Rural Coordination Centre of BC
Enhancing rural health through education and advocacy
Linking community needs and policy development with the JSC

Rural Surgery, Operative Delivery, and Trauma Response Networks

Project Summary

Robust local surgery programs are the cornerstones of rural health care infrastructure and are recognized to be essential for the sustainability of local maternity care. The presence of local surgical first response capacity is also foundational to comprehensive emergency and trauma care. All of these services are essential to the healthy development of towns and their surrounding districts.

The past two decades has seen the attrition of these local surgical programs, and the corresponding reduced access to care for vulnerable rural and Indigenous populations. This proposal offers a series of interventions to stabilize, support, and enhance BC's rural surgical programs, and thus its maternity and trauma programs as well. It is aligned with a national consensus on networked surgical care,[i] and also aligns with provincial policy directions aimed at strengthening the interface between primary and specialist care,[ii,iii] optimizing the use of resources by determining appropriate location of procedures,[iv] and supporting rural access to Specialist consultation and support through networks of specialized teams.[v]

This document outlines a project that will build Surgical Networks to support safe and appropriate 'closer to home' surgery, operative delivery and maternity care, and trauma response in select local geographical regions of British Columbia. These Surgical Networks will have five mutually-supporting components:

Components of the Proposal:

1) Clinical Coaching and Training Opportunities
2) Remote Presence Technology
3) Increased Scope and Volume of Rural Surgery Programs
4) Evaluation of Network Functioning
5) Continuous Quality Improvement (CQI) Mechanisms

Clinical Coaching and Training Opportunities will include formalized **clinical coaching** that will provide opportunities for GPs with Enhanced Surgical Skills (ESS), GP Anesthetists (GPA), and OR Nurses to work with surgeon, anesthesiologist, and nurse coaches. The **UBC C-Section Training Program** in Surrey is a much-needed training site in BC for ESS to be able to meet community need, and this project will work with UBC to expand the opportunities available for BC physicians. **Trauma Networks** are also being developed that will provide training and support for BC rural physicians.

Remote Presence Technology will provide the skeleton upon which coaching, mentoring, and urgent support can be facilitated at low cost when not possible in person. Built on existing communication networks, additional endpoint technology will allow surgeons separated by distance to stand shoulder-to-shoulder in the OR. Endpoints may consist of fixed, mobile, or wearable cameras. These applications have proved effective in other jurisdictions, such as Saskatchewan and Labrador. The technology will also provide essential opportunities for CQI and evaluation.

Defining Surgical Networks

Surgical Networks provide a way of thinking of appropriate services for all residents of a geographic region as close to home as possible. These Surgical Networks:

- **Optimize existing patterns** of care provider referral, triage and feedback between rural, regional, and tertiary sites to support optimal patient care;
- Are built on **natural geographic population catchments** that reflect established referral patterns;
- Assume **regional oversight** to ensure that location of care matches clinical need with available capacity;
- Facilitate a **decentralized model of patient care** within the mandate of **'closer to home'**;
- Rural surgical and obstetrical programs become **outreach extensions of core referral hospital surgical programs** with the organization of services respecting the **sustainability of both programs**;
- Facilitate robust and collaborative **Continuous Quality Improvement** and **Continuing Professional Development**;
- Are underscored by **collaboration and trust between all players** and require facilitation and leadership by trusted stakeholders.

Adapted from Kornelsen, J., Friesen, R. (2016). Building rural surgical networks: an evidence-based approach to service delivery and evaluation. Healthcare Policy, *12(1), 37-42.*

The **Increased Scope and Volume of Rural Surgery Programs** will have the dual benefit of enhancing the sustainability of small volume surgical programs and meeting the provincial priority of reducing wait times for patients [iv] by providing safe and appropriate services 'closer to home'. OR time will be increased by one day per week at small sites in collaboration with referral centre specialists performing surgeries from their wait lists. The utilization of local capacity for regional wait times will increase closer to home access to surgery for patients, provide local coaching opportunities, and sustain local programs by increasing OR time for OR Nurses and GPAs, maintaining competence and effective service delivery.

Evaluation of Network functioning, as well as **wait times**, **utilization** and **cost-effectiveness** will be integrated into the networks on an iterative and ongoing basis. Formal evaluation tools to assess network functioning will be NSQIP[vi] compatible and are being developed by the national Network Reference Group.

Continuous Quality Improvement programs will allow for the ongoing and iterative improvement of local performance at a team level. Constructing a Surgical Network entails the construction of a CQI system; clinical coaching, remote presence technology, and the evaluation of network functioning all serve this goal. The robust **evaluation of surgical outcomes** will develop emerging sources of quality outcome data relevant to rural surgical patients in order to move towards the goal of introducing monitoring of quality indicators to all hospitals in BC[iv]. Indicators will be developed, adapting NSQIP to the rural context, appropriate to the scope and level of care at small sites. Patient level clinical outcomes will be gathered and analyzed by facility, through a **dedicated OR Nurse** at each site.

Partnerships

The development and implementation of Surgical Networks in BC will require fostering and leveraging reciprocal relationships between key stakeholder organizations and communities. Project elements that will require funding support out of these relationships include:

- Administrative and clinical leadership for each site and geographical Surgical Network;
- Endpoints and clinical support for Remote Presence Technology;
- Remuneration for coaching, mentoring, and support;
- Expansion of OR time at select small surgical sites;
- Ongoing research and evaluation of Surgical Networks functioning;
- Outcomes evaluation and "best practices" knowledge translation, including OR nurse data collection.

Key partnerships will potentially include **provincial** level organizations such as the Ministry of Health, Joint Standing Committee on Rural Issues and other Collaborative Committees and programs; **regional** Health Authorities; **national** organizations such as the Canadian Initiative for Rural Surgery and Operative Delivery, SOGC, CAGS, CFPC, RCPSC, and the Trauma Association of Canada; and **communities**, including hospital foundations and the Union of BC Municipalities, and Divisions of Family Practice.

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[i] Iglesias, S., Kornelsen, J., Woollard, R., Caron, N., Warnock, G., Friesen, R., Miles, P., Haines, V.V., Batchelor, B., Blake, J., Mazowita, G. (2015). Joint position paper on rural surgery and operative delivery. *Can J Rural Med*, 20(4), 129-38.

[ii] *Rural Health Services in BC: A Policy Framework to Provide a System of Quality Care*, 2015

[iii] *Setting Priorities for the BC Health System*, February 2014

[iv] *Future Directions for Surgical Services in British Columbia*, 2015

[v] *Primary and Community Care in BC: A Strategic Policy Framework*, 2015

[vi] National Surgical Quality Improvement Program