

PART II



DIGITALLY
ENABLED

In May 2020, four months into the US pandemic, my mother, a type 2 diabetes patient, decided that enough was enough. After 24 years of having diabetes and 10 years of injecting herself with insulin daily, she was tired—tired of her medications, tired of checking her blood sugar every day, and tired of living with diabetes.

I was in high school when my mom was first diagnosed. Overnight, my mother's health was no longer a given. She was the foundation of our home, and now she had a serious illness, one that I didn't understand much about other than that it would affect her for the rest of her life.

As someone born and raised in India, my mother loved rice and naan and the occasional dessert of *gulab jamun*. Like so many patients with type 2 diabetes, she largely knew what she needed to do to keep her condition under control, yet struggled to do it. Time and again, I witnessed her come home from a doctor's appointment highly motivated to lose weight and eat the right things, but by her next visit a few months later, her old habits would return.

After years of poorly controlled sugars, she was put on insulin. Every day since then (or at least on most days when she felt up to it) she would steal herself away to a quiet corner of our home, draw up a syringe of insulin, and inject herself in the abdomen. But during the pandemic, this routine had become too much for her. She wanted out.

Years earlier she had learned of the idea of “curing” diabetes from me. At the time, I was a newly minted internal medicine physician and researcher at the University of Chicago. One of my patients was an elderly African American gentleman who lived on the South Side of Chicago. He had developed type 2 diabetes

as a young man and had been on insulin for years. More recently, he had gotten serious about his health. As he ate healthier and shed pounds, his blood sugar fell, and with it the number of his diabetes medications. When I took him off the last of these medications, he asked me a simple question: “Dr. Nundy, am I cured of diabetes?”

My reflexive answer was to say, “Of course not. You can’t cure diabetes.” But I hesitated and told him I would need to get back to him. As I walked the labyrinth of hallways that led from my clinic through the hospital to the research offices where I made my second home, his question nagged at me. I knew that type 2 diabetes wasn’t a condition that went away, and yet somehow his seemed to have.

Reviewing the latest research online, I found an article published a year earlier about this very question. The advent of gastric-bypass surgery had enabled some type 2 diabetes patients who had undergone the weight-loss procedure to get off all of their medications.¹ A small group of experts had convened to define this state and choose a name for it, ultimately deciding to borrow from the field of cancer: diabetes *remission*. Patients with type 2 diabetes were in remission if they maintained a normal blood sugar without the aid of diabetes medications for at least one year.²

My patient hadn’t had weight-loss surgery, but he seemed to otherwise fit the criteria. My next question was: How often did remission from type 2 diabetes occur naturally? To answer it, I partnered with a team of researchers at Kaiser Permanente, which had one of the largest data sets in the world of patients with type 2 diabetes. When I initially proposed the study, they were incredulous. They had been studying their data for years and had never noticed any patients in remission. But they were intrigued enough to try. After a year’s worth of data cleaning, false starts, and iterative testing, we came to a conclusion: remission or cure from type 2 diabetes was rare but possible.³ My patient was right.

When I told my mother that achieving remission was possible, she became interested in the idea but wasn't sure where to get started. A year or two later, I told her about a startup company named Virta, which had created a program to help patients with type 2 diabetes do just that. The program, which they called diabetes reversal, was based on years of research showing that a ketogenic diet—a diet so limited in carbohydrate intake that the body burns fat instead of carbohydrates—could help 60 percent of patients with type 2 diabetes get off insulin and nearly all of their medications.⁴

The problem was that the treatment was very complex to administer. Often, patients needed a lot of support from nutritional experts to follow the ketogenic diet, as well as medical supervision to carefully decrease their medications so their blood sugar wouldn't get too high or too low. Most doctors didn't know about type 2 diabetes reversal, and the few who did didn't have the staff or systems in place to properly manage it. Virta had solved these challenges and now had a growing cohort of patients who had successfully reversed their diabetes.⁵

The Virta program still required a major commitment—one that my mother wasn't quite ready to take on. But in the middle of the pandemic, with nearly daily news reports about how Covid-19 was worse in patients with diabetes, my mom was finally ready to move forward.

