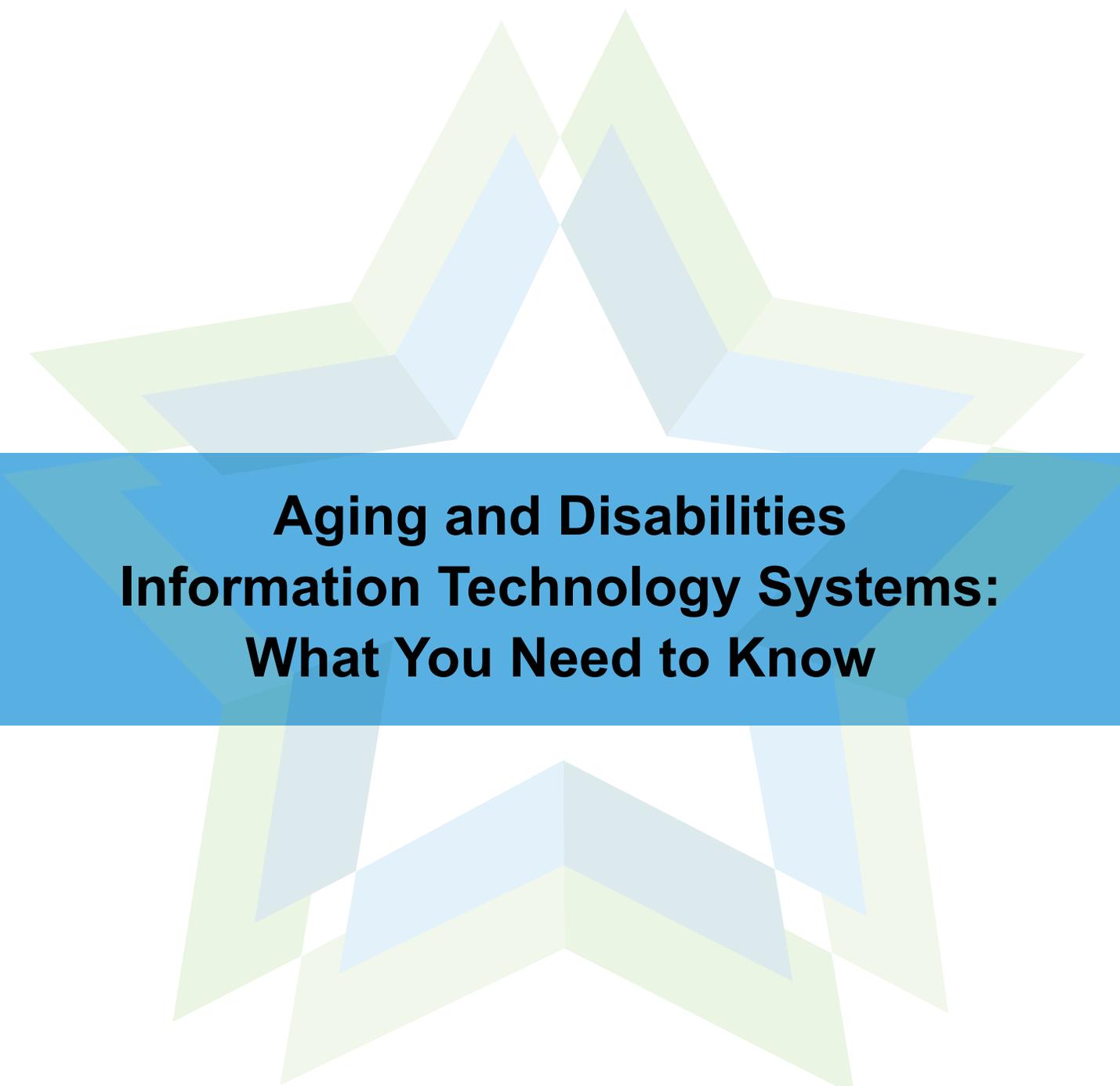




# **Aging and Disabilities Information Technology Systems: What You Need to Know**

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# **Aging and Disabilities Information Technology Systems: What You Need to Know**

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The ADvancing States **Aging and Disabilities Technology Workgroup** was established in 2019 in order to drive improvements in aging and disabilities state agencies' information technology (IT), facilitate sharing and learning among states, and provide assistance to states as they seek to implement and integrate technology that supports holistic person-centered services. The work of the workgroup will result in expanded agency IT capacity, greater technological innovation at the state level, and state/federal engagement on IT policy.

**ADvancing States** represents the nation's 56 state and territorial agencies on aging and disabilities and supports visionary state leadership, the advancement of state systems innovation and the articulation of national policies that support long-term services and supports for older adults and individuals with disabilities.



# Acknowledgments

This issue brief was produced under the guidance and leadership of the Aging and Disabilities Technology workgroup. I am grateful to our visionary Board of Directors, state long-term services and supports leaders, and thought leaders at our partners with information technology companies who see the benefit of forward-looking technology that supports the integration of long-term services and supports with the broader health and human services delivery systems.

Under the direction of the Aging and Disabilities Technology workgroup, we have crafted this paper to serve as an introduction to key technological concepts and terms and their applicability to long-term services and supports for those individuals who may not be experts in the field. We hope and believe that this paper will serve as a resource to both state agencies as well as technology companies so that they can better coordinate the development of systems that support holistic person-centered service and supports. We also intend this to be the first step of a broader initiative to expand and improve technology in aging and disabilities agencies. We invite you to join us in these efforts.

Sincerely,



**Martha A. Roherty**

*Executive Director, ADvancing States*

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# Executive Summary

**D**isconnects between and across health care, social services, and long-term services and supports programs have led to similar divides in the development and operation of information technology. Currently, several trends across these systems are converging in a manner that is rapidly transforming the nature of service delivery and placing increased emphasis on the need for emerging IT infrastructure. These trends include an increased focus on person-centered services, emphasis on addressing social determinants of health, alignment of government-funded services, and a focus on reimbursing services based on value. The emerging IT infrastructure will need to support appropriate information sharing to coordinate care and service delivery properly.

As the landscape of IT systems in both healthcare and LTSS expands, important considerations must be made to reflect the person-centered practices of the systems as well as governance structures in place for administration, oversight, and service delivery. The stakeholder engagement for the service recipient and all users throughout the system should be considered at every level of system development. Data and technology should be used in conjunction with programmatic and policy goals, and stakeholder engagement consistently present throughout the process. This work should constantly remember that, when implementing IT changes, there is an opportunity to improve the underlying process while also establishing the technology to support and strengthen the agency's infrastructure.

Agency staff are also faced with the related challenge of understanding IT terminology and the applicability of these concepts to LTSS. There are a wide range of IT concepts that are important for agency staff to become familiar with in order to effectively communicate business needs and processes in order to facilitate system development that supports the underlying LTSS delivery system. The paper seeks to define many of these key terms and, importantly, explain how they relate to the technology that is currently used in aging and disabilities services as well as emerging opportunities in the field.

