Embracing Data Sharing and Collaboration Could Change the Shape of Health Care
At the start of 2020, we took stock of the progress made in health IT over the prior decade as a way to set the context for what's possible to achieve in the years ahead. The response to the Covid-19 pandemic was just coming into view, underscoring the importance of data sharing and collaboration across the health system.

In this sense, the pandemic didn't create new challenges; it revealed the depth of existing ones. The quadruple aim—our shared pursuit of lower total costs, higher quality, and increased patient and provider satisfaction—relies on collaboration across the health system. This requires shared data, effective means to communicate and share information, and aligned decision-making processes.

According to research by Harvard Business Review Analytic Services, there is strong support (86% of respondents) for strategic alliances that deliver this foundation for collaboration. Eighty-four percent also agreed that better data sharing among health care organizations could contribute to the goals of health reform. At the same time, 75% of executives interviewed said their organizations could be sharing more data.

Historically, change has come slowly in health care. That resistance—which flows from many sources—may have met its match in the response to Covid-19. Demand for collaboration, data sharing, and transparency skyrocketed as policymakers, health system and health plan leaders, and individuals all rallied to achieve the common goal of slowing the spread of the virus—all at an unprecedented pace.

The following white paper examines these trends along with the impact the accompanying digital transformation will have on our ability to manage future public health issues.

Armed with tangible experience showing what's possible when we share data on a larger scale, we have before us a springboard to innovation that will have a lasting impact: better outcomes, improved patient experiences, a health system less mired in transactional processes and repetitive tasks, and lower total costs.

At Optum, we don’t just see challenges—we see possibilities. Our people work across the health system, helping define pathways toward achieving the quadruple aim. We understand that the power of connections between people, and between technologies, will help us do more than improve clinical and operational performance. These connections will also improve access to care and create a more agile, responsive, and equitable health care system for everyone.

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Embracing Data Sharing and Collaboration Could Change the Shape of Health Care

The Covid-19 pandemic has reinforced the idea that optimized care for patients can be achieved through communication, collaboration, and data sharing across health care organizations. But this linkage has been otherwise difficult to accomplish, as health care organizations operate with different standards for data, and privacy concerns make patients apprehensive about sharing their personal medical history.

While the crisis has certainly stressed the health care system, it has also accelerated opportunities for collaboration, data sharing, and transparency. From the explosion in the use of virtual care to more widespread information sharing between and within health care organizations, a spirit of collaboration has gained renewed momentum and energy. “We’ve made big strides pretty fast,” says Frank Dominguez, the president and CEO of El Paso Health, a Texas nonprofit health maintenance organization (HMO). “I don’t think this could have happened without an episode like this happening.”

What the pandemic has done is just confirm what many health care executives have believed is central to making the overall health care system more efficient and patient-friendly. A 2019 Harvard Business Review Analytic Services survey of health care professionals demonstrates that the industry values collaboration and data sharing in a big way. Eighty-six percent of survey respondents agreed on some level that significant reform can be achieved through strategic and operational alliances using shared data and agreed-upon outcomes and decision-making criteria, with 48% saying they strongly agree and 38% saying they somewhat agree. FIGURE 1 Similarly, 84% agreed on some level that increased data sharing between health care organizations can have a significant improvement on health care reform efforts, with 51% strongly agreeing and 33% somewhat agreeing.

**FIGURE 1**

The health care system values information sharing, with 84% of survey respondents agreeing that increased data sharing can have a significant improvement on health care reform efforts.

Challenges to interconnectedness remain, but the Covid-19 pandemic has accelerated opportunities for collaboration, data sharing, and transparency within the health care system.

Going forward, embracing technologies that facilitate further data sharing and holding on to the spirit of collaboration will help the system become more agile and improve the quality of care for patients.
A Desire for Data Sharing and Collaboration

Though health care is multifaceted, the system works with a common goal of caring for patients. As John Snyder, president of Sioux Falls, S.D.-based Sanford Health Plan, says, “I think one of the things we’re trying to do is look at the health care we’re providing our patients and members as a system versus as a hospital or a clinic or a health plan.” To do that, he adds, “we have to pool the data and look at it holistically so that we’re not just looking at one source of data.”

Meanwhile, experts believe that changes throughout the health care system can be brought about by data sharing and strengthened collaboration—which impacts patients and the quality of care they receive. El Paso Health’s Dominguez says, “The ability for us to share the data can help us with what we call in the industry ‘service coordination,’ which is: How do we manage patients? And if we can manage patients better through data sharing, it benefits everybody.”

