free text or attachment.	String / Free Text
Service Information	Service Name	Identifies the paid and/or non-paid service/support provided to a person. Include the code and display name plus any modifiers when a coding system (e.g., Healthcare Common Procedure Coding System (HCPCS), Home Health Revenue Codes) is used.	Text/ Display Name, Code, Modifier
Service Information	Self-Directed Service Indicator	Indicates whether the individual chose to self-direct the service.	Boolean /Yes, No
Service Information	Service Start Date	The start date of the service being provided.	Date / MM/DD/YYYY

Grouping	Data Element Name	Data Element Definition *(includes examples, expected list of values and usage note where applicable)*	Datatype / Format
Service Information	Service End Date	The end date of the service being provided.	Date / MM/DD/YYYY
Service Information	Service Delivery Address	The address where service delivery will take place if service will not be provided at the person's address.	String / Street, City, State, Zip Code, County
Service Information	Service Comment	Additional information related to the service being provided. This field could capture additional information of the frequency of the service, how the person wants the service delivered and only used when the comment provides additional detail of the service not already handled by another element.	String / Free Text
Service Information	Service Funding Source	The source of payment for the service.	String / Free Text
Service Information	Service Unit Quantity	The numerical amount of the service unit being provided for a frequency. This element is slated to be used in conjunction with Service Quantity Interval and Unit of Service Type elements to form a full description of how often a service is provided. For example, a service being provided 7 units per week, the Service Unit Quantity = "7." For a service being provided 8 hours a day, the Service Unit Value = "8."	Number/ Numeric
Service Information	Unit of Service Type	A named quantity in terms of which services are measured or specified, used as a standard measurement of like services. Values include: minute(s), 8 hour(s), quarter hour(s), hour(s), half day(s), full day(s), day(s), week(s), month(s), dollar(s), meal(s), mile(s), visit(s)/session(s), installation(s), none, other (free text). This element is slated to be used in conjunction with Service Unit Quantity interval and Service Unit Quantity elements to form a full description of how often a service is provided. For example, a service being provided 7 units per week, the Unit of Service Type = "units." For a service being provided 8 hours a day, the Unit of Service Type = "hours."	String / List of Values
Service Information	Service Unit Quantity Interval	A period of time corresponding to the quantity of service(s) indicated. Values include: per day, per week, per month, per year, one time only, other (free text). This element is slated to be used in conjunction with Unit of Service Type and Service Unit Quantity elements to form a full description of how often a service is provided. For example, a service being provided 7 units per week, the Service Unit Quantity Interval = "per week." For a service being provided 8 hours a day, the Service Unit Quantity Interval = "per day."	String / List of Values

Grouping	Data Element Name	Data Element Definition *(includes examples, expected list of values and usage note where applicable)*	Datatype / Format
Service Information	Service Rate per Unit	The rate of one unit for a service.	Number / $
Service Information	Total Cost of Service	The total cost of a service for the plan.	Number / $
Service Provider Information	Support Planner Name	The name of the person (e.g., Case Manager, Care Coordinator, Plan Coordinator) who helped develop the plan.	String / First Name, MI, Last Name
Service Provider Information	Support Planner Phone Number	The primary phone number (and extension when applicable) of the support planner.	Number / 111-111-1111 x1111
Service Provider Information	Service Provider Name	The name of the entity or individual providing the service. For paid services use the organization/agency name, for non-paid services use the first and last name of the individual providing the service.	String / Free Text
Service Provider Information	Service Provider Phone Number	The primary phone number (and extension when applicable) of the service provider.	Number / 111-111-1111 x1111
Service Provider Information	Non-Paid Provider Relationship	The relationship (e.g., spouse, neighbor, guardian, daughter) of the individual providing a non-paid service or support to the person.	String / Free Text

Exhibit F-2 includes the non-core elements of the eLTSS Dataset. This set of data elements was briefly discussed with the eLTSS community. The eLTSS community agreed that these data elements are "nice to have, but not core" to a service plan. The details (definition, values, and format) of these elements are not as robust as the core elements.

