



EPISODE 1: FIRESIDE CHAT WITH KAREN DESALVO AND PATRICK PILCH

INSIGHTS FROM THE BDO CENTER FOR HEALTHCARE EXCELLENCE & INNOVATION

Patrick Pilch: My name is Patrick Pilch, I'm managing director and a leader in the BDO Center for Healthcare Excellence and Innovation. We're very honored to have Dr. Karen DeSalvo here to help kick off our session with a fireside chat on the future of digital health.

Most of you in the room likely know Karen. She was the former national coordinator for Health Information Technology where she led the charge to build an interoperable health IT system to bring consumers better access to care, no matter their background. Before working for the Obama administration, Karen served in the private sector as faculty at the Tulane School of Medicine. She became the New Orleans—is that the right way to put New Orleans? Right? New Orleans?

Karen DeSalvo: New Orleans.

HURRICANE KATRINA AND THE IMPORTANCE OF HEALTH IT [1:02]

Patrick: [laughter] Okay. There are certain geographical intricacies there.... New Orleans Health Commissioner in 2011 where she restored healthcare to areas of the city so devastated by Hurricane Katrina. She also led efforts after Katrina to create an innovative, neighborhood-based primary care in mental health services for vulnerable populations, and helped build a sophisticated health IT infrastructure. How can health IT and technology support population health?

Karen: Thank you, Patrick. Thanks for the chance to be here and talk about all this. And to your question about New Orleans, by the way, depends on how yatty you are [laughter]. So

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in New Orleans, we have something we call yats, which is most of my family, and that affects how strongly you say the words, but New Orleans is perfectly fine.

And it is a population that exemplifies some of the things that we would worry most about for people on this country. It's historically been very poor. It's historically had access to care largely through emergency departments and through systems that were funded by disproportionate share moneys, so sort of block grants to hospital systems, and didn't build an infrastructure in that community of outpatient services because there wasn't a financing mechanism and because it wasn't culturally sort of expected. And so not only for healthcare reasons, but for social reasons—poverty, education, etc.—it was a pretty unhealthy community.

And I think it was, for us, particularly in the era of digitization and thinking about the opportunity to leverage data, that was more facile and could give us a picture of the community, and look for gaps and care for opportunities at the neighborhood level to make intervention through an early study for me and others about what it could look like if you were able to leverage data to improve health.

And this has obviously, in the last decade, become a buzz for people. Most of the time, people think about population health as a way to reduce cost or to think about opportunities for management of individuals or perhaps some targeted populations. I think, increasingly, we're also thinking about population health as a way to not just record what's happening and try to do some intervention, but predict.

So, the world of using data and digital inputs to inform population health has really gone from building databases to thinking about a more... I'll call it a retail model, sort of understanding at a more granular level who's living in the community, what they're thinking about, where there are opportunities to intervene, again, not only in the community level but where appropriate for individuals.

I'll just say one other thing which is, though it can feel daunting to think about an entire large community, I believe what we've also learned from the world of population health is that when you pull data together, when you aggregate it in that way, it is really easy not only to see gaps but to find that 5% that accounts for 50% of the cost. And that feels more manageable for a lot of folks. Okay, well, this is a subset of patients that we can really do something about, reach out to.

And then again, as we're learning more about how to predict who's going to fall into that 5% bucket in the next year or two or three, that's giving us a chance to get even further ahead of the curve. So, from a healthcare standpoint, limitless possibilities. I know we're going to talk a little bit about public health, but I think that that's also where it's creeping, is sort of what are the other ways that we should be thinking about changing contexts so that people don't end up in that 5% in the first place.

DIGITAL TECHNOLOGY AND DATA'S ROLE IN EMERGENCY PREPAREDNESS [4:55]

Patrick: So, that's very helpful. So Katrina was obviously a major weather event. But since then, there have been significant other additional major weather events around the world. Now, looking at that in terms of digital health and digital technology and data, playing into emergency preparedness, how do you see that role?

Karen: The thing about disasters is that it's a time when people tend to leave their agendas at the door and come work together collaboratively. We see that every time there's some horrible disaster, and I bet that's happening right now in Santa Barbara and the area around there, where people are just thinking about helping their community.

