



CHIME President and CEO Russell Branzell moderated the roundtable discussion involving DHMW Level 10 providers:

Aaron Miri

Senior Vice President and Chief Digital and Information Officer
Baptist Health of Jacksonville, Florida

James Venturella

Chief Information Officer
West Virginia University Medicine, Morgantown

CT Lin, MD

Chief Medical Information Officer
UCHealth - Colorado

A Chief Technology Officer of a leading academic health system in the Mid-Atlantic region

Chas Thawley

Assistant VP and CTO
Virtua Health, Marlton, NJ

Joining the discussion were:

Sean Kelly, MD

Chief Medical Officer and SVP Healthcare Strategy, Imprivata, and practicing emergency physician

Joe Wurzer

Healthcare Senior Client Executive
HCI Group



INTRODUCTION

Digital Health Most Wired and its Global Sponsors Imprivata, HCI Group and Oracle hosted a roundtable of industry thought leaders to discuss key findings of the 2023 DHMW survey, including driving factors behind digital transformation, governance around AI and patient data, integrating consumer health data into EHRs, measuring success beyond tech adoption, and more.

DIGITAL HEALTH ADOPTION AND TRANSFORMATION

The Digital Health Most Wired (DHMW) survey looks at digital health usage across a representative cross-section of U.S. healthcare organizations (HCOs). In addition to its recognition awards, Most Wired offers HCOs a benchmark for their own digital health progression. Also, it is an important resource for identifying major themes and shifts in the healthcare marketplace, and emerging from this year's survey is an overarching theme of "acceleration of data usage."

Leveraging data has become a critical focus for improving operational and clinical outcomes. The increased digital health usage across organizations was evident, as this year's survey saw:

- an unprecedented number of Level 10 organizations this year (21)
- an incredible shift in the percentage of HCOs reaching Level 9, and
- the average score in the DHMW survey increase

This was accomplished despite an elevated scoring criteria to make it harder to achieve higher DHMW levels.

CHIME President and CEO Russell Branzell highlighted the significance of continuous improvement in digital health. "If an HCO did nothing new in digital health for the survey year, they would have lost 16 points on a 100-point scale," he said. "So, when you see organizations move up significantly, it means they didn't just improve from a level-to-level perspective; they improved that much over a raised bar."

The survey results suggest HCOs are ramping up their investments in technology and digital solutions. "The future of health care will be technology-empowered," assured CT Lin, MD, CMIO, UCHealth - Colorado. "If you're not investing in innovation, you are falling behind."

Digital transformation is being driven by population shifts, margin pressures, attracting talent who expect advanced tools, and the need to innovate to stay competitive.

IT is embedded in every area of healthcare, including all aspects of staff and patients' lives, and there is a continuous demand for more technology, according to James Venturella, CIO of West Virginia University Medicine. "People live in a digital world outside of their healthcare jobs, and they expect their workplaces to keep up with digital progress," he said. "Healthcare might never catch up to other consumer-facing industries like retail and banking in terms of digital transformation, but there are much higher expectations for digital health now than 10 years ago."

PUTTING TECHNOLOGY IN ITS PROPER PLACE

This raging thirst for technology will not be quenched by shiny new tools sprinkled haphazardly around the enterprise. HCOs are facing dire workforce challenges due partly to overwhelming amounts of tasks and tools. They also face stiff competition from savvy disruptors that can offer patients better experience, value, and care.

Sean Kelly, MD, Chief Medical Officer and SVP of Healthcare Strategy for Imprivata, supported the use of technology to address clinician workloads and improve efficiency. "Technology is one of the biggest levers that can be pushed."

However, fear is often a hindrance. "Doctors are sometimes hesitant to embrace new technologies because they're understandably worried about liability and unintended negative patient outcomes," offered Aaron Miri, Senior Vice President and Chief Digital and Information Officer at Baptist Health. "We need to build trust and share responsibility."

Surveying medical staff to gauge their experience and feedback on technology use could serve as an indicator of success. The same approach may help with patient experience. Miri reported Baptist Health used a patient feedback program to benchmark their digital health progress against other health systems across the country.

Supporting this idea that technology cannot drive results on its own, the roundtable discussed the importance of human-centered approaches to implementing technology.

"Relationships on top of the technology are crucial," Lin Advised. "There's four times as much work on the relationship team building side to make the technology really succeed."

He suggested HCOs look beyond metrics and focus on the human element by building strong teams and organizational structures around technology implementation. "Let's listen to our teams, embrace the messiness of human interaction, and build tech that serves, not just tracks."

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Senior Vice President and Chief Digital and Information Officer
Baptist Health of Jacksonville,
Florida

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Diving further into the humanity element, the discussion turned to the potential impact technology can have on global disparities in healthcare access and regulations. Healthcare can't afford first-world exclusivity, Branzell urged. "Technology shouldn't widen the gap between the haves and have-nots in healthcare," he said, advising digital solutions should work for everyone, everywhere.

Panelists recommended pharmacists are underutilized stakeholders who could bridge the global access gap by providing broader healthcare services, which could improve access for more people. This is already being done in some places around the world.

In Canada, pharmacists can renew prescriptions for certain medications, provide medication counseling, conduct health screenings, administer immunizations, and even manage some chronic conditions like diabetes in collaboration with a physician. Australian pharmacists have similar authority to renew prescriptions, offer medication advice, and perform basic health checks, but they also can provide smoking cessation support and administer some vaccines like the flu shot. Pharmacists in New Zealand may dispense emergency contraception, offer travel health advice, provide minor wound care, and conduct medication reviews.

Similar to their counterparts in Canada and Australia, pharmacists in the UK can renew prescriptions, provide medication counseling, conduct health screenings, and administer vaccinations. They also have the unique ability to initiate treatment for certain minor ailments like urinary tract infections and provide emergency hormonal contraception.

The intent is not for pharmacists to replace doctors but to serve as complementary healthcare providers that offer accessible and convenient care services for patients.

"Pharmacists have untapped potential to provide more care, but current legislation limits their scope in the United States," Miri noted. "However, small steps are being made toward changing this."

While ONC is not directly responsible for regulating pharmacists' scope of practice, it can advocate for changes in federal regulations and support innovative projects targeting expanded pharmacist role in healthcare.

A number of currently proposed or recently passed federal and state bills aim to expand the role of pharmacists and improve access for patients — [HR1770](#), [S1491](#), [Montana SB112](#), [New Mexico SB92](#), [Colorado SB162](#), and [Illinois HB559](#), to name a few.

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Russ Branzell

President and CEO
CHIME

HEALTHY DATA DIET AND GUIDANCE

Just as a healthy body is rooted in diet and lifestyle, digital health technologies and tools are only as good as the data they are fed and the governance they are built upon. With data coming in from a growing number of sources both inside and outside of an HCO's enterprise network, it is easy for the system and its users to get bogged down and frustrated.

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Sean Kelly, MD

Chief Medical Officer and SVP
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HEALTHY DATA DIET AND GUIDANCE CONTINUED

“The data deluge is overwhelming; we need to stop treating every byte like gold and focus on what truly matters to patient care,” Kelly said, noting the signal-to-noise ratio with patient data is critical. “Public data may be suitable for some cases, while private data with strict control is necessary for others. Transparency and process around training data are crucial.”

Thus, HCOs should focus on identifying the essential data points that matter most for specific clinical cases, using technology with proper gating and digital identity to ensure security and effectiveness.

Patient data is not only coming from healthcare partners, but from consumers themselves, including wearables like smartwatches. About half of HCOs surveyed in the 2023 DHMW reported they are integrating patient-generated health data (PGHD) into their EHRs.

Some HCOs are still too focused on getting good data from legacy sources to give much attention to data from patient wearables. The Chief Technology Officer of a leading academic health system in the Mid-Atlantic region said his organization is not consistently using PGHD. “This is a difficult project to undertake and requires someone driving change across the organization,” he said. “There are innovative uses of PGHD being explored involving feeding the data into AI and predictive models.” The organization also adopted FHIR a few years ago, which could help with interoperability obstacles to integrating PGHD into the EHR.

UCHealth cardiologists have taken the leap into PGHD, receiving screenshots of patients’ Apple watches, but it is still early stage. “The data is not fully integrated,” Lin explained. “They are detecting dysrhythmias from the screenshot data and alerting patients to come in when necessary, but this is not on a population level.”

Lin advised of another challenge to relying on PGHD is disempowerment. When his endocrinology department started accepting PGHD, patients stopped taking care of their own blood sugar. Even if their personal monitoring device showed a high blood sugar level, many patients didn’t act on the information because they assumed that since the data was going to the healthcare provider, their doctor would call if there was a problem. This shows that as HCOs integrate more PGHD, there must be a plan and resources to act consistently on the data.

There are privacy and security concerns around who owns and can use PGHD. Liability fears are an anchor on progress, and clear PGHD regulations could help untether innovation and empower patients.

“Patients are the ultimate owners of their health data, and we need to empower them to make informed decisions about how it’s used and shared,” Miri urged. “Patients are generating a treasure trove of health data, but we’re sitting on it out of fear. We need to address liability concerns and empower patients to be partners in their care, not just data points.”

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AI: FROM WADING TO SYNCHRONIZED SWIMMING

Nearly 75% of HCOs in the 2023 DHMW survey said they were using AI for at least one business function. With all the buzz about this revolutionary technology and its potential to improve workloads, workflows, operational efficiencies, and patient experience, it is no wonder most healthcare organizations are at least dipping their toes into the AI waters.

Meaningful use played a significant role in driving the adoption of artificial intelligence (AI) in clinical decision support systems (CDSS), particularly automated BPAs (Best Practice Alerts) and other alerts. In addition to providing financial incentives for EHR adoption, it required providers to capture and analyze clinical data to improve quality, efficiency, and patient outcomes, and it encouraged automated BPAs. Also, the major EHR providers have partnered with leading AI firms to develop and integrate generative AI into their EHR products.

This pushed many HCOs to do simplistic AI, but if healthcare is to keep up with other consumer industries, it needs to develop more sophisticated AI applications.

“We need to get to the next stage,” advised Joe Wurzer, Healthcare Senior Client Executive for HCI Group. “AI isn’t just about digitizing, it’s about automating — We’re automating our patients. We’re automating our children or grandchildren. We’re automating all the processes.”

On the administrative side, AI, machine learning (ML), and automation have started making a significant positive impact in areas like rev cycle and prior authorization. On the clinical side, these trending technologies are a bit more challenging.

Whether it’s a sepsis alert project at one health system or a falls model at another, emerging AI applications often fail in their first iteration due to various challenges, including human-based issues like monitoring, clinician buy-in, and lack of AI-specific governance.

“If you don’t have the doctors at the table, you aren’t going to get far with these new projects,” Miri cautioned. “They have to understand it, to realize the pitfalls, because at the end of the day it is their license on the line when it comes to clinical care quality.”

Kelly advocated for what he called human-chaperoned AI. “You need some actual intelligence and guidance of those processes, particularly when it comes to clinical applications of AI.”

The governance factor looms large. The roundtable emphasized the importance of data governance in AI development, distinguishing between public and private data use cases and the need for transparency and process in training models.

There are significant legal considerations with the use of AI in clinical settings, including privacy, algorithm bias and transparency, potential data breaches, and the threat of legal e-discovery.

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“Once the spoken voice becomes written and tied to a person, the transcription becomes open to e-discovery for evidence gathering,” explained Chas Thawley, assistant Vice President and CTO for Virtua Health.

Miri highlighted the need for a dedicated executive to lead process and proof, one of the most challenging aspects of developing successful AI. A Chief Process and Proof Officer (CPPO) could play a crucial role in helping healthcare providers develop effective and legally-sound AI models for both administrative and clinical use. This leader could oversee process optimization, data governance, model validation and testing, risk assessment and mitigation, and regulatory compliance.

CONCLUSION

As healthcare dives deeper into more sophisticated AI development and governance, so must the Digital Health Most Wired survey. Measuring digital maturity based solely on adoption provides an incomplete picture. It’s important to correlate measures like safety, quality, outcomes, profitability to get the full impact.

“It’s time for deeper questions about AI, including how healthcare providers are actually using and benefiting from it,” Thawley suggested.

Areas where providers and DHMW can focus on include how HCOs are pairing AI with dedicated resources to monitor signals and facilitate human intervention when needed, as well as how HCOs are building relationships on top of the technology and including clinical input in governance.

“Technology is just a tool,” Lin said. “The real magic happens when people come together and work towards a common goal.”

The stakes couldn’t be higher. “The competition we have in healthcare is not just with each other but with greater consumerism, including CVS, Apple, and every company with a shiny tool,” Wurzer said. “Patients are attracted to these shiny objects and are buying them.”

To better compete, HCOs will need to overcome data management hurdles such as integrating patient-generated data into EHRs, determining which data is clinically meaningful, and mapping to specific use cases vs. trying to take in all data indiscriminately. Interoperability and patient identity remain persistent gaps that have not seen enough progress.

The current digital health landscape continues to transform into an environment where experience and care are at the forefront of a model backed by increasingly efficient, secure, well-governed, and intelligent systems and data. Healthcare may still lag other industries in terms of digital sophistication, but as HCOs tackle and solve key issues with data, AI, and other technologies and processes, the gap will narrow and healthcare will rise.



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