She went to the Virta website and signed up for the service, agreeing to pay for it out of pocket. Soon she was on the phone with a Virta representative and uploading her medical records to the site. She was instructed to tell her doctor's office that she was enrolling in the program. "They were very happy because they had been taking care of me for years, and they knew that my sugar was not controlled at all," she said. She then downloaded the Virta app and was given a series of videos to watch to learn about the diet, how the program worked, and what to expect.

Soon after, my mom met her Virta doctor, Dr. Jeff Stanley, via videoconference using the app. He helped answer her final questions and approved her to begin the program. A few days later, my mother received a bright blue box in the mail welcoming her to the program. In it, nicely packaged, were a wireless scale, a wireless glucometer, an instrument for measuring her ketones, and a recipe book. She could use the app to log her glucose and ketone measurements and what she had eaten. It also enabled her to connect with other patients in the program who were dealing with many of the same questions and struggles, and to message a health coach who understood the ins and outs of the diabetes reversal program and could get in touch with Dr. Stanley whenever necessary.

The program was tough. The diet upended her life and for the first several days left her with bad headaches and fatigue. She had a lot of questions early on and texted her coach multiple times a day. Then her team introduced her to a fellow Virta member in Chicago, who like my mother was from India and a vegetarian. He shared a number of recipes and tips about maintaining a ketogenic diet with Indian vegetarian foods, which were a lifesaver for her.

Her progress was encouraging. Within three days of starting the program, Dr. Stanley messaged her to decrease her insulin dose. After over 10 years of being on insulin and only experiencing dose increases, she went from 25 units a day to 10 units, a dramatic reduction. Within weeks, she was off insulin completely. And months later, she still is.

My mom's story illustrates the promise of digitally enabled care. Her care itself isn't digital. There's no robot, no AI. She has a doctor and a health coach, even though she's never met either one in person. Instead, she sees them virtually from the comfort of her own home.

But that's not what I mean by digitally enabled. She could just as easily see Dr. Stanley and her health coach in person in a

clinic from time to time, and her program would still be digitally enabled, because digital technology is making a difference to her care in a host of additional ways:

First, my mother is *connected* to her doctor and her care team in ways that she never was before. That connection is not just about the data that is sent wirelessly to them. It's also about the personal connection she has with them—a connection strengthened by her ability to communicate with them whenever she needs to.

Second, her care is *continuous*. Between visits, she is sending data daily on her weight, blood sugar, ketones, and progress adhering to the diet. This data helps reinforce the relationship she has with her care team and shortens the feedback loop between them so her care is more proactive.

Third, her care is *collaborative*. She benefits from having access to a care team, including a doctor, a coach, and peers, who work together to address her needs. She also benefits from having her family and informal caregivers brought into the process. A few weeks into the program, when I wanted to know how my mother was doing, Dr. Stanley welcomed the opportunity to set up an appointment with me as well, during which I was able to share my concerns that my mother wasn't eating enough and receive his counsel on how I could help support her.

Fourth, her care is *personalized*. The reversal team understood her preference for Indian food and a vegetarian diet from the get-go. They also continued to tailor the service to her ongoing needs. Weeks into the program, when my mom flew cross-country to Seattle to be present for the birth of her granddaughter, they

adjusted their recommendations to account for the few days it would take for her to get settled into a new routine.

Fifth, her care is *responsive* to the latest scientific evidence and expert guidelines. My mom was able to get access to a cutting-edge service based on science that most doctors aren't even aware of. And it's a service that has clinical pathways built in to ensure that her care is safe and effective.

In the chapters that follow, I talk about how the future of healthcare is *digitally enabled*. Each chapter will explore a different theme that my mom's story illustrates—connected, continuous, collaborative, personalized, and responsive. The primary thread woven through all of these chapters is that digitally enabled care uses data and technology to strengthen the trusting, caring relationships that are central to healthcare.

