VISITING NURSES
Association

Contributor:

David Taylor, RN
Supervisor of Telehealth Services

LeadingAge CAST
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 contact:

Zohra Sirat, Programs and Operations Administrator, CAST
zsirat@LeadingAge.org
(202) 508-9438
LeadingAge.org/CAST

Honeywell | Life Care Solutions

Reduction of Hospital Readmissions through Telehealth among High-Risk Cardiac Patients

Category

Health Outcomes (Blood Pressure, Blood Glucose, etc.)

Quality of Life/Satisfaction with Care

Hospitalization and Hospital Readmissions

Organization Name

Visiting Nurses Association (VNA) of the Rockford Area

Organization Types

Home Health/Home Care, Hospice

Organization Description

The Visiting Nurses Association has been providing care for residents of northern Illinois for more than 100 years, providing comfort, care and compassion to enhance the lives of our patients, to allow them to continue to live comfortably and independently in their own homes. Its patient-centered clinical care and personalized services provide patients with a peace of mind and satisfaction that is continually highly-ranked.

Other Partners

Rockford Memorial Hospital.

Project Description

In an effort to help Rockford Memorial Hospital lower its overall readmission rate, which hovered around 28 percent in 2011, the Visiting Nurses Association of the Rockford area (VNA) launched a new initiative – the **Heart & Vascular Program** – to provide remote patient monitoring services to high-risk congestive heart failure (CHF) patients who were not eligible for home care services under Medicare and insurance guidelines.

Telehealth and RPM System Type

Store and Forward: Biometric Remote Patient Monitoring, Real-Time Interactive Two-Way Video Conferencing with Clinician.

Telehealth and RPM System Embodiment

Single-User/Patient Home Base Unit.

Business Model

Medicare Reimbursement, Private Health Insurance Coverage, ACA-Related Opportunity (ACO, Hospital Readmission Reduction Program, Bundling of Payment).

Implementation Approach

As part of an overall initiative to reduce hospital readmissions at Rockford Memorial Hospital, the Visiting Nurses Association of the Rockford Area introduced a new program they called the **Heart & Vascular Program**, which identified high-risk congestive heart failure (CHF) patients who could benefit from remote patient monitoring (RPM) in both short- and long-term timeframes.

Despite the fact that the subset of cardiac patients treated for CHF were not typically eligible for home care services under Medicare guidelines, the staff at the VNA recognized that in most cases, RPM could prevent patients from being readmitted to the hospital.

To that end, the VNA worked with the Rockford Memorial Hospital cardiology group to create a new program that allowed any patient being treated by a hospital cardiologist to receive a remote patient monitoring device – whether they qualified for VNA home care services under Medicare or not.

In order to impact both the short-term hospital readmission reduction goals and the long-term health and well-being goals for patients, the VNA staff and hospital cardiologists created specific protocols around the RPM vital sign standards for patients in the program. Some vital sign parameters were consistent for all patients (such as weight), but others were customized (such as blood pressure) in order to ensure that clinicians got more accurate alerts and that all patients received the right level of attention.

The combination of standardized and customized vitals monitoring might have been difficult for the VNA to manage, given the breadth of its RPM services (with more than 85 patients monitored at any given point in time), but using Honeywell's software allowed the VNA nurses to easily import existing vital sign standards as well as set customized ranges in a patient record, making it simple to implement a customized thresholds in their RPM system.
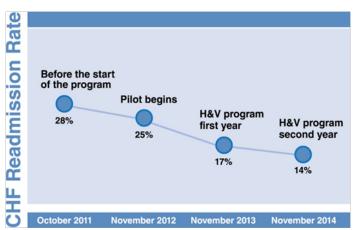
If the VNA telehealth nurses observed that a Heart & Vascular Program patient was exhibiting out-of-normal range vital signs, they alerted the patient's cardiology staff, who then made contact with the patient and worked with them to address any issues. Through this early recognition of potential complications based on patient data points, they were able to provide early intervention such as: 1) a change to patient medication(s) without a visit to the doctor or 2) a visit to the physician's office without a trip to the emergency room.

