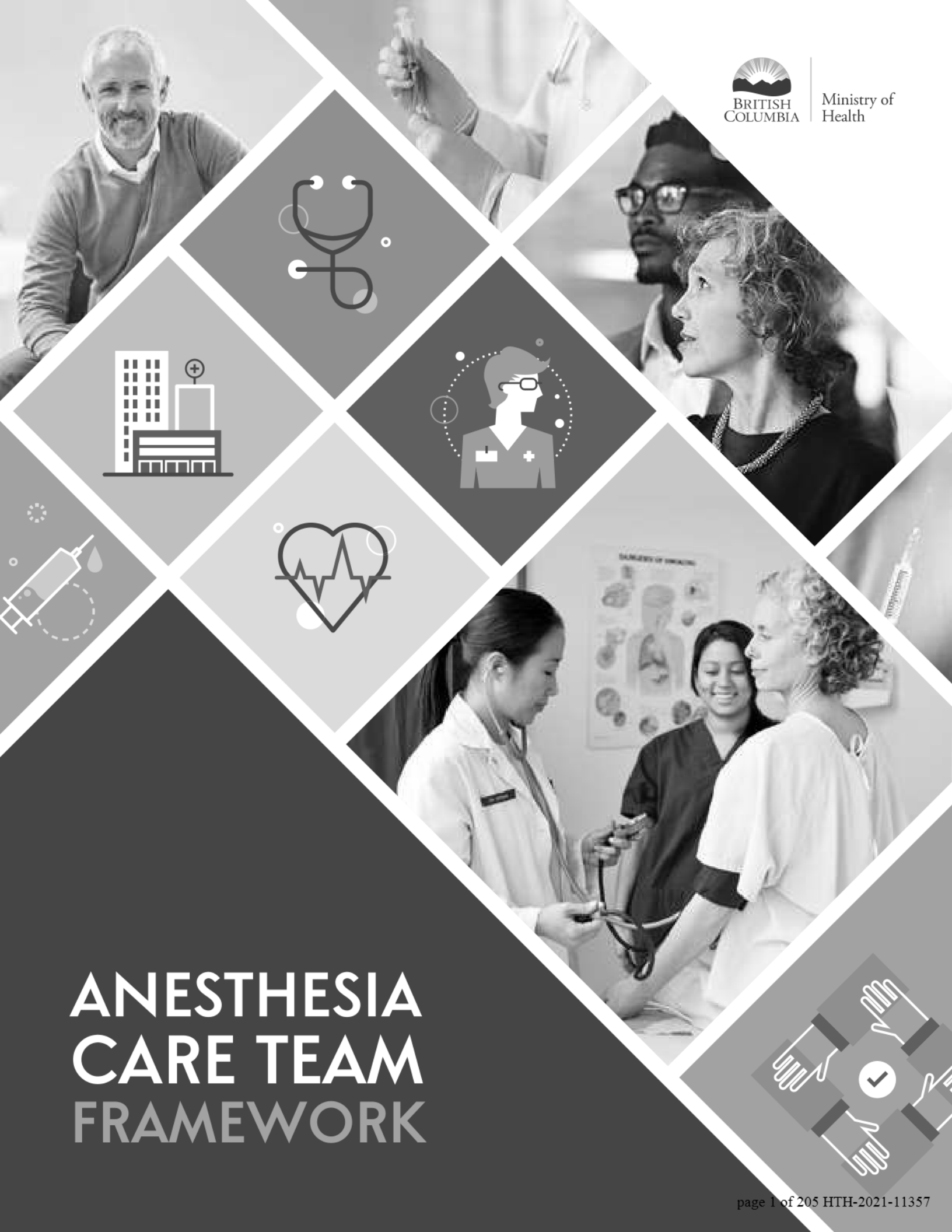

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ANESTHESIA CARE TEAM FRAMEWORK

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The Impact of Population Density on Certified Registered Nurse Anesthetist Scope of Practice in Arizona

