

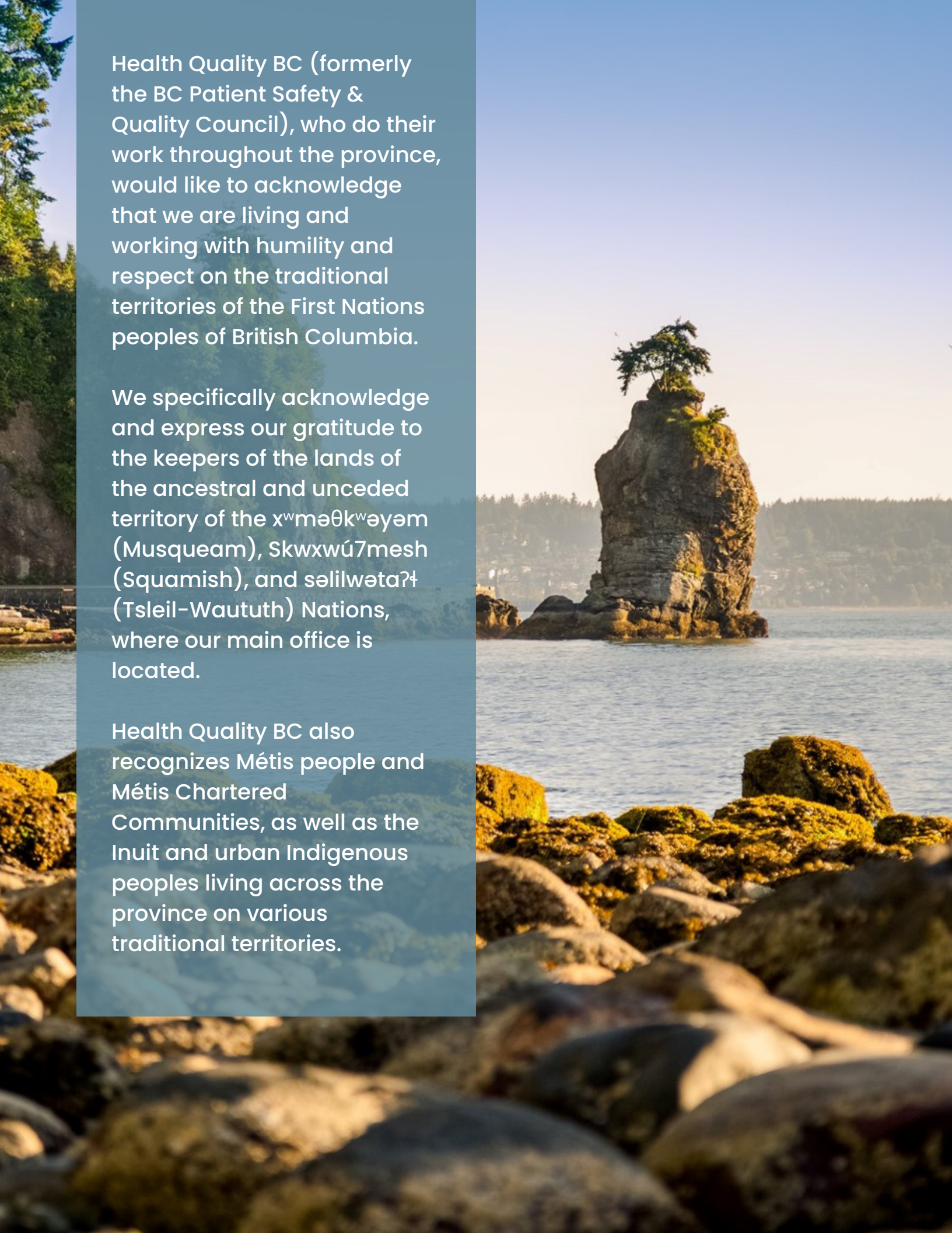


Low-Carbon, High-Quality Care Summit

# What We Heard Report

Findings and feedback from a provincial summit, held April 12, 2023, by Health Quality BC and Vancouver Coastal Health's Planetary Health Department





Health Quality BC (formerly the BC Patient Safety & Quality Council), who do their work throughout the province, would like to acknowledge that we are living and working with humility and respect on the traditional territories of the First Nations peoples of British Columbia.

We specifically acknowledge and express our gratitude to the keepers of the lands of the ancestral and unceded territory of the x<sup>w</sup>məθk<sup>w</sup>əyəm (Musqueam), Skwxwú7mesh (Squamish), and səliwətaʔt (Tsleil-Waututh) Nations, where our main office is located.

