Enabling front line–driven perioperative quality improvement through organizational infrastructure built around the Comprehensive Unit Based Safety Program

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Summary

Many surgical departments are interested in quality improvement (QI). For sustainable success, front-line involvement is crucial for improving culture. Without improved culture, any QI strategy will be a struggle. Designing an infrastructure to support these principles is important. We describe our process creating this infrastructure, the multidisciplinary teams that drive change in our department and some of the processes and outcomes we have been able to improve.

Quality improvement (QI) in surgery is a priority for many health care centres. Increasingly, hospitals are understanding that an underlying culture in which front-line health care workers are focused on quality is essential to sustainable, ongoing improvement. Many leaders like to talk about this concept, but we assert that if a centre wants to involve front-line providers, an infrastructure to enable this must be created. As Don Berwick stated, "a system creates the results it is designed to produce." Without an infrastructure, there may be intermittent short-lived involvement; without sustained participation, culture will likely not improve.

A top–down type approach to improve quality in our department of surgery was initiated after data collected through the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) demonstrated a high surgical site infection (SSI) rate. During this time, there was minimal input from front-line staff and no improvement in the SSI rate. There was also a lack of surgeon ownership of this problem. The decision was made to use the Comprehensive Unit Based Safety Program (CUSP)[1,2] as our method of engaging health care providers, improving culture and improving surgical processes across the spectrum of the patient journey.[3] One of the most attractive aspects of CUSP to our group was its simplicity. Surgeons and other front-line providers easily understood the approach. People were able to get involved, have their ideas heard and start making changes. The relative ease of its implementation, the resulting quick wins and the flexibility in terms of issues it could address led to buy-in on multiple levels of our organization — the most important level being the front line. Our creation and implementation process is described in detail in Appendix 1, available at canjsurg.ca.

A CUSP team is a multidisciplinary team that in our institution is led by a dyad of a surgeon and nurse. The team members involved depend on the unit but should include anyone who comes into contact with the patients. Therefore, for the inpatient floor the CUSP team includes occupational therapists, physiotherapists, housekeeping staff, the ward clerk, front-line nurses, residents and others. Importantly, each team also includes a QI coordinator, who adds QI expertise to these front line–driven teams, and an engaged senior executive to facilitate change.

We started with 3 CUSP teams in the colorectal, vascular and orthopedic spine surgery fields in our department. With the quick wins we had in these areas, expansion continued to our current complement of 23 teams. Some of these teams are called "corporate" CUSP teams, as they address issues that are relevant across the entire department (e.g., antibiotics dosing, patient warming, blood glucose management). To ensure that teams can benefit from successes as well as lessons learned, we have monthly meetings in which the dyads are invited to share experiences as well as updates on new projects. A perioperative logistics team looks at the feasibility of proposed ideas that would incur substantial costs. Alignment of all these teams with the hospital and departmental vision occurs via an executive team that consists of our QI coordinators, senior executives from the hospital, department chairs of anesthesiology and surgery and front-line surgeons.

Ideas for improvement were solicited using a simple survey with the following questions. How will the next patient be harmed? What can be done to reduce this harm? Why do you think the next patient will get an SSI? What can we do to prevent the SSI? The 47 interventions that subsequently occurred were driven by the responses to the survey (Fig. 1).

A critically important result is that there are now 200 front-line health care providers involved in QI in surgery (as opposed to essentially zero when we first started). Surgical site infections across the department have not been solved, but in specific areas, such as bariatric surgery, the SSI rate has decreased from 10% to less than 1%. A new communication process was initiated on the general surgery inpatient floors and has led to decreased pages to residents, improved collaboration among the entire health care team and, not surprisingly, better patient experience scores. There has been improvement in initial dosing and redosing of antibiotics.

Warming of patients has improved, and there have been changes in wound management. Discharge rounds started on the general surgery floors and have spread beyond surgery to the internal medicine floors. We have even run an in situ simulation program for 22 surgeons and their teams to improve communication in the operating room.

Through the creation of an enabling infrastructure, we have been able to engage a multitude of front-line workers and their ideas. With CUSP now running for 3 years, sustainability has occurred because of the implementation of both small- and larger-scale projects; there is also now funding within the department to support surgeons. Health care providers have seen their ideas implemented and continue to see suggestions incorporated into improving the quality of care for patients. This has led to continued engagement and the incorporation of the idea of CUSP into the culture that exists in the department of surgery. Quality improvement is an ongoing process, and with our flexible infrastructure we feel we are well positioned to continue the journey improving the care of our patients.

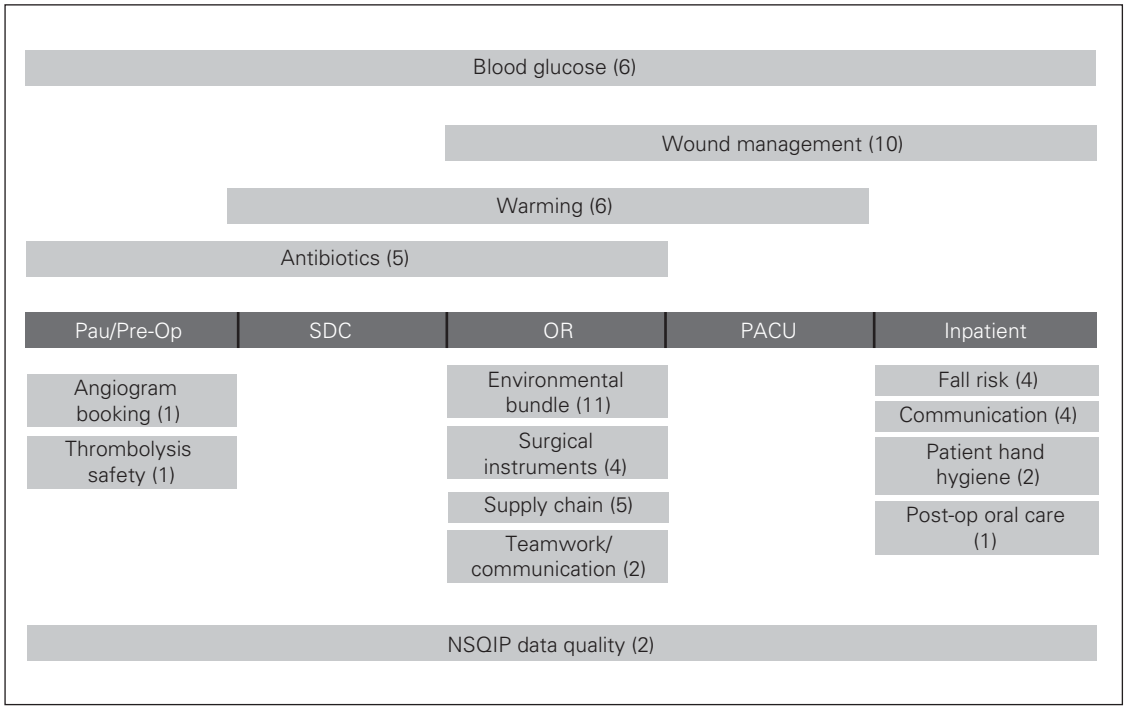

Fig. 1. Interventions spanning the spectrum of patient care. NSQIP = National Surgical Quality Improvement Program; OR = operating room; PACU = post-anesthesia care unit; Pau = pre-admit unit; SDC = same-day care.

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