Lessons Learned While Preparing for the Future:

Revisiting the Accomplishments of Technology Pioneers in the Field of Aging Services

AN UPDATE TO 13 CASE STUDIES

FROM PIONEERS IN THE FIELD

June 2015

CASE STUDY

LeadingAge™ CAST

center for aging services technologies

LESSONS LEARNED WHILE PREPARING FOR THE FUTURE:
REVISITING THE ACCOMPLISHMENTS OF TECHNOLOGY PIONEERS IN THE FIELD OF AGING SERVICE

A program of LeadingAge
2519 Connecticut Ave., NW
Washington, DC 20008-1520
Phone (202) 508-9438
Fax (202) 783-2255
Web site: LeadingAge.org/CAST

LeadingAge Center for Aging Services Technologies:

The LeadingAge Center for Aging Services Technologies (CAST) is focused on accelerating the development, evaluation and adoption of emerging technologies that will transform the aging experience. As an international coalition of more than 400 technology companies, aging-services organizations, businesses, research universities and government representatives, CAST works under the auspices of LeadingAge, an association of 6,000 not-for-profit organizations dedicated to expanding the world of possibilities for aging.

For more information, please visit LeadingAge.org/CAST

Contents

Introduction 1

ACTS Retirement-Life Communities 4

Cathedral Square Corporation 7

Ecumen 11

Evangelical Homes of Michigan 15

Jewish Home Lifecare 23

Lutheran Homes of South Carolina 28

Mather LifeWays 32

MorseLife 36

Presbyterian SeniorCare 38

Providence Life Services 41

Selfhelp Community Services 44

Wellspring Lutheran Services 49

Introduction

At the October 2010 meeting of the LeadingAge CAST Commissioners, Chair Mark McClellan M.D., Ph.D., challenged CAST to take steps to educate aging services providers about innovative business and operational models and to provide members with the tools they need to successfully implement those models.

Thus began the CAST publication, *PREPARING FOR THE FUTURE: Developing Technology-Enabled Long-Term Services and Supports for a New Population of Older Adults*. CAST published this collection of 18 case studies in 2011 to help aging services providers understand how they might implement technology-enabled models and services.

The organizations featured in the 2011 case study collection were—and still are—pioneers in the field of aging services technologies. They were the first among their peers to think strategically about how their business models might need to change in order to meet the changing needs of a growing older population, changing consumer preferences, and increasing cost and regulatory pressures.

They were also among the first long-term and post-acute care providers to recognize that technology could help them transform their service offerings in order to improve quality, meet consumer needs and preferences, and save health care dollars.

Revisiting the 2011 Case Studies

Four years later, *Lessons Learned While Preparing for the Future* revisits 13 of the 18 organizations featured in CAST's 2011 case study collection to explore how those organizations and their technology-enabled services have evolved over time. The remaining five organizations did not provide any additional updates.

In preparing this volume, CAST asked the 13 participating organizations to review and update their case studies by describing how their technology-enabled services had changed since 2011. CAST wanted to know more about these changes, including:

- What new technologies and models had been explored since 2011.
- Whether any technologies or models had been rolled out on a larger scale.
- What technologies and models were no longer being pursued.

Finally, we asked participants to share what they had learned since 2011.

"Lessons learned" is the theme of this publication. The organizations featured here have learned many lessons since 2011. As illustrated in the following pages, change has been their constant companion. Without exception, their success has been dependent on a willingness to embrace that change by:

- Continually re-evaluating their technology-enabled programs.
- Tweaking programs that weren't working as well as expected.
- Dropping programs that failed to deliver on their promises.
- Constantly searching for new and better ways to deliver technology-enabled services and supports to older Americans.

The lessons that these organizations learned along the way—presented in each case study as "Advice for Others"—include the following:

Conducting Strategic IT Planning

- **Look to the future.** Think about the kind of services and supports consumers will be demanding in 10-20 years, and the kind of technology necessary to provide those services efficiently and effectively. Then, begin upgrading your buildings and programs so that they are ready to support that future.
- **Focus on changing the health care system.** "Boutique" programs that serve only a small number of older consumers often disappear when their short-term funding has been exhausted. Aim instead to change the health care system so your programs can be scaled and replicated.
- **Follow your mission and vision.** Technology is not an end in itself. It is a means to reaching your organization's goals. Set those goals first. And then explore how technology can help you achieve those goals.
- **Set priorities carefully.** Make sure that your discussions about new ventures include a concerted effort to prioritize the allocation of resources, especially the resource of time. Consider conducting mini-experiments that will give you preliminary information about a proposed innovation before you jump into a project with both feet.
- **Create an intentional business model.** Determine the business model for integrating new technology-enabled services into your operations. Will you fund these services through a standing budget line item or will they be funded through customer fees? How will you present the value proposition to consumers? When can you expect to see a return on your investment?
- **Educate your board of directors and senior management** about opportunities to integrate technologies and explore new service lines. Their support will help every staff member accept technology and the changes that it brings to workflows and processes.

Creating a Culture of Innovation

- **View innovation as a team sport.** A technology tool alone won't be enough to spur innovation within your organization. You also need to tap into the ideas, perspectives and skills that your employees can bring to an initiative.
- **Be willing to let go.** Embracing innovation means not being afraid to let go of the past. Say goodbye to previous practices so you can embrace better ways of operating. Learn from setbacks so you can move forward in new directions.

Implementing Technology-Enabled Services

- **Narrow your focus and conduct a pilot.** Target your technology-enabled service program to a specific patient population and identify a specific outcome you want to achieve. Then, conduct a pilot program. Expand the program only if you have outcomes data to support your investment.
- **Make sure technology tools are extremely easy to use.** Technology glitches can degrade participants' confidence in a technology-enabled service. Work with your vendor to prevent and/or remove these glitches.
- **Build technology into your physical infrastructure.** Upgrade old buildings and make sure your new buildings support high-speed Internet, remote monitoring and communications technologies.

Working with Vendors

- **Select vendors who share your values and vision.** Make sure your vendor understands your organization, its mission and its commitment to building a culture of innovation.
- **Partner with a vendor to test its product.** This will help your organization implement a new technology and will give you an opportunity to influence how that technology might be improved.
- **Understand how your vendor will implement the technology.** Select a vendor that will be flexible enough to meet your specific needs.

Working with the Organization's Staff

- **Hire employees who are comfortable with technology.** That way you're likely to get the most out of every component of your technology systems.
- **Identify/recruit technology champions.** Identify staff members who are supportive of and familiar with technology. Call on them to convince other staff to give technology a try.
- **Provide good customer support.** Be sure to teach staff how to use a new technology tool, and be there to support end users when things go wrong. Remember that good customer service can make the difference between success and failure of technology deployments.

Working with Outside Partners

- **Get a seat at the policy table.** Become educated about plans in your state to create health information exchanges and telehealth networks, institute payment reforms, and establish Accountable Care Organizations. Find ways to convince state officials that you could help improve the care provided by local health providers.
- **Network with colleagues in the field.** Participate in CAST and other groups to learn best practices and to create a network of relationships that can support you while you pilot, evaluate and launch technology-enabled services.

ACTS Retirement-Life Communities

West Point, Pennsylvania

Contributor: Peter J. Kress, Vice President and Chief Information Officer

The Organization

The story of ACTS Retirement-Life Communities (ACTS) began in the early 1970s when a suburban Philadelphia pastor and members of a nondenominational church sought to offer retired church members a new and better way of living. Their idea was to create a community that offered a fulfilling and meaningful independent living lifestyle while ensuring that a quality skilled health care environment would be available if it was ever needed.

Using their own resources and talents, this group of visionaries built Fort Washington Estates, which opened in Fort Washington, PA, in 1972. Since then, ACTS has evolved into the largest not-for-profit owner, operator and developer of continuing care retirement communities (CCRCs) in the United States. These life care communities provide independent living residences for people age 62 and older. They also offer guaranteed access to assisted living and skilled nursing care services, usually on the same campus.

Currently, ACTS operates 21 not-for-profit life care retirement campuses. These campuses are home to more than 8,500 older adults in eight states: Pennsylvania, Delaware, Maryland, North Carolina, South Carolina, Georgia, Alabama and Florida.

Technology-Enabled Service Model

ACTS is rapidly transitioning to a technology-enabled strategy that helps front-line employees create best-of-class, wellness-focused aging experiences and interactions for residents. The organization is accomplishing this goal by taking advantage of emerging trends in cloud, mobile, secure, "Big Data" analytics, and design.

Moving to the cloud: Many of ACTS' core technological capabilities are now delivered in the cloud, which has greatly enhanced their security and availability, and significantly reduced internal data center investments. Cloud-based services currently include enterprise resource planning (ERP); electronic medical records (EMR); customer relationship management (CRM); and communications, collaboration and productivity (CCP) solutions. Moving to the cloud has allowed ACTS to focus on investing in information technology (IT) that enhances direct partnerships and enables customer and employee engagement.

Using CRM as a platform: ACTS is committed to using the standard features of its ERP, EMR and CCP systems to their fullest capacity. In addition, the organization is leveraging its CRM platform to deliver unique tools and processes that support the ACTS signature experience. ACTS is also building design and development partnerships that support and optimize the experiences of prospective residents, current customers and employees. The organization's goal is to equip all employees with the technology tools they need to serve as concierges for residents.

Expanding mobile access: All 6,000 ACTS employees now have access to its CCP capabilities. In addition, ACTS has made it a priority to extend its core ERP, EMR and CRM capabilities so frontline workers can access them directly. The organization is in the process of significantly expanding the number of mobile devices used by its workforce in an effort to eventually provide one mobile device to every worker.

Resident-centered infrastructure: ACTS continues to build a robust connectivity infrastructure to support rich experiences and amenities for its residents and the employees who serve them. The organization is implementing campus-wide wireless and in-apartment commercial broadband. It is also evaluating low-energy Bluetooth technologies with the intent of providing fine-tuned internal mapping and positioning for both persons and "things." ACTS expects that these initiatives will help it create a much smarter environment within which it can deliver and optimize resident services and amenities.

Holistic wellness: ACTS aspires to develop a residential atmosphere that is environmentally, socially and technically conducive to best-of-class, wellness-focused aging experiences for our residents. Organizational leaders believe that the ability to quantify different aspects of wellness will help ACTS meet this goal.

Implementation Approach

ACTS is in the process of developing new implementation strategies for its technology-enabled services. The costs associated with installing, upgrading and maintaining system infrastructure and hardware are declining significantly. Moving forward, the organization is cultivating new skill sets in vendor relationship management, change management, business analysis and solutions design. In this effort, ACTS is enhancing its traditional change models with agile processes. It is also looking for new kinds of partnerships with its technology users—both customers and employees.

This shift requires the organization's IT team to acquire and emphasize significant new skill sets. This is a challenging transition, particularly because demands from residents, employees and businesses are increasing even faster than ACTS can increase its capacity to support change.

Outcomes

Although early in its process, ACTS is already seeing significant acceleration in its ability to support change for the organization. ACTS anticipates that its latest technological innovations will bring about:

- Significantly enhanced engagement measures for both residents and staff.
- Significant reductions in reliance on paper and manual records.
- Improved marketing results.
- A significant upgrade in the amenities available to residents.

Business Case

Organizations like ACTS are emerging from the "survivalist" mode they adopted, by necessity, during the recent economic crisis. ACTS remains confident that residential-based CCRCs that emphasize wellness and hospitality will continue to enjoy a strong market share. Technology that helps ACTS take steps toward new business models—especially those models that can be scaled rapidly for broad adoption—are expected to play a role in enhancing the organization's market position.

ACTS believes that implementing platforms for core business services—including EMRs, CRM and CCP—are a basic necessity of doing business responsibly in today's environment. The organization's leaders believe that connected campuses serve as essential foundations for any environment in which services are delivered to older adults.

Ultimately, ACTS expects to experience accelerated returns through:

- The **service culture** it nurtures by equipping every employee to serve as a concierge to residents.
- The **wellness-focused aging experiences** it develops for its residents.
- The **knowledge and expertise** it accumulates in the areas of service and wellness, which will be analyzed through "Big Data."

Keys to Success

Ultimately, ACTS expects that its success will hinge on its ability to accelerate iterative change through effective relationship management with internal and external stakeholders.

More practically, the sooner ACTS connects every employee and every resident, the sooner it will be able to enhance the experience of both.

Advice for Others

Embrace solutions and strategies that will not become barriers to future change.

Cathedral Square Corporation

Burlington, Vermont

Contributor: Nancy Eldridge, Chief Executive Officer

The Organization

Cathedral Square Corporation (CSC) is a nonprofit organization in South Burlington, VT, which owns and manages 28 affordable housing communities for older adults and individuals with special needs. Founded as a ministry of the Cathedral Church of St. Paul, CSC opened its first building in downtown Burlington in 1979.

Over the years, CSC has worked hard to raise awareness about the important role that affordable housing communities can play in helping residents age in place. The organization developed the Support And Services at Home (SASH) model, through which an inter-professional team of health care and service providers work with a housing site to help residents and nearby community members remain independent. The SASH team is comprised of a full-time SASH coordinator and a SASH wellness nurse, as well as nurses, caseworkers, mental health professionals and service providers from community-based organizations.

Since July 2011, SASH has been integrated into the Blueprint for Health, a Vermont health reform initiative. Organized around a medical home model, the initiative involves the creation of interdisciplinary community health teams that provide coordinated care and support patients' primary care physicians. The Medicare-funded SASH program has extended the capacity of community health teams at 118 housing developments serving 3,800 of Vermont's lowest income, frailest residents.

