



Health IT Interoperability in the New Normal

The pandemic highlights ongoing challenges to connected healthcare

Connected care continues to be a priority for patients and providers. Savvy patients expect their digital healthcare experiences to be as robust as online interactions with their financial institutions or favorite retail stores. At the same time, clinicians expect and demand real-time access to comprehensive patient data to inform their decision-making.

But hospitals and health systems are struggling with interoperability, the foundation of the connected care experience. A HIMSS Market Intelligence research report, sponsored by Hyland, shows that healthcare organizations (HCOs) are still encountering obstacles as they move toward their interoperability goals.¹

The research report, *2021 State of Interoperability and Connected Care*, is based on a survey sponsored by Hyland that has been conducted annually for the past three years. In the most recent report, nearly one-third of respondents (31%) said their organizations' efforts "to improve interoperability and deliver a more connected care experience" were only fair (27%) or terrible or poor (4%). Compared with the prior two years, fewer organizations rated their interoperability efforts as good.

While the global health crisis may have slowed progress toward interoperability goals, the changes it brought also highlighted the critical importance of achieving interoperability. "Interoperability has always been a strategic goal, but the pandemic has reinforced it as a functional necessity," said Lisa Emery, CIO, The Royal Marsden Hospital in London.

Unstructured content is a primary barrier

The respondents to this year's survey identified "managing unstructured data/content" as the most significant obstacle to improving interoperability (Figure 1). This is consistent with previous surveys, which also identified "managing unstructured data/content" as a top challenge to improving interoperability.^{2,3}

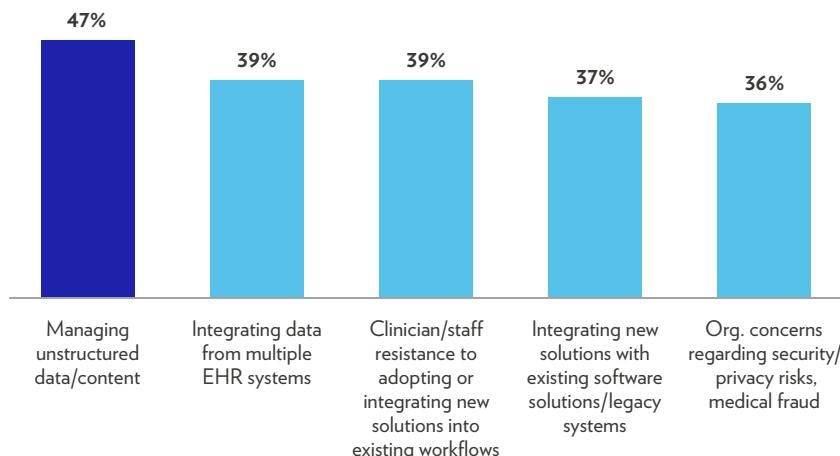


"If there is one thing we've learned from the pandemic, it's that we have to be able to capture and access content from many different sources. Telehealth and other means of remote, virtual and mobile healthcare delivery isn't going to go away."

Colleen Sirhal | Chief Clinical Officer and Associate Vice President, Customer Success | Hyland

Figure 1. Managing unstructured data is the primary obstacle to improving interoperability, according to survey respondents

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



Source: HIMSS Market Intelligence. 2021 State of Interoperability and Connected Care [research report]. October 2020. Chicago: HIMSS

"Hospitals and health systems are good at interoperability when it involves sharing structured data, within a framework and with a standard taxonomy," said Colleen Sirhal, Chief Clinical Officer and Associate Vice President, Customer Success, Hyland. "But when sharing unstructured data, such as images and clinical notes, it is more complex."

Unstructured data is important for providing a complete picture of the patient. Yet much of that data remains inaccessible. The majority of respondents (62%) reported that less than 30% of unstructured patient data that is sitting outside core health information technology (HIT) applications can be accessed and analyzed.

"The lack of access to those clinical images and unstructured content is a real health risk," said Sirhal. "Providers, clinicians, physicians and nurses want access to those details in real time, because seeing that unstructured data in the context of the total patient record helps them make better clinical decisions."

Respondents reported that fewer than 40% of medical images and clinical content captured by mobile devices and portable modalities is accessible from within the EHR. "If there is one

thing we've learned from the pandemic, it's that we have to be able to capture and access content from many different sources," said Sirhal. "Telehealth and other means of remote, virtual and mobile healthcare delivery isn't going to go away."

Interoperability weaknesses highlighted by the pandemic

HCOs pivoted quickly to telehealth and other virtual means of providing care to reduce the chances of patients being exposed to COVID-19 at hospital facilities. But the rapid scaling of telehealth revealed weaknesses in some of the HIT infrastructure that underpins interoperability. Respondents identified "difficulty incorporating telehealth/virtual care components" among the primary weaknesses highlighted by the coronavirus.

