Health Matters Bulletin

BY REBOOT HEALTH CONSULTANCY & ADVISORY SERVICES INC.

ISSUE 3

Real-time Health System: Driving Predictable Excellence with Near Real-Time Contextual Awareness

Personalized Medicine: Are We Delivering Real Clinical Value?
Part 2: Aligning, Focusing, and Prioritizing

Brought to you by Reboot Health Consultancy & Advisory Services Inc
with Founding Partners: Roche *&* Cerner

reboot
HEALTH CONSULTANCY & ADVISORY SERVICES INC

Foreword Issue 3

Welcome to the Health Matters Bulletin, a regular quarterly publication provided by the Reboot Health Consultancy & Advisory Services Group and our Founding Partners. The Group's Objective is bringing together policy, industry and health leaders to discuss poignant topics in healthcare by creating opportunities and organizing formal, ongoing dialogue, and focused communications on health innovation topics with specialized Health Matter's subject experts. We invite you to review articles which provoke thought leadership and foster collaboration, catalyze healthcare innovation to optimize the use and deployment of increasingly scarce resources in this country. We bring knowledge, views and perspectives which focus on these key strategic pillars advancing healthcare:

· Health Data Privacy, Policy and Security

· Personalized Medicine & Genomics

· Artificial Intelligence in Healthcare

· Value Based Healthcare, Operational Efficiency and Health Policy

· Health Innovation Development

*Editors: Alan Low, Greg Spievak, and Howard Waldner,
Reboot Health Consultancy and Advisory Services Inc.*

Acknowledgements

7

REAL-TIME HEALTH SYSTEM: DRIVING PREDICTABLE EXCELLENCE WITH NEAR REAL-TIME CONTEXTUAL AWARENESS

———

COVID-19 HAS PUT ENORMOUS PRESSURE on Canada's health workforce, exacerbating pre-existing human resource shortages and burnout. A study conducted in late 2020 by Statistics Canada, CIHI, the Public Health Agency of Canada and Health Canada found that 33% of those working in healthcare settings reported fair to poor mental health.[1] The Canadian Medical Association (CMA) and the Canadian Nurses Association (CNA) have deemed the current state a "health worker crisis" in light of the "massive system backlogs and a shortage of colleagues to cope with demands."[2] Now, more than ever, health administrators need current data to manage capacity and staffing, utilize limited resources most efficiently, minimize stress on providers and ultimately enable timely and high-quality patient care.

To improve clinical, operational and financial efficiency as well as patient engagement and outcomes, device connectivity solutions enable the capture of near real-time data from medical devices at scale. That information streams into a context-rich format that providers can use to inform clinical decision making based on that day's data.

Post-COVID-19 virtual care strategies have seen an increase in other digital engagement channels. The need for social distancing and preservation of personal protective equipment (PPE) caused an explosion in the demand for virtual health. Both inside and outside the four walls of the hospital, organizations are using virtual observation to allow providers and specialists to remotely monitor and interact with patients. Also, more providers are integrating virtual care applications into the consumer framework, like patient portals, secure messaging with providers and patient questionnaires.

Beyond COVID-19, rising healthcare costs, increased use of mobile apps for health monitoring, and the growing burden of chronic diseases and consumer engagement are driving the increased interest and expansion of virtual health.

A real-time health system (RTHS) is a health delivery organization that leverages the use of near real-time data from many sources to help improve clinical,

operational, and financial efficiency and effectiveness, and improve patient engagement in a safe and secure manner.

