COORDINATING CARE IN A VIRTUAL WORLD

Integrating and using data to engage patients and providers

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When the first wave of the COVID-19 pandemic hit, hospitals, health systems and their affiliated physician practices became online caregivers almost overnight. Though many providers had telehealth and remote patient-monitoring capabilities in place prior to the outbreak, they used them relatively infrequently and only for a small subset of their patient populations. Within weeks, most providers were using virtual care models to deliver nonemergent care safely and effectively to most of their patients. As providers and patients adapt to virtual care and as the pandemic subsides, it's clear that virtual care is here to stay. This executive dialogue examines the capabilities hospitals and health systems are developing and the barriers they're tackling in building a data-driven, health information technology (IT) infrastructure that seamlessly connects virtual care with in-person care for all their patients and all the affiliated and nonaffiliated care settings throughout patients' health journeys.

KEY FINDINGS

1. Hospitals, health systems and medical practices **pivoted quickly to digital health technologies and virtual care models** in response to the COVID-19 outbreak. What became apparent during that fast transition was not only the wide variation in telehealth technologies used by providers, but also the wide variation in patients' readiness to use those technologies.

2. Disparate telehealth technologies and range of patients' access to those technologies **exposed the lack of a common health IT infrastructure** to capture clinical, financial and operational data from the exponential growth in the number of virtual care encounters. The result is fragmented data from virtual care visits that puts care coordination and continuity at risk.

3. What providers and patients need is a way to **integrate clinical, financial and operational data from virtual care encounters on disparate technologies on one platform.** The single platform must be able to cull the most relevant information from the data and present it to clinicians within the workflow at the point of care to optimize care coordination and continuity.

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MODERATOR *(Lindsey Dunn Burgstahler, American Hospital Association):* **How quickly did you transition into virtual care because of the pandemic and how ready were you from a data management and interoperability standpoint?**

CAROL VARGAS *(Atlantic Health System)*: Like everyone, we had to pivot quickly into virtual care in March and April 2020. We deliver virtual care in one of two ways: telehealth and remote patient monitoring. The technology component of virtual care was straightforward, and we handled that well. It all worked. It was the data part that created the immediate challenge. The challenge is how data generated by virtual care technologies, which are provided by multiple vendors depending on the patient population, feed into our electronic health record (EHR) system. It's all competing for the same real estate in our EHR system. Right now, we're trying to solve the issue by controlling the number of vendors we use. Ultimately, we must figure out the best way to have multiple data inputs coming in from patients receiving various forms of virtual care. Then we need to figure out how we can present only the most relevant data to our clinicians at the right time and place in their workflow. It can't be everything, or it won't be meaningful and actionable.

THOMAS KLOOS, M.D. *(Atlantic Health System):* Carol is right. It was a free-for-all. In addition to our 900 clinically-integrated physicians, we have another 400 affiliated doctors on 40 different EHR systems who are using all kinds of telemedicine platforms. We need to get those folks on a uniform telemedicine platform so we can capture the information from that platform to use in our data analysis.

WILLIAM KOSE, M.D. *(Blanchard Valley Health System):* We were not really using telehealth at all until COVID-19 and, in two weeks, we had to figure it out. We were driven initially by the technology and the patient experience in terms of what they needed and what they could use. Now we're trying to do all the front-end revenue cycle to capture as much patient information as we can before the visit and to make virtual care more accessible to patients 24/7. We haven't spent much time trying to figure out what we're going to do with all the data.

MANISH SHAH *(Community Health Systems):* It was a free-for-all for us, too — quite haphazard during March and April last year. There was about a three- or four-week period when we were passively letting patients use whatever tools they could get their hands on. We definitely lost some data integration opportunities for that brief period. Then, we began navigating patients through the virtual care tools that were already in place but rarely used. We have a much firmer handle now on our go-to-market strategy regarding how we engage with patients remotely.