The top HIT infrastructure weakness – as underscored by the outbreak – was "reliance on physical (person-to-person) clinical workflows." This finding was all the more significant in light of the fact that for three years in a row, respondents have identified "optimizing clinical workflows and performance" as their top objective for interoperability improvements.

“During the pandemic, the clinical workflows became more aligned with keeping the patient in one place and having the healthcare infrastructure circle around the patient. We’ve gotten better at this, but we still have a long way to go.”

Colleen Sirhal

Sirhal believes the global health crisis also accelerated the trend toward more patient-centered clinical workflows. “Prior to COVID-19, unless you were at an organization with a very comprehensive approach to patient-centered care, you often saw the patient going to many different places for their care delivery,” she said. “During the pandemic, the clinical workflows became more aligned with keeping the patient in one place and having the healthcare infrastructure circle around the patient. We’ve gotten better at this, but we still have a long way to go.”

International response to the coronavirus also highlighted the importance of compliance with regulatory requirements related to interoperability, particularly for HCOs that operate in the U.S. While regulatory compliance was not cited as a weakness, 54% of respondents said that COVID-19 had made complying with federal regulations for health data interoperability more important.

Challenges cause HCOs to evaluate technology solutions

As a result of their experiences, HCOs identified a number of technology solutions they will be evaluating in the next 12 to 18 months (Figure 2). Telehealth is at the top of the list, with more than two-thirds (67%) of respondents identifying telehealth solutions as a priority. In addition, organizations will also be evaluating “network enhancements/upgrades” (44%), “solutions to support digital interaction with patients” (43%) and “enhancements to better support remote work” (39%).

“Digital interactions with patients” refers not only to care delivery, but also to the communication that takes place through the patient portal. The survey found that although the vast majority (97%) of HCOs in the U.S. have a patient portal, the functionality of the portal varies widely (Figure 3). Transactional functionality is common. For example, 69% of respondents said patients can make appointments through the patient portal. However, access to unstructured content, such as medical images, is much less common: Only 23% of respondents said patients are able to access medical images through the patient portal.

WellSpan Health, an integrated health system that serves central Pennsylvania and northern Maryland, is an exception. “Our patient portal is far more than just a transactional place to

make appointments,” said Mick Murphy, Vice President and CTO. “In fact, we recently enabled our patient portal to share radiological studies.

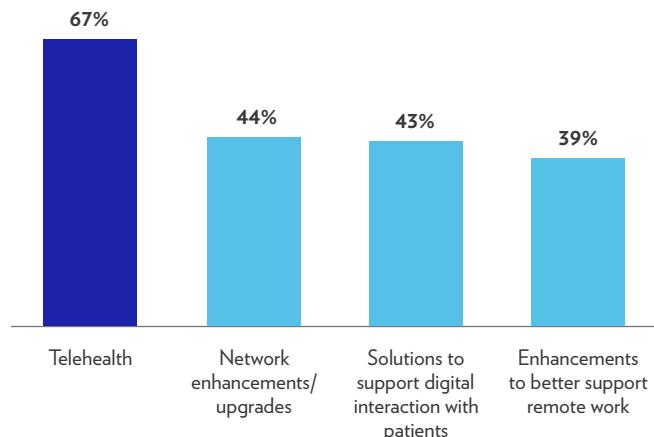
“We believe that the more information patients can have access to, the better,” he said. “Transparency in the medical record helps patients own their care and it helps drive patient engagement.”

Interoperability and the future of healthcare delivery

Improving interoperability, including the ability to handle unstructured content and data, has been on HCOs’ wish lists for a long time. The current environment simply added urgency to this longstanding need.

Figure 2. HCOs are evaluating new technology solutions as a result of the pandemic

In response to the challenges presented by COVID-19, what technology solutions will you be evaluating in the next 12-18 months?



Source: HIMSS Market Intelligence. 2021 State of Interoperability and Connected Care [research report]. October 2020. Chicago: HIMSS

