

# **Moving Toward Adoption:**

Exploring Strategies to Expand the Implementation  
of Appropriate Aging Services Technologies

Proceedings of the CAST Commission Meeting

**February 21, 2010**  
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**Moving Toward Adoption: Exploring  
Strategies to Expand the Implementation  
of Appropriate Aging Services Technologies**



**Center for Aging Services Technologies**

A program of the  
American Association of Homes  
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## EXECUTIVE SUMMARY

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In November of 2002, a group of forward-thinking service providers, researchers and company visionaries gathered in Washington, D.C to discuss ways in which technology might help them address—in new and creative ways—pressing issues facing the field of aging services. That meeting led to the birth of the Center for Aging Services Technologies (CAST) in late 2003.

In the more than six years since CAST opened its doors, the dream of using technology to improve quality of care and enhance the independence of older people is starting to become a reality for many pioneering providers of long-term services and supports. In the last few years alone, the federal government has taken a leadership role in promoting health information technology (HIT) and has made remarkable progress in establishing workable standards that will guide the development of interoperable HIT systems. Most important, government policy makers have recognized that providers of long-term services and supports have an important role to play in the development and deployment of technology systems aimed at coordinating the care that Americans receive from a variety of health professionals and in a variety of settings.

Since the beginning of this journey, CAST and its Commissioners have been visionaries, strong believers in and evangelists of technology's valuable role in long-term care. Now that the building blocks for aging services technologies are in place, a different kind of action is required. CAST and its Commissioners remain committed to removing the barriers to technology adoption and increasing the rate at which providers of long-term and post-acute care incorporate technology into their streams of services and supports.

On Feb. 21, 2010, the CAST Commissioners gathered in Washington, D.C. to identify the steps necessary to ensure that the potential of aging services technologies is realized. During that meeting, the Commissioners explored the barriers to adoption presented by provider concerns about risk management and liability. They also participated in brainstorming sessions aimed at devising practical strategies to promote technology adoption among aging services providers.

The meeting yielded three core recommendations for actions that CAST can consider taking, as resources allow, to begin the process of increasing the technology adoption rate among CAST and AAHSA members:

1. Facilitate regional meetings during which providers that have been pioneer adopters of technology can share their successes, identify the barriers they face and provide practical information that might spur other providers to follow their example.

2. Develop a menu of roadmaps that could guide providers of aging services in their efforts to adopt and implement technology within their organizations.
3. Organize an exploratory meeting between AAHSA providers, financiers and investors to explore new viable financing opportunities for aging services technologies.

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## UPDATES ON CAST PROGRESS

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### Overview

*David M. Gehm, CAST Interim Chair*

Since the October 2009 meeting of the CAST Commissioners, CAST has reached important milestones in the selection process for a new CAST Chair and implemented a major upgrade to the CAST Web site.

### CAST Chair

Chief among CAST's goals for 2010 is the selection of an individual to replace Eric Dishman, who stepped down as CAST chair in 2009. The CAST Chair Selection Committee has identified candidates for the position and expects that the successful candidate will be welcomed by the Commission at its next meeting, to be held in Los Angeles, Calif., in late October 2010.

In addition, the CAST Chair Selection Committee is taking steps to strengthen the CAST structure by developing policies that outline term limits and order of succession for CAST officers, and member representation on the CAST Commission.

### Web Site

During late 2009, content on the CAST Web site migrated into the Content Management System of the AAHSA Web site ([www.aahsa.org](http://www.aahsa.org)) and redesigned its Web site ([www.aahsa.org/cast.aspx](http://www.aahsa.org/cast.aspx)) to include site-wide search functionality. The site's four main sections—devoted to safety, health and wellness, social connectedness and electronic documentation technologies—are fully linked to additional information and resources located throughout the site.

### **Standards Update: Shifting CAST's Focus from Standards Development to Adoption and Implementation**

*Majd Alwan, Ph.D., Director of CAST*

Up until recently, CAST's work focused on ensuring that long-term and post-acute care (LTPAC) providers were included in the process to develop standards for health information technology (HIT) in general and electronic health records (EHR) in particular. Confident that the basic building blocks for standards development are now in place, CAST is shifting its focus to activities that will encourage providers of long-term and post-acute care to begin demonstrating, by implementing their own technology systems, how these standards can spur the exchange of health information through interoperable electronic systems.

