



Connecting Healthcare **Interoperability Progress and the Challenges Ahead**

With advances in what can now be digitized and placed in electronic health records, healthcare organizations need to think more broadly about their interoperability strategy

Now that the vast majority of nonfederal, acute-care hospitals have adopted electronic medical record (EMR) technology, the healthcare industry finally has the proper foundation to move away from paper to digitized records.¹ But as the healthcare ecosystem continues to evolve, with massively expanding volumes of data and unprecedented merger and acquisition activity, provider organizations are facing a new challenge: how to appropriately consolidate, and then make sense of, the data they now have the power to collect. It adds a new layer of complexity to each organization's interoperability requirements and goals.



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DONALD SPENCER, MD | VICE PRESIDENT AND CHIEF
MEDICAL INFORMATICS OFFICER | UNC HEALTH CARE

New research from HIMSS Media explores the state of connected care and interoperability in healthcare. The January 2020 study *Connected Care and the State of Interoperability in Healthcare* builds off previous 2019 research showing that interoperability progress is being made across the healthcare sector — with 36% of respondents stating their organizations had the semantic level of interoperability, enabling two or more core systems to exchange and use healthcare information.

However, advancing technological capabilities and heightened consumer expectations require updated objectives regarding interoperability. As such, HIMSS has now revised its interoperability definition, adding a higher echelon called “organizational interoperability.” Organizational interoperability provides users not only with the technical standards and data formats within which that information should be exchanged but also the nontechnical specifications that include the policies and procedures which encourage healthcare stakeholders to exchange data with one another.



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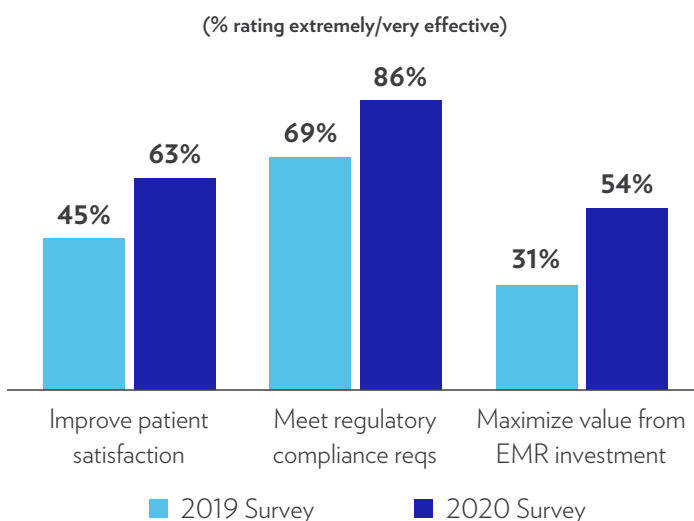
COLLEEN SIRHAL | CHIEF CLINICAL OFFICER | HYLAND HEALTHCARE

“The need for communication and the ability to share clinical information have grown dramatically since I started practicing 20 years ago,” says Donald Spencer, MD, Vice President and Chief Medical Informatics Officer at UNC Health Care. “Each part of a large healthcare system has different needs and different information that it needs to share. There are different requirements. Today, it’s expected that we share different types of information, like medical images, and do so on mobile platforms in a vendor-neutral manner. It changes what our interoperability goals should be and need to be.”

Unstructured information still a challenge

The results from *Connected Care and the State of Interoperability in Healthcare* demonstrate that significant year-over-year improvements have occurred in pursuing interoperability goals, with significant jumps in organizations’ abilities to effectively tackle improvements in patient satisfaction (45% to 63%), meet regulatory compliance requirements (69% to 86%), and maximize the value from EMR investments (31% to 54%) (Figure 1). When asked about obstacles to improved interoperability, more than half of the respondents noted that keeping pace with patient expectations was a significant concern (55%), up 13 percentage points from the year before.

Figure 1. Significant year-over-year improvements in addressing 3 top interoperability goals



Colleen Sirhal, Chief Clinical Officer at Hyland Healthcare, says these findings are not a surprise. Advances in EMRs and patient financial systems have improved interoperability, but consumer concerns indicate significant gaps still need to be addressed in intersystem data-sharing.

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As noted in the HIMSS Media survey, despite gains in interoperability progress, more than half of respondents say managing unstructured data remains a key challenge to advancing their interoperability efforts (53%) (Figure 2), with 73% of unstructured patient data inaccessible and unavailable for analysis (Figure 3).

Figure 2. Most significant obstacles to improving interoperability

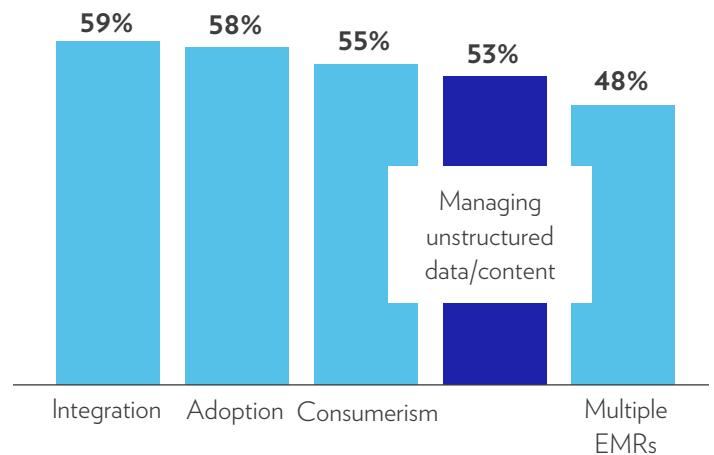


Figure 3. Percentage of unstructured patient data that is not accessible and unavailable for analysis



Source: HIMSS Media Connected Care and the State of Interoperability in Healthcare research, 2020.



“You also need to cast a wide net across all your stakeholders, and make the investment to measure twice and cut once, so that you can understand which systems must be able to share information, and you can get the right data to the right people where and when they need it.”

JEFF AGRICOLA | MANAGER OF ENTERPRISE CLINICAL IMAGING INFORMATION TECHNOLOGY | UNC HEALTH CARE

This is of concern, according to Spencer, as providers still rely heavily on unstructured notes, discharge summaries, and pathology reports to do their jobs: Potential gaps in care could develop that impede an organization’s ability to recoup the most from its value-based reimbursements.

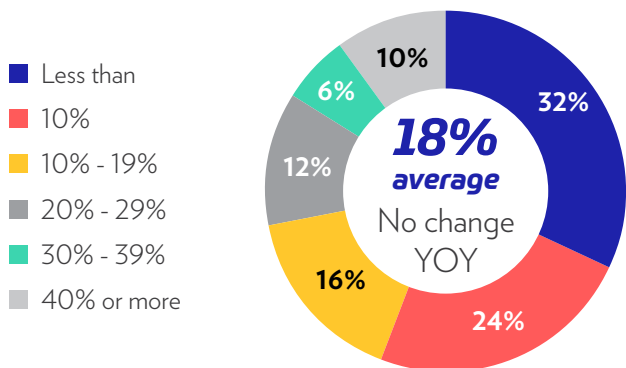
“As we move toward a value-based care world, making sure we can still access those notes — but also have some structured way for the record to show me that, yes, that mammogram was done or, yes, that test was done outside our system — will be increasingly important,” he explains. “Being able to capture things in a discrete way not only helps me save money by not ordering repeat tests, but it also improves patient satisfaction because it’s a real patient ‘dissatisfier’ when I can’t see what the patient had done just a couple weeks ago.”

Including image capture

Another interoperability gap uncovered by the HIMSS Media research is the ability to consistently share picture and archiving communication system (PACS) images so they can be easily accessed at the point of care. Nine out of 10 respondents agreed that access to images at the point of care is important. However, on average, 18% of imaging data is captured offline via smartphones, portable ultrasound/imaging devices, or other devices that are largely not integrated with core clinical systems such as EMRs (Figure 4).

Figure 4. Imaging data captured offline remains a challenge

What percent of your organization’s imaging data would you estimate is captured offline?



Source: HIMSS Media Connected Care and the State of Interoperability in Healthcare research, 2020.

Further questioning revealed only limited success in extending patients access to their medical images via the patient portal. In fact, only 11% of respondents connect with a vendor-neutral archive for digital imaging and communications (DICOM) and non-DICOM images. This is a significant gap, Spencer noted, as there is a growing need for providers to access those images at the point of care, even for specialties such as radiology and dermatology.

“Patients increasingly expect that we can do this,” he says. “And it’s helpful. It’s one thing to tell a patient that he or she has a nodule on a chest X-ray. It’s another thing for me to be able to show the patient an image of that nodule on my phone or on the screen in my office while I’m sitting next to the patient. It really enhances my communication with patients, as well as their engagement with their own care.”

The gap also affects innovative research projects that require access to medical images in a vendor-neutral manner, Sirhal added. “When these images are locked down by a vendor, you are not only limiting a clinician’s ability to follow an issue and create a proper diagnosis or prognosis. But you are also limiting what kind of research can be done. We don’t talk enough about what’s happening today in clinical research and how these images can help our medical community better understand the complexities of different disease processes. We need to find a better way to ensure access.”

Enabling an enterprise wide strategy for interoperability

Because of such gaps, healthcare providers cannot rely on PACS alone to address their medical imaging needs. Provider organizations will benefit from adopting enterprise-imaging strategies that can place proper emphasis on a complete view of patient information, including vital medical images in a vendor-neutral manner. Unfortunately, as noted in *Connected Care and the State of Interoperability in Healthcare*, only 35% of respondents reported that they are adopting such a strategy, with 31% saying they plan to do so in the future (Figure 5).

To gain a truly complete view of each patient to aid in diagnosis and treatment, healthcare organizations must understand that imaging interoperability is not just an IT or radiology project, according to Jeff Agricola, Manager of Enterprise Clinical Imaging Information Technology at UNC Health Care. “You also need to cast a wide net across all your stakeholders, and make the investment to measure

twice and cut once, so that you can understand which systems must be able to share information, and you can get the right data to the right people where and when they need it,” he says. “It really is an enterprise-wide endeavor. And when you realize that, and take the time to plan accordingly, it will pay a lot of dividends later.”

Sirhal agreed and added that healthcare organizations need to understand organizational interoperability is not a technology issue — it’s a people issue.

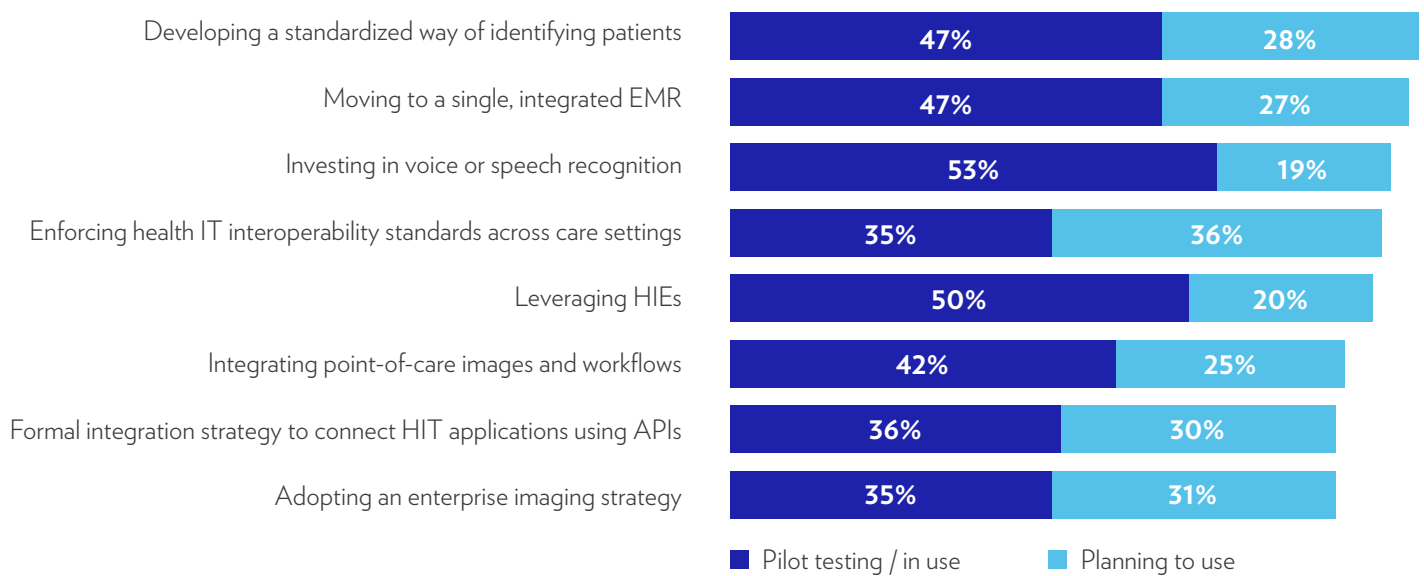
“Success is determined by working collaboratively not just with your technology people but also with all your departmental leaders,” she says. “Getting to a full view of the patient is about breaking

down walls and bringing people together. The next generation of interoperability is going to depend on educating knowledge workers, practicing good change management, and putting ourselves in the shoes of our patients so we can understand what they expect in their healthcare lives. It’s only when we take a truly enterprise approach that we can get the right information to the right place and ensure we are doing so with better controls and better security.”

Reference

¹ The Office of the National Coordinator for Health Information Technology (2019). Quick Stats. Health IT Dashboard. <https://dashboard.healthit.gov/quickstats/quickstats.php>.

Figure 5. Steps being taken to improve interoperability and deliver a more connected care experience



Source: HIMSS Connected Care and the State of Interoperability in Healthcare research, 2020.



About Hyland Healthcare

Hyland Healthcare provides solutions that allow healthcare organizations to harness unstructured content at all corners of the enterprise and connect it to core clinical and business applications such as electronic medical record (EMR) and enterprise resource planning (ERP) systems. Hyland offers a full suite of content services and enterprise imaging tools, putting clinical documents, medical images and more at the fingertips of the healthcare stakeholders that need it most. This comprehensive view of patient information accelerates business processes, streamlines clinical workflows and improves clinical decision-making. For more information, visit hylandhealthcare.com.