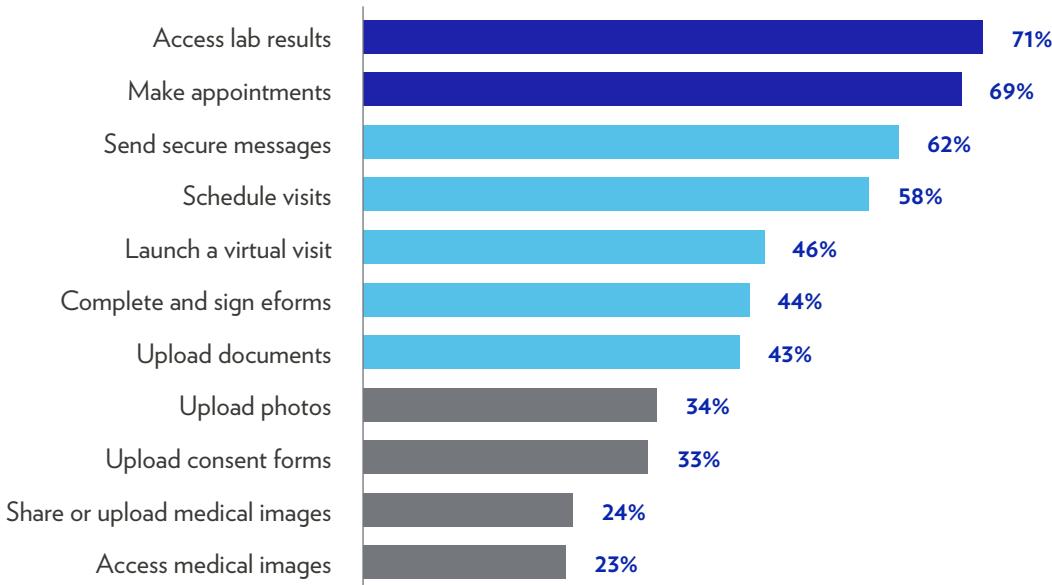


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Mick Murphy | Vice President and CTO | WellSpan Health

Figure 3. The functionality of the patient portal varies widely

Which of these functions can a patient currently perform from your patient portal?



Source: HIMSS Market Intelligence. 2021 State of Interoperability and Connected Care [research report]. October 2020. Chicago: HIMSS

"Hospitals have so much information that needs to be managed and monitored, that when they think about addressing interoperability barriers associated with unstructured content, they tend to say, 'We'll get to that later,'" said Sirhal. "But what the pandemic highlighted is that all of the stakeholders – from providers to clinicians to patients – can benefit from the ability to access the clinical value that is contained in that unstructured content."

To that end, 9 in 10 respondents identified "integrating point-of-care images and workflows" as the No. 1 step they are taking to improve interoperability and deliver a more connected care experience. Approximately 8 in 10 respondents are either currently, planning to or investigating use of "cloud native architecture for building new apps." And 7 in 10 respondents are either currently, planning to or investigating "investing in enterprise content management solutions to integrate unstructured content."

Moving closer to comprehensive interoperability

The research showed that HCOs are taking practical, technical steps toward improving interoperability. For example, 37% of respondents are already using a vendor-neutral archive (VNA) for imaging data. Another 19% have plans to put a VNA in place and an additional 23% are investigating the possibility of establishing a VNA. (A VNA facilitates interoperability by enabling the sharing of images in nonproprietary formats, thus supporting efficient clinical workflows.)

"The technology is important, but it is not the most difficult part," said Emery. "The question that has to be asked and answered is, 'Why do you want to do it?' Understanding the 'why' is fundamentally important to designing the right answers."

Murphy suggests that organizations start by identifying the departments or lines of service where images or other unstructured data is "essential versus nice to have." For example,

“The technology is not the problem. The problem is identifying the most compelling use cases, and then deploying the right technology, processes and people to solve it. It can be done.”

Colleen Sirhal



he points out that wound care is an area in which point-of-care images are especially important.

Images document the progress of a wound over time. Access to images at the point of care can also facilitate continuity of care between the patient's various caregivers and the patient themselves. “If you can get interoperability right where it is essential, then you will be able to figure it out in the less essential areas as well,” he said.

“I think that the takeaway is that although we are still struggling with barriers to interoperability, we can address the challenges if we continue to have thoughtful and strategic conversations about how to move forward,” said Sirhal. “In many cases, the technology already exists. The technology is not the problem. The problem is identifying the most compelling use cases, and then deploying the right technology, processes and people to solve it. It can be done.”

Break down the barriers to connected care with the right content and image management solution. [hylandhealthcare.com](https://www.hylandhealthcare.com)

References

1. HIMSS Market Intelligence. 2021 state of interoperability and connected care [research report]. October 2020. The survey was conducted among 115 qualified respondents who work in IT, informatics, business and clinical roles at U.S. hospitals and health systems. Sixty-five percent (65%) of participating hospitals had greater than 500 beds. Thirty-five percent (35%) had 500 beds or less. Unless stated otherwise, all percentages and statistics in this white paper are from this survey. Hyland was not identified as the survey sponsor.
2. HIMSS. April 2020. HIMSS connected care and the state of interoperability in healthcare [research report]. Chicago: HIMSS. <https://news.hyland.com/hyland-healthcare-and-himss-media-publish-2020-connected-care-and-the-state-of-interoperability-in-healthcare-study-results/>.
3. HIMSS. October 2019. HIMSS connected care-interoperability research report. Chicago: HIMSS.



About Hyland

Hyland Healthcare provides connected healthcare solutions that harness unstructured content at all corners of the enterprise and link it to core clinical and business applications such as electronic medical records (EMR) and enterprise resource planning (ERP) systems. Hyland Healthcare offers a full suite of content services and enterprise imaging tools, bringing documents, medical images and other clinically rich data to the healthcare stakeholders that need it most. This comprehensive view of patient information accelerates business processes, streamlines clinical workflows and improves clinical decision making. [hylandhealthcare.com](https://www.hylandhealthcare.com)

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