

## A THOUGHT LEADERSHIP ROUNDTABLE The Impact of Mature Digital Strategy on EHR ROI



CHIME President and CEO Russell Branzell moderated the roundtable. Contributing to the discussion were Imprivata representative Sean Kelly, MD (Chief Medical Officer and Senior Vice President, Customer Strategy, Healthcare).

Participating CHIME members:

**Richard Mohnk**

Chief Information Officer &  
Vice President  
Bayhealth Medical Center

**Bernard Rice**

Senior Vice President and  
Chief Information Officer  
Nemours Children's Health

**Todd Richardson**

Former Senior Vice President  
& Chief Information Officer  
Aspirus

**Brian Sterud**

Chief Information Officer  
Faith Regional Health Services

**Interim Chief Technology  
Officer of a physician-led  
health system serving 35  
counties throughout the  
Midwest**

### INTRODUCTION

Imprivata convened a thought leadership roundtable with members of the College of Healthcare Information Management Executives (CHIME) to explore strategies for optimizing an organization's investment in electronic health record (EHR) technology. Chief information officers (CIOs) and chief technology officers (CTOs) described how their organizations are improving the utilization of EHR systems in conjunction with enterprise-wide digital transformation efforts while also confronting EHR challenges ranging from usability to cybersecurity to data integrity.

### SUMMARY

It's been more than a decade since the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 pushed hospitals and health systems to adopt certified EHR systems through meaningful use. Encouraged in large part by financial incentives – the U.S. Department of Health and Human Services (HHS) awarded more than \$36 billion to eligible providers – [EHR adoption climbed dramatically](#). While just 9% of hospitals used an EHR system in 2008, 96% did in 2021.

More than 80 hospitals and 3,300 ambulatory clinics in the United States are associated with a healthcare provider organization that achieved Level 10 status within the 2023 CHIME Digital Health Most Wired (DHMW) survey. These high-level providers matched the overall DHMW participant trend of high utilization of EHRs, including support for patient monitoring, deploying real-time analytics for clinical quality metrics, and chronic disease management. However, the Level 10s demonstrated high and increasing EHR utilization in advanced areas such as automated integration of IV pump data and integration of data from patient wearables.

Despite this progress, many organizations have struggled to achieve return on investment (ROI) for their EHR systems. [The transition from paper to electronic records has changed clinical workflows](#), with clinical staff often forced to focus on multiple tasks as they enter orders, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8061456/plete> notes, look for information, or respond to alerts. Unfortunately, an interface rife with distractions doesn't lend itself to efficiency – and workarounds only lead to a lack of standardized practices and potential errors.

This roundtable addressed the work that leading hospitals and health systems have done and continue to do to optimize their EHR systems. Some efforts occur by enhancing the software itself, such as reducing the number of clicks it takes to complete a task. Other efforts aim to improve the integrity of the data that goes into the EHR, making access to the EHR both easier and more secure at the point of care.

## EHR OPTIMIZATION IS A LONG AND WINDING ROAD

The EHR system is no doubt a powerful tool. Whether through native functionality or third-party integrations, it allows physicians, nurses, and other clinicians to perform dozens of tasks, look up a patient's entire medical history, and both document and code an entire encounter with a patient.

The challenge is that the EHR system places significant onus on the end user to do all that work. In the words of Sean Kelly, MD, Chief Medical Officer and Senior Vice President of Customer Strategy for Healthcare at Imprivata, it's like asking the judge in the courtroom – the individual with more power and responsibility than anyone else – to also serve as the stenographer, the clerk, the bailiff, and the janitor.

"Doctors want to be doctors," said Kelly, who is also a practicing emergency department physician. "We don't want to be clerks, and we don't want to be security experts. Everyone wants to work at the top of their license."

One reason for this struggle is that it has taken hospitals and health systems a long time to reach the point where they're finally ready to focus on EHR optimization. Bernard Rice, Senior Vice President and CIO at Nemours Children's Health, noted that his organization went live with its EHR in 1999. "It has been a journey for us, and right now we're just in the phase of asking, 'How do we leverage this platform? How do we utilize it better to help us run?'"

Todd Richardson, former Senior Vice President and CIO at Aspirus, pointed to another common challenge for large health systems: Bringing disparate systems together.

Like many organizations, Aspirus has grown through acquisition. In these situations, there's no guarantee that the entities' EHR systems will be compatible, let alone interoperable. "Rather than being able to focus on leveraging them for good and getting a lot of the value from an IT perspective," he said, "we've been heads down trying to consolidate into a single framework."

Additionally, Richardson continued, health system executives need to grapple with the dilemma of spending money to achieve optimization and add value. This is especially prescient, as [Kaufman Hall's hospital financial reporting](#) continues to highlight rising expenses and economic pressures even as margins continue to stabilize.

"We talk about cutting costs through things such as process automation. That's great, and we can do it in a lot of areas," Richardson said. "But that's implementation of technology, which comes at a cost. And, at the same time, we're being asked to drive value to the organization by driving those costs down."

## OPTIMIZATION MEANS LESS FRICTION

That said, automation is an important step in the push for EHR optimization. Rice pointed to an effort at Nemours to introduce ambient artificial intelligence (AI) technology to record patient visits and document them without the need for physicians to type notes. Critically, these systems can distinguish among different speakers – a valuable feature for pediatric care, as patients typically have multiple caregivers.

A THOUGHT LEADERSHIP ROUNDTABLE

The Impact of Mature Digital Strategy on EHR ROI



## OPTIMIZATION MEANS LESS FRICTION CONTINUED

“We started this as a pilot, and we positioned it as a wellness initiative, because our clinical staff were feeling burned out with the EHR system. Now, there’s no way you’ll take it away from them,” Rice said. “We’ve also seen a 10-point increase in patient satisfaction scores in the practices using the technology, because the physicians get to spend more face time with families. We have hard numbers to prove the value.”

Organizations are emphasizing automation as part of their broader aim to reduce the friction that commonly defines the clinician’s relationship with the EHR system. Other positive steps in this direction include [reducing the number of clicks](#) needed to place orders or prescriptions, decreasing the number of duplicative or otherwise unnecessary alerts that EHR system users see, and directly integrating secure chat and telehealth products so clinical staff can communicate with patients without leaving the EHR system.

“We’re reducing a lot of the noise that we put in place,” Rice said. “The more that we can take things out of the equation that don’t add value, the more that our clinical staff can focus on what really matters. That’s a big part of our effort.”

A physician-led health system serving 35 counties throughout the Midwest recently transitioned to a new EHR system. The hope for the health system is to implement it in such a way that the clinical staff members’ time is utilized well, according to the health system’s Interim Chief Technology Officer. “We want to make this something that’s seen as a necessary tool that’s additive to the clinical experience, and not as a necessary evil,” he said.

## DATA INTEGRITY NEEDS TO BE ADDRESSED

Unfortunately, the hard work of EHR optimization will be for naught if end users can’t trust the data within the records. The [absence of a national patient identifier](#), has been a longtime obstacle for achieving a high level of data integrity.

As organizations consolidate EHR systems, they struggle to match records to the right patients. “I can’t tell you how many systems I’ve put in that try to match up names, addresses, birthdates, and all this other information from disparate systems, and they only work about 85% of the time,” said Richard Mohnk, CIO and Vice President at Bayhealth Medical Center. “So, now you’ve got duplicate medical records.”

Having a single EHR system in place across an entire health system can help, as it eliminates the need to try to match patients that appear in different EHR systems (or even different instances of the same EHR system). It also puts a lot less pressure on registrars and other administrative staff to select the correct patient at the beginning of an encounter — and as a result ensure services are billed and delivered to the right person.

Then, though, the issue becomes one of change management, Mohnk continued.

“We still run into people creating duplicate medical records because not everybody wants to follow the standard. They’re going to do things the way they want to, and that’s just a part of the clinical practice,” he said. “Then you get people putting in ‘Rick Mohnk’ and ‘Richard Mohnk’ – and, you know, nobody really knows how to spell ‘Mohnk.’”

Along with its EHR transition, the aforementioned Midwest-based physician-led health system has an initiative to match patient records across disparate archiving systems. For its Interim Chief Technology Officer, the importance of the work is as much about ensuring that clinical staff can trust the data as it is about deduplication.

“We have to think about the provider impact. If the data that they know should be available, that they were looking at three months ago on a different system, isn’t available all of a sudden, then it’s a constant reminder that the data isn’t reliable,” he said. “If you’re trying to be an analytics-based organization, or you’re trying to encourage the practice of evidence-based medicine, it’s hard to do that when data quality is suspect.”

## DIGITAL IDENTITY ENTERS THE PICTURE

The potential solution to the data integrity problem may lie in the reframing of a principle familiar to many CIOs.

In the ongoing effort to improve cybersecurity, hospitals and health systems increasingly embrace identity management. At its core, identity management grants an employee access to the resources they need given their role and restricts access to anything unrelated to their work. It relies on a zero trust architecture, in which a user must verify their identity prior to obtaining access, and leverages multifactor authentication, which requires two or more identifying factors to be used to grant access.

“If we know with confidence and trust who an individual is, then we can open up the right doors to the right digital services that the organization can offer,” said Sean Kelly, MD, Chief Medical Officer and Senior Vice President of Customer Strategy at Imprivata. “At the same time, we can also prevent these individuals from opening the wrong doors.”

Beyond the obvious benefit of restricting who can approve transfers of funds, identity management gives organizations an opportunity to bring together in a single record all the information they have about an employee. Everything from badge numbers to security clearances to Active Directory profiles ultimately gets linked.

Admittedly, it’s a tall order. Information comes from different business applications owned by different business units, and there’s quite a bit of heavy lifting necessary to integrate the disparate data sources. However, it’s a critical step to getting a full view of employee behavior and taking fast action when unauthorized activity begins to take place.

Here, there are clear ties to managing patient records through the creation of a digital identity. “Identity is the gel that holds everything together,” Richardson said. “How do we ensure that we know who that patient is when they’re coming through the door? We want the same seamlessness and frictionless experience for them that we’re trying to create for our physicians.”

“If we know with confidence and trust who an individual is, then we can open up the right doors to the right digital services that the organization can offer”

Sean Kelly  
CEO  
Imprivata

Along with the benefits presented to EHR system users at the point of care, patient records integrated and consolidated as part of a single digital identity would enable the use of that information for data-driven research and business decision-making. “There are implications to being able to attribute patients properly and understand their needs from a strategic perspective,” noted Brian Sterud, CIO at Faith Regional Health Services.

## CONCLUSION

For most hospitals and health systems, the challenges of EHR system implementation are behind them. As a result, the focus has turned to optimizing EHR systems to increase utilization among members of the clinical team, primarily by reducing the friction that can make these systems difficult to use or otherwise inefficient.

Amid these efforts, technology leaders shouldn’t lose site of the importance of data integrity. More than simply matching patient records to reduce duplication, data integrity ensures the information presented at the point of care is complete and trustworthy. Data integrity done right enables the creation of a digital identity for a given patient, in much the same manner that organizations carefully manage employee identity – providing much greater visibility into who patients are, what care they have received, and what future needs they may have.

For providers focused on digital optimization, taking steps to improve patient identification offers exponential ROI, including reduced costs, more accurate care, improved patient safety, and enhanced patient satisfaction.