Months into the program, my mother remains off insulin but still hasn't figured it all out. There are days when her sugars are a little high and days when she struggles with her diet. But when I recently asked my mom whether she's glad she joined the program, her response was: "*Beta*, I'm living the life I want to now and finally getting the care I need." This future is all any of us can hope for.

CONNECTED

GIVING PATIENTS A SEAMLESS CARE EXPERIENCE

Standing over the sink in his hotel room, a patient I'll call John sent a message that saved his life.
"I messed up. Can you call me?"

The message went to a nurse at Accolade, the healthcare company I work for.

Hundreds of miles away, the nurse, whom I'll call Colin, received the secure message sent through Accolade's mobile app and called John back. After a few minutes on the phone, the story became clear: John had tried to kill himself. He attempted to overdose on a common over-the-counter medication. And now he was scared and wanted help.

Colin was sitting in one of our offices in Arizona, feet away from our experts in mental health and substance abuse. With their support, he kept John talking. Soon John started sharing more details—the medication he took, when he had taken it, and finally, the city, hotel, and room he was in. With that last bit

of information, Colin activated emergency medical services and stayed on the line with John until they arrived.

But John's initial message wasn't just a shot in the dark. It turns out that three months earlier, John had called Colin for help with open enrollment, the annual process that many of us go through to select our insurance plan and other employee benefits.

Although John's questions were fairly straightforward, and in many places would have been answered through a self-service app or automated system, Colin took the opportunity, as our frontline care teams are trained to do, to ask John how he was doing. These, what we call "fearless questions," are challenging to ask over the phone. People often just want to have their immediate questions answered and be on their way. But if you've met Colin, as I have, he's the kind of person you instantly want to get to know better and open up to.

That was fortunate for John. He shared feeling stressed out; his new job was challenging and he was also having issues on the home front. Colin engaged. He listened closely and asked questions. Ultimately, he convinced John to contact his company's employee assistance program (EAP) to access free crisis counseling and mental health services. Colin gave him the direct phone number to his EAP, then closed the call by reminding him that if he needed anything at all, he was just a call or message away.

It wasn't until three months later, when that fateful message came through, that John and Colin connected again. Fortunately, the paramedics were able to get to John in time. And after a short stay in the hospital, he was safely discharged home with a plan to follow up with a therapist.

Six months later, John sent another message: "I've hit rock bottom. I need help *today*."

Once again, Colin called right back. John's full story came out. He had been suffering from depression and alcoholism for years. It was wreaking havoc on his personal and professional life. He was ready to go into rehab, but only if Colin could get him into a facility that same day.

Colin and a small team sprang into action. They started by identifying all of the local rehab centers that were in-network—meaning covered by John’s health insurance. The centers don’t update their availability online, so Colin’s team called them, one by one, only to find out that none of them was available to take John that same day.

They broadened their search. Eventually they found an out-of-network alcohol treatment center that could take him. Colin would find a way to get it paid for later. All John had to do now was get himself there. But there was another problem. It was an hour away by car, and after years of alcoholism, John didn’t have any family or friends who were willing to drive him. The window for meeting John’s goal was closing. So Colin made a decision. He called John a cab and paid for it out of his own pocket.

Six months later, John remains sober.

VISION OF CONNECTED CARE

This chapter is about the shift to connected care. When people in the healthcare industry talk about connected care, they are usually talking about technology: devices that measure blood pressure and sugar levels at home, wirelessly sending data to the cloud; data flowing between hospitals and doctors’ offices; and patients accessing their health records anytime, anywhere. Healthcare needs all of that. But what John’s story makes clear is why our definition of *connected care* needs to extend beyond technology to include a connection to a human being—an empathetic, caring professional whom patients trust and can easily reach when the need arises.

You don’t have to look far to know that healthcare today is far from connected on either front. On the data side, healthcare lives in silos. Doctors don’t talk to other doctors, clinics don’t talk to hospitals, employers don’t talk to insurers, and patients and their loved ones are often the last to know what’s going on. When I see a new patient in clinic, I often have to take a medical

history from scratch, even if they have been seen at another clinic just weeks ago. I don't have access to a list of their medications and lab tests. I don't know who their employer is and what health benefits they offer. I don't know what additional support they qualify for to manage their chronic conditions.

