HOME CARE 100
LEADERSHIP & STRATEGY CONFERENCE

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CARDIOCOM®
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Centura Health At Home
✚ Centura Health®

Case Study: Enhancing the Home Telehealth Program with Call Center Activities

Cardiocom, Experts in Telehealth; Centura Health at Home

Organization Name: Centura Health at Home (CHAH)

Organization Type: Centura Health at Home provides services in Home Care, Hospice Care, Senior Care and Palliative Care.

Other Partners: Approximately 14,500 of the health care industry's best and brightest, including more than 6,000 physician partners, deliver advanced care to more than half a million people each year, across 14 hospitals, seven senior living communities, medical clinics, affiliated partner hospitals, Flight For Life® Colorado, and home care and hospice services.

Organization Description: Centura Health at Home is a part of Centura Health, Colorado's largest hospital and health care network. Our strength lies in our ability to offer a team of connected networks and shared resources to deliver accessible, reliable and cost-effective health care across the state of Colorado. As a not-for-profit organization, Centura Health has no shareholders to whom returns are distributed; all profits are reinvested in our mission and communities. By treating and touching the whole person-body, mind and spirit-we seek to create a healing sanctuary for our patients and residents. We offer our patients and residents a unique kind of care that recognizes needs and nurtures each individual with excellence, integrity and compassion.

At Centura Health at Home, we have a team of talented professionals that are experts at providing care wherever patients and residents call home and we are dedicated to fulfilling their wishes and needs. Centura Health at Home serves patients and residents in Denver, Colorado Springs, Pueblo, Canon City, Durango, Pagosa Springs and Summit County in Colorado and most recently added two sites in western Kansas.

Project Description: The purpose of the Centura Health at Home (CHAH) project was to decrease 30-day rehospitalization rates and to increase older adult quality of life by augmenting the current telehealth continuum at CHAH by merging the two, independently successful, Call Center and Telehealth programs. Prior to the implementation of the integrated program, the telehealth program at CHAH demonstrated a reduction in the readmission rate for re-hospitalizations to six percent.

The successful integration of these two programs has significantly expanded the populations CHAH serves geographically and has also created a deeper level of service by making telehealth monitoring available 24 hours a day, seven days a week. Another key component to this project was the integration of the CHAH staff into the telehealth program, establishing telehealth as a new standard of care at CHAH. These key factors proved vital to the success of this project and also paved the way for CHAH to greatly increase the number of patients served by telehealth in the future.

Telehealth and RPM System Type: CHAH selected Cardiocom® as its vendor because of the host of telehealth platforms offered (Interactive Voice Response System (IVR), Store and Forward: Biometric Remote Patient Monitoring, Real-Time Biometric Remote Patient Monitoring, Real-Time Interactive Two-Way Video Conferencing and Interactive Health through any internet enabled device) to support and plan for the long term. CHAH utilized Cardiocom's COMMANDER FLEX® for this project because of its unprecedented array of unique telehealth features, ease of use and modular design as a store and forward biometric remote patient monitoring telehealth solution.

Telehealth and RPM System Embodiment: Cardiocom's COMMANDER FLEX® Telehealth

solution provided the most suitable and cost effective solution as a single-use/patient home based unit.

Business Model: Medicare, Medicaid, Commercial, ACO, Bundled Service and Hospital Readmission Program for high risk non-eligible home care patients.

Implementation Approach: Specific project goals and parameters guiding the measurable outcomes of this project include:

> 1.) Decreased rates of recidivism for 30-day readmissions at identified Centura Hospitals (St. Anthony 's Central, St. Anthony 's North, Parker Adventist , Littleton Adventist and Porter Adventist Hospital) by 2% after year one;
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> 2.) Increased quality of life for project participants as measured through the Quality of Life SF-36;
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> 3.) Increased number of patients served in the telehealth program by a minimum of 200 per year after year one.

All project participants were located in the Denver Metro area. The typical participant was an older adult, living in his or her own home, managing co-morbid conditions, and who had just experienced a hospitalization related to an exacerbation of their chronic health condition.

The project enrollment criteria included discharge from one of participating hospitals into the Telehealth Program or the Porter Adventist Hospital CHF Callback Project. Because the participants were part of the existing Centura programs, they were identified through the efforts of highly trained case managers and Home Service Coordinators at the hospitals, who conduct coordination for all hospitals at Centura, regardless of where the patient is going

for aftercare. Home Service Coordinators at each of the targeted hospitals were a key component in referring patients to the Telehealth Program. Final numbers for project participants are as follow:

Remote Patient Monitoring Diffusion Grants Program
- Number referred to the project and invited to participate: 273

- Number who refused to participate: 73

- Number who actually participated : 200

- Number of participants who did not complete the program as expected: 0 participants did not complete telehealth monitoring; 34 did not complete the post SF-36.

Outcomes:
Reduction in frequency of re-hospitalizations. In alignment with the Tufts Medical Center Study, Centura Health at Home's RPM project found that over a 30-day period following the initial hospital stay, hospitalizations related to heart failure, COPD and Diabetes were reduced by 62% . Rehospitalization rates for patients receiving telehealth home care (6.28%) were significantly lower than those for traditional home care patients (18%). During the project period, ED utilization decreased from 283 visits in the year preceding the study to 21 ED visits.

Improved Quality of Life of Older Adults. Quality of life, which was measured at baseline and at the end of the study period using the SF-36 scale, increased for patients receiving home telehealth care averaging a 4.8 point increase in both the physical and mental health components (pre PCS = 29.46, post PCS = 34.3 ; pre MCS = 47.63, post MCS = 52.5). While these results were not statistically significant overall (requiring over a 5-point increase), specific components of the quality of life survey demonstrated statistically significant changes in all ages and sexes: physical functioning (5.44), role physical (7.18), social functioning (6.81) and role emotional (6.74). By age with both sexes combined, there were statistically significant improvements for 45-54 years olds (PCS = 9.47, MCS = 14.93), 65-74 year olds (PCS = 6.11, MCS = 5.73), and 75+ year olds (MCS = 5.1). There were also comparatively greater increases in quality of life for women compared with men where women had statistically significant results in their mental component summary (5.97), physical functioning (5.38), role physical (7.05), vitality (5.33), social functioning (8.27), role-emotional (7.34), and mental health (5.38), while men showed improvement in their physical functioning (5.52), role physical (7.34), role emotional (5.84), and mental health (5.52).

Improved Patient Self-Management and Education. The project improved chronic disease management by extending the reach of the nursing staff. Thus, field nurses are able to focus their time and attention on "intentional " visits dictated by health circumstances, rather than routine assessments, which can be done via telehealth equipment. Another improvement noted is the improved opportunity for patient education. The monitoring nurse is able to connect with the patient in "real time," helping patients to make the connection between cause and effect. Patient actions such as missed medications or a meal high in salt will be reflected in the monitoring. The nurse can effectively educate the patient in a "teachable moment" that will give the patient something tangible to make the correlation between actions and outcome.

Reduced Frequency of Home RN Visits and Cost Savings. The traditional home care model with like patients sets typical frequency of visits

for the RN as two or three times per week over a 60-day episode of care. Often this is not enough to catch the subtle early warning signs of a health concern. The frequency of RN visits was reduced from the traditional two to three visits per week over a 60-day episode of care to approximately three (2.69) visits over the entire 60-day telehealth care management period. The resulting cost savings is between $1,000 and $1,500 of the fully loaded cost. By daily telehealth monitoring using biometrics and personal algorithms based on health conditions, the monitoring RN was able to closely monitor the most volatile patients and take any required action toward early and timely intervention. As a result, around-the-clock telehealth monitoring became the standard of care.

Policy change to Telehealth Services Payment to Homecare Agencies in Colorado. CHAH worked with the Home Care Association of Colorado to get the Telehealth Rule passed by the Medical Service Board of HCPF. As of October 1, 2011, the Telehealth Rule 8.520 will allow for payment to homecare agencies directly for telehealth services - not just homecare. However, this legislation allows payment for the Medicaid population only, so there is still a need for private support for those older adults not able to pay and not covered by Medicaid. Although this Rule is very restrictive in what they initially passed in terms of diagnosis, history of hospitalizations, etc., it is a step in the right direction.

Challenges and Pitfalls to Avoid: Select a technology that will work in the long-term and monitors by exception - The original program design involved use of either two-way video technology , American Telecare's LifeView, to meet the needs of patients' with a very high acuity level, or remote patient monitoring technology, American Telecare's inlife, to more routinely monitor patients with chronic conditions. As a result of increasing the

volume of patients served through the integrated telehealth program, CHAH made a decision to change vendors to support more cost-effective scaling of the program while meeting the broader patient population's needs. In particular, the new platform in use from Cardiocom offers the ability to monitor by exception, thereby placing the emphasis on those patients needing immediate attention.

