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PRECISION MEDICINE

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Using synthetic data

Clinical trials must sometimes be abandoned due to a lack of suitable recruits. Now, a large study at CHEO has found that synthetic data can simulate the findings of clinical trials.

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Modular CTs and MRIs

Prefabricated modules outfitted with CT or MR scanners can be up-and-running in half the time as traditional construction methods, at less cost. We look at the example of Kemptville, Ont.

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Precision med in the EHR

Integrating genomic data into the electronic patient record is just getting off the ground. The data makes it easier for physicians to determine the right medication dose, and to make other decisions. We look at two leaders in Canada and the U.S.

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PHOTO: COURTESY OF ANATOMAGE

Medical students are learning anatomy, pathology and problem-solving with the help of a leading-edge platform, the Anatomage Table, which offers sophisticated 3D reconstructions of frozen cadavers using CT and MRI scans. It's just one of the technologies being deployed by the University of Prince Edward Island's new medical school, scheduled to start operating this August. **SEE STORY BELOW.**

PEI to open tech-advanced medical school facility this year

BY NORM TOLLINSKY

Twenty students selected to join the charter class at Memorial University's regional medical school campus located at the University of Prince Edward Island's (UPEI) new Faculty of Medicine and Interprofessional Health Education Facility in August will be able to take advantage of an amazing collection of advanced medical learning technologies.

Among the learning technologies in the school's Clinical Learning and Simulation Centre (CLSC) is an Anatomage Table, a 3D medical visualization technology that provides ultra-high-definition, life-size digital representations of human anatomy, physi-

ology and pathology (anatomage.com).

Also described as a virtual dissection platform, the Anatomage Table produces images from thin-slice CT or MRI scans of real frozen cadavers, allowing learners to study bodies from different angles and at different layers,

"It is going to be the most state-of-the-art medical education facility in the country."

rotate them, look at all the different organs or remove them to just see the skeleton.

With a swipe of one's finger, a student can slice through the head, for example, and turn it to reveal detail of the brain.

The digital cadaver also offers lessons and case studies; students can repeat the experience as much as needed, gaining expertise in anatomy and pathology.

For its part, Anatomage is a pioneer in the digitization of human bodies. Based in Santa Clara, Calif., it began more than 20 years ago by developing an accurate digital representation of real cadavers through its "Anatomage Bodies".

Gradually, the company augmented the digital cadavers with functional responses, extending the visualization of human anatomy to functional anatomy and pathology.

The platforms are used at leading-edge medical schools and teaching hospitals, in-

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PEI to open tech-advanced medical school facility this year

CONTINUED FROM PAGE 1

cluding the Harvard Medical School, Stanford Medicine and the Mayo Clinic.

UPEI's clinical learning and simulation centre is also equipped with an immersive simulation room that uses projectors and scent diffusers to replicate almost any imaginable setting or environment. It could be the back of an ambulance, a critical care unit in a hospital, a forest or a beach, said Tammie Muise, director of the CLSC.

"Using a 360-degree camera, you can go to any location, do a scan of the area and create that exact space in the immersive simulation room," she said. "You don't have to wear goggles or a headset. You actually feel that you're in that space."

The school, which will initially operate as a regional campus of Memorial University's Doctor of Medicine program until a joint degree is established, also features 10 so-called hi-fidelity rooms, each of which is fully furnished to simulate an environment in which students can learn and practise their skills.

One room that simulates a critical care

unit, for example, will be furnished with a hospital bed and diagnostic equipment, along with an animatronic mannequin.

Because the CLSC will also be used for allied health professional learners in nursing and paramedicine, other rooms will simulate the back of an ambulance, a patient's home, or a nursing desk in a hospital.

A paramedicine student, for example, will be able to practise attending to patients in their home, transfer them to an adjoining room that simulates an ambulance, and then to a third adjoining room that simulates an acute care facility.

Each room is equipped with cameras and microphones, allowing faculty to plan scenarios, watch students live or record them and review their performance and provide feedback. Technical staff in a control room can operate the animatronic mannequins to mimic crying, sweating, coughing, or vomiting.

They breathe, have a pulse, and can be operated by someone in the control room to converse with a student, scream or cry out in pain. Their eyes even look at the student during the encounter.



PEI's medical school will initially open as a remote campus of Memorial University's medical program.

The CLSC has a collection of mannequins, including adults, babies and a pregnant woman. One mannequin, created from a 3-D scan of a real, seven-year-old girl with Down Syndrome can be used for training and managing care for a child with the same condition, said Muise.

The school has 16 simulated clinic rooms where medical learners will engage

with standardized patients, examine them, take their medical histories and practise their clinical skills.

Faculty can monitor and assess the students by watching them live through one-way windows and headphones or in their own offices through cameras and microphones.

A SimRig mobile ambulance trainer has also been acquired by the school to train paramedicine students in the field. Pulled by a truck, the SimRig looks exactly like the back of a real ambulance. It's fully stocked with medical supplies and equipment and can be taken anywhere on the Island to simulate an accident or emergency using an animatronic mannequin.

The decision to establish a Faculty of Medicine and Interprofessional Health Education Center at UPEI was announced in October 2021. Construction of a state-of-the-art, five-storey building on the grounds of the school's Charlottetown campus began exactly one year later.

The 140,000 square-foot building is designed to maximize exposure to natural light and features a closed-loop geothermal heating and cooling system. Of the \$90 million price tag for the building, a total of \$30 million was dedicated to the future-facing medical education technologies, said Muise.

The school is intended to help relieve the current shortage of family doctors and nurse practitioners in PEI, whose health authority currently lists 38,000 Islanders on an orphan patient registry, representing a shortage of approximately 50 primary care providers.

The school's focus on family practice and rural health will be complemented by the presence of a patient medical home or a team-based primary care clinic within the building that will serve 10,000 or more patients and provide students with valuable clinical learning opportunities.



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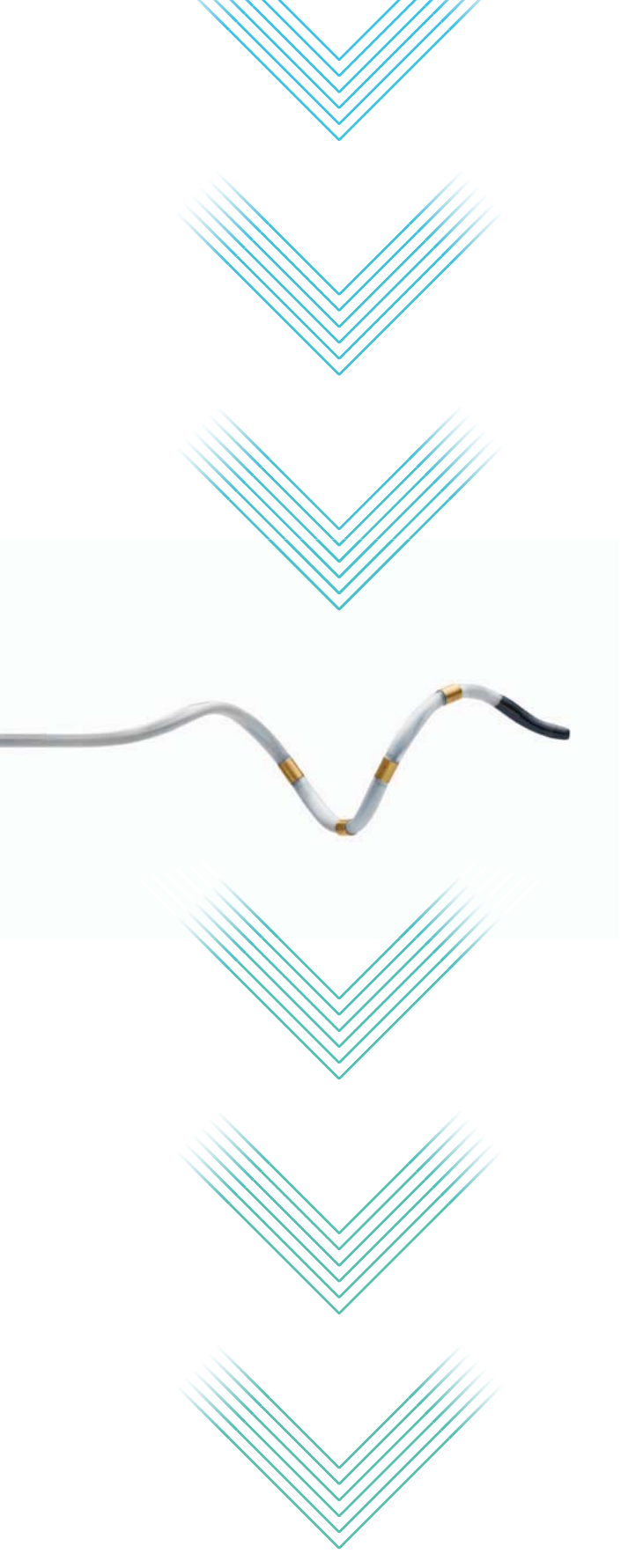
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Holland Bloorview data-sharing initiative to accelerate innovation

TORONTO – Children and young people with disabilities and developmental differences represent 10 percent of the world’s population. However, innovation in pediatric developmental healthcare – especially pediatric disability care – lags behind the adult healthcare sector. Why? One major factor is the limited access to large-scale datasets that enable ground-breaking advances in care.

To address this gap, Holland Bloorview Kids Rehabilitation Hospital is committed to accessing and harnessing the power of clinical, administrative and demographic data, through research partnerships and data consortiums.

By using and sharing de-identified clinical data across the province, country and globe, the hospital can speed up the development of personalized therapies and interventions as well as improve and predict outcomes for children and youth with disabilities, developmental differences, and rare genetic conditions.

Earlier this year, Holland Bloorview announced it was the first Canadian hospital to join KidSights, a pioneering data consortium created to address and close the innovation gap in pediatric health, established in 2023 as a subsidiary of Gillette Children’s, a specialized pediatric hospital based in Minnesota.

KidSights will use secure, privacy-enhanced technology to create de-identified, aggregated datasets focused on pediatric disability. These datasets will be available to innovators, including pharmaceutical and medical device companies, and researchers around the world to propel research and accelerate new products, medical treatments, devices and drugs.

The ultimate goal: to advance the health



Barbara Joers, of Gillette Children’s, and Holland Bloorview’s Julia Hanigsberg are working together.

and wellbeing of children and youth with complex needs.

“For far too long, pediatric disability health data have not been effectively aggregated and made widely accessible, which has led to a major innovation gap,” said Julia Hanigsberg, president and CEO. “The KidSights data consortium is a critical step in the right direction. By participating, Holland Bloorview expects to close that gap and speed up the development of personalized therapies and interventions to improve outcomes for children and youth with disabilities, developmental differences and rare genetic conditions within and beyond our walls.”

“In our long history of providing specialty care for children with complex conditions and rare diseases, we have consistently led and innovated clinical advances that directly benefit the community we

serve,” said Barbara Joers, president and CEO of Gillette Children’s. “The launch of KidSights marks a transformative step forward in pediatric health. We look forward to utilizing the data derived from KidSights to tackle enduring challenges and drive clinical advancements for the children who need them most.”

Researchers at the Bloorview Research Institute are already leveraging datasets to inform care decisions. For instance, senior scientist Dr. Azadeh Kushki and her team are using datasets and artificial intelligence to predict and improve medication outcomes for neurodivergent children.

“High quality, real-world datasets are critical to gaining insights into individual characteristics that influence trajectories, responses to interventions, and long-term outcomes. These types of insights will help us deliver the right type of care, at the right

time, to each child,” said Dr. Kushki, who is the associate chair of data science at the Bloorview Research Institute and holds the Canada Research Chair in Neurodiversity and Personalized Health.

For Adrienne Zarem, a family leader who is a member of Holland Bloorview’s Family Advisory Council and a parent advisor on Holland Bloorview’s ECHO Autism Hub Team, this membership with KidSights means the hospital can be part of a global network with a shared goal to enable more meaningful and healthy futures for children and youth and their families.

“Membership in data consortiums like KidSights unlocks the potential for transformative advancements in care for children and youth with disabilities and neurodevelopmental differences, bringing much-needed hope to kids and families alike, including mine,” said Zarem.