## Standards Development

To date, the federal Health Information Technology Standards Panel has endorsed four primary HIT standards:

1. The *HL-7 Continuity of Care Document (CCD)* allows for the exchange of patient summaries at the time of transfer between care settings.
2. *NCPDP Script 10.6* allows physician medication order entry, e-prescribing and the exchange of pharmacy data.
3. *The Patient Health Monitoring Report* standardizes the exchange of personal health data collected by in-home health devices like blood pressure and glucose levels and the integration of that data into EHRs or personal health records.
4. *The Patient Assessment Questionnaire Framework* allows for the capture and exchange of data for such functional assessment questionnaires as the Minimum Data Set (MDS) and the Outcome and Assessment Information Set (OASIS).

CAST and AAHSA participated in the federal standards development process through the LTPAC Collaborative, a coalition of organizations that promotes HIT adoption among long-term and post-acute care providers. The collaborative is represented on two federal HIT decision-making bodies: the Health Information Policy Committee and the Certification Commission for Health Information Technology (CCHIT), which will finalize its certification criteria for long-term and post-acute EHRs in late summer 2010. Once CCHIT puts these criteria into practice in Oct. 2010, providers of long-term and post-acute care will have access to interoperable EHR systems designed specifically for their care sector.

## Shift to Adoption

As CAST shifts its focus from standards development to adoption, it plans to carry out a number of activities. For example, the Center is currently adapting an HIT benchmarking tool, originally developed for nursing homes through a grant from the Office of the Assistant Secretary for Planning and Evaluation, so that it can help a variety of organizations across the LTPAC spectrum to assess their HIT maturity. In addition, CAST will co-sponsor the sixth annual Health Information Technology Summit in collaboration with the LTPAC Collaborative. The summit, which takes place June 6-8 in Baltimore, will feature a CAST-led Interoperability Showcase, during which vendors and providers will demonstrate how they exchange health information across different settings.

CAST is participating in dissemination of two important technical assistance tools that will give CAST and AAHSA members practical information they can use to adopt HIT. First, CAST and other members of the LTPAC Collaborative are ready to release an updated version of an HIT Adoption Roadmap for 2010-2012. In addition, CAST is working with Aging Services of Minnesota to promote two toolkits that

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provide technical assistance about technology adoption for nursing homes, assisted living communities and home health organizations. CAST provides links to the tool kits from its Web site and sponsored a session about the toolkits at AAHSA's Future of Aging Services Conference in Feb. 2010.

Aging Services of Minnesota, which is an AAHSA state affiliate, sponsored the tool kits in partnership Stratis Health, which serves as Minnesota's Quality Improvement Organization. The *HIT Toolkit for Nursing Homes* and the *HIT Toolkit for Home Health Agencies* detail various phases of HIT adoption and could be used successfully by a variety of providers, including those who do not yet have an HIT infrastructure in place and those who are seeking to upgrade an existing HIT system. The comprehensive tool kits include guidance on how to estimate the cost of HIT adoption and how to obtain financing for technology-related initiatives. Stratis Health plans to update the toolkits periodically based on user feedback.

**Research Update: Evaluating the Ability of Older People and Caregivers to Manage Hypertension with Telehealth Technology**

*Zachary Sikes, AAHSA Senior Vice President, Services*

CAST and the Institute for the Future of Aging Services (IFAS) at AAHSA are undertaking a study, funded by the Agency for Healthcare Research and Quality (AHRQ), which is examining the feasibility of deploying telehealth kiosks in nutrition centers to help manage high blood pressure. The study will evaluate the willingness, compliance and ability of older people and their health professionals to use a telehealth intervention to manage hypertension. Researchers placed blood pressure monitoring devices in federally funded nutrition sites that older people visit on a regular basis. They trained older people with hypertension to take their own blood pressure once a week, track blood pressure readings through an electronic database and provide a support network of health professionals to help study participants understand and manage their condition. CAST led a literature review on the efficacy of using of telehealth in the management of hypertension. At the conclusion of this task, the research team concluded that telehealth is efficacious. The team has submitted its final report to AHRQ; a paper on the literature review was recently accepted by the *Journal of Telemedicine and E-Health*.

CAST partnered with the National Opinion Research Center (NORC) to submit a proposal to evaluate the need to extend health information technology (HIT) adoption incentives to health care providers that are not eligible to receive incentives under the American Recovery and Reinvestment Act of 2009 (ARRA). The study was mandated by the ARRA, which became law in Feb. 2009. CAST and NORC also applied for a second ARRA-supported grant to examine the barriers to innovation in and the adoption of aging services technologies. The proposal was recently selected for funding. When completed, the

Department of Health and Human Services will submit the study report, along with recommendations, to Congress.