As a key component of RTHS, operations focus on optimizing the patient journey through the health system, coordinating critical resources and a precision care team across the continuum. For a health system to be operationally aware, it must optimize workforce, automate throughput, and centralize operational collaboration and decision-making.
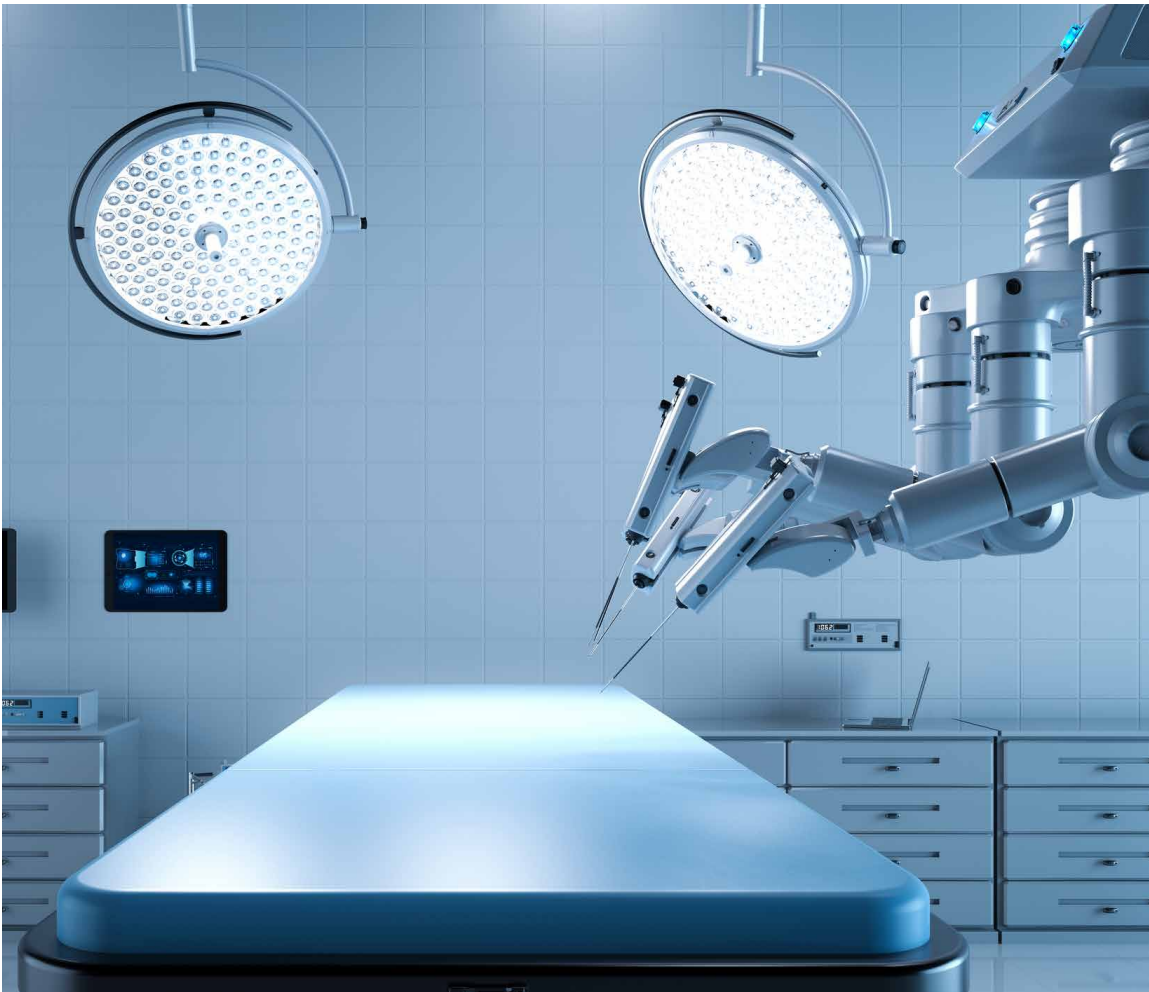
According to the CIHI, 63.5% of hospital spending in 2019 – 2020 are labour expenses[3] . To optimize the workforce, a health system must consider objective workload management, mobile scheduling, staff satisfaction and cost control. A health system requires visibility of predicted and near real-time census to manage capacity and automate patient throughput. Enterprise situational awareness allows processes to be streamlined for admissions, transfers, and discharges, and creates efficient workflows for all roles responsible for managing patient flow and improving the patient experience.

