

THE Value Initiative

Members in Action: Improve Quality & Patient Outcomes

Rush University Medical Center – Chicago, IL *Software Supports Enhanced Recovery After Surgery*

AHA's *Members in Action* series highlights how hospitals and health systems are implementing new value-based strategies to improve health care affordability. This includes work to redesign the delivery system, manage risk and new payment models, improve quality and outcomes, and implement operational solutions.

Overview

A 607-bed, Chicago-based academic medical center, Rush University Medical Center is part of the Rush health system, which includes three hospitals, numerous outpatient care facilities and Rush University. Several years ago, Rush's leaders—like many hospital administrators across the country—began preparing for the shift to value-based care. As part of those efforts, the Medical Center's colorectal surgery team implemented the enhanced recovery after surgery (ERAS) program in 2014.

With the goal of decreasing the physiological stress of surgery and, ultimately, improving outcomes, the ERAS program employs evidence-based interventions before, during and after surgery using a multidisciplinary approach, from case workers to the anesthesiology team. By following the ERAS protocols, patients can expect to recover sooner with fewer complications; they feel part of the care team and are active participants in all phases of the surgical experience.

Within the ERAS program, Rush saw an opportunity to accelerate the transition to value-based care by connecting caregivers and patients in a more interactive way via a computer app called SeamlessMD. The app, which can be downloaded to a

Impact

SeamlessMD is a natural progression in the Medical Center's quest to improve patient outcomes and compliance, according to Joanne Favuzza, M.D., assistant professor, Department of Surgery, Division of Colon and Rectal Surgery at Rush. SeamlessMD provides a way to aggregate key clinical data and obtain a comprehensive picture of each patient. This information helps Rush clinicians identify potential problems earlier and understand how to help patients recover faster.

To date, more than 200 colorectal surgery patients have participated in ERAS, which has reduced their length of hospital stay by 2.2 days on average compared with patients who underwent colorectal surgery at Rush between July 1, 2012 and June 30, 2013. General surgery and bariatric surgery patients participating in the ERAS program have seen reductions in hospital stays of 1.2 days and nearly one day, respectively, compared with prior years.

Further, based on outcomes achieved in the first two years of the ERAS program, readmission rates dropped from 17% to 9%, and surgical complications decreased from 30% to 16%. This represents a cost savings of \$5,200 per patient.

Rush does not have the data yet on SeamlessMD's specific impact because the app has been in use within the ERAS program for less than a year. However, based on its ability to engage patients, reinforce protocols and track patient progress, the app's impact should further the success of ERAS program as well as advance the Medical Center's move to value-based care.

smartphone, tablet or desktop computer, provides prompts, checklists and timelines to remind patients what they should do before and after surgery. For example, before surgery, the app sends a reminder to patients to stop taking aspirin or other medications, an oversight that can complicate or delay a surgical procedure.

During a patient's hospital stay, the app provides helpful information about pain control, exercise, eating and drinking. SeamlessMD remains in use after patients return home, where it uses visual aids and aural prompts to expedite the healing process,

answer questions and reinforce the recovery protocols that Rush doctors and nurses had already explained to their patients. Depending on a patient's preference, they can receive the app's messages by email or text message.

SeamlessMD takes the recommendations Rush is already giving patients in the ERAS process and puts them in a patient's digital pocket. In addition, unlike the hard copy of materials, SeamlessMD gives patients reminders.

Lessons Learned

When Rush initially launched SeamlessMD, some participants did not own smartphones or have easy access to a computer. To resolve this issue, staff invited family members or other potential caregivers to enroll in SeamlessMD; these caregivers receive the protocol reminders and reinforcements directly and then contact the patient themselves. This solution also engages the family in patient care, which often decreases the patient's stress.

Future Goals

Following additional patient piloting of SeamlessMD in early 2017, Rush's colorectal surgery program began offering all colorectal ERAS patients the option of using SeamlessMD, which is provided free of charge. Dr. Favuzza anticipates expanding the app's use to other patients and other surgical groups.



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