AAHSA, IFAS and CAST will learn in September whether their proposal to establish an AHRQ-supported Active Aging Research Center (AARC) has been funded. AHRQ would like the center to enhance quality of life and improve quality of care for older people by fostering the evaluation, adoption and translation of technologies that support independence, and promoting person-centered care through the engagement of caregivers and social networks in the care process. Using an initial five-year, \$10 million budget, the successful applicant will establish the center's infrastructure and will implement four initial projects that involve evaluating technologies, disseminating research findings and translating new care delivery approaches into practice.

**Federal Policy Update: Assessing the Impact of Health Reform and the American Recovery and Reinvestment Act of 2009 on Aging Services Technologies**

*Marsha Greenfield, AAHSA Vice President, Legislative Affairs*

Aging service providers breathed a sigh of relief when the U.S. Senate passed its health reform legislation on Christmas Eve 2009. Subsequent events—including the surprise election of Scott Brown (R-Mass.) to fill the seat of the late Sen. Edward Kennedy—put the fate of health reform in question until mid-March when the House of Representative approved the Senate's bill and sent a reconciliation bill with additional amendments back to the Senate. The basic health reform bill was signed into law by President Barack Obama on March 21, 2010.

The most significant aspect of health reform for AAHSA members was the inclusion of the CLASS Act in both the House and Senate versions of the historic legislative package. The CLASS Act is a revenue-neutral, long-term care insurance product that would be offered through the federal government to beneficiaries who pay into the system over time. Eligible beneficiaries would receive a cash benefit, based on their ability to perform activities of daily living, which they could use to purchase long-term services and supports, including technology. In addition to the CLASS Act, the health reform legislation featured technology-related programs, including a demonstration project that would explore strategies for using information technology to improve resident care and safety of nursing home residents.

From a technology perspective, the American Recovery and Reinvestment Act (ARRA) will have a more direct impact on CAST's goal to promote technology adoption among providers of long-term and post-acute care (LTPAC). Through one ARRA-funded program, the Centers for Medicare and Medicaid Services (CMS) will soon begin providing financial incentives to hospitals and physician practices that demonstrate that they are making "meaningful use" of electronic health records (EHR). The act also

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authorized several grant programs, administered at the State level, to provide financial support to health information exchanges and technical assistance to hospitals and physician practices seeking to adopt health information technology.

Providers of long-term and post-acute care are not eligible to participate in the EHR incentive program administered by CMS. However, they can participate in ARRA-funded grant programs at the state level if they partner with local entities. Aging Services of Minnesota, an AAHSA state affiliate, joined with two partners to apply for one of these grants. The Beacon Community Grant program expects to award 15 grants of up to \$20 million each to encourage local communities to serve as business models for EHR adoption. The proposed Minnesota project will use the Veteran's Administration's Open VistA and WorldVistA EHR systems to create a "public utility" EHR model that would give LTPAC providers free access to EHRs.

Finally, AARA authorized two technology-related research grants for which CAST has applied. See the Research section of this report (page 5) for more information.

Looking ahead, AAHSA expects technology to play an important role in its ongoing efforts to promote effective housing-with-services models for low-income older people. While AAHSA recognizes that the private-pay market will drive the adoption of technology, it remains confident that advances in the field of aging services technologies will make these technologies more suitable for affordable housing settings by driving down their cost through more widespread adoption.

### **State Policy Update: Using the Experience of California and Minnesota to Promote HIT Adoption in Other States**

*Scott Peifer, CAST Associate Director, Technology Policy*

CAST has been working with AAHSA state affiliates across the country to sponsor technology conferences, organize technology demonstrations for state legislators and help aging services providers benefit from the technology-related provisions included in the American Recovery and Reinvestment Act (ARRA) of 2009. Among the highlights of these efforts are CAST's recent work with AAHSA state affiliates in California and Minnesota.

### **California's Aging Services Technology Legislative Hearing**

Aging Services of California, the California Association of Health Services at Home, Continua Health Alliance and CAST organized the nation's first state-level Aging Services Technology legislative hearing on aging services technologies. The joint hearing, held on Feb. 9, 2010, was sponsored by the California State Senate Subcommittee on Aging and Long-Term Care and the California Assembly Committee on

Aging and Long-Term Care. An exhibit featuring six aging services technologies was on display in the Capitol building before, during and after the hearing. Testimony was provided by the hearing's sponsors, the Center for Technology and Aging, Intel, SCAN Health Plan, Accredited Nursing, GE Quietcare, Eskaton, Dakim, Front Porch and the California Center for Connected Health Policy.

