

Virtual Health Grand Rounds

Braiding Rural Care, Data, and AI: Strengthening Health Systems Through Relationship-Based Innovation

From rural reality → to system intelligence → to better decisions

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Land Acknowledgement

Anthon: I acknowledge that I work on the traditional, ancestral and unceded territory of the Syilx Nations.

Nico: I acknowledge that I work on the traditional, ancestral and unceded territory of W̱SÁNEĆ peoples.



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Presenter Disclosures

Anthon - Relationships with commercial interests:

- Sessional support from RCCbc, UBC and HQBC roles
- Has no other relationship or commercial interests to disclose.



Nico - Relationships with commercial interests:

- Contract support for RCCbc and PHSA roles
- Owner of Valhalla Springs Studio, a JSC/RCCbc technology partner
- Has no other relationship or commercial interests to disclose.

Mitigation of Bias

- All content developed as part of this program was reviewed for potential bias by the members of the program planning committee.
- Relationships do not affect my choices in developing content.
- Financial relationships are unrelated to presentation.
- Not speaking about any products or medications.



Learning Objectives

01 | DESCRIBE

Relationship-Based Real-Time Virtual Support

How rural healthcare networks like RCCbc — through their Real-Time Virtual Support (RTVS) program — generate critical clinical and operational insights to support remote patients and communities.

02 | DISCUSS

Collaborative Data Platforms

Explain how building collaborative data platforms to map the BC health system can support insights into health system planning, workforce sustainability, and equitable care for rural and remote communities.

03 | RECOGNIZE

Structured Rural Health Data & AI Analytics

Recognize how structured rural health data and AI-enabled analytics can strengthen learning health systems, supporting improved decision-making, service planning, and policy development.



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Grounding – WHY

Last night somewhere in British Columbia, a nurse placed a phone call to a physician they have never met, trying to stabilize a patient hundreds of kilometers from the nearest hospital – and that moment tells us more about our health system than many of our datasets ever will. And yet, much of this never shows up in the data we use to make decisions.



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Braiding Rural Care, Data, AND AI

RURAL CARE (Relationships & Reality)



“ *In rural healthcare, stories are data. Our task is to translate those stories into knowledge that can strengthen the system.* ”

Objective 1

Relationship-Based Care in Action



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A Night in Rural BC: Takla Lake

Population ~300 | No physician on site | BCEHS coverage only

The Clinical Scenario

- A patient becomes acutely ill. The nurse on duty is the only clinician on site, supported by the local BCEHS team.
- There is no physician in the community.
- The nurse calls **Real-Time Virtual Support (RTVS)** to speak with a physician.
- Together, they stabilize the patient and coordinate with BCEHS to determine next steps.

But the system questions extend beyond the moment:

- Will a **medevac aircraft** be available?
- How long will the patient wait for transfer?
- Will they reach a hospital within the **golden hour**?
- What happens to the **nurse left alone** in the community afterwards?

How do we translate real-world experiences like this into knowledge that strengthens the health system?

This is where data — and increasingly AI — can help us. Not to replace relationships, but to understand them and support better decisions.



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RTVS: How It Works & Why It Matters

How RTVS Works

The Call

A rural nurse or clinician calls RTVS — reaching a physician within minutes, any hour of the day or night.

The Collaboration

Together, they assess the patient, guide stabilization, and coordinate next steps — often preventing unnecessary and costly transfers.

The Data

Each consultation generates structured clinical and operational data — building a knowledge base that reveals system-wide patterns and gaps.

Clinical Insights RTVS Generates

Workforce & Workflow Pressures

Which communities face the greatest clinician shortages and at what times

Patient Acuity & Pathway Patterns

What conditions are most common in rural emergencies and how patients are routed

Service Gaps & System Signals

Where the health system is failing rural patients before they ever reach a hospital

Care in the moment. Knowledge generated. Insight for the system.



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Objective 2

Mapping the BC Health System



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Rural Planning & Situational Awareness

A comprehensive geospatial intelligence platform built by RCCbc to transform how health systems understand, plan for, and respond to rural healthcare challenges — integrating clinical data, workforce signals, and community context into one coherent view.



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The DIG Approach: From Fragmented Data to Structured Knowledge

Every consultation is both a lifeline – and a signal to the system

What DIG Integrates

Rural Clinical Workforce Realities

RTVS consultations, program data, and operational insights

Qualitative & Quantitative Patient Pathways Narratives

Stories from rural clinicians and communities alongside structured datasets

System Signals | Gaps

Workforce pressures, service gaps, and access barriers across BC

What DIG Produces

Stories → Data → Insight → Action

Isolated stories

→ **Structured Data**

→ **System Intelligence**

A learning health system infrastructure that enables better planning, stronger policy, and more equitable care for rural BC.



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Objective 3

Structured Rural Data & AI Analytics



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Where AI Fits in Rural Health Systems

AI does not replace clinicians – it helps us understand them at scale. It *complements human decision-making* to enable system learning.

Detect Patterns

Identify recurring clinical presentations, workforce gaps, and geographic access challenges across hundreds of communities.

Connect Signals Across Systems

Link RTVS data, transport availability, workforce scheduling, and patient outcomes into a unified picture.

Anticipate Service Gaps

Predict where workforce shortages or surge demand will emerge before they become crises.

Inform Better Decisions

Provide evidence for health system planning, rural policy, and resource allocation that is grounded in real rural care.



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Braiding Rural Care, Data & AI: The Learning Health System

When We Capture & Structure Lived Care

We begin to see patterns:

- Workforce & workflow pressures
- Patient pathways and gaps
- Community strengths and needs
- Emerging equity gaps

This is where data becomes understanding. And where AI becomes a tool for learning.

By Braiding These Three Pillars, We Can Build Learning Health Systems That:

- Support clinicians and teams of care
- Strengthen rural communities
- Inform better policy decisions
- Advance rural and Indigenous health equity



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In rural healthcare, stories are not just stories. They are data waiting to be understood.

Key Takeaways

RURAL REALITY

Rural care is already innovative

Relationships are the system

Much of what matters remains invisible

DATA & INSIGHT

We are not data poor — we are insight-poor

DIG makes rural care visible:

Stories → Structured data → System intelligence

AI & EQUITY

AI enables system learning

Not replacing care — strengthening it

The goal is equity:

Better data → Better decisions → Better care

Stories & lived care → Structured data → System intelligence → Equitable care



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*If we want a system that learns,
it must be able to **see rural care.***

Q&A

POST YOUR QUESTIONS IN THE CHATBOX



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Thank you



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