MODERATOR: **Clearly, your hospitals and health systems did the right thing by pivoting almost overnight into virtual care for your patients and worrying about other things later to avoid any delays in care. But now, almost a year into the transition, what lessons did you learn about why being able to capture data from disparate virtual care encounters benefits both patients and providers?**

ALEX RODRIGUEZ *(St. Elizabeth Healthcare):* I'll start by saying my story probably isn't much different than other health care colleagues. Each of us had a crisis to manage and we went from 15 video visits per month to 20,000 per month. We are well over a quarter million visits through the end of Jan. 2021. From a technology perspective, we got there. From a lessons learned perspective, the path forward is a little unclear. We anticipate that a good amount of that volume will revert back to a physical office visit. However, there is definite interest from the patient perspective to leverage virtual offerings. Time will tell how fast and how much will actually change. Another lesson learned was that we can definitely pivot to digital solutions with more efficiency leveraging our core EHR solution and minimize

disparate offerings. Less complexity results in more agility to respond. We don't know what telehealth will look like beyond 2021. That's the challenge we'll be wrestling with during the next few months.

ANURANG REVRI *(Stanford Health Care):* The challenge is data fragmentation — when you have no data or data coming in from different places. That prevents you from having a complete picture of patients who use your virtual care solutions. We're trying our best not to fragment our data. We're using one common platform that consists of three separate platforms — the EHR system, a patient interaction application and a video platform. As long as a virtual patient encounter happens on one of these three platforms, we'll be able to capture all the data and we'll be more capable of coordinating our care for each patient over the virtual landscape. Now, if we start adding a lot of other virtual applications, integration becomes a big problem.

KENT SONA *(Methodist Health System):* Collecting the data from all these different telemedicine platforms and remote monitoring technologies is just the first challenge. The next is enabling clinicians to see the data from wherever their patients received virtual care and have that information ready for a clinician before a patient's virtual or in-person visit with them. All the data must be there; it can't be decentralized. Doctors don't have the time or desire to hunt for it. And it all must happen within their normal workflow.

DARRELL JOHNSON *(Cerner):* You're all heroes regarding getting the telehealth systems in place to have continuity of care with your patients, and that's fantastic. But from what I'm hearing, the technology piece is not usually the problem.

It's usually the usability of the technology that's the problem or the challenge, and how you customize it for each person to make the care delivery process as efficient as possible.

How do you leverage the data that you're collecting? How can you use that data to determine the best care delivery model for each patient? How do you customize data to make the care delivery process as efficient as possible for the physician? The future of virtual care depends on successfully answering those questions.

"The challenge is how data generated by virtual care technologies, which are provided by multiple vendors depending on the patient population, feed into our EHR system."

— Carol Vargas — Atlantic Health System

MODERATOR: Aside from recognizing the need for a common platform to capture virtual data and knowing why that data capture is critical to care coordination, what other lessons did the transition to virtual care teach you about your patients and the clinicians in your respective systems?

JITENDRA BARMECHA, M.D. *(SBH Health System):* We learned a lot of things about our patients and our providers because of our pivot to virtual care. Our virtual visits took off during the first surge of the virus in the Bronx. What we didn't know was that our providers were using all sorts of telehealth systems and not necessarily using the one we had. Some liked this one, others liked that one. And no one was going to switch from what they were used to during the first few months of the pandemic. Now we're working with them on integrating with or switching to a common telehealth platform.

JEENY JOB, D.O. *(SBH Health System):* One thing we learned is that only about 40% of the patients in our ZIP code have regular access to the internet. About 60% don't have regular Wi-Fi access. For those patients, switching from in-person visits to virtual visits was a real struggle. The other struggle was language interpretation. Non-English-speaking patients had a difficult time navigating all these different tele-

medicine systems because of language barriers. Even selecting their preferred language on these systems was a challenge. We're using interpreter services to onboard patients with language barriers to our telehealth platform.

LINDA KNODEL, MHA, MSN, NE-BC, CPHQ, FACHE, FAAN *(Kaiser Permanente):* I really get excited about telehealth. We've invested in telehealth for decades, and our infrastructure has rapidly scaled to meet rising demand. It took us just two weeks with about 30,000 employees working from home to expand our virtual care infrastructure for our clinical work. It was extraordinary.

In 2020, about half (48 percent) of our ambulatory care visits across the enterprise were conducted virtually by video or scheduled phone call. Telehealth appointments peaked at about 80 percent during the onset of the pandemic. Overall, Kaiser Permanente provided nearly 31 million scheduled telehealth appointments in 2020. Our members' average rating for our video visits are 4.4 out of 5 stars.