On the human relationships side, patients increasingly don't have one person to turn to for their healthcare needs. Today one-fourth of Americans do not have a primary care physician, a number that only keeps growing.¹ Even those who have a primary care doctor often can't reach them when the need arises.² As care gets more distributed, this problem may only worsen. Patients may have a primary care doctor who sees them at home or online, another doctor who sees them in a clinic for urgent issues, and another doctor they go to for their heart disease or diabetes. Add to that care that is increasingly delivered through pharmacy chains, retail stores, and patient apps, and your head starts to spin.

John's story demonstrates both sides of what's needed—and also how much further we need to go. John was connected to an empathetic and caring healthcare professional who was just a message away. And that healthcare professional had access to most of the data he needed to help John.

If John had come to my clinic and needed help managing stress at his workplace, I would have had no idea who his employer was, that he had access to a free EAP, and what phone number to call to connect him to it. As a physician with an electronic health record, I have access to a lot of data, but often not the data I need most. Fortunately, Colin did, and having access to that information allowed him to refer John to his EAP.

But even with all the data Accolade had, the fragmented nature of the healthcare system meant that John's experience was not perfect. It turned out that John never called the EAP. Like so many patients with depression and substance abuse issues, he had a hard time bringing himself to get care. (When you barely feel the will to live, how are you going to muster up the strength to call a stranger and schedule yourself for medical care?) But

Accolade didn't get data back from the EAP, which would have shown that although the nurse had referred John, he hadn't made an appointment. (This is a common problem in healthcare: an estimated one-third of referrals made by a doctor are never followed up.)³ Had Colin known that, he may have called John a week later to encourage him to follow up. Better yet, had the systems been directly connected, he could have scheduled John for an appointment with the EAP. This isn't just a matter of convenience. Had John begun receiving assistance months earlier, he might not have slid further into the depression and alcoholism that almost cost him his life.

Later in the process, when Colin was trying to find John a rehab facility the same day, he knew which ones were covered by his health plan and which were not. While access to this information may seem routine, it isn't. As a physician, I don't have a simple way of knowing what medications and services are covered by my patients' health plan. My clinic sees patients with dozens of different health plans, each with its own portal and login, and none of which are connected to my electronic health record. It's not enough to have data. It has to be readily accessible.

While Colin could access a list of the facilities covered by John's insurance, it still took him hours to find out which ones were accepting new patients. Although many innovators have dreamed of building an "OpenTable" for medicine—where patients and care teams can see the availability of any doctor or clinic in the country and schedule an appointment—that dream remains far from reality.

On the people side, so much of what made John's story possible was his relationship with Colin. Colin was John's lifeline. Part of what enabled that connection was Colin himself. At Accolade, we assess every person we hire for empathy and then train them to deliver compassionate care. The other part was how easy it was for John to contact him. It was as simple as sending a message, or if John wanted to speak by phone, making a direct phone call. I shudder to think how a patient of mine in a similarly dire

situation would get hold of me. He would need to look up our clinic phone number online, hold for several minutes, leave a message with an operator, wait for me to be called by the operator, and finally wait for me to call back. The situation not only makes connecting with me inconvenient and slow—and in cases like John’s wastes precious, lifesaving minutes—but it also keeps patients from contacting me in the first place. I don’t blame them.

Finally, and most important, what John needed wasn’t only someone to hold his hand—although that was essential—he needed someone who could actually solve his dilemma. Colin is a registered nurse with over 15 years of clinical experience. While Colin was not providing medical care to John, his expertise and access to key information about John empowered him to triage his health needs, facilitate an admission to a rehab facility, and start an appeal with John’s insurance company to get the facility covered. Every bit as important as John’s connection to Colin was Colin’s connection to the rest of the healthcare system.

John’s story shows that we have much further to go in creating a healthcare system that’s not only connected in a digital sense but also in a human sense. No amount of seamless data integration would have gotten John to confide to Colin that he was suffering from alcoholism. He didn’t reveal that information until he felt comfortable and safe sharing something that very few people in his life were aware of. This is the sacred trust that healthcare professionals have with patients—the ultimate connection.

