How Connected Data Can Help Improve Patient Outcomes

A Texas health care system successfully accessed and managed unstructured data and images to realize care and efficiency goals

Leveraging integrated solutions, Cook Children's Health Care System, a 499-bed system and health plan with more than 120,000 members based in Fort Worth, Texas, can easily verify that patients have had their well checks, vaccines, dental appointments and other needed care because they have access to integrated information. Case managers use this information to identify if a component of care is missing and will reach out to the family to make an appointment for the needed service and to help families with any challenges.

"The [case] manager might say, 'We noticed that you didn't make your five-year checkup. Do you need help with transportation?'"

LaKAMI BRYANT | Vice President, Revenue Cycle and Enterprise Applications | Cook Children's Health Care System

"The case manager can then use that information to reach out to the family to see what kind of assistance they need to get to an appointment. The manager might say, 'We noticed that you didn't make your five-year checkup. Do you need help with transportation? We can offer that to you.' Or the case manager might notice in the documentation that there's a food insecurity that then prompts them to reach out and say, 'Hey, would you be interested in receiving a box of food? And here's how you can do that,'" said LaKami Bryant, Vice President, Revenue Cycle and Enterprise Applications at Cook Children's. As a result, the healthcare system can successfully enhance care quality and meet regulatory requirements such as those associated with the Healthcare Effectiveness Data and Information Set (HEDIS), a set of standardized performance measures developed by the National Committee for Quality Assurance to objectively measure, report and compare quality across health plans.

This example clearly illustrates how interoperability can enable access to data that helps identify care gaps and, ultimately, improve outcomes. Of course, Cook Children's is not alone in this pursuit. Improving outcomes is the number one goal associated with integrating data from multiple sources, according to HIMSS Market Insights' *2025 State of Interoperability and Connected Care* report.[1] The survey of 115 healthcare leaders across the country highlighted the obstacles associated with searching for medical images and unstructured clinical content outside the electronic health record (EHR) system.

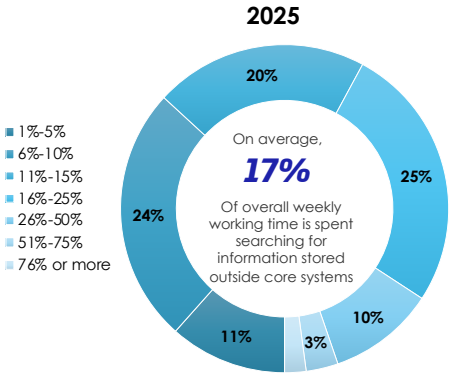
While survey respondents cited improved outcomes as their top interoperability goal for the past four years, healthcare leaders are also looking for interoperability to deliver on other fronts. For example, they are counting on interoperability to optimize clinical workflows and performance (47%). Respondents say that, on average, 17% of the work week is spent searching for information such as medical images and other unstructured content that resides outside of the EHR and other core systems (Figure 1). In fact, 62% of health systems do not have access to medical images and unstructured patient data at the point of care. Clinicians at Cook Children's, however, spend less than 10% of their time searching for information. Charity Darnell, RN, MSN, Vice President and Chief Clinical Information Officer at Cook Children's, noted that the organization's interoperability efforts are often specifically aimed at making clinicians' jobs easier by empowering them to seamlessly access data and view images.

"The data comes from various sources. It comes from paper sources; it comes from other electronic sources. Having that information all centralized in one location and standardized workflows to input that data and then index it in a way that makes it easier for staff to access makes it possible to truly leverage data for better care," she said.

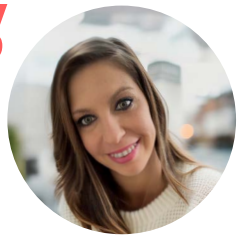
In addition to improving outcomes and workflows, leaders are looking for interoperability to improve patient satisfaction (37%) and meet regulatory compliance requirements (37%). While these goals are long-held mainstays, healthcare leaders are now also looking for interoperability efforts to maximize the value of EHR investments. In fact, this goal moved from the No. 12 goal in 2023 to the No. 9 goal in 2024 to the No. 5 goal in 2025 (Figure 2).