Exhibit F-2: Non-Core eLTSS Dataset Elements

Grouping	Data Element Name	Data Element Definition *(includes examples, expected list of values and usage note where applicable)*	Datatype / Format
Beneficiary Demographics	Assessment Summary	Contains a subset of information from one or more assessments pertinent to the delivery of a service.	String / Free Text
Beneficiary Demographics	Person Gender Identity	Gender Identity is an area that is currently under discussion in the LTSS domain. We have included pilot language from ONC and CMS (as of August 2017). ONC 2015 Edition Certification Companion Guide for Demographics v1.6 (7/28/2017) (https://www.healthit.gov/sites/default/files/2015Ed_CCG_a5-Demographics.pdf) Best Practice for Gender Identity: What is your current gender identity? (Check all that apply.) Values include: Male; Female; Transgender male/Trans man/Female-to-male; Transgender female/Trans woman/Male-to-female; Genderqueer, neither exclusively male nor female; Additional gender category/(or other), please specify; Decline to answer. CMS Office of Minority Health Gender Identity Pilot Test: How do you describe yourself? Values include: Male; Female; Transgender; Do not identify as female, male, or transgender.	String / List of Values
Beneficiary Demographics	Person Birth Sex	Birth Sex is an area that is currently under discussion in the LTSS domain. We have included pilot language from ONC and CMS (as of August 2017). ONC 2015 Edition Certification Companion Guide for Demographics v1.6 (7/28/2017) (https://www.healthit.gov/sites/default/files/2015Ed_CCG_a5-Demographics.pdf): The sex recorded on the person's birth certificate. Values include: Male, Female, Unknown CMS Office of Minority Health Gender Identity Pilot Test: What sex were you assigned at birth, on your original birth certificate? Values include: Male; Female	String / List of Values
Beneficiary Demographics	Person Environment	The description of the person's environment where services will be delivered. This could include but is not limited to: roommates, pets, devices or equipment.	String / Free Text
Beneficiary Demographics	Main Contact Name	The name of the main contact for the person whom the plan is for.	String / First Name, MI, Last Name
Beneficiary Demographics	Main Contact Phone Number	The primary phone number (and extension when applicable) of the main contact for the person whom the plan is for.	Number / 111-111-1111 x1111
Beneficiary Demographics	Main Contact Address	The address of the main contact for the person whom the plan is for.	String/Street, City, State, Zip Code, County

Grouping	Data Element Name	Data Element Definition *(includes examples, expected list of values and usage note where applicable)*	Datatype / Format
Beneficiary Demographics	Emergency Contact Phone Type	The type of telecommunication for the emergency contact. Values include, but not limited to: home, work, mobile, facility, toll free, fax, other	String / List of Values
Beneficiary Demographics	Emergency Contact Primary Indicator	States whether or not the emergency contact is the primary contact.	Boolean / Yes, No
Goals & Strengths	Goal Created Date	The date on which the goal was created by the person. *Harmonization Note: This is not core since the grantees that do collect this date state that the date the goal is created is usually the same as the date the plan was created.*	Date / MM/DD/YYYY
Goals & Strengths	Goal Completed Date	The date on which the goal was achieved. *Harmonization Note: This is not core since the majority of the grantees did not track or capture the completion of the goal. Currently, grantees' plans are static in nature. If a goal is completed before the annual plan review date, most grantees will create a new plan with new goals.*	Date / MM/DD/YYYY
Goals & Strengths	Goal Status	The condition or state of a goal at a particular time. *Harmonization Note: This is not core since the status of goals is not captured directly in the plan by all grantees. Currently, grantees' plans are static in nature. If there is a change in status, a new plan is generated rather than a status being updated.*	String / Free Text
Goals & Strengths	Outcome	The actual endpoint of the goal. *Harmonization Note: This is not core since the majority of the grantees currently do not have this level of "case management tracking" in their service plans. Some grantees collect this information at the end of the plan and are not captured directly on the plan.*	String / Free Text
Plan Information	Plan Created Date	This could be the date the plan was entered into a system or the date the plan is considered complete (or both). *Harmonization Note: Include as an Optional element. This is an administrative element (mostly used for audit and tracking purposes) and is defined differently via the Grantees and Pilots.*	Date / MM/DD/YYYY
Plan Information	Plan Type / Category	*Harmonization Note: These elements are administrative in nature and are largely used for internal purposes.*	String / Free Text
Plan Information	Plan Status	*Harmonization Note: These elements are administrative in nature and are largely used for internal purposes.*	String / Free Text
Plan Information	Plan Comments / Narrative Text	*Harmonization Note: Grantees/pilots currently use this field for administrative purposes or any items from assessments that can't be put in another field.*	String / Free Text
Plan Information	Total Plan Cost	*The estimated total cost of all services and supports for a plan.*	Number / $
Plan Information	Total Plan Budget	*The total allotment of funds for services and supports approved or authorized for a plan.*	Number / $