Like their counterparts in other states, California lawmakers are particularly concerned about health care costs and were intrigued by testimony that positioned technology as one cost-saving solution to the health care crisis. Hearing testimony highlighted a cost-neutral telecare program, now being implemented in Pennsylvania, which has reduced the number of visits that registered nurses make to their community-dwelling patients while increasing the amount of health data about these patients that health care professionals have available to them. Those health professionals can opt to institute preventive measures or interventions if the data collected and transmitted by remote monitoring technology indicates a change in the individual's health status.

Through its experiences at the state level, CAST has discovered a number of best practices that could help other states develop successful education and advocacy efforts around technology. For example, technology demonstrations are most successful if they take place in a central location in the Capitol building where they can attract a variety of state policy makers and staffers. And while it is beneficial to involve key legislators in the technology demonstrations, it is critical to attract key legislative staff members who are in a position to initiate meaningful action around technology. Finally, hearing testimony will be most effective if it focuses on how technology helps individual older people improve their health and maintain their independence. Legislators, especially those who have had recent experiences caring for aging relatives, are often most receptive to the human side of the technology story.

### **Technology Initiatives in Minnesota**

By Jan. 1, 2015, all Minnesota hospitals and health care providers—including providers of long-term and post-acute care—will be required to have interoperable electronic health records system in place for their patients, clients and residents. To help its members meet that deadline, Aging Services of Minnesota has succeeded in establishing a special agreement with the Minnesota Health Information Exchange (MN HIE) that will give about 15 of the state's providers of aging services access to their residents' comprehensive electronic health records (EHR). This agreement is unique because few, if any, of those providers currently have an interoperable EHR system in place.

Providers who are participating in the new agreement recently had the opportunity to preview the data that will soon be available to them through the MN HIE. The richness of the information contained in these EHRs has convinced many providers that health information exchange can play a valuable role in

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helping them fulfill their missions and meet the highest standards of quality. This first step should help convince aging services providers in the state to invest in their own EHR systems so they can participate more fully in the state's HIE.

In addition, Aging Services of Minnesota has partnered with Stratis Health, Minnesota's Quality Improvement Organization, to develop two comprehensive toolkits to help nursing homes, assisted living communities and home-health agencies adopt technology. Read more about these toolkits in the Standards section of this report (page 4). The AAHSA state affiliate has also joined with several other partners to apply for a Beacon Communities Grant, authorized by the American Recovery and Reinvestment Act of 2009. See this report's section on federal policy (page 6) for more information.

### **CAST Support of State Efforts**

CAST is currently involved in several initiatives to help more AAHSA affiliates become involved in efforts to promote aging services technologies at the state level. For example, CAST published three white papers on the state of technology in Pennsylvania, California and Minnesota. It will soon publish policy briefs on HIT promotional efforts in New York, Ohio and Oregon.

Next steps in this education effort could include a broader analysis of state-based initiatives to identify common features of the state policy environment that allowed successful initiatives to gain traction. Such an analysis could also help CAST identify specific elements that must be included in any effort to promote adoption of HIT and aging services technologies. Using this knowledge, CAST could propose a broader strategy that other states could follow to achieve similar successes in the promotion of aging services technologies.

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**FEATURED PRESENTATION**

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**The Role of Technology in Risk Management and Liability**

*Bruce W. Dmytrow, BS, CMD, MBA, CPHRM, Vice President, CNA Specialty*

While hospitals routinely use technology in patient care, attitudes about technology are more complicated in the aging services field. Aging service providers and the people they serve don't necessarily understand technology and many are afraid to use it. Yet technology has the potential to help aging service providers prevent falls, dispense medications in a safer manner, monitor the health status of residents in a way that promotes prevention and early intervention, and keep residents safe through technology-assisted elopement management strategies.

In addition to this great potential for improved care and services, technology can also bring added risks to an organization. An organization's residents might resist the technology that it adopts. The new equipment could malfunction. The organization may not receive appropriate or adequate support from its technology vendor. Staff may have trouble using the technology. The organization may find, in retrospect, that it spent too much on the system. Or it may realize down the road that the technology inadvertently helped to depersonalize the care setting.

The fact that these risks exist should not deter an organization from adopting technology. After all, risk is part of every clinical service and every social model that an organization establishes, no matter what the setting. The key to minimizing the organization's exposure to liability is to anticipate, identify and address those risks before bad outcomes occur.

When adopting technology, aging services organizations can take a number of steps to reduce their risk. These steps should include a thorough cost/benefit analysis, an honest assessment of possible risks and liabilities, a deliberate effort to choose the right technology system, and a deliberate campaign to obtain buy-in from both staff and residents/ clients.

**Cost/Benefit Analysis**

Any due diligence process related to technology should answer two key questions: Does the organization have the capital necessary to invest both in the technology system and in the system's regular maintenance? Will the investment in technology reap enough benefits for the organization to justify that investment?

