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TECHNOLOGY 2.0

Understanding the advancements in access to technology solutions for people with intellectual and developmental disabilities resulting from the COVID-19 pandemic

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State of the States
In Intellectual and Developmental Disabilities

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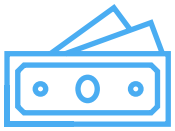
INTRODUCTION

In 2019, the National Association of State Directors of Developmental Disabilities Services (NASDDDS) Policy Workgroup in collaboration with the State of the States in Intellectual and Developmental Disabilities Ongoing Longitudinal Data Project of National Significance (PNS) launched the Technology Solutions State Survey. This survey was the first of its kind to examine state developmental disability (DD) agency investments in technology solutions for the provision of long-term supports and services (LTSS) for people with intellectual and developmental disabilities (I/DD) and their families across the nation. The results of the survey provided a glimpse into the access, barriers, and funding streams utilized to promote equitable access to individual and organizational technologies. In the subsequent report, Technology for People with Intellectual/Developmental Disabilities and Their Families NASDDDS' National Policy Workgroup Subcommittee, authors discussed survey results as well as promising practices and considerations for state DD agencies to optimize opportunities for people with I/DD to benefit from emerging technologies.

Soon after the release of the report, the COVID-19 pandemic devastated and disrupted the nation leading to approximately 1.15 million deaths in the United States.[i] The fatality rate following a COVID-19 diagnosis was 2.75 - 3.00 times higher for people with I/DD.[ii] Social isolation was already a concern for individuals with disabilities prior to the pandemic, but further impacted the I/DD community were COVID-19 mitigation strategies such as social distancing, safer at home requirements, loss of care giving staff, limited availability of services and much more. In response to the pandemic, State DD agencies were thrust into re-evaluating the use of technology and technology solutions by relying upon innovative approaches and emerging technologies to address the needs of people with I/DD and their families. To demonstrate the shifts in resources and access, in the fall of 2023, NASDDDS and the State of the States in Intellectual and Developmental Disabilities Ongoing Longitudinal Data PNS launched a second Technology Solutions State Survey Technology Solutions 2.0 to examine three primary areas:



1. Funding for Technology Solutions

2. Service or Operational Specifications

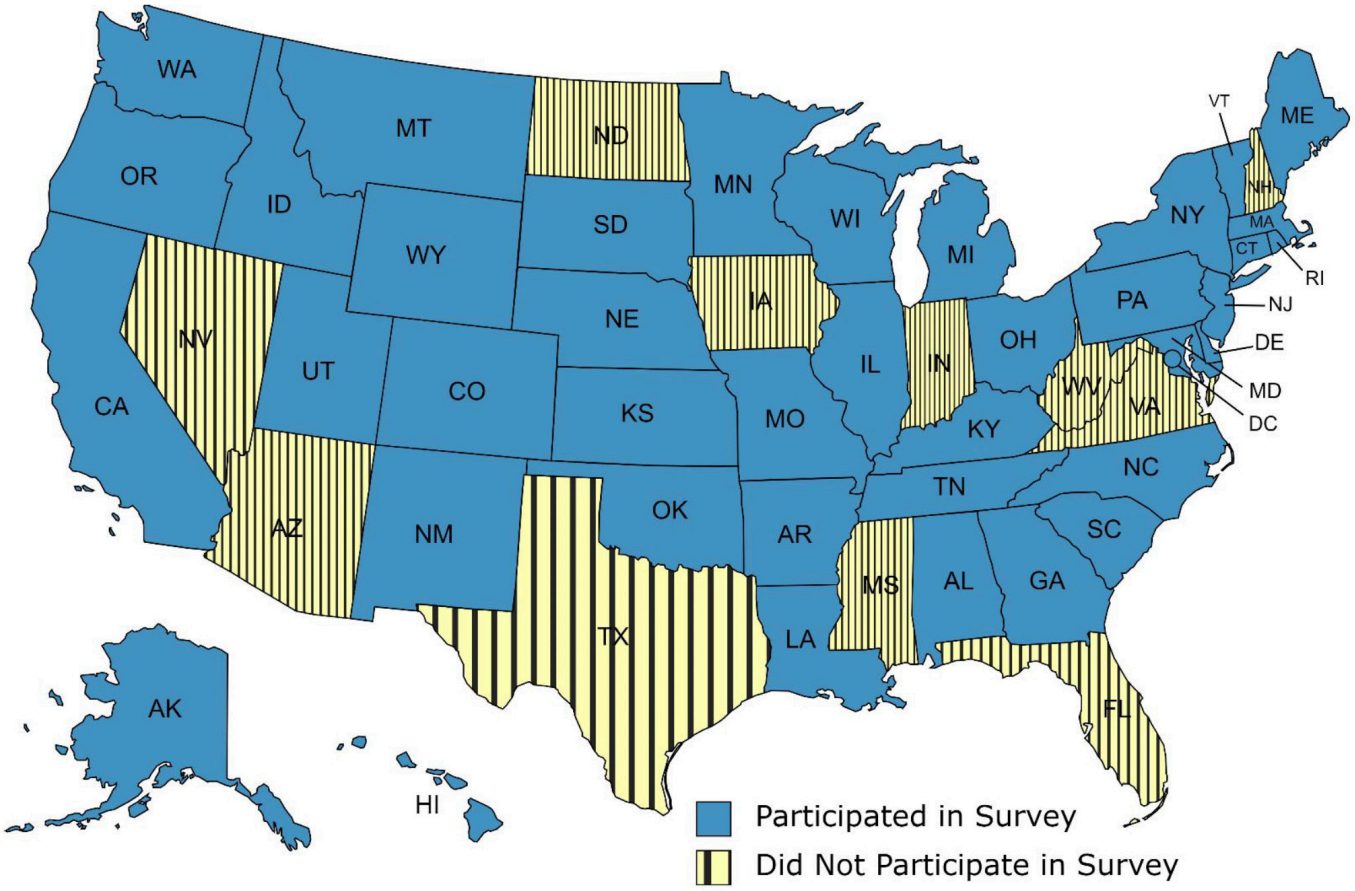
3. Benchmarking for Technology First Systems Change

PARTICIPATING STATES

Participating States

Forty states participated in the online survey (Figure 1). Lack of survey participation does not imply lack of investment in technology solutions; in fact, several of the states (New Hampshire, Iowa, and Indiana) that did not participate in the survey have historically been highlighted as states promoting technology access based on legislative activity and innovative service provisions.

Figure 1. Participating States



Survey Respondents

Initial solicitation for participation in the survey was made to State Directors of Developmental Disability Services in each state. Directors were asked to identify key staff knowledgeable in technology-related services and supports to complete the survey. Individual respondents varied in job titles and responsibilities.

Table 1. Survey Respondent Job Titles

Top Respondent Job Titles	Number of Respondents
Waiver Services Lead	9
Director of Developmental Disabilities Section/Unit	8
Program Specialist	8
Assistant Directors of Section/Unit	4

Several respondents had roles specific to technology programs and services in their state such as: State Director of Enabling Technology, Director of Supportive Technology, Community Life Engagement Project State Lead, and Director of Innovations. Other respondents held generalized roles such as Policy Analyst, Research Consultant, Systems Improvement Bureau Chief, and Business Analyst.

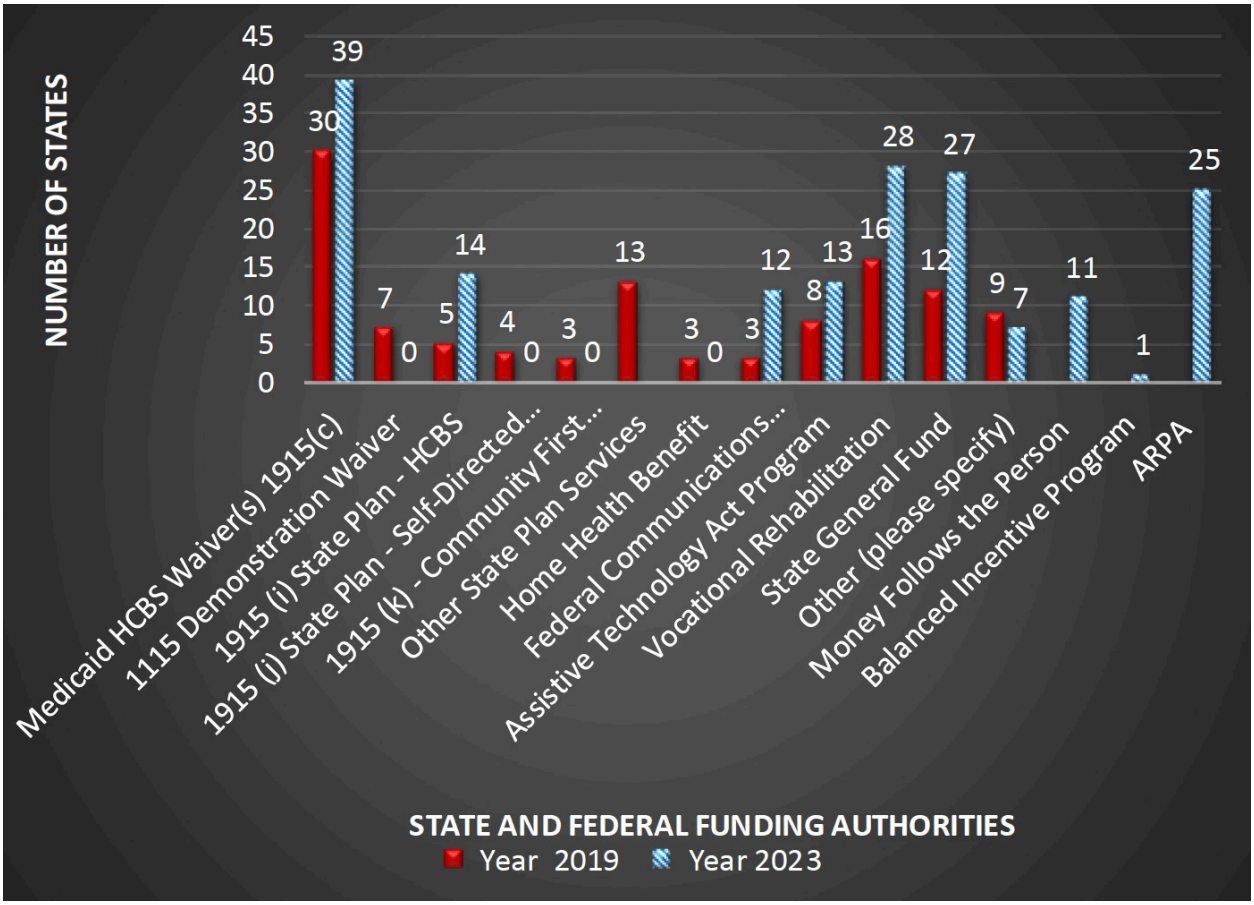
When respondents were asked about their role in advancing technology solutions, many highlighted duties developing programs and policies. Utilization and funding of technology solutions has often coincided with policy changes and program adaptations to include emerging technologies and evolving terminology written into existing policies. Respondents also identified responsibility for programs, management, training, and funding of technology solutions in their state.

FUNDING OF TECHNOLOGY SOLUTIONS

NASDDDS State I/DD agency members rely almost entirely on Medicaid and oversee more than 1/3 of the nation's LTSS budget, providing essential services to children and adults with disabilities and their families – enabling good lives in their communities. According to the CMS LTSS annual expenditure report for 2020[iii], National Medicaid LTSS expenditures totaled $199.4 billion in FY 2020, with HCBS accounting for $124.6 billion (62.5 percent). Since 1982, the State of the States in Intellectual and Developmental Disabilities Ongoing Longitudinal Data Project of National Significance has investigated determinants of public spending for I/DD services across the nation. In fiscal year 2021, 54% of the $71.7 billion dollars spent in the U.S. for I/DD supports and services in states were dedicated funds from the Medicaid Home and Community Based Services (HCBS) waiver program.[iv] In the 2018/2019 Technology Solutions National Survey, state DD agencies identified twelve different funding authorities to purchase technology services, applications, devices, or solutions. The HCBS waiver was the dominant funding authority used to provide access to technologies identified by state DD agencies. Vocational rehabilitation and other state plans also supported the purchase of technology solutions in states in 2019.

Figure 2. demonstrates the utilization of state and federal funding sources used to purchase technology solutions, devices, or other technology solutions for people with I/DD and their families in 2019 and 2023. In the 2023 survey, funding lines were re-categorized to align with evolving terminology and resource availability. Not captured as defined categories in the 2023 survey were funds affiliated with the 1115 Demonstration Waiver, 1915 (j) State Plan – Self-Directed Personal Assistance Services, 1915 (k) – Community First Choice Option, and Home Health Benefit.

Figure 2. Number of States Utilizing State and Federal Funding Sources



The six funding sources that were captured in both 2019 and 2023 all experienced increases in utilization by states. State general funds experienced the greatest growth in utilization with an additional fifteen states using that funding stream for technology solutions. Twelve additional states reported utilization of vocational rehabilitation funds for technologies to support employment outcomes. HCBS funding, 1915 (i) state plan, and Federal Communications Commission (FCC) funded programs, like the Lifeline Program, were utilized in nine additional states in 2023. Lifeline is an FCC program that helps make communications services more affordable for low-income consumers. Lifeline provides subscribers a discount on qualifying monthly telephone service, broadband Internet service, or bundled voice-broadband packages purchased from participating wireline or wireless providers.[v] Overall, there was a clear increase in the funding authorities used to access technology solutions across states as using technology to deliver services has quickly become a preferred option for the continuation of needed HCBS.

Emergency Relief Funding

The COVID-19 pandemic provided a unique opportunity to catalyze advances and adoption of technologies through the availability of temporary funding streams such as the American Rescue Plan Act Funds (ARPA). Section 9817 of the American Rescue Plan Act of 2021 provided states with a temporary 10%-point increase in federal matching rate (FMAP) for spending on Medicaid HCBS services. The Centers for Medicare and Medicaid Services (CMS) provided guidance that federal funds were to be used "to supplement, not supplant, existing state funds expended for Medicaid HCBS."[vi] According to CMS's overview of State Spending plans under the ARPA[vii], each state is expected to spend between $24.6 million and $5.2 billion in state and federal funds on activities that enhance, expand, or strengthen HCBS under Medicaid. These amounts will change as states further plan and implement their activities under ARPA.

Figure 3. CMS Overview of State Spending Plans as of the Quarter Ending December 31, 2022

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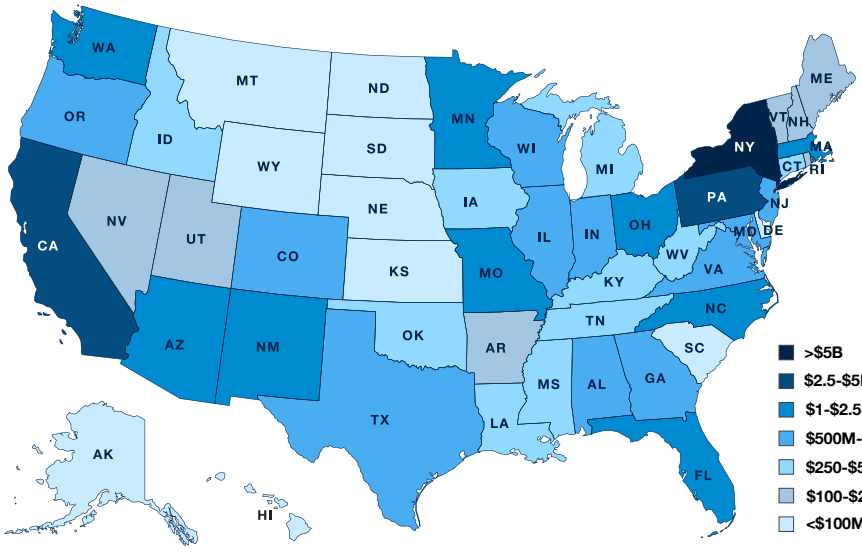
CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

Total of $36.8B in Planned Spending Across States
According to states' spending plans submitted to CMS, each state plans to spend between $24.6million and $5.2 billion in state and federal funds on activities that enhance, expand, or strengthen HCBS under Medicaid. These amounts will change as states further plan and implement theiractivities under ARP section 9817.



Total of 1,206 Activities Across States
Across all 51 states (including the District of Columbia), more than 1,200 activities have been proposed to enhance, expand, or strengthen HCBS. The most commonly proposed activity types include workforce recruitment and retainment, workforce training, quality improvement, reducing or eliminating HCBS waiting lists, and expanding use of technology.

$4,933 Additional Spending per Beneficiary
Across all 51 states, an additional $4,933 per beneficiary will be spent on activities that enhance, expand, or strengthen HCBS.

Figure 4. CMS Overview of State Spending Plans: Excerpt from the most proposed activity types by planning spending: Expanding Use of Technology.

Most Commonly Proposed Activity Types by Planned Spending, as of the Quarter Ending December 31, 2022

36 States

$1.8B Total Planned Spending

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

5. Expanding Use of Technology
States are enhancing technology in their HCBS programs, including supporting technological enhancements for providers to set up and for individuals/families to use electronic health records (EHR), enhancing electronic visit verification systems, and utilizing technologies in service provision to address beneficiary functional needs, promote independence, and/or support community integration.

As of the quarter ending December 31, 2022, states have reported $1.8B in total planned spending on expanding use of technology.

96
Number of Activities to Expand Use of Technology

- EHR / benefits web platforms for record access and information
- Technology grants for information technology (IT) infrastructure,monitoring systems, computers, etc.
- EHR / benefits web platforms for record access and information

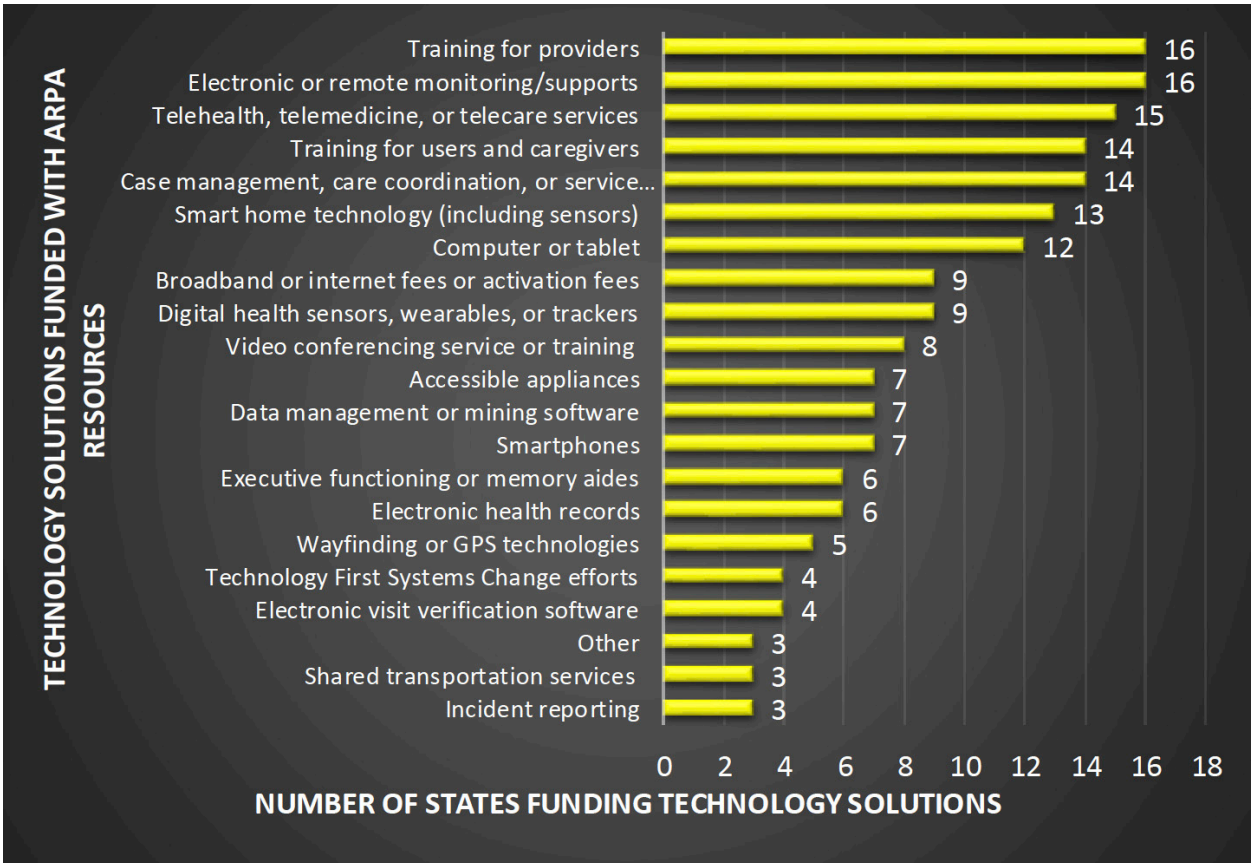
State Highlights: Enhancing Technology

Nebraska Grants to Agencies to Purchase Telehealth Equipment: This activity will fund providers delivering HCBS to purchase technology that will support the provision of direct clinical services through telehealth and telemonitoring. Specifically, two-way audio/video communication or technology will be leveraged for the asynchronous management of chronic diseases.

Georgia Case Management Technology Platform for Medicaid HCBS: Funds will be used to develop an electronic platform to capture Medicaid HCBS case management activities for both state plan and waiver authorities. Funding will support implementation of the electronic platform, staff training on platform use, additional staff, and development of reporting and dashboard components that provide insight into trends and areas to target quality improvement activities. The technology platform will incorporate medical provider EHR information to improve the accuracy of care planning and service delivery.

To examine the investments in technology solutions, the State of the States project examined technology-related investment categories outlined in state spending plans for implementation of ARPA funds as part of a special investigation under the Project of National Significance. Forty-nine states listed technology investments within their state ARPA spending plans. Select states outlined technology investments for enhancing infrastructure, while others focused on individual technologies/devices.[viii] Twenty-five states reported utilization of the ARPA funds for technology solutions in the 2023 survey to date. Emergency relief funds provided states the opportunity to invest in technology solutions and supports not otherwise covered under traditional Medicaid funding authorities or programs (Figure 5).

Figure 5. Technology Solutions and Services Funded Through Emergency Relief Funds Not Covered Under Existing Policies and Programs



As the nation begins to unwind from the pandemic, evidence of successful investments in technology-related solutions may appear in the form of HCBS waiver amendments and sustained programs. The following states identified the use of emergency relief funds to establish new pilot programs in technology solutions for people with I/DD and their families: CA, CO, CT, DE, IL, KS, LA, MA, ME, MN, MO, NJ, OH, OK, OR, PA, RI, TN, UT, WA, DC, WI, and WY. In addition, several states reported that they had already submitted new HCBS waiver applications or amendments to existing waivers to support sustained funding for technology solutions authorized during the pandemic. Twenty-two states identified services for approval in one of three general areas: remote supports/monitoring, virtual service delivery, and telehealth.

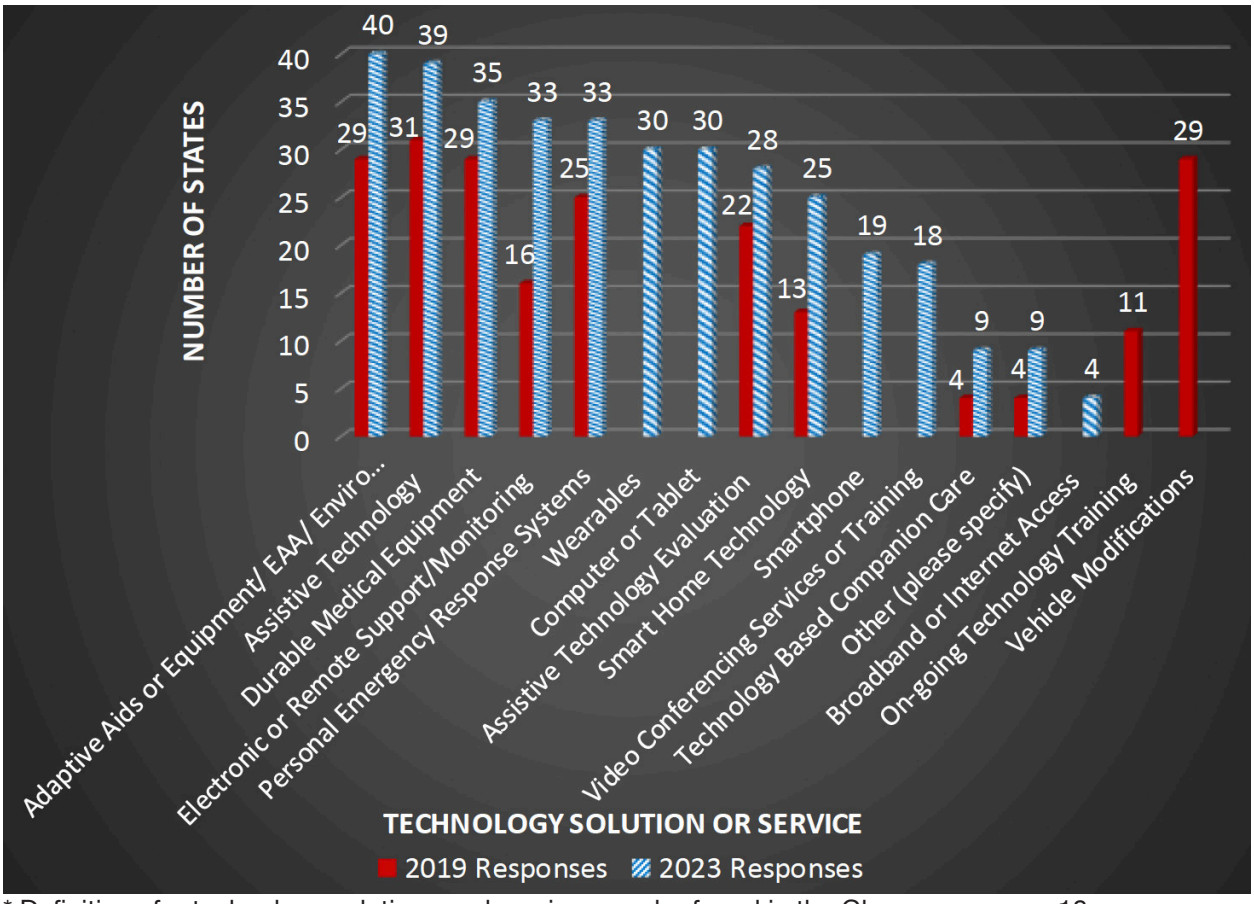
Technology Solutions Funded in States

The 2023 survey compared technology solutions funded in states from present with the results from the 2018/2019 state technology survey. In the 2018/2019 survey, states were asked to identify from a list of technology solutions and supports those which the state had reliable funding sources to provide to people with I/DD and their families. Included in the 2018/2019 survey were emerging technologies such as technology-based companion care and ongoing-technology training that had been previously identified as promising practices.

In the 2023 survey, innovative technology solutions were added to the list as reliable funding streams were established. Examples included video conferencing service or training, wearables, computers, or tablets, and broadband or internet access. Some categories from the 2018/2019 survey were not evaluated in the 2023 survey (ongoing technology training and vehicle modifications). The survey results demonstrated a significant increase in the states funding technology solutions and services from 2019 to 2023. Figure 6. compares the number of states that identified funding of specific technology solutions and services in the states over time.

The number of states that funded specific technology solutions or services increased across all technology categories from 2019 to 2023. Electronic or remote support/monitoring, smart home technology, technology-based companion care, and "other" technology solutions demonstrated the greatest increase in the number of states funding the services and solutions. "Other" technology solutions and services cited by states were targeted case management, telehealth, virtual and augmented reality, sensory technologies, and emergency health care systems.

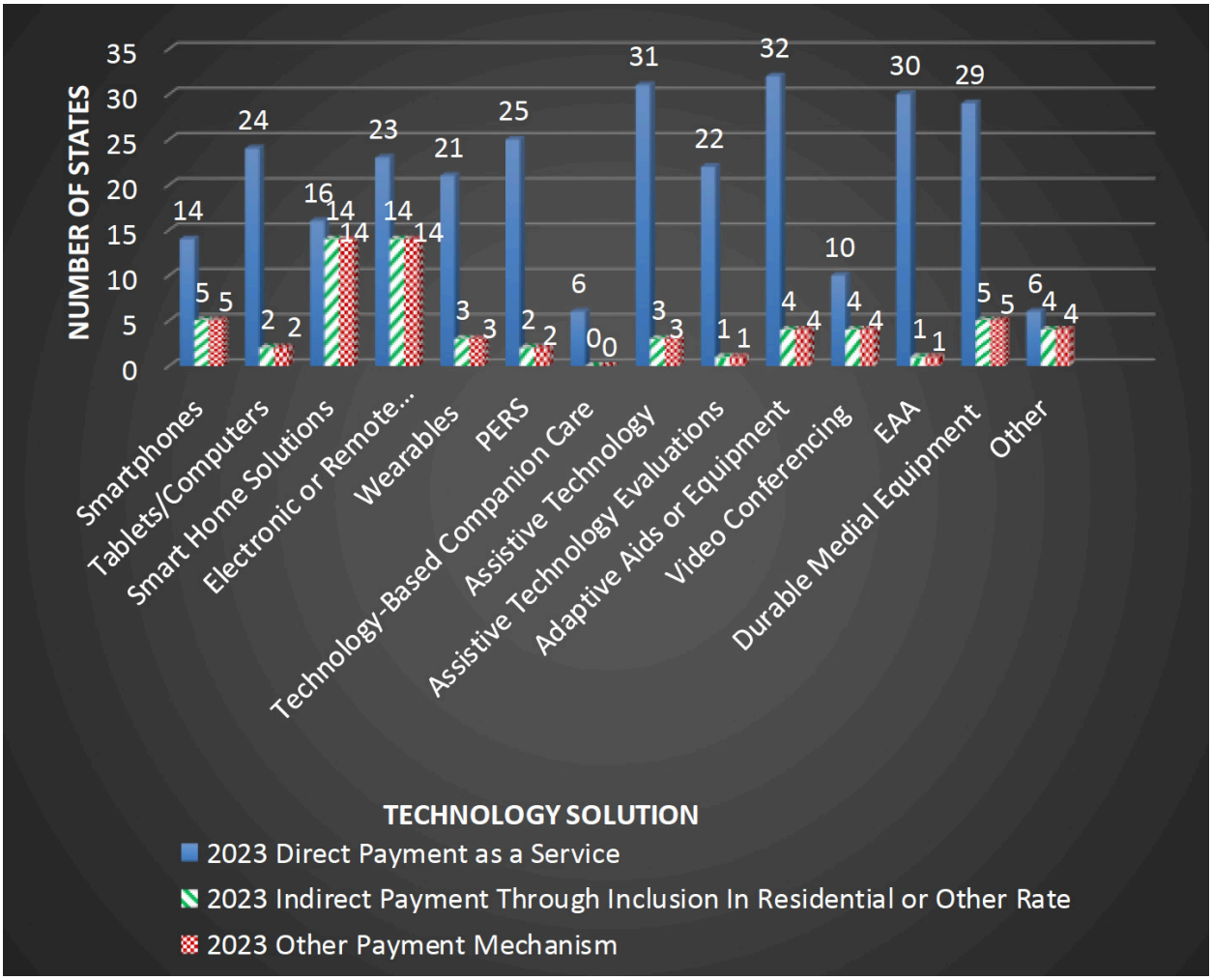
Figure 6. Number of States Funding Technology Solutions and Services in 2019 and 2023



* Definitions for technology solutions and services can be found in the Glossary on page 18.

To further examine the funding of solutions, the project examined the use of payment strategies for purchasing technology solutions. While states had little variability in 2019 in the methods of payment for technology solutions, in 2023, it was clear that technology as a direct payment as a service was the desirable method of payment (Figure 7).

Figure 7. State Utilization of Funding Payment Methods for Providing Access to Technology Solutions and Services



The results from the survey are consistent with previous analyses performed by the State of the States Project demonstrating state reliance on new service categories created to fund 1915 (c) Home and Community-Based Services waivers (HCBS) services. In a recent analysis of 1915 (c) I/DD HCBS waiver applications, the project found that between 2010 and 2022 the number of defined services and supports categories and dedicated funding across state I/DD waivers nearly doubled from approximately1,300 distinct services in 2010[ix] to 2,459 service categories in 2022 in the U.S.[x] The advantage of developing new waiver service categories is that it provides clear funding parameters for payment within the service delivery system.

In the absence of new service categories, states included new technologies under existing services. An example is smart home technologies, which were included in environmental accessibility adaptations (EAA)/home modifications/environmental engineering in eighteen states.

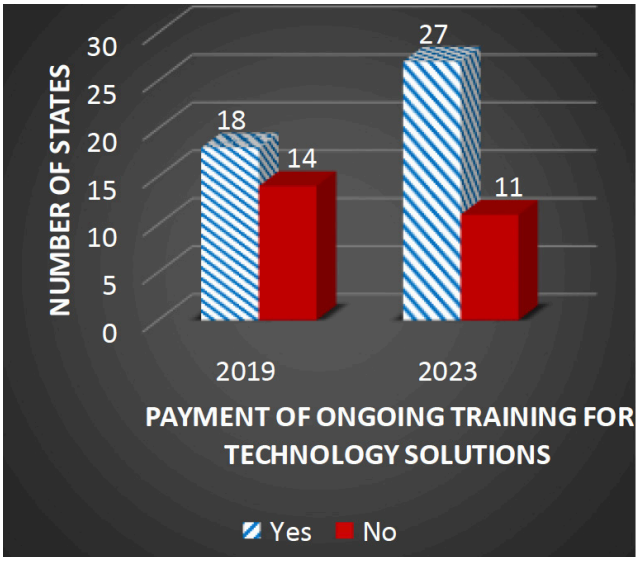
When comparing results from the 2018/2019 survey, smart home solutions continued to rely more heavily on direct and indirect payment sources than any other service category. Relying upon blended funding mechanisms for cross-platform advanced technologies allows states to separate features of a technology solution across funding streams. In the 2023 survey, comparable results were seen for remote supports/monitoring due to the unique nature of both solutions relying upon internet infrastructures, home environment access, and technical supports. Vendors had the opportunity to bundle broadband access, technical support, staffing, hardware, and software in various ways to address state funding resource parameters.

Not only did the variety of technology solutions increase in 2023, but the allowable funding opportunities for those services increased across states. While direct payments to technology providers were the most prevalent source, several states found funding technology through alternative sources such as grants, foundations, trust funds, and loans.

Investments in Training

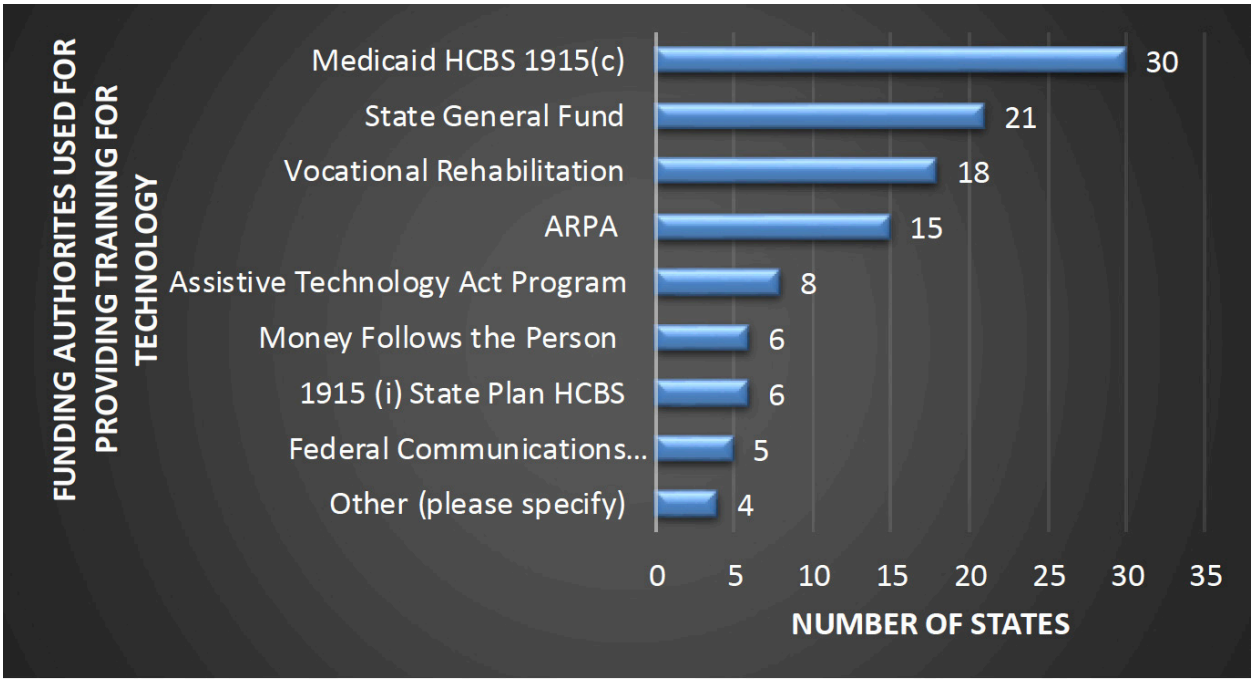
It has long been acknowledged that the acquisition of devices and/or technologies is not enough to ensure long-term adoption and use. Critical to ongoing utilization is the inclusion of training and technical assistance to support users with startup, customization, upkeep, updates, and environmental applications. The number of states providing training to learn, upkeep, and update purchased hardware, software, or technology solutions increased by 50% between 2019 and 2023 (Figure 8.) Two states were unsure if they could provide funding, and two states indicated they did not fund training in the survey, but then identified HCBS 1915 (c) waivers as a source of funding.

Figure 8. Number of States Providing Training to Learn, Upkeep, and Update Purchased Technology Solutions



Funding authorities for paying for training for learning, updating, and upkeeping technologies expanded in 2023 due to the pandemic. A lack of accessible training curricula, resources, and trainers were quickly identified as an area of need to allow for effective virtual service delivery. The ARPA funds provided a new and dominant source of funds to provide training. However, across states, service specifications were modified to allow training as part of the waiver service definitions.

Figure 9. Funding Authorities Used for Technology Training

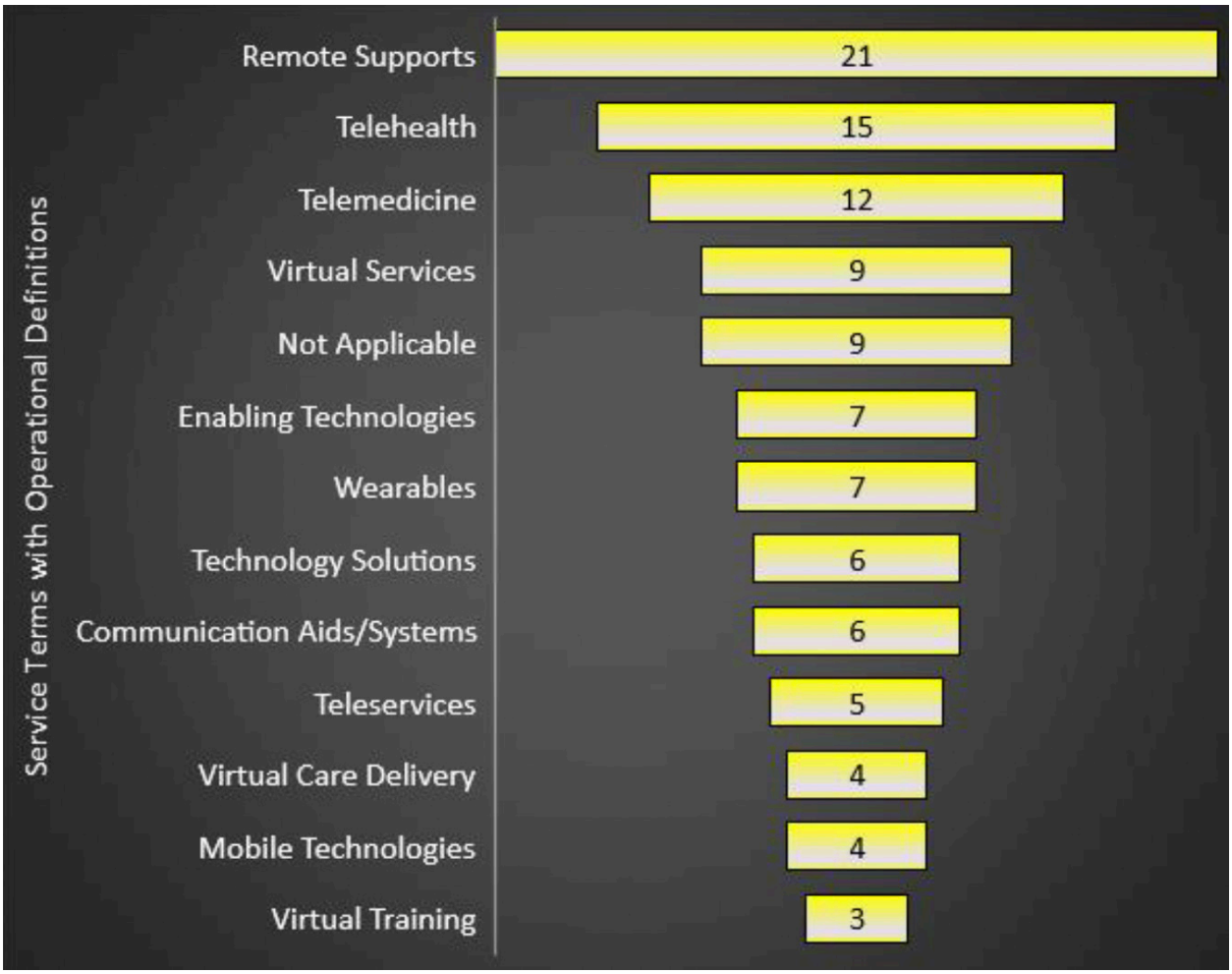


SERVICE OR OPERATIONAL SPECIFICATIONS

Technology Terminology

The field of I/DD is of ten criticized for the use of jargon and elaborate acronyms describing services, programs, and organizations. Plain and simple language has emerged as a method for transforming elusive content into chunks of information understood by diverse audiences. However, in the technology industry, complex disciplinary jargon is coined to introduce new innovations and frequently evolves to differentiate new expanded discoveries from previous technological tools. All of this occurs at a fast pace to keep up with progress and often creates barriers to technology adoption due to misunderstood, misapplied, and unclear terminology. As technological advancements have been embraced across service programs and providers of I/DD services and supports, terminology describing the technologies outlined in policy has been a challenge. Practically, terminology needs to be broad enough to encompass a wide range of innovations while remaining specific for funding authorities to approve expenditures. In addition, terminology must effectively communicate meaning to providers and consumers for initial acceptance and adoption. NASDDDS state DD agency members have noted that different terminology has been used, sometimes interchangeably and sometimes with distinct definitions, in guidance, webinars, and Requests for Additional Information (RAIs) responding when responding to waiver amendment submissions. In the recent draft of the CMS 1915 (c) technical guide found in the Federal Register Notice for 1915 (c) Waiver Application (PRA Renewal 88 FR 6237), CMS provided additional guidance regarding what they describe for the implementation of remote/telehealth and electronic/remote monitoring HCBS.

Figure 10. Number of States with Emerging Technology Service Operational Definitions



To clarify the use and application of technology terms, the 2023 survey investigated the use of technology terms in the identification of new and existing I/DD supports and services. Twelve emerging technologies and affiliated terms were investigated to identify consistency in operational definitions across states. Figure 10. lists the number of states that identified existing operational definitions for technology-related waiver services.

Remote Supports

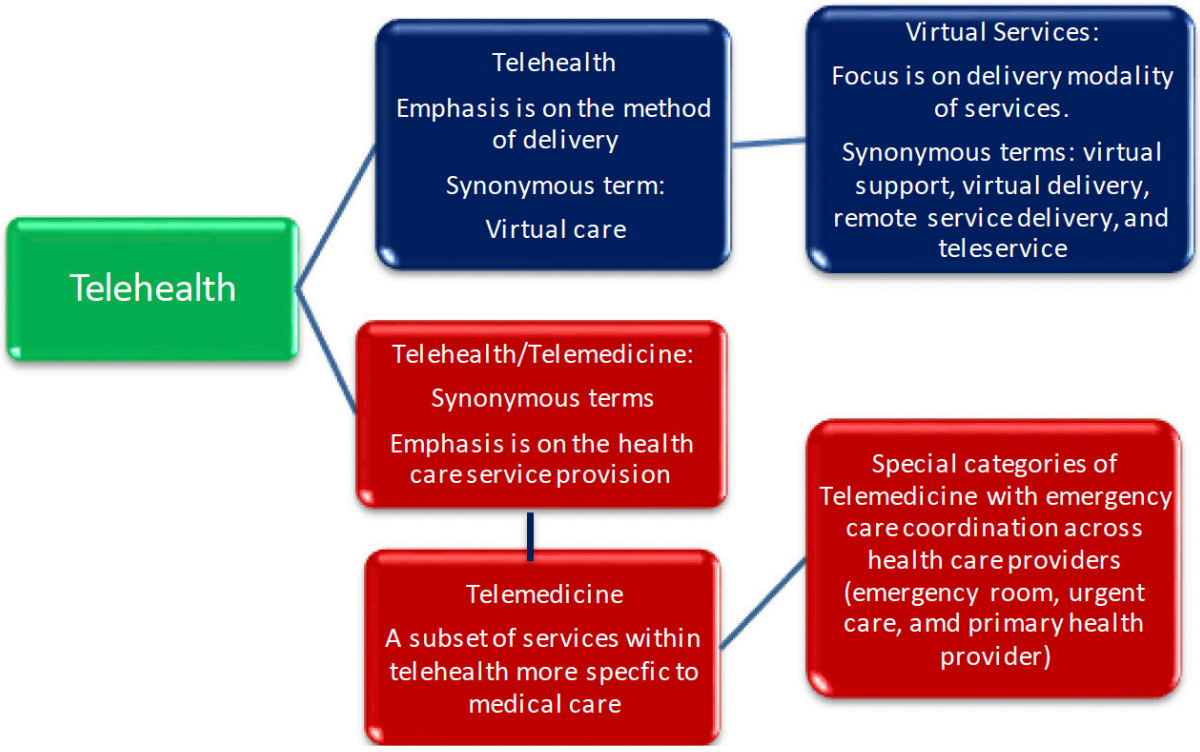
"Remote supports" was the most consistently applied term across states, however no two definitions were the same. Content and word frequency analyses were performed on the twenty supplied definitions using qualitative software to identify consistencies across definitions. Results illuminated that: who provided the service, how the service was provided, where the service was provided, to whom the service was provided, what the service provided, the goal of the service, equipment included, service eligibility parameters, and other definition specifications varied across definitions. The majority of program definitions listed the use of "live two-way communication systems" (n=9), by remote support staff or caregivers (n=10). Remote supports were used f or "oversight," "monitoring," "providing support," and "responding." Eight of the twenty definitions described the use of remote supports to allow users greater independence and reduced reliance on direct staff support.

Additionally, nine definitions highlighted the application of remote technologies to address "health, safety, and other needs" of the users. Eleven of the remote support definitions outlined specific equipment approved for remote support delivery (including web-based monitoring, sensor detection, live audio feeds, etc.). Finally, numerous definitions included parameters for installation, consumer privacy safeguards, service eligibility, and cost coverage.

Telehealth, Telemedicine, and Virtual Care

The terms related to healthcare delivery and service varied in application based on scope, emphasis, and delivery modality. "Telehealth" was the broadest category applied across states allowing the greatest hardware and program flexibility. While virtual, remote, teleservices definitions focused on the delivery modality of the service being provided through interactive audio, video, or other telecommunication technologies. Other applications of telehealth focused on the area of emphasis that the service provided (i.e., health care services). Analyses of telecare service definitions used across states generated a differential pattern of service function and service emphasis when word patterns were examined. Figure 11. demonstrates a graphical interpretation of service definitions used by the states. As states further refine operational definitions, understanding delivery modalities and service emphasis could aid in consistency and clarity across states. Consistency also provides the nation an opportunity to examine technology utilization, gaps in service, and consumer impact.

Figure 11. Patterns in Function and Emphasis in Telehealth Terminology



BENCHMARKING TECHNOLOGY FIRST SYSTEMS CHANGE

Technology First Systems Change

Technology First is defined as a "framework for systems change where technology is considered first in the discussion of support options available to individuals and families through person-directed approaches to promote meaningful participation, social inclusion, self-determination and quality of life."[xi] Technology First was initiated in Ohio in 2018 when Governor John Kasich signed an executive order declaring Ohio as "Technology First" mandating all developmental disability organizations examine supportive technology, which was broken down into remote support and assistive technologies, in individual service planning.[xii] Since then, additional states have adopted a similar approach focusing on technology solutions for long-term services and supports. In 2019, the State of the States began data collection on the nation's initiatives toward technological advances in supports and services. To date, there are 27 states that have initiated Technology First activities ranging from involvement in the Developmental Disabilities Services Technology Consortium to multi-tiered systems change efforts (AK, AL, AR, CA, CO, CT, DC, IA, IL, IN, LA, MA, MD, ME, MI, MN, MO, NC, NH, NJ, NY, OH, OK, OR, PA, TN, and WA). However, more structured analyses of the stages of Technology First Systems Change adoption have been needed to not only provide a framework for advancement but to benchmark progress in implementation.

The Technology Solutions Survey 2.0 provided an opportunity to benchmark states on a more refined criteria using the Technology First Systems Change Model. The Technology First Systems Change Model applies implementation science to frame elements necessary for systems change in health and human services.[xiii] These elements fall into three categories: statewide policy initiative; implementation frameworks; and fidelity and data driven decision-making. These elements have been evident in the examination of promising practices across states. The current survey examined select benchmarks within the systems change model listed below as well as attitudinal perspectives on Technology First implementation.

Evaluated Technology First Benchmarks in states included:

- Implementation or advancement of statewide legislation
- Modernization and harmonization of policies to support technology access
- Regularly convening a statewide group focused on technology access, services, and programs (ex. Technology First Council)
- Considerations of technology solutions as a requirement within the Individual Service Plan (ISP) or person-centered service plan
- Pilot programs for evaluating technology impact for people with I/DD
- Statewide evaluation of technology needs
- Statewide data collection plan or protocol for impact evaluation
- Statewide capacity building for providers and consumers
- Communications strategy for sharing Technology First efforts tied to statewide legislation

Technology First Attitudinal Perspectives

Not unlike other technology-related terms, Technology First has been interpreted in a variety of ways based on the perspective of the user. Some interpret Technology First as the statewide adoption of remote support technologies, while others interpret Technology First as a program or initiative implemented by service providers for culture and operational change. In data collection and implementation, this study examines Technology First as a comprehensive approach to systems change. Survey participants were asked if they considered their state a Technology First state and to provide evidence for their conclusion. Only seven states considered themselves Technology First states, citing legislative priority or a named program as evidence. Interestingly, when asked if states were working toward advancement of legislation, state proclamation, or statewide policy to support access to technology solutions and information for people with disabilities a mere thirteen states indicated they were advancing technology policies while sixteen states were not. Eleven states did not know if their state was advancing technology related legislation. Policy development in any arena can be complex and time consuming and requires the engagement of advocacy groups and legislative sponsors which can help to explain the survey results; however, the value of a legislative priority cannot be underestimated in providing the framework and resource allocations necessary to sustain and catalyze efforts.

Technology First Benchmarks

Technology influences the lives of all of us and our activities are reliant on technological advancements Technology is a way to increase opportunities for more inclusive and autonomous lives for people with intellectual and developmental disabilities (I/DD). In thinking about achieving progress in the use of technology for individuals with I/DD, it is important to engage in high quality, person-centered planning that keeps the full focus on the person and what technology solutions they are interested in. The supports coordinator is key to assuring the person receives the supports and services in their plan, preferences are honored, and technology solutions conversations are included in plan development.

Supportive technology can be used to meet different outcomes for people and to increase independence and including supportive technology into discussions when engaging in developing the person-centered planning are critical. For example, Missouri developed a remote supports approach to identify risks important to consider during planning to determine whether remote support services are appropriate for an individual, and to assist the person in making informed choices and planning for success.[xv] Ohio also has many resources on the use of technology to be considered during planning, such as the Supportive Technology guidance that further explains the use of assistive technology and remote supports as types of supportive technology that could provide personalized help with daily tasks at home or at work.[xvi]

Progress toward Technology First Systems Change were evaluated using a sample of nine benchmarks from the larger systems change model. Leading states were identified by the number of benchmarks positively identified in the state through the survey. The states could be ranked from Technology First Experts to Novices based on the number of benchmarks identified (Table 2.).

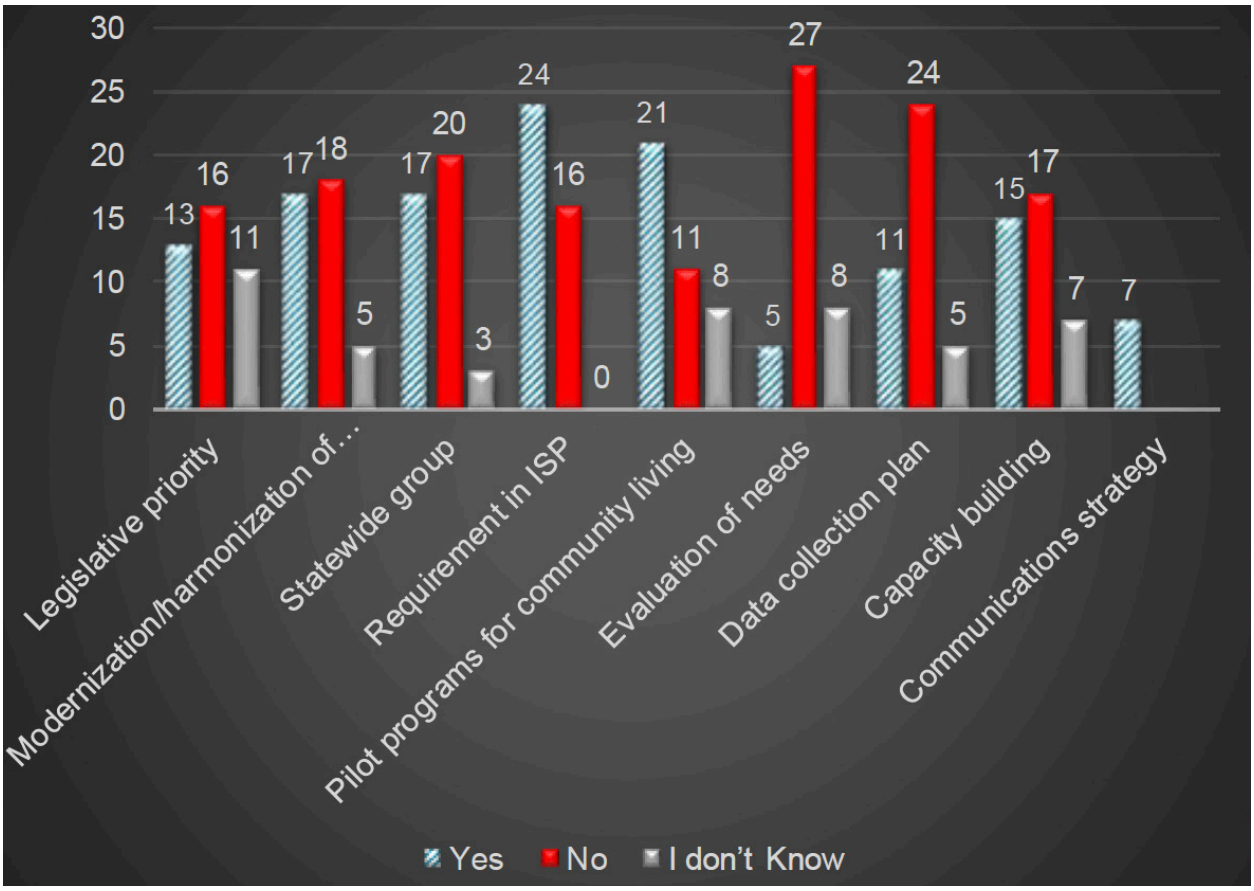
Table 2. State Level of Expertise Based on Positively Identified Benchmarks

