

HOSPITAL CHARACTERISTICS

**OWATONNA
 HOSPITAL**

- ▶ Owatonna, MN
- ▶ 45 beds
- ▶ www.owatonnahospital.com/

Owatonna Hospital is a nonprofit regional medical center that includes a birth center, emergency care, surgery, and rehabilitation, as well as home and palliative care and hospice. It is a level IV trauma center. Part of Allina Hospital and Clinics, Owatonna serves the communities in and around Steele County, Minn.

S.T.E.E.E.P.



EFFECTIVE

For 74 percent of its patients, Owatonna decreased length of stay from six or seven days to three days or less following major abdominal surgery.



EFFICIENT

Decreasing length of stay by more than two days has decreased cost of care and helped expedite the patient's return to normal activity.



PATIENT-CENTERED

A patient education journal provides patients with information on how to prepare for surgery, what to expect and helps them track and discuss with providers their progress after surgery.

IMPROVING PATIENT RECOVERY AFTER SURGERY

The Problem

Major abdominal surgery, such as elective colon surgery or major hernia repair, is high risk. After surgery, patients typically have long stays in the hospital, which increases the risk for occurrence of deep vein thrombosis (DVT)—a blood clot in the legs or—and hos-

pital-acquired infections. Patients are at bedrest for much of their stay, which causes loss of muscle mass and strength. The standard practice of fasting before surgery also delays patients' return to normal intestinal activity

The Solution

Owatonna Hospital adopted the Enhanced Recovery Protocol (ERP), a three-step protocol that includes (1) education for the patient and family before surgery, (2) a process to maintain the patient's normal physiology and an epidural to control pain, and (3) patient ambulation four hours after surgery and return to a regular diet and activity within 24 hours.

Results

From May 2007 to August 2009, preliminary results show that after undergoing major abdominal surgery:

- » 74 percent of patients had a hospital stay of three days or less, a 50 percent decrease from the typical stay of six to seven days.
- » Only one incident of VTE has been reported, and no patients had respiratory issues.
- » No deaths have occurred, and only the patient with VTE was readmitted within 30 days. That patient has fully recovered.

Background

Owatonna Hospital uses a protocol devel-

oped by the Enhanced Recovery After Surgery (ERAS) study group, which includes hospitals in northern Europe and England. Collecting results from random control trials, the ERAS group found that many standard procedures in place for patients before and after surgery are not necessary. For example, standard practice has been for patients to fast the day before surgery. The study group concluded that fasting is not helpful and possibly harmful. With results from their trials, the ERAS study group developed an updated protocol for recovery after surgery. According to Keith Paley, MD, general surgeon, Owatonna Clinic-Mayo Health System, "[The protocol] was not a checklist of what to do, but a checklist of what not to do. It was based on what's been scientifically proved."

One of the group's primary authors, Mattias Soop, visited the Mayo Clinic to discuss his work. The Mayo Clinic now uses the protocol, and the University of Minnesota Medical Center is adopting it as well. Dr. Paley says that Owatonna may be among the first community hospitals in North America to use the protocol.

In February 2007 Owatonna had a trial run with the new protocol; the protocol was fully implemented by the end of May 2007. Since that time, Owatonna surgeons have enrolled 45 patients in the protocol for colon resection or incisional hernia repair. The

TEAM MEMBERS

Joanne Joachim, RN

Ambulatory Surgery

Sharon Kapp, RN

Medical-Surgical and Special Care Unit
Manager

Keith Paley, MD

General Surgeon, Owatonna Clinic-
Mayo Health System

Teresa Price

Pharmacist

Chris Turnbull

Nurse Anesthetist

Shirley Winslett

Dietician

protocol works for patients who will be hospitalized for 48 hours or longer, which for abdominal surgeries includes all colon surgeries and major hernia repairs but not minor hernia repairs.

**Principles of
Performance
Excellence**

Reducing Process Variation

An emphasis on educating all staff involved in patients' care helps ensure consistent and high-quality care. "Education is the key to the success," says Dr. Paley. Nurses attend training sessions and learn the physiology, adds Sharon Kapp, RN, medical-surgical and special care unit manager. Interdisciplinary training involves anesthesiologists, surgeons, ambulatory surgeons, nurses, pharmacists and dieticians from Owatonna Hospital and Owatonna Clinic-Mayo Health System.

On the day of surgery the preoperative protocol calls for administering an epidural for pain and low solute intravenous (IV) fluid, but the fluid volume is restricted. Patients also drink a clear liquid with complex carbohydrates before surgery. The epidural helps the patient manage pain control but contains minimal narcotics so as not to cause drowsiness. For the first four hours after surgery, nurses are staffed one to one with patients—almost unheard of at most hospitals. With the epidural, patients have good pain control and can start walking. IV fluids are limited and patients begin eating a regular diet within 24 hours.

Specific order sets for each phase of the process are published on the hospital intranet. This information provides nurses

with a clear and concise description of the protocol and its implementation.

Dr. Paley emphasizes that this protocol is especially important to small community hospitals like Owatonna, as they perform fewer of these kinds of surgeries. Hospital administration, physicians and nurses all are involved and on board. Owatonna's Joint Committee on Quality and Safety gave Sharon Kapp the okay to increase staffing levels after surgery. One-to-one nurse staffing needs leadership support to be implemented. "Everyone is supportive of change to improve things," says Dr. Paley. "We want to provide reliable, respectful care."

The Patient Experience

Patient and family education is another key to success. Dr. Paley says patients were "uniformly excellent" about complying with the protocol. Family members typically had posed more problems, such as questioning why a patient was made to walk soon after surgery. Now physicians and nurses educate the patient's family about preparation and expectations for surgery. This preoperative preparation begins in the clinic office, then with Joanne Joachim, RN, of the hospital's ambulatory surgery department. Patients receive a journal that includes step-by-step instructions to prepare for surgery and space for making diary entries after surgery. "Patients are well-educated about what to expect and what is expected of them," says Kapp.

Involved with the new protocol and active participants in their own care, patients recover more quickly and with fewer complications and readmissions. Patients begin walking the first night of surgery.

They are out of bed for eight hours the first day after surgery and advised to take four walks in the hall. If patients are up and about faster, it reduces their length of stay. For older patients, too much bed rest quickly results in loss of muscle tone. With the new protocol, these patients are less likely to spend time in a rehabilitation center before returning home.

Continual Improvement

Owatonna Hospital is spreading this successful program to other hospital units and other hospitals. After observing how patients benefit from early mobility—getting out of bed and moving more quickly after surgery—nurses are using the protocol for patient recovery after other surgeries. Owatonna is sharing the program with

other Allina hospitals. “It is very innovative to have a different protocol to enhance the type of care we provide to our patients,” says Kapp. Owatonna also examined readmission rates for its heart failure patients and developed a program to reinforce patient education and reduce readmission rates for those patients as well.