Carly Cermak, a speech language pathologist and research associate, sees the potential impact of having access to larger clinical datasets.

“When I was in the depths of my PhD examining cognitive communication outcomes after early childhood traumatic brain injury, I would have loved to have access to a dataset to examine populations served outside of Holland Bloorview,” said Cermak. “To have access to a larger dataset from across different regions, states, and provinces, provides the representation of children and youth with disabilities that is needed to inform clinical care.”

Together, we are leveraging the power of data to close the pediatric innovation gap and propel our efforts to provide care and services that are agile, socially accountable and transformed by research and education.

Synthetic data could salvage clinical trials, CHEO research suggests

OTTAWA – For researchers leading clinical trials, recruiting enough participants can be a challenge. When recruitment targets for clinical trials are not met, due to cuts in funding, studies being shut down, or difficulty finding eligible patients, the trial can be abandoned altogether or redesigned to accommodate the smaller data sets, resulting in less impactful conclusions than originally intended.

Abandoning clinical trials can be seen as unethical and unfair to the individuals who give their time and active participation in a trial, only to have no results or conclusions reached.

But what if there was a way to salvage clinical trials that may not meet recruitment targets? Dr. Khaled El Emam, senior scientist at the CHEO Research Institute and Canada research chair (Tier 1) in medical AI at the University of Ottawa, sought to answer this exact question with the largest study to date that tested whether synthetic data generation (SDG) could accurately supplement recruitment gaps in clinical trials.

The study took nine completed breast

cancer clinical trials from around the world, including some from The Ottawa Hospital Research Institute (OHRI), and re-created them by replacing a portion of the participants with synthetic data – also known as a digital twin.

The analysis and results using the synthetic data were then compared to the original results from the clinical trials – in partnership with the original study teams.

The simulation worked “incredibly well” said Dr. El Emam, with findings showing that as long as the original patient group remained at least 60 percent human, synthetic data was able to replicate findings with high accuracy.

“At this stage, it’s hard to say whether synthetic data will change the way we do clinical trials altogether or just be another tool in the toolbox we can depend on when recruitment targets cannot be achieved,” said Dr. El Emam. “I am hopeful of this becoming a trusted tool to mitigate common barriers and pitfalls in clinical trials, that is accepted not only by researchers but regulators alike. But there is more work to do – we need to continue to engage patient partners, clinicians, researchers, and regulators in

discussions about the use of synthetic data to optimize clinical trials.”

Working closely with the medical oncology group and REaCT team at OHRI, Dr. El Emam gathered the largest international team thus far to successfully explore using synthetic data in clinical trials. They are now working on testing synthetic data on an even larger scale, with hopes of completing 100 trial simulations to see

Simulations showed that synthetic data was able to replicate findings with high levels of accuracy.

how it works across different diseases, patient populations, and study sizes.

“AI is revolutionizing society and the REaCT team is delighted to present this pivotal research in collaboration with CHEO and national and international groups,” said Dr. Mark Clemons, medical oncologist and scientist at The Ottawa Hospital and professor at the University of Ottawa. “This work is striving to improve clinical trials by making them

more efficient so that better treatments reach patients sooner.”

Synthetic Data Summit 2025: On May 16, 2025, expert speakers from across industry, government, academia, and regulatory agencies are gathering for the 2025 Synthetic Data Summit at the PHI Centre in Montreal. The summit will explore how synthetic data is being used to address real-world data challenges and privacy problems and examine its future applications in healthcare.

“By using AI to create high-quality datasets that do not contain personal information, synthetic data generation (SDG) enables data to be shared and analyzed, protecting privacy. SDG also helps amplify and fill gaps in datasets to improve research outcomes, as well as reduce bias in clinical trials.

“The 2025 Synthetic Data Summit is a unique opportunity to gain a well-rounded perspective on how synthetic data is transforming health care now, and in the years ahead,” said Dr. El Emam, who as director of the Electronic Health Information Laboratory, based at the CHEO Research Institute, is hosting the summit.



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Modular addition of CTs and MRIs cuts time to launch, reduces costs

BY NORM TOLLINSKY

Kemptville District Hospital (KDH), a 40-bed, acute-care facility 50 kilometres south of Ottawa, has joined a growing list of hospitals opting for a prefabricated modular addition to house a new CT or MRI scanner.

Supplied by SDI Canada and constructed offsite in Hamilton, the prefabricated modular cassettes can usually be delivered faster and at less cost than renovating or building an addition to a hospital onsite.

“For a bricks-and-mortar build from the ground up, it was probably going to take us 18 to 24 months to get everything in place,” said Brittany Rivard, KDH’s chief financial officer and vice-president of operations. “With the prefab modular cassette, we were anticipating 12 to 18 months. That’s significantly faster than it would have been if we were to construct an entire addition off our building.”

In the aftermath of the pandemic, Rivard was also concerned about escalating costs, and concluded that a larger percentage of the overall costs would be predictable using prefab modular construction.

SDI has also delivered prefab modular cassettes to Richmond Hospital in British Columbia, the Health Sciences Centre in Winnipeg, Brockville General Hospital in Ontario and a private MRI research centre in Laval, Quebec.

Another prefab addition for Headquarters Health Care Centre in Orangeville, Ontario is in progress and at least a half-dozen other projects are in the pipeline, noted SDI president Toufic Abiad.

“We delivered a two-cassette addition to Brockville in 12 months,” he said. “Initially, it was supposed to be traditional construction that would have taken two and a half years. That equates with thousands of extra scans. It’s the same with Kemptville. If we do this 20 times in Ontario, we can fast forward scanning by 20 years.”

In addition to faster construction and cost savings, both Rivard and Abiad claim



prefab construction in a controlled environment results in superior quality.

SDI Canada had its start in 2003 as a shielding vendor importing MRI shields from the U.S. and evolved over the years to offer turnkey construction for diagnostic imaging departments. In 2013, Abiad bought out the U.S. based shielding manufacturer and six years later transferred the manufacturing to Canada.

He subsequently struck a relationship

with PDC Facilities, a prefabricated modular cassette manufacturer in Wisconsin to supply the Canadian market and ultimately signed a licencing agreement to manufacture in Canada. The KDH project was SDI’s first Canadian manufactured prefab job.

“We took the American solution and invested a half million dollars to re-engineer it to make it Canadian compliant,” said Abiad.

Going forward, SDI plans to manufacture prefab modular cassettes for CTs in

Canada and continue importing MRI units from the U.S.

Tariffs, given the current trade war with the Trump administration “aren’t an issue,” said Abiad, “because it’s our understanding that healthcare will be spared. The worst thing the Canadian government could do is sanction healthcare.”

SDI also has a relationship with a supplier of patient experience solutions that help to put patients at ease during a scan.

A colourful nature scene directly above KDH’s CT scanner, for example, reduces anxiety and helps to improve imaging quality. Patient-experience additions to the scanning suite are especially important for children, who might otherwise require anesthesia to keep them from moving on the table while in the gantry, said Abiad.

The two cassettes for Kemptville, each weighing 80,000 pounds, were delivered from Hamilton, a distance of 500 kilometres, on two 130-foot super-trailers and hoisted onto a preconstructed slab using a 550-ton crane. The GE CT scanner was introduced onsite by sliding it into place through an opening in the cassette and installed by the GE staff.

“The tolerances were in millimetres,” said Rivard. “We were blown away by how perfectly everything aligned.” The integration with the existing diagnostic imaging department was made possible by relocating a small staff lounge and creating an opening for a hallway joining the original building with the prefabricated modular addition.

KDH had sufficient space outside the hospital building to accommodate the cassettes and only lost a handful of parking spaces. That was important because insufficient space outside the building would have eliminated the option of a prefab addition.

For Soldiers’ Memorial Hospital in Orillia, for example, SDI recommended the renovation of a space inside their building because there was no space outside the hospital to accommodate a prefab addition.

“Orillia had a wonderful space inside

CONTINUED ON PAGE 23

New procedure helps patients fight high blood pressure

TORONTO – A new minimally invasive procedure is helping cardiac patients gain better control of high blood pressure and reduce the risks of heart attack and stroke.

Patients who have been unable to control their hypertension with medications and lifestyle changes now have an additional treatment option – renal denervation – to try to keep their blood pressure in check.

Physicians use heat energy delivered by a catheter to disrupt signals sent by renal nerves, which help regulate blood pressure by influencing kidney function and the body’s sympathetic nervous system. Reducing activity of the renal nerves through the procedure causes blood pressure to decrease and become more stable in most patients.

“Renal denervation allows an opportunity to safely control blood pressure

when medications and lifestyle haven’t achieved the desired results that we want,” said Dr. Mina Madan, medical director of the cardiac catheterization lab at Sunnybrook’s Schulich Heart Program, in Toronto. “But the bigger picture is that we are also ultimately hoping to reduce cardiovascular risk.”

Since launching its renal denervation program in April 2023, Sunnybrook has performed the procedure on nine patients. Dr. Madan and her team select patients with resistant hypertension who have been taking at least two or three medications to try to control their blood pressure without success.

While the procedure takes only about two hours, patients remain in hospital overnight to allow the cardiac team to monitor their condition and make any adjustments necessary to the medications they take.

The therapy can produce dramatic improvements for some hypertension patients, reducing the amount of medication they need for blood pressure control and improving their overall quality of life, said Dr. Madan.

Dr. David Ellis, a retired otolaryngol-

Dr. Mina Madan hopes renal denervation will play a growing role at Sunnybrook and other hospitals.

ogy surgeon who specialized in facial plastic surgery, was among Dr. Madan’s first patients to undergo renal denervation. Dr. Ellis, 84, had been living with hypertension for about five years and taking multiple medications daily that weren’t controlling his blood pressure effectively. He also

experienced a significant complication from the medications he was taking.

The procedure lowered Dr. Ellis’s blood pressure and has allowed him to reduce the amount of medication he takes for hypertension and other side effects. It’s also allowed him keep up with an active personal schedule, including travelling frequently to play in international duplicate bridge tournaments.

“It’s been very positive,” Dr. Ellis said. “It makes me feel happier because I know my blood pressure is under control without the risk of complications.”

Considering hypertension affects nearly one in four Canadians and is one of the leading risk factors for cardiovascular disease and premature death, Dr. Madan is hopeful renal denervation will play a growing role in treatment at Sunnybrook and at other hospitals with cardiac centres across the country.

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- Pharmacogenomic drug-gene checking and clinical trial matching enables next-level personalized care

A holistic approach to executing large-scale healthcare transformations

Large-scale healthcare transformations are complex endeavours. Success depends not just on technology but on aligning people and processes for long-term impact. Without this alignment, even the most sophisticated digital solutions can fail to deliver their intended impact.

Transformation projects fail at an alarming rate, often due to poor planning, resistance to change, and underestimating the complexity of implementation.

A structured approach – balancing people, process, and technology – is key to ensuring leadership engagement, optimized workflows, and sustainable adoption.

To gain insights into best practices for managing large-scale healthcare transformations, we spoke with two Stratford Group experts: AJ Harris, an IT and digital transformation expert specializing in system implementations and interoperability, and Kathryn Yeung, a change management specialist focused on leadership alignment and workforce readiness.

Laying the groundwork: Before launching a major transformation, organizations must define the why – whether it's regulatory compliance, patient care improvements, or operational efficiency.

The transformation must align with strategic objectives and have clear, measurable goals to guide decision-making and ensure long-term impact. Without this alignment and strong leadership buy-in, projects can stall or fail.

Key factors for success:

- Readiness: Are leaders and teams prepared for change?
- Stakeholder alignment: Have all impacted groups been identified and engaged?
- Governance: Who makes decisions, and how will risks be managed?
- Change management: How will communication and training be handled?
- External validation: Have outside experts

been engaged to challenge assumptions?

One of the most common mistakes is failing to secure strong leadership sponsorship. External advisors can help identify blind spots and ensure decisions are grounded in best practices.

“If senior leadership is not fully bought in, the project is set up for failure. There is no scenario where a large-scale transformation isn't painful. The only way through it is with strong leadership and a clear ‘why’ behind the change,” said Stratford Group's AJ Harris.

The role of people: While technology enables transformation, people drive it. Many organizations underestimate how much effort must go into process optimization and change management – not just the technology itself. In reality, the hardest part is ensuring that the people and processes are prepared to use the technology effectively.