Health Quality BC also recognizes Métis people and Métis Chartered Communities, as well as the Inuit and urban Indigenous peoples living across the province on various traditional territories.



# Introduction

We bring health system partners together to accelerate action on key quality of care issues. Improving clinical care while decreasing the carbon footprint is one of them.

Clinical service delivery within the health system is a large consumer of energy and resources and a major producer of emissions and waste. These environmental impacts of care are substantial with upwards of 5% of global greenhouse gas emissions coming from health care systems.<sup>1</sup>

Health care professionals are well positioned to decrease the environmental costs of how we deliver care by changing individual practice, influencing health system decision makers, and setting clinical standards that support low-carbon, high-quality care.<sup>2</sup>

As a health care system, this is a necessary step to mitigating our environmental impact and ensuring sustainable models of care. Sharing knowledge of low-carbon practices that can improve the quality of care will support the scale up of these efforts across the province.

# What We Know

Health care quality, as defined by the [BC Health Quality Matrix](#), is inextricably linked to low-carbon clinical care activities. Embedding environmental sustainability into health care quality supports its inclusion as a pre-requisite, goal, and overall outcome of high-quality care.<sup>3</sup>

Environmentally sustainable health care practices can be seen in different parts of the health care sector and across all dimensions of quality – care that is respectful, safe, accessible, appropriate, effective, equitable and efficient. For example, appropriate care is specific to a person’s or community’s context and weighs the benefits and risks of interventions to prevent the overuse and underuse of treatments or services.<sup>4</sup> Preventing the overuse of treatments and services has the opportunity to reduce waste, carbon emissions and harm to patients.<sup>2</sup> To meet the overall outcome of high-quality care, efforts to support improvements in quality should also include efforts to decrease the carbon footprint of care.

We have amazing innovation happening right here in BC. Quality improvement initiatives are underway across the province that focus on changing the way we deliver programs and services to support an environmentally sustainable health care system. These leading practices are driving changes for individual health care professionals, programs and services and at the strategic and organizational level.





# What We Did

Health Quality BC (HQBC), in partnership with Vancouver Coastal Health's Planetary Health Department, hosted a provincial summit in Vancouver on April 12, 2023. We brought together key clinicians, academics, health care professionals, leaders and patient partners to build on and accelerate existing efforts to reduce the environmental impacts of care delivery through a quality care lens. We used the day to lay the foundation of what it means to deliver low-carbon, high-quality care in the BC health system.

We heard from a number of health system partners who have had success in delivering high-quality care, with lower carbon footprints. Our hope in sharing leading practices and connecting health system partners is that it helps to develop new ideas and actions to advance clinical quality while minimizing carbon emissions.

***"Thank you so much for bringing us together. It is incredibly exciting to see the concrete mitigations steps the health care system can take to reduce our carbon footprint."***

## Leading the Charge in British Columbia and beyond

The following clinical initiatives were profiled during the Low-Carbon, High-Quality Care Summit:

***"It was great to connect with people doing similar work in other areas and share learnings and opportunities."***

### Appropriate Use of Blood Products

Jacqueline Trudeau, Andrew Shih and the team at Vancouver Coastal Health are taking a patient-centred approach to pre-operative group and screen (G&S) ordering – a test that determines a patient's blood group and ensures safe transfusion if blood is needed during surgery. Presented by Emma Pienaar, their initiative directly improves the appropriateness dimension of quality by preventing the overuse of services while decreasing overall testing costs – both in costs and carbon. The team brought the issue to the forefront with a dashboard of data, used posters and infographics to communicate the change and helped improve the ways G&S is ordered via pre-printed orders to help make the change stick.

## Climate-Conscious Inhaler Practices

Passionate clinical leaders Val Stoyanova and Celia Culley from Island Health and Kevin Liang from Fraser Health shared the way they are advancing clinical quality, while minimizing the environmental impact from metered dose inhalers (MDIs). Medications account for 25% of health care greenhouse gas emissions with MDIs having a significant carbon footprint.<sup>5</sup>

Work is underway in both primary care and acute care to mitigate the negative impact of MDIs on the environment without compromising patient care. There are a number of initiatives such as reducing inhaler waste, ensuring patients demonstrate a clinical need for and are prescribed the correct type of inhaler for their clinical condition, and optimizing inhaler technique and disposal to avoid excess leakage of carbon emissions. These focus areas improve on multiple quality indicators focused on both individual perspectives of patients and providers and larger system performance indicators.