# Glossary of Terms

AAA – Area Agency on Aging	HSDS – Human Services Data Structure
ACA – Affordable Care Act	IT – Information Technology
ACO – Accountable Care Organization	LTSS – Long-term Services and Supports
APCD – All-Payer Claims Database	MCO – Managed Care Organization
ACL - Administration for Community Living	MECT – Medicaid Enterprise Certification Toolkit
APD – Advance Planning Document	MITA – Medicaid Information Technology Architecture
API - Application Programming Interface	MMIS – Medicaid Management Information System
CBO – Community-Based Organization	NCAPPPS – National Center for Advancing Person-Centered Planning Practices and Systems
CIL – Center for Independent Living	OAA – Older Americans Act
CMMI – Center for Medicare and Medicaid Innovation	OAAPS – Older Americans Act Performance System
CMS – The Centers for Medicare and Medicaid Services	ONC – Office of the National Coordinator of Health Information Technology
EHR – Electronic Health Record	PCP – Person-Centered Planning
ELTSS – Electronic Long-term Services and Supports	PHR – Personal Health Record
EVV – Electronic Visit Verification	SAMHSA – Substance Abuse and Mental Health Services Administration
FHIR – Fast Healthcare Interoperability Resource	SaaS – Software as a Service
FTP – File Transfer Protocol	SDOH – Social Determinants of Health
HCBS – Home and Community-Based Services	SOA – Service-Oriented Architecture
HHS – United States Department of Health and Human Services	SPR – State Program Report or State Performance Report
HIE – Health Information Exchange	TEFT – Testing Experience and Functional Tools
HIT – Health Information Technology	
HITECH – The Health Information Technology for Economic and Clinical Health Act	

# Background and Introduction

In 2019, ADvancing States, in collaboration with MediSked, founded the Aging & Disabilities Technology workgroup. The workgroup intends to bridge a gap and improve communication across the aging and disabilities state staff and IT sectors in an open, collaborative environment. It is focused on facilitating sharing and learning among states and companies. It will provide technical assistance to states and technology vendors regarding the various nuances of aging and disabilities programs as well as IT requirements. The workgroup will also explore opportunities to increase IT efficiencies, reduce duplication across and within state agencies, and expand interoperability so that the information can be established in a manner that genuinely facilitates person-centered services and supports.

During the inaugural meeting of the workgroup at the 2019 National HCBS Conference, participants discussed the lack of common understanding between program staff, IT staff, procurement officers, and vendors. One contributing factor is the lack of knowledge regarding key IT terms and concepts among many aging and disabilities policy and program staff. Though these staff are not IT experts, meeting attendees agreed that a baseline of understanding is necessary when program staff engage with technology staff to plan for systems development. State leaders and technology vendors in the meeting believed the workgroup could provide value through the development of this paper that describes important IT concepts, terms, and processes and explains why they are relevant to program staff.



# Historic Context

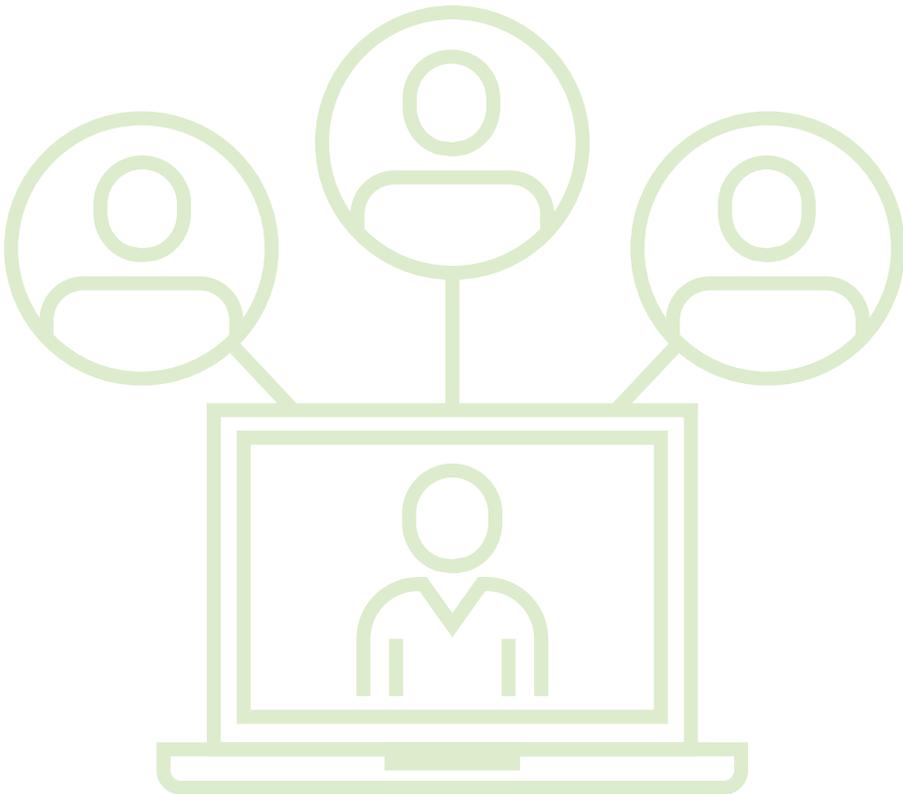
Numerous distinct public programs finance and deliver health and social services for older adults and individuals with disabilities. While there are a wide range of publicly funded services and supports at the federal, state, and local levels, there are three programs that are particularly significant to the framework of state agency operations and integration. These include:

- The Older Americans Act;
- Medicaid; and
- Medicare.

Program	Federal Agency	Funding	Individuals Served
<b>Older Americans Act</b>	ACL	Federal grants to state agencies with state and local matching requirements	Individuals age 60 and over, with priority for those with greatest social and economic need
<b>Medicaid</b>	CMS	Federal matching funds to state agencies	State defined groups, including low-income adults, parents, children, older adults, and people with disabilities
<b>Medicare</b>	CMS	Federal government	Individuals age 65 and over, individuals with disabilities, individuals with end stage renal disease or amyotrophic lateral sclerosis

Due to the significance of the services and supports financed through these programs, this framing paper focuses on their specific technological concepts and needs. Each of these programs has distinct eligibility criteria, covered services, provider groups, and methods for payment. These programs also have unique ways that they deliver services and engage with providers to deliver services. Historically, each program has also operated mostly independently of the others. While there are instances where a participant may be covered by more than one of these programs, the disconnect in policy and operations has created challenges with coordinating services and supports for a single individual across multiple funding sources.

These disconnects between and across programs have led to similar divides in the development and operation of information technology. Some of this divide is due to specific restrictions related to privacy and confidentiality. In contrast, other aspects of the separation may be related to funding restrictions that require IT development to be financed by the specific program it supports. Further boundaries may be due to different reporting requirements and distinct legislative or regulatory data collection requirements for the different services and funding sources. Yet there are also issues with the culture of organizations and the lack of communication across program areas that have both exacerbated these fractures in IT development, coordination and prevented agencies from developing systems that integrate and effectively share information to promote seamless services for individuals.



# Changing Delivery System

There are several trends across the healthcare and long-term services and supports (LTSS) systems that are converging in a manner that is rapidly transforming the nature of service delivery and placing increased emphasis on the need for emerging IT infrastructure. This emerging IT infrastructure will need to support LTSS as well as primary and acute services, enabling appropriate information sharing to coordinate care and service delivery properly. These trends include:

1. An increased emphasis on person-centered planning and services;
2. The recognition that social services can dramatically influence health outcomes;
3. Improved alignment of government funding sources; and
4. A shift towards value-based payment structure that incentivizes outcomes over the volume of care.

In the LTSS field, there has been an ongoing evolution of service delivery that promotes the significance of the individual in the development and implementation of service plans. Although person-centered planning (PCP) is not a new idea, there have been continued efforts to strengthen its role in LTSS and improve the processes and skills of the individuals who are delivering these supports. Federal initiatives from Centers for Medicare and Medicaid Services (CMS) and Administration for Community Living (ACL), driven by section 2402(a) of the Affordable Care Act spurred efforts to improve the PCP policies and practices across the country.<sup>1</sup> While these activities are largely focused on LTSS, a similar evolution is underway in the medical profession with an increasing emphasis on “patient-centered care” that reflects the needs and preferences of individuals seeking healthcare.