Change management is often cited as the most challenging aspect of large-scale projects, especially in industries like healthcare, where workflows are deeply ingrained, and even small changes can disrupt operations. Without clear leadership commitment and organization-wide alignment, transformation can stall.

The key is not just top-down approval but trickle-down adoption – leaders must actively champion the change, managers need to reinforce it, and frontline teams must feel supported in adapting to new ways of working. Effective change management is not just about communication; it's about ensuring that teams have the training, resources, and structured support needed to integrate new systems into daily operations.

“The biggest challenge isn't the technology – it's getting the organization to use it effectively. Turning on a system is easy; aligning it with business processes and ensuring adoption is the real effort,” Harris noted.

How to overcome resistance to change:

Resistance to change is natural. However, resistance is rarely about outright opposition; more often, it stems from uncertainty, lack of clarity, or fear of the unknown. Successfully navigating this requires early engagement, ongoing support, and clear feedback loops to address concerns before they escalate.

Key strategies:

- Active leadership engagement – executives must champion change with visible support and consistent messaging.
- Targeted support for impacted teams – identifying those most affected ensures tailored interventions.
- Empowered managers – mid-level lead-



AJ Harris



Kathryn Yeung

ers must be equipped to guide teams through change.

- Frequent, transparent communication – uncertainty fuels resistance; clear messaging mitigates it.
- Strong feedback mechanisms – employees need structured ways to raise concerns and influence decisions.
- Measurable adoption tracking – usage metrics and employee feedback highlight where additional support is needed.

At the core of overcoming resistance is recognizing that change is not just a technical shift – it's a human one.

“Resistance to change isn't just reluctance – it's often uncertainty. People in-

stinctively try to maintain familiar ways of working, even when change is necessary. That's why it's critical to assess resistance early and create feedback mechanisms that allow teams to voice concerns and adapt in real time, observed Kathryn Yeung.

The process perspective: A well-defined process is critical to keeping large-scale transformations on track, within budget, and aligned with strategic goals. In healthcare, regulatory requirements, complex integrations, and data security concerns make structured methodologies essential. Yet, many organizations underestimate the importance of process clarity and data readiness – key factors that often determine success or failure.

“Most organizations don't fully understand how their business processes function until they're forced to map them out. Every transformation project involves peeling back layers of legacy workflows that have evolved over time, often in inefficient ways,” noted Harris.

Key Process Considerations:

- Select the right approach – Agile, Lean, or Six Sigma methodologies help maintain flexibility and drive continuous improvement.
- Define workflows and accountability – every phase should have clear responsibilities and measurable outcomes.
- Prioritize data governance – poor data quality or lack of integration can derail even the most well-planned projects.
- Engage stakeholders early – identifying impacted roles before implementation helps prevent bottlenecks.
- Take an iterative approach – regularly assess process readiness and refine strategies as needed.

Data governance is particularly critical in healthcare, where privacy regulations and interoperability standards add complexity. Addressing data quality, compliance, and integration requirements early prevents costly setbacks.

Sustaining change: Deploying a new system is just the beginning. Without structured support, training, and governance, organizations risk backsliding, adoption fatigue, or inefficiencies that undermine long-term success.

“Too often, projects end at deployment. The reality is a transformation isn't successful until the organization fully integrates the new system into its everyday operations. That requires continued leadership involvement and reinforcement,” commented Yeung.

Keys to sustainable transformation:

- Develop internal change champions – empower employees to sustain momentum after external consultants leave.
- Establish feedback loops – address post-implementation challenges by continuously refining workflows.
- Embed sustainability planning early – don't treat steady-state operations as an afterthought.
- Ensure training is hands-on and role-specific – build true proficiency, not just awareness.
- Foster a culture of continuous improvement – iterative changes make adaptation easier.
- Leverage data insights – monitor adoption, track progress, and adjust strategies as needed.



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Canada's approach to productivity: longevity and care over innovation

BY ANDREW FRANCES

Economist Impact, the business intelligence arm of the *Economist* magazine, recently conducted an international study of productivity in the public sector, including healthcare. Canadian or-

ganizations are generously represented, with half of the Canadian respondents coming from the healthcare sector.

By a significant margin over their worldwide peers, Canadian organizations see budget constraints, lack of public trust, and labour shortages as barriers to productivity.

Fifty-six percent of Canadian respondents felt budget constraints were a concern, compared to 48 percent globally and 47 percent in the U.S. Lack of public trust was cited by 45 percent of Canadian respondents (versus 38 percent globally and in the U.S.), while labour shortages were

named by 23 percent of Canadians (compared with 17 percent globally and 12 percent in the U.S.).

Peeling the layers of productivity: The Canadian federal government has weighed in on the healthcare labour shortage, allotting \$14.3 million in March to help healthcare workers with foreign accreditation enter the workforce, with some of that funding aimed specifically at women with international training.

The funding will “help grow capacity in our healthcare system and give relief to workers already providing care to Canadians,” former Minister of Health Mark Holland said earlier this year.

“We’re short of staff in all levels of healthcare,” said Dr. Patrick Rogalla, radiologist at Toronto’s University Health Network in the Joint Department of Medical Imaging, where he also serves as the division head of cardiovascular and thoracic imaging and site director of medical imaging at the Toronto General Hospital.

Operationally, he said, imaging productivity tends to be narrowed to throughput – how many patients can we scan per time slot? – but it can look very different depending on the strategies and goals of the institution.

Through the lens of quality, the picture might look different because less interaction with the patient might improve throughput, but it can also increase the need for recalls and additional testing. And at the strategic level, there’s “a conglomerate of resources” – human, environmental, technical, financial – that are interwoven to maximize big picture efficiency, he said.

At the operational level, technology offers new opportunities.

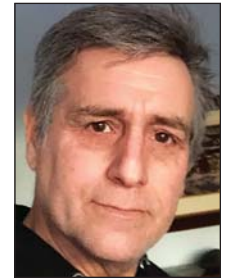
“It can open up new treatment plans, new possibilities of treating disease that we never had before,” Dr. Rogalla said. The automation that replaces strenuous, repetitive tasks doesn’t just improve throughput. It’s also a safety net.

“We eliminate downtime. We eliminate problems from fatigue. We may eliminate unexplained variability – a very important term in high-reliability organizations.”

Unexplained variabilities can lead to waste and even “catastrophic events,” he said.

Augmented intelligence: Lorne Rothman, industry specialist and national healthcare lead at data and AI firm SAS Canada, said there is a preference for “augmented intelligence” – the use of artificial intelligence to support, not replace, decision-making – among healthcare users. Large language models (LLMs) and natural language processing (NLP) are used to retrieve and standardize information in medical records and laboratory results.

“Relying solely on humans to pore over large volumes of textual information is incredibly time consuming. The problem is compounded by variation in how medical conditions, and drug treatments, dosages,



Lorne Rothman



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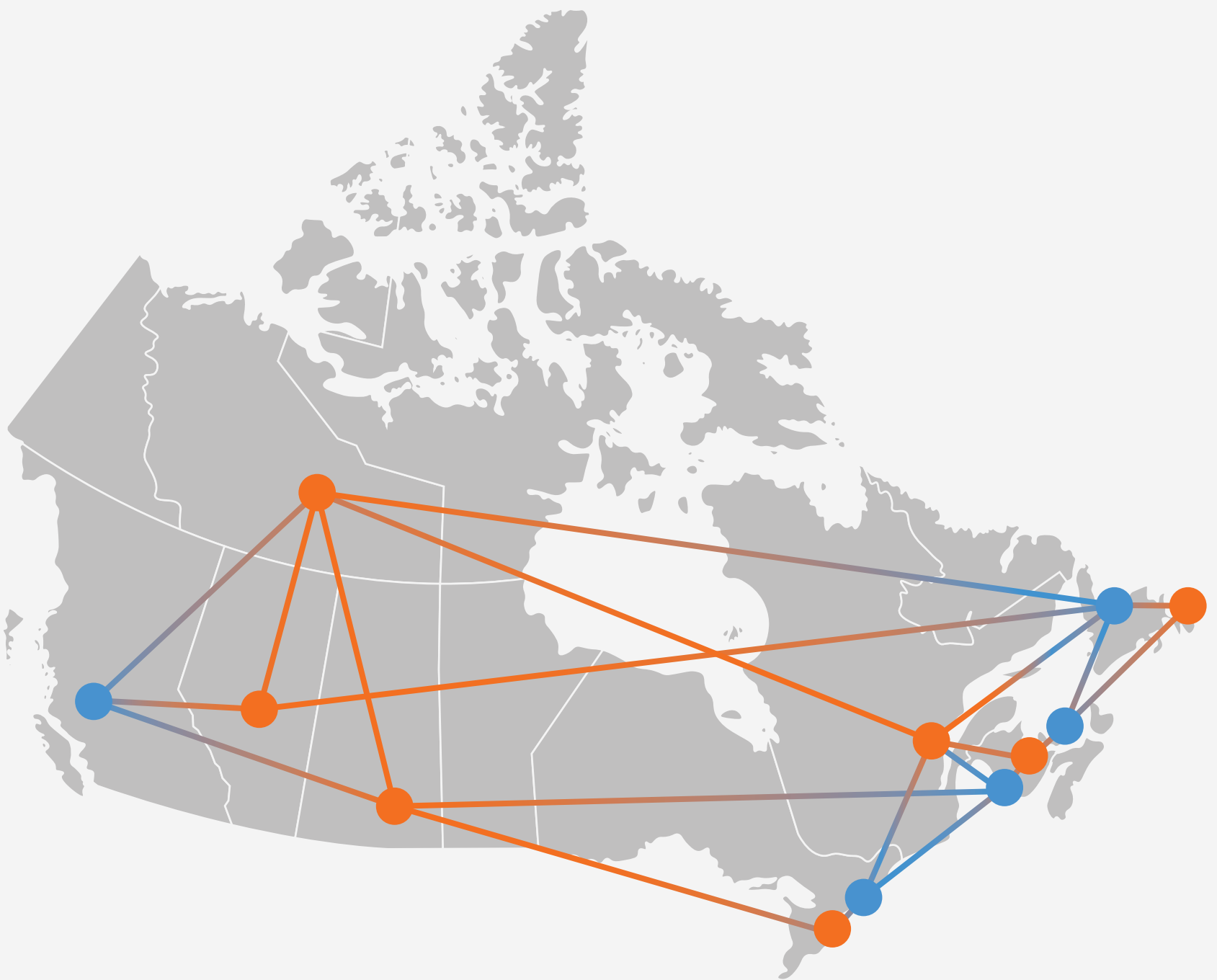


CONTINUED ON PAGE 23

A New Era in Canadian Healthcare:

Working Together to Build Smarter, More Unified Health Systems

Integrating systems. Connecting care. Empowering better outcomes.



Orion Health and HEALWELL AI join forces to build smarter systems

BY ANDREA TAIT

As the healthcare sector continues to face increasing pressure – from ageing populations and workforce shortages to the rising complexity of care – there’s a growing consensus that the future

of sustainable, effective healthcare lies in better use of data.

At Orion Health, we’ve spent decades working alongside governments and healthcare providers in Canada to build digital solutions that enable this vision. Now, as we join forces with HEALWELL

AI, we’re advancing that work even further.

Our strategic alignment reflects where healthcare is heading: a more connected, intelligence-driven system that delivers value to patients, clinicians, and the broader health ecosystem.

Combining strengths for proactive, pre-

ventative care : Orion Health has a long-standing track record in delivering data interoperability and healthcare navigation solutions using our Amadeus Digital Care Record and Virtuoso Digital Front Door products. Across Canada and globally, our technology supports some of the most advanced examples of integrated care, underpinning initiatives where health data flows across organizations, regions, and sectors.

HEALWELL AI is renowned for its world-class, clinically validated AI capabilities, which are already improving patient outcomes and streamlining healthcare systems across North America and beyond.

Together, we are combining two critical components of modern healthcare delivery: a complete, longitudinal view of patient health and the ability to act on that information in real-time with AI-informed clinical insight. It’s about creating something greater than the sum of its parts – solutions that empower care teams to move from reactive treatment to proactive, preventive care.

Dr. Alexander Dobranowski, CEO of HEALWELL AI, commented, “Orion Health joining the HEALWELL family creates a powerhouse of innovation that will deliver actionable insights and drive better population healthcare outcomes globally.”

Addressing the real needs of Canadian healthcare systems: Canada’s healthcare system continues to face complex, long-standing challenges, and digitization alone isn’t enough. What’s needed are tools that can help healthcare systems improve care coordination, reduce administrative friction, and support decisions based on complete, accurate data.



Andrea Tait

By embedding decision-making tools directly into digital care records, clinicians will get access to insights in the context of care, not through a separate app or dashboard, but right where they are already working, which is a game changer for clinical usability.

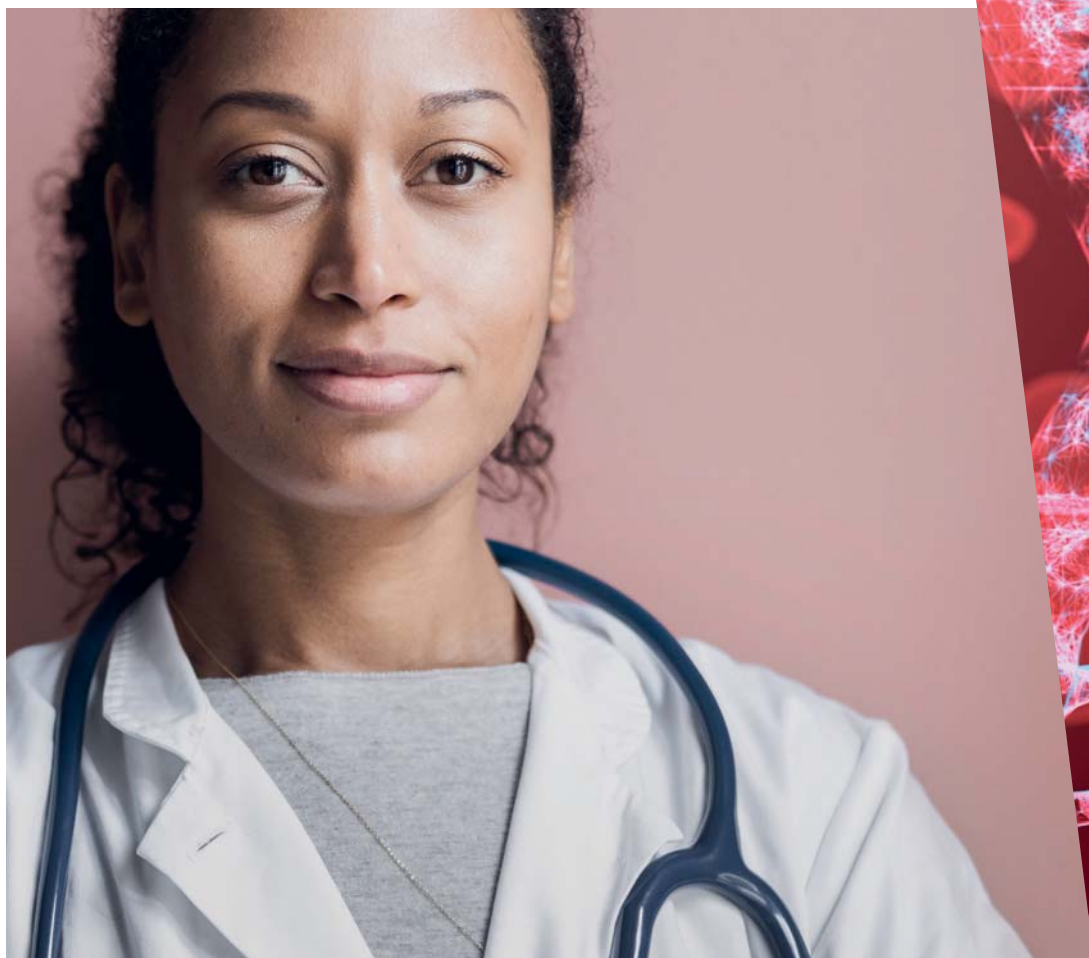
Meanwhile, predictive analytics will allow health authorities and ministries to better monitor trends across populations, design targeted interventions, and shift resources upstream toward prevention, not just treatment.

Brad Porter, CEO of Orion Health, commented, “By joining forces with HEALWELL, we will deliver AI-driven insights that have the potential to revolutionize how healthcare providers interact with data, leading to improved decision-making, better patient outcomes, and more efficient care delivery.”

A Canadian foundation with global reach: With HEALWELL’s Canadian roots and Orion Health’s decades of local experience, the combined business is built to serve Canada. This is crucial not just in terms of alignment with policy and procurement frameworks but also in understanding how care is delivered across provincial systems.

At the same time, the potential of our

CONTINUED ON PAGE 23



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Pharmacogenomic systems being integrated into the electronic record

BY JERRY ZEIDENBERG

LAS VEGAS – Two forward-thinking organizations described how they're integrating genomic data into their MEDITECH electronic health records during the HIMSS conference in March. Ontario Shores Centre for Mental Health Sciences, based in Whitby, Ontario, near Toronto, and Frederick Health, located outside Baltimore, Maryland, have both made strides in capturing and using personalized data for clinical decision support.

The two organizations are users of MEDITECH's Expanse Genomics solution, which brings discrete genetic data into their MEDITECH Expanse electronic health record (EHR) systems.

For its part, Ontario Shores, a mental health facility, has been using the solution to allow its physicians to more precisely gauge the right medication dose for their patients. Using the data, they can also determine if certain medications will work at all.

"Before, there was a lot of trial and error," said Sanaz Riahi, PhD, vice-president, clinical services, practice and chief nursing executive at Ontario Shores. "Now, dosing is more precise."

Some of the patient population have severe challenges, such as schizophrenia, and dosing can be difficult. "It's sometimes hard for the clinicians to make decisions," she said. Using genomic testing and the digital support system, these decisions have become much easier.

The hospital has been offering the genomic testing service to its inpatients, and Dr. Riahi said that about 60 percent have been agreeing to go ahead with it on admission.

It's planning to start offering the service to ambulatory patients, too, starting in April 2025.



Leaders in precision medicine: Frederick Health's Jackie Rice, VP and CIO, and Pat Rice, clinical director.

Not only is the data gathered useful to clinicians at Ontario Shores, it's also helpful to the patients and their doctors when they visit other medical centres, as well, she said.

In the U.S., Frederick Health has become a leader in the application of genomic data to the EMR.

It started its own program in 2022, using Expanse Genomics from MEDITECH.

In the first six months, 96 patients had their treatment changed due to the information and decision support available with the digitized system.

Moreover, for cancer patients, the system logs the availability of clinical trials and automatically matches patients to them. In the first six months, Frederick Health made 56 referrals to clinical trials, compared to only two in the six months prior.

"Before, we had to manually go through the charts looking for genetic markers and match them to the right trials," said Jackie Rice, vice president and CIO at Frederick Health. "Now it's automated," making the

process much easier.

The organization has itself ramped up from four clinical trials to 19 since last July.

As Rice noted, before the hospital digitized its solution, pharmacogenomic tests would come back as 30-page PDFs. They were difficult to analyze and didn't flow through the electronic medical record system.

Moreover, there was little standardization in terminology. "Our lab systems weren't set up for genetics," she said.

It took some time and effort working with the EMR partner, MEDITECH, to standardize the genetic data coming from four different labs.

Now that data appears in a standardized format and is collected in a meaningful way, it takes a provider only five minutes to order a pharmacogenetic test for a patient, compared with 30 minutes earlier. The data is also integrated with decision support systems.

"We can measure if you're a fast or slow

metabolizer," said Rice. "Or whether the medication will work as expected."

There are a range of medications this applies to, including antidepressants and pain, as well as heart and cancer drugs.

She described the experience of one teenaged patient who was suffering from anxiety at college and was failing. "She was a fast metabolizer and wasn't getting the right drug," said Rice. She had pharmacogenetic testing and the results showed clinicians a different care path for her.

"Now she's doing well at college," said Rice.

Pat Rice, clinical director of precision medicine and genetics at Frederick Health, (and no relation to Jackie Rice) said the organization had to develop a business strategy for the program that was presented to its board, to get it off the ground in 2022.

As part of the strategy, the team had to show return on investment. Rice said this presented some challenges: "It's hard to capture a negative event. How can you be sure that you prevented a heart attack?"

However, over time, you can show numbers such as a decrease in admissions, she said.

As well, there are initial barriers to overcome when launching a genomics program, such as provider and patient resistance. But again, over time, as the results are seen, this resistance is overcome.

"There is buy-in now," said Rice. "Providers didn't have this information before. Now they see it, and they are acting on it."

That information is resulting in more effective treatment for mental health disorders, cancer, heart disease and more.

"It's really helping our primary care physicians and specialists with dosing," said Rice. "It's really valuable information. One day, we'll probably be saying, we can't believe how we did things without it."

Alberta and BC announce new investments in personalized medicine

CALGARY – Genome Alberta and Genome British Columbia (Genome BC), with support from Government of Alberta and other key partners, are announcing funding for eight new projects to accelerate adoption of new technologies for improving patient care.

Through the Healthy Outcomes through Genomic Innovations initiative, these new projects, with a total value of \$5.9 million, are focussed on near-term solutions in the areas of infectious disease, cancer screening and detection, mental health disorders, cardiology and transplants.

"These projects will provide valuable insights to both researchers and healthcare providers, ultimately improving care for patients in western Canada and strengthening our delivery of genomic medicine," said David Bailey, CEO, Genome Alberta.

He added, "We are pleased to make this investment into near-term solutions needed for broader adoption of new

technology in our healthcare systems to reach patients faster."

Precision health tailors care to an individual patient's needs using detailed information about their genetics and other biological data together with their medical history, lifestyle and environment.

Expanding genomics-based testing into routine care leads to faster diagnosis, more effective personalized treatment, and improved disease prevention while offering cost-effective care.

"This initiative is designed to drive the adoption of genomics-based technologies into clinical practice, focusing on projects that deliver tangible patient benefits in the near future. Whether it's detecting cancer earlier, improving transplant success or tailoring medications to an individual's genetic makeup, these projects are about making healthcare work better for everyone," said Suzanne Gill, president and CEO, Genome BC.

Eight new initiatives will bring together top research teams from Alberta

and BC and the health authorities in each province to overcome barriers for adoption of new technology to routine patient care, including:

- Early-stage detection of lung cancer with a fast, cost-effective, at-home screening test.
- Establishing performance criteria for

Projects are focused on near-term solutions in infectious disease, cancer, mental health, cardiology and transplants.

rapid testing of blood stream infections to reduce time needed for life-saving antibiotic prescribing decisions.

- A health economics evaluation of proactive genomic surveillance for early interventions to prevent the spread of multi-drug-resistant bacteria in healthcare environments.
- Improving treatment outcomes and reducing side effects from medications

by standardizing reporting of genetic test results helping doctors better tailor doses and medication choices for individual patients.

- Safer chemotherapy for children by improving tests that predict severe drug reactions in pediatric cancer patients.
- Improving kidney transplant success rates by using an improved, non-invasive test to detect signs of organ weakness earlier and more precisely monitor the health of kidneys.
- More precise cancer testing with upgrading testing for gene fusions – genetic changes that drive many cancers.
- Improved heart failure detection with an earlier and more precise diagnosis of a hereditary condition that can result in heart failure.

Funding for the Healthy Outcomes through Genomic Innovations initiative comes from Genome Alberta – with support from the Government of Alberta and Genome BC, as well as program partners Johnson & Johnson and Roche Diagnostics.

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Canada Health Infoway is collaborating with provinces and territories to implement the AI Scribe Program. Program availability, access, and execution may vary by jurisdiction, with each approach tailored to align with the unique needs of the region and clinical practice requirements.

AI in healthcare: The year in review and the road ahead

Expect adoption of AI to accelerate quickly. Best to understand how AI works, sooner rather than later.

BY WILL FALK

In mid-April, roughly 250 of us – one third AMS AI Fellows and two thirds Ontario health system leaders – gathered at the AMS Healthcare Conference on AI in Healthcare. The mood was resolutely hands on: let's get practical. The keynote set the stage: artificial general intelligence (AGI) at human levels is being reached by AI systems this year in many realms.

Recent research shows this in healthcare: AI is performing at specialty licencing exam levels. The promise that we see in the research literature is shifting into practice. Implementation challenges are being solved by clinicians, health systems, and vendors across the country. Let's review progress this past year and then look ahead.

Ambient AI scribes shifted the AI conversation in 2024/25 from "interesting" to "indispensable." The administrative burden on doctors calls for an AI point solution to scribing. Ontario already tops 10 percent adoption in primary care AI scribe usage, and a province-wide bulk buy this month should be close to 50 percent by next spring.

Infoway is procuring 10,000 additional licences to seed the rest of the country. Most clinicians will use ambient scribing in their practice by the end of the decade.

OntarioMD lit the fuse. Its evaluation – analytics by Women's College's WiHV with the eHealth Centre of Excellence and the Centre for Effective Practice – showed 70-90 percent documentation time savings for more than 150 clinicians, with 83 percent wanting to keep the software.

With CMPA, OMA, CPSO, and privacy officers all endorsing the approach, scribes became a regulatory wedge that lets AI into routine ambulatory care. It is "just a point solution" but also a pointy solution.

Vendor response to scribes has been immediate as major Canadian and US EMR vendors moved to develop scribe partnerships and AI strategies.

In Canada, WELL Health absorbed Abstractive Health, pocketed Orion, invested in partnerships with a couple of scribes, and then consolidated HEALWELL.AI back into the parent company on March 31.

TELUS Health countered with a Sovereign AI Factory built with NVIDIA to keep training data on Canadian soil and their own scribing partnerships plus their 224 investments in the space.

Loblaws/Shoppers hovers one press release away; PointClickCare, AlayaCare, and several lab and pharma players are already budgeting for AI expansions.

South of the border, Epic and Oracle are rolling out their own "clinical copilots." Whether these systems will be loosely or tightly coupled and how they will interoperate remains to be seen.

Clinical decision support is following the same curve. Pathway.MD, OpenEvidence, and specialty specific tools are replacing yesterday's reference mainstays – UpToDate, Google, and even Wikipedia.

Patients are using AI every day: automated insulin dosing for diabetes, symptom trackers for Parkinson's, and more. These normative clinical systems rely on best evidence and clinical pathways to provide real-time recommendations.

Clinical decision support systems based on institution-specific (empirical) evidence are coming fast, and exactly how normative and clinical practice patterns will be combined is unclear.

Whether "best evidence" is local, national or global will be a fascinating discussion. Often the best answer may be patient specific. For example, a New York Medicaid patient has a different formulary and a different "best practice" than an elderly ODB patient in Ontario.

Institutional moves in Canada: Canadian hospitals and governments have matched the private sector energy. Many have active multi-year research efforts that have been underway and already had scale. 2024/25 saw these research initiatives move into production-ready systems. Examples include:

- GEMINI (Unity Health) streams data from 35 hospitals – 12 billion clinical datapoints – with Quebec and Alberta joining.
- UHN has hardened data governance and green lit dozens of internal AI pilots.
- HALO (Hamilton Health Sciences + BC's PHSA) is wiring FHIR plumbing between EMRs.

AI scribes will evolve into documentation tools capable of real-time coding, drug interaction checks, and differential diagnosis checks.

- Fraser Health built an operational digital twin and is deploying agents.
- Humber River lets an AI agent triage its emergency department front door.

The flood of AI agents will now come. Based on solid foundational population data models, agents will assist with progressively more complex tasks. Starting with administration, answering patient calls and emails, care coordination, and screening, they will become clinical and more independent in the next year.

2025–26: My best guess.

- AI joins the care team. First as a "medical student" or "medical office assistant" (MOA). Med student level AI will take histories, consolidate information, and may suggest differentials. MOA AI will become common across administrative functions. AI functionality will improve to resident, fellow, and eventually attending levels.

Scope of practice enhancement. AI will upend all the skill-mix discussions as scopes of practice expand. Patients and their informal caregivers will have access to much better clinical information. Nurses, pharmacists, and other mid-

level providers will increase their scopes comfortably. PSWs less comfortably. Cross-specialty consults and primary care physicians are enabled, moving generalists closer to specialty and multi-specialty scopes.

Scribes become copilots. Scribes are table stakes. By year end, documentation tools may layer in real-time coding, drug interaction checks, and differential diagnosis prompts. Pre-visit data collection and results consolidation will be in maturing products. Infoway is building this vision into its procurement with the IPS as a cornerstone. Post-visit e-referrals, e-prescriptions, labs, and DI ordering will all be copilot outputs. FHIR assumed.

- Population health data. Unstructured and semi-structured data becomes more accessible as digital twins and NLP translation tools are put in place to allow for consolidated views across health systems. PDFs are "deblobbed" and become a meaningful part of the care record. Non-hospital care records become more valuable and usable.

- Agents deployed. Agentic AI is in its infancy in healthcare. It is growing exponentially. Dozens in 2024, hundreds in 2025, thousands in 2026 or 2027.

Digital health and interoperability changes. More loosely coupled AI-based communication systems are enabled. International Patient Summary (IPS) is foundational to new data liquidity. This will be a "who moved my cheese" moment for digital health and IT shops. AI will run circles around 2010 technology, prompting re-architecting of messaging and communication systems.

- Small organizations – OHTs, PHUs, SSAs, research scientists, and patients – will have much improved access to information, if websites are scorable and data resources "grabable". Zipped XLS files are a bad thing. HSAAs, QIPs, wait-time reports, and financials all need to be published AI-ready.

Synthetic patients and better coaching for learners. This is happening across education and will happen in healthcare education.

Governance structures and guardrails will need to be put in place. This is obvious but needs to be repeated; we will need rules for AI in healthcare. The national AI4H principles are solid. Bill C-72 may rise from the ashes and be part of national AI governance for healthcare – it is needed. Individual provinces and institutions will develop these structures as well or in place of national standards.

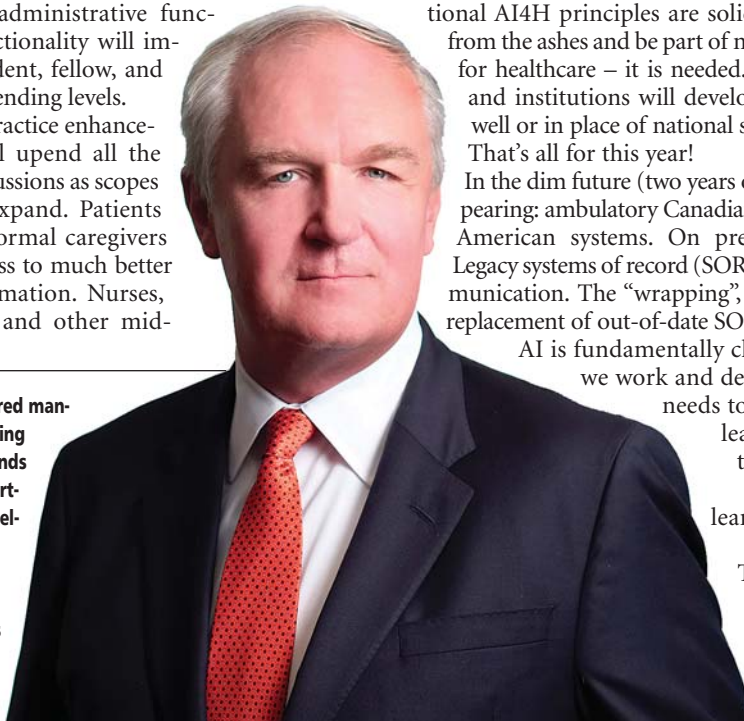
That's all for this year!

In the dim future (two years out), fault lines are appearing: ambulatory Canadian systems versus acute American systems. On premises versus cloud. Legacy systems of record (SOR) versus modern communication. The "wrapping", rehabilitation and/or replacement of out-of-date SORs and registries.

AI is fundamentally changing the way that we work and deliver care. Each of us

needs to commit to personal learning to understand these systems, getting our hands dirty and learning when AI works and when it doesn't. Technology helps but human compassion and caring need to be central to everything we do in healthcare.

Will Falk is a retired management consulting partner who spends his time with startups, as a policy fellow at four institutions and in philanthropy. This last includes AMS Healthcare where he is Board Chair.



Steps to effective leadership needed to guide people through change

BY JENNIFER KRUL, MLIS,
AND TRICIA BARFOOT, PhD

In today's rapidly changing and complex technology landscape, organizations need leaders who can inspire, empower and guide people through change.

Digital innovations – whether small process improvements or enterprise-wide transformations – can disrupt workflows, require retraining, and create uncertainty among staff, often leading to resistance.

Successfully adopting and sustaining change requires effective change management and change leadership. But what's the difference?

Where change management focuses on the structured, step-by-step execution of a change to ensure smooth and effective transitions, change leadership takes a proactive, people-centric approach, shaping vision, strategy, and culture to foster innovation, continuous improvement, and long-term growth.

Consider the following five steps for leading change. With each step, ask your-



Jennifer Krul



Tricia Barfoot

self the key questions and document the answers to start a plan to lead change.

Create a compelling vision and strategy: Positioning change within a broader context helps create alignment and build buy-in. Effective change leaders inspire and engage people by clearly communicating the vision and strategy.

Why is the change happening? What opportunities does it bring? How does the change support organizational goals and objectives?

This approach is especially critical in digital transformations, where failure often stems from a lack of clarity around purpose. When leaders can articulate a clear “why” and paint a compelling picture of the future, people are more likely to embrace and support the change.

Pairing this vision with a well-defined strategy builds trust and instills confidence, helping people see the change not as a disruption but as a necessary and achievable step toward a better future.

Focus on people: Organizations are complex systems driven by people. Effective change leaders understand both the system and the individuals within it, particularly people directly impacted by change. How will the change affect them? What behaviours, mindsets, and emotions may influence success?

How do people interact with each other and who has influence? What new actions or behaviours are needed, and how do current systems and processes need to evolve to support them?

Engaging stakeholders throughout the process gives them a voice, builds a sense

of ownership, and increases the likelihood of success.

Why engage people? Because humans have an inherent need to belong. Involving them early ensures that changes are feasible, appropriate, and informed by real insights rather than assumptions.

Design the change: A well-designed change plan requires careful consideration of both the “what” (the change you want to make and why it's necessary) and the “how” (the strategies that will propel the change forward).

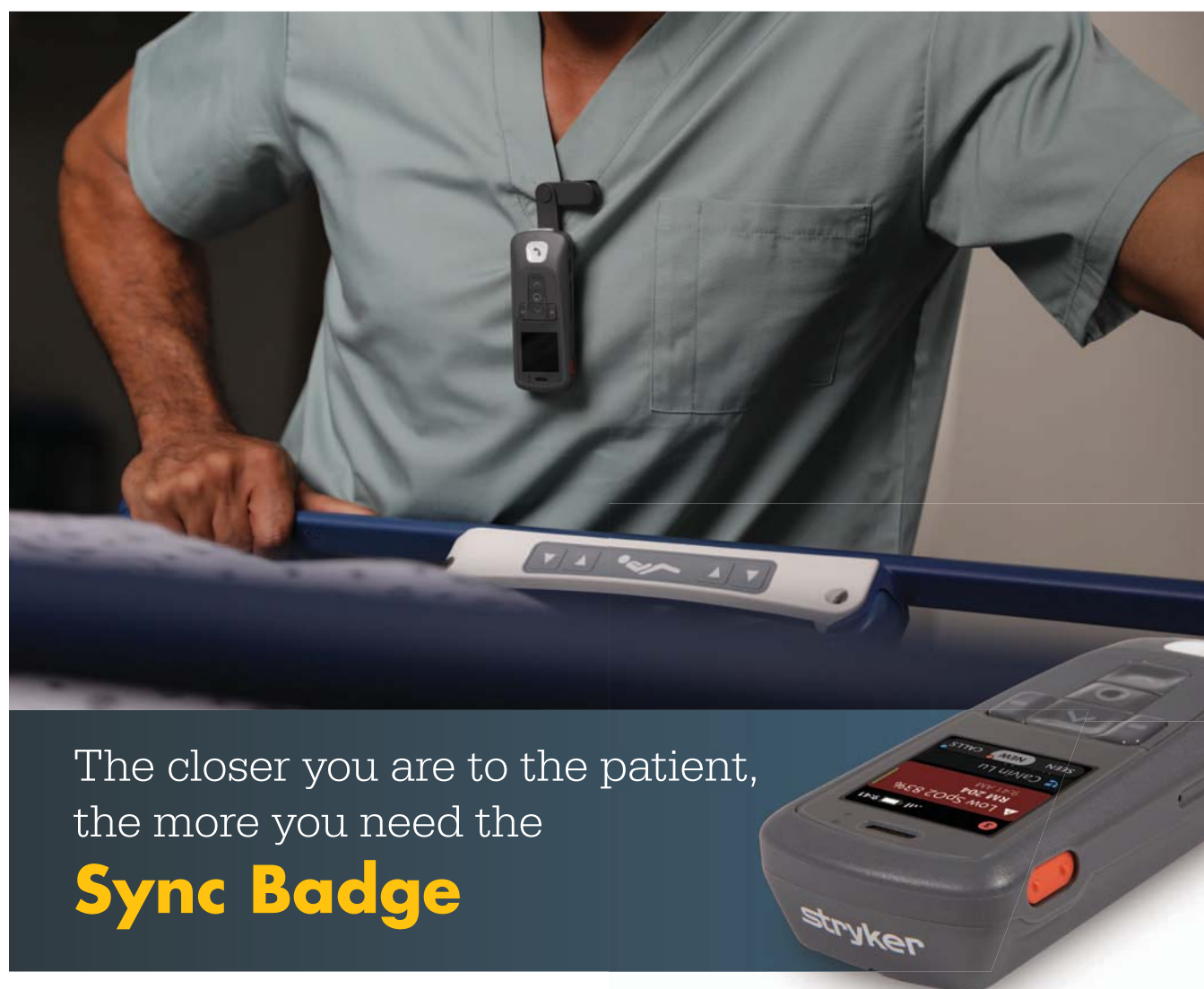
Research suggests that up to 75 percent

of change efforts fail due to organizations being unprepared. Before embarking on a change initiative, effective change leaders assess organizational readiness for change.

Is our organization truly ready for this change? What are potential barriers and

CONTINUED ON PAGE 23

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Companies, clinicians and researchers band together to develop smart wearable devices

Canadians are leading the way in the development of ‘smart fabrics’ that help patients and clinicians.

BY DIANNE DANIEL

Cardiac monitoring has gone the way of the future for patients at PACE Cardiology, an Ontario-based clinic with offices in Newmarket, Barrie and Orillia, where 30 cardiologists handle more than 50,000 patient visits each year.

Instead of the traditional Holter monitor with its adhesive patches, wires and bulky recorder, patients are provided with comfortable, washable chest bands made up of primarily nylon and spandex, but also consisting of smart textiles capable of collecting continuous heart and health data, including a multi-lead ECG.

The biosensing garments, manufactured by Toronto-based Myant Health, are equipped with a small battery and Bluetooth transmission device that inserts into a small pocket on the band.

Data is securely sent to a smartphone, then to the cloud where it is available for analysis using diagnostic software from Philips called Cardiologs.

In addition to helping to detect arrhythmias and other heart conditions, the monitors are supplied to patients for one year, post-procedure – such as ablation to treat atrial fibrillation – so they can be closely monitored for two-week periods every three months.

This year, the clinic will be transitioning to a second-generation band with a longer battery life, more memory and an optical sensor to characterize blood flow beneath the skin. According to cardiologist Dr. Yaariv Khaykin, who has been working with Myant Health since 2020, it may soon be possible to mea-



sure blood pressure and oxygen levels without the need for a traditional cuff and finger probe.

“It’s tremendous. It allows us to monitor patients better, safer and more conveniently by operating these monitors in textiles,” said Dr. Khaykin. “Incorporating multimodal biometric monitors into everyday clothing makes it a lot more accessible to a lot

more people and I think over time, it’s going to be less and less intrusive.”

The chest band, one of several products that make up the Myant Health platform – which is trademarked and Health Canada licensed under the medical group family name Skiin Underwear – is indicative of the type of Canadian innovation taking place in the rapidly evolving field of medical-grade wearables.

In Western Canada, University of Alberta professor Vivian Mushahwar, Canada Research Chair in Functional Restoration and director of the Institute for Smart Augmentative and Restorative Technologies and Health Innovations, is predicting a “smartwear revolution.”

In March, the university announced a landmark interdisciplinary project that is bringing together 64 collaborators from across Canada, the U.S. and Europe to develop lightweight, washable and affordable assistive technology in the form of everyday clothing.

With an infusion of \$24 million in federal funding over the next six years – one of six transformation grants available from Canada’s New Frontiers in Research Fund – the team is aiming to deliver a working prototype within three years and functional prototypes for the trunk, arm and leg by 2031.

At the heart of their work is a set of smart fibres that can sense temperature, strain and pressure, and then change their shape, size and stiffness accordingly.

The project’s initial focus is to help the 25 percent of Canadians currently living with some form of muscle weakness, ranging from sprains and broken bones to spinal cord injuries to strokes and aging, by replacing rigid assistive devices with clothing that stiffens and re-

ILLUSTRATION: LINDA WEISS

Wearables project will monitor patients more closely

BY DIANNE DANIEL

A collaboration under way in B.C., led by Medtronic and supported through the Digital Global Innovation Cluster, is bringing together St. Paul’s Hospital, Providence Health Care, Simon Fraser University, Bridge Solutions Inc., Excelar Technologies, Cloud DX and, most recently FluidAI, to develop a continuous connected patient care (CCPC) platform.

The idea is to use medical-grade digital monitoring, including Medtronic Canada’s newest prototype of a wrist-wearable vital sign monitor, to pull helpful health data into a patient’s medical record to provide a more holistic view, whether the patient is in a hospital bed or discharged to home.

The product is still in development and is not yet approved by Health Canada. Initially, the focus was to provide a fully integrated solution to enable high-quality home care experiences for adults with congestive heart failure and chronic ob-

structive pulmonary disease.

What excites Medtronic senior director, Research & Technology and Open Innovation Rakesh (Rick) Sethi is the ability to work directly with hospital staff.

“Usually when I’m doing a clinical trial, I work with a principal investigator who’s very passionate about what they do,” said Sethi. “Here at Providence, I have access to the CEO, CFO, data team, IT team, pharmacist, doctors, nurses, RTs – they’re all engaged. I’ve never had that before and to create a solution working with your customer is the ideal way to work.”

For the CCPC platform, the medical-grade wrist prototype developed by Medtronic transmits vital patient data similar to the equipment found at a hospital bedside and is now ready for clinical trial.

Cloud DX provides peripheral devices for home care such as blood pressure monitors, scales, thermometers and oximeters, as well as digital translation capabilities.

Bridge Health Solution provides

medication adherence software, and FluidAI provides smart monitoring of post-operative drains to detect infection early.

Excelar provides the middleware to interconnect data and workflows across systems and ensure data can be pushed into the Oracle/Cerner electronic medical record used at Providence.

“When we were talking to the clinicians, they always felt they were



dropping their patients off the side of a cliff and they described it this way, saying, ‘As soon as they leave the hospital, we don’t know if our intervention worked,’” said Sethi. “They were very excited about hav-

ing information as the patient transitioned home.”

Early on, the engineers on the project were focused solely on hospital-at-home monitoring.

Working within Digital’s collaborative model, they quickly identified that clinicians were just as keen to use the wearable technology to monitor their patients while in-hospital.

That’s where Excelar’s Careflow Timeline is playing a key role. It allows clinicians to see patient information about medications, vitals, anastomotic leak, symptoms or procedures, and provides a continuous patient record so clinicians are never in the dark.

With one year left in the project, the team is getting ready to start clinical trials of the CCPC platform at St. Paul’s Hospital, Mount St. Joseph Hospital, and Holy Family Hospital, including home monitoring.

That meshes well with a major trend in the healthcare world, to extend more care into the community – including the home – while keeping clinicians in touch with patients.

laxes as required. The clothing will provide support where it is needed, when it is needed.

For example, the smart fibres could be stitched into specific points in a sleeve and sensors embedded in the thread would then apply artificial intelligence to deduce movement, such as when the person wearing the shirt is about to lift a heavy object.

Actuators in the fibre would then stiffen the fabric to serve as a temporary support, relaxing the fabric once the arm is lowered.

What sets the project apart is the team's co-design approach that includes input from older adults at risk of falling and mobility loss, people with disabilities who need additional support to complete daily activities and people at risk of work-place injury, as well as fashion designers, disability advocates, clothing manufacturers and artists.

To help them understand what is viable in the clothing industry and what isn't, the team is engaging with industry early on, including collaborations with Myant Health and Lululemon.

"It is going to be a smartwear revolution, but it's not going to happen if it's only the technical folks doing this," said Mushahwar. "It's going to happen because we have people with lived experience as co-leaders and members of the team ... We are actually converging our thoughts together into something new, something different, that we all have to be driving as opposed to doing our bits in isolation."

The interdisciplinary approach has already proven its worth. At first researchers assumed it would be sufficient to provide standalone garments that functioned like a physical brace or electrical stimulation device. It was only after an open, facilitated session with users that they learned how important it was from the user perspective to have data collected and sent to an accompanying app.

"Initially, we didn't think that would be needed but the wider user experience said, 'I'd like to know how I'm doing,' so we added the app," said Mushahwar, noting that the idea is to provide one version for personal use and another for clinical use.

User input is also steering the project team to pursue two separate commercialization paths: one geared at consumers so people will be able to buy the smart garments off-the-shelf, and another through medical channels that will enable people to access the clothing as a Health Canada approved medical device covered by health insurance.

"We don't want it to look like a medical device. We want the garments to be accessible and affordable," said Mushahwar, adding that the goal is to allow people to retain their character and sense of style. Once proven, the technology can be applied to help other groups, such as smart uniforms for people at risk of injury at work or performance wear to help with athletic injuries.

"It can be whatever style you want because the fibres are built in – the options are limitless," she said.

For his part, Dr. Khaykin imagines a world where any patient arriving at a hospital's emergency room could be fitted with a smart chest band to monitor multiple biometrics. Instead of waiting to be admitted to a bed for monitoring, the information could be collected while they're sitting in the waiting room waiting to be seen by a doctor.

Myant Health is working on smart wear

solutions to enable sleep studies to be conducted at home, to help with menstrual pain by delivering heat or to track ovulation using temperature. The company has also partnered with The Perimeter Institute to apply AI in its cardiac monitoring system with the goal of predicting clinical events before they happen.

"It's turning out that there's a lot of valuable information in the ECG that's not

necessarily visible to the naked eye ... there's a lot of in-between, and AI systems are becoming increasingly aware of it," said Dr. Khaykin, noting that in the future it might be possible to detect electrolyte levels, blood sugar levels, potassium levels, magnesium levels, whether or not a patient has coronary artery disease, whether their aortic valve is narrowed or the pressure is high in their lungs, just by analyzing the

ECG data collected from the smart band.

"Most of those diagnostics are being developed on snapshot ECGs. The advantage Myant Health has is the continuous ECG," he added. "We won't be giving you just a data point. We'll be giving you a trend and once we have a trend we may be better able to predict a deterioration of some sort before anybody would have become aware of an impending health problem."

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Health Application Lightweight Protocol: HALO, a one-stop solution

BY DR. ED BROWN

Over the past 10 years, the widespread adoption of electronic medical records (EMRs) in the community setting has significantly transformed the Canadian health-care landscape. According to Canada Health Infoway's 2024 National Survey of Canadian Physicians, 95 percent of physicians now rely on EMRs to support patient care.

While this progress is significant, a major barrier to realizing the full potential of digitized health data remains.

The paradox of digital progress: As highlighted in the 2024 Digital Health Interoperability Task Force (DHITF) Recommendation Report, digitization alone does not equal connectivity. The most immediate opportunity lies in building stronger connections between existing systems to ensure health information flows securely and can be used effectively across the care continuum.

With more than 50 community-based EMR systems in use nationwide, each supporting the unique needs of providers and their regions of practice, there is now a strong digital foundation in place. However, much of the patient information within these systems remains siloed.

According to recent data, only 29 percent of physicians exchange patient clinical summaries with care providers outside their practice.

In the absence of digital health interoperability, important patient data is often not readily available at the point of care. While clinicians regularly face this issue and find ways to work around it, the lack of comprehensive data poses a serious risk of medical errors and compromised patient safety.

The focus moving forward must be to enhance how these systems work together through aligned standards and coordinated approaches to data sharing. Without this continued focus, we risk remaining in the paradox of digital progress – where in-

formation is digitized but not yet meaningfully connected.

HALO - Plug in, power up: Shifting from digitizing health data to truly connecting it requires seamless, standards-based integration.



Dr. Ed Brown

That's where HALO comes in. The Health Application Lightweight Protocol (HALO) is a technology framework designed to enable approved third-party applications to integrate with EMRs and other point-of-care solutions, helping bring interoperability to life at the front lines of care.

Think of HALO as enabling a universal app store for health data solutions. Like how your phone can connect to various apps through one single interface, HALO

enables applications to launch within any compliant EMR and communicate with the data held in that EMR, ensuring patient health information flows seamlessly across different platforms, no matter where you are, or which EMR solution you use.

Once an EMR adopts the HALO standard, HALO-compliant web applications can be launched directly within the EMR through a single, plug-and-play interface. This means no additional integration work is required from the EMR vendor, the apps just work.

With access to a full suite of apps for initiating services like sharing a Patient Summary, eReferrals or eConsults, HALO bridges smoother two-way data exchange between clinicians, to and from repositories, and across care settings, unlocking the power of health data to deliver truly connected care.

The human impact of seamless technology: HALO isn't just about technical

CONTINUED ON PAGE 23

Specialized Yardi EHR improves care delivery in transitional care units

BY MICHAEL PENG

MARKHAM, ONT. – Bayshore Integrated Care Solutions (ICS) is saving time and empowering staff through a phased implementation approach of the Yardi EHR across multiple transitional care units (TCUs), in southern Ontario, where care is provided 24-7.

Bayshore ICS partners with hospitals and retirement homes to operate a transitional care unit. The ICS interdisciplinary team consists of doctors, nurse practitioners, nurses, personal support staff and allied health teams (physiotherapists and assistants, recreational coordinators, occupational therapists, dietitian and speech language pathologists).

Before Yardi, the transitional care units relied on paper for charting, assessments, medication management and more, which brought an array of challenges.

Not only was there a lack of standardized practices across TCU locations, but paper also made it difficult to store and retrieve information, evaluate the clinical effectiveness and complete audits. Not to mention, paper workflows posed challenges for supporting care remotely.

The obstacles paper workflows created didn't stop there. Communicating information across teams wasn't optimal, causing staff members to feel siloed. Communication during emergency transfers was particularly inefficient since caregivers had to manually transcribe data or photocopy charts.

Since making the switch to a single connected solution that simplifies record keeping and streamlines caregiver workflows, Bayshore ICS is driving success in new ways. To help make the implementation successful, leaders focused on engaging stakeholders, prioritizing clear communication and sup-

porting staff during implementation.

To facilitate the transition to the new EHR, Bayshore ICS adopted a change management approach that involved the following steps:

- Engaging stakeholders from different roles and levels in the planning and decision-making process. Relationship management, setting expectations and early involvement were key especially for back-office processes with the finance and IT teams. Implementing a new system challenges status quo and creates opportunities for more efficient processes and the buy-in from back-office and clinical teams is crucial for success.

As with any new system, new responsibilities were created and small clinical working groups with practice leads were created to develop and review workflows. The implementation team and clinical managers continue to follow-up and check-in on staff routinely to ensure a sense of comfort.

A forum is held every quarter with staff to share results using Infoway's Benefits Realization framework, to solicit feedback from frontline staff and to foster collaboration and synergy between all the units.

- Communicating clearly and frequently about the benefits, expectations and timeline of the implementation to all stakeholders. This helped to address any questions or concerns staff members had and to prepare them for the upcoming changes.

Weekly leadership calls and monthly steering committee meetings were held to review updates and address critical concerns. Posters and email communication was disseminated to create excitement. Project team support email and MS teams chat was heavily used.

- Providing personalized training and go-live support for staff members based on roles during and after the implemen-

tation. This helped to ensure that staff members were comfortable and confident with using the new system and could access help if needed. Tip sheets, guides, were provided online and paper copies were made available. Training videos were developed and made available online.

Through this implementation, Bayshore ICS learned there is no one-size fits all change management plan. The team had to change styles and keep improving on the go-live approach for each site to ensure effectiveness.

"The project was quite challenging to manage due to geographies and different stakeholders. The key was solid communication, relationship building and fostering an environment that promotes visibility and collaboration," said Joshua Kirubanandan, project manager.

With the new EHR centralizing resident records, standardized care work-

Before Yardi, the transitional care units relied on paper for charting, assessments and medication management.

flows, medication management and clinical reporting in one place, the TCU teams no longer need to dig for information. The secure, intuitive platform makes it easy to retrieve important documentation – without searching across various locations.

"In Yardi, there are specific tabs for each document where it can easily be located, and we can easily navigate from one client to another," said nurse Mohammad Siddiqi at Carriage House TCU.

The system also helped integrate clinical information with bed management, census and billing data while also providing real-time data that was difficult to obtain in the past. Working from one inte-

grated platform ultimately helps Bayshore ICS gain enhanced oversight of clinical operations, across every single location.

Saying goodbye to paper processes offers additional benefits for Bayshore ICS, including time savings. With Yardi EHR uniting on a single digital platform – which houses everything staff needs – teams complete tasks quicker and more efficiently. This includes performing assessments, managing shift-to-shift handovers and pulling information from charts. The patient flow coordinators save an hour a day from doing the manual census.

"Freeing more time is a big factor," said nurse Margi Patel of Sunrise Unionville TCU. "It is convenient now, we no longer need to get each client's chart one by one, and search for medical records, and bonus, we are saving trees."

Yardi EHR created another success for Bayshore ICS: empowered staff. Across teams and locations, 80 percent of staff members have provided positive feedback on Yardi EHR.

Yardi has enhanced interprofessional communication by providing a single platform to document, monitor and coordinate interventions and care plans.

Teams appreciate specific features, such as the ability to filter progress notes, auto-populate resident information and track vital-sign trends, as well as things like automated reminders and single sign-on. "I like the triggers that help staff what's the next assessment to complete for admissions," shared clinical systems educator Kari Waller. Clinical manager Tracey-Ann Walters of Sunrise Unionville TCU noted that "It is user friendly and much easier to monitor the care of my clients on the unit by accessing notes and documents at my fingertips."

Michael Peng is director of data, digital health and projects at Bayshore ICS.



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CANADIAN
Healthcare Technology

Agentic AI will benefit health organizations, summit speakers say

BY JERRY ZEIDENBERG

Workday hosted a Toronto summit in April that advised healthcare executives about upcoming developments in AI, human resources and enterprise resource planning systems. CTO Kalan Comba kicked off the event, noting that Workday is now an \$8.4 billion company that supports 70 million active workers around the world. “We understand workers,” he observed.

Moreover, with the massive amounts of data that are being processed and observed, and with feedback from users, the company also understands what is happening with AI now and what’s coming down the pipeline.

“Our systems are processing a trillion transactions per year,” said Comba. “It’s a very good data set, especially for AI.”

Comba then summed up much of what the conference participants would be discussing: “The future is about [AI] agents,” he said. He observed that the number of baby boomers who will be retiring in the next five years is staggering. The gaps in the workforce will also become enormous.

However, it’s likely that AI will be used to plug those gaps. “What is agentic AI?” asked Comba. “It learns, adapts and makes decisions,” he explained. Far from taking notes and summarizing conversations, as some AI does today, agentic AI will take its own initiative and conduct work for us.

In fact, soon, there will be two workforces, said Comba, one that’s human and another that’s digital.

He envisions a future where agentic AI can perform some of the work in many key areas, including recruiting, legal, payroll, engineering and sales. “Agents will create a new future,” said Comba.



Kalan Comba, Workday's CTO at the summit: “What is agentic AI? ... It learns, adapts and makes decisions.”

Others in the healthcare sector – and the companies helping them deploy the new systems – agree with Comba. “AI that writes your emails and helps you brainstorm. That’s the AI of today,” commented Arslan Idrees, healthcare partner at Deloitte, in Toronto. “The next AI will be like an intern who wants your job. But he does it better and never takes a coffee break!”

Viswanathan Nagarajan, director, health transformation at Deloitte, observed that with the rise of smart agents, some people will fear for their jobs. But he asserted that agents would help them – in an era of overworked and stressed managers and clinicians, agents will support their well-being and mental health.

Once they see this, employees will welcome the new generation of AI agents.

Brendan Kwolek, chief information and digital officer at Halton Health, agrees. He noted that Halton Health is currently de-

ploying a large, enterprise resource planning system that will include leading-edge AI.

He sees AI as a boon. As just one example of how an AI agent could be helpful, he explained: “Healthcare is 24/7, but a lot of the support [personnel] work Monday to Friday, 8 to 5. If you have a question about HR – like your overtime – and it’s at night or on the weekend, you’re out of luck.

“But agentic AI could help here,” he said, as it can be programmed with the ability to seek and find the right answers, night and day.

For his part, Deeraj Paul, chief digital officer at Bayshore HealthCare, described some of the organization’s activities in leading-edge AI. They’re creating their own Large Language Model that will enhance the quality of care in long-term care.

One of the problems the model will solve is to make clinical language and reports understandable to clients and their families.

“If my mom is being visited by a nurse, I may not understand the jargon in a report. I just want to know that my mom had a good day and was alright,” said Paul.

Healthcare executives also emphasized that AI will be able to help them with the complexity of healthcare, especially on the human resources front.

Katie LeMoyné, senior vice president and chief human resources officer at Extencare, observed that the organization has 256 different bargaining agreements with employee groups. The variations in things such as vacation pay alone can become mind-boggling. “We used to have to do this with no automation,” said Katie.

She expects AI will be of immense help with questions such as which employees have quit or stopped coming to work, but are still receiving benefits – something that was previously very difficult to sort out.

Alistair Forsyth, VP of digital health and CIO at VHA HealthCare, commented that his organization implemented Workday about a year ago. Already, VHA has accessed the consolidated data to improve its operations by reducing absenteeism. He described one project in which access to data helped improve the quality of care: By analyzing income levels among PSWs with children, VHA HealthCare could better predict absenteeism – chiefly by predicting when low-income workers would need to stay at home with their kids.

“We harnessed the data to produce effective interventions,” said Forsyth. “There are things you can do to reduce absenteeism, bringing in supports like improved incomes, child care and other benefits.”

That’s just an initial step, noted Forsyth. He expects to see many more enhancements using analytics and AI in the future.

Leveraging innovation to combat stress, burnout and workplace violence

BY KASSAUNDR MCKNIGHT-YOUNG,

Every day, millions of nurses and other frontline healthcare professionals work long, tireless hours serving both the basic and complex needs of multiple patients. It’s a mentally, physically and emotionally demanding job. It also requires a high level of specialized expertise to perform their duties calmly and efficiently in an otherwise bustling, unpredictable, and sometimes chaotic environment.

Needless to say, working under these conditions can take its toll, and it should come as no surprise that feelings of high stress and burnout regularly impact more than two-thirds of nurses across the healthcare sector.

In addition to navigating incredibly tight schedules and the generalized sense of urgency around patient needs, healthcare professionals must remain vigilant of threats to their own safety and the well-being of co-workers. Workplace assault and violence in hospital settings remain disproportionately high, compared with other industries.

Fortunately, healthcare technology has come a long way, and rapid advancements in a wide range of supportive systems and management tools are helping to address some of the biggest challenges facing the industry today.

Taming the chaos: Critical breakthroughs in radio frequency identification (RFID) technology are optimizing the ability of healthcare professionals to track both patients and all medical assets across the facility in real-time.

For patients, it’s as simple as replacing traditional hospital wristbands with those embedded with an RFID chip, allowing nurses to track their movements around the unit and respond more quickly and effectively to potential emergencies.

Similarly, by assigning an RFID tag to medical equipment and uploading the data to AI-powered management software, nurses gain constant knowledge of where items are and can also automate the process of replenishing key assets before the supply runs out.

Importantly, the utilization of RFID chips is only one small aspect of a broader transformation and digitaliza-

tion of management protocols for nursing professionals.