The survey also showed that health care priorities are generally aligned across the system, and most providers support the idea of becoming more interconnected across organizations. Improving user or patient satisfaction ranks highest, with 66% citing it as a top-three priority. Expanding analytics capabilities (44%) and increasing communication/collaboration with health care organizations (41%) follow as the other top-three priorities. \[FIGURE 2\]

What’s more, within the next five years, respondents say increasing communication/collaboration with health care organizations will become even more important, with the number climbing to 47% from 44%.

Yet, despite overwhelming agreement on the importance of collaboration and data sharing, large gaps have traditionally remained. Seventy-four percent of respondents, for example, report that they could be sharing data more, with 44% saying they could be sharing a significantly greater amount and 30% a moderate amount more.

Dr. Jeremy Cauwels, senior vice president, quality, for Sanford Health and chief medical officer for Sanford Health Plan, says that for practicing physicians, communication between units, let alone different organizations, can be challenging if systems aren’t integrated. “Each health care provider may treat their information as a silo. And it’s very, very difficult to get up-to-date or pertinent information, especially historical information on tests that may have been run on somebody who doesn’t work in your system or with you on a regular basis.”

Understanding the Roadblocks

What makes it so hard for organizations to break down silos, share data, and increase collaboration? The issue starts with data itself—and the systems needed to transfer and share it. Organizations typically operate with different definitions of data that are processed on diverse platforms. Trish O’Keefe, president of Morristown Medical Center and vice president of Atlantic Health System in New Jersey, explains: “Generally speaking, the challenge can be finding the appropriate source of truth. You may be looking at one source of data, which may look at a different time frame or have a different definition of a given metric.”
IT departments—already have a lot on their plate, meaning there isn’t enough time or bandwidth to make sense of other organizations’ systems and data. “The IT departments are really stretched,” he says. “So it’s a challenge to not only get the work prioritized so the teams are able to work on it, but also to get the budget for it. To me, the more we can continue to simplify, standardize our data sets, and enable systems to communicate with one another, the easier it’s going to be for us to exchange data.”

Additionally, market forces can disincentivize organizations from trading insights and sharing their data. The industry is fragmented, and competition between health care providers makes it difficult to collaborate, says Eric Larsen, president at Advisory Board, a health care best practices research company. “There’s been reticence to have complete open sourcing on the data sharing front and a lot of collaboration because the industry’s just been constructed in a competitive way.”

Darrell K. Terry Sr., president and CEO at Newark Beth Israel Medical Center and Children’s Hospital of New Jersey, emphasizes that competition can be good for the system but that circumstance isn’t always conducive to working together with rivals. “Competition among institutions is healthy; however, collaboration is an essential element of delivering quality health care to patients and communities.” Terry explains that if a patient goes to one hospital at 9 a.m.,
another facility at 11 a.m., and yet another at 1 p.m., that patient will likely receive completely fragmented health care. Facilitating better communication and collaboration around the care of this patient, though, can help physicians connect the dots. “As health care leaders, we understand how to balance healthy competition with collaboration to ensure the effective delivery of care,” he asserts.

**Privacy Concerns**

Though there are certain standards in place to protect patients’ medical records, including the Health Insurance Portability and Accountability Act—or HIPAA as it’s commonly known—many patients are hesitant about disclosing their sensitive health information, particularly if they know it will be shared. And these privacy concerns make it difficult to share data across organizations, says Advisory Board’s Larsen.

Dominguez underscores that there are circumstances where patients especially tend to guard their data. “There are certain categories of illnesses that people still like to keep very private, like HIV and mental health. So those patients have even more concerns about sharing their data because, ultimately, they think their employer might use it against them or society might use it against them,” he says.

Sanford Health’s Snyder says there are many issues and questions health care organizations face when handling patients’ sensitive data. “Is it okay for the health plan to share data with the health providers?” he says. “And how much data is it okay to share? And when can you use that to reach out and interact with the patient or a member? Clearly, health information data is just as important and as private, may more so, than financial data for people.”

For some, the risk is more about what security measures are, or aren’t, being taken. “I think what everybody’s afraid of is somebody being able to inappropriately, be it hacking or otherwise, get into their medical record, and not just see their data, but actually change it, mess with it,” says Sanford Health’s Cauwels. “And that’s the big fear that lots of people have stood behind and said, ‘This is why we can’t have all of our data in common.’ I think that probably short sells what we can really do with technology.”

At times, these concerns inflate that actual risk. “There are lots of systems in place to try to protect that [data], and health care, I think, has gotten a lot better at that. But it’s a balance, because I think that the danger is—and what I see happen is—people don’t want to share data because of these concerns,” says Snyder.