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A decision to invest in technology must be based on an organization's conviction that the resident population wants and needs the new technology, that the technology will improve the organization's quality of care and that it will help enhance the organization's market share. How well will the system serve residents? Will it make the organization more efficient? Will the system increase consumer safety and customer satisfaction?

At the same time, an organization must assess the costs associated with *not* investing in technology. If the organization foregoes technology, will it lose its leadership position in the local market? And, most importantly, will the failure to invest in technology increase the organization's liability risk because that failure makes the organization less efficient and its consumers less safe and less satisfied?

### **Assessing Potential Risk and Liability**

Any technology that an organization adopts should help reduce the risks inherent in providing long-term services and supports to older people. A CNA claims analysis shows that those risks are most frequently related to adverse outcomes resulting from falls, failure to follow the established care plan, pressure ulcers, failure to monitor the resident, elopement, and failure to inform a physician about a change in his or her patient's health status or behavior.

Technology should help the organization mitigate these known liability risks. The organization must also utilize its technology in a way that minimizes its exposure to liability. For example:

*An organization's technology must be accessible to all residents for which it is appropriate.* If a facility has 25 residents who share the same health status or behavior issues, its technology system must be available to all 25 of these consumers. An organization that does not offer its technology to all of the appropriate users sends the message that it does not have a consistent standard of care for all residents. Of course, these equal-access requirements do not apply to pilot projects or demonstrations intended for only a small portion of the resident population.

*Organizations must use the technology they have in place.* If a complaint is lodged against an organization due to a bad outcome, the complainant is likely to argue that if the organization had used the technology it had in place, the adverse outcome would not have occurred.

*The organization must inform consumers and their families about its technology systems.* Residents and their families should be comfortable with the technology and they must give the organization permission to use it.

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*The organization must take steps to ensure that the technology system will perform well.* The organization must have systems in place to measure the performance of its technology. It must also have backup systems that will take over if the technology system fails.

### **Choosing the Right System and Vendor**

Eventually, all technology becomes obsolete. This cannot be avoided, whether an organization is purchasing a cell phone or a complex elopement prevention system. The risk of obsolescence can be reduced, however, by following a few simple steps.

First, the organization must do its best to ensure that the technology system under consideration incorporates the latest technological advances currently on the market. An older system will approach obsolescence more quickly than a “cutting edge” system. Second, organizations must do their best to ensure that the technology system they purchase can be changed and tailored as the resident population changes.

Choosing the right vendor could very well make the difference between a successful and an unsuccessful technology project. Organizations purchasing technology must determine, before the purchase, the amount of technical support that the system will require and the amount of support that will be available from the prospective vendor. In addition, organizations must thoroughly investigate the strength of the vendor’s market presence to determine that the vendor will remain in business—and continue to offer support—for the life of the technology system.

### **Staff Issues**

Technology is only as good as the people who are using it. Organizations sometimes let very good technology systems fail because they haven’t first obtained buy-in for that system from staff. Staff must be involved in meaningful discussions about the technology from the beginning of the acquisition process so they can help the organization analyze its current procedures and workflows and make sure that the new systems are compatible with existing processes or that staff are familiar and comfortable with the new processes. The system will need cheerleaders who will convince staff members that the extra effort involved in putting the technology in place will reap meaningful benefits over the long term. And, finally, the organization must ensure that staff members have the computer skills and related competencies to operate the system well. Otherwise, the organization runs the risk of low staff morale and bad outcomes.

Once the technology system is in place, the organization must pay close attention to the experiences and feedback of the staff members using the technology. If, for example, staff members are using “workarounds” on a new technology in order to mitigate that device’s cumbersome aspects, this will

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indicate that the new technology is not working as intended and may, in fact, be dangerous. Using workarounds with a medication dispensing device, for example, creates the possibility that residents will receive the wrong medication or an incorrect dosage. An organization that knows its staff is using workarounds on technology will be at risk for liability unless it works with the vendor to change the technology or process so it is easier to use and less susceptible to workarounds.

Finally, technology should never supplant staff judgment. Staff members will resist technology if they perceive themselves as technicians rather than consumer-focused caregivers.

### **Consumer Considerations**

Many older consumers will fear technology simply because they don't have enough experience with it. Organizations that introduce technology slowly and in nonthreatening ways will be most successful in winning over consumers. Simple devices like cell phones, computer games and email systems can help introduce consumers to the benefits and joys of technology.