Dr Michael MacKinnon FNP-C CRNA

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ADVICE TO MINISTER

CONFIDENTIAL ISSUES NOTE **Ministry: Health** **Date: March , 2021** **Minister Responsible: Adrian Dix**	**Nurse Anesthetist**

ISSUE SUMMARY:

- In May 2020, B.C. government launched *A Commitment to Surgical Renewal in B.C.,* a provincial Plan that outlines the steps and related actions to renew the surgical system and build system capacity to address patient surgical needs; the pent up surgical demand as a result of the impact of COVID-19; and keep up with the ongoing demand over the long term.
- Increasing personnel is integral to the Plan, acknowledging that surgical system renewal and surgical capacity cannot be sustained by existing anesthesia staff. As such, it identifies the need to look at alternative models to address immediate and long standing service gaps, including Anesthesia Care Teams (ACTs) and nurse anesthesia.
- There is also an identified need to improve equitable access to anesthesia services through the implementation of service models that: optimize all provider roles (both current and future roles); support scalability; provide quality care; are responsive to geographical anesthesia care needs; and are sustainable over time.
- Traditionally in B.C. and in the Canadian context, anesthesia service delivery has been focused on a physician-centric delivery model to meet service demands. This care model is not sustainable as it is solely contingent on the availability of anesthesiologists.
- In the absence of an existing education program in B.C., the initial implementation will require recruitment of a small number of Certified Registered Nurse Anesthetists (CRNAs) s.13

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BACKGROUND REGARDING THE ISSUE:

- In the current B.C. and Canadian health care landscape, physicians are the sole provider of anesthesia services with anesthesia care primarily delivered by anesthesiologists, complemented by a family practice (FP) anesthetist model of care (typically in more rural and remote settings). In some areas of the province, Anesthesia Assistants (AAs) also provide dedicated intraoperative support under the direction of the anesthetist.
- Anesthesiologists provide traditional hospital care in 4 areas: perioperative, obstetrics, critical care, and pain management.
- In 2012, B.C. government explored a nurse practitioner nurse anesthetist role; however, this was not implemented due to issues related to health system readiness, funding, and changes in ministerial leadership.
- Since April 1st, 2020, 32 anesthesiologists and three general-practice anesthetists have been hired. However, gaps in anesthesia care and anesthesiologists persist.
- Nurse anesthesia, an advanced practice nursing domain, has been adopted in 107 countries world-wide with nurse anesthetists participating in more than 80% of all anesthesia in the world. They are the sole providers in 60% of the cases.[1]
- The U.S. Certified Registered Nurse Anesthetist (CRNA) model is considered the gold standard and most developed in the world. Nurse anesthetists have been providing anesthesia care to patients in the United States for more than 150 years.[2]
- Nurse Anesthetists (in the US) are highly trained registered nurses (CRNAs) with at least one year of critical care experience, who have successfully completed a Master in Anesthesia, and written the National Board of Certification and Recertification for Nurse Anesthetists (NBCRNA). They practice either independently as the most responsible anesthesia provider within their competencies (for American Society of Anesthesiologists (ASA) classification levels 1-4) or in a collaborative model under the supervision and/ or delegation of an Anesthesiologist. Similar to anesthesiologists and family practice anesthetists, the nurse anesthetist's scope of practice includes the full spectrum of tasks and activities within the anesthesia care environment.
- CRNAs comprise approximately half of anesthesia care providers and administer over

[1] International Federation of Nurse Anesthetists (INFA). About INFA web page. Refer to: https://ifna.site/about-ifna/

2 American Association of Nurse Anesthetists (AANA). Updated February 1, 2021. Certified Registered Nurse Anesthetists Fact Sheet. Retrieved from: https://www.aana.com/membership/become-a-crna/crna-fact-sheet

49 million anesthetics on an annual basis in the U.S. Increasingly, a number of states (26 states, and the District of Columbia) do not have a requirement for physician involvement in nurse anesthesia services (the remaining states require physician involvement in diagnosing and treating patients).