**Coming Together to Curb the Virus**

To curb the spread of Covid-19, the health care system had to ensure that patients would share relevant data—including where they had traveled, whom they had been in contact with, and whether they had the virus—knowing that this information would be shared across organizations as part of a larger effort to curtail the pandemic’s effects.

El Paso Health worked to educate its plan members and alleviate any privacy concerns, so people knew the significance of sharing their health data. “We launched a communication effort to make sure that we can properly communicate with patients the importance of opting in, to share that data, and how important those things are,” says Dominguez.

SCAN Health Plan has also taken steps to strengthen data sharing to streamline and provide better care during a time when the system is strained. “We’ve been sharing data with our provider groups, specifically data on our high-need, vulnerable members,” says Goode, the CIO. “This has allowed us to collaborate and deliver to our members the right level of care according to their needs.”

The pandemic has forced many health care organizations to overcome traditional challenges to collaboration and data sharing—and fast—in order to trace and curtail the virus. In El Paso, medical systems worked with independent physicians, city health officials, Texas Tech University Medical School, and private labs. “There’s more collaboration, so even the bigger labs are starting to help us feed into our recording system,” says Dominguez.

In New Jersey, Atlantic Health System collaborated with state officials and the New Jersey Hospital Association to help lead the response before Covid-19 was detected in the state. It also communicated with other medical centers, including the University of Washington, which is located in an early Covid-19 hotspot, to gain insights on policy and practices.

“We appreciated the sharing of their lessons learned, which assisted in our planning and response,” O’Keefe notes.

This cooperation involved looking beyond the usual competitiveness between health care organizations. “Essentially, there was no competition during Covid. We were assisted in our planning and response,” O’Keefe notes.
sharing data at the state level. We were sharing knowledge, expertise, and supporting each other,” O’Keefe recalls.

Interorganizational collaboration has not just worked between typical health care and government players. Cauwels also worked with other organizations to help curb the spread, including veterinarians at pork processing plants in South Dakota—one of the first Covid-19 hotspots in the Midwest. “I actually ended up meeting with about a dozen veterinarians because those are the people that are the medical experts in a pork packing plant,” he explains. “And we started working together on ways to try to prevent plant shutdowns and the disruption of the food chain before all of this stuff went the rest of the way through the nation.”

In addition to veterinarians, Cauwels met with a cross-section of people at these facilities. “We sat down with the whole food chain, farmers who are literally raising a million hogs a year, biostatisticians from the local universities, and national pork producers, all getting together to say, ‘What does Covid look like as it runs through a plant, and how do we move that into keeping the production facility at least somewhat open and keeping all of the people safe?’” This was important not just for tracking and containing Covid-19, but also to ensure it didn’t become a food access issue.

This cross-organizational collaboration worked because people saw the importance of sharing whatever information they could. “I can pretty much guarantee you that none of these pork producers would have sat down in a room and started talking about how their plants work and what their safety protocols and procedures and everything else were if it hadn’t been for Covid,” Cauwels adds.

Intraorganizational collaboration matters, too. To handle the influx of cases, some hospitals restructured and changed their models of care to facilitate more internal communication and data sharing. Newark Beth Israel Medical Center created “pods” to help address the rapid increase in hospitalizations due to Covid-19. “We reconfigured our clinical leadership structures on the units to ensure our ability to manage the unprecedented increase of critically ill patients. On every unit, our physician leaders, nursing leaders, and administrative leads worked in pods to meet the rapidly changing needs of patients and staff,” explains Terry.

The hospital has kept the pod structure in place, even after its Covid-19 numbers subsided. “This pod structure has really given us an opportunity to transform how we provide care at our facility. It allows us to gain an even greater level of insight into key quality and safety metrics such as length of stay [for patients], and it improves the overall patient experience,” he adds.

**Collaborating to Expand Access to Care**

Though virtual care was available before the Covid-19 pandemic, the crisis has served as the impetus to expand the use of telehealth, telemedicine, and remote patient monitoring. “The biggest impact of Covid, in my opinion, is an acceleration of the embrace of telehealth,” says AllWays Health Partner’s McCormick. Indeed, there’s growing recognition of additional applications that benefit patients and providers, and these applications have been highly effective in allowing patients to continue care with minimal risks. Patients with diabetes or cancer, for instance, are able to continue receiving care without leaving their homes and risking exposure in a doctor’s waiting room.

