A Canadian strategy for surgical quality improvement

David R. Urbach, MD
Ahmer A. Karimuddin, MD
Alice Wei, MD
Brent P. Zabolotny, MD
Guylaine Lefebvre, MD
Mark Walsh, MD
Morad Hameed, MD
Paola Fata, MD
Prosanto Chaudhury, MD
Robin S. McLeod, MD
Sean P. Cleary, MD

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Correspondence to:
D. Urbach
76 Grenville St, Room 8332
Toronto ON M5S 1B2
david.urbach@wchospital.ca

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Summary

The Canadian Association of General Surgeons (CAGS) Board of Directors hosted a symposium to develop a Canadian strategy for surgical quality and safety at its mid-term meeting on Feb. 24, 2018. The following 6 principles outline the consensus of this symposium, which included diverse stakeholders and surgeon leaders across Canada: 1) a Canadian quality-improvement strategy for surgery is needed; 2) quality improvement requires continuous, active and intentional effort; 3) outcome measurement alone will not drive improvement; 4) increased focus on standardization and process improvement is necessary; 5) new, large electronic medical record systems pose challenges as well as benefits in Canadian hospitals; and 6) surgeons in remote and rural hospitals must be engaged using tailored approaches.

The Canadian Association of General Surgeons (CAGS) Board of Directors hosted a symposium to develop a Canadian strategy for surgical quality and safety at its mid-term meeting on Feb. 24, 2018. The participants included CAGS executive officers, representatives of the provincial general surgery associations, CAGS committee chairs, resident representatives and invited guests. The purpose of the symposium was to explore jurisdictional perspectives and projects focused on surgical quality improvement, including initiatives such as the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) and those undertaken by the Canadian Patient Safety Institute (CPSI) and the Canadian Medical Protective Association (CMPA). The session blended scientific and policy points of view, with the overarching goal of identifying resources, strategic initiatives and products to plan a Canadian framework for surgical quality improvement.

Dr. Prosanto Chaudhury provided an overview of surgical quality improvement in Canada, with a special focus on the use of NSQIP, an increasingly popular approach to drive surgical quality improvement in Canadian hospitals. Most NSQIP hospitals in Canada are in British Columbia and Ontario, and there are more than 700 hospitals participating worldwide. Features of NSQIP include risk-adjusted outcomes, audited clinical data collection, 30-day postoperative tracking, team engagement and best practices. Barriers to using NSQIP include the expense; participation costs approximately $100 000 per year.

Dr. Robin McLeod outlined the history of Best Practice in General Surgery (BPIGS), which began in 2006. It stemmed from interest in evidence-based medicine and the need to standardize evidence-based practices in the divisions of general surgery at the University of Toronto teaching hospitals.

Several perioperative care guidelines were developed in areas such as surgical site infection prevention, venous thromboembolism prophylaxis and pain management. The necessary enablers to successful implementation were a multidisciplinary approach, recommendations and changes based on evidence and supported by opinion leaders, consensus (rather than

a top–down approach), support from hospital administration, and the recognition that quality improvement is an academic activity.

Dr. Ahmer Karimuddin discussed the CPSI's implementation of enhanced recovery after surgery (ERAS) in 5 provinces across Canada. It is the implementation of patient-focused, interdisciplinary, standardized, evidence-based perioperative guidelines that integrate preoperative, intraoperative and postoperative care. Implementation of ERAS reduces postoperative complications and length of hospital stay without increasing hospital readmissions.

Dr. Guylaine Lefebvre presented on behalf of the CMPA, which believes that surgical safety is an important factor for patients' well-being and the overall quality of the health care system in Canada. Using the example of the introduction of laparoscopic cholecystectomy — which resulted in an increase in medicolegal cases in its early years — Dr. Lefebvre outlined the CMPA's current interest in safe surgical care. Many harmful events are associated with faulty systems, processes and conditions that lead people to make mistakes or fail to prevent them. To help address this reality, the CMPA offers many workshops and educational programs for their physician members.

Outcomes

All attendees participated in a discussion to develop a Canadian strategy for surgical quality improvement. The strategy reflected concern that passive data collection and feedback programs (such as NSQIP) may be misunderstood as sufficient for quality improvement and may divert attention and resources from the active strategies that are necessary to improve care. Excellent quality-improvement programs invest the majority of their resources in improvement activities rather than measurement.