Achieving predictable excellence in clinical, operational, and financial outcomes is crucial for an RTHS. For example, Cerner helps equip healthcare organizations with the right tools and technology to transform into an RTHS by providing solutions that integrate data throughout the network and within the health system, paired with technology-enabled advisory services that drive actionable insights back into point-of-care workflows.

The cloud-based *CareAware®* platform is foundational to the Cerner RTHS strategy because it enables clinical communications and access to timely, accurate data from medical devices and operational solutions. This distinctive, multi-purpose platform is unique in its design that supports comprehensive end-to-end solutions and an extensive number of clinical use cases.

INTELLIGENCE

Generate insightful predictions using near real-time data to support decision making, streamline operational and clinical workflows, and transform the clinical experience. The key is combining and making use of data from many sources.

DEVICE CONNECTIVITY

To improve clinical, operational, and financial efficiency and improve patient engagement and outcomes, Cerner offers a suite of integrated device connectivity solutions designed to capture near real-time data from connected devices at scale and stream that information into a context-rich format that can be used by providers to inform clinical decision-making.

CLINICAL COMMUNICATIONS AND MOBILITY

New available workflows leveraged from our proprietary algorithm and cloud-based platforms can help organizations integrate and mobilize their care teams, enable them to find the right role at the right time and improve nurse mobility. Care team members will have access to critical alerts and notifications from the Electronic Health Record (EHR) wherever they are inside or outside the enterprise.

VIRTUAL HEALTH

The Cerner virtual health solutions, together with third-party collaborations, can help deliver a holistic digital strategy with a broad set of digital capabilities to safely deliver quality remote care anywhere, both inside and outside the enterprise. These strategies may involve addressing changes in staffing needs, overhauling patient outreach initiatives, integrating new technologies, updating provider workflows, and establishing a framework for balancing virtual health

services with in-person care as appropriate. Other virtual health solutions are designed to help patients feel more connected to their care through consistent bi-directional engagement with the care team having full visibility into the plan of care.

OPERATIONS

The Health System Operations offerings include the workforce and capacity management suites of solutions and command center. Health systems using these products and services can show measurable improvements in their key performance metrics for throughput, patient satisfaction, avoidable healthcare-acquired conditions, length of stay and care transition turnaround times. In addition, these products help with workforce management and will not only improve efficiency in managing the most expensive resources in the health system, but will also help reduce human resource shortages and burnout.

CYBERSECURITY

Cerner is dedicated to helping health systems develop and realize a secure ecosystem that prioritizes patient safety and privacy. In addition to offering clinically oriented and integrated solutions that support workflow-enhanced compliance and regulatory requirements of an RTHS, Cerner is also invested in maturing the cybersecurity posture of health systems.

Cerner is focused on optimizing the patient journey through the health system from the time patients enter the health system and at every point of care across the continuum. Cerner can help healthcare organizations integrate data through the network and within the health system, predict operational and clinical needs, and secure patient communication and clinical workflows to transform and optimize care delivery.

Sonia Pagliaroli, RN, MSc, CPHIMS-CA
Chief Nursing Officer, Cerner Canada
sonia.pagliaroli@cerner.com

Learn more about the value of a comprehensive real-time health system strategy **here**.

Listen to **What does it take to be a real-time health system?** podcast by Bob Robke Vice President, Real-Time Health System and Clinical Products, Cerner

Northern Light Health was the first to use the Command Center Dashboard during COVID-19 to help with current visibility of operations and anticipate future capacity, staffing needs and other resources. Learn more about their RTHS strategy **here**.

Data helps streamline operations, manage nursing utilization and expedite patient transfers. Read about Glens Falls Hospital in the U.S. **here**.

REFERENCES:

1. Statistics Canada. Impacts of COVID-19 on Health Care Workers: Infection Prevention and Control

2. Canadian Medical Association. Canada's health system is on life support: Health workers call for urgent mobilization to address shortages, burnout and backlog issues

3. What are hospitals spending on

PERSONALIZED MEDICINE: ARE WE DELIVERING REAL CLINICAL VALUE?