In addition, consumers and their families must be reassured that the organization takes seriously their privacy and the security of their personal data. The organization must consult with legal counsel regarding issues of data ownership, informed choice and privacy. It must also develop clear and transparent privacy policies that assure the proper management of information and help the organization avoid the serious regulatory and liability consequences of information mismanagement.

Above all, technology should never be used to decrease human interaction with older consumers. Instead, its goal should be to liberate staff from monotonous routines so they can have more interaction with those consumers. If technology depersonalizes the care environment, the older person will suffer and the organization will be less attractive to prospective consumers.

### **The Bottom Line: Technology and Risk**

Providers of long-term and post-acute care often want to know whether insurance carriers and risk managers view technology as something that is helpful or hurtful to an organization concerned about potential risk and liability. More specifically, they question whether the enhanced documentation of resident status and outcomes, which organizations receive through technology systems, puts the organization at risk if that documentation doesn't always show the organization in the best light.

Is there ever a situation, they wonder, when not knowing about real or potential bad outcomes is safer for an organization? The answer is no.

To minimize its exposure to liability, an aging services organization must know what risks exist and must do everything it can to minimize those risks. Therefore, the more information an organization has on

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hand to help it make informed care decisions, the better off that organization will be vis-à-vis risk and liability. Technology systems can provide that information.

Having information won't protect an organization from risk if the organization does not act on that information, however. For example, if an organization has information about a bad outcome, it puts itself at great risk if it chooses not to act on that information. If, on the other hand, the organization identifies the cause of a bad outcome and changes the system that was involved in that bad outcome, the risk to the organization will be reduced considerably.

Not every adverse outcome will result in a law suit. However, if families or residents feel that the organization failed to provide transparency and disclosure around that bad outcome, a law suit is much more likely to occur. The more information an organization can provide to residents and families on an ongoing basis—and the faster that a family or resident understands the causes of a bad outcome—the easier it will be to resolve a claim.

Of course, organizations can provide, document and monitor the quality of their care without sophisticated technology systems. However, if the organization takes the extra step to computerize these processes, it may be better able to minimize its exposure to liability and put the organization in a better position to defend itself if bad outcomes lead to legal action.

### **Conclusion**

Technological innovation points to a promising future in which providers can use monitoring and computing systems to provide services in a more focused and efficient way. In particular, these innovations will give providers timely awareness of health issues and care needs, enhance staff effectiveness, allow for the continuous refinement of care plans to ensure quality of care for each resident, expand independent living options, reduce human error and result in better outcomes.

Organizations considering technology adoption must keep one important truth in mind, however. Technology alone will not mitigate risk, reduce liability or guarantee the quality of care. Instead, any technology system must support the organization's values, mission and culture. In this way, technology becomes not an end in itself, but a means by which the organization enhances its strengths, addresses its weaknesses and becomes the best that it can be.

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## SHARED LEARNING AND DISCUSSIONS

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### **Pioneer Providers' Self Examination/Discovery**

#### ***Problem Statement and Rationale:***

A number of CAST and AAHSA members have emerged over the past few years as pioneers in the field of aging services technologies. These pioneers share a commitment to and an enthusiasm for technology and the role it can play to improve the lives of older people. Some members of this group demonstrate creativity and inventiveness as they experiment with technology adoption within the restricted reimbursement environment. Others continue to face barriers as they try to implement technology.

The varied experiences of pioneer providers place them in an optimal position to help CAST identify best practices in technology adoption and define the operational barriers to that adoption so these impediments can be minimized. Eager to tap into this knowledge and experience, CAST asked a group of Commissioners to plan a gathering of pioneering providers that would provide a forum for self examination and discovery.

#### ***Discussion Summary:***

To be most successful, a self-examination/discovery meeting of pioneer providers should include representatives from a broad range of organizations: both small and large providers that are located in both rural and urban regions and provide services in a wide variety of settings. In order to make the forum easily accessible to a wide variety of participants, it was suggested for CAST to hold several regional meetings, rather than one national meeting, as resources allow. CAST can solicit recommendations for participating organizations from Commissioners and through CAST and AAHSA publications. Results of the AAHSA Member Survey could also help CAST identify providers that have successfully adopted technology.

#### ***Meeting Agenda:***

During the meetings, pioneer providers would be asked to share their experiences with technology adoption, including what motivated the organization to adopt technology, how the organization's managers worked with the Board of Trustees to garner support for the technology initiative, and how the organization financed its technology systems. Discussions might also cover such topics as how the organization made a business case for adoption, how it incorporated technology into the organization's strategic plan, the type of technology the organization selected and how the organization applied those technologies. While the focus would be on best practices, providers could also be asked to identify the

obstacles they faced and what they learned from mistakes and failures. This and other information could be disseminated to AAHSA and CAST members in the form of case studies.

***The Value of Small Organizations:***

Small organizations could prove to be extremely valuable to the planned discussion. The size of these organizations often makes them nimble enough to adopt technology on a smaller scale, at a lower cost and more quickly than larger organizations. During the technology implementation process, many smaller organizations have pursued creative approaches that provide a model that could inspire similar-sized organizations and be adapted to larger organizations.

***Challenges of Identifying the Right Individual:***

Creating a list of specific invitees for a pioneer provider meeting could prove challenging. In the emerging field of aging services technologies, there are no hard and fast rules regarding where technology should reside within an organization or who the key staff people in an organization should be. As a result, organizations might place technology under such varied managers as the chief executive officer, chief financial officer, chief information officer, director of nursing, or a board member who championed the organization's technology adoption. To meet this challenge, a group of CAST Commissioners will contact a number of prospective invitees to determine which staff members would be most able to share the organization's experiences in planning and implementing technology systems within the organization.

***Benefits of Participation:***

Organizations that agree to participate in the regional meetings would gain a number of benefits, including the opportunity to network with other technology adopters and to have their successes spotlighted during the meeting. In addition, CAST could disseminate case studies of successful adopters through the CAST Web site and in CAST and AAHSA publications. Finally, CAST might consider publicly recognizing selected participants for their pioneer status and technological innovations.

**Technology Adoption Roadmap**

***Problem Statement and Rationale:***

Many providers of long-term and post-acute care have requested that CAST provide them with practical advice and guidance regarding the steps they should follow when pursuing technology adoption. Due to differences among providers and the technology they might adopt, however, it has been difficult to reach consensus on how such a roadmap should be defined and the components it should contain.

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Some providers suggest that a roadmap should provide a step-by-step guide that providers could follow as they implement technology. Others believe that a roadmap should offer only general guidance that would help an organization incorporate technology into an ongoing strategic planning process. Still others wonder if the roadmap should evaluate the quality and cost effectiveness of specific technology products.

CAST asked a group of Commissioners to define the components of a technology adoption roadmap and discuss the steps needed to produce each component.

***Discussion Summary:***

CAST has a vested interest in responding to requests from providers of aging services seeking guidance and education about technology adoption and implementation. Providers need help in assessing their need for technology, determining where technology will fit within the organization, evaluating various technology options and creating cost-effective business models that work. By providing relevant information in these areas, CAST could potentially drive more aging services providers to adopt technology, thus creating change nationwide and attracting new funders and investors to the field of aging services technologies.

Due to the wide variety of aging services providers, however, it will be extremely difficult to provide a single roadmap that all providers would find useful or appropriate. A better approach may involve producing a menu of roadmaps and allowing providers to select the map that is most relevant to them. Further discussion is required before such a menu can be fully developed. However, that menu might include roadmaps with a range of differing orientations.

***A consumer-oriented roadmap*** to technology adoption might focus on how technology could be utilized to improve health and well being within the consumer's home through scheduling, delivery and monitoring of services. This roadmap would be particularly useful to aging services providers that follow a hospitality model through which services and amenities, coordinated by the provider, help to optimize the consumer's life experience.

***A provider-based orientation*** to technology adoption would provide a way for providers to bring their required capabilities and standard of care into consideration when planning for an integrated and efficient technology system.

Providers taking a ***threshold orientation*** to technology adoption would implement technology when certain preordained thresholds were triggered. For example, a provider that expects substantial resistance to technology from staff and/or consumers might decide to begin the adoption process with simple

technologies that are easier to integrate into the organization's existing infrastructure and are more likely to provide a positive experience for consumers. Once staff and consumers are comfortable with that technology, the organization would implement more complex technologies. Similar thresholds could be established for system reliability, cost or other factors that are important to the organization. The roadmap would help providers establish these thresholds and create conditions that would help the organization reach those thresholds.

Roadmaps with a *certification orientation* would help providers make good choices when purchasing technology by recommending or certifying specific technologies for certain type of care settings and use cases. Not all stakeholders believe that providing product recommendations is not an appropriate task for provider organizations like CAST or AAHSA. However, CAST might be able to offer providers more general guidance about the types of technologies that work best in certain settings or that meet specific consumer needs.

Finally, an organization could use a *capacity-oriented* roadmap to determine whether its current organizational infrastructure and staffing capacities are adequate enough to facilitate successful adoption of certain technologies. The roadmap could provide a set of benchmarking assessments that the organization could use to determine its technology maturity and develop strategies to fill gaps in organizational capacity.