Figure 1. Healthcare workers continue to spend considerable time looking for needed information.

Please estimate what percent of your overall weekly working time is spent searching for information that is stored outside of your organizations core systems, such as the EHR, ERP, CRM, etc.



Data labels <3% not shown
'All of my necessary patient information is stored in our EMR' 4%-7%, not shown
Base: Total Respondents, 2025: n=115



"Having that information all centralized in one location and standardized workflows … makes it possible to truly leverage data for better care."

CHARITY DARNELL, RN, MSN | Vice President and Chief Clinical Information Officer | Cook Children's Health Care System

Exploring healthcare's interoperability roadblocks

While Cook Children's is successfully achieving many connectivity goals, some healthcare organizations are struggling with specific obstacles on their interoperability journeys. According to the HIMSS Market Insights research, integrating data from other providers outside of the healthcare system (47%) is the top obstacle to achieving a connected care experience, followed by integrating data from multiple EHR systems (42%) and integrating new solutions with legacy systems (41%).

Managing unstructured patient information, such as consult notes, and making it available for care decisions emerged as another common issue (39%). The list of challenges runs deep, as leaders reported that their organizations are also striving to deal with concerns about security/privacy; integrate data from medical devices/wearables; keep pace with evolving patient expectations; exchange information with other providers, payers and shareholders; manage growing volumes of medical images and more (Figure 3).

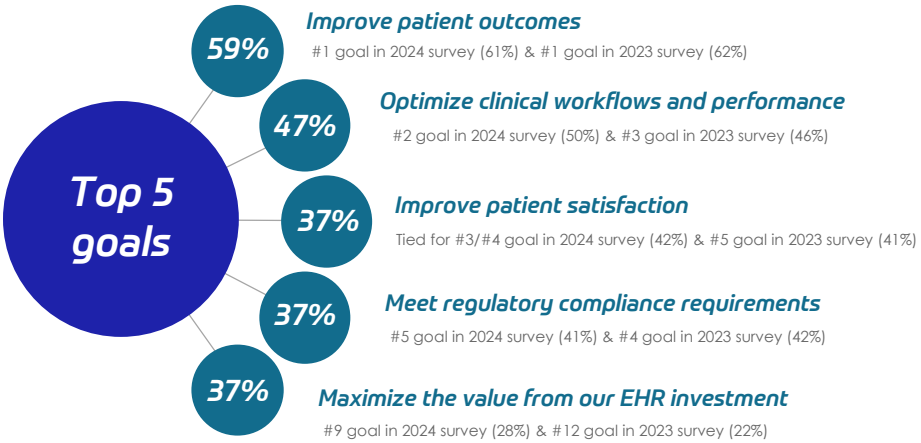
Combining the right tools with the right approach

Cook Children's is conquering this challenge by leveraging data integration technologies that offer up the enterprise insights that can help staff members make better decisions and ultimately improve outcomes. "We're really investing in integration platforms that facilitate that data exchange between these different systems. We are implementing data repository systems to have a full enterprise data warehouse that people can utilize," said Bryant.

Such investments are key to success for many organizations, as 77% of the 2025 respondents reported enhanced operational efficiency through the use of at least one effective technology, up from 65% in 2024 and just 56% in 2023.

Figure 2. Enhancing patient outcomes is a long-held interoperability goal while maximizing the value of EHR investment has recently become a top concern.