- The scope of practice between CRNAs and anesthesiologists in the U.S. is comparable. However, physicians currently have a longer course of study i.e., a four-year residency in anesthesiology (in addition to completion of medical school) compared to a two to three-year master's level preparation for nurse anesthetists.
- CRNAs provide the full spectrum of anesthesia care across the lifespan; patient health status may range from healthy through to life-threatening illness or injury, as aligned with the classification system of the American Society of Anesthesiologists (for ASA levels 1-4).
- Studies have found no difference in outcomes between CRNAs and physician anesthetists, and there are no definitive statements that can be made about the superiority of one type of anesthesia care over another (see footnoted citations).
- A Ministry of Health project working group has been convened in collaboration with the BC College of Nurses and Midwives (BCCNM), with plans for a governance structure with health authority representation to be embedded within a broader Anesthesia Care Team Steering Committee in April 2021.

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OPTIMIZING ANESTHESIA CARE IN B.C.

2021 AND BEYOND

BRITISH COLUMBIA | Ministry of Health

May 2021

CONFIDENTIAL

LAND AKNOWLEDGEMENT

WE ARE A GUEST ON THIS LAND

BRITISH COLUMBIA | Ministry of Health

April 2021

CONFIDENTIAL

Overview

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- Setting the Context
- Anesthesia Care Teams (ACT) – Model & Framework
- Providers in Anesthesia Care Teams
- Implementing the ACT Model

Context

Why Review Anesthesia Care Delivery in BC?

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Government Direction

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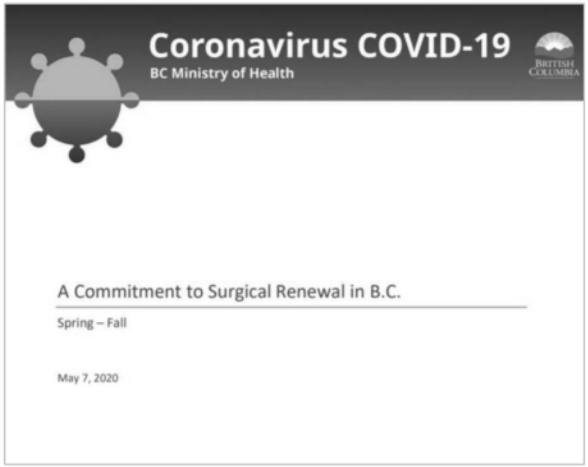

Surgical Renewal

- Acknowledges surgical system renewal and surgical capacity cannot be sustained by existing anesthesia capacity
- Identifies need to look at alternative models to address long standing service gaps, including ACTs and the role of nurses in anesthesia care

Throne Speech 2021: reduce wait times by permanently changing the way we deliver surgeries in B.C. to get more patients their surgeries faster

Current State

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Some progress has been achieved:

- Recruitment efforts and new hires
- Education seat expansion
- Ongoing provincial contract implementation
- Some waitlist reduction
- Commitment to partnership and collaboration

System Challenges

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- Wait times for non-urgent surgeries exacerbated due to COVID-19
- 2021/22 will see ~97,000 hours of in-OR time added compared to 2019/2020 (translates into an additional 1,635 hours of operating room time per week)
  - An estimated **82 *net new*** anesthesiologists are required to meet the patient demand
- More capacity will be needed in the future
- Pandemic, work-life balance, mental wellness

ANESTHESIA CARE TEAMS

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ACT Model of Care

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ACTs are interprofessional teams that reflect optimized scope of practice for available human resources, tiers of service, and complexity with roles such as:

- anesthesiologist;
- family practice anesthetist (FP-A);
- anesthesia assistant (AA); and
- nurses in anesthesia care

Macro Anesthesia Care Process

- Each ACT member has a different scope of practice which determines the type of anesthesia activities they can provide.
- By aligning providers' unique competencies within the Macro Anesthesia Care Process based on patient need, then the **right provider, right care, right time and right patient opportunities exist.**
- Optimization of scope of practice for each ACT member can occur.

