

Smartphone app helps patients prepare for and recover from surgery

August 1 2016, by Eric Swensen



Credit: University of Virginia

A new smartphone app is helping some University of Virginia Health System surgery patients follow a treatment program to better prepare them for surgery and speed their recovery.

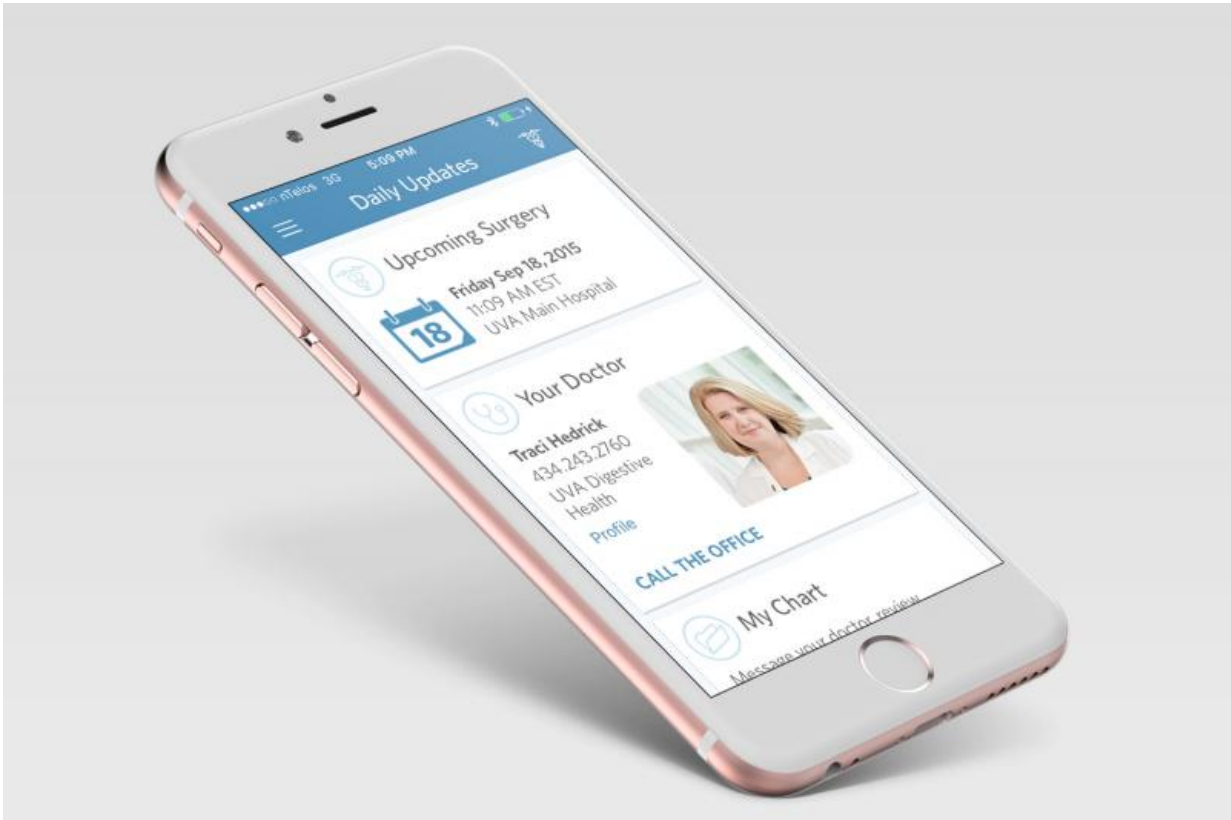
Since 2013, colorectal [surgery patients](#) at UVA have used the Enhanced Recovery After Surgery program. ERAS aims to educate patients, improve their outcomes and help to make them more comfortable before and after their surgery.

In the first six months after ERAS was implemented for planned colorectal surgical procedures, the overall median length of stay for patients decreased from five days to three days, overall complication rates were reduced by around 50 percent, and patient satisfaction scores improved across the board.

The ERAS program includes:

- Having patients drink sports drinks two hours before surgery to reduce the need for IV fluids;
- Providing non-narcotic medications to minimize use of opioid pain medications;
- Getting patients out of bed and walking soon after surgery;
- Having patients eat as soon as possible after surgery.

The key to making ERAS work, UVA care providers said, is extensive patient education both before and after surgery. Patients already receive an educational handbook and a paper checklist to ensure they complete needed tasks.



A new smartphone app has helped reduce complications from elective colorectal surgery. Credit: University of Virginia

"We are bringing patient education into the digital age with an ERAS website and a mobile app to complement the handbook," said Bethany M. Sarosiek, the ERAS development coordinator at UVA. "This ensures patients have the information they need to understand their care and be better prepared for surgery. The app puts the information directly at their fingertips."

UVA worked with Charlottesville-based Willowtree Inc. to develop an app that brings information from the handbook and the checklist to a patient's smartphone, said Derrick Stone, director of software development at UVA Health System. Patients download the free app in

the clinic, then enter their surgery details and information. Reminders are sent directly to their smartphone in preparation for surgery.

For example, patients receive a checklist of when to stop taking certain vitamins and supplements. This is important because, without a reminder, patients may forget and surgery may have to be postponed. Patients also receive a pop-up message on their phone on the morning of their surgery that includes directions to the hospital and where to park.

After surgery, [patients](#) get reminders about getting up to walk around. This helps improve their mobility while preventing breathing problems, reducing the risk of blood clots and ensuring early return of bowel function.

"Having the reminders sent directly to their smartphone allows them to see the information at the right time, wherever they are," Sarosiek said. "We are hopeful this will improve compliance, reduce surgery cancellations and postponements, improve patient outcomes and reduce hospital readmissions."

As the ERAS program rolls out to additional surgery services at UVA, so too will the [app](#). Gynecologic [surgery](#) will be the next program supported.

Provided by University of Virginia

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