Technology-Enabled Services

Cathedral Square Corporation has deployed several technology-enabled services for its own residents and for participants in the SASH program.

Wellness programming: SASH uses technology to provide wellness programming to participants located in remote regions of the state. For example, one SASH region developed a Tele Tai Chi program that allows participants to connect electronically with a Tai Chi class in real-time. Lack of funding has prevented replication of this very successful program in other regions.

E-call: CSC offers an emergency call system, at no cost, to all residents at one SASH site. When a resident presses his or her bracelet or lanyard pendant, a wireless signal is sent to the SASH Coordinator. If the SASH Coordinator cannot respond to the call, an alert is sent to the town's emergency dispatcher. More than half (56%) of the site's new residents have requested the e-call service.

Wi-Fi deployment: CSC is committed to providing free Wi-Fi at all of its 28 housing communities over the next few years. This enhanced Wi-Fi connectivity will give SASH teams improved access to the Vermont Central Clinical Registry, the electronic database that holds SASH participants' health and demographic data. It will also allow CSC to provide its residents with free Wi-Fi service.

Intelligent mechanical systems: CSC continually explores how technology can improve the comfort and health of its residents. For example, the organization built direct digital controls (DDC) systems into its two most recent developments. These systems allow maintenance staff to remotely monitor how a building's

mechanical systems are functioning, monitor and manage energy expenditure, perform remote diagnostics and facilitate preventive maintenance.

In addition, the newest SASH site is heated by a natural gas-powered radiant hydronic system that is inexpensive to operate and maintain. The cooling system, which is so important to residents with chronic conditions like multiple sclerosis, uses air source heat pumps. The energy recovery unit (ERU) reduces the energy lost through ventilation and improves air quality, which is important for individuals with asthma or chronic obstructive pulmonary disease.

Telemedicine: CSC is about to embark on a telemedicine pilot at one of its SASH sites with help from an academic medical center and a volunteer physician. Medicare does not reimburse for telemedicine when the originating site is not a licensed health care setting. The pilot program will test the telehealth concept in hopes that payment reform will eventually make reimbursement/incentives for such services a reality.

Central Clinical Registry

Having accurate and up-to-date information about the health status of each SASH participant helps the SASH teams respond quickly and appropriately to emergencies or intervene early before a subtle health change becomes a major health crisis. The efficiency of information sharing has been maximized by access to Vermont's Central Clinical Registry (CCR) and, ultimately, to the state's health information exchange (HIE).

At the start of the SASH demonstration, the State of Vermont made a formal commitment to connect each SASH site to the HIE. A SASH Health Information Technology Work Group was formed to advance this work.

At that time, Vermont's HIE was not operational. Instead, the Blueprint for Health developed the CCR to serve as an integrated health record system that physicians and community health teams could access. When SASH was funded as part of the Blueprint's demonstration, the state directed its contractor to develop a SASH module in the CCR.

SASH enters health assessment data about all SASH participants into the CCR through an electronic medical record program called DocSite. This enables real-time tracking of SASH participants' health conditions, their progress on following healthy living plans, referrals, and changes in medications. DocSite has a robust analytic capability. Customized reports track any of the 224 data elements SASH collects on each participant. This data, which can be compared between SASH sites and regions, or statewide, drive SASH's choice of evidence-based programming for each resident at each location.

SASH is also using the CCR to gain access to aggregated data about its participants' health and functional status so it can develop community-wide programs aimed at changing disturbing trends. The aggregated data—about prescription drug use, chronic diseases, falls, and Emergency Room (ER) visits—allow SASH to identify demographic factors that could possibly influence the variability of health outcomes from one SASH site to another.

Health Information Exchange

When community health teams and SASH sites are connected to the state's HIE, the databases created by SASH and the community health teams should be interoperable. Currently, CSC can access the HIE because it is a licensed health care provider. It is not clear yet how other SASH sites will input and access HIE data about their participants.

Interoperability will:

- Allow SASH to enrich the community health team's database with additional information about individual SASH participants, including their nutritional status and history of falls.
- Provide SASH sites with access to the community health teams' clinical tracking system and the electronic health record system that the state's hospitals are now implementing.
- Give SASH participants access to the personal health record that will be provided to all of the state's health care consumers as part of Vermont's health reform initiative.

Outcomes

During its one-year testing stage, SASH interventions helped reduce hospital admissions by 19 percent among housing residents at the test site. Not one SASH participant who was discharged from a nursing home during the test period experienced a readmission.

In addition, falls were reduced by 22 percent. The number of residents at moderate nutritional risk fell by 19 percent. And the percentage of physically inactive residents was reduced by 10 percent.

SASH has also proven that it represents a wise use of resources. In 2010, the State of Vermont projected that its health reform initiative, combined with SASH, would save Medicare $40 million by reducing older consumers' use of inpatient hospital and physician services, hospital outpatient and ER services, pharmacies, and nursing homes. An independent evaluation of the Medicare demonstration, conducted in Summer 2014, concluded that Vermont has saved Medicare $44 million.

In a separate evaluation released by the U.S. Department of Health and Human Services and the U.S. Department of Housing and Urban Development, an independent evaluator concluded that SASH slowed the rate of growth in total Medicare expenditures, and expenditures for post-acute care, among SASH participants in the second year of enrollment, compared to similar Medicare beneficiaries who did not have SASH supports.

These outcomes have helped cement SASH's credibility with sometimes-skeptical housing providers. As of 2014, all nonprofit providers of affordable rental housing in Vermont are participating in SASH. In addition, service providers working at the SASH test site now endorse the program because SASH has demonstrated that it can help these providers carry out their missions more effectively.

SASH's involvement in discussions about Vermont's health care reform initiative has also helped health care providers see housing providers in a new light. A growing number of state policy makers, health providers and community-based service providers understand the benefits they can reap by sharing information with SASH sites and receiving information from those sites.

The Business Case

SASH obtained $10.2 million in Medicare funds through the federal Multi-Payer Advanced Primary Care Practice (MAPCP) Medicare Demonstration program. Those funds, which represent a capitated amount of $700 per participant per year, have allowed SASH to roll out its team-based model to 118 sites. The program continues to expand.

To support an aggressive and effective rollout of SASH, the state provided funding through the Medicaid Global Commitment Waiver. The state's support has increased as SASH has achieved statewide scale and operational excellence. Based on the success of Vermont's Blueprint for Health and its SASH extender,

the Centers for Medicare and Medicaid Services has requested a two-year extension of the Medicare demonstration to allow further evaluation and bridging to a permanent source of funding.

Challenges

Outdated infrastructure: Like many owners of older housing communities, SASH sites face a challenge as they attempt to upgrade their buildings to support technology innovations. Wireless technology was virtually nonexistent in these buildings a few years ago. Today, this technology is becoming increasingly more common as housing organizations recognize how technology can help sites share information with other practitioners and institute more sophisticated methods of monitoring resident behavior and tracking health outcomes.

User-friendliness: The technology used to input assessment data must be user-friendly, without diminishing the quality of the interaction between the assessor and the participant. In the most rural areas of Vermont, this has required a greater investment in laptops and tablets, consistent training programs and nimble technical assistance.

Advice for Others

Make systems change your goal. Housing providers are valuable community resources. These providers can bring a model of housing with services to scale as part of an overall effort to change the health care system at the regional or state level. "Boutique" programs that serve only a small number of older consumers often disappear when their short-term funding has been exhausted. Housing communities need to become actively involved in efforts aimed at changing the entire health care system.

Get a seat at the table. The ability of housing providers to participate in systems change will depend on their willingness to get involved when states and local stakeholders are creating health information exchanges and telehealth networks, instituting payment reforms, and establishing Accountable Care Organizations. It is essential for housing providers to become educated about their state's plans in these areas. Seek ways to become involved in the process.

Sell yourself to your HIE. Housing providers must convince state officials that they have valuable information about older residents that could help improve the care provided by local health providers, particularly emergency room physicians.

Look to the future. Like all providers of long-term services and supports, housing providers need to start thinking about the kind of services and supports consumers will be demanding in 10-20 years, and the kind of technology necessary to provide those services efficiently and effectively. Providers are wise to begin taking steps today to upgrade their buildings so that they are ready to support that technology tomorrow.

3. Ecumen

Shoreview, Minnesota

Contributor: Larry Jorgensen, Chief Information Officer

The Organization

The roots of Ecumen date back to 1862 when the Lutheran Church began providing foster care for children in Minnesota. The organization, which is based in the Minneapolis/St. Paul metropolitan area, began serving older adults at the beginning of the 20th century as the Board of Christian Service and, later, as the Board of Social Ministry.

The Ecumen name, adopted in 2004, comes from the Greek word for "home," and underscores the organization's mission to create a home for older adults wherever they choose to live.

Ecumen operates a variety of senior housing options and services throughout Minnesota and in six other states. The organization employs approximately 3,800 people and serves more than 12,000 people. The Minneapolis/St. Paul Business Journal has named Ecumen a "Best Place to Work" nine times in the last decade.

Much has changed in Ecumen's technology exploration and deployment since 2011. The organization has continued using some technologies that have served its customers well. It has discontinued the use of several technologies, either because customers did not find value in them or because the organization switched to a different product that it felt provided more value.

Sensor Technology

Ecumen uses sensor technology to passively monitor the activities of residents so it can intervene early when changes in activity patterns indicate a change in health status. Sensor technology continues to be a standard in every new building that Ecumen opens. Over time, as more companies have entered the sensor space, the quality of available products has advanced considerably.

Ecumen values sensor technology for two reasons. First, customers welcome the technology as a way to enhance their safety and security. Few customers feel the technology compromises their privacy. In addition, sensor technology enhances the human part of care that Ecumen provides.

Ecumen analyzes sensor data for trends and often shares that data with family members and physicians to help them understand how the health status of a resident is changing or to illustrate why Ecumen is recommending a change in a care or service plan.

iPads and iPods

With the help of platforms from PointClickCare and Eldermark, employees in Ecumen's skilled nursing and assisted living settings are increasing their use of iPods, iPads and tablets.

Ecumen has adopted WiFi technology as a standard throughout new and existing locations to enable connectivity of these mobile devices.

Skilled nursing settings are using iPads and tablets for real-time care data entry, Minimum Data Set (MDS) interviews, assessments and charting. Staff members in assisted living settings use iPods to confirm the delivery of services, submit work orders to maintenance, and access their schedules.

Using iPads, iPods and tablets has brought tremendous benefits to Ecumen customers, including:

- **Time savings:** Increased use of mobile devices means that Ecumen staff spend less time on paperwork and more time with residents. For this reason, Ecumen has eliminated several paper processes and streamlined many more.
- **Security and ease:** Data entered into portable devices are stored in a central, secure location, which makes it very easy to access and review. Ecumen is very pleased with the added security that electronic data offer.
- **Communication:** When all care team members have easy access to all of an organization's data, it fosters greater collaboration and enhances the ability of team members to solve problems.
- **Reimbursement:** Portable technology platforms make it easier to document the work that staff is doing. This ensures that an organization will receive the proper reimbursement.
- **Scheduling:** Online scheduling makes it much easier for employees to plan and secure shifts. It also improves the organization's ability to manage overtime expenses.

Heath Information Exchange

Ecumen continues to actively partner with and encourage the development of Health Information Exchanges within the geography we operate. Ecumen believes that efficient exchange of data between entities that serve our clients will benefit our residents by helping to improve outcomes for our residents and provide efficiencies within the healthcare system overall.

Information and data collection must occur and be made available as close as possible to the Point of Care.

For Ecumen, this includes not only within its bricks and mortar locations with WiFi connected devices but also in home care settings with mobile wireless devices. Ecumen is deploying more and more mobile devices to caregivers throughout its various care settings. Ecumen has implemented Sansio Home Solutions within its homecare business and is evaluating the best use of mobile devices in that setting.

Pharmacy EMAR

Ecumen continues to believe that effective integration between its Pharmacy providers and caregivers is very important to ensure accuracy and efficiency as well as to help identify and protect against potential adverse drug interactions. Ecumen has been deploying Electronic Medication Administration Record (EMAR) systems in both its long term care environments (PointClickCare) and Assisted Living operations via Eldermark's Service Minder product. Ecumen is planning to test Pharmacy integration with Eldermark and one of its leading Pharmacy providers later this summer.

Focus on Innovation through Collaboration

Ecumen takes a collaborative approach to evaluating whether to implement specific technologies. The organization has launched two initiatives that bring multiple stakeholders together to spur innovation both within Ecumen and in the broader field of aging services.

Innovation 2.0: In 2013, Ecumen created "Innovation 2.0" workshops. Over a period of several months, teams of 30 employees from different areas of the organization are invited to work with a college instructor who specializes in innovation. Team members learn about key aspects of innovation, including how ideas evolve, how to link ideas, and how to conduct ethnographic and market research.

Each Innovation 2.0 team also takes a deep dive into a specific problem and/or opportunity area, creates a design concept for a new product or service, and develops the business case for that solution. The business case is then presented to Ecumen's leadership team, which selects ideas it feels merit further development. Two technologies emerged from the organization's first Innovation 2.0 workshop and are currently being pursued further.

AgePower Tech Search: Ecumen believes that providers of aging services—and the customers they serve—can play a vital role in helping inventors, start-ups and long-established companies create new value that makes lives better. During 2014, the organization's AgePower Tech Search invited companies to submit technologies that Ecumen employees and customers could beta-test. This testing is designed to give companies insight into the types of technologies consumers find valuable.

The AgePower Tech Search received a great deal of national attention and helped make the case for the importance of focusing on and investing in aging services technologies. Thirty-seven companies participated in the tech search. Ecumen selected three products for further testing within its care settings:

- A bracelet that allows users to operate their household's lights, microwave, television and other electronic devices.
- A highly secure online technology for storing and sharing stories, photos, legal documents and other important information with family members.
- An easy-to-use treadling machine designed to improve blood circulation.

Advice for Others

View innovation as a team sport. Ecumen continues to foster collaborative activities in an effort to identify ideas, perspectives and skills that will spur innovation. This collaboration is essential if organizations want to maximize the value of innovation-enabling technology. A technology tool alone won't be enough to spur that innovation.

Don't chase every shiny object. Collaborative initiatives have a tendency to bring many new ideas to the attention of an organization's leaders. Organizations may be tempted to launch pilot programs to test many of these ideas. Keep in mind that pilot programs and new ventures take a significant amount of time. Organizations must make sure that discussions about new ventures include a concerted effort to prioritize the allocation of resources, especially the resource of time.

Conduct mini-experiments. Innovation does not often take place in one huge leap. Instead, innovation consists of a series of small steps that allow an organization to learn as it goes. Ecumen is conducting many mini-experiments that are designed to give the organization preliminary information about a proposed innovation so it can quickly decide whether to change, add to, or abandon the experiment.

Be willing to let go. Embracing innovation means not being afraid to let go of the past. It would have been very easy for Ecumen to stay with paper charting, but the organization decided instead to pursue better ways of record keeping that would benefit its customers and its business. Discovering that better way meant saying goodbye to previous practices.

Expect the unexpected. When organizations expand collaboration and open themselves to new learning, they will go to unexpected places. When Ecumen decided to abandon a community portal that facilitated communication with customers and their families, the organization's leaders learned lessons that led to new conversations and perspectives. This process is helping Ecumen define its next experiment to improve communication through technology. The key to success is not being afraid to abandon an existing project, learn from it, and apply that learning in new ways.

Eskaton

Carmichael, California

Contributors: Todd Murch, President and Chief Executive Officer

Sheri Peifer, Chief Strategy Officer

The Organization

Eskaton's primary mission is to enhance the quality of life of older adults through innovative health, housing and social services. Each year, the organization offers a full spectrum of aging services to 14,000 older adults throughout northern California. Eskaton's campuses provide a variety of housing and service options, including independent living, assisted living, memory care, hospice, respite care, rehabilitation and skilled nursing, and affordable apartments.

Eskaton also provides a broad spectrum of home-based support services to older people living in their own homes. These services include information and assistance, care management and coordination, health and wellness education, telephone reassurance, transportation services for low-income older adults, home health care, and adult day health care services.

Approach to Technology Adoption

Eskaton's association with CAST since 2005 has allowed the organization's senior staff to learn about technology tools that could advance the organization's service models. CAST affiliation also allowed Eskaton staff to network with major technology vendors and share information with peers.

As a result of this interaction, technology rose to a new level of importance in the organization and led the board of trustees to authorize investments in technology-related research and development. Those investments helped Eskaton implement electronic health records (EHR), deploy a sensor-equipped remote monitoring system, and build a national demonstration home featuring universal design, cutting-edge technologies and "green" living features.

Today, Eskaton continues to evaluate smart-sensor solutions and consumer technologies. The organization is working with a variety of technology partners to build out seamless care management software, including LivWell Health and Live!y.

Electronic Health Records

In 2006, Eskaton introduced EHRs in its skilled nursing setting and licensed home health agency. Today, the organization's EHR extends to independent, assisted living and memory care settings. Point-of-care kiosks complement the EHR system in Eskaton nursing settings by allowing frontline staff to quickly and accurately document the care they provide.

Eskaton's EHR system requires the buy-in of a host of internal stakeholders, from frontline caregivers to top-level managers. The organization has learned that it is best to engage interdisciplinary departments, such as accounting and finance, in EHR discussions and planning stages. Eskaton adopts an "all hands on deck" approach when it commits to using an organization-wide tool like EHRs.

Remote Monitoring

Eskaton has deployed approximately 750 QuietCare sensor-equipped passive monitoring units in its assisted living and memory care apartments.

The organization has anecdotal evidence that its passive monitoring system is helping staff quickly identify resident health problems and provide early interventions before those issues become serious enough to require hospitalization. In addition, Eskaton credits the QuietCare system with detecting early signs of dementia in residents, and helping families better understand the health and cognitive status of their relatives.

The Eskaton Foundation paid for installation of QuietCare in all assisted living/memory support units. Once installed, that monitoring service became part of Eskaton's standard of care and is available at no additional cost to all residents.

National Demonstration Home

In 2008, Eskaton built its national demonstration home as a way to shine a spotlight on universal design and aging-in-place technology and to dispel the common misconception that age-friendly design must look institutional.

By 2014, a number of builders had elected to incorporate Livable Design core standards, developed by Eskaton's Livable Design Program, into their floor plans. The Cannery development in Davis, CA, will feature Livable Design features in 450-500 homes when it opens in June 2015.

LivWell Health

Eskaton began working with LivWell Health in 2014 to build out Eskaton's Live Well at Home care management/coordination platform, which interfaces directly with the organization's Customer Resource Management systems.

Eskaton's Live Well at Home Resource Coordination and Care Coordination team uses the LivWell tool to track all customer calls, referrals, notes and follow-ups. The HIPAA-compliant module is designed to:

- Provide a seamless client record that follows an individual from that person's first point of contact with Eskaton.
- Facilitate real-time data tracking that allows Eskaton to report back to primary care physicians, health systems and managed care organizations.
- Promote the efficiency of Eskaton staff.

Outcomes: Early evidence suggests that the LivWell Health module has increased the number of daily point-of-service care coordination visits that Eskaton's Live Well at Home program is able to conduct. Originally, the program's care coordinators and managers could conduct only one to two visits per day.

Eskaton's new goal—to conduct four to six visits per day—will be tested through a pilot program that Eskaton will conduct with a regional health care system. The pilot will involve approximately 150 "rising risk" older adult patients who would benefit from Eskaton's Live Well at Home program.

The pilot program will also test initial findings that the LivWell module is expanding Eskaton's ability to scale services, communication and continuity for hundreds of clients who access its home support services.

Business case: LivWell Health provided Eskaton with "partner pricing" for its technology solution as a way to ensure that both organizations were investing equally in building a program that would benefit both. Further partnership opportunities are under discussion. Eskaton was able to integrate its investment in the LivWell Health module into its capital planning budget. The cost of software licenses was embedded into Eskaton's operating budget.

Eskaton expects the LivWell module to help it expand service opportunities and choices to caregivers and older adults living at home. The module will be embedded into Eskaton's Live Well at Home program in 2015 as a fee-for-service addition.

Live!y

During 2013 and 2014, Eskaton began exploring independent living sensor technologies that also have the capability to offer social connectedness. The goal of this exploration was to determine the value of these technology solutions and their benefit to caregivers. Subsequently, the organization conducted a highly focused, two-month pilot to understand the value of the information shared through Live!y, a simple sensor package that is not reliant on Internet or Wi-Fi.

Live!y measures healthy living patterns and lets family members know when a relative may need their help. The technology solution also offers a Live!yGram containing family photographs and puzzles, which is mailed to the older adult each month.

The Live!y pilot was designed to explore how older adults and their caregivers experience the Live!y app. The Live!y pilot was small and short-term. It involved 10 caregivers and 10 older adults who participated in a variety of Eskaton's home-support business lines, including the adult day health and Live Well at Home programs.

Outcomes: The Live!y product was offered at no cost to Eskaton during the pilot program. The Pitch for Pilots program sponsored by AgeTech West and Aging 2.0 made this possible. Following the pilot, clients had the option to take over the program's monthly subscription fee so they could continue using the program.

Eskaton conducted a survey before and after the pilot to analyze the implementation and value of Live!y. Results from the pilot were positive. Over half of pilot participants decided to continue with the program after the pilot ended. Over 85 percent of users said that Live!y improved their sense of connectedness.

Based on these findings, Eskaton decided to integrate the Live!y service into Live Well at Home during 2015. The organization is now exploring how to package and deploy this solution within its Home Support Network.

General Technology-Related Challenges

Outdated infrastructure: Some of Eskaton's initial technology-related challenges revolved around basic infrastructure issues. For example, the organization owns many older buildings that were not adequately equipped to support wireless monitoring devices and point-of-care kiosks. In some cases, older buildings had to be carefully assessed and rewired before technology solutions could be implemented.

Technology phase-outs: Eskaton is informed periodically that technical support for a variety of software systems will end at a particular time. This news often forces the organization to quickly identify a compatible

system that will integrate with the technology that is already in place. This can be costly and frustrating. However, the organization has come to accept the ebb and flow of the "Technology Life Cycle."

Key to Success

An active board of trustees: In 2004, Eskaton's board of trustees switched to a policy governance model that freed board members to make strategic decisions aimed at ensuring that Eskaton will continue offering services that future consumers find appealing and relevant. To advance its strategic planning work, the board places a high priority on educating its members about current trends in the field of aging services. The board has been vocal about its desire for Eskaton to be an innovator in that field. As a result, Eskaton's strategic plan integrates technology into each of the organization's four strategic directions.

Organization-wide buy-in: Eskaton approaches technology as a natural tool that is a part of the framework of how the organization functions and provides services. The organization's vice president of information services is a member of the Eskaton Capital Planning team and provides direction on how resources supporting technology integration and advancement are allocated and used within the organization.

Good communication with partners: When systems do not work as originally expected, there can be frustration. Eskaton meets this challenge by working alongside partners to figure out critical issues and develop timelines to remedy the issues. The success of these partnerships is dependent on having a program manager on each side who serves as the one point-of-contact. The job of these program managers is to streamline communications, follow-up, and keep one another accountable to timelines and agreements.

Advice for Others

Conduct vigorous evaluations. Conduct a pilot for any new technology-enabled service. Be sure that you and your partner agree to also conduct a pre- and post-pilot evaluation and methodology. Look to university-based research programs to assist in the formal evaluation. Share your results.

Create an intentional business model. After evaluating the value of the new platform, determine the business model for integrating that platform into your operations. The specific features of this business model will depend on whether you are launching an infrastructure improvement (which is an organizational cost) or a consumer-based technology (which might be funded through customer fees). Be sure to determine how you will package the value proposition.

Provide good customer support. Before any technology deployment takes place, an Eskaton information technology training team learns all it can about the system, teaches staff how to use the tool, and provides excellent customer service to individuals who need assistance after the launch.

Select partners who share your values and vision. Vendors must understand the organization's commitment to celebrate new ideas and build a culture of curiosity.

Network with colleagues in the field. Participate in CAST and other groups to learn best practices. Create a network of relationships that can support you while you pilot, evaluate and integrate technology-enabled services into your organization.

Educate your board of directors about opportunities to integrate technologies and explore new service lines. Don't stand still and do nothing. The world will pass you by!

Evangelical Homes of Michigan

Farmington, Michigan

Contributors: Denise Rabidoux, President and Chief Executive Officer

Steve Hopkins, Chief Operating Officer, LifeChoice Solutions®

The Organization

Since 1879, Evangelical Homes of Michigan (EHM) has been committed to creating lasting communities for older people living in Southeast Michigan. The organization's six campuses in Saline, Detroit and Sterling Heights offer affordable housing, independent living, skilled nursing, assisted living, rehabilitation services, adult day services and memory care. EHM also has three regional offices for its home-based services companies.

Evangelical Homes of Michigan experienced significant changes after making three strategic decisions based on extensive research with its current and future customers.

1. In 2006, EHM launched an organization-wide health and wellness initiative that uses the services of personal trainers, lifestyle coaches, nutritional counselors, massage therapists and other professionals to help EHM residents and individuals living in the wider community stay independent for a lifetime.

2. In 2008, EHM purchased two home care agencies. This strategic decision moved EHM into the community to provide services and supports.

3. In 2010, EHM launched LifeChoices® and LifeChoice Solutions®. These home-based solutions use technology and an array of innovative services to help consumers remain at home while focusing on their personal health, well-being and independence.

These three strategic decisions have transformed EHM from an organization serving 600 residents on its brick-and-mortar campuses, to an organization that serves 4,500 consumers. Forty percent of those consumers receive a wide variety of services and supports—ranging from Medicare-certified home health care to home maintenance and renovation—in the place they call home.

In late 2013, Evangelical Homes of Michigan launched a new affordable product, called Passport to Living Well, for older adults who live at home and need assistance. Clients often come to the program after realizing that the difficulties involved in carrying out minor home repair and maintenance tasks are causing them to consider leaving their homes. EHM's Passport to Living Well addresses this challenge by offering its customers a menu of services in exchange for a small monthly fee. Membership in the Passport to Living Well program costs as little as $50 per month or $600 per year.

Evangelical Homes of Michigan currently serves nearly 600 individuals through its new product lines. EHM's new emphasis on helping consumers stay healthy, no matter where they live, is supported by technology-enabled service programs.

LifeChoices®

LifeChoices® is EHM's continuing care at home program. It provides members who pay a one-time member fee and a monthly service fee with an inclusive package of services and supports designed to keep them independent for life, all in the comfort of their own home.

Every participant in the LifeChoices® program is assigned a lifestyle coach. The coach could be a social work case manager, dietician, personal trainer or other trained professional, such as a massage therapist. While lifestyle coaches represent a variety of disciplines, they share one important trait: an ability to focus on health and well-being, rather than clinical or nursing care.

Coaches get to know each customer well and follow that customer's lead in devising solutions that will help him or her remain healthy and independent. This may involve:

- Managing a home modification like a bathroom renovation.
- Hiring a handyman to take care of burdensome maintenance chores.
- Delivering daily meals or catering dinner parties.
- Introducing a variety of technology solutions that can keep track of vital signs, send an alert to caregivers when a problem arises, or allow a person with a hearing impairment to know when visitors arrive.

LifeChoices® customers also have access to LivWell Health™. The web-based platform helps older people stay in touch with care providers and their lifestyle coach while providing them with a variety of other tools aimed at reducing isolation and promoting health and well-being.

EHM lifestyle coaches use this connectivity tool to manage wellness surveys completed by members and receive updates and alerts that help identify members who desire attention. The lifestyle coach sends news and information about events that might interest members. Members can use the platform to arrange for services such as a personal trainer visit, a massage or housekeeping.

LifeChoice Solutions®

LifeChoice Solutions® provides an a la carte menu of support products that promote wellness, safety and independence. These products include wireless technology for fall detection, and two health and wellness platforms. Individuals access these a la carte services through LivWell Health™, a robust customer management product, or simply by calling EHM's service concierge. The program has adapted over 120 homes since 2010, allowing seniors to remain "safe at home."

Outcomes

Since 2010, LifeChoices® members have successfully remained in their homes and have used virtually no skilled health care services, other than periodic services after surgery.

Southeast Michigan has become very familiar with EHM's menu-based and membership products. The number of clients has tripled, primarily through word of mouth. Quite often, a prospective member will call EHM after a physician recommends one of its programs.

Business Case

An executive director and a team of lifestyle coaches now serve 350 customers in the LifeChoices® and LifeChoice Solutions® programs. An additional 25 members have joined the Passport to Living Well program. 300 clients now use the web-based LivWell Health platform. The remainder connects with EHM's concierge or life coaches through smart phone technology.

EHM staff members who work for other divisions understand that, in addition to working in the campus environment, they are also responsible for community-based work. For example, the EHM maintenance staff deploy technology devices in the homes of LifeChoice Solutions® customers. The organization's nutritional counselors serve as the program's registered dietitians. Its skilled health care clinicians conduct home visits with home-based clients.

The LifeChoices® one-time membership fee is based on the customer›s age and ranges from $35,000 to $50,000. Monthly fees average $400. EHM expects that the typical LifeChoices® member will participate in the program about nine years before requiring ongoing health care.

The sales cycle for LifeChoices® is about four-to-six months. Most prospects are people who have helped a family member navigate the current long-term care system and are looking for other options for themselves. The most successful sales strategy involves inviting 10-15 individuals to an educational meeting. Retirement education programs exploring LifeChoices® and LifeChoice Solutions® typically attract 25 prospects three times a month.

Interest in EHM's innovation story has spurred LeadingAge members to seek consulting services from Evangelical Homes of Michigan. Within a recent 18-month period, EHM has helped eight other not-for-profit organizations either launch an "at home" program or discern strategies to move their services outside the campus walls.

Challenges

Delivering on promises: When an organization decides to put the customer in the driver's seat, it must take deliberate steps to deliver on its promises. This can be challenging for organizations that are used to setting the care agenda. It requires that the organization devote time and energy to understanding the customer, creating programs that the customer has requested, and establishing the right process to make sure that each program works well. Employee culture transformation has been key to EHM's success.

Keys to Success

Staff buy-in: EHM team members like having the opportunity to deliver services in a variety of settings and have embraced the organization's mission to offer consumers customized solutions that can help them stay at home. Staff members hear consistent messages from EHM's management about the importance of designing services and supports with future consumers in mind.

Staff ambassadors: Staff buy-in on technology solutions is facilitated by an EHM commitment to launch every new technology in the homes of employees and their family members. Technology partners must agree to provide free equipment that can be tested by EHM staff. Employees are considered to be an important referral base for EHM's array of home-based services, whether they are talking about technology with customers in the organization's rehabilitation unit or with friends at the grocery store.

Advice for Others

Don't turn into a technology vendor. While EHM had to make some capital expenditures to launch its home-based programs, it did not spend a great deal of money building up a large inventory of technology products. There are two reasons for this:

1. Technology products can generally be ordered and delivered quickly—in many cases, overnight.
2. The organization wanted to be a "solutions provider," not a technology vendor. EHM maintains that since every customer is different, every customer will require a different, customized solution, rather than a device that the organization is looking to move off the shelf.

Don't be afraid to work with technology and service industry partners to create the "next big thing." Evangelical Homes of Michigan is working with a company that has created an iPad solution that brings the right employee (via a cell phone prompt) to the bedside of individuals in EHM's rehabilitation center. This "directed call response technology" allows staff to respond appropriately to a client's need. EHM's beta-test of this technology will involve both clients and team members so the organization can evaluate customer satisfaction.

Jewish Home Lifecare

New York, New York

Contributors: Bridget Gallagher, Senior Vice President, Community Services

Regina Melly, Senior Vice President of Business Development

The Organization

Jewish Home Lifecare (JHL) provides health care services and assistance for older adults and those who care for them. Those services are available on campuses in the Bronx, Manhattan and Westchester County, NY, and in homes throughout the New York metropolitan area.

JHL operates three large nursing homes featuring both long-term and sub-acute beds, three Section 202 housing communities, one independent housing community, and a Medicaid assisted living program. The organization's Community Service Division is comprised of a certified home health agency, a licensed home care agency, and three medical and social day centers.

JHL provides care management services to long-term care members of a managed care company. A part-time registered nurse from JHL works with tenants of four naturally occurring retirement communities to provide health education and screening, arrange for outside speakers to discuss a variety of health topics, organize health fairs, and provide referrals.

Jewish Home Lifecare uses technology in all of its service lines and in all components of its Community Service Division, as well as on the post-acute floors of its skilled nursing settings. The organization has implemented an electronic health records (EHR) system for its home care clients. Home care clients also have access to automated medication dispensers.

JHL has implemented three telehealth programs: HealthMonitor, Panasonic Home Gateway and eCaring.

HealthMonitor

At least three days a week, clients of Jewish Home Lifecare's Community Service Division use a tabletop telehealth device called HealthMonitor to collect and send their vital signs to a telehealth nurse at the organization's Manhattan headquarters. The device also conducts a daily dialogue with clients by posing questions about the client's general health status and the client's particular health concerns, such as congestive heart failure (CHF) or diabetes.

A full-time telehealth nurse monitors both the vital sign data and the answers to dialogue questions. When data and client feedback indicate that the individual has a health concern requiring action, the nurse sends an alert to the client's home care clinician, who follows up to resolve the health issue before a hospitalization becomes necessary.

Clients who attend JHL's medical day center programs use a kiosk to participate in the HealthMonitor program. Kiosks are also installed in senior centers and senior living buildings. When users swipe their individual identification cards at the kiosk, the device greets them by name, asks them a set of questions, and measures vital signs that are relevant to their health conditions.

Outcomes: During pilot testing, Jewish Home Lifecare's telehealth program was shown to have reduced hospitalization rates among home care clients with CHF from 16 percent to five percent. The organization was able to maintain these low rehospitalization rates when the deployment of telehealth units became a standard practice for all home care clients with CHF.

The HealthMonitor program is helping nurses reach out to clients more effectively. Home health visits are much more interactive and focused because home care nurses already have information about a client's concerns and need for health information.

Finally, the telehealth program has given Jewish Home Lifecare an edge in the local market because the program fulfills the desire of clients for peace of mind and a real-time connection with the organization and its clinicians. In addition, agencies that partner with JHL are looking for tools to prevent hospitalizations through increased communication and data about the health issues of their clients/members.

Business case: Jewish Home Lifecare began to pilot test the HealthMonitor service in 2002 with help from two outside grants. Clinical outcomes from both pilots spurred JHL to equip the homes of all home care clients with HealthMonitor devices.

JHL also installed telehealth kiosks in its sub-acute units as a way to help patients learn how to control their conditions and avoid a readmission. When CHF patients are discharged from the sub-acute unit to their own homes, JHL is hoping they will take private-pay telehealth units with them and continue to actively manage their conditions. JHL believes that the presence of these kiosks gives its sub-acute units a competitive edge in the marketplace.

Jewish Home Lifecare is actively working to position itself as a partner that can help local hospitals reduce their rehospitalization rates through telehealth. At the end of a 2011 pilot with 75 CHF patients who had been discharged from the New York University (NYU) Medical Center, the rehospitalization rate for pilot participants was 17 percent, compared with a 24-percent rehospitalization rate for all NYU CHF patients. JHL is working with NYU to establish this program for all of the medical center's at-risk CHF discharges.

Panasonic Home Gateway

Jewish Home Lifecare is working with Panasonic to develop a telehealth program that uses household televisions to communicate with clients. The technology is being implemented with members of Healthfirst, a not-for-profit health plan serving more than one million members in downstate New York.

A secure electronic device, called "Panasonic Home Gateway," attaches to clients' television, cable and Internet services. A friendly reminder on the television prompts members to take their vital signs. After vital signs are transmitted via Bluetooth to the Gateway, the television displays health survey questions tailored to members' health conditions. Members use a special remote to answer the questions.

Vital signs and health survey responses are sent to a secure website. There, the JHL telehealth nurse reviews and triages the data and conducts follow-up if necessary. If a member requires additional clinical interventions, the telehealth nurse calls the member's Healthfirst care manager to discuss options. A variety of educational videos are also available on the Gateway through a "video on demand" feature.

Panasonic provided funding for a pilot to test its gateway system in late 2013. Thirty-seven older clients, who had a primary diagnosis of CHF, were chosen for the pilot based on their risk for hospitalization. Participants were either members of Healthfirst Managed Care Plans or clients of Jewish Home Lifecare.

Outcomes: Decreased hospitalizations and increased compliance with medication regimens were the primary benefits of the Panasonic Home Gateway. Overall, the client group had an average hospitalization rate of 9.6 percent during a five-month period. Medication adherence was above 95 percent throughout the pilot.

Hospitalization rates among a smaller sample of Healthfirst members decreased from 18.1 percent before the devices were deployed in 2013 to 10.2 percent in 2014 while clients were using the device. Similarly, emergency room rates decreased from 9.7 percent to 5.5 percent for this smaller group.

Business case: The Panasonic Home Gateway increases receptivity to telehealth for those who may not be comfortable or able to afford a computer. This key benefit suggests that deployment of the Home Gateway could be expanded to include lower income or older populations. This telehealth solution is also attractive to managed care or other third-party payers because it increases monitoring of what is taking place in the home.

eCaring

Jewish Home Lifecare has partnered with eCaring to deploy a technology solution designed to help JHL home health aides use telehealth to document clinical, behavioral and medications adherence data for their clients in real-time.

Each client in the program is provided with an iPad that is equipped with the eCaring software. By clicking on simple icons, a home health aide can document the care provided to the client and report adverse events, record important updates like a change in condition or medications, and can add narrative notes.

Outcomes: JHL has conducted two pilot-tests of the eCaring software with a total of 60 clients. Outcomes were positive. During one pilot, for example, the eCaring system sent 127 validated alerts for 28 clients during a two-month period. Most alerts involved a self-reported symptom (55%) or an out-of-range vital sign (31%). Telehealth nurses intervened by reinforcing health education (for 72% of alerts) or recommending a visit to a physician (20%) or a hospital (8%).

Business case: Technologies like eCaring are attractive to insurance companies like managed care or other third-party payers because they facilitate enhanced monitoring of what is taking place in a client's home but do not involve expensive visits by other clinicians unless a problem is reported.

eCaring also makes it possible for one telehealth nurse to effectively monitor multiple clients. JHL maintains a ratio of one telehealth nurse to 250 clients. That telehealth nurse verifies all of the information reported by home health aides and then sends care managers only information that requires follow-up. This allows JHL and its partners to deploy their resources in the most effective and efficient manner.

Challenges

Changes in funding of telehealth: New York State is currently transitioning dually eligible clients into managed long-term care. As a result, the state no longer is providing direct reimbursement of telehealth services. Instead, the managed long-term care program can authorize telehealth as part of the menu of service options provided to its members.

This has created the need for JHL to add the telehealth service to its contracts with managed care companies—a task that requires negotiations over costs and education about the benefits of telehealth. These efforts have been met with some resistance. However, attitudes are expected to change as telehealth's ability to prevent hospitalizations becomes more widely accepted.

A lackluster private-pay market: A lack of consumer awareness about telehealth is holding back the private-pay telehealth market for the HealthMonitor Program. JHL staff members spend considerable time educating clients before they purchase a telehealth subscription. However, once clients try the devices, they tend to continue using them for an extended period.

Staff resistance: While clients have been very receptive to JHL's HealthMonitor service, clinicians were initially resistant to the new technology. Generally these staff members questioned why their clients needed a machine to monitor their vital signs and well-being when they already had a clinician to perform these tasks.

Faced with this pushback, Jewish Home Lifecare conducted an extensive campaign to educate clinicians about how the telehealth initiative would help them better serve their clients. The organization has used this same type of education—as well as bonuses—to encourage home health aides to use the eCaring program.

Keys to Success

Telehealth experience and data: Jewish Home Lifecare's 12 years of experience with telehealth is helping it convince hospitals to participate in the HealthMonitor Service. Hard data associated with the organization's telehealth programs, including its success in reducing rehospitalization rates, give JHL instant credibility with potential hospital partners. Such data have also helped the organization convince its own clinicians that telehealth provides tangible benefits to their clients.

Support from organizational leaders: Key staff and board members immediately saw the potential of the telehealth technology, were supportive of its deployment, and helped the organization acquire financial support for the initiative.

Easy-to-use technology: JHL's Panasonic Home Gateway deployment allows clients who are not comfortable with computers to participate in telehealth by using the nonthreatening and familiar television. By the same token, even users whose primary language is not English can easily understand eCaring's simple icon-based system. As a result, learning the system requires only one training session.

Open lines of communication: eCaring significantly enhances communication between JHL's home health aides and office-based staff. Aides feel empowered when the telehealth nurse responds promptly to a communication. These responses can be sent by email or text, giving nurses the ability to communicate even when they are not at a computer.

Advice for Others

Narrow your focus and conduct a pilot. When deploying a telehealth unit for the first time, target your program to a specific patient population and identify a specific outcome you want to achieve. Then, conduct a pilot program with at least 25 clients for at least six months. This makes it easier to coordinate interventions to ensure compliance. Expand the program only if you have outcomes data to support your investment. Pilots can also help you test out vendors and equipment to see if they are a good fit for the organization.

Don't buy a fancier telehealth unit than you need. Most JHL home care clients lack high-speed Internet access and must transmit their telehealth data using a telephone line. For this reason, the organization chose a non-video telehealth unit for its HealthMonitor program. This device is more compatible with telephone-line transmission.

Don't ask too much of clients. Initially, Jewish Home Lifecare asked its home care clients to use the HealthMonitor service seven days a week. Clients pushed back against this requirement because they found it onerous. Now the organization asks clients to use its telehealth service at least three times a week.

Partner with a vendor to test its product. Working with a vendor to implement a new type of technology can be beneficial because it allows the organization to suggest how the technology can be improved.

Lutheran Homes of South Carolina

Irmo, South Carolina

Contributors: Thomas E. Brown, Jr., President and Chief Executive Officer

Mike Witte, Director of Information Systems

Jeff Bolivar, Director of Information Systems

The Organization

Lutheran Homes of South Carolina (LHSC) provides independent living, assisted living, skilled nursing care, memory support and hospice care in five continuing care retirement communities (CCRC) that employ 1,100 staff members.

LHSC has earned a reputation for taking innovative steps to improve the quality of care in its communities. In 2004, the organization used funds from the Duke Endowment to adapt the Wellspring Model to its nursing homes. Through that model, interdisciplinary staff teams create and implement interventions to improve the quality of care for nursing home residents. Another LHSC initiative, called BeWell Home Services, provides a host of non-medical services to older people living in their own homes.

Technology initiatives at Lutheran Homes of South Carolina are grounded in the organization's desire to make care delivery more efficient.

Electronic Health Records

LHSC has already implemented Keane's Minimum Data Set (MDS) software because it was compatible with its billing software. The organization will soon roll out a full electronic health record (EHR) from HealthMEDX for its skilled nursing, assisted living, independent and hospice settings. Existing technology systems will also transition to the HealthMEDX software to ensure interoperability across all LHSC settings and systems.

LHSC is already developing plans for educating staff about the EHR system, which is expected to impact more employees than any other LHSC technology deployment. In preparation for this implementation, the organization has added Wi-Fi coverage to all of its skilled and assisted living buildings.

Other Existing Software Systems

LHSC currently uses several software programs to enhance resident wellness, conduct its marketing program, support clinical and administrative functions, measure performance, gather and store resident data, manage volunteers, and amortize entrance fees. These include:

- **Vitals,** a suite of health and wellness assessments that LHSC uses to help residents in its assisted living and active life communities develop and follow a wellness plan.
- **REPS,** a software solution for lead management, marketing, inquiry and referral source tracking.
- Cerner HomeWorks and RoadNotes, which support clinical, billing, financial and administrative functions in the LHSC hospice program.

- **MyInnerView,** a web-based, data-entry program that LHSC uses for staff and resident satisfaction surveys and to report quality indicators, including falls, for skilled nursing and assisted living residents.
- **CareTracker,** which helps caregivers in LHSC's skilled nursing settings perform required resident documentation on touch-screen devices placed in strategic locations. CareTracker analysis tools scan that information for changes in resident conditions and send alerts when the conditions change beyond certain thresholds. The software also uses INTERACT to track and flag diagnoses that most frequently result in hospital readmissions.
- **Volgistics,** which helps LHSC staff members recruit, track and coordinate volunteers. This web-based solution replaced an older, in-house volunteer tracking software.
- **AVPowell Forcast7,** a tracking system that helps LHSC amortize its entrance fees. This software, with its frequent updates of life expectancy tables, has helped improve the accuracy of these calculations.

Pharmacy EMAR

LHSC selected two separate pharmacy-provided electronic medication administration record (EMAR) solutions—one for its skilled nursing settings and one for its assisted living communities.

LHSC decided to adopt the EMAR solutions when it renewed pharmacy contracts for its nursing and assisted living settings. The pharmacy EMAR does not provide a full EHR solution. But it is helping LHSC begin to build a paperless communication system between the pharmacy and each of its care settings.

LHSC's pharmacy provided the EMAR software, but LHSC was responsible for supplying laptops for staff and Wi-Fi coverage throughout the buildings in which med-carts are deployed. The laptops and the wireless technology were included in the capital budget of the Information Technology Department.

Outcomes: In its current form, the EMAR solution is not entirely paperless. While communication between the pharmacy and LHSC care settings has been improved, the need for faxing has not been completely eliminated. This situation should improve as more doctors begin using the same pharmacy system.

LHSC plans to transition to a new EMAR solution from HealthMEDX once interoperability issues between LHSC's software and the pharmacy's software are resolved.

Business case: By reducing its reliance on paper and faxing, Lutheran Homes of South Carolina has reduced the risk of medication errors, which, in turn, reduces its liability.

In addition, one director of nursing reported that the new EMAR system has saved one hour of staff time per nursing shift. As a result, staff members have more time to carry out other activities. In theory, the system should eventually reduce overtime.

QuietCare

Lutheran Homes of South Carolina decided to implement the QuietCare monitoring system in the assisted living and memory care rooms of one community. QuietCare provides non-invasive monitoring of residents and allows staff to develop a baseline of healthy behavior by detecting activity patterns. When the monitoring shows that a resident has deviated from that baseline, a staff member takes a closer look and determines if any preventative action needs to be taken. The system also monitors environmental factors like room temperature.

LHSC's current QuietCare model uses analog phone lines in resident rooms to connect with an onsite server.

The server then uploads the monitoring data to a web server in two-hour intervals. LHSC will soon switch to a new QuietCare model that uses wireless technology.

Outcomes: QuietCare's ability to detect irregularities in the activity patterns of residents allows staff to intervene before an issue becomes serious. For example, when the system detected that a resident was getting up to go to the bathroom every hour, the staff notified the resident's physician, who checked the resident for a urinary tract infection. When the monitor detected one resident's abnormal sleep patterns, staff alerted the physician and a sleep aid was prescribed.

Business case: The QuietCare project was financed through rate increases for rooms that are equipped with the technology. LHSC justified the rate increase by demonstrating the enhanced level of care that the organization was able to provide with help from the monitoring technology.

Challenges

Setting priorities: Although LHSC occasionally receives grants to fund its technology projects, most technology initiatives are funded through the organization's capital budget. This means that LHSC must weigh each technology purchase against other organizational priorities. During some fiscal years, for example, a new software program may compete against a new roof for a place in the budget. LHSC's top-level managers are strong technology supporters, but the organization's technology expansion is often limited by insufficient funds.

Lack of interoperability: LHSC utilizes a wide variety of care-tracking software that is designed for specific care sectors like hospice or assisted living. The organization has been challenged by the fact that these software programs are not always interoperable. LHSC's decision to implement HealthMEDX as its EHR solution was based, in part, on its interest in achieving interoperability. Incorporating different business lines in one piece of software reduces the number of systems utilized, as well as the extra work it takes for staff in different care sectors to communicate.

Finding—and keeping—champions: LHSC always tries to identify staff members to serve as champions for particular technology initiatives. Identifying this champion can present challenges during the start-up phase of a technology initiative. But the bigger challenge often comes when over-dependence on one champion puts a technology initiative in jeopardy if that champion leaves the organization.

Wireless coverage: The EMAR project required installing robust wireless equipment and running additional network cabling to extend wireless coverage to all areas of LHSC buildings. Concerns about after-hour Internet outages led LHSC to develop a backup solution using an alternate Internet service provider.

Keys to Success

Up-front staff involvement: Clinical staff members play an important role in technology-related decision making at Lutheran Homes of South Carolina. For example, members of LHSC's IT staff rely heavily on the organization's clinical staff to keep them informed about new technology in the aging services field and to bring news about that technology back to the organization. The IT staff ensures that the organization has the infrastructure necessary to host the initiatives that clinical staffers identify as valuable. In addition, clinical staff members are heavily involved in evaluating particular products and checking references of potential vendors.

Proper training: Proper training has been an important element of LHSC's efforts to ensure that staff members embrace the EMAR software and the QuietCare system. Staff members need to see the benefits of the systems, how those systems can make their jobs easier, and how those systems can improve resident care.

Advice for Others

Gain support from senior management. Staff members often are resistant to change in workflow and processes. Senior management's involvement and leadership are often necessary to overcome these objections.

Provide good customer service. The IT department at Lutheran Homes of South Carolina conducts periodic surveys to gauge how satisfied LHSC employees are with its services. The department believes that good customer service can make all the difference between success and failure of technology deployments.

Join networks. It's important that an organization's staff members associate with outside peers who share their interest in technology. LHSC's IT staff members belong to technology associations, including LeadingAge CAST and the Lutheran Information Technology Network, which provide them with valuable education and networking opportunities. LHSC also participates in Health South Carolina, the planning group for the state's health information exchange.

Be willing to make do. LHSC has invested considerable time and money in choosing data systems that track the care it provides. Sometimes, however, the organization has an immediate data need that can't be addressed by existing systems. In these cases, LHSC has learned to settle for imperfect solutions in the interest of accountability. For example, LHSC recently created a stand-alone database to track readmission rates for clients discharged from its post-acute beds. The database isn't perfect; updating it requires double entry. But LHSC's leaders believe that the ability to report readmission rates to local hospitals is well worth any extra work involved in maintaining the database.

Hire employees who are comfortable with technology. That way you're likely to get the most out of every component of your technology systems.

Hold employees accountable for technology implementation. Once an organization decides to move ahead with a technology-enabled service, staff members must understand that they will be held accountable for implementing that new initiative.

Mather LifeWays

Evanston, Illinois

Contributors: Linda Hollinger-Smith, Ph.D., R.N., F.A.A.N., Vice President, Mather LifeWays Institute on Aging

Perry Edelman, Ph.D., Director of Wellness Research, Mather LifeWays Institute on Aging

Tony Ma, M.S., Owner, Benten Technologies

The Organization

Founded in 1941 by entrepreneur and humanitarian Alonzo Mather, Mather LifeWays is dedicated to:

- Providing a continuum of living and care.
- Making neighborhoods better places for older adults to live.
- Identifying, implementing and sharing progressive practices for wellness, workforce issues, memory care support and caregiver empowerment.

Mather LifeWays operates three continuing care retirement communities (CCRC): the Mather in Evanston, IL, Splendido in Tucson, AZ, and Mather Place of Wilmette in Wilmette, IL. The organization also provides skilled nursing care at Mather Pavilion in Evanston, IL.

Mather LifeWays' Community Initiatives programs, including the successful Mather's More Than a Café model, allow the organization to act as a point-of-contact for older adults who seek access to community resources.

Mather Institute on Aging plays a leading role in enhancing the lives of older adults in today's society through numerous collaborative, applied research and education projects targeting healthy aging, workforce development, caregiver support and senior living trends.

Observing Quality of Life in Dementia

The Mather LifeWays Institute on Aging has been working for seven years on a multi-phase project to assess the quality of life of people with dementia. During the course of that project, researchers developed a measure, called "Observing Quality of Life in Dementia," or OQOLD, which enables professional caregivers to assess the quality of life of persons with dementia based on their observations during a variety of activities. Using Mather LifeWays resources, as well as a grant from the Alzheimer's Association, the research team tested the reliability, validity, usability and usefulness of the OQOLD tool at 18 sites in the Chicago area.

To use the OQOLD scale, staff members who facilitate activities in a particular care setting record OQOLD scores as well as other information[1] after observing individuals during an activity. Quality-of-life scores are based on the person's level of engagement and/or emotional response during the activity. To assess emotional response, staff members who know the individual may rely on facial expressions, changes in body language or other pleasure/displeasure cues that are unique to that person.

1 This information includes the number of participants, staff members, visitors, or pets participating in the activity; the type of activity; and the primary and secondary impact of the activity in terms of six dimensions of wellness.

Initially, staff members were asked to immediately record each participant's OQOLD scores on a laptop or desktop computer. This process soon proved unworkable since most staff members were not free to leave an activity area to work on a computer in another room. In most cases, staff members wrote the OQOLD scores on a form and then later transferred the scores to a computer.

Mather LifeWays researchers were dissatisfied with the paper-to-computer process because it disrupted workflows and required too much time and effort. As an alternative, they began exploring a technology-based recording system that they hoped would improve staff participation in and attitudes toward the project.