ACT Roles

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- The Most Responsible Provider (MRP) acting in the most responsible role on the ACT assumes full responsibility for the provision of anesthesia services.
- ACT members are clinically responsible to the MRP.
- Each professional role will be clearly delineated with common understanding of responsibilities and accountabilities.
- Scope of practice, autonomy and level of supervision of ACT members
  - Agreed upon in advance with the MRP
  - Ratified by the hospital/facility management

Macro Anesthesia Care Team Process

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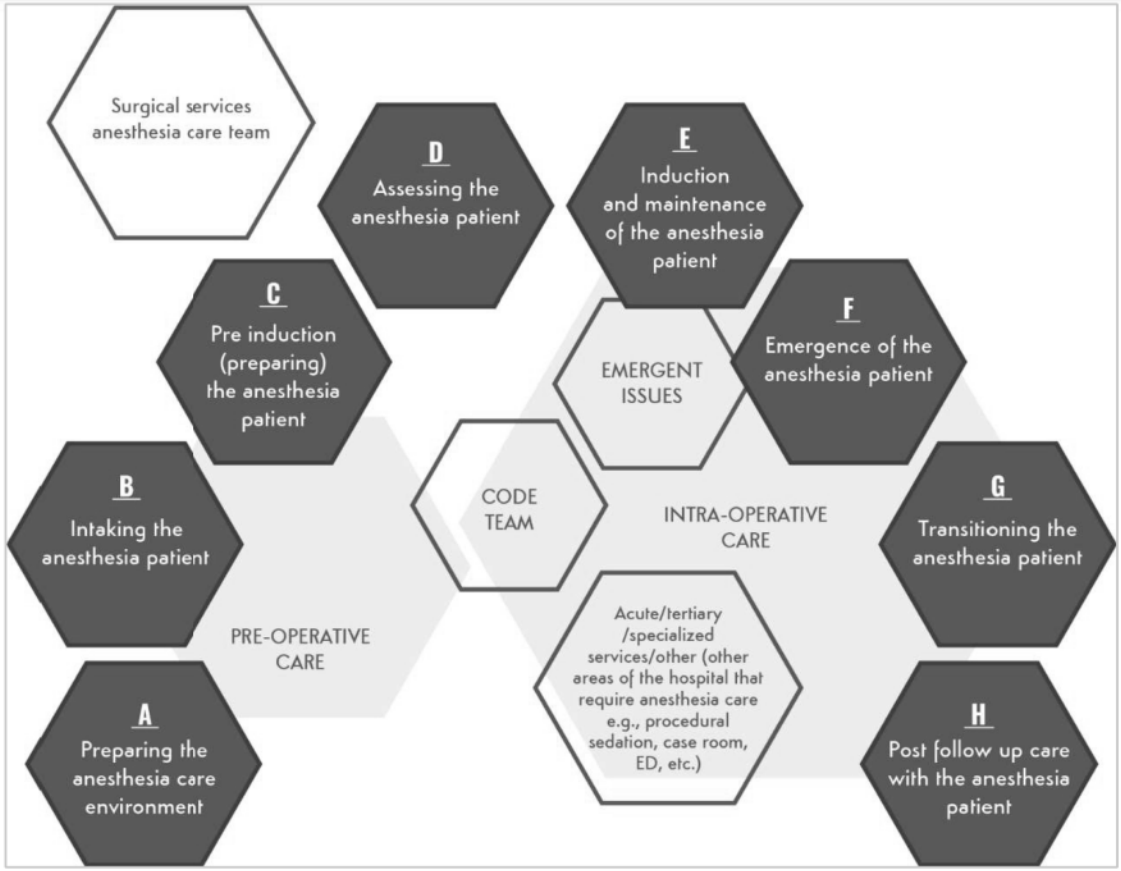

ACT Model: Benefits and Outcomes

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The ACT model promotes a quality working environment for all team members by:

- Enabling providers to work to their optimal professional scope of practice
- Improving consistency and quality of supports available for providers
- Promoting collaborative practice environments that support shared and unique competencies of various interprofessional providers

ACT Model: Provider Benefits

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- **Work-life balance and mental wellness:** pressures faced by providers including increases in workloads can be reduced by spreading the workload across more members of an interprofessional team.
- **Diversification of all roles:** team-based model enables task shifting, promoting professional diversity and scope optimization for providers.
- **Recruitment:** quality work environments that promote work-life balance can attract new providers and support recruitment.
- **Retention:** enhanced well-being and job satisfaction of team providers can improve workforce retention.

ACT Model Framework

Enables implementation of various types of ACT models and team composition based on:

- Demonstrated community need
- Capacity of facility to deliver/provide support for various tiers of services
- Available providers to provide adequate supervision, ongoing support to ACT members and ability to ensure continued competency

The ACT framework does not focus on one standard model of ACTs but provides a guide to build care around the patient where discussions about roles including MRP can happen withing the local context

Performance Measurement

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Ensure the provision of safe anesthesia practices and measure, monitor and report on outcomes and impacts of ACT models through:

- Oversight of model implementation and regular reviews of performance reports by performance measurement governance body
- Accountability agreements established with each participating site
- Data base audits to ensure consistency with data collection standards and reporting

ANESTHESIOLOGISTS
&
FAMILY PRACTICE-ANESTHETISTS

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Anesthesiologist Overview

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- As surgical volume increases, the need for anesthesiologists in B.C. is expected to grow in alignment with the Ministry's Surgical plan.
- Beyond just supply side solutions, complementary strategies have been undertaken to meet demand (i.e., optimization, pre-surgical screening).
- Province has taken a comprehensive approach towards the development and implementation of a provincial anesthesiology contract, as well as recently introducing a weekend premium.

Anesthesiologist Workforce

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Table 1. Anesthesiologist Workforce Data (Source: HSIAR v. 20210226)

Region	2017/18	2018/19		2019/20	
	Headcount	Headcount	% Change	Headcount	% Change
Fraser	118	124	5%	127	2%
Interior	86	92	7%	98	7%
Northern	14	15	7%	14	-7%
Vancouver Coastal	215	224	4%	220	-2%
Vancouver Island	98	101	3%	104	3%
Other	11	15	36%	16	7%
TOTAL	**542**	**571**	**5%**	**579**	**1%**

Note: % change may not align exactly with year-over-year changes in FTE figures due to rounding

Anesthesiologist Recruitment

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- Accelerate international recruitment:
  - Work with Heath Match BC to attract qualified internationally trained anesthesiologists from approved jurisdictions.
- Create new anesthesiology pathway to licensure:
  - Develop and fund an anesthesiology clinical program for board certified US trained anesthesiologists to help qualified candidates meet national licensure requirements.
- Increase residency training at UBC:
  - Continued expansion of entry-level R1 anesthesiology positions
  - Family medicine anesthesia training for doctors in rural and semi-urban communities

Anesthesiologist Supply Initiatives

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Anesthesiology	• In 2020/21, 62 residents training/providing care (5-year program) • Increase 10 to 15 entry-level positions (15 for July 2021 admissions)
FP-A	• Increased family practice anesthesiology (FP-A) enhanced skills residency positions from 1 to 5 (1-year program)
New pathway to licensure	• New pathway to licensure for six US-trained anesthesiologists (1-year program)
New proposals	• Ministry is working with UBC Dept of Anesthesiology on additional training strategies

Partnering In Productivity

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Anesthesia Assistants	• 5 – 8% Increase in Productivity • Working Group / Academic Funding.
Fellows	• Explore offering increased Anesthesia Clinical Fellowships
Regional Recruitment Plans	• Monitoring and reporting • Regional Lead
Governance - Collaboration	• Leadership/Engagement with the provincial Anesthesia community