## Environmentally Sustainable Kidney Care

Caroline Stigant and the teams at Island Health, BC Renal and SNAP (Sustainable Nephrology Action Planning committee of the Canadian Society of Nephrology) are educating, innovating and advocating for high-quality, environmentally sustainable kidney care for patients with kidney disease. They are taking a layered approach to embed a culture of sustainability into the way kidney care is delivered in BC and throughout Canada.

Actions such as considering medication stewardship, optimizing preventive care and uptake of transplantation when appropriate speaks to care that is specific to a person's context and is respectful and safe. Clinically appropriate consumables, water and energy use and adjustments in prescriptions where clinically indicated can modestly reduce waste and carbon emissions.<sup>6</sup> These examples are a few of the many ways that environmentally sustainable kidney care aims to prioritize changes to minimize the burden of disease through a quality lens.

## The Environmental Impact of Perioperative Care

Nicole Simms and the dedicated team at [CASCADES Canada](#) have developed a playbook to provide information and implementation resources to address environmental sustainability in perioperative care.<sup>7</sup>

They focus on strategies that reduce environmental impact, reduce expenditure, ensure patient safety and build climate resilience in the perioperative space. They leverage quality improvement infrastructure and resources to help support sustainability efforts to build a low-carbon culture that considers upstream decisions that impact the environmental footprint of care.

## Regional Anesthesia in Breast Cancer Surgical Care

Chris Prabhakar and the team at Mount St. Joseph's (MSJ) hospital in Vancouver have reduced the carbon footprint of breast cancer surgeries, while positively impacting more than one dimension of quality. The team at MSJ began using regional anesthesia which uses local anesthetic to numb a select part of the body. It avoids the use of potent inhalation anesthetics that contribute greatly to carbon emissions.

Not only does this change in clinical practice decrease the amount of carbon being released, it also improves the quality of care being delivered. The MSJ team found that when they used regional anesthesia rather than general, care became more effective, efficient and respectful. The patients who received the regional anesthesia had better pain management, less nausea and were able to be discharged home sooner. They spent less time in the operating room, which freed up time for other clinical procedures to be done. And the patient experience was impacted – not only do patients now have alternative options for the way they receive anesthesia, but better pain management, less nausea and quicker discharges home can enhance patient experiences throughout the health system.

# What We Heard

As part of the Summit, we invited participants to engage in small group discussions to imagine what the future of environmentally sustainable, high-quality care could look like. Participants were invited to identify what would help make low-carbon, high-quality care a core attribute of the health system and highlighted barriers that may get in the way of achieving this vision. We also spent time identifying the next steps that are required to move towards this goal. We've highlighted the common themes we heard from the participants of the day.

## Great Work is Already Happening

In addition to the initiatives highlighted above, clinical pathways are being changed at all levels of the system that improve quality and reduce the environmental impact of care delivery. These grassroots ideas stemming from those directly involved in care delivery are being initiated and spread across programs and services in the province. Supporting these efforts is based on the many assets we currently have, including:

- Strong Indigenous leadership to help create change and build relationships that work to protect resources and understand the impacts of worsening climate change.
- Provincial mandates and strategies that embed climate action in health care processes. Examples such as these support the need for the health system to contribute to reducing carbon emissions.
  - [Climate Preparedness and Adaptation Strategy](#)
  - [Health Authority Mandate Letters](#)
- Firsthand experience in BC with the climate crisis and its impact on health care services highlighting the importance of decreasing the environmental impact of health services.

Great work is happening to address existing challenges and opportunities to improve clinical care through a low-carbon lens. Participants highlighted that sharing solutions and ideas can help inspire efforts, and build energy and momentum.






## Working Together is the Way Forward

Participants highlighted that many provincial structures currently exist that support low-carbon clinical care. They also suggested that further coordination and collaboration across the system is needed to support low-carbon clinical initiatives that focus on improving quality.

Ideas to help develop stronger partnerships and alignment, by leveraging provincial and local efforts to raise awareness of low-carbon clinical quality improvement initiatives, were suggested.



## We Need to Know Where We've Been to Know Where We Are Going

Participants highlighted the need to leverage data to demonstrate value in potential cost savings, decreased environmental impact and enhanced clinician and patient and family experience. Current data can help to lay the foundation to identify improvement measures to determine our impact on improving quality.

Along with data, participants suggested using existing and new evidence-based information to strengthen our commitment to effectiveness and support efforts to decrease health care's carbon footprint.