REALIZING THE VISION

Making stories of connected care like John’s the norm and not the exception will take a number of changes in healthcare.

Sharing Data

About a year ago I saw the type of patient that doctors usually dread. Mrs. Rodriguez, as I’ll call her, was 10 minutes late for a

15-minute appointment. As soon as I walked into the room, I knew something was very wrong. Despite her being in her early 40s, she moved to the examining table slowly and was bloated and swollen. I asked what had brought her to the clinic, and she said she recently left the hospital and needed a new doctor. I asked her why she was hospitalized, but she couldn't remember. When I noticed a surgical scar near her Adam's apple, she took out her phone to show me a series of photographs. They showed her on a ventilator with breathing tubes and catheters splayed around her. Then I asked if there was a doctor or family member I could call to find out more, but she couldn't think of anyone. She knew the name of the hospital, but I knew it would take my nurse a few hours to call and fax various request forms to track down her records. In the meantime, I had a waiting room full of patients to see.

Then my nurse made a suggestion. "Have you checked CRISP yet?" CRISP stands for Chesapeake Regional Information System for our Patients. It is a health information exchange (HIE).

Within a minute, we had Mrs. Rodriguez's full record pulled up. I instantly had access to hundreds of documents, imaging reports, and lab results. Within a couple of minutes, I found her discharge summary from the hospital.

With it, I immediately knew what to do. I went back into the room and explained to Mrs. Rodriguez why she was in the hospital. I then helped her organize her medications according to her discharge instructions and scheduled the follow-up appointments she needed.

CRISP has been a huge success in my region. To illustrate why it has been transformational, David Horrocks, CRISP's CEO, told me a story about his grandmother: When her primary care doctor put her on a blood pressure medication, the full-strength dose made her dizzy, so her doctor cut her dosage to one-quarter of the original. She handled that well, and it kept her blood pressure in the right range. However, when she was

hospitalized for pneumonia a couple of years later, the hospital sent her back to her retirement community with the full dose of the blood pressure medication. As a result, she had a dizzy spell and took a nasty fall.

She recovered, but a year later she was hospitalized again. Again, she was discharged with the wrong dose of her medication. This time, David's sister, a nurse practitioner, caught the error. But when she brought it to the attention of the nurses, they didn't have the authority to change the order, and it took two days to get the prescription rewritten at the right dose.

"This is the type of thing that drove John Erickson crazy," David told me. Erickson, founder of a chain of retirement and assisted living communities headquartered in Maryland, is CRISP's founder. In 2006, after seeing seniors like David's grandmother released from hospitals with the wrong medications, he brought together the region's biggest healthcare systems to discuss how they might exchange patient information. Within a couple of years, they worked with the Maryland Health Care Commission to create the state's first health information exchange.

Today hundreds of hospitals, clinics, laboratories, and imaging centers across the region are connected to CRISP, making patient records more easily accessible and available.⁴ Unlike most healthcare IT, CRISP is widely used and valued by healthcare providers. ER doctors access CRISP to get a patient's history; cancer specialists like my wife use it to view imaging reports of patients who get their follow-up care closer to home. CRISP also has a prescription drug monitoring program that lets me see all the controlled medications my patients have been given, so I can ensure that they aren't taking too many opiate medications. I like to think that CRISP may have helped spare my patient, Mrs. Rodriguez, the kind of errors that affected David's grandmother.

But we have further to go. Through CRISP, I can access data from hospitals, imaging centers, and labs across the region.

The next step is to be able to access data nationally and to expand the network to nontraditional healthcare providers like community-based organizations, digital health services, and patient apps.

In addition, we also need to understand how to share data so that it is actually used. David Horrocks says a mistake that people often make is to focus only on the data: “Sometimes what we get is 20 pages of records, and doctors don’t have time for that.” Instead, CRISP works with a clinical committee to prioritize data based on specific use cases, so doctors get just the data they need—no more and no less.