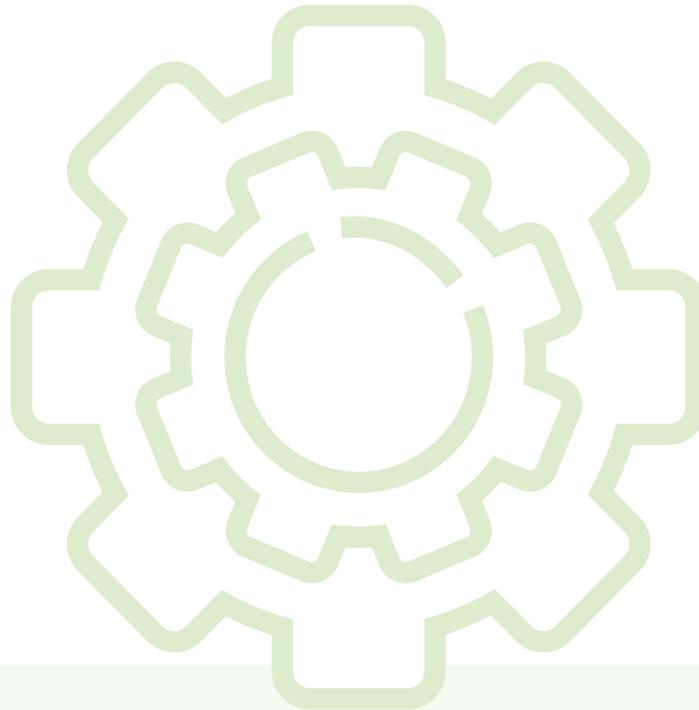
Importantly, this evolution has significantly expanded the responsibilities of LTSS case managers. Historically, these entities were responsible for the assessment and facilitation of access to services. In contrast, today they are required to provide comprehensive support to ensure that the holistic needs of the individuals are met. Such a transformation requires new business processes and flexible IT infrastructure that can align and translate between the needs and preferences of individuals with the underlying structure of health programs, services, and payment models.

A related but distinct development is the increased recognition and emphasis on social determinants of health, which are the conditions in which people are born, grow, live, work and age and the resulting impact on health status of those individuals. Healthcare providers and financers, as well as federal policymakers, have recognized the impact of an individual's overall social situation on their healthcare utilization and associated outcomes. This impact has led to health plans, hospitals, primary care doctors, and other medically-oriented entities seeking new partnerships and financial arrangements with social service providers, including those in the aging and disabilities networks. One of the most visible of these initiatives is the Federal Accountable Health Communities<sup>2</sup> model promoted by CMS' Center for Medicare and Medicaid Innovation (CMMI). Still, there are a number of similar initiatives and partnerships occurring across the country. As these models evolve and expand, policymakers are seeking IT infrastructure that can link and coordinate the health and social services in a manner that has not historically occurred.

There have also been efforts to integrate better and align the various federal programs that finance services and supports for older adults and people with disabilities. Over the past decade, policymakers have increased emphasis on programmatic coordination and service integration for many of these services and supports. The most prominent initiatives are focused on the coordination of Medicare and Medicaid services for dual-eligible individuals, which have frequently involved contracts with a third-party health plan to administer each of these benefits. More recently, ACL has been promoting integration between healthcare, such as Medicare, Medicaid, and private insurance, and the aging and disabilities service network, including Area Agencies on Aging (AAAs), Centers for Independent Living (CILS), and other providers. In many ways, this is a subset of the healthcare system's increasing engagement with the social system and requires similar IT infrastructure to accomplish. In fact, many such data systems include a resource database that facilitates access to a wide range of supports that include the aging and disabilities networks as well as social supports such as food banks, domestic violence assistance, housing programs, and related services. More recent initiatives have attempted to advance this integration by implementing a "closed loop" IT system that manages referrals across health and human services.

Lastly, the healthcare system has been moving towards new models of payment for services. Historically, health services have been financed on a volume basis where payers such as Managed Care Organizations (MCOs), Medicaid agencies, and Medicare reimburse a set fee for each service provided by a qualified provider. This model of payment creates incentives for increased utilization since providers are paid more for delivering more services. In contrast, many current initiatives are emphasizing payment that is based upon the value of care provided as opposed to the volume of services. These "value-based payments" are generally tied to the healthcare outcomes of individuals, such as the proper management of hypertension or diabetes. While relatively new to the LTSS space, several states, providers, vendors, Accountable Care Organizations (ACOs), and MCOs are identifying opportunities to shift from a fee-for-service (or volume-based) model to a value-based one. As we see an increased emphasis on value-based payments in the LTSS space, IT systems will need to be able to manage sufficient data in a flexible manner that allows states and providers to track progress towards mutually agreed-upon goals and outcomes.

As these evolutions in the health care, LTSS, and aging and disabilities networks continue to change the way that states, MCOs, and Community-Based Organizations (CBOs) do business, the IT systems will also need to evolve to support their needs. However, the development of each specific program's data system(s) must be accompanied by an increased capacity to integrate and share information across those various systems. The emphasis on person-centered practices requires an ability to focus on abilities and strengths while addressing the holistic needs of individuals, regardless of the source of funding for specific services. Data systems will need to evolve in a manner that supports the person-driven rather than program-driven models of delivery.



**As these evolutions in the health care, LTSS, and aging and disabilities networks continue to change the way that states, MCOs, and Community-Based Organizations (CBOs) do business, the IT systems will also need to evolve to support their needs.**

# Historic Division Between Healthcare and LTSS Data Systems

An evolution of person-driven data systems will require overcoming many barriers that have been enacted through legislation, policy, and/or practice at the federal, state, and local levels. Because of these barriers, IT systems have historically focused on a single portion of a state or payment sources' health and/or human services program. While many LTSS services are a subset of the broader Medicaid program, these supports are frequently managed separately from Medicaid's primary and acute healthcare services. Often, this involves a separate state agency, such as a State Agency on Aging and Disabilities, having oversight of LTSS policy and operations. In fact, over half of the states reported that their Agency on Aging and Disabilities had oversight of some portion of the Medicaid program in 2017.

The disconnect in LTSS operations frequently makes sense from a programmatic standpoint. Implementing the unique LTSS business processes, expertise in population-specific needs and strategies, as well as managing the disparate types of providers and service delivery models, is often best suited to specialized agencies. However, this has also had the unintended consequence of fragmenting LTSS from the broader healthcare infrastructure.

One prominent example of this fragmentation is the Health Information Technology for Economic and Clinical Health Act (HITECH) program that was created by Congress in 2009. HITECH provided significant federal funding and policy development to support the creation of Electronic Health Records (EHRs) and the integration of Health Information Technology (HIT) within a broader state exchange. This program intended to facilitate increased access and availability of health information about individuals so that their services could be appropriately coordinated across multiple settings. HITECH's policy and financing led to drastic increases in the adoption of EHRs, particularly within hospitals and physician practices. However, LTSS providers were notably excluded from eligible entities to receive the funding, and the benefits of this increased information sharing were thus largely confined to clinical settings. This resulted in an opportunity lost for both LTSS as well as the medical system. LTSS providers are still largely unable to integrate into the broader health system, and medical providers do not benefit from the information that could be used to implement better care management and preventive services. Such information could be gleaned on an ongoing basis from the LTSS providers that routinely see individuals on a weekly, if not daily, basis as well as from case management's ongoing engagement with individuals in the programs.

Another example lies in the development of standalone systems for government-funded services. Many states operate separate IT systems for LTSS case management, provider enrollment, and service delivery than their Medicaid IT systems. Some states even manage claims and billing processes outside of the usual Medicaid Management Information System (MMIS). Additionally, other programs such as the Older Americans Act (OAA) and state-funded LTSS also have entirely separate data systems than programs serving similar populations or even programs that include the same specific individuals. Though there are efforts underway to continually integrate these systems, challenges arise from the requirement that costs be appropriately allocated to each program that benefits from the IT development as well as from the difficulty of aligning nuanced and disparate program rules and requirements within a single IT system.

These challenges all contribute to a broader policy, programmatic, and IT ecosystem that largely separates not only LTSS from primary and acute healthcare services but also specific population-based LTSS programs from each other. As a result, a single state may have a separate IT system for each of Medicaid primary care, the Medicaid Aging and/or Physical Disabilities Home and Community-Based Services (HCBS) waiver, the Medicaid ID/DD HCBS waiver, the OAA, and state-funded LTSS. Yet a single individual may receive services from different programs simultaneously, or even from every single program at different points in their life. In some instances, a family may have members accessing all programs at the same time. The resulting inability to integrate or share data across these IT systems exacerbates fragmented care delivery for the individuals and families served.

**Because of these barriers, IT systems have historically focused on a single portion of a state or payment sources' health and/or human services program.**

# Current LTSS IT Systems and Considerations

States' IT systems are as unique and state-specific as their overall LTSS programs and services. LTSS is a broad array of supports that includes both HCBS and institutional care, such as skilled nursing facilities. There are key programmatic requirements for LTSS data collection and reporting; the IT systems are the vehicle in which those requirements are delivered. Each LTSS program has separate requirements, and thus, the IT systems are built on those requirements. Major LTSS programs include:

- Behavioral Health,
- Independent Living,
- Medicaid (waiver, state plan, and Programs of All-Inclusive Care for the Elderly),
- Older Americans Act,
- Veterans Administration,
- And an array of state-funded programs.

These programs are a part of a larger system supported by a number of additional service types, such as:

- Access and Information,
- Advocacy,
- Education,
- Protective Services (Child and Adult), and
- Vocational Rehabilitation.

Traditionally, there are some state core functions its LTSS IT systems must support. These functions include information and referral, eligibility, assessments, service provision, claims payment, and case management. Information sharing across all core functions are vital for a well-developed IT system. This section below will define the functions and how states are shifting towards more collaboration across programs and systems.

**Information and Referral/Assistance**—Also referred to as I&R/A, is a service that provides access to information on community resources for people seeking opportunities, supports and services. This person-centered service establishes rapport with individuals, assesses the individual’s needs and circumstances, provides a choice of referrals, offers linkages to community offerings and supports, and includes follow up when appropriate. Key to this service is the ability to offer warm transfers to the individual seeking help to the community resources identified. For more information on I&R/A, visit: <http://www.advancingstates.org/initiatives/information-and-referralassistance/what-ira>.

**Eligibility**—Eligibility is the process for determining if an individual meets local, state, and/or federal requirements for participating in a LTSS or other related program. These requirements vary by program such as Medicaid, Medicare, OAA, as well as there is variation in specific services and populations within each program. Eligibility standards include age and disability determinations, income and asset tests, as well as functional or clinical assessments to determine abilities, supports, and needs. When determining eligibility for an individual entering the LTSS system, it is prudent to have one data input for multiple program determinations. Consolidated and interoperable IT systems provide opportunities for program determinations across multiple programs and service options. One such initiative includes a federal mandate for states to establish an electronic asset verification system to assist with identifying whether LTSS applicants are within allowable resource limits for the programs. For more information on Medicaid LTSS eligibility, visit: <https://www.kff.org/medicaid/report/medicaid-and-long-term-services-and-supports-a-primer/>.

**Assessments**—Assessments are used for multiple purposes across LTSS programs. The most common use of assessments is pre- or post-eligibility review of the participants to understand the person, their environment, abilities, strengths, needs and requested services. Assessments consider multiple payor sources to obtain a comprehensive, person-centered view of the participant. Assessment tools are shifting in states to use of national tools that require IT systems to support data collection. As states continue to increase use of electronic assessment tools, there is a greater need for assessment tools to pull data from eligibility systems and push data to care planning and service delivery tools. For more information on assessments, visit: <https://www.gao.gov/products/GAO-18-103>

**Service Planning**—Service planning, also called person-centered planning (PCP), is the process for identifying appropriate services and supports for LTSS participants. This process uses data collected from assessments regarding strengths, goals, abilities, needs, and desired outcomes to facilitate the discussion with the person directing their services and all individuals the person has identified to be involved in the process. PCP crosses multiple programs to include education, housing, medical, and social supports. For more information on service planning, visit: <https://acl.gov/programs/consumer-control/person-centered-planning>.

**Service Provision**—Services provision includes the delivery of services and supports to the LTSS participants to fill gaps where needs exist. LTSS service delivery must be person-specific and person-centered. The service delivery is outlined through the PCP process. Once the person-centered plan is developed, services are delivered through a process from the service authorization process to provider management.

- **Authorization**—Authorization refers to several requirements that states, health plans, and the federal government requirements for payments to be made for services rendered. One specific type of authorization is prior authorization or preauthorization, which is a determination that a service is “medically necessary” to be delivered. This means the service must be pre-approved by Medicare, health plans, CBOs and/or the state before the service is performed or the payment is approved for the participant. Another type of authorization is a level of care (LOC) determination based on assessments previously completed, used in many LTSS programs. For Medicaid HCBS waivers, individuals may need to reach the need for institutional level services to qualify for the program. Technology systems in place to ensure authorization prior to services being performed are key in Medicare, Medicaid, and other federal and state-funded programs controlling costs and reducing fraud, waste, and abuse. For more information on Authorization, visit <https://www.macpac.gov/wp-content/uploads/2015/01/Medicaid-fee-for-service-provider-payment-process.pdf>.
- **Electronic Visit Verification (EVV)**—The 21st Century Cures Act under Section 12006 mandated states to implement EVV for personal care services and home health care services under specified Medicaid waiver authorities. This mandate requires the system to verify the type of service provider, individual receiving, date, location, individual provider, and the time the service begins and ends. The EVV requirement has caused a flurry of technological consideration as it relates to the design, implementation, and quality of data collected from providers, caregivers, and participants. For more information on EVV, visit: <https://www.medicaid.gov/medicaid/home-community-based-services/guidance/electronic-visit-verification-evt/index.html>.
- **Critical Incidents**—Critical incidents are situations that cause safety, health, or welfare risks to a participant or provider in LTSS. It is important to note that there is no standard definition of a “critical incident,” CMS expects states at minimum include abuse, neglect, exploitation, and unexpected deaths. CMS has required states to provide assurances that participants in Medicaid HCBS waiver report and manage critical incidents through a system of data collection, review, corrective action, and trend analysis. Much of the critical incident reporting has been managed in silos through provider reporting and various state agencies. For more information on Critical Incidents, visit: <https://www.hhs.gov/sites/default/files/cmcs-informational-bulletin-062818.pdf>.

- **Claims Payment**—Claims payment is the process of submission, review, and adjudication of a bill for a service delivered to a participant of a program. For this process to occur, providers must meet several requirements, such as authorization of the service, documented delivery of the service, a timely filing of the claim, and other requirements that may be included from federal, state, health plan, or CBO payers. For more information on claims payments, visit: <https://www.govinfo.gov/content/pkg/CFR-2011-title42-vol4/pdf/CFR-2011-title42-vol4-sec447-45.pdf>.
- **Provider Management**—Provider management is the process of credentialing, enrolling, training, monitoring, analyzing, and improving provider service delivery and adherence to rules, goals, and objectives of the program. Quality provider management has impacts on program costs, participant outcomes, and overall experience. This process includes provider selection, program standards, standardization of process, quality reviews, and claims processing. The design of technology solutions to manage providers requires data collection, management, analysis, and ongoing engagement.

The technology that supports these programs and services currently ranges from complex interoperable cloud-based systems to shared excel workbooks and word documents in both state and provider networks. In this section, we will walk through two programs that highlight the current state and development of LTSS IT systems, Testing Experience and Functional Tools (TEFT), and Older Americans Act Performance System (OAAPS).

In 2014, CMS and Office of the National Coordinator of Health Information Technology (ONC) launched a joint project called TEFT that granted nine states resources to “quality measurement tools and demonstrate e-health in Medicaid home and community-based services (HCBS).”<sup>4</sup> These TEFT grants were the first time that CMS made funding available specifically for the use of Health IT in HCBS systems.<sup>5</sup> Of these nine states, six states (Colorado, Connecticut, Georgia, Kentucky, Maryland, and Minnesota) participated in the electronic long-term services and supports (ELTSS) component of TEFT that focused on the electronic exchange of data to support improved care coordination and person-centeredness in HCBS programs. The ELTSS pilot showed us that states are within one of three below identified tiers:

- **Tier 1.** Non-Electronic Information Exchange—using paper, fax or other means of secure transmission,
- **Tier 2.** Secure Electronic Information Exchange—exchange of data or files listed in Tier 1, using and leveraging previously documented information through data transmission, and
- **Tier 3.** Complete ELTSS Data Model and Exchange—importing and exporting the complete ELTSS data model via robust technology.

While TEFT grants focused on Medicaid HCBS, its lessons learned can be applied across LTSS programs regardless of funding source. These lessons included (1) data elements are interpreted differently within and across programs in each state, and (2) states have limited and non-integrated electronic capabilities.

Another major shift impacting LTSS IT systems is the Older Americans Act Performance System (OAAPS) funded by ACL in 2016 to replace the state reporting tool used for OAA programs. In order to reduce burden and streamline reporting for states and local AAAs, ACL redesigned the SPR, renaming that tool to OAAPS to monitor OAA Title III and VII and parallel and integrating OAA Title VII (Long-Term Care Ombudsman Program) and Title VI (programs for tribal governments) services and activities. To assist in the change, ACL developed 11 publicly available technical documents outlining the data model, service list requirements, data elements categories and intersections, and data elements tables. The creation of the OAAPS considered the lessons learned of the TEFT grants, indicated by its development of state resources and the ability for the tool to be used by both states and AAAs. These changes are intended to improve states and AAAs' data integrity of the federal programs allowing comparable and complete information once fully implemented.

As the landscape of IT systems in both healthcare and LTSS expands, important considerations must be made to reflect the person-centered practices of the systems as well as governance structures in place for administration, oversight, and service delivery. The stakeholder engagement for the service recipient and all users throughout the system should be considered at every level of system development. Data and technology should be used in conjunction with programmatic and policy goals, and stakeholder engagement consistently present throughout the process.



# Defining Core IT Concepts and Applicability to Aging/Disabilities Services

As state aging and disabilities agency staff work to improve the integration of their data systems into the broader health and social services environment, increasing demands are placed on their ability to translate LTSS concepts and terminology so that external entities such as technology vendors can appropriately understand and engage with these systems. Agency staff are also faced with the related challenge of understanding IT terminology and the applicability of these concepts to LTSS. There are a wide range of IT concepts that are important for agency staff to become familiar with in order to effectively communicate business needs and processes in order to facilitate system development that supports the underlying LTSS delivery system. The following discussion is not meant to be all-encompassing and is instead intended to provide an overview of core concepts, the applicability to LTSS, and information on where to learn more detail if needed. We intend this section to serve as a reference guide that aging and disabilities staff can use as-needed at various points during the IT design, development, implementation, and operational process.

**Advance Planning Documents (APD)**—APDs are a core part of the Medicaid Enterprise Certification Toolkit (MECT) process and are used to outline the needs, goals, and strategies for state Medicaid IT system development. APDs are also the way that states request enhanced funding through the Medicaid Information Technology Architecture (MITA) process. There are different types of APDs depending upon the part of the development and implementation process of the IT project. These include Planning APDs (P-APDs), Implementation APDs (I-APDs), Updates to an implementation APD (IAPDUs), or Operational APDs (OAPDs). These documents also represent a standardized form of communication between states and CMS regarding their IT infrastructure and development. An overview of APDs and their role in the MITA process is available at: [https://www.acf.hhs.gov/sites/default/files/ocse/apd\\_guide\\_2.pdf](https://www.acf.hhs.gov/sites/default/files/ocse/apd_guide_2.pdf)

**All-Payer Claims Database**—An APCD is a large database that collects data from public and private insurance programs, such as Medicare, Medicaid, MCOs, and other private insurers. APCDs are usually developed and implemented at the state-level data and are often accompanied by a state mandate for the insurers to provide information. The consolidation of this information in one centralized area allows for greater understanding of utilization patterns and increased care coordination across multiple settings of care, such as hospitals and doctors offices, as well as across multiple payment sources. More information is available at: <https://www.ahrq.gov/data/apcd/index.html#i>

**Application Programming Interface**—APIs are a way that IT systems communicate with external entities, such as an individual user or a separate data system. An API enables systems to effectively manage information in a way that maintains the privacy and security of data that should not be shared while simultaneously allowing access to necessary and permissible data exchange for external entities. APIs are extremely important for aging, disabilities, and LTSS programs, as they govern all types of information exchange including information and referral systems; case management systems; and enabling data access that supports broader research regarding the programs operated. Additional information is available at: <https://project-open-data.cio.gov/api-basics/>

**Business Process Models**—Business process models represent a visual diagram of the activities and actions that comprise a business process. Essentially, this is a way of modeling how a process is currently performed by using standardized notations that indicate each specific action, potential outcomes, and the result of the process. Business process models are frequently used to clearly demonstrate the current, or “as is” process and then contrast with desired changes to improve process efficiency and/or outcomes. While related to a use case, a business process tends to be broader and focuses on the overall organizational operations rather than specific examples of a user’s interactions with an IT system. In LTSS, an “as is” business process model could be used to visualize the Medicaid eligibility determination, starting with the collection of financial and nonfinancial information, and flowing through the clinical level of care assessment process, ending with the ultimate determination of whether the individual is eligible. This example could then be contrasted with desired changes to improve LTSS determination timelines, such as warm transfers of information collected from one step to the next throughout the process. For more information, visit: [https://www.ucop.edu/information-technology-services/\\_files/webinars/mapping-processes-for-systems-planning.pdf](https://www.ucop.edu/information-technology-services/_files/webinars/mapping-processes-for-systems-planning.pdf).

**Clinical Document Architecture**—The Clinical Document Architecture (CDA) is a standardized way of formatting and structuring clinical documents to promote standardization and usability. The CDA is maintained by HL7 and is a way to promote interoperability and facilitate easy data exchange across IT systems. For more information on CDA, visit: [https://www.hl7.org/documentcenter/public/calendarofevents/himss/2016/Introduction%20to%20Clinical%20Document%20Architecture%20\(CDA\)%20and%20Consolidated%20CDA%20\(C-CDA\).pdf](https://www.hl7.org/documentcenter/public/calendarofevents/himss/2016/Introduction%20to%20Clinical%20Document%20Architecture%20(CDA)%20and%20Consolidated%20CDA%20(C-CDA).pdf).

**Closed Loop Referral Systems**—Closed-loop referral systems are IT infrastructure that allows for bidirectional sharing of information in support of a health care referral. This generally entails an entity that makes a referral, such as a primary care doctor, receiving information on the outcome of this referral. These types of referral systems are becoming increasingly utilized to support the integration of health and social services. An example of a closed-loop system could include a data system that allows a physician to refer an individual who is experiencing homelessness to a local housing authority. The housing authority could then receive the referral, make an appointment, and share information regarding the intervention with the referring doctor. For more information, visit: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5910374/>.

**Cloud Computing**—Cloud computing refers to an internet-based way of managing information and access. Cloud computing involves storing files and applications on an external web server, which is accessed through the internet. This access offers the individual information and ability to utilize the applications from any computer with an internet connection. Software as a Service models generally utilize cloud computing infrastructure to manage the data systems on a third-party site to facilitate access to the user from any location. More information is available at: <https://www.us-cert.gov/sites/default/files/publications/CloudComputingHuthCebula.pdf>

**Consolidated Clinical Document Architecture**—The C-CDA is a grouping, or library, of CDA documents to further interoperability using the CDA framework. Both CDA and C-CDA tend to be clinical in nature; however, the ELSS initiative, which is also maintained by HL7, has been developed in a manner that aligns with the C-CDA Care Plan Document template. For more information on CDA and C-CDA, visit: [https://www.hl7.org/documentcenter/public/calendarofevents/himss/2016/Introduction%20to%20Clinical%20Document%20Architecture%20\(CDA\)%20and%20Consolidated%20CDA%20\(C-CDA\).pdf](https://www.hl7.org/documentcenter/public/calendarofevents/himss/2016/Introduction%20to%20Clinical%20Document%20Architecture%20(CDA)%20and%20Consolidated%20CDA%20(C-CDA).pdf).

**Electronic Health Records (EHR)**—Frequently referred to as EHRs, electronic health records are the digital version of a person’s health chart that includes their history of medical visits, diagnoses, prescriptions, care plans, and other relevant information. EHRs are intended to create a secure manner of providing immediate access to a participant’s health information when the person seeks care. In order to facilitate access across multiple settings of care, EHRs are frequently linked with a health information exchange that allows for the proper sharing of medical information. To learn more about EHRs, visit: <https://www.healthit.gov/faq/what-electronic-health-record-ehr>.

**Electronic Long-term Services and Supports**—ELSS generally refers to a specific initiative that was led as a collaboration between ONC and CMS. ELSS intends to create standardized data and processes to support the development and implementation of EHRs that are specific to LTSS. While EHRs may include some information on LTSS, they historically have focused on primary and acute clinical care information. ELSS’ goals involve expanding EHR infrastructure to support the inclusion of broader, person-centered, LTSS plans, service records, and other important information to promote increased coordination across primary care, acute care, and LTSS in a person-centered manner. For more information on ELSS, visit: <https://365.himss.org/sites/himss365/files/365/handouts/552577690/handout-235.pdf> or <http://www.hl7.org/special/Committees/projman/searchableProjectIndex.cfm?action=edit&ProjectNumber=1431>

**Enterprise Architecture**—Enterprise Architecture is a process to assess and align the organization’s operational activities with the underlying technology systems. Using an enterprise architecture model, a state Aging and Disabilities agency can align the different practices within its agency to support the overall goal of supporting older adults and people with disabilities while developing modularized IT systems that support each of those underlying business functions. An enterprise architecture framework is generally used in service-oriented architecture, which forms the framework for many health, human services, and LTSS IT systems. California’s overview of the state enterprise architecture process provides a valuable example of this framework: <https://cdt.ca.gov/services/enterprise-architecture/>.

**Fast Healthcare Interoperability Resources Specification**—This is usually referred to as the FHIR specification and is a set of standards that is used for health care interoperability. FHIR uses a set of resources that use a standardized way to define specific components of various parts of the health care system, such as patients, providers, claims, medical procedures, and many others. FHIR is then organized into modules that combine resources together based on common uses, such as clinical, financial, administration, and other key health care functions. FHIR is an important part of national interoperability initiatives, and the LTSS initiative uses FHIR standards. The FHIR specification is administered by HL7 (for more about HL7, see interoperability in this section). To learn more about FHIR, visit: <https://www.hl7.org/fhir/overview.html>

**File Transfer Protocol**—Also known as its acronym, FTP, this represents a way of transferring information between two different computers on an internet platform. Generally, a FTP transfer includes a host, or server, and a user that is interacting with the host. The FTP framework standardizes access, permissions, and process for exchanging this information between the two computers. For LTSS, FTP may become applicable if there is the need to upload files or other relevant information from a worker's computer to the IT system, such as a case manager uploading document scans to support the development of an electronic LTSS care plan. Given the sensitive nature of many data points in the LTSS field, FTP should be linked with some form of security to ensure that no protected health information is compromised in the process. For more information on FTP, visit: [https://www.its.bldrdoc.gov/fs-1037/dir-017/\\_2405.htm](https://www.its.bldrdoc.gov/fs-1037/dir-017/_2405.htm).

**Health Information Exchange (HIE)**—HIE refers to the process of secure electronic transmission of a participant's health information across settings of care. This allows for entities to access timely information from one another, such as a laboratory electronically sharing results of a patient's blood panel test with a doctor for inclusion in the participant's EHR. While some discussions of HIE may refer to a specific entity, such as a state-run information exchange, other HIE discussions may focus on the specific types of exchange: provider-to-provider sharing, a provider searching for records to help inform care they are giving at the time, or an individual accessing their health information to understand it or to provide it to a new source of care. For more information on HIE, visit: <https://www.healthit.gov/topic/health-it-and-health-information-exchange-basics/what-hie> and for more information on entities that are sometimes referred to as exchanges, visit: <https://www.himss.org/resources/faq-what-health-information-exchange-hie>.

**Human Services Data Structure (HSDS)**—HSDS is a set of core resource data fields that supports and promotes interoperability within the health and human services sector. Essentially, it covers the programs and services that people need, the locations where the services are available, and the organizations that provide them. This standard can be used specifically to support the information and referral structure that underlies many aging and disabilities services, but also to promote broader interoperability between various parts of the health and human services delivery system. HSDS is Open Source and is maintained through the Open Referral initiative, which is a broad international collaboration. HSDS information is online at: <http://docs.openreferral.org/en/latest/hlds/about/>

**Identity Management**—Identity management is a way of ensuring that the right people have the right access to data within an IT system. Identity management is crucial to ensuring that privacy and security is maintained within a system, particularly in health and LTSS where protected health information (PHI) and personal identifiable information (PII) may be compromised with insufficient identity management. A basic type of identity management is the establishment of specific user accounts that govern what a specific individual’s access to data within a system. These accounts, or users, are given roles that govern their access to and control over data. The amount of access a user is provided is sometimes described as their permissions within a system. In LTSS, identity management allows the systems to distinguish access based on their type of job, such as an eligibility worker, case manager, supervisor, or researcher. For more information, visit: <https://www.csoonline.com/article/2120384/what-is-iam-identity-and-access-management-explained.html>.

**Interoperability**—Interoperability is a term used to describe the ability to exchange and use information between two or more IT systems. With interoperability, there must be an exchange of information, and the second necessary step that each system’s capacity has to utilize the information in a meaningful manner once the data exchange occurs. A key focus of healthcare IT is on expanding interoperability across the different IT systems and settings of care for participants. Interoperability generally requires a set of standards for managing and using the information that extends beyond common data elements to define and share the information itself. Two important concepts apply to interoperability for health information technology and LTSS:

1. **The Trusted Exchange Framework and Common Agreement:** A federally-led initiative to establish a standardized set of “principles, terms, and conditions” that facilitates information exchange across a wide range of entities to promote a broader exchange of information across the country. For more, visit: <https://www.healthit.gov/topic/interoperability/trusted-exchange-framework-and-common-agreement>
2. **HL7:** A nonprofit organization that develops standards to govern information exchange across various parts of the healthcare system to promote interoperability. HL7 is the entity that is currently managing the ELTSS standards. Information about HL7 is available at: <https://www.hl7.org/about/index.cfm?ref=nav>

For more information on interoperability, visit: <https://www.healthit.gov/buzz-blog/meaningful-use/interoperability-health-information-exchange-setting-record-straight> and review information about the recent interoperability rule from CMS at: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Interoperability/index>.

**Medicaid Enterprise Certification Toolkit**—The MECT is a toolkit that outlines the steps that states take to implement Medicaid IT systems. To claim the enhanced federal match available for IT systems, states must receive CMS certification. MECT outlines the steps in the certification process, which includes information about the various modules that comprise the overall MMIS and MITA framework. The MECT is online at: <https://www.medicaid.gov/medicaid/data-systems/medicaid-enterprise-certification-toolkit/index.html>. It is also worth noting that CMS is beginning to transition away from a process and step-based approach to systems certification. Instead, the agency intends to focus on outcomes-based certification process. CMS first utilized this outcomes-based approach for EVV certification. Information on the outcomes-based process is available at: <https://www.medicaid.gov/sites/default/files/Federal-Policy-Guidance/Downloads/cib102419.pdf>

**Medicaid Information Technology Architecture**—MITA is a CMS-led initiative to develop a common framework and infrastructure for Medicaid IT development and operations. Medicaid statute allows states to claim 90% federal funding for certain types of information technology design and implementation, along with 75% ongoing funding for operations. To claim this enhanced match, states must use the MITA framework as they develop the IT systems that support their Medicaid systems. MITA is built upon a service-oriented architecture, an approach that allows for modules to be re-used across different state systems. CMS' introduction to MITA is online at: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidInfoTechArch/downloads/mitaoverview.pdf>.

**Medicaid Management Information Systems**—MMIS is the name given to the state Medicaid information systems that support a wide range of business functions for the programs. At its core, MMIS is a claims payment system. However, the MMIS infrastructure has expanded since the inception of the program to include a wide range of functions such as program integrity, provider enrollment, decision support queries and reporting, and a number of additional capabilities. States use the MITA structure to build their MMIS systems. For more information, see: <https://www.cms.gov/Medicare-Medicaid-Coordination/Fraud-Prevention/Medicaid-Integrity-Education/Downloads/ebulletins-medicaidmanage-infosystem.pdf>.

**Modularity**—Modularity is an IT approach that builds complex systems out of smaller components that can be organized into different combinations to support different outcomes. Modularized systems contain independent components that are largely self-supporting, but which then combine to perform a wide range of functions in support of broader business needs. This type of design also allows IT companies to re-use existing modules in various contexts which can help decrease the time spent building a system and lower development costs. In aging and disabilities services, you could see an IT system that combines different modules that support provider management, claims payment, eligibility, and case management functions into a larger system. More information on modularity can be found at: <https://www.dau.edu/tools/se-brainbook/Pages/Design%20Considerations/Modular-Design.aspx>.

**Personal Health Record**—PHRs are a way for individual users to access and manage their various types of electronic health information on an ongoing basis. While PHRs are related to EHRs, they are distinct insofar as EHRs are generally provider-oriented and focus on clinical treatment. In contrast, PHRs are generally participant-driven as a way to enable individuals to be informed of and have control over their overall health and medical needs. Information on PHRs is available at: <https://www.hsph.harvard.edu/news/magazine/fall08ehrpersonalvshealth/>.

**Provider Directories**—Provider directories are a list of enrolled and participating providers within a health care program. These are important in health IT because they represent a key locus of integration between participant, provider, and health care payer. Proper development of an IT system that supports a provider directory allows an individual to find a provider to deliver care, a provider to manage their enrollment and referrals, and enables ongoing updates to account for the rapidly changing dynamics of provider enrollment in many programs. Visit: <https://www.chcf.org/wp-content/uploads/2017/12/PDF-DirectoryAssistanceProvider.pdf>

**Service-Oriented Architecture**—SOA is closely related to modularity. This approach involves developing service-focused modules as components of the broader IT system. Most of the current aging, disabilities, and LTSS IT systems are built using a SOA with each module comprising a different service to the agency, such as the core modules for provider enrollment or claims payment. More information on SOA is available at: <https://er.educause.edu/articles/2007/7/serviceoriented-architecturewhat-is-it-and-how-do-we-get-one>

**Software as a Service**—Software as a Service (SaaS) models are increasingly popular across the country. This model involves the technology company hosting the software and providing access to individual users on a subscription basis. Such a model varies from historic software sales strategies where users would purchase an application for a flat fee, install it on their computer, and use it indefinitely until the individual chose to upgrade. In contrast, SaaS models generally include ongoing subscription fees, but also include upgrades throughout the process. Health, LTSS, and human service management programs, such as OAA or HCBS waiver case management systems, are generally SaaS models. More information is available at: <https://www.healthit.gov/faq/what-software-service>.

**Third-Party Application**—A third-party application is a computer program that is developed by an entity other than the company developing the main piece of software. Essentially, this involves an outside program that must interface with a computer system to access information, which frequently occurs through an application programming interface or API. The recent CMS interoperability rules place new requirements on states and companies to enable access to certain information that allows third-party applications which increase consumer access to their information. For more information on third-party applications and interoperability, visit: <https://www.cms.gov/files/document/best-practices-payers-and-app-developers.pdf>

**Use Case**—A use case represents the way that a user will interact with a particular software program. This demonstrates the various steps that the individual will perform and how the IT system is expected to respond to each of those steps. This represents a way of translating the intended user’s actions to develop the steps that the software must enable to reach the user’s desired outcome. In the LTSS space, a use case could involve the electronic development of a participant’s person-centered service plan, starting with the process of identifying an individual’s strengths, preferences, and needs and ending with the various parties approving the plan with a digital signature. The use case would also need to include potential alternative outcomes, such as the plan not being completed. Such a use case would incorporate the various steps, data required, and necessary participants in the process. For more information on use cases, visit: <https://www.usability.gov/how-to-and-tools/methods/use-cases.html>



# Critical Considerations for Aging and Disabilities Staff

All of the ongoing efforts can support the broader development of data systems within the aging, disabilities, and LTSS arena. The overarching goals are to develop more comprehensive systems that are modularized and that support the underlying business processes of the agency in order to better serve older adults and persons with disabilities. Yet, the development of IT systems also represents an opportunity to examine existing procedures and to attempt to find efficiencies and other improvements that can be implemented alongside technology development. Simply put, digitizing an inefficient process does not make sense when there is an opportunity to improve the underlying process while also establishing the technology to support and strengthen the agency's infrastructure.

Before embarking on an IT project, state agency staff should assess the current status of operations and the existing infrastructure in the state. This assessment can then inform the subsequent steps of goal setting and development.

As part of this assessment, at a minimum, state agency staff should:

- Identify the different services and supports offered through the agency, including the sources of funding and technology requirements for each. An example of this can include whether the agency administers OAA services and/or Medicaid HCBS waivers.
- Understand the existing IT systems in the state agency, including the vendor who operates the system, the age of the system, the expected lifespan, the existing interfaces that allow for data sharing, and the limitations of the system.
- Understand the broader health and human services infrastructure beyond the state agency, which can include IT used by health plans, the MMIS and Medicaid eligibility IT system (which may or may not be separate IT systems), any existing state or local infrastructure for health information exchange, all-payer claims databases, the state's HIE and marketplace, as well as the information and referral IT resources in place. Staff should similarly identify vendors, interfaces, limitations, and expected lifespan of these systems.
- Determine whether any related agencies are currently planning or in the process of implementing new systems or system upgrades that could be aligned with the agency's initiative.

After this assessment phase, states can then turn to goal setting and objective planning in order to focus on IT development as well as any other business practice improvements they may wish to implement.

# Current Programmatic Goals/Objectives

**A**ging, Disabilities, and LTSS systems have several goals and objectives as it relates to its implementation of data and IT throughout. These goals include (1) ensuring person-centered practices are maximized throughout the system, (2) creating appropriate data transfer across networks and programs, (3) monitoring, quality assurance with both process and outcomes reporting, (4) continuous engagement with service recipients across programs, and (5) strengthen program integrity and support proper claims payment.

Person-centered practices has been a core goal of LTSS systems for decades, however as described above a flurry of policy and system transformation work began after issued guidance implementing Section 2402(a) of the Affordable Care Act. Since this guidance was released multiple regulations, projects, grants, and programs have been designed, developed and released. ACL, CMS, SAMHSA and other HHS agencies have provided additional guidance regarding PCP across multiple areas and programs. These include the ACL “No Wrong Door”(NWD) initiative, CMS/ONC ELTSS data elements, CMS’ Long-Term Care Facilities Rule, ACL’s Long-Term Care Ombudsman Rule, ACL’s National Center for Advancing Person-Centered Planning Practices and Systems (NCAPPS), and the National Quality Forum’s Person-Centered Planning and Practices committee. Ensuring that person-centered practices are enhanced across all systems is vital to the overall LTSS system and must be a top-level consideration when developing and engaging LTSS IT systems.

The use of electronic IT transfers to share individual’s data across multiple LTSS platforms, as well as share information with other eligibility systems and health IT systems is a key element in improving states’ No Wrong Door system infrastructure. All four functions of the NWD system, state governance and administration, public outreach and coordination, person-centered counseling, and streamlined eligibility for public programs are supported by technology. As states expand their NWD systems, consideration for how technology is used to support the system is essential.

Additionally, when an individual is active in the LTSS system, data sharing across different programs are necessary to ensure a quality experience. Allowing shared participant data across different payor sources and agencies within the state is vital. For example, when an individual is receiving services through OAA programs, it is important to have communication with not only access and information services but also protective

and advocacy services such as Adult Protective Services or the state's Long-Term Care Ombudsman Program, if necessary. It is also important for ease of electronic communication with providers that may be assisting an individual or multiple individuals in the LTSS network.

Another key goal of understanding LTSS IT systems is the ability for program monitoring, quality assurance, and reporting of both process and outcome measures. Most LTSS services are federally-funded, state-administered, and locally-delivered, thus requiring multiple levels of monitoring, quality assurance and reporting to ensure the effectiveness and the programs to meet their goals. Well-designed LTSS IT Systems create a portal that allows data sharing across levels of the system that reduce cost and burden of reviewing paper documents or documentation not easily transferred from one data source to another. These electronic monitoring efforts can make quality assurance and process improvements more regular and ongoing rather than finding problems once they have risen to a level of heightened awareness.

Data assists states, health plans, CBOs and providers to:

- Assure person-centered and consumer-directed quality services are being delivered,
- Evaluate the effectiveness of service delivery and care coordination across both clinical and LTSS systems,
- Have the ability to track outcomes of recipients of LTSS over time giving individuals and advocates a tool to ensure appropriate service provision, and
- Create similar outcome measures used across programs and service settings (e.g., community versus institutions), to help service recipients make choices, and advocates and policy makers identify programs with the best outcomes.<sup>6</sup>

Effective LTSS IT systems provide access to data that is important for improving LTSS programs over time as well as create opportunities for stakeholder engagement. Continuous stakeholder engagement is vital to health and LTSS systems commitment to the satisfaction of services, meeting individual's goals, as well as obtaining information regarding service and program accessibility, feasibility, ease of use, and improved quality of life metrics.

Similarly, an emerging trend in health IT involves providing individuals with access to and control over their personal information. This empowers individuals to take an active role in managing their care and choosing the providers of services and supports. Aging and Disabilities state agency staff can leverage these broader trends to support the underlying person-centered, participant-directed principles of LTSS and align the IT developed for these services and supports with consumer-empowering health IT models. Such an effort can include increased access to a participant's own LTSS service plan and records; expansion of electronic provider directories to increase ability of individuals to find and select the individuals who deliver services and supports; as well as integration of LTSS and primary/acute information to improve coordination across multiple programs and increase the effectiveness of discharge planning or other transitions across settings of care.

# Opportunities to Leverage Available Resources

There are many different issues that should be considered when financing a new IT system, particularly one that crosses multiple health and human services programs. These include state and federal funding sources, requirements placed on each, and the methods for cost-allocation across different payment sources. In general, aging and disabilities programs have not utilized large systems that support multiple different programs; however, as states have moved towards integrated health and human services IT infrastructure for programs, this may be an area to consider in the future. At a minimum, the state agency should assess opportunities to improve interoperability in a manner that supports holistic person-centered approaches rather than fragmented program-specific technology.

States can also identify funding sources that could support the underlying development of the systems. Key questions to ask include:

- Can I utilize separate funding streams to support the IT development, such as both OAA and Medicaid, if the IT system supports both programs and costs are appropriately allocated?
- What are the matching rates for various sources of federal funding, and what are the requirements and limitations of each funding stream?
- Are there any grant programs that the agency could apply for as a potential source of augmented funding?
- Do current federal mandates necessitate IT development that could be leveraged to support broader functionality? One current mandate is the 21st Century Cures Act's Electronic Visit Verification for certain HCBS services.

## Conclusion

States have made strides to advance the use of technology throughout the Aging and Disabilities and LTSS systems. ADvancing States, at the direction of the Aging & Disabilities Technology workgroup created this document as a resource for capacity building of policy and program staff regarding key IT terms and concepts. The workgroup also acknowledges a number of additional challenges and opportunities that states encounter in the landscape of improving LTSS IT Systems. Additional concerns of the committee include navigating state IT procurement, working across state agencies, and collaborating with vendors to develop products that fit the needs of the individuals receiving essential services to remain safe and healthy in the place of choice.



# Endnotes

- 1 <https://acl.gov/sites/default/files/programs/2017-03/2402-a-Guidance.pdf>
- 2 <https://innovation.cms.gov/innovation-models/ahcm>
- 3 <http://www.advancingstates.org/sites/nasuad/files/NASUAD%202017%20State%20of%20States%20Report.pdf>
- 4 <https://www.medicaid.gov/medicaid/long-term-services-supports/testing-experience-functional-tools/index.html>
- 5 <https://www.medicaid.gov/sites/default/files/2019-12/teft-evaluation-final-report.pdf>
- 6 <http://nsclarchives.org/wp-content/uploads/2013/02/Guide-LTSS-Outcome-Measures-Final.pdf>

# Notes





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