PART 2: ALIGNING, FOCUSING, AND PRIORITIZING

PART 1 DISCUSSED OVERCOMING BARRIERS TO IMPLEMENTATION and in part 2 we will suggest ways that the public and private sectors, and government and other healthcare funders can align, focus, and prioritize the implementation of innovations in Personalized Medicine (PM). There are varying degrees of provincial and federal strategies and processes which we need to acknowledge in order to be more proactive informing and influencing decision makers (e.g Canadian Agency for Drugs and Technologies in Health (CADTH) operates both the Common Drug Review (CDR) and pan-Canadian Oncology Drug Review (pCODR); as well several provinces have established health technology assessment (HTA) processes). Unfortunately, these traditional processes can be time consuming and complicated in a world where PM is advancing so rapidly, doesn't lend to classic randomized clinical trials (RCT) and can't rely on traditional evidence of numbers.

PM professionals should aim to develop a consensus framework for prioritizing diagnostics and treatments. It is essential that there be robust, yet nimble and flexible regional, provincial, and federal supports that connect key stakeholders. A consensus framework can be built on several fundamental questions or decision-making criteria:

1. Is there good clinical evidence for the test or treatment; and for its utility and value for patient treatment that will improve clinical outcomes?

2. Are there clinical criteria or an agreed algorithm to determine which patients are eligible and will benefit?

3. Is there a good quality, validated test available at an accredited lab?

4. Should the test or treatment be offered locally or centrally?

5. Are there documented measurements and review processes (data analysis, business analysis, clinical analysis) to support these tests and treatments as standards of clinical care?

6. Is there an all-party agreement to review outcomes data and clinical relevance post-implementation?

While advocating for a "framework", it is critical that we "don't focus on process and governance" and that we recognize that "a modern, cost-effective health care system is not the old system plus genomics".[1] Governments, by nature, focus on process and governance which does not "fit" with the very complex, rapidly changing, and often clinical urgency of PM.

Instead, funders, payers and governments must support a framework that provides front-line authority for patient/clinician/laboratory decision making and utilization of test results. Laboratories must be funded to provide genomic testing and work closely with clinicians to prioritize testing and treatments.

Not naively, this is going to require a new level of trust amongst all the parties involved in PM. Funders/governments must have faith to fund testing and treatments in advance of what has historically been sufficient "evidence"; clinicians and laboratorians trusting to prioritize testing and treatments; and lastly, all parties must collaborate on the evaluation (post testing/treatment) of genomic testing and treatments – necessarily at the national and international level particularly where case numbers don't provide sufficient local evidence. A new model may well require "trust" to fund in advance with a commitment to periodic reviews (e.g. in its current round of funding for rare diseases, Genome Canada requires a Health Economics Assessment (HEA). Not only will this add to

the evidence through each project, it will also build knowledge and capacity for a more nimble and relevant HEA that will further build a trust framework.

The single most important factor to nourish this trust framework and to align, focus, and prioritize PM is to engage – to keep the dialogue going between all relevant parties in each jurisdiction across Canada; including patients and their advocacy groups. Despite all this, we must also remember we're not just competing with other PM innovations, but with other traditional healthcare and political priorities.

By Jim Slater, MBA, BSc, ART
Health System and Business Advisor
Email: jimslater55@icloud.com

SUGGESTED READING:

1. Precision Medicine: From Science to Value

2. Being Precise About Precision Medicine: What Should Value Frameworks Incorporate to Address Precision Medicine? A Report of the Personalized Precision Medicine Special Interest Group

3. Evaluating the Effectiveness of Personalized Medicine With Software

REFERENCES:

1. Alan Bernstein; as contributed to the Globe and Mail; Published January 1, 2015; "Genomics will be at the centre of real health care innovation"

COPYRIGHT PAGE

**For more information or to subscribe and receive
the Reboot Health Matters Bulletin regularly,
email: info@reboothealthconsultancy.ca.**

Issue 3 ebook edition April, 2022

Editors: Alan Low, Greg Spievak, and Howard Waldner,
Reboot Health Consultancy and Advisory Services Inc.

© April 2022
www.reboothealthconsultancy.ca