And one of the related issues there is that it's a time when people let go of the hoarding of data, and they are more willing to share, not only from an interoperability data movement standpoint but even a data liquidity standpoint to think about use cases, usefulness of health information to improve the health of populations.

When Katrina happened, so it was 2005, and so you all probably—I don't know what the rest of the world was like, but I'll tell you in New Orleans, we were using flip phones. We really didn't even have BlackBerrys in Louisiana at the time. We were pretty rudimentary. I had never texted, which is almost embarrassing to say to this crowd, but it's a fact. And so I had to learn to use some technology, including something simple like texting, and that was the state of our IT infrastructure in 2005 in New Orleans.

I will submit to you, that though there are places like California or New York or D.C. that might have been more advanced, most of the country was in that state, and frankly a lot of the country is still there. So we should remember that context.

However, from just a purely patient-focused standpoint, because of that lack of IT infrastructure, what happened was that doctors like me didn't know where our patients had gone, particularly those patients who were on blood thinners, or HIV meds, or cancer regimens—people who couldn't miss a dose, who couldn't miss a treatment. And we didn't have, from a population health standpoint, a way to mine-able, our data because we were not using EHRs, or one that was minable, in our case, to say, "Okay, well, here are the 200 people that I got to find tomorrow because if they miss a dose—and I need to figure out where they are."

So, we had this—we, in Louisiana, I think, set a course forward for the country about how important it was to have a digitization of the care experience; not just for every day but for disaster, because it just—we felt it acutely and it marshaled all of us. It created this movement in our community that we needed to digitize the care

infrastructure. We would not go back to paper; it was all bricks and flooded and ruined anyway.

So let's just move ahead and let's find a way to create a system where the data can be pulled together, and be useful to help people in times of disaster. And fast-forward to even the last summer season of hurricanes, where we saw assault after assault after assault. Even though there were some challenges and we still have work to do, by and large, the health IT infrastructure performed extraordinarily well.

And we kind of took it for granted as a country that if you were in a shelter and someone needed to access your meds, there was a way. The health information exchanges set up shop in the shelter alongside FEMA and others to help people get in their portals and get their information so that those clinical teams could help people who had evacuated. It was true if you had moved to another part of the country you had a way to get, even as an individual, through your patient portal, your health information, and that continuation-of-care part is pretty seamless.

We've done other things, too, and I'll just—because it's worthy to not just talk about those different types of data, and I think you and I have talked about this emPOWER tool before. Because one of the other things we've learned to do with data in this country is not just wait for the health information from a clinical record, but we're using claims more intelligently. And claims is a place where we've been able to use data to help people in times of disaster.

So when I was health commissioner, I worked with HHS to develop a tool call emPOWER, which is now at scale across the country, that at the time of an event or immediately preceding one, importantly, Medicare data is mined for a geography to identify people on Medicare who are at high risk in the event of power outage, water disturbance.

So based upon their claims, they're using durable medical equipment, they're oxygen dependent. And it allows the local first responders, public health to know by address and name the people in their community who need help evacuating or who need to be notified that there is a fire coming, and may not know that because they are deaf, as an example. So I think that we're using data in this country now a lot more intelligently to help in disaster, but I think also in every day. And it's a great thing. We're not done, but I think as the next iteration of data management and intelligence comes along, I hope people remember that there are use cases beyond just clinical delivery.

USING DATA FOR PUBLIC HEALTH PURPOSES [10:15]

Patrick: Yeah. That's very helpful. And I could go on deeper into that in terms of where you're going, because it makes a lot of sense. And I can tell you, having been in New York

during Sandy, we didn't really—you couldn't get power, so with no power you can't find people.

Karen: Right. And so the way—people who have done emergency work will know this, so you're—as health commissioner, I'm standing in the emergency operations center, it's our fifth day or whatever of power outage. This is the same story that would be in Sandy, and the power company has been through its list of prioritized sites to restore power, and then turns to you and says, "So where should we go next?" And you're looking at your community and you know—for a variety of reasons, we knew there were seniors in high rises, exactly the same story in Sandy, that were without power and in our case it was hot, it was hot there.

Patrick: It was 100 degrees, yeah.