With funding from the National Institute on Aging, the Mather LifeWays Institute on Aging worked with Virginia-based Benten Technologies to develop software that would enable staff to enter OQOLD scores on a hand-held device. After experimenting with several devices, the team chose the iPod Touch.

Benten Technologies designed an iPod Touch application that enables staff members to enter data by selecting from a series of menus with drop-down responses. Staff can use a text feature to record comments or note special situations. Data are transferred wirelessly from the iPod Touch to a website where the scores are organized into a variety of reports that staff can download and use to maximize both the quality of care and quality of life.

Outcomes: Using the OQOLD measure, staff members in various settings have been able to identify the impact that specific activities have on individuals with dementia. This enables staff to match individuals with activities that yield high quality-of-life scores for them, test out the effectiveness of new activities, and match participants with new activities as their dementia symptoms change over time.

The technology-enabled OQOLD measure provides organizations with a mechanism to keep families informed, through hard data rather than verbal opinions, about the engagement level of their relatives. Family members who have difficulty communicating with a relative with dementia are reassured when staff members can share data illustrating that the relative has participated in activities tailored to their personal interests, and is earning high quality-of-life scores during their preferred activities.

The OQOLD measure also enables program managers to better match the skills of staff members to the requirements of specific activities, resulting in the greatest benefits for people with dementia. In addition, the tool helps to focus the attention of staff members on the impact that they can have on an individual's quality of life. Finally, relying on frontline staff members to complete the OQOLD scale—and equipping them with the technology they need to do this job well—sends a strong message that the organization values the knowledge and observational skills of its caregivers.

Business case: Benten Technologies and Mather LifeWays view the iPod Touch and its accompanying website as a platform that can be expanded to include other data collection capabilities. Staff can now use the iPod Touch software to access information about a resident's medications and allergy histories, as well as the telephone numbers of family members. Benten has added additional applications to the iPod Touch platform, including software that facilitates staff scheduling and tracks falls among nursing home residents.

Benten Technologies and Mather LifeWays are finalizing plans to offer a mobile OQOLD service that will be available on devices like the iPod, iPhone or Android smartphone.

Boost Your Brain

A team of aging services staff, researchers and neuropsychologists began developing the Boost Your Brain and Memory program in 2012. The program, funded by a bequest from former Mather LifeWays resident Spencer Powell, is designed to help senior living residents learn about:

- Lifestyle behaviors and activities that can reduce the risk of dementia and promote cognitive health.
- Practical strategies that can help them improve their everyday memory.

The program takes a whole-person wellness approach to improving brain health, is evidence-based, and utilizes technology to translate cutting-edge research into useful strategies that residents can incorporate into their lives.

Boost Your Brain and Memory program is an eight-week instructor-led course. Each week, participants attend one 60-minute class featuring a series of brief video segments that present current evidence relating to a dimension of wellness and its impact on long-term brain health.

The benefits of the video-focused format were confirmed during two pilot studies conducted in 2012 and 2013 with community-dwelling individuals and CCRC residents. The studies produced positive findings about "brain-healthy" behavior change; identified the need for replicable, easy-to-implement programs that did not require a large investment of time; and acknowledged the desire of staff members to maintain a personal connection with residents rather than relying entirely on technology.

The Boost Your Brain and Memory program is designed to be implemented by an instructor who is equipped with an instructor's guide, the video-based content, and participant workbooks featuring suggested discussion questions and activities.

Outcomes: The 2013 study of CCRC residents assessed self-reported behavior change in three areas: physical activity, intellectual activity and stress reduction. The intervention group, which took the eight-week course, reported greater behavior change than the control group on all items. These results were statistically significant on all behavior changes except stress reduction. Specifically, program participants reported:

- Adoption of new brain-related healthy behaviors.
- Increased intellectual activity.
- Participation in at least one activity that lowers the risk of Alzheimer's disease.
- Increased intensity, frequency, amount and time spent on physical activity.
- Additional steps to reduce stress.

Participants who completed the course were significantly more optimistic about maintaining their memory as compared to the control group. They also reported significantly greater confidence in their ability to remember everyday things like where they left their keys or parked their cars.

Business case: Nearly one-half of adults age 85 and older have dementia. This fact alone ensures that brain health will be a continuing concern for older adults and the staff who serve them. There is an increasing number of online and in-person products targeting older adults. However, evidence for their efficacy varies widely.

An important strength of the Boost Your Brain and Memory Program is that it uses technology to translate existing evidence-based programs that older adults can use. In addition, the model combines expert-developed content with the advantages of in-person instruction in a way that is easily replicable.

Challenges

Inadequate technology infrastructure: In order for the OQOLD iPod Touch system to work, wireless Internet access must be available in the areas where observations are being made. Providing this access on multiple floors or in multiple rooms was difficult in some settings. Benten staff worked with information technology staff to resolve these issues.

Staff comfort with technology: Initially, some staff members at the QQOLD research sites were hesitant about the technology-enabled measure because they had never used an iPod Touch or a smartphone. However, the simplicity of the interface helped staff overcome this discomfort. Mather LifeWays researchers worked with staff at Benten Technologies to develop the most user-friendly interface possible.

Staff comfort with challenging content: Prior to development of the Boost Your Brain and Memory program videos, staff members at the initial research sites experienced a steep learning curve, and were unsure of their ability to deliver the content effectively. This concern was greatly reduced when the videos were developed to deliver the challenging content.

Achieving behavior change: Individuals face numerous obstacles and challenges when they attempt to transform behavior changes into lasting healthy lifestyle habits. To address the challenges inherent in this process, Mather LifeWays revised its materials to include discussion of obstacles, slips and procrastination.

MorseLife

West Palm Beach, Florida

Contributors: Keith Myers, President and Chief Executive Officer

Alan Sadowsky, Ph.D., Senior Vice President of Community-based Services

The Organization

More than 31 years ago, the founders of MorseLife set out to provide comprehensive care and services—in the spirit of Jewish traditions and values—to older adults facing the challenges of aging. This promise remains the cornerstone of MorseLife's ongoing mission to enhance and honor senior living.

MorseLife is a non-sectarian, charitable organization that cares for older adults in various settings, including long-term care, short-term rehabilitation, independent and assisted living, and through home and community-based services (HCBS) that enable older adults to age in place. The organization also conducts research designed to develop best practices in the care of current and future older adults.

The programs conducted on MorseLife's 37-acre campus serve between 2,200 and 2,400 individuals on any given day. MorseLife has more than 1,500 employees.

Three-Part Technology Solution

MorseLife opened a new short-term rehabilitation center in 2014. From inception, the center featured a three-part technology solution that includes:

- Electronic medical records (EMR) from Cognify.
- A Medicare Part D coordination of benefits solution from Care Kinesis.
- Back-office regulatory and claims adjudication support from Pak PACE.

The three-part software solution integrates the many moving parts of the Program of All-Inclusive Care for the Elderly (PACE) so MorseLife can keep excellent track of the enrollees and their services.

Electronic Information Centers

MorseLife has expanded its Electronic Information Network since it was first implemented in 2011. The network consists of large, flat-screen televisions called Electronic Information Centers (EIC) that are positioned throughout the campus to provide tailored updates on campus events and current events. For example, one television near the employee lounge focuses on employment issues. The EIC located at the Tradition of Palm Beaches, a 144-unit independent and assisted living residence, highlights events and residents who reside in the Tradition community.

During the past two years, MorseLife has added EICs to strategic areas of its campus to help educate the community about the organization's programs.

Salesforce

MorseLife has invested in a relational database system called Salesforce to monitor all sales leads and give the organization a competitive edge in this era of increasing competition for long-term, short-term, assisted living and community-based services.

The Salesforce system promotes increased communication with and tracking of marketing staff members. Improved tracking has increased the accountability of staff and improved their efficiency. Field staff can now devote more time to market calls while remaining in real-time contact with management.

Integrating Technology into Every Facet of the Organization

MorseLife has more than 300 computer users. It has assigned mobile smart phones to 100 staff members. It has deployed more than 50 laptops and iPads. All of this technology requires that the organization have a robust information technology (IT) department that can be on call 24 hours a day to support the expanding technology needs of staff.

Each year, the IT department carefully reviews capital budget requests from department managers throughout the MorseLife organization. This review is designed to ensure that technology needs and requirements are considered in the planning of all new capital expansions.

MorseLife's commitment to strengthening the technology expertise of staff extends to the Human Resources Department. The organization's hiring process emphasizes technological proficiency, based on management's understanding that an organization has the best chance to stay competitive if its staff members have strong computer and technical skills.

Challenges

There have been few challenges associated with the adoption of new technology at MorseLife. The organization has an excellent history of inclusion among managers and the executive team. This process ensures minimal resistance, especially when adoption is accompanied by a detailed implementation timeline featuring training, orientation and careful monitoring.

Advice for Others

Embrace change. The culture at MorseLife is to embrace change. Its advice to other organizations is simple: Do not wait to see what others are doing. Embrace technological solutions now!

Presbyterian SeniorCare

Verona, Pennsylvania

Contributor: Ransom Towsley, Senior Director for Community-based Services and Executive Director of Presbyterian SeniorCare at Home

The Organization

Founded in 1928, Presbyterian SeniorCare (PSC) is the largest provider of care and services to older adults in southwestern Pennsylvania. The organization operates three continuing care retirement communities (CCRC), 406 personal care beds, 795 skilled nursing beds, and 1,595 supportive housing units in over 30 locations. PSC also provides outpatient rehabilitation services, adult day services, and is a partner in a PACE program. PSC has gained renown with a couple of "firsts." Woodside Place is one of the first personal care/assisted living facility in the US to specialize in dementia care. PSC also operates Longwood at Home, western Pennsylvania's first "CCRC with Walls." Most recently PSC has moved into home and community based services, adding a dually licensed home health and home care agency to its service lines.

Background on Silent Alert Beta Test

In 2012, Presbyterian SeniorCare invited administrators of its personal care homes (PCH) to join a peer group focused on process improvement. In the course of its work, the group reviewed data showing that all of the organization's PCHs had very similar fall rates except Woodside Place, a PCH serving individuals with mid- to late-stage dementia.

The fall rate at Woodside Place remained significantly higher than the fall rate for the organization's other PCHs. Interventions that had worked at the other locations did not work at Woodside Place because of its cognitively impaired population.

To rectify the situation, Presbyterian SeniorCare partnered with a local entrepreneur looking to enter the home-based monitoring space and beta tested a monitoring solution called SilentAlert at Woodside Place.

SilentAlert is not a fall-prevention device, but rather a passive activity monitoring system. It provides almost real-time monitoring of residents' nighttime activity. The system's cloud-based software helped increase the care team's awareness of residents' unplanned out-of-bed events. It also facilitated a timely and appropriate response to those events.

The administration at Woodside Place expected staff to be reluctant to embrace a new technology and there were some initial challenges as bugs were worked out of the system. This was an iterative process involving directly asking staff for their input and advice on how to best address a problem or issue. This staff involvement went a long way toward gaining staff acceptance as they could more clearly see how the new technology would make their work easier.

The response was overwhelmingly positive within just a few weeks. The community's overnight team expressed a high level of confidence in SilentAlert. Team members referred to the system as their "extra set of eyes."

Outcomes

Nighttime falls declined by 42 percent after the SilentAlert system was installed. Woodside Place's fall rate continues to stay below the level that Presbyterian SeniorCare has tracked for the past few years.

- Use of SilentAlert has helped staff manage and reduce injuries among more fragile residents. This means that residents can remain in a less intensive and lower cost care environment and are able to avoid transfers to a skilled nursing community.

The activity logs provided by SilentAlert, combined with team reports, help staff identify changes in a resident's medical condition, and help the community's administration hold the care team accountable.

Challenges

When the peer group of PCH administrators first began their work, group members identified a number of problems and barriers associated with home-based systems:

- Current home-based passive monitoring systems are focused on the individual resident. Each unit is a stand-alone device with an associated monthly monitoring fee. Economies of scale are not factored into monthly expenses as the number of units rises.
- Monitoring units rely on landline, Wi-Fi or cellular connections. Connection quality becomes an issue in communities that do not have campus-wide Wi-Fi access or that have cellular dead zones in certain parts of the campus.
- The time it takes for a care aide to receive an alert, although only 10-15 seconds, is too long.

These barriers were identified during the pilot phase of the SilentAlert system:

- Some residents did not weigh enough to trigger the bed alert.
- Staff was spending too much time on paperwork related to falls.
- Information about a fall could be tracked better.
- The process of recording and accessing information needed to be untethered from a desktop computer.
- Staff was unfamiliar with and hesitant to use monitoring technology.

Keys to Success

- Use an iterative and incremental process of improvement to achieve the best technology integration possible.
- Involve staff members who perform the jobs affected by the technology integration during the process improvement phase.
- Remain aware of the bigger picture. The process that is being improved interacts with and affects other pieces of the total workflow. New and unexpected uses for technology can be found this way.

Advice to Others

Be open to partnerships with organizations and people who are outside of the usual relationships. As non-profits, it is ok to venture into the for-profit world and cross pollinate. Also learn to move quickly- another trait nonprofits are not known for.

Future Directions:

The knowledge acquired in integrating technology in a dementia specialized personal care home will be translated to Presbyterian SeniorCare at Home- PSC's newest service line with a dually licensed Home Health and Home Care agency offering in home care givers, care management, tech-enabled care, dementia care, and all skilled services.

