

Analysis of General Surgery and Anesthesiology Services and Workforce Alignment in Newfoundland and Labrador

Objective

To compare the level of general surgery and anesthesiology services in Newfoundland and Labrador (NL) to those in Tasmania (TAS) and to assess the alignment of the workforce and level of service provided in each hospital and health centre.

Practice Points

1. Sustainability is a challenge for workforce adequacy especially in smaller hospitals.
2. In NL, most emergency surgeries do not occur in small hospitals.

Results

Table 1. Number of Facilities in TAS and NL Providing Each Level of General Surgery Services

Level	Description	TAS	NL
2	Low complexity surgery is performed on low to medium-risk patients undergoing ambulatory procedures requiring local anesthetic, but not sedation	0	9
3	Surgery is performed on patients undergoing ambulatory or day surgery procedures	1	0
4	Surgery is performed on low to medium risk patients undergoing major surgical procedures with low to medium anesthetic risk	1	3
5	A combination of procedures with a moderate to high level of complexity and risk are performed	1	7
	Management of some patients with comorbidities and risk of intra- and post-operative complications occurs		
	Ability to support patients in the post-operative stage 24 hours		
	Has the ability to undertake most emergency surgeries		
6	Manages the most complex and highly specialized surgical presentations with the highest level of risk in specified areas of expertise	1	2

Table 2. Number of Facilities in TAS and NL Providing Each Level of Anesthesiology Services

Level	Description	TAS	NL
2	Analgesia/minimal sedation performed by a physician credentialed to provide anesthesiology services	8	9
3	Low to medium-risk local anesthetics, neuraxial block and regional block for low to medium anesthetic risk patients undergoing procedures that do not require general anesthesia	1	0
	Low to medium-risk general anesthetics are provided to patients (ASA 1–3) undergoing Surgical Complexity III (SCIII) procedures		
4	General anesthetics on moderate to high anesthetic risk patients (ASA 1–4) undergoing day surgery or major surgical procedures	1	1
	Anesthesia is administered by a specialist anesthesiologist		
5	Surgery is performed on low to high anesthetic risk patients (ASA 1–4) undergoing complex major surgical procedures	1	9
	A combination of procedures with a moderate to high level of complexity and risk are performed		
	Management of some patients with comorbidities and risk of intra- and post-operative complications occurs		
	Anesthesia is administered by a specialist anesthesiologist with support from anesthesiology residents		
6	Manages the highest level of anesthetic risk in a range of specialties in conjunction with the most complex surgical and medical presentations that have a high level of complexity or risk to patients with an extensive range of comorbidities requiring specialist staff	1	3

- Many more hospitals in NL compared to TAS provide complex surgical procedures and the corresponding level of anesthesiology services.

Table 3. Description of Workforce Requirements to Provide Each Level of General Surgery Services

Level	Workforce Description
2	Physician to coordinate care
	Registered nurses (RNs) with appropriate post graduate qualifications and/or experience; RNs may be supported by Licensed Practical Nurses (LPNs) in providing care to low complexity general surgical patients
	General surgeon available for consultation
3	Visiting specialist with credentials in general surgery or other surgical specialties may be available
	Physicians credentialed to administer anesthesia
	RNs with appropriate post graduate qualifications and/or experience in perioperative nursing; RNs may be supported by LPNs
	Medical, anesthesia and nursing pre-admission services
	Access to allied health services, as required
4	Specialist surgeons, specialist anesthesiologists, critical care specialist on-site; and on-call 24 hours
	Surgical and anesthesiology residents on-call 24 hours
	RNs with appropriate post graduate qualifications and/or extensive experience in perioperative nursing on-call 24 hours
	RNs with appropriate post graduate qualifications and/or experience in post-operative nursing; RNs may be supported by LPNs in providing care to inpatients
	Clinical nurse specialist providing leadership in perioperative and postoperative care
	Clinical nurse educator
	Access to designated allied health services appropriate to the level of general surgical services being provided
5	Access to specialized allied health services
	Access to multiple surgical sub-specialties on-site; and on-call 24 hours
6	Broad range of surgical sub-specialists available on-site
	Dedicated surgical staff with clinical competency in a range of sub-specialty areas available at close proximity 24 hours
	Allied health professionals available 24 hours, as required

Table 4. Level of General Surgery Services and Level of Workforce Providing General Surgery Services for Each Hospital in NL

Hospital	Service Level	Workforce Level
Eastern Health (EH)		
Health Sciences	6	6 (5A)
St. Clare's	6	6 (5A)
Janeway	-	-
Carbonear	5	5
Burin Peninsula	5	4
Dr. G.B. Cross	5	4
Central Health (CH)		
James Paton	5	6 (5A)
Central NL	5	6 (5A)
Western Health (WH)		
Western Memorial	5	4
Sir Thomas Roddick	5	4 (3M)
Labrador-Grenfell Health (LGH)		
Charles S. Curtis	4	4 (2M)
Labrador	4	4 (3M)
Labrador West	4	4 (2M)

- Most hospitals do not have the full required workforce for the level of surgical services being provided.

Table 5. Description of Workforce Requirements to Provide Each Level of Anesthesiology Services

Level	Workforce Description
2	Physician credentialed to provide anesthesiology services
	Access to specialist anesthesiologist for consultation
	Must be a minimum of three appropriately trained staff present: the proceduralist, the practitioner administering sedation and monitoring the patient, and an assistant
	The assistant must be exclusively available to the practitioner administering sedation at induction of and emergence from sedation, and for general anesthesia throughout the procedure
3	RN with experience/post graduate qualifications in anesthesiology nursing
4	Specialist anesthesiologists on-site
	Specialist anesthesiologists on-call 24 hours
	Anesthesiology residents on-call 24 hours
5	Specialist anesthesiologist on 24 hour roster for low, moderate and high risk patients
6	Anesthesiology resident on-site 24 hours
	Broad range of surgical sub-specialties services on-site and available at close proximity 24 hours

Table 6. Level of Anesthesiology Services and Level of Workforce Providing Anesthesiology Services for Each Hospital in NL

Hospital	Service Level	Workforce Level
Eastern Health (EH)		
Health Sciences	6	6
St. Clare's	6	5
Janeway	6	4
Carbonear	5	2N; 5M
Burin Peninsula	5	5
Dr. G.B. Cross	5	5
Waterford	2	-
Miller Centre	2	-
Central Health (CH)		
James Paton	5	5
Central NL	5	5
Western Health (WH)		
Western Memorial	5	5
Sir Thomas Roddick	4	3
Labrador-Grenfell Health (LGH)		
Charles S. Curtis	5	-
Labrador	5	2
Labrador West	5	-

- Hospitals in Eastern, Central, and Western Health generally have an appropriate workforce for the level of anesthesiology services being provided, however hospitals in the Labrador-Grenfell region do not have an adequate workforce to provide the higher risk and complexity anesthesiology services in those hospitals.

Conclusions

Given the lower need for complex surgeries at smaller sites in NL, it may make more sense to limit the complexity at such sites to match the available workforce than to try to bring the workforce level to where it should be for the more complex cases.