Kaiser Permanente continues to conduct more than 40,000 video appointments for primary and specialty care each weekday (on average). In 2020, Kaiser Permanente conducted 28 times more video visits than in all of 2019 as members embraced telehealth options for safety, quality and convenience.

We have learned that patient education is necessary in order to improve the productivity of our providers. Many of our patients didn't know they had to call in or log in 15 minutes before their appointment. We are also investing in the analysis of the vast volume of data accumulated during the pandemic to design new approaches for the delivery of care. Knowing our members access our system at various points across the continuum, care can no longer be episodic.

RICK LANG *(Doylestown Health):* You learn a lot about your system and your physicians in a short time during a crisis. We weren't doing telehealth at all. But we ramped up at light speed and have been upgrading and expanding our telehealth capabilities since. It was amazing how fast we adopted telehealth. We employ about half of our physicians, and the other half are independent contractors. Obviously, the employed practices used our telehealth platform from the start. Getting the independent practitioners to use our telehealth platform, though, has been more challenging. A good portion has migrated over, but not the majority. That's a detriment to any kind of across-the-board data analysis of telehealth.

"It's usually the usability of the technology that's the problem or the challenge, and how you customize it for each person to make the care delivery process as efficient as possible."

— Darrell Johnson — Cerner

MODERATOR: How do we take these lessons learned — the importance of data and data integration, knowing your patients' virtual care readiness and working with your physicians' telehealth preferences — and build a virtual care model that engages patients and providers and effectively coordinates care across a continuum that's increasingly virtual?

HANS BUITENDIJK *(Cerner):* From a technological standpoint, we can get data from all the different systems, all the different patients and all the different physician practices and integrate them on one platform. The key will be putting the right data in context at the right time in front of the right users to make the right clinical decisions as efficiently as possible.

VARGAS: That starts with semantic interoperability or data normalization. All these systems need to use the same data fields, the same telehealth

terminology and the same data dictionary, so to speak. This ensures patients and providers receive accurate data that is actionable at the point of care. While clear and accurate data is imperative from a quality and safety standpoint, it's also incredibly important to building trust in the virtual care technology and processes.

LANG: The charting is congruent. I'm talking about the clinical documentation from a virtual visit into the patient's EHR. That's all the same no matter what telehealth platform anyone is on. That's not the issue. The issue is that there are certain data points that are part of the construct of a virtual visit that you miss when everyone is on a different system. There are a lot of things that we're not measuring yet, and when we start to be able to measure those things, then we'll be able to see gaps in care that we need to address or coordinate care more effectively for each patient.

SONA: When you're talking about the future of telehealth, what you're trying to figure out is utilization by patient information, demographics and characteristics. What are the use cases? What's worked? What hasn't worked? Without visibility into the totality of virtual care use by your patient population, it's hard to know what that future is.

KLOOS: What we need is a standardization of telehealth outputs or patient encounters from the various telehealth vendors.

"The challenge is data fragmentation — when you have no data or data coming in from different places. That prevents you from having a complete picture of patients who use your virtual care solutions."

— Anurang Revri —
Stanford Health Care

BARMECHA: Virtual care is a win-win for both patients and providers. What we don't want are usability issues burning out patients or doctors on telehealth, right? We need to focus on working telehealth into the physicians' workflows and providing them with meaningful information. That creates value for the physician as well as the patients.

SONA: I agree. We've received a lot of positive feedback from doctors. They can do virtual rounding from one location and see in person only the patients they really need to see. They can discharge patients virtually, which reduces the length of stay. We'll see even more uses as we go forward.

REVRI: Virtual care is in the toolbox now, and it's not going away. Think of all the uses moving forward beyond the pandemic like the annual flu season. Do you really want a lot of people with flu symptoms coming into the ED or a physician's office when you could treat them remotely? How effectively we use telehealth is the real question going forward.

BARMECHA: And if we don't continue this virtual care journey, nontraditional health care companies and others from outside of the health care field will. That's why it's extremely important for hospitals and health systems to continuously seek feedback from patients, physicians, nurses and others regarding our telehealth capabilities so we can make them even better.

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