Dominguez says that in the year before the pandemic, El Paso Health’s telehealth appointments totaled around 900 for the year. Within two months of Covid-19 coming to the U.S., the HMO saw that number triple. O’Keefe, likewise, says utilization of virtual care has exploded at Atlantic Health. “We had focused on telehealth as one of our key system strategies prior to Covid. But Covid really pushed us to accelerate its utilization, which was so important for our patients and our physicians,” she says. “It started particularly in the primary care sector, but then expanded pretty rapidly to specialist care as well. Some practices were seeing up to 80% of their patients through telehealth [during the height of the pandemic].”

Some health care experts see privacy concerns subsiding because of the increased use of telehealth. “In order to do telehealth, you often have to sign up for a patient portal, where you have to share some of your information. So we are seeing our members engage with us more on the digital side. We think they are becoming more accepting of the privacy concerns,” says Goode.

To provide care virtually requires the right infrastructure for monitoring, quality measures, and payment. AllWays Health Partners, which works with the Mass General Brigham System in Massachusetts, gave the 30,000 contracted providers in its network free access to Microsoft Teams to deliver virtual care, says McCormick. “We’re super excited about the world of telehealth and leveraging it as the right point of service for...”
a lot of care in the future to help members more conveniently access care when they need it and reduce the cost of that care.”

Virtual care has benefits that stretch beyond enabling continuing care and offering patients and providers convenience and flexibility. “It’s going to drive the cost of care down, because the case rates for urgent care centers and walk-in clinics and things like that are higher than what we pay to your primary care physician,” notes McCormick.

Such care can also help limit redundant tests, reduce errors, and, ultimately, create better patient experiences, says Terry. “I think it could be very helpful in reducing errors and improving the patient experience. During this pandemic, we also found that telehealth services played a vital role in providing a comfortable space for patients to engage with their physicians. At times, patients felt more at ease providing certain information via telehealth than during a face-to-face encounter,” he says.

Goode points out that data sharing between virtual care providers helps strengthen the type of care the patient receives. “If you need to reach out to a specialist quicker, one of the challenges is making sure that the specialist has access to your data—the member or the patient’s historical data,” says Goode. “And then vice versa, after the specialist has the visit, that data needs to get back to the primary care physician, to the health team. So, with telehealth, we’re seeing a virtual expansion of the care teams that are taking care of a member or a patient. And all those different individuals that are part of that care team need to have access to that same data.”

**Sustaining the Spirit of Collaboration to Reimagine Health Care**

The health care system realizes what’s possible when it collaborates, innovates, and shares data on a larger scale. Experts overwhelmingly agree that virtual care will continue after the pandemic completely subsides—and that it will bring a lot of benefits. “I’m very optimistic that this is going to be adopted in a structural way, and that we’re going to see a lot more sort of the embrace of telehealth and telemedicine,” says Larsen.

Anna Orlova, associate professor of health informatics and analytics at Tufts School of Medicine and visiting associate professor at Johns Hopkins School of Medicine, says virtual care represents the future of health care. “Telehealth is bringing us into that digital era that every other industry is going through,” she says.

Beyond the continuation of virtual care, many experts hope and expect data sharing to occur within workflows for efficiency and care coordination, which should improve patient outcomes. Goode says some providers may also rethink their business models and move away from the fee-for-service model, where physicians are paid for individual services they provide, and toward value-based care, where financial risks and rewards are shared between providers and health plans, and providers are paid based on patients’ health outcomes. Value-based care can incentivize collaboration between payers and providers around patient care, while the fee-for-service model generally encourages physicians to provide services in isolation.

The Covid-19 crisis has shown that the fee-for-service model doesn’t always pay, though. “Those fee-for-service providers saw their financials impacted when utilization dropped with Covid-19,” Goode explains. “But those that were on the delegated model for value-based care didn’t, because its payment isn’t based on utilization. So I think you’ll see a consideration of those models more in the future—the delegated model, the value-based care—that way, providers have more predictable income streams.”

The Centers for Medicare and Medicaid Services’ (CMS) promulgation of the CMS Interoperability and Patient Access final rule is another important move toward reimaging health care and increasing data sharing beyond the Covid-19 crisis. The rule pushes organizations to update their systems and partake in more cross-organizational data sharing. Among the things it requires is a payer-to-payer data exchange, which orders CMS-regulated payers to share a patient’s clinical data with other payers at the patient’s request, thereby allowing patients to take their information with them and build their own cumulative and comprehensive health record. The rule also requires hospitals to send electronic patient event notifications of a patient’s admission, discharge, or transfer to another health care facility or to another provider. As McCormick starts to prepare the infrastructure at AllWays Health Partners to comply with this rule, he says it will have a big impact on being able to treat patients holistically. “We’re probably as good as any other plans that are really sharing data, but the new CMS rule is going to be a great thing for us to collaborate more with providers—and getting the one single history of a member, which we probably didn’t have before,” he says.