Karen: And I was guessing. And I was guessing based upon getting the cops to drive me around the streets and knocking on doors at high rises—and asking managers and people outside—"Do you know anybody who lives here that's on oxygen? Can we help them?" The list we had was incomplete. That very personal experience drove me to kind of build this emPOWER tool. And that's the kind of thing that if you build those bridges in disaster—so a pipeline, so that claims data is useful for public health purposes, then we can begin to imagine a world where we can also use that data—de-identified, it could be—for other good public health purposes, population health management, planning. And that's why I get excited, not just because of what we can do to help people in the moment, but also because it'll help them with the resiliency component.

Patrick: Right. So let's turn to government's role. You're obviously recently out of the government. Right? So now you're—

Karen: It's a year. Not quite a year, but same.

GOVERNMENT'S ROLE IN SUPPORTING HEALTHCARE INNOVATION [12:13]

Patrick: It's, I guess, a year next week. So what do you think is government's role? Do you think government has a role in fostering and supporting innovation, and what would that look like? I mean, you were at the forefront under the Obama administration.

Karen: You mentioned the clinics work that we did in New Orleans after Katrina. So we had this very hospital-based, ER-based system with a lot of uninsured folks who were really unhealthy, and we flipped the system and we built a network of community clinics in neighborhoods that were first financed with philanthropy, and then we worked with Secretary Levitt and his team in Congress to get a grant to support them as a sort of capitated model.

And that three-year effort was ending, and we needed to figure out a new way to fund the care for these uninsured individuals. It was about 200,000 people, 70% of whom were uninsured, and they were using the clinics. And there were patient-centered medical homes, NCQA-recognized. It is, today, still a great system. And it's now very financially stable, but we were in this zone and I was—it's one of the things that drove me to be health commissioner because the new Mayor said that he thought it was an important part of our infrastructure and wanted to help find a way to continue the financing, which really meant an 1115 Waiver from the Feds that would go to Medicaid.

So we had to find the match. It's a longer, other story. The state would never give money for our clinics. We found the match, drew down the dollars. But in the process of the 1115, our state government and the federal government at the time—this was early Obama administration—pushed us into a fee-for-service model. We had been in this global cap model. It was the best experience I've had practicing medicine, running clinics that were focused on care. And we were [focused on] end-quality, not on how many people came through the door.

And I'm telling you, within a couple of months, I was having to let go of community health workers and tell the legal aid clinic, "I'm not so sure." And it drove me to want to know more about the policy side because I didn't understand why—if we knew something worked on the frontlines and we'd had mystery shopping and we'd been audited, I mean there was just—why couldn't the system, the government help with that?

And, along the way, it ended up federally, because I really felt like government could have a role either in driving innovation or getting out of the way. And I think that where I've landed now, that I've had an additional year to think about it, is that there's—government, particularly when it comes to healthcare, wants to do things, but I think we get in the way, being overdictating, overprescribing, kind of the care model or how people should be engaged and supporting individuals.

Care is very local. And it sounds so cliché, but I know this personally. And we tried very hard to step back from it, but it's difficult to not get your hands in it. So I'm very interested to see how this administration continues some of their deregulatory work.

I think, on the other hand, government, in my opinion, has a really strong responsibility to level out the unevenness in this country and have a policy goal of not leaving anyone behind. So it's very easy for innovation to support people who have means, and access, and living communities where they have the resources.

But if you live in rural Georgia, I think you should still have the same expectation in this country that if you get run over by your tractor, that you're going to have access to quality care and a blood product that's going to be safe, and be able to take care of

you, and that your digital record's going to be able to transfer with you when you go down to Emory to have your case done.

So, to me, the government has a floor. We have to set a floor, stay out of the way of innovation, and there are some guardrails around consumer protection that used to work out. The difficulty in all that nice talk is when you're doing your regulatory process, it's years until it hits the street.

So when I arrived at HHS in January 2014, the team at the Office of National Coordinator was like, "We must have an emergency meeting in the morning about meaningful use stage 3," and I'm like, "We haven't even put out stage 2. What the heck is going on?" And they said, "Oh, no, we must start talking about it." And it's, as you know, turned into MIPS but it took years for that to even come out. And in that intervening time we learned a lot about value-based payment, we learned a lot about what digital can and cannot do, we learned a lot about the fact that meaningful use is not the center of the universe nor are electronic health records. We changed the Federal Health IