

Population Health News
February, 2017, Volume 4 Issue 2
 ISSN Print (2333-9829)
 ISSN Electronic (2333-9845)

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Population Health News is published monthly by
 Health Policy Publishing LLC. Newsletter
 publication administration is provided by MCOL.

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Making a Case for Population Health

A Selected Case Study in Population Health Management...

Taking Aim at Reducing COPD Readmissions

by Donald Lilly and Matt Barker

Program Objectives:

- Implement a comprehensive clinical strategy to improve system-wide performance in achieving readmission reductions for chronic obstructive pulmonary disease (COPD) and other chronic diseases.
- Improve patient education and engagement with interactive, video-based education delivered through a technology solution that streamlines and automates manual processes.
- Effectively deliver education at the optimal point of care through patient televisions at the bedside.
- Involve patients' family members as a support system for optimal care following discharge.

Program Description: West Virginia ranks fourth in the nation for prevalence of COPD.¹ While COPD has been the fourth leading cause of death in the United States since 1991, unfortunately, it has been the third leading cause of death in West Virginia since 2000.² West Virginia's rates of hospitalizations for COPD have consistently been higher than national averages and in some years, twice the national rate.³ Charleston Area Medical Center (CAMC), a non-profit, 956-bed, four-hospital system in central West Virginia, sees the faces behind these numbers.

CAMC's Multidisciplinary Patient and Family Education Council began implementing an interactive, patient engagement solution to proactively address this challenge by improving patient education and care coordination in the first quarter of 2015. The initiative to reverse this patient population trend has been successful, and best practices are being applied to address other population health challenges, such as chronic heart failure.

Some of the key elements of the CAMC comprehensive clinical strategy to improve system-wide performance in achieving readmission reductions for COPD and other chronic diseases include:

- A detailed clinical assessment at admission and an assignment of a severity score.
- Nurse navigators who coordinate care, provide education, make referrals and ensure smooth transitions after discharge.
- Communicating referrals to pulmonary and cardiac rehabilitation and providing access to psychological support opportunities as appropriate.
- The Meds to Beds program, which provides bedside delivery of a 30-day supply of prescription medications filled in the CAMC pharmacy, as well as education on the medication prior to discharge,
- Escalation to a skilled nursing facility for patients who are too sick to be discharged to home.
- For patients who are discharged to home, follow-up appointments with their primary care physicians within seven days and home health services referrals as appropriate.

In March of 2015, CAMC rolled out TeleHealth Services' SmarTigr interactive, patient engagement, enterprise platform across its four hospital campuses to help standardize patient education and drive an enhanced patient experience. Interactive, patient engagement solutions meet both patient and hospital needs by creating clinical workflow efficiencies and optimizing information and education at patient point of care.

"West Virginia's rates of hospitalizations for COPD have consistently been higher than national averages and in some years, twice the national rate."

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In an effort to improve delivery of patient education for chronic disease patients, CAMC developed medical, condition-specific video prescriptions, which prompt nurses and the platform solution to provide additional patient resources. These include comprehension assessments, zone-teaching tools for self-management, handbooks and teach-back education. In addition, CAMC launched the Warm Welcome Initiative in January 2016, with SmarTigr as its cornerstone technology. CAMC produced a custom welcome video to orient patients to their hospital stay and set expectations for the patient experience. The video has helped improve patient satisfaction scores and provide more time for nurses to devote to patient care.

Evaluation Process: Records of patients' compliance to their education plan are tracked with reports, which are delivered to clinical leaders active in each patient's care. Patients are also asked to complete quizzes to assess comprehension of the videos. "When interactivity follows learning, patients comprehend and retain more information," says Beverly Thornton, education division director at CAMC's Health Education and Research Institute.

Results: By moving to an interactive, patient care model, readmissions for COPD dropped by almost 30% compared to the previous year.

Throughout the first year of the SmarTigr system's roll out at CAMC, the number of patients viewing educational videos steadily increased each month. The hospital system now estimates that there are 2,000 views monthly. Nearly one-third of all patient education activity in the inaugural year of SmarTigr focused on COPD and pneumonia content. CAMC observed a parallel drop in readmission rates for both disease states, suggesting that CAMC's adoption of video education delivered through the SmarTigr system helped make an impact in driving enhanced outcomes.

Nurse "navigators" disseminate disease-specific "video prescriptions" to front-line nurses, who provide SmarTigr access instructions and a list of required videos prescribed to patients. The video prescriptions also become part of a patient's electronic medical record.

"One of the likely culprits for COPD readmissions is the 90% of adults who use prescription inhalers incorrectly."

Nurse navigators have no shortage of stories that speak to the impact that video education has had on CAMC's patients. For example, one of the likely culprits for COPD readmissions is the 90% of adults who use prescription inhalers incorrectly.

Natalie Osborne, LPN, one of the nurse navigators at CAMC, describes in more detail the positive effect from video learning. "Just recently, we had a patient learn to use her inhaler correctly from watching a video about pulmonary medications," she says. "When she saw the nurse and patient actors in the video using the inhalers properly, it helped her recognize

that she had been using hers the wrong way. We also reinforced appropriate use with bedside teaching and had the patient demonstrate the right way."

Lessons Learned:

- **Health literacy obstacles.** Understanding health literacy issues of a patient population is a key factor in recognizing the value of being able to better communicate important self-care information. Many patients have literacy issues so using written materials is not always the best way for them to learn.
- **Learning processes.** Interactive video using a television is an effective way for patients to learn about their disease and how to manage their health condition. Many of CAMC patients are visual learners and can better retain information from videos than from reading patient handouts. They spend much more time watching television than reading written material in their daily lives so it seems more natural for them.
- **Test for success.** Videos along with corresponding quizzes stimulate conversation and facilitate learning for an entire family. When patients involve their own family members while they're still in the hospital, they have more support and a greater chance of compliance once they return home, helping prevent readmissions.
- **Organizational leadership.** Everyone from CAMC hospital administration to the maintenance crew participated in the rollout, and many learned how to use the interactive, patient engagement technology. "Our entire health system was on board with SmarTigr from the very beginning," Thornton says.
- **Team commitment.** Hospitals need to make sure nurses don't think they are too busy to use the tools to help them educate their patients and improve workflow. Patient engagement systems streamline and automate manual processes and deliver education at the optimal point of care. "The prescription for education isn't optional. It's an expectation for the nurse and patients," says another nurse navigator Angelia Fugate, LPN.
- **Support the continuum of care.** Interactive patient education throughout the recovery continuum helps patients understand and learn about their care during a hospital stay and while they continue to recover at home. In fact, research has shown that the use of videos for education increases retention up to 50% compared to conventional paper handouts that often are not read or easily understood.⁴

¹ Centers for Disease Control and Prevention.

² Tomblin ER, Lewis MJ. "Chronic Obstructive Pulmonary Disease: An Overview of the Problem in West Virginia." Bureau for Public Health, Statistic Center. West Virginia Department of Health & Human Resources. March 2011.

³ *Ibid.*

⁴ Murphy D. "Hear, See, Do: How Videos Improve Patient Education." SurroundHealth. March 14, 2013.

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