6 Expert States Report 9-7 Benchmarks	6 Advanced States Report 6-5 Benchmarks	6 Intermediate States Report 4-3 Benchmarks	22 Novice States Report 2 or Fewer Benchmarks
CT, MD, MO, NJ, OH, & TN	DC, AL, MN, OK, PA, & RI	KS, MA, ME, OR, NM & SD	AK, AR, CA, CO, DE, GA, HI, ID, IL, KY, LA, MI, MT, NC, NE, NY, SC, UT, VT, WA, WY, WI

It is also possible to analyze the survey data by examining the number of states that have achieved Technology First benchmarks as a way of developing a strategy toward full implementation and areas for growth for novice states. Figure 12. lists the frequency of benchmarks positively identified across states. States listed the requirement that technology be considered within the Individual Service Plan (ISP) or Person-Centered Service Plan (PCSP) as the most frequently identified benchmark achieved. The ISP or PCSP must reflect what is important to the individual to ensure that services and supports are delivered in a manner reflecting individual preferences and ensuring the individual's health, safety, and well-being.[xv]

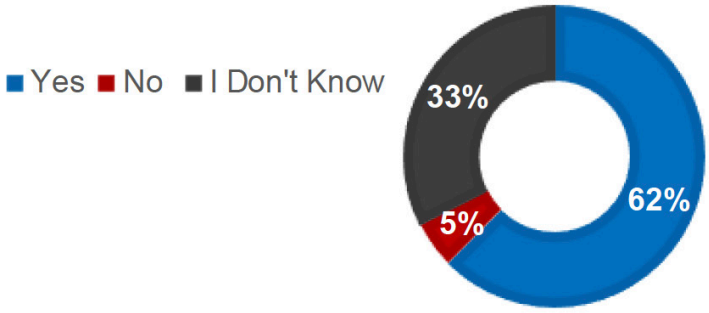
Benchmarks evaluating the modernization and harmonization of policies to support access to a broader range of technology solutions, and regular convening of a statewide technology committee were the second most identified benchmark in seventeen states. Most difficult for states to achieve was the statewide evaluation of technology needs reported by people with I/DD. It is important to note that in many cases, states indicated that they did not know if a particular benchmark had been achieved. Future data collection efforts will focus on improving data reporting.

Figure 12. Frequency of Technology First Benchmarks



Technology First implementation has quickly emerged as a promising practice, yet there are still tremendous opportunities for growth and advancement across the states. Concluding the survey, states were asked if they would like to receive technical assistance in supporting Technology First Systems Change efforts. Figure 13. demonstrates that the majority of surveyed states (62%) reported a desire for future technical assistance in the area of Technology First Systems Change.

Figure 13. Number of States Identifying a Desire for Technical Assistance in Technology First Systems Change



CONCLUSION

States continue to expand the use of Technology solutions for individuals with I/DD as part of disability support services, integrating technology into the home, work, and community activities to enable persons with disabilities to increase autonomy, access the community, and engage with others. While the nation continues to grapple with the challenges facing DD service delivery systems, technology solutions are examined not only to advance personal self-direction and autonomy, but also as a means of increasing efficiencies and addressing the most pressing concerns in the field. Thirty-nine of the forty surveyed states in the Technology Solutions 2.0 Survey believed technology solutions could be used as a tool to address the direct professional workforce crisis. This statement is an example of the ways in which investments in technology solutions could modernize and transform the delivery of services and supports for people with I/DD. The results of the survey will also help provide information to funding agencies (including CMS) as they consider policy adjustments to keep pace with technological innovations in services and programs.

The results of The Technology Solutions 2.0 Survey capture the advancements in technology investments pre and post pandemic and provide longitudinal evidence for investments in emerging and innovative technology solutions across state DD agencies. The identification of reliable funding sources, payment methods, utilization of new funding streams, and investments in remote monitoring/supports and telehealth allows the examination of trends and systemic barriers to be examined over time.

A barrier to long-term sustainability continues to be inconsistent terminology used to describe technology-related services and supports. With the evidence from the survey, states can begin to streamline definitional elements to conform to a standard structure and ultimately allow for service evaluation at a national scale.

Finally, the report examines areas of emphasis and what tools states need to continue to advance access to technology solutions for individuals and organizations through the implementation of Technology First Systems Change. As technology solutions become a necessity for community integration and organizational efficiencies, the DD service system must adapt and address the changes needed to modernize policies, research, programs, and practice. This report and future analyses will aid in the direction and achievement toward innovation and implementation.

GLOSSARY OF TERMS

Adaptive aids or equipment (EAA) - Adaptive aids or equipment are products, sytems, and/or machines used to help people perform activities of daily living (ADLs).

Assistive technology (AT) - Assistive technology is any item, piece of equipment, software program, or product system that is used to increase, maintain, or improve the functional capabilities of persons with disabilities.

Companion care - Companion care provides social and emotional supports to an individual through digital or technology platforms.

Durable medical equipment (DME) - Equipment and supplies ordered by a health care provider for everyday or extended use.

Electronic or remote monitoring/supports - Electronic equipment used to support a person from a distance for residential or in-home supports.

Enabling technology - Equipment and/or methodologies that, alone or in combination with associated technologies, provide the means to support individuals' increased independence in their homes, communities, and/or workplaces.

Environmental accessibility aids (EAA) - EAA are physical adaptations to a home that are necessary to ensure the health, welfare, and safety of the individual.

Personal emergency response system (PERS) - Personal emergency response systems or personal safety monitors directly connect an individual to an emergency responder or organization. These include life alerts, medical alerts, or fall monitors.

Smart home technology - Home equipped with network-connected products for controlling, automating, and optimizing functions such as temperature, lighting, security, etc., either remotely or by a separate system within the home.

Technology solution - Ideas, products, or services that are used to solve a problem or create something new. Advances a goal-oriented and self-directed approach to the development, acquisition, and utilization.

Technology First - Framework for systems change where technology is considered first in the discussion of support available to individuals and families through person-centered approaches to meaningful participation, social inclusion, self-determination, and quality of life.

Telehealth, telemedicine, or telecare - The use of telecommunications and information technology to provide access to health assessment, diagnosis intervention, consultation, supervision, and information across distance.

Video conferencing service or training - May be termed virtual delivery of service or teleservice. Service that provides real-time video communications, including audio, to enable users to share information of the user's choosing.

Wearable technology - Technology devices intended to remain on the user's body.

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Land Acknowledgement

At the University of Kansas, we acknowledge that our institution occupies land that has long been cared for by Indigenous peoples and work to reflect on the history of genocide and the forced removal of people and communities.

At KU we are also taking the time to understand and acknowledge the history that has brought our institution to occupy this space and to understand our institution's place within that history. Native American and Indigenous peoples are still here as our students, staff, faculty, and partners, and continue to thrive despite ongoing colonialism and oppression.

So, with this acknowledgment:

- We affirm sovereignty of the 574 federally recognized tribal nations in the US, 4 of which have reservations in Kansas, the 63 state recognized tribes and the many more tribes who seek recognition.
- And we continue our commitment to support our Native American community and recognize the dynamic contributions Indigenous people make at KU and at our sister institution Haskell Indian Nations University, as well as in our local communities, the state of Kansas, and our country.

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