While most cardiac patients in the Heart & Vascular Program had monitoring devices for the standard 45-90 days, the VNA staff has the ability to be as flexible with those timeframes. The ability to monitor patients in the long-term has allowed the VNA to impact and observe not only sustained lower hospital readmissions, but positive impacts to the long-term health and well-being of its patients.

Outcomes

Prior to the implementation of the Heart & Vascular program, the readmission rate for Rockford Memorial Hospital ranged between **25-28 percent**, on average. Following the launch of the program, overall readmission rates initially dropped to 17 percent after the program's first year, and to **14 percent** after the second year.

And while the Heart & Vascular program played a significant part in reducing the **overall** hospital readmission rates, they were also able to measure successful results within the readmission rates of their own program participants: rates for all-cause readmissions are now **7 percent, with only 3.5 percent** of those related to CHF complications.

The patients have also reported increased levels of independence and an awareness that gives them the ability to self-manage their disease. The program has also provided patients' families with peace of mind, knowing their loved ones are being consistently monitored. In addition, the positive health improvements impact their greater communities and employers, as patients have been able to be more participative within those environments.

This is perhaps best illustrated through a patient case study, representative of a common Heart & Vascular program patient experience: Robert* is a CHF patient who was in and out of Rockford Memorial Hospital on a regular basis. On several occasions following discharge, he would be placed under care with the VNA, and staff would monitor his vitals for between 45 and 90 days, on average. Throughout that timeframe, nursing staff identified changes in his health as they happened and worked with his physicians to address specific health issues and adjust his medications accordingly. As a result, VNA staff where able to keep Robert out of the hospital.

But after his 60-90 days of RPM (the certified home health care period), Robert would be discharged from VNA services, the monitor would go back to the VNA, and in short order, he would end up back in the hospital.

Now a participant in the Heart & Vascular program for more than 18 months, Robert's vital signs reflect the change in lifestyle he's made: he has lost weight through diet modifications and exercise. Once he realized that the VNA staff would be there as a resource for as long as he needed, he felt empowered and supported to make significant changes to his lifestyle that contributed to improved overall health. He has not been to the hospital for more than two years now.

Challenges and Pitfalls to Avoid/Lessons Learned

Two primary challenges confronted the staff at VNA as they implemented the Heart & Vascular Program. The first: buy-in from hospital physicians, and the second: creating the processes around not only implementation of the new program, but demonstration of measurable outcomes.

Physician Buy-in: Prior to the Heart & Vascular Program, there was already a telehealth program in place through the VNA, but it was under-utilized. As a result, there was skepticism among the hospital cardiologists that it could

work as the VNA was describing it, especially in the long-term.

Creating the Processes: Based on the lack of existing framework around a telehealth program, the VNA staff needed to ramp up its program and processes around it quickly – implementing everything from education for new telehealth nurses, to logistics surrounding patient monitor distribution, to development of outcomes measurement tools in order to determine success of the program.

Lessons Learned

Based on the challenges related to program implementation, the VNA staff were able to address the issues surrounding physician buy-in and process creation by working as a collaborative team.

By involving hospital cardiology physicians and nurse practitioners from the very beginning, the cardiology group became an involved stakeholder and had a piece of ownership in the program, and the processes surrounding it. As a result, both the cardiology group and VNA staff were able to ensure the program was representative of all aspects in the care continuum – from the hospital to the patient's home.

The collaboration around measurement tools also ensured that the information captured was fully demonstrative of the measurable outcomes necessary to measure levels of success of the new program.

Advice to Share with Others

While it sounds a bit cliché, in the case of the Heart & Vascular Program, the VNA staff credits their success around planning: "if we had failed to plan, it would have been tantamount for planning to fail." By ensuring there was a plan in place that represented the goals of all parties involved, they planned for – and achieved – success.