Connecting Systems

Ordering medications for patients to pick up from any pharmacy in the country with a couple of clicks—what’s called electronic prescribing, or e-prescribing—is so routine now that many doctors and patients don’t even think of it as innovative. But I remember a time when it wasn’t so routine.

When I started my medical residency, I couldn’t believe how time-consuming the process of ordering medications for patients in the hospital was. First, I would walk over to the patient’s floor and find the medical chart. Second, I would handwrite the medication in the chart. Third, I would put the order sheet on top of a stack of papers for the floor clerk to fax to the pharmacy. Fourth, I’d wait for the clerk at the pharmacy to review the medication order and enter it into their system. Fifth, I’d call the patient’s nurse or drop by the patient’s room to see if the medication had been filled.

By the end of my residency, that system had completely changed. I would pull up the electronic medical record, order the medication, and click “submit.” Then I would see when the medications were scheduled and be able to track in near real time when the patient received it.

But even then, when it came time to discharge a patient home, I couldn't e-prescribe the medications. I would order the medications in the electronic health record but still need to print out the prescription for the patient to take to their pharmacy. This wasn't just cumbersome. It impacted patient care. The extra step meant that sometimes patients didn't get their medications in time. By the time patients got to the pharmacy, it was often too late for them to fill it. At times, this meant patients would go one or two days without a critical medication and would wind up back in the hospital because of it.

E-prescribing is a reminder of what's possible. Today, lack of connected systems means that I can't automatically schedule my patients for a specialist visit, sign my patients up for transportation and social service programs, or enroll my patients in clinical programs offered by their employers. When I ask why, I'm often told "that's impossible" or "that's really hard" or "that's complicated." But that's not good enough. That I can order nearly any prescription medication from any pharmacy in the country in seconds is a powerful illustration of the future of connected care that we need and should demand.

Creating Seamless Care Transitions

Ultimately what patients want is a seamless experience as they go from one healthcare provider to another. What patients dread more than anything else is going to a doctor's office only to be asked, "So what brings you in today?"

Providing a seamless experience means integrating data into clinical workflows. At Accolade, we partnered with a leading mental health company called Ginger to provide virtual therapy and psychiatry services for our members. If the therapist noted that the patient's depression scores weren't improving, we wanted our nurses to escalate the case to the patient's primary care doctor. However, to do that, it wouldn't be enough for us to have data integration with the mental health company. The data would go

into our system, and our nurses would have no idea where to find it or even to look. What we needed was to build a clinical workflow that automatically sent a task to one of our nurses if the scores didn't improve, prompting him or her to contact the primary care doctor.

Often, what's needed to make care seamless is not just data but a live conversation. As a resident in the hospital, I cared for patients whose conditions changed hourly. After an overnight shift, one of my jobs was to make sure the next doctor was prepared to take over for me. Although in theory all of the patient's health data was in the electronic health record, it wasn't enough. Data is retrospective. What we wanted to share was anticipatory. So between every transition from one care team to another, we'd sign out our patients one by one, telling each other what to watch out for and what to do if a patient's condition worsened.

Investing in Customer Service

In healthcare, customer service is sometimes considered a bad word. "We don't have customers, we take care of patients" is a common—and misguided—sentiment.

A lesson I learned from Accolade's advocacy service, which helped John, is that healthcare is sorely missing an obsessive focus on customer service. When I first joined the company, I kept hearing the terms "ASA" and "C-SAT." As a doctor, my mind immediately went to "aspirin"—acetylsalicylic acid or ASA for short—and as a technology geek, to satellite technology for "sat." I quickly learned what these terms meant. ASA was "average speed of answer," the amount of time it takes for a customer to reach a real live human being. C-SAT was "customer satisfaction," a measure of how people rate a service after they experience it.

Measuring these makes complete sense to me as a doctor. We cannot help patients if we don't pick up the phone. We cannot

build a longitudinal relationship with someone if we don't treat people the way they expect to be treated.

Medicine has long given short shrift to the human side of care. Physicians are recruited for high exam scores and then are largely trained on the biomedical elements of care. Once we are in practice, we peer-review each other's cases based on what we write in the electronic medical record, not on how we treat patients in the exam room. To course correct, we need to hire empathetic, caring people and train them to deliver excellent service. We also need to create a supportive work environment that measures compassion fatigue and burnout and is structurally designed to prevent it.