### **Financing Aging Services Technologies**

#### ***Problem Statement and Rationale:***

Proponents of aging services technologies generally agree that three conditions must be met before technology will become commonplace within organizations that provide long-term services and supports. First, research-based evidence must be widely available to show that technology is efficacious and cost effective. Second, providers of long-term and post-acute care need information—including practical implementation guides and business plans tailored to their particular setting—to help them implement the most appropriate technology for their resident populations. Third, providers will need ready capital to pay for technology.

The third condition could well be the most critical. Until new and stable funding sources for aging services technologies can be found, technology adoption rates are likely to remain stagnant, even if convincing research and technical assistance are plentiful.

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CAST asked a group of Commissioners to identify viable financing mechanisms for aging services technologies, apart from the foundations, government programs or private donors that not-for-profit organizations typically tap when seeking funds for new initiatives.

***Discussion Summary:***

Finding a source of financing for aging services technologies will be a challenge for several reasons.

First, funding for technology differs significantly from the type of financing that long-term care providers have typically sought in the past. Traditional long-term care financing is based almost exclusively on a real-estate model that promises an ongoing revenue stream in return for an initial investment. Aging services technologies don't fit into this investment-reward system.

When a provider of long-term or post-acute care implements a care-related technology, that provider is actually launching a professional service that is supported by technology. The hard costs involved in establishing these technology-assisted services—purchasing the hardware and software needed to launch a remote monitoring system, for example—represent only a small portion of the overall cost of such the service. In addition, a host of soft costs are required to create the infrastructure and processes that will support the service and the technology. Those soft costs will be the same whether 100 people or 1,000 people are served.

Obtaining the level of investment needed to create a professional service—even one supported by technology—is difficult because professional services do not typically provide the type of returns that venture capitalists expect from their investments. Because upfront costs are substantial no matter how many consumers are served by the system, organizations are under pressure to bring the technology up to scale as quickly as possible, which can add to the initial investment.

While the challenges are great, they are not insurmountable. Finance and investment companies with experience in aging services could be educated about the important role that technology will play in the future of aging services. CAST may consider organizing a formal discussion with these companies to explore new financing models for technology-assisted services.

Given the current economy, these finance and investment companies might be willing to adopt new financing models if they were convinced that these models would help position them to play an active role in the future long-term care market. AAHSA members might be enlisted to contribute to this discussion by sharing their technology-based business models. In return, finance companies could offer practical advice about how providers might eventually create revenue streams that would make aging services technologies more attractive to investors.

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AAHSA providers cannot depend on government reimbursement to fund their technology initiatives. On the other hand, the government's history of success in driving practice cannot be ignored. Legislative action to allow government support for the initial deployment of technology in long-term care settings could encourage private investors to build on that momentum. CAST could play a role in raising legislators' awareness of emerging technologies and encouraging policy makers to support early technology adopters through grants, tax credits or other incentives.

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## NEXT STEPS

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CAST remains committed to promoting the adoption of technology among providers of long-term and post-acute care. Over the short term, CAST continue that commitment by:

- Tapping into the knowledge and experience of technology pioneers by encouraging them to share their successes, identify the barriers they face, and provide practical information that might spur other providers to follow their example.
- Exploring the development of a collection of technology adoption roadmaps that recognize the differences among aging services providers and allow individual providers to find a path to technology adoption that fits their unique missions and organizational structures.
- Calling on the finance and investment communities for guidance and assistance in developing new funding models and opportunities for providers seeking to adopt aging services technologies.

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## ABOUT CAST

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The Center for Aging Services Technologies (CAST) is leading the charge to expedite the development, evaluation and adoption of emerging technologies that will transform the aging experience.

### **CAST four focus areas:**

- 1. Driving a global vision of how technologies can improve the quality of life for seniors while reducing health care costs;**
- 2. Accelerating technology research and development through pilot evaluations with seniors;**
- 3. Advocating to remove barriers to the rapid commercialization of proven solutions; and**
- 4. Promoting dialogue about standards to ensure interoperability and widespread access to aging-services technologies.**

CAST is now an international coalition of more than 400 technology companies, aging-services organizations, businesses, research universities and government representatives working together under the auspices of the American Association of Homes and Services for the Aging ([www.aahsa.org](http://www.aahsa.org)). The members of AAHSA help millions of individuals and their families every day through mission-driven, not-for-profit organizations dedicated to providing the services that people need, when they need them, in the place they call home.

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Members and Sponsors receive a wide variety of benefits. Please visit our Web site

[http://www.aahsa.org/article\\_cast.aspx?id=10130](http://www.aahsa.org/article_cast.aspx?id=10130) for a full listing of benefits and dues structure.





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