Health Matters Bulletin

BY **REBOOT HEALTH CONSULTANCY & ADVISORY SERVICES INC.**

WITH FOUNDING PARTNERS: **ROCHE** AND **ORACLE CERNER**

Building Ransomware Resilience in Healthcare

Technology Plays a Big Role in Achieving the Quintuple Aim

reboot
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Foreword Issue 6

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:

OUR KEY STRATEGIC PILLARS

Health Data Privacy, Policy and Security

Personalized Medicine and Genomics

Artificial Intelligence in Healthcare

Value Based Healthcare, Operational Efficiency and Health Policy

Health Innovation Development

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Building Ransomware Resilience in Healthcare

Ransomware and other types of cyber attacks have evolved – so too should your organizational approach to managing them. Ransomware is a threat to your entire healthcare organization, with impacts downstream, upstream and across patients and other stakeholders. But there is hope. At the continuum of technology and experience, the Metaverse, can help your organization build resilience and prepare you to win if you get hit.

Sixty-six percent of healthcare organizations were hit by ransomware last year, according to Becker's State of Ransomware in Healthcare Report 2022. As just one example, Canada's largest pediatric hospital was hit with a ransomware incident in December, impacting operations for weeks.

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Without question, ransomware attacks can be very disruptive particularly in an environment where business continuity literally could mean saving lives. In fact, Accenture's Cyber Threat Intelligence Report shows healthcare remains among the most targeted industries (trailing only manufacturing and financial services). Compressed transformation has often extended the attack surface, evidenced by a 107% increase year-over-year in ransomware and extortion attacks.

INSURANCE MAY NOT BE THE ANSWER

We believe the high cost of cyber insurance means it might be more efficient and effective to adopt other approaches for handling ransomware attacks and building resilience to them. One approach for building this resilience is through tabletop exercises. After all, practice may not always make perfect, but it may well produce a better result than paying the ransom through an insurance provider.

HOW TO PREPARE?

So, what do you do when your organization gets hit? Do you know what you must do and who to call? What do you tell your customers, employees, and other stakeholders, and when do you tell them? Who will contain the damage and take care of recovery? How will you handle compliance?

FIGURE OUT THE ANSWERS BEFORE TROUBLE OCCURS

There is a lot to do, so the key is to prepare before the bad stuff hits the fan. Organizations that take the time to develop their ransomware response playbooks and regularly practice their responses will have a much better chance of emerging with little or no damage.

TABLETOP EXERCISES

The best way to prepare is to simulate the situation, guided by a facilitator. This is a zero-risk, low-stress, low-cost way to ensure that response plans are effective. You'll find the missing links in your chain of command, double check the documentation and identify gaps in your recovery processes. In addition, tabletops can save your organization thousands of dollars in ransomware or data breach recovery expenses.

THE KEY: GO ALL IN

Many organizations, including in the healthcare sector, fail to take advantage of this powerful training tool for various reasons. As noted in this article from the Healthcare Insurance Reciprocal of Canada, these exercises require the participation of the CIO, CISO, CMO, a medical technical advisor, the emergency medical services lead and others. Getting all these people together in one room can be extremely difficult due to their distributed locations and busy schedules.

This is where the metaverse comes into play. Metaverse technology can enable the training sessions for all required participants from the comfort of their home offices or other distributed locations. The execution is almost as simple as the concept: All that's needed is for an organization to secure Oculus or equivalent VR devices and model a virtual meeting room/space in the metaverse, where all parties can meet. Metaverse-enabled virtual tabletop exercises can help for many emergency situations, from Cloud storage breaches or third-party cyber attacks on critical vendors, to ransomware attacks, which are particularly relevant for the healthcare sector.

To build their ransomware resilience, healthcare organizations need to test their cyber defenses as well as the human and organizational factors that are just as important for cybersecurity.

KEEP 'HOLISTIC' IN MIND

Many threat actors target remote services for initial access into networks. So, it is critical to include remote services in your cyber strategy and secure systems in hybrid/remote work environments.

For more on ransomware resilience and healthcare security, please visit www.accenture.com/ca-en/services/health/healthcare-security.

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Technology Plays a Big Role in Achieving the Quintuple Aim

Healthcare in Canada is facing significant challenges. In 2022 Canada spent $331 billion on healthcare[1], second to the US in the percentage of spend based on GDP. We have an aging population many with chronic illnesses who have deferred health maintenance interventions. Our health human resource pool is insufficient to meet demands with many facing burnout and contemplating leaving their professions. As we look for opportunities for improvement, we should consider and align with the Institute for Healthcare Improvement's (IHI's) quintuple aim.

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The quintuple aim is a framework that has evolved over time from the original IHI's "Triple Aim", and now includes two additional key elements that are recognized as essential to achieve successful and simultaneous healthcare improvement.

These five key elements are:

- enhancing patient experience and outcomes
- promoting workforce wellbeing and improving the staff experience
- improving the population's health and well-being
- reducing the cost of healthcare
- advancing health equity

For more information, please see www.ihi.org/about/news/Pages?Quintuple-aim.

As we look to health improvement strategies, we need to consider leveraging technology to create efficiencies that serve as a tool to better inform and measure health outcomes.

The initial prerequisite for enhancing the patient experience and outcomes is ensuring real-time access to a fully integrated and comprehensive longitudinal patient health record that captures the entire patient's journey and eliminates the need for patients to repeat their stories and allow clinicians to better coordinate care. Virtual care, patient portals, and bidirectional contribution to their care empower patient engagement in driving their care.

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Recent surveys have shown that 91% of patients were satisfied using virtual care during the COVID-19 pandemic, and 46% said they would prefer a virtual method as a first point of contact with their doctor. www.cma.ca/virtual-care

Secondly, with the current health human resource challenges and clinician burnout, technologies must **improve the staff experience**. A single source of truth for clinical data eliminates chart fragmentation and makes it easier for healthcare professionals to make informed decisions. Additionally, technology can be used to introduce clinical decision support, evidence, and best practices, which will guide healthcare professionals toward doing the right thing.
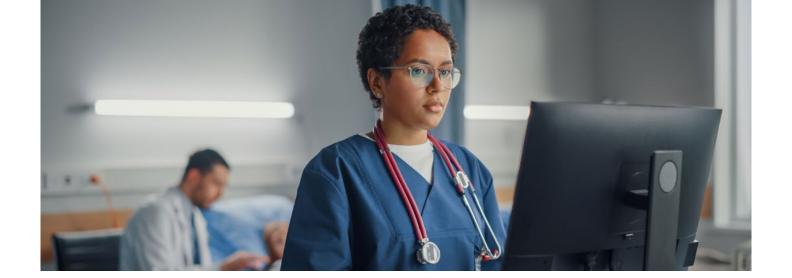
Nurses feel the frustration of asking a multitude of questions during the admission process – many of which may be unnecessary – taking time away from patient care. Island Health leaders on Vancouver Island, Canada, knew they needed to find a way to simplify the process. Working with Oracle Cerner, they utilized the essential clinical dataset (ECD) to reduce the number of questions asked when nurses complete the adult admission history form, saving more than 95 hours a month.

TransForm Shared Services Organization (TSSO) with a group of four hospitals in Southwestern Ontario, was formed and implemented during the height of COVID-19. With remote training and remote support, during the first six months, they saw rapid adoption of the technology with 79% scanning compliance with medication administration 84.7% compliance with discharge meds reconciliation 92% of electronic documentation done by physicians with 100% done by nurses. They leaped from a HIMSS EMRAM stage 2 to stage 6 as a result of the program.

The Centre for Addiction and Mental Health (CAMH) focus is on continual engagement in order to implement ongoing improvements over time and make the lives of nursing staff less challenging. A status check in October 2022 showed that progress has been made already: nursing time spent in the EHR was down two minutes to 13 minutes per patient compared to December 2020, while documentation time had reduced by 50 seconds to six-and-a-half minutes. These time savings increased the number of patients being seen from 59,530 to 80,534 over the period.

Thirdly, technology can be used to advance **population health** and well-being by integrating health and environmental data from various sources including multiple EMRs used in varied venues of care, medical devices and by including social determinants. Studies commonly report that medical care only contributes twenty percent to a patient's health outcomes[2] making the case for a more inclusive health record, able to inform the coordination of care provided to an individual. Population health platforms have the ability to consolidate large amounts of data and convert that data into insights.

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Technology solutions can connect data to remove fragmentation and duplication. Oracle Cerner Health Information Exchange (HIE) connects multiple stakeholders, EHRs and other patient systems across different settings and services, including the region's primary care, acute, community, mental health, and social services. This solution is currently being implemented in Ontario connecting data across Ontario Health Teams partners. This same technology has been a proven success in East London Health & Care Partnership. This provides a consolidated view of patients' longitudinal records, and by using real-time connectivity leading to a saving of £500k, provides users with up-to-date and relevant clinical information saving 9,400 hours of clinical time per year, and an estimated £940k annually.

Fourthly, as costs of healthcare outpace inflation, **lowering the cost of healthcare** becomes increasingly vital. Technology must create efficiencies across all other segments of the quintuple aim. Even reducing the time it takes for clinicians to gather necessary information, avoiding duplication, and providing actionable insights within their workflows will equate to more cost-efficient care delivery.

In a fast-paced emergency room, clinicians need immediate access to information about patients as quickly as possible. When North York General Hospital (NYGH) in Toronto, Canada, began utilizing Cerner Emergency Medicine and ED LaunchPoint™, the solutions helped improve patient tracking, increased efficiency, and helped bring in increased government funding.

Lastly, the fifth and most recent addition to create the quintuple aim highlights the need to address **health and care inequities** that have become increasingly apparent over the past couple of years. The large datasets aggregated in population health platforms provide a means to identify the most vulnerable in society – those at risk of physical and mental illness and in need of intervention to prevent or delay a need for long term care. Reducing reliance on the safety net of the high acuity, high expense acute care system should be a positive result of a healthier more equitable society.

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The example here is from NHS, Healthy Wirral Partners (HWP). They use Oracle Cerner's HealtheIntent®, and predictive risk analytics, Healthy Wirral Partners were able to convey meaningful public health messages directly to those who would benefit most from COVID-19 and influenza vaccinations.

In conclusion, technology can be leveraged to transform healthcare in Canada and address the critical issues facing the healthcare system.

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ⓘ Oracle Cerner's health technologies connect people and information systems at thousands of contracted provider facilities worldwide dedicated to creating smarter and better care for individuals and communities. Recognized globally for innovation, Oracle Cerner assists clinicians in making care decisions and assists organizations in managing the health of their populations. The company also offers a connected clinical and financial ecosystem to help manage day-to-day revenue functions, as well as a wide range of services to support clinical, financial, and operational needs, focused on people. **www.cerner.ca**

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