Providence Life Services

Tinley Park, Illinois

Contributor: Carl Goodfriend, Chief Information Officer of Providence Life Services and ProviNET

The Organization

Providence Life Services (PLS) operates retirement and assisted living communities, skilled nursing and rehabilitation services, respite and memory care on 13 campuses in Michigan and Illinois. In addition, the organization's home and community-based services program, called Providence At Home, offers a full spectrum of in-home services, including home health care, chronic disease management, private duty home care, palliative care and hospice care.

In 2001, Providence Life Services formed a technology division called ProviNET Solutions. Today ProviNET serves over 300 long-term care communities with a staff of 90 professionals. ProviNET's consulting services include strategic planning and assessments, software selection and support, technical support, general consulting and outsourcing. The division also provides advanced cloud-based hosting services, hardware sales, and a multi-tiered 24/7 call center. ProviNET Solutions is a wholly owned subsidiary of Providence Management and Development, a for-profit subsidiary of Providence Life Services.

Technology-Enabled Model or Service

Providence Life Services has focused its energy on launching an electronic medical record (EMR) system for its communities' nursing homes, assisted living and memory support communities, and its short-term stay and home and community-based services. This endeavor is nearing completion, which will allow the organization to shift its focus to telehealth and other technology-enabled service models.

Telehealth continues to be evaluated but, as with many providers, the implementation of these systems in a large-scale deployment is still on the horizon, and funding has not materialized. As accountable care organizations and other quality-based payment models expand, the adoption of these technologies will certainly accelerate as payment and incentives for the services they enable become available.

Implementation Approaches

Electronic health records: Providence Life Services has now completed about 90 percent of its EMR implementation project for its skilled and short-term stay communities. This project has taken three years to complete.

PLS adopted a phased approach to EMR implementation, which began with the basic components such as activities of daily living (ADL) capture, care plans, assessments and workflow rules. The second phase included implementing nurse's notes, physician order entry and the arduous task of automating a significant number of paper-based assessments. The final phase of the EMR implementation included deployment of a physician portal, advanced workflow rules and ePrescribing. The final phase will also include a health information exchanges (HIE) with acute-care providers and a bi-directional lab interface.

Since the kickoff of the EMR implementation in 2011, PLS has opened two new communities: a CCRC campus with the full continuum of care, and a community consisting of small houses and short-term rehabilitation. Both of these communities had PLS's EMR when they opened. All of the legwork for standardizing forms and processes was preformed when PLS was planning the EMR implementation for its existing communities. This made the "go-live" for the newest sites seamless, efficient and fast.

PLS is now in the process of implementing its EMR strategies within its assisted living communities by leveraging much of the work already done for the skilled nursing settings. PLS has also analyzed the specific assessments needed to meet the regulatory and operational needs of these communities.

Telehealth: Providence Life Services has had some success deploying some telehealth systems on its campuses. These systems feature social networking, monitoring and alerting components. In addition, the organization has deployed about 200 personal emergency response systems (PERS). PLS is actively evaluating the best way to incorporate these monitoring and alert systems into its home health and home and community-based services.

Outside Consulting: ProviNET Solutions focuses most of its attention on helping providers prepare for and execute a successful EMR implementation. Many providers know that they need an EMR, but are not prepared for the installation and don't know where to turn for help. ProviNET helps these providers create an infrastructure to support their EMR software, including wireless networks, high bandwidth, devices to document ADLs, and solutions to integrate disparate systems.

Implemented Technologies and Approach

PLS's technology vendors were a key components of the EMR implementation. For example, PLS implemented HealthMEDX Vision EMR software, Aruba wireless network for the infrastructure, and Pioneer POS systems on both fixed and CAPSA medical carts for point of care ADL capture. All applications are hosted and supported internally in a virtualized environment. Redundant connectivity to the communities is achieved by working with Internet service providers and/or microwave wireless providers.

PLS also implemented monitoring solutions that track all systems to assure that the end-users have continuous access to necessary systems. Lastly, PLS expanded information technology (IT) services to provide 24/7 support for the EMR.

Challenges

Staff communication and receptivity: Conflicts between IT and clinical staff is inevitable when an organization implements technology projects like an EMR. There is often a breakdown in communication between these two groups because neither understands the processes followed by the other.

To facilitate communication between clinical and IT staff during its EMR launch, PLS created an EMR committee that includes IT staff, nurses, certified nursing assistants, directors of nursing, and administrators. The committee meets regularly, in part to keep clinical staff members updated about the EMR implementation process so they can create excitement about the system among their peers. Also, as EMR adoption grows, IT departments need to work closely with nurses who understand technology as well as the clinical operations.

Lack of integration: Integrating different software packages so they work together has been one of the biggest challenges facing providers, including PLS. This challenge also applies to the integration of data from telehealth and life safety systems, point of service systems, communication systems, and other "separate"

systems that are not typically part of an EMR. However, software integration has generally become easier, more efficient and less costly with the adoption of HL-7 and other interoperability and connectivity standards that facilitate such integration.

Business Case

Providence Life Services relies on technology-enabled services to help make the organization more efficient. PLS benefits when processes can be streamlined to eliminate duplication of data entry. The organization recognizes that the existence of an EMR or other technology does not guarantee greater efficiency unless the organization uses the EMR implementation period to standardize, optimize and automate its processes to eliminate duplication of efforts.

Keys to Success

Revisiting all processes: The implementation of an EMR system gives an organization a golden opportunity to thoroughly examine its processes and the forms it uses to document the provision of services and supports. Staff members need to review every paper form the organization uses to make sure those forms are standardized for all campuses and divisions. In addition, forms that collect the same information should be consolidated to avoid duplication.

Infrastructure analysis: The launch of a major technology initiative represents a good opportunity for an organization to analyze its entire technology infrastructure, including servers, data lines, workstations, wireless infrastructure, redundancy and software applications. During this analysis, staff at all levels of the organization should be invited to offer their input on what they like and don't like about particular software and hardware products. In addition, IT staff should examine whether the organization has the infrastructure necessary to support the technology it wants to implement. It should also review the capabilities of the existing technical staff to support any new technologies being deployed.

Advice for Others

- **Plan and update the infrastructure.** Before starting down the pth of expanding your own EMR or implementing a new software application, consider all of the components that go into delivering an EMR solution. Communities should conduct an analysis of where they are now and where they want to be. Identify the current "environment," including the operational strategies and physical components that make up the IT infrastructure. Include a review of the devices that staff will utilize, how they will access these devices, and where and how the devices will be deployed. The actual EMR software is only ONE component of a successful implementation.
- **Understand the implementation strategy of your vendors.** Each of the leading EMR vendors has different implementation models. Make sure you understand your vendor's implementation strategy. Select a vendor that will be flexible enough to meet your specific needs. If any component of your infrastructure negatively affects end-users, it will have a negative effect on their experience and on the overall acceptance of the EMR plan. It's vital that the actual EMR software application be delivered to the users consistently and without interruption.

Selfhelp Community Services, Inc.

New York, New York

Contributors: Stuart Kaplan, Chief Executive Officer

David Dring, Executive Director, Selfhelp Innovations

The Organization

In 1936, a group of German émigrés joined forces to help European Jewish refugees fleeing from Nazi persecution establish themselves in America. The founders of Selfhelp Community Services believed that with basic support, new arrivals would be able to use their skills, experiences and strengths to build independent, dignified and productive lives. These themes of independence and empowerment have been a hallmark of Selfhelp for the past 79 years.

Today, Selfhelp is still dedicated to enabling older adults and members of other at-risk populations to live in their own homes, independently and with dignity. On average, the organization provides services to 20,000 vulnerable older New Yorkers each year.

Selfhelp manages nine housing complexes serving low- and moderate-income older adults, and five senior centers that provide programs to enrich the lives of older New Yorkers. In addition, the organization offers residents of four Naturally Occurring Retirement Communities extensive on-site care services.

Selfhelp also manages a Medicaid-supported licensed home care services agency and a Medicare-certified home health agency. The organization provides geriatric case management services through its Senior Source initiative.

In 2005, the Selfhelp board of trustees considered Selfhelp's positioning for the future. One result of that discussion was a board decision to include technology in Selfhelp's mission statement, which pledges the organization to "lead in applying new methods and technologies to address changing needs of its community."

Selfhelp has implemented this mission by incorporating technology into each of its initiatives and planning activities. Recent technology initiatives include remote activity monitoring, telehealth, computer learning and a Virtual Senior Center.

Monitoring Technology

Selfhelp's remote monitoring program has served more than 120 seniors since it began in 2005. At any given time, the organization has remote sensor monitoring systems deployed in the homes of 30 home care clients who have chronic conditions, a history of falling, or difficulty managing medications. A client typically learns about the monitoring systems from Selfhelp social workers, who are trained to explain the technology and how it can benefit clients.

Telehealth

Telehealth devices equipped with electronic blood pressure cuffs, glucose meters, medication reminders and weight scales are installed in clients' homes to keep track of their health status on a daily basis. Data is

transmitted by telephone lines to a registered nurse at Selfhelp. The nurse reviews the data on a daily basis and alerts home health clinicians when an intervention is necessary. Clients typically begin using the telehealth service after an assessment by nurses in Selfhelp's home health agency.

Computer Learning Centers

Each Selfhelp senior center features a computer learning center where older people can use technology to socialize with peers, communicate with family members, or develop new skills that can help them find volunteer work or post-retirement employment.

In addition, senior center clients can use a Microsoft Kinect multi-player gaming system for exercise and socialization. Selfhelp clients "compete" with clients at other senior centers in New York City and across the country to encourage regular exercise and expand opportunities for socialization.

Virtual Senior Center

In March 2010, Selfhelp entered into a partnership with the Microsoft Corporation, the New York City Department for the Aging and the city's Department of Information Technology and Telecommunications to offer its Virtual Senior Center program. The program is designed to combat isolation by linking homebound seniors electronically to senior centers, community-based organizations, and cultural and historical organizations throughout New York City and across the country.

Selfhelp has expanded its Virtual Senior Center program dramatically since 2010, when the Virtual Senior Center pilot included only six people. Today, the Virtual Senior Center program serves more than 200 individuals in Baltimore, Chicago, Long Island and San Diego. Program participants in New York can now join video-based classes with peers from around the country. This represents a dramatic transformation from their previously socially isolated lives.

Selfhelp has created a senior-friendly interface for the Virtual Senior Center, with support from the AARP Foundation, the Consumer Electronics Association Foundation, and the UJA Federation of New York. The new interface has reduced the amount of technical support and training that program participants require. Its most innovative feature is the use of touchscreen, all-in-one computers. One touch activates the computer and provides participants with immediate access to an activity menu on the home screen.

The Virtual Senior Center's interactive classes have also been expanded, in both scope and volume. The program continues to feature museum tours, music programs and computer training. In addition, participants can now attend classes on health and well-being led by geriatricians, listen to intergenerational music concerts, and attend history classes. They can also catch up with other participants in virtual lounges. All classes use volunteer facilitators whose passion and expertise enrich the lives of participants.

Outcomes: Participants in Selfhelp's Virtual Senior Center program dramatically increase their social connectivity and develop relationships with facilitators, other homebound program participants, senior center members, community organizations, care managers and public officials. Program participants have testified before the New York City Council and the U.S. Senate, and advocated for the program with potential funders.

These face-to-face interactions are improving well-being and reducing the depression and sense of isolation that participants felt before becoming involved in the program. Research is underway to provide empirical evidence of these positive impacts on participants' health and well-being.

Business case: Selfhelp uses private donations and grant funds to support its implementation of innovative projects and services like the Virtual Senior Center. Building on its success to date, the organization is pursuing a multi-pronged approach that it hopes will sustain and grow the program through support from:

- **Government:** A recent analysis demonstrated that the costs of a Virtual Senior Center program are in line with the costs of a traditional senior center. These findings have prompted government officials to examine ways they can support and expand the Virtual Senior Center project in New York City.
- **Family caregivers:** Selfhelp is developing a marketing program that will seek to engage family members in paying for the Virtual Senior Center services their older relatives use. Market research demonstrated that family caregivers are willing to pay for the service.
- **Health care organizations:** Selfhelp continues to conduct research to demonstrate that the Virtual Senior Center can have a positive effect on health and well-being. It hopes to use this data to convince health care organizations to support the service.

Telehealth Kiosk Program

Selfhelp uses Internet-connected kiosks to help residents of congregate housing communities manage their chronic conditions. The kiosks are all-in-one touchscreen devices that are equipped with Bluetooth-enabled blood pressure cuffs, blood oxygen saturation measurement clips, and weight scales. They were purchased with a combination of grant and government funds and are used in conjunction with regular wellness programming conducted by community partners for all residents of a housing property.

Each housing resident who uses the telehealth kiosks receives a swipe card. The card holds information about the resident's health profile and allows the cardholder to activate the kiosk. After the resident takes his or her vital signs using the kiosk measurement equipment, the readings are sent, via the Internet, to a telehealth nurse. The nurse reviews the values, and contacts the resident if those values are out of normal range. The nurse then determines if an intervention is needed or if general health education can help improve the situation.

The kiosks also ask users a series of questions in order to engage them in a health literacy dialogue. The telehealth nurse monitors each user's answers and follows up to provide education about questions that are answered incorrectly.

The telehealth kiosk is currently available at Selfhelp's independent housing apartments and shared with Selfhelp's Innovative Senior Center. The device is placed in an easily accessible community room and near staff members who can provide assistance, if necessary. Regular gatherings are scheduled to encourage resident to use the kiosk service.

