

Surgery Strategic Clinical Network: Improving quality, safety and access to surgical care in Alberta

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Publicly funded surgical care in Alberta is delivered at 55 hospitals and 42 nonhospital surgical facilities, with more than 293 000 surgeries completed per year at an annual budget of about \$2 billion.¹ However, about 1.6% of Alberta's population is on a surgical wait list (70 000 out of 4.3 million Albertans), and about 50% of these patients are waiting longer than clinically recommended.^{2,3} The number of Albertans waiting for an initial consultation with a surgical specialist is unknown. In August 2019, the Blue Ribbon Panel on Alberta's Finances reported that per capita health care expenditures in Alberta (\$5077) were higher than other provinces (e.g., British Columbia, \$4267; Ontario, \$4080; and Quebec, \$4370), but Alberta lagged behind these provinces on several key performance indicators, such as wait times, lengths of stay and readmission rates.⁴ The needs of these patients are diverse, and root causes for untimely access and outcomes are complex and require system-level solutions that address fundamental and recurring challenges such as inefficient referral pathways, increasing disease chronicity, variation in surgical outcomes, antiquated models of care that are provider centric and a mismatch between demand and system capacity.

Recognizing the need to address these challenges at a systems level, Alberta Health Services created the Surgery Strategic Clinical Network (SCN; www.ahs.ca/surgeryscn) in 2013 with the goal of bringing together front-line health care professionals, operational leaders, academic partners and the community to identify priorities and develop novel solutions to transform the surgical landscape in Alberta. At the time, common metrics, processes and approaches to explicate surgical care were lacking. Although there were several quality-improvement initiatives at local sites, they were not centrally coordinated, integrated or widely shared. The creation of the Surgery SCN sparked a paradigm shift toward system innovation and learning, with a focus on using objective data to drive change and improve outcomes.

From the beginning, it was imperative that the Surgery SCN balance local, facility-based needs and priorities for efficient and effective service delivery (the operational business) while also identifying areas for collective action, improvement and innovation (the strategic business). In its first 3 years (2013–2016), the network focused on specific actions, tools and processes that would improve access,

KEY POINTS

- Timely and equitable access to surgical care continues to feature prominently in public discourse and policy debates across Canada and is currently under scrutiny by Alberta decision-makers.
- The first 4 years of the Surgery Strategic Clinical Network (SCN), which was created in 2013 with a mandate to address gaps in care and unwarranted variation, were a “learning-and-doing” period, after which it shifted to a more strategic focus and approach.
- Comprising operational leaders, clinicians, academic partners and patient advisors, the Surgery SCN has successfully co-designed, tested, validated and implemented major surgical quality-improvement programs with substantial returns on investment.

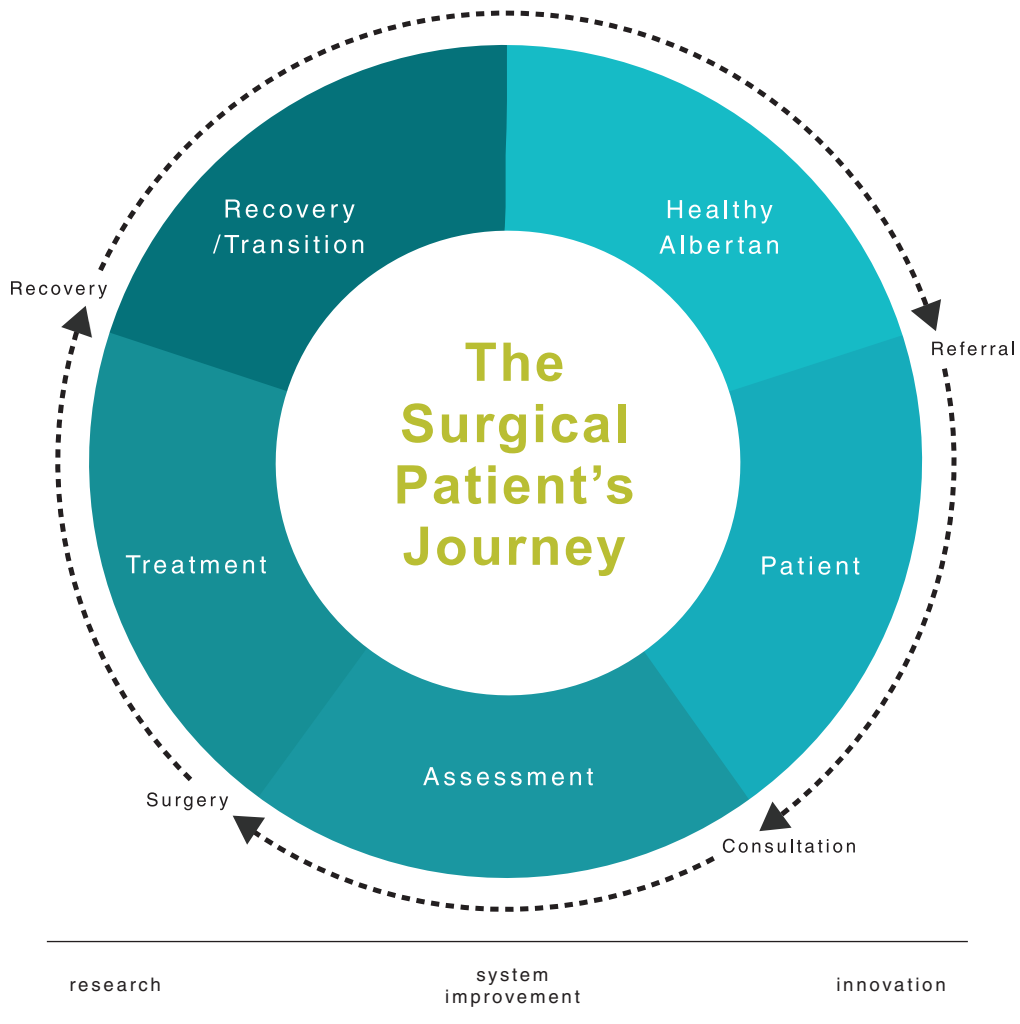
safety and quality of surgical care, and enable ongoing measurement and improvement. Three examples of this work include developing a standardized measurement system, the Alberta Coding Access Targets for Surgery tool to elucidate scheduled wait times, customizing and implementing the Safe Surgery Checklist to reduce surgical errors and implementing care pathways on a provincial scale (e.g., Enhanced Recovery After Surgery guidelines) to standardize care and improve patient outcomes and experience.