Lessons Learned: Lessons learned at CHAH from the integration of telephonic telehealth with home telehealth highlight several critical program areas for the successful implementation of telehealth at scale and on a sustained basis: staff engagement; training and support; working with vendors to select solutions that scale while meeting the broader patient population's needs; and modifying care management practices to reflect telehealth-enabled efficiencies.

Staff engagement and buy-in are critical to program success - In order to have a successful program, homecare nurses and clinicians need to see value in the telehealth intervention for patients, nurses and physicians. Establish an open house for the homecare nurses to interact with the telehealth technology and ask questions. Key discussion points used to demonstrate the value of the telehealth intervention to patients, nurses and clinicians focus on outcomes, visits/episode, rehospitalization rate, as well as patient satisfaction data. Discussion around how the program can improve chronic disease management by extending the reach of the nursing staff demonstrates the value of the intervention without negatively impacting the workflow of clinicians. As a result of the improved chronic disease management in the program, field nurses were able to focus their time and attention on "intentional" visits dictated by health circumstances, rather than regular assessments, which can be routinely conducted via telehealth equipment.

Effective nurse communication training vital to patient enrollment and engagement - Home Service Coordination Nurses, who introduced patients to the program during their hospital-stay, required additional training for effective communication, particularly to emphasize the value of the program to patients. Clinical call center nurses also benefited from effective communication training to bolster confidence in decision making processes to actively manage patients in response to issues raised during calls. Training focused on key words and phrases that are simple yet effective in describing the program and the intended outcomes for the patient. There was also some scripting of the initial RN call to the patients after installation as well as key elements of focus for the installers in teaching patients and families.

Traditional clinical call center nurses require additional disease management education - Clinical call center nurses also underwent specific disease management education that improved their problem solving and critical thinking skills while fostering confidence. Among the challenges encountered, clinical call center nurses who were previously accustomed to directing patients with symptoms to emergency rooms required training on the new paradigm, which emphasizes chronic disease management at home.

Streamline discharge planning process to incorporate enrollment into telehealth program - Centura's experience indicates that attention to strategic home service coordination is a key factor to program success. As part of the program, the home service coordination discharge planning process was restructured in the hospital. Case managers were trained to identify patient eligibility and enrollment criteria for patients discharged without home care. Before discharge, introduction to the telehealth intervention takes place while in the hospital. Within 48 hours of patient discharge, a personalized telehealth algorithm is created, and telehealth technicians install and train older adults on how to use the device within their homes. This streamlined process encourages patient and caregiver engagement as they begin to follow their treatment plan at home.

Patient telehealth program enrollment most effective when introduced by a trusted clinician - Increasing a patient's likelihood to enroll in the telehealth program was found to be most effective when they were introduced to the program during the hospital stay by a homecare nurse or physician or by a primary care physician after discharge, but not during the initial home care visit. Once patients were enrolled, repeat visits from the telehealth device installer were required to train elderly adults on using the technology.

Establish physician PRN orders for telehealth patients to maximize efficiency of monitoring nurses and physicians - Monitoring nurses are able to react to trending and monitoring data more quickly by utilizing physician PRN orders. To operate on a larger scale, these orders need to be ready to go with physicians establishing the orders when patients are enrolled into the program.

Provide "real-time" education to patients during a teachable moment to increase patient self-management - The monitoring nurse was able to connect with the patient in "real time," helping patients understand the relationship between cause and effect of lifestyle-related behaviors. For example, the reflection in patient monitoring data of missed medications or a meal high in salt provided opportunities to educate the patient in a "teachable moment" in order to make the correlation between actions and outcome.

Advice to Share with Others: Plan to expand your program to a larger number of patients as well as the possibility of linking projects into Patient Centered Medical Homes and Accountable Care Organizations. CHAH's Director of Telehealth is working to help develop evidence-based training programs for homecare nurses with modules around telehealth with the Colorado Center for Nursing Excellence. Additional opportunities lie within expansion of telehealth programs to CHAH's seven other senior living communities and particularly with the independent living community at the Garden's at St. Elizabeth (GSE) in Denver.