Outcomes: Selfhelp has three aims for its kiosk initiative: to reduce emergency room (ER) visits, provide insight into better management of chronic conditions, and develop mechanisms to encourage long-term use of services.

In preliminary studies of the kiosk service, Selfhelp noticed dramatic reductions in self-reported ER use by participants. In one building, the rate of self-reported ER visits dropped by 30 percent. While this self-reported data provides some evidence regarding the value of the kiosk service, Selfhelp would like to confirm these findings by comparing them to actual claims data. This comparison would provide empirical evidence about the service's value to health care providers and might spur their financial support of the service.

Kiosk users also demonstrated heightened understanding of their chronic conditions within three months after starting the program. To continue this trend, the organization is working with its vendor to add supplemental dialogues to the kiosk program.

Business case: Selfhelp continues to believe that its telehealth kiosks can play a critical role in reducing acute care services, including ER visits. Questions remain regarding who should pay for kiosk-related reductions in overall health care costs. Selfhelp is targeting government as the payer.

Selfhelp recently received three Balanced Incentive Program grants from New York State. The grants are supporting the telehealth kiosk program as part of an overall wellness, preventative care and population health initiative. The organization hopes that these grants, and its success in their implementation, will pave the way for sustainable funding.

Challenges

Overcoming technophobia: No matter how easy it is for some people to adopt and engage with the Virtual Senior Center, there are others who still fear that they will break the equipment. Selfhelp uses a combination of peer support, remote trainings and encouraging phone calls to mitigate this problem.

Encouraging regular kiosk use: Selfhelp remains challenged in its ability to maintain high utilization of the kiosk service. Selfhelp encourages use of the devices through regular gatherings that provide education about health and wellness. Additionally, Selfhelp began providing printers that participants can use to print out their kiosk readings and take them to a doctor visit. The availability of printers has helped to convey the clear benefit of the service. It also helps to build a stronger relationship between residents and their doctors.

Funding: Selfhelp relies heavily upon philanthropic support for its technology initiatives. Selfhelp has embarked on a private-pay approach for its flagship program, the Virtual Senior Center. Developing the marketing plan, materials and soliciting the sales are all new territory and bring new challenges.

Advice for Others

Focus on your broad objectives. It's easy for organizations to get frustrated when launching a technology-enabled service and it's tempting for managers and staff to blame the technology for this frustration. Focusing on the organization's broad objectives—and viewing technology as a tool to reach those objectives—will help the organization work through the frustration.

Recruit technology champions. Once Selfhelp incorporated technology into its mission statement, it began to actively recruit new board members who had technology backgrounds. With these new members on board, the organization established a technology committee that is led by a technology champion. The organization has also worked hard to identify staff members who are supportive of and familiar with technology. It calls on these staff members to convince others to give technology a try.

Make sure equipment is extremely easy to use. As with most technological initiatives, there will be glitches that can degrade participants' confidence in a technology-enabled service. Selfhelp has worked with its vendor to remove most of these glitches, but continues to be vigilant in this area.

Build technology into your physical infrastructure. Selfhelp recently opened a 92-unit "smart" housing community that supports a host of technology-enabled services, including high-speed Internet, remote monitoring and communications technologies.

Don't turn your back on low-tech assistive devices. Understand that not everyone needs a high-tech device. Sometimes clients just need a grab bar, a magnifying glass or a telephone sound amplifier to maintain their independence and quality of life.

Wellspring Lutheran Services

(Formerly Lutheran Homes of Michigan)

Frankenmuth, Michigan

Contributor: Gehm, Chief Executive Officer and President

The Organization

On Oct. 1, 2013, Lutheran Homes of Michigan rebranded itself as Wellspring Lutheran Services as part of a broader strategy to affiliate with a sister organization providing child and family support services. The newly created Wellspring Lutheran Services now provides services and care across the age spectrum, including:

- Foster care, adoption and family preservation services.
- Skilled nursing/rehabilitation.
- Affordable, subsidized and market-rate senior housing.
- Home health and home care.
- Hospice.
- Telehealth and other home and community-based services (HCBS).

Wellspring Lutheran Services is one of the largest nonprofit providers of residential services for older adults in Michigan. Its campuses feature a total of 800 residential living units, including market-rate condominiums, affordable apartments and townhouses. The organization also offers assisted living, skilled care and memory care, and serves about 1,000 people a year through its hospice and home care programs.

In 2009, 80 percent of the organization's revenues came from services it provided to residents of its brick-and-mortar campuses. Twenty percent of the organization's revenues came from HCBS. Wellspring is currently working to change that revenue blend. By 2016, the organization expects to receive half of its revenues from campus-based services and half from HCBS.

To reach that goal, Wellspring is exploring new ways to use technology to serve people in their own homes. In particular, Wellspring views technology as an important tool in its ongoing quest to prevent rehospitalizations through better management of care transitions from hospital to nursing home and nursing home to home.

Aging Enriched Network

In seeking to rebalance its revenue streams, Wellspring Lutheran Services decided that its home care model needed a complete makeover. As part of that makeover, the organization's private-duty home care agency became the Personal Services Division. This new division no longer offers a standard menu of services that it will deliver to home-based clients. Instead, staff members are trained and encouraged to find ways to provide whatever services a client requests or needs.

Wellspring Lutheran Services also established the Aging Enriched Network in an effort to increase its HCBS offerings. The one-stop information and referral service for older adults, their caregivers and families provides more than 20 categories of services that Wellspring has determined older adults need to stay independent.

Wellspring provides some of these services, including home health care, transportation, and in-home safety and telehealth technologies. A pre-screened group of affiliated businesses, volunteer organizations and individuals provides other complementary services, including transportation, home repair and modification, light housekeeping, meals, financial and legal services, housing, mental health services, social activities and medical equipment.

Consumers and their caregivers can access the Aging Enriched Network in two ways.

- Older consumers can meet face-to-face with a nurse or other health care professional at Aging Enriched Resource Centers on Wellspring campuses.
- Family caregivers can receive relevant information and referrals by using Wellspring's call-in center.

When a caregiver contacts the Aging Enriched Network call center, his or her questions and concerns are entered into the center's software program. The software then provides follow-up questions that the staff person can ask to probe more deeply into a particular issue. Answers to the follow-up questions are also entered into the software program.

The call center software uses this additional information to suggest appropriate interventions that can be carried out either by Wellspring or by the businesses affiliated with the program. Wellspring follows up with the caregiver 24 hours, seven days and 30 days after the referral to make sure the service was delivered and that it was satisfactory. Wellspring also uses the software to collect referral, utilization and satisfaction data.

Business case: Establishing the Aging Enriched Network required a modest investment, mostly to develop the program's software. However, because the network represents a service delivery model that is new to consumers, Wellspring has made a significant investment in marketing the network.

Consumers, who can join the network for free, use either their own funds or private long-term care insurance to pay for the services they receive. Wellspring found that a substantial portion of Aging Enriched Network users have long-term care insurance.

Post-Rehab Discharge Calls

A new suite in the Aging Enriched Network software is allowing Wellspring to make follow-up calls to clients who have been discharged from the organization's rehabilitation centers.

The Post-Rehab Discharge Call software offers an efficient, technology-enabled tool that keeps providers connected to clients post-discharge, gathers and tracks data about those clients, and prompts appropriate interventions if indicated.

The Post-Rehab Discharge Call program places a series of calls to rehab clients at regular intervals—one, three, seven, 21 and 30 days after discharge. The system uses specific, consistent questions to gather information and data that can be used to alert caregivers if a follow-up or intervention is needed. Answers to some questions might trigger an immediate intervention. Answers to other questions may be tagged for follow-up within 24 hours.

Data collected through the Post-Rehab Discharge Call program can be aggregated across nursing units, care settings or entire organizations. As the database grows, the ability to benchmark Wellspring's performance against peer care settings and organizations has also grown.

Wellspring is also using the software to make other "outbound" calls, including calls for quality assurance, customer service, new employee onboarding, and start of home health care. The organization is also beta-testing a software application for smart phones and tablets that will allow clients who are more tech savvy to engage with the program after receiving daily prompts.

Telehealth and Remote Monitoring

Telehealth is becoming a regular part of Wellspring's care offering. The organization is seeking to position itself in the market by scaling its telehealth program in several ways:

- Deploying both telehealth and remote monitoring units in the private residences of its home care clients.
- Creating internal processes to follow up routinely with clients after discharge from its rehabilitation
- Tracking rehospitalizations in order to identify specific transition issues facing its clients and create solutions that address those issues.

Since early 2011, Wellspring has been participating in an electronic health referral program initiated by a local hospital. Wellspring receives referrals by email for patients who are being discharged from the hospital to either home care or sub-acute care. The referral, which is sent simultaneously to several providers in the region, is accompanied by information about the patient that providers can use to assess their capacity to accept the referral.

The new referral system has spurred Wellspring to make several changes in the way it does business. To remain competitive, the organization is now responding to referrals in 15-20 minutes, instead of the traditional two-to-three hours.

In addition, Wellspring has expanded its telehealth program significantly because the referral program is open only to home care agencies that offer telehealth monitoring to patients with congestive heart failure (CHF). Wellspring has deployed 35-40 telehealth units to Medicare beneficiaries since the hospital referral program began. Before 2011, the organization had no more than five telehealth units deployed in the community at any one time.

In a small study of its telehealth program, Wellspring compared rehospitalization rates among 18 clients with CHF who were discharged from the hospital with a telehealth device and 15 clients with CHF who left the hospital without such a unit. Of the 15 clients who were not monitored, 12 experienced either a readmission or an unexpected revisit to a physician. Only two members of the telehealth group experienced a readmission or revisit.

Wellspring began exploring sensor-based remote activity monitoring technologies several years ago, but that program has not grown at the same rate as its telehealth initiative. The organization recently chose a new remote monitoring product, which has an easy-to-use interface and social media components that allow communication between clients, caregivers and family members. Plans call for scaling the remote monitoring program to serve a larger number of clients.

Business case: Return on investment (ROI) is hard to calculate for the telehealth program, especially in light of a lackluster private-pay market and the fact that telehealth is not a reimbursable expense under Michigan's Medicaid program. Wellspring is hoping that reimbursement policies will eventually encourage technological innovation by offering incentives to organizations that prevent rehospitalizations.

Wellspring anticipates that a healthy ROI could eventually come from increased efficiencies associated with telehealth. These efficiencies include the fact that telehealth monitoring will allow Wellspring staff to care for more clients. Telehealth is also expected to facilitate a robust early intervention program that will help reduce medical crises and the costly emergency home health visits associated with those crises.

For now, Wellspring Lutheran Services is willing to enter a market segment that does not have a guaranteed ROI. The organization views telehealth as an expected standard of practice that will help position it for future success.

Challenges

Breaking down silos: A new emphasis on preventing rehospitalizations, and a rapid deployment of telehealth units during 2011, led Wellspring to recognize that operational silos within the organization made care coordination difficult. The organization has been actively working to break down these silos by integrating its rehabilitation and post-rehabilitation care with the goal of keeping clients healthy and independent for as long as possible.

Inflexible technology: The decision to deploy remote monitoring units in off-campus locations created challenges for Wellspring, especially when the organization's first remote monitoring systems proved to be less robust than expected. Making service calls to remote locations in order to repair faulty units presented challenges that the organization does not usually encounter with campus-based technologies. In addition, installing sensors in environments that Wellspring does not control has created some challenges. Ceiling fans, pets and unexpected visitors have interfered with the collection of accurate monitoring data, especially from motion sensors. To overcome these challenges, Wellspring has learned to be much more thorough in assessing a home environment before sensor installation.

Keys to Success

Outsourcing: An outside vendor monitors telehealth data and sends alerts to the clinical supervisor when data indicate the need for medical intervention. Outsourcing is more costly than conducting an in-house data review. However, Wellspring decided that outsourcing was a good way to ensure that no alert would fall through the cracks while the organization's clinical staff learned the telehealth system and incorporated it into their workflow. Once telehealth becomes fully integrated into the work of clinicians, the organization may bring the data analysis in-house.

Wellspring Lutheran Services also contracted with a Durable Medical Equipment (DME) company to install its remote monitoring system in the homes of clients. Wellspring didn't have the capacity to carry out those installations with current staff. It chose the DME company because that company already had experience installing technology in private homes. Since then, Wellspring has found that most families are capable of installing their own system, with some advice and assistance from staff. This is possible because remote monitoring systems have become much simpler, user friendly, and "smarter."

Board trust: The Wellspring board made a formal commitment to telehealth because it recognized that this technology could help the organization carry out its mission to reduce rehospitalization rates. However, the board has not micromanaged the technology deployment. Rather, it is supportive of the health reform-related goals that Wellspring is pursuing and trusts that the organization's management will use the best tools available to reach those goals.

Advice for Others

Be thoughtful about how you support and scale remote monitoring systems. Any organization is capable of putting a few telehealth or remote monitoring units into the field and using them well. The challenge comes when the organization sets it sights on scaling its technology programs in order to deploy several hundred units at a time.

Such large-scale deployments require that the organization take a thoughtful look at:

- Whether it will rent or purchase units.
- How large an inventory it will keep.
- How it will manage distribution of the units.
- What data it will collect.
- Who will carry out the tasks necessary to ensure success.

Wellspring Lutheran Services conducted a thorough planning process to answer these questions. In the end, it decided to lease its telehealth units; to keep a small inventory on hand since units could be shipped overnight from the manufacturer; and to outsource installation and data review.