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One-stop information and referral service helps a provider meet seniors and caregivers needs, and increases home and community based services

The second in a series of case studies from the Preparing for the Future Report

Response time to hospital referral requests was reduced from 2-3 hours to 15-20 minutes

Hospital readmission for telehealth users was 2 compared to 12 for the control group

Rather than wait for guaranteed ROI, Board recognizes telehealth as an expected standard of practice

The Organization

[Lutheran Homes of Michigan](http://LutheranHomes.org) (LHM) is a Recognized Service Organization of the Lutheran Church-Missouri Synod and has a history of service to seniors that dates back to 1893. The organization is one of the largest nonprofit providers of residential senior services 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, LHM received 80 percent of its revenues from services that it provided to residents of its bricks-and-mortar campuses. Twenty percent of the organization's revenues came from home and community-based services (HCBS). LHM is currently working to change its revenue blend so that, by 2016, it will receive half of its revenues from campus-based services and half from HCBS. To reach that goal, the organization is exploring ways to use technology in new and different ways to serve people in their own homes.

Technology-Enabled Model or Service

Aging Enriched Network: To support the strategy to increase its offering of home and community-based services, Lutheran Homes of Michigan established the [Aging Enriched Network](#), a one-stop information and referral service for seniors, their caregivers and their families. The network provides more than 20 categories of services that LHM has determined older adults need to stay independent. LHM provides some of these network 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.

Aging Enriched Resource Centers, where consumers can meet face-to-face with a nurse or other health care professional, are located on LHM campuses and in some local churches. In addition, technology powers a call-in center with keyword recognition software and interactive Internet tools on the front-end that family caregivers can use to access the Aging Enriched Network. The software analyzes the requests and provides the relevant information and referrals that

callers need to keep their loved ones safe, healthy and independent at home.

Telehealth: LHM is currently deploying both telehealth and remote monitoring units in the private residences of its home care clients. The organization 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. LHM is currently positioning itself in this market by scaling its telehealth program and creating internal processes through which it routinely follows up with patients after discharge from its rehabilitation program and tracks rehospitalizations among those patients. That tracking system is helping the organization to identify specific transition issues facing its clients and to create solutions that address those issues.

Implementation Approaches and Outcomes

Call Center: When caregivers call the Aging Enriched Network, an LHM staff person uses a new triage software to address the caller's concerns and offer appropriate referrals. Callers' questions and concerns are entered into the software program, which then provides follow-up questions that the staff person can ask to probe more deeply into a particular issue. Using this information, the software then suggests appropriate interventions that can be carried out either by LHM or by the businesses affiliated with the program. Within 24 hours of each referral, and at 7 and 30 days, LHM calls the caregiver to make sure that the service was delivered and that it was satisfactory and documents referral, utilization and satisfaction with the software.

Telehealth: Since early 2011, LHM has been participating in a shared electronic health referral and record exchange program initiated by a local hospital. Through the program, LHM 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 Lutheran Homes of Michigan to make several changes in the way it does business. To remain competitive, LHM is now responding to referrals in 15-20 minutes, instead of the traditional two-to-three hours. In addition, the organization 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). Lutheran Homes of Michigan has deployed 35-40 telehealth units to Medicare beneficiaries since the hospital

referral program began. Prior to Jan. 2011, the organization had about three-to-five telehealth units deployed in the community at any one time.

In a small study of its telehealth program, LHM 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 one or two members of the telehealth group experienced a readmission or revisit.

Remote monitoring: LHM began exploring remote monitoring several years ago, but that program has not grown at the same rate as the organization's 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. The organization has also completed operational plans for distributing, installing and maintaining the remote monitoring system in private homes and reviewing sensor-transmitted data. Plans call for scaling the remote monitoring program to serve a larger number of clients.

Challenges

Breaking down silos: A new emphasis on preventing rehospitalizations, and a rapid deployment of telehealth units during 2011, led Lutheran Homes of Michigan to recognize that operational silos within the organization made care coordination difficult. The organization has been actively working to break down those 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 LHM, 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 LHM 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, LHM has learned to be much more thorough in assessing a home environment before sensor installation.

Business Case

In seeking to rebalance its revenue streams, Lutheran Homes of Michigan decided that its home care model needed a complete makeover. As part of that makeover, LHM's private duty home care agency became the Personal Services Division and 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 service a client requests or needs.

Establishing the Aging Enriched Network required a modest investment from LHM, mostly to develop the program's software. However, because the network represents a service delivery model that is new to consumers, LHM 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. LHM found that an appreciable proportion of the users of this service have long-term care insurance.

Return on investment (ROI) is hard to calculate for LHM's 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. The organization is hoping that reimbursement policies will eventually encourage technological innovation by offering incentives to organizations that prevent rehospitalizations. In addition, LHM anticipates that a healthy ROI could eventually come from increased efficiencies associated with telehealth. These efficiencies include the fact that telehealth monitoring will allow LHM staff to care for more clients and will facilitate a more robust preventive care and early intervention program that will help reduce medical crises, as well as the costly emergency home health visits associated with those crises.

For now, LHM 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 LHM for future success.

Keys to Success

Outsourcing: An outside vendor monitors LHM's telehealth data and sends alerts to the LHM clinical supervisor when

data indicate the need for medical intervention. Outsourcing is more costly than conducting an in-house data review. However, LHM 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.

LHM also contracted with a Durable Medical Equipment (DME) company to install its remote monitoring system in the homes of clients. LHM 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.

Board trust: In Jan. 2011, the LHM 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 LHM is pursuing and trusts that the organization's management will use the best tools available to reach those goals.

Advice to Others

Be thoughtful about how you will 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 its 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 and who will carry out the tasks necessary to ensure success. LHM 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. ■

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