By streamlining workflows through the integration of modernized electronic health record (EHR) systems into interoperable mobile computing devices, hospital nurses can eliminate administrative silos and much more readily strike that delicate balance between agility and rigid time management, moving seamlessly



Ms. McKnight-Young

from task to task and at a much lower risk of compounding stress and burnout throughout their shifts.

Protecting nurses to protect patients: Workplace assault and violence has only grown worse with time, with

eight in 10 nurses having experienced at least one type of workplace violence last year. In fact, even at facilities where security teams are especially robust, there aren’t always adequate safeguards in

place to ensure threats are mitigated as quickly and efficiently as possible.

Zebra Technologies has collaborated closely with 911cellular on a solution that allows nurses and healthcare professionals to alert security and/or police in real-time of any present or potential dangers in the workplace.

Designed specifically to address instances of staff duress in a hospital setting, the solution provides both a mobile application and small button on the back of EHR-integrated devices that nurses can push discreetly. This triggers a near-immediate response from the closest security personnel or local law enforcement, whether danger is imminent, or a patient’s behaviour suggests a gradually escalating threat.

So, as we celebrate National Nurses Month, we should also work collectively to promote the design, implementation, and improvement of the critical technologies that make their work and lives easier and more rewarding.

Kassandra McKnight-Young is Healthcare CNO Industry Principal, Zebra Technologies.

Effective leadership

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facilitators to change? What strategies should we use to meet our organization where it's at, overcome challenges, and leverage existing strengths?

A successful strategy also allows room for experimentation and iteration. What works in one context may not be as effective in another so adaptability is key. By continuously refining the approach based on feedback, change leaders can transform an organization's vision into actionable, lasting change.

Communicate clearly and often: Effective communication is the backbone of a successful change. Clear, consistent, and frequent messaging keeps people informed, engaged, and confident.

A single announcement isn't enough – people need ongoing, transparent communication that reinforces key messages, addresses concerns, and builds trust.

What's changing, and why now? What's staying the same? What challenges should we anticipate? What are the timelines? What support is available? What's in it for me?

By proactively addressing people's concerns, effective change leaders reduce uncertainty, minimize resistance, and prevent misinformation from spreading.

Communication isn't just about sharing information; it's also about shifting mindsets. A win? Share it to inspire confidence and momentum. Celebrating progress (no matter how small) can shift perspectives and turn skeptics into champions. Encourage a conversation which highlights successes and watch engagement grow.

Measure progress and outcomes: Tracking progress isn't just a best practice – it's essential for driving meaningful, last-

ing change. Without clear evaluation, how can we know if our efforts are making a difference?

Effective change leaders take a structured approach to measuring success, assessing outcomes and the strategies that drive them. How does our organization define success? What should we measure to track the progress and impact of the change? Which key performance indicators (KPIs) matter most? Where are we starting from, and what are we striving to achieve?

Selecting the right evaluation criteria creates alignment, keeps teams focused on objectives, and ensures visibility into progress.

A strong measurement strategy not only tracks progress but also fosters learning, adaptation, and continuous improve-

ment. With data-driven insights, change leaders can refine their approach, make informed decisions, and celebrate milestones that build momentum and engagement.

To keep up with the rapid pace of digi-

Effective communication is the backbone of a successful change. Clear messaging keeps people informed and confident.

tal innovation in healthcare, we need leaders who can inspire cultural change and create resilient and adaptable organizations. Practices to drive innovation through improvement of processes and

systems must consider the people at the heart of them.

Build trust, engage stakeholders, plan carefully, communicate clearly, and align through measurement. Are you ready to lead change? Learn more through a course focused on Change Leadership, offered by the National Institutes of Health Informatics (NIHI) and taught by the authors of this article. For more information, see Change Leadership at NIHI.

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Modular addition of CTs and MRIs cuts time to launch

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the building, so we were able to do traditional construction there," said Abiad. "The first thing we do is a case study because modular doesn't apply everywhere. Where it makes sense, we still do traditional construction. It's important to study the business case and look at all of the options."

The acquisition of a CT scanner at KDH is an important milestone for the community as patients in the hospital's catchment area between Ottawa and Brockville, and stretching from Smiths Falls to Winchester, will no longer have to travel out of the community for CT scans. Additionally, wait times will more than likely be lower, said Rivard.

The KDH project was made possible by a \$2.3 million donation from the hospital

foundation and contributions of \$900,000 from both the municipality and the county for another \$1.8 million to be delivered in installments over a 10-year period. The total cost of the project was \$4.6 million.

"The foundation and the community did an unbelievable job raising money and blew us away with how generous everyone was," said Rivard.

Operating costs will be more of a challenge as Ontario Health requires hospitals to find room in their existing operating budgets, and that's getting

harder and harder to do, said Rivard.

"When the project was first approved, operating costs were estimated to be \$400,000 per year and we thought we'd be able to cover that, but with the pandemic and the human resource crisis in healthcare, the costs have ballooned."

She continued, "Actual operating costs are now considerably higher. We're anticipating close to \$700,000, but we are working with Ontario Health and the Ministry to ensure that everything within our hospital continues to be funded."

Joining forces to build smarter systems

CONTINUED FROM PAGE 12

combined platforms and capabilities has global relevance. Canada isn't alone in grappling with how to improve decision-making and modernize care delivery for better patient outcomes. Our established global presence ensures healthcare organizations worldwide have access to the most advanced tools for care coordination and population health management.

What's next: Building for impact: For our existing customers in Canada, this new era means added value: more tools, more capability, and deeper intelligence within a platform that's already trusted. For those planning their next steps in digital health transformation, it offers a proven foundation that's now even more robust.

We'll continue focusing on areas where we can have the greatest impact:

- Enhancing clinical workflows with real-time decision support
- Powering proactive population health strategies
- Supporting healthcare navigation and patient engagement at scale
- Improving interoperability across fragmented systems

Ultimately, this is about enabling a healthcare system that is more connected, more responsive, and more sustainable.

Canada's digital health future will be built on strong foundations, purposeful partnerships, and the ability to adapt.

Orion Health and HEALWELL AI joining forces reflects this. Interested in learning more? Visit the Orion Health team at eHealth 2025, booths 110 and 111.

Andrea Tait is Global Senior Vice President, Patient Empowerment and Equity with Orion Health.

HALO solution

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advancements; it's about supporting the people who rely on these tools every day. When implemented, technically, it will enable a full suite of digital health tools to be integrated within an EMR, all in one place.

From a practical perspective, it will help streamline clinical workflows and give clinicians better access to patient health information at the point of care.

By turning the promise of interoperability into a real, usable solution, HALO has the potential to ease the administrative burden clinicians face every day. The outcome is simple but powerful: less time navigating systems, and more time focused on patient care.

For patients, the impact will be just as real. When information can flow freely across care settings, care becomes

more connected, more coordinated, and more responsive to individual needs. HALO will empower clinicians with the tools and insights they need at the point of care, helping to strengthen continuity, speed up referrals or consultations, and ultimately create space for more meaningful, human interactions.

The future of HALO in Canada: In-

HALO can ease the administrative burden clinicians face every day, leaving more time for care.

foveal, in collaboration with provincial and territorial partners, is leading the implementation of HALO to advance Canada's shared vision for interoperability. Ontario Health and the BC Provincial Health Services Authority (PHSA) have played a central role in co-

sion of infections, and to estimate virus growth rates as well as the impact of pandemic policy changes on disease spread," Rothman said.

Deep learning computer vision applications are used to speed diagnostic imaging and help prioritize patients for care.

While there remains a cautious approach towards innovation in Canada, Rothman said it's often in service of prioritizing patients.

"Proactive improvements require time, planning and resources, but budget limitations in our publicly funded system push priorities toward patient care over technological innovation."

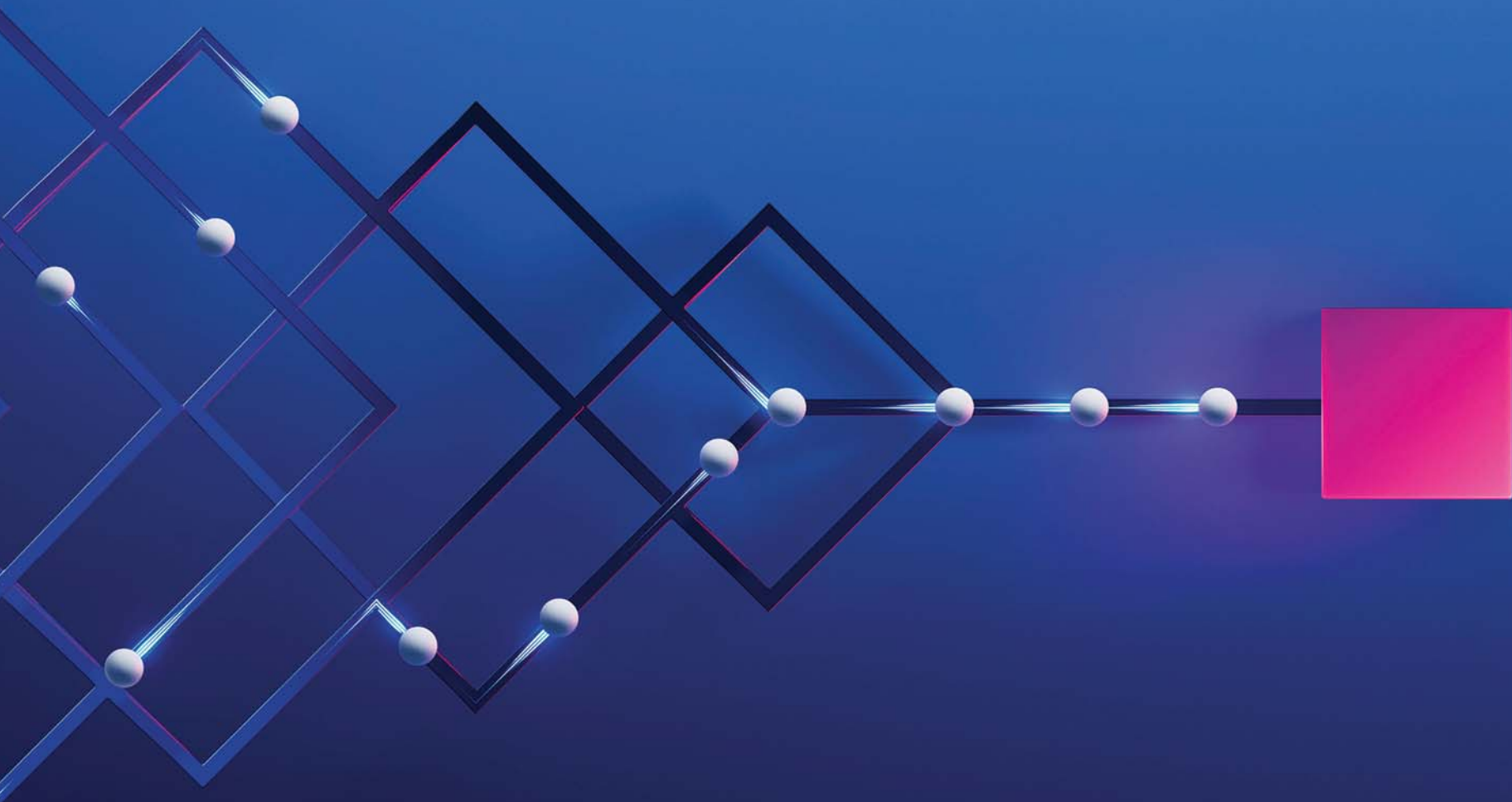
developing the HALO standard, building the supporting infrastructure, and guiding the design and deployment of the first HALO-enabled applications.

Further, with strong engagement from early adopter vendors, the first application has now been completed and entered early deployment.

The work of Infoway, Ontario and BC have been instrumental in demonstrating HALO's real-world potential, proving it to be a practical, scalable solution for enabling data sharing and improving clinical workflows across the diverse EMR systems used in community care.

Their early investment and commitment laid the groundwork for broader adoption across jurisdictions, helping to establish HALO as a cornerstone of connected care in Canada.

If interested in learning more about HALO and the transformative impact the standard could have on the future of health information exchange, visit [HALO](#).



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*Source: The Futurum Group, Performance at Scale – Comparing AI/ML Performance of SAS Viya vs. Alternatives, 2023

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