## Engage All and Connect to Purpose

There is significant potential in a distributed leadership model to both spread and scale low-carbon changes in clinical care through a quality lens. Our new generation of health care professionals are looking for ways to ensure what matters to them is embedded into actions related to climate change in their work.

We heard that by supporting and leading low-carbon, high-quality clinical care, health care professionals have an opportunity to feel connected by being a part of meaningful work that contributes to the health of patients and to the health of our planet.

# Where Are We Headed?

Summit participants discussed what needs to happen to take low-carbon, high-quality care initiatives forward here in British Columbia. Actions across each system level – micro, meso and macro – were identified that would benefit from varying levels of support and involvement. Participants suggested ideas such as supporting and promoting grassroots clinical changes, updating quality improvement curriculum to include an environmentally sustainable lens, and building low-carbon, high-quality care into organizations' strategic plans and pillars as examples of changes at the different system levels.

A major highlight from the discussions was that there is no one path to achieving a low-carbon, high-quality care health system. Rather, multiple routes are needed to improve clinical care quality to reduce the environmental footprint.

The participants at the Summit emphasized that there is growing focus and excitement about improving care with a low-carbon lens, and that high-quality care must also include an environmental approach to quality that minimizes the impact on carbon emissions.



# Our Next Steps

Health Quality BC and Vancouver Coastal Health are working towards launching a low-carbon, high-quality collaborative in fall 2023. The overall aim will be to reduce carbon emissions from clinical service delivery while improving at least one of the seven dimensions of quality care:

-  Respect
-  Accessibility
-  Safety
-  Appropriateness
-  Effectiveness
-  Equity
-  Efficiency

Current planning is underway for two streams of improvement:

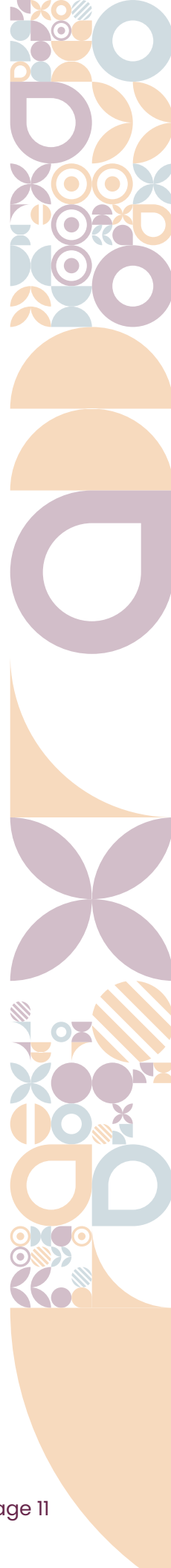
- Climate-Conscious Inhaler Practices
- Sustainable Perioperative Practices

A collaborative is an improvement method that relies on spread of existing change ideas to accomplish a common aim. We will invite teams from across the province to join us in one or both of the streams above.

## Your Role as a Change Champion


Become a low-carbon champion! Sign up to join us as part of our distributive leadership network. You'll receive resources, links to webinars and learning opportunities that focus on improving quality through a low-carbon lens. You'll be the first to know how you can participate in the Low-Carbon, High-Quality Collaborative that we'll be launching in fall 2023!


- Join our [low-carbon, high-quality care network](#)
- Sign up for our [Health Quality BC newsletter](#)



# Acknowledgments

The success of the Low-Carbon, High-Quality Care Summit would not have been possible without our partners who helped deliver the day:

 Andrea MacNeill, Regional Director, Planetary Health, Vancouver Coastal Health, who challenges us to think differently about how we deliver quality care that minimizes the environmental footprint while increasing efficiency.

 Rapid-fire presenters and their teams who are leading improvement efforts across the province and nationally, providing us with examples to help inspire efforts and build momentum.

- [Sustainable Kidney Care](#)
  - Caroline Stigant, Nephrologist, Island Health
- [Climate-Conscious Inhaler Prescribing](#)
  - Celia Culley, Clinical Pharmacist, Island Health
  - Val Stoyanova, Internal Medicine Specialist, Island Health
  - Kevin Liang, Family Physician, Fraser Health
- [Breast Regional Anesthesia Program](#)
  - Chris Prabhakar, Anesthesia, Providence Health Care
- [Appropriate Use of Blood Products](#)
  - Emma Pienaar, Health Systems Planning Advisor, Vancouver Coastal Health
- [Perioperative Care](#)
  - Nicole Simms, Executive Lead, CASCADES
  - Husein Moloo, Director, Planetary Health, Faculty of Medicine, University of Ottawa

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