Grouping	Data Element Name	Data Element Definition *(includes examples, expected list of values and usage note where applicable)*	Datatype / Format
Plan Information	Plan Funding Source	*The source(s) of payment for the plan.*	String / Free Text
Plan Information	Miscellaneous Budget Elements	*Sample elements include: fixed budget total, flexible budget total, waiver obligation, cost neutrality limit, etc.* *Harmonization Note: Each Grantee / Pilot has a unique way of capturing and displaying various budgets on their plan. It was agreed that these elements could not be harmonized as a core component.*	Number / $
Plan Information	Miscellaneous Cost Elements	*Sample elements include: Total cost and projected cost of services, annual waiver service cost total, annual state plan services total, annual non-Medicaid services total, MFP flexible funds total, total participant directed services cost, etc.* *Harmonization Note: Each Grantee / Pilot has a unique way of capturing and displaying various costs on their plan. It was agreed that these elements could not be harmonized as a core component.*	Number / $
Plan Signatures	Signature Type / Signature on File	*Harmonization Note: These are administrative in nature and should not be a core component of the eLTSS Plan.*	String / Free Text
Plan Signatures	Other Plan Signatures	*Other optional or state-specific signatures. Examples could include care coordinator collaborator, DSS county staff, etc.*	String / Signature
Risks	Risk Created Date	*The date the risk was put on the plan.* *Harmonization Note: This date is pre-populated based on the date that InterRai assessment was performed or the date the risk is added to the plan which would be the same as the Plan Created Date.*	Date / MM/DD/YYYY
Service Information	Service History	*A history of services, changes in hours of care, or changes in providers.*	String / Free Text
Service Information	Service Total Units	*The total number of units for each service for the duration of the plan.*	Number / Numeric
Service Information	Service Reason	*The reason a service is being provided.* *Harmonization Note: KY uses their reason elements for internal tracking purposes only and is specific to delays in services being provided.*	String / Free Text
Service Information	Service Status	*The condition or state of a service at a particular time.* *Harmonization Note: KY and MN are the only grantees who currently capture the status of each service being provided. They both mentioned that they see this as something that is important for their planning process, but should not be listed as a core eLTSS element.*	String / Free Text
Service Information	Service Delivery Days of the Week	*Harmonization Note: Service Delivery Day should not be included as a core element. This information is negotiated between the provider and beneficiary and may change frequently which would make plan management and revisions impossible to maintain.*	String / Free Text

Grouping	Data Element Name	Data Element Definition *(includes examples, expected list of values and usage note where applicable)*	Datatype / Format
Service Information	Exceptions for Service	*Harmonization Note: Each Grantee who captured Exceptions for Service had a unique way of capturing and displaying this element on their plan. It was agreed that these elements could not be harmonized as a core component.*	String / Free Text
Service Information	Service Type / Category	*Harmonization Note: Each Grantee / Pilot has a unique way of capturing and displaying service category on their plan. It was agreed that these elements could not be harmonized as a core component.*	String / Free Text
Service Provider Information	Service Provider Identifier	*Harmonization Note: The Grantees currently use Service Provider Identifier for billing and service authorization purposes. It is not something needed for sharing the plan.*	Number / Numeric
Service Provider Information	Service Provider Address	*Harmonization Note: Service Provider Address will not be a core element on the plan. KY states this information is pre-populated for traditional (paid) services. MD captures the provider's address for their emergency back-up plans only. MN's county of service is brought over from the assessment and not considered core to the plan.*	String / Street, City, State, Zip Code, County
Service Provider Information	Service Provider Qualifications	*Harmonization Note: Service Provider Qualifications will not be a core element on the eLTSS Plan. There is nothing specifically stated in the PCP regulations that Provider Qualifications need to be captured in the plan. Currently only CT captures qualifications of service providers in their plan. CT requires that providers have certain qualifications and this is a criteria based on certification. This information collected is similar to what would be found on a resume. MN no longer captures "qualifications" in their plan, but instead the individual states their needs in a "Support Instructions" field and then providers are selected (from provider enrollment information) based on those needs.*	String / Free Text
Server Provider Information	Support Planner Agency Name	*The name of the agency that the Support Planner works for.*	String / Free Text