Enabling Asynchronous Communication

The vast majority of healthcare today is synchronous—that is, the patient and doctor are communicating in real time. Visits to the doctor's office are all synchronous and most virtual visits are synchronous too. But as we move to a connected healthcare system, asynchronous communication—which doesn't require an immediate response—will become increasingly important.

There are multiple reasons for this. For one, most of us prefer text messaging and emails to phone calls. It's why my wife and I don't call each other anymore (synchronous); we text instead (asynchronous). Second, it's more efficient. A doctor can manage multiple patients at once using messaging, whereas in a live conversation or visit, they can generally help only one patient at a time. Third, and perhaps most important, asynchronous communication—like “How's that new medication going?”, “Don't forget to fast before your lab tests tomorrow,” and “Give me a call if your symptoms don't improve”—enables lighter-touch, more frequent communications that keep patients and doctors more connected.

It was a message after all that saved John's life.

STRATEGIC ACTIONS

The shift to connected care will leverage data and technology to create a more seamless care experience and strengthen the human relationships that are central to care. However, it will also create new demands on healthcare organizations and new risks. Increased data sharing will require new approaches for managing data security and privacy. More frequent communication between patients and care teams will require new staffing models to avoid overburdening providers. Making care more seamless will require investments in end user design and clinical workflow integration.

Here are steps that all of us can take to accelerate our path to connected care while mitigating these risks.

Patients, Caregivers, and Consumers of Care

- Find out if the organization where you work, get care, or receive health insurance offers a care navigator or advocate program like John's. Many of us have access to one but just don't know it.
- Ask your doctor to share your medical information with any doctor or organization they refer you to.
- Request a copy of your records at the end of each visit, and be sure to have it handy for your next appointment.

Physicians and Healthcare Professionals

- Give your patients a business card with your clinic's phone number and contact information on it, including after-hours coverage. Better yet, ask them to type it into their mobile phone before they leave the visit. Your patients should know at all times who to reach and how to reach them when a health concern arises.

Healthcare Delivery Systems, Including Traditional and Technology Enabled

- Create a single place that patients can call or message with any health concern or question 24/7 and measure and report your abandonment rate, wait times, and patient satisfaction.
- Make care transitions more seamless by creating standardized clinical workflows for common health conditions and referrals.
- Hire, train, and promote frontline care teams as much for compassion and empathy as for technical expertise. Build an environment that minimizes compassion fatigue. Measure and track provider and staff burnout.
- Incorporate measures of messaging, email, and asynchronous communication into metrics of provider productivity.
- Make data sharing and security—including hiring a chief data officer, a chief security officer, or other roles with clear accountability and responsibility for data and security—a strategic differentiator and a core competency for your organization.

Payers, Including Employers, Government Entities, and Health Plans

- Demand that providers, technology-enabled services, and partners invest in data interoperability and sharing.
- Invest in advocacy and care navigation services to coordinate and streamline care. Provide tools and data to empower those services to most effectively serve your members.

- Provide reimbursement for messaging, email, and asynchronous communication, or accelerate adoption of risk-based payment models that pay healthcare providers for results, not visits.

Policymakers

- Set aggressive timelines for data interoperability and sharing by making it a requirement for receiving government grants, contracts, and payments.
- Strengthen investment in health information exchanges. Data sharing is a public good.
- Reexamine patient privacy and security laws—the “portability” in the Health Insurance Portability and Accountability Act (HIPAA)—to remove unnecessary barriers to data sharing.

Healthcare Investors and Entrepreneurs

Invest in and build technology companies that:

- Power modern data exchange.
- Aggregate data from disparate sources.
- Clean, process, and structure data.
- Improve data security and privacy and enable advanced permissioning.
- Enable physicians and other healthcare professionals to manage multiple communication channels through automation and task shifting.
- Layer care advocacy and other human-powered healthcare services on top of self-service tools.