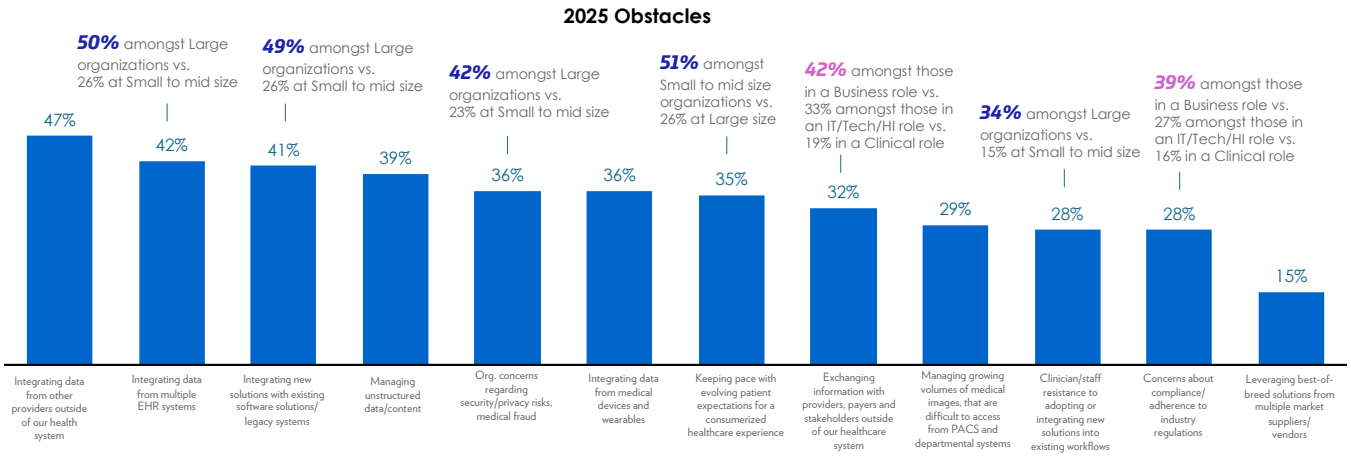
What are the top five objectives or goals driving your organization's efforts to improve interoperability and deliver a more connected care experience?



Base: Total Respondents, 2025: n=115

Figure 3. Healthcare organizations are facing multiple interoperability obstacles.

What are your organization's most significant obstacles to improving interoperability and delivering a more connected care experience?



'Other' 1%, not shown

Base: Total Respondents, 2025: n=115, Large Organizations (500+ beds): n=76; Mid to small org (fewer than 500 beds): n=39, IT/Tech/HI: n=51; Business: n=33; Clinical: n=31

Cook Children's leaders, however, also realize that simply plugging technologies in won't automatically produce the desired connectivity. Rather, the health system relies heavily on strong data governance and education initiatives to get the most out of technology. "We also do a good job of providing comprehensive training and ongoing support to our staff," Bryant said.

The investments in technologies coupled with this strong guiding oversight are making a measurable difference. Before the hospital had interoperable systems in place, staff members would collect all documents that required signatures via fax, deliver them to the providers' desks and wait for their signatures. Then, they would scan the document back into the system. "It was a really clunky, convoluted workflow, and you ended up with three or more different versions of the document as different people along the way needed to annotate and sign their section," Bryant noted.

However, with an electronic process, supported by Hyland OnBase, a content services platform, and other technologies, clinicians and staff will provide required information, annotate certain sections, make edits and provide signatures while the document resides in the electronic system. These documents are seamlessly routed electronically as well.

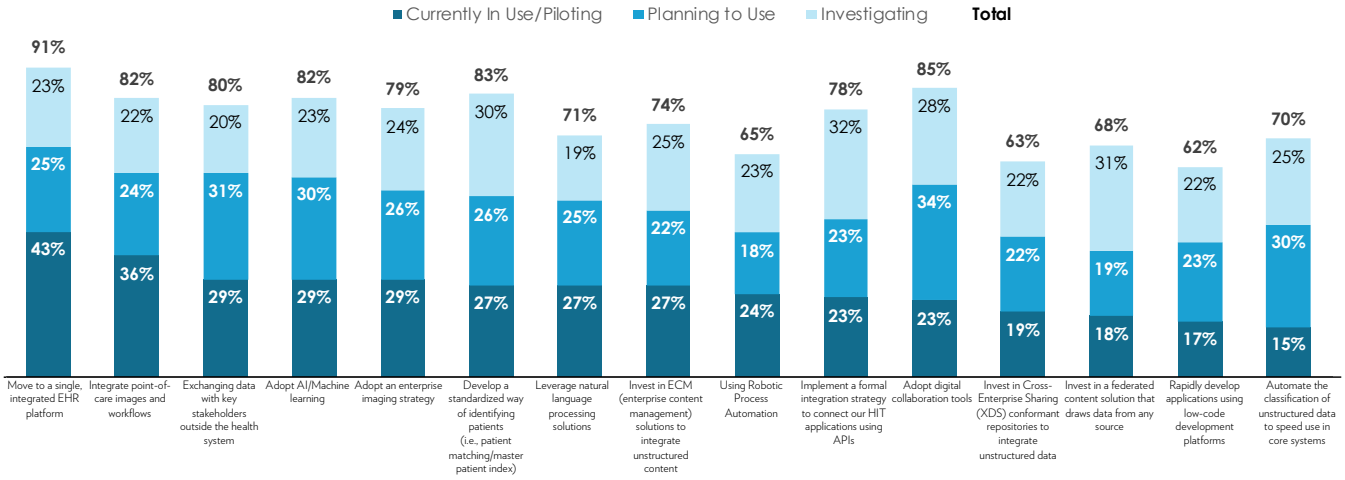
To achieve this success, however, Cook Children's leaders discovered that they needed to do more than simply provide the technology tools. After meeting resistance when the new workflow was being deployed, the health system created a focus pilot group. The training team and the OnBase team worked closely with the business units throughout the process to ensure that the business units' needs were met.

In addition, Cook Children's relies on a governance concept called department optimization groups (DOG), where each business unit has the opportunity to see what changes others are requesting so that they can be part of the conversation. "That's been a gap historically. The DOG governance structure gives the business a forum to collaborate on changes and develop end-to-end workflows that meet the needs of the patients and members we serve. I jokingly say that integrated systems seem to have tentacles. One of the tentacles will eventually hit someone else across the back of the head if they're not part of the conversation," Bryant said. "With these conversations, staff members can better understand the change and integrated points that are necessary across big systems. I think we have a really good governance structure and process that makes it possible to collaborate and make integration a priority. This extra effort made it successful .... and made it possible to automate throughout the organization."

> **"We're really investing in integration platforms that facilitate that data exchange between these different systems."**
>
> LaKAMI BRYANT

Figure 4. Most healthcare organizations are looking to invest in collaboration technologies.

What steps is your organization taking or likely to take to improve interoperability and deliver a more connected care experience?



Note: 'Invest in a federated content solution that draws data from any source' added in 2025
Base: Total Respondents, 2024: n=115

Replicating successful practices

Many healthcare organizations now want to follow in Cook's footsteps. Indeed, to improve interoperability, 58% of health systems are looking to purchase a connected care platform to deliver unstructured enterprise content, images and video. Fifty-five percent of health systems are planning or investigating automated classification of unstructured data to speed use in core systems. Fifty percent of health systems are planning an enterprise imaging strategy, and 50% are looking to a federated content strategy to provide for connected care (Figure 4). Forty-five percent of health systems are looking to acquire a solution to build new applications to support connecting content, process workflows and case management for their healthcare ecosystem.

With such technology in place, these organizations could look forward to achieving what Cook Children's has achieved. The pediatric health care system has enabled 78 workflows (spanning clinical, human resources, legal, supply chain, accounts payable and more) that previously were manual to improve efficiency throughout its enterprise. It has also built 11 applications using low code/case management technology to drive better performance and compliance. Cook Children's clinicians also benefit from enterprise medical imaging which improves efficiency and insight for informed care decisions.

"As we meet with our internal customers, we talk a lot about the manual things they are doing and how we can automate those things," Bryant concluded. "Having a direct connect technology has been a game changer. So, the people ask for what they want and we do our best to build it."

To learn more about Hyland, visit hyland.com/healthcare.

References

1. HIMSS Market Insights. January 2025. *2025 State of Interoperability and Connected Care* [research report]. This research was conducted among 115 U.S. individuals with IT, informatics, business, and clinical roles in U.S. hospitals and health systems. Hyland was not identified as a research sponsor.

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About Hyland

Hyland provides innovative solutions that seamlessly integrate unstructured content, medical images, core systems, and processes across the healthcare ecosystem. This holistic approach accelerates business processes, streamlines workflows, and enhances clinical and operational decision-making, ultimately driving better outcomes for the entire ecosystem of care.

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