ANESTHESIA ASSISTANTS

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Anesthesia Assistant (AA) Overview

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- AAs are specially trained to provide anesthesia services under the direction and supervision of an anesthesiologist
- AAs provide services both inside and outside of the operating room, throughout the surgical continuum
- AAs are employed in each B.C. health authority. In 2018 there were 96 AAs practicing in B.C., representing a 57% increase since 2014
- A majority of AAs in B.C. are experienced respiratory therapists who complete additional specialized training. A small number of AAs in B.C. are registered nurses (RNs)
- HAs and Anesthesiologists report that the AA role is currently underutilized (and, in some cases, working beyond scope).

Desired Future State for AAs

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Standardize Practice

- Provincial adoption of the *National Competency Framework in Anesthesia Assistance (NCF AA):* consistent practice standards and competencies across the province
- Anesthesiologist authorized delegation of restricted activities to AA

Increase Supply

- Workforce planning processes assesses health authority AA gaps and forecasting demands
- Appropriate AA education program model(s) to meet both lower mainland and regional needs.
- Adequate AA workforce to meet health system needs

Optimize the Role

- Established models of care that optimizes AAs practice

AA Work in Progress

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- A provincial working group is currently focusing on standardizing AA practice in B.C. and supporting development and maintenance of competencies
- Ministry is working with the College of Physicians and Surgeons of B.C. (CPSBC) on how an anesthesiologist may authorize delegation of restricted activities to an AA
- The Ministry of Health is working with the Ministry of Advanced Education and Skills Training to ensure education and training programs are meeting the needs of health authorities

NURSES PRACTICING IN ANESTHESIA CARE

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Possible Nurse in Anesthesia Activities

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Stage	Activities
Preoperative	Perform a comprehensive preanesthetic history and physical examination, assessment and evaluation and develop a comprehensive anesthesia care plan for anesthesia, analgesia and recovery
Intraoperative	Implement a patient-specific plan of care administering anesthesia and emergence
Postoperative	Facilitate recovery from anesthesia and prescribe and administer post anesthetic medications.
Outpatient	Perform preoperative assessment or consultation in outpatient clinics prior to admission for an operative procedure; provision of anesthesia, analgesia and/or procedural sedation for minor surgeries or for diagnostic or therapeutic procedures in outpatient/ ambulatory settings.

Nurses in Anesthesia: Opportunities

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- Address services gaps and build surgical capacity for priority surgeries
- Expand the anesthesia care team and decrease the burden of care on anesthesiologists
- Enhance the provider experience of care (Quadruple Aim) by addressing workload challenges to bolster available health human resources to address the back log of surgeries

Consultation to Date

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- Draft Education Program- UBC
- Draft Regulatory Framework- Ministry of Health
  - BC College of Nurses and Midwives
  - BC College of Physicians and Surgeons
  - BC College of Pharmacists
- BC Medical Quality Initiative- Draft Dictionary
- Health Employers Association of B.C.- Initial Compensation

Key Messages

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Misperceptions

- An effort to avert costs
- Replication of U.S. based CRNA model
- Intended to replace anesthesiologists or provide nurse delivered anesthesia for most complex cases or in areas with no noted service gaps
- A stop on maximizing all other roles in anesthesia care

Clarification

- Comprehensive approach to HHR planning for anesthesia care to ensure all human resources are available (with sustainable growth over time)
- Solution to be responsive to B.C. context
- Optimization of scope and roles of all providers in an ACT model of care.

IMPLEMENTING ACT MODELS

Proposed Next Steps

Key Deliverables

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- Create a framework that defines the future state for an ACT model based on the team competencies required to address future anesthesia population needs.
- Develop a learning and education strategy to achieve and sustain ACT models in B.C.
- Initiate plans to achieve and sustain new models for team-based anesthesia care in B.C.

Implementation

- Engagement Strategy
- ACT Steering Committee
- Implementation Working Group: health authorities/Ministry of Health

QUESTIONS AND FEEDBACK

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