Dominguez says he’s looking at the CMS rule to help El Paso Health make sure the organizations are better serving patients. “For us, it’s how do we make sure that the regulations make sense and that they’re something that is valuable to the patient, not just to us as providers,” he says.

Collaboration has to extend beyond health care providers to other types of organizations, just as it did with stakeholders in the pork processing plants in and around South Dakota, to better understand how social determinants of health affect individual patients. “Maybe the homeless shelters and other entities that deal with people might have access to helpful medical history on them,” says Dominguez. Looking at the patient holistically requires knowing a bit more about their lives.
Value-based care can incentivize collaboration between payers and providers around patient care.
The Covid-19 pandemic has shown that a holistic view of the patient is important and increasing data sharing and collaboration will create a leaner and more agile health care system in the long run.

**Tech Forward**

Collaboration is mostly facilitated through different, innovative technologies that allow organizations to more easily transfer data, talk to one another, and provide better care for patients.

One of the key technologies underlying this transfer effort is APIs. In fact, the CMS Interoperability and Patient Access final rule will require CMS-regulated payers to implement and maintain a secure patient-access API and a provider directory API—both of which should help payers, providers, and patients gain increased access to data and improve decision making and innovation across the health care system.

Goode emphasizes that APIs can help providers and payers exchange clinical data more effectively. “If a health system is able to render a patient or member’s clinical records through an API, and we are authenticated to access that API, IT teams don’t have to get involved,” he explains. “When the mechanism is set up and the security controls are in place, we’re able to get that data without having to ‘set up the pipes,’ so to speak, between the provider and the payer systems. They can simply call that API and access that data.”

APIs give the patient more control, too. Members can allow health care organizations to access their data for certain transactions, or they can authorize it on a systemic level, Goode explains. “We have a member, and they authorize us to share their health data. At the end of the day, the member should have control over that data,” he adds.

Looking forward, Orlova of Tufts and Johns Hopkins says “digital twin” technology will revolutionize how providers and patients create, view, manage, analyze, and share patients’ medical information. The digital twin, which in health care is essentially a 3D digital replica of the patient, “is becoming your instant electronic health record,” she says.

Digital twin technology is based on clinical imaging and medical devices, including mobile, the internet of things, and artificial intelligence, and allows patients and providers to work together to keep critical information about the patient current. Through this advanced technology, patients can use smart devices that transfer health information that is then automatically updated and stored in their electronic health records. For instance, Orlova explains, if a person steps on a scale to weigh themselves, that data can be connected and sent to their doctor—should they so choose—and then it will be added to their digital replica for monitoring purposes. This technology can also be used for providers to compare data across digital replicas, including against a universal standard—or a 3D model of a human body in good health—which can help providers better understand the progression of a condition and its response to treatment in different individuals, she adds.

McCormick notes that these smart devices can be tied to virtual care visits, too. A patient may be able to use the USB port to send their blood-pressure results to their doctors in real time. The same goes for blood-glucose levels and heart-rate monitors. This technology can give providers a comprehensive view of the patient that is easy to update and share. And it goes beyond just record keeping; if the technology detects a drastic change in a patient’s blood pressure during a virtual care visit, for example, it can trigger a response from the care team, whether that prompts a review of the patient’s medication and adherence or an in-office visit that saves the patient from a potential emergency care episode in the future.

“That [digital twin technology] to me is the future, and I understand it’s very highly experimental; it’s just two or three years old,” Orlova says. “But with the advancements of technology and standards development activities already underway, this future could be closer than we think. Of course, there are issues we still need to address in order to trust and take full advantage of this technology.”

**Conclusion**

The Covid-19 pandemic has shown that a holistic view of the patient is important and increasing data sharing and collaboration will create a leaner and more agile health care system in the long run. While overcoming traditional challenges still remains an important task, particularly once the urgency of the pandemic completely subsides, this experience shows what’s possible.

Going forward, embracing technologies that facilitate further data sharing and holding on to the spirit of collaboration that emerged during the crisis will help the system further its goals of improving patients’ quality of care and becoming more agile.

Dominguez says continuing with this level of collaboration and data sharing ultimately starts with trust. “As payers, we still are searching for trust between us and the providers, so this data sharing is done to benefit everyone. And I think this episode has helped us hopefully bridge that trust a little more—that we can offer something if we share our data.”
Endnotes


3 Ibid.

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