A Canadian quality-improvement strategy for surgery is needed

A national quality-improvement strategy outlines core principles that should guide quality-improvement activities in all the provinces and territories. Nationwide models in some countries, such as the UK, are constructed as "learning" systems: every patient who comes through the system informs the system and makes it better. In learning organizations, leadership supports learning by supporting a "systems" approach and establishing a culture of safety; clear and specific policies and procedures facilitate learning and encourage creativity among all staff.[1] As a national organization representing general surgeons and the practice of general surgery in Canada, CAGS is well positioned to lead a national surgical quality-improvement strategy. CAGS can connect opinion leaders across the country to share experiences and best practices, and provide training opportunities in advocacy and change management.

Quality improvement requires continuous, active and intentional effort

Strictly passive strategies, such as routine collection and feedback of outcome information, are unlikely to lead to meaningful or enduring change in practice. Comprehensive team-based initiatives, led by surgeons, have greater potential to improve quality. The history of adoption of new technologies and procedures in Canada, such as the example of laparoscopic cholecystectomy, shows that implementing new forms of clinical care requires active management. Quality improvement requires leadership at both the clinical and operational levels. While clinical leadership is natural for many surgeons, operational leadership — the capacity to create and lead committed teams, engage surgeons, evaluate programs and secure adequate resources — is increasingly necessary as quality-improvement programs become more complex and widespread across clinical programs. The Canadian experience clearly shows that change must be owned and championed by surgeons, who are supported and empowered to effect local change, in their own hospitals.

Outcome measurement alone will not drive improvement

Outcome measurement products, such as NSQIP, provide important information, but do not independently create change.[2] Hospital leaders may think that purchasing an off-the-shelf product "ticks the box" for quality improvement, but quality-improvement teams are the real drivers of clinical quality. Quality improvement requires a change-management strategy, with dedicated staff from a multidisciplinary background, including surgeons, nurses, affiliated health care providers and administrators. The cost of some commercially marketed quality-improvement products may make them unsustainable for hospitals over the long term, especially if initial funding commitments disappear. Promotion of quality improvement in Canadian hospitals should not focus on standardization or promotion of specific quality-measurement programs, but on activation of local teams committed to improvement.

Increased focus on standardization and process improvement is necessary

Comprehensive strategies aimed at strengthening processes of care, such as the BPIGS and CPSI initiatives like ERAS, provide practical, actionable and achievable guidance that affects clinical quality directly. Making providers accountable for their outcomes makes sense only when there is clear information on processes of

care that influence outcomes; direct measurement of processes of care and initiatives that automate the adoption of evidence-based quality processes are more effective than outcome measurement alone.[3]

New, large electronic medical record (EMR) systems pose challenges as well as benefits in Canadian hospitals

Health care information management systems are expensive, and the revenue cycle management function that these systems serve in US hospitals does not translate to improved financial performance in Canadian hospitals. While electronic data collection is important for quality improvement, the onerous data entry burdens of modern EMRs may fall to physicians in Canadian hospitals. Hospitals may mistakenly believe that EMRs alone serve as quality-improvement programs. Currently, EMRs and administrative databases do not provide the types of data that are useful for outcome measurement.[4] Reliable measurement of clinical quality is resource and time intensive. Lack of complete data on quality should not prevent a quality-improvement program from moving forward.

Surgeons in remote and rural hospitals must be engaged using tailored approaches

Rural surgical practice differs from university-affiliated and large, urban community hospitals. Quality improvement in these settings must be tailored to rural practice. Top–down recommendations are unlikely to gain traction; input from local stakeholders, including patients and physicians, is necessary.

Affiliations: From the University of Toronto, Toronto, Ont. (Urbach, Wei, McLeod); the University of British Columbia, Vancouver, BC (Karimuddin, Hameed); the University of Manitoba, Winnipeg, Man. (Zabolotny); the Canadian Medical Protective Association, Ottawa, Ont. (Lefebvre); Dalhousie University, Halifax, NS (Walsh); McGill University, Montreal, Que. (Fata, Chaudhury); and the Mayo Clinic, Rochester, Minn. (Cleary).

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