These initiatives have provided considerable value to the people of Alberta through improved outcomes, patient experience and access to surgical care, system-wide learning and quality improvement on a provincial scale. The network has contributed to the successful implementation of this work and its ongoing evaluation. For example, the Alberta Coding Access Targets for Surgery⁵ has improved transparency for surgical wait lists and how they are managed. When a surgery is booked, each patient is assigned 1 of around 2000 diagnostic codes, with a recommended maximum wait time and a “ready-to-treat” date. These data are used to optimize wait lists for surgeons to ensure that urgent cases are prioritized and patients who have been waiting the longest are operated on first. The common measurement system was developed and is adjudicated through consensus by surgeons, bringing together the subspecialties across the province. The implementation was coordinated through a provincial team working directly with surgeons, their medical office assistants, medical and administrative

leadership in the hospitals, and the surgical booking offices. The system has provided a consistent, transparent means to monitor and report surgical wait times — highlighting areas where variation in surgical scheduling continues and a data-driven mechanism to engage surgeons in discussion of utilization of surgery.

The Surgery SCN played a similar role in supporting the implementation of the Safe Surgery Checklist. Alberta was the first province in Canada to implement this checklist in all operating rooms, an outcome enabled through collaboration and effective partnerships. Broad engagement across regions and collaboration among clinicians, operational leads and patient advisors was critical to navigate challenges, create buy-in and ensure solutions reflected site-specific and procedural needs. Through ongoing communication and feedback, compliance and outcome continue to improve. Performance data have shown that the checklist has prevented errors in about 4% of surgeries.⁵ All surgical sites in Alberta utilize the checklist, and the overall compliance rate has increased steadily from 48% in 2011 to 97% in 2018–2019, while the number of averted errors has declined over the same period from 314 to 137.⁶

First pioneered in the 1990s, the Enhanced Recovery After Surgery program is a bundle of interventions occurring before, during and after surgery that are intended to accelerate recovery by modifying the patient’s response to major interventions. In collaboration with academic partners, the Surgery SCN was successful in securing provincial grant funding to adapt and implement Enhanced Recovery After Surgery guidelines at 8 hospital sites using 9 different care pathways.^{7,8} Physician and nurse champions, armed with pathway adherence and surgical complication data, working with unit-level surgical teams to drive quality-improvement efforts, layered with strong leadership and a provincial coordination and learning approach has led to substantial improvements in the system and for patients. For patients undergoing colorectal surgery, implementation of the guideline led to lower lengths of stay and decreased complications, resulting in substantial cost savings for treatment for patients with cancer (range \$1096–\$2771/patient) and without cancer (range \$3388–\$7103/patient).⁹ Based on the assessment of 1295 patients undergoing colorectal surgery, the net cumulative savings to the health system for the period June 2013 to



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The Surgical Patient's Journey serves as a central framework for the Surgical Strategic Clinical Network (SSCN).

March 2015 were estimated at \$2 290 000 (range \$1 191 000–\$3 391 000) or \$1768 (range \$920–\$2619) per patient. Another study involving the same cohort of patients found that the return on investment for every \$1 was \$3.8.¹⁰

As the Surgery SCN has matured and looked to build on the success of these initiatives, it has recognized the need to be more strategic in future endeavours. In 2017, the network began a comprehensive consultation process with major stakeholders (i.e., the provincial government, front-line staff, patient and family advisors, operational leaders and academic partners). This informed the network's Transformational Roadmap for 2018–2021 (<https://www.albertahealthservices.ca/assets/about/scn/ahs-scn-surg-roadmap.pdf>),¹¹ which provides strategic guidance over the next 3 years. The roadmap identified the Patient's Surgical Journey (see figure) as the central framework, and set out 4 strategic objectives that are critical to the future improvement of surgical care in Alberta. These objectives focus on improving access to surgical care; providing safe, high-quality care; building a strong surgical community; and using analytics and evidence to guide decisions.

Since its inception, the Surgery SCN has galvanized the surgical community to work toward generating and implementing data-driven evidence to enhance patient-centred surgical care for all Albertans. Despite progress over the past 5 years and a deep asset base from which to build, there is a clear need to continue to bring Alberta's surgical community together, leverage the single health system, put citizens of Alberta first, and spread and sustain solutions at a provincial scale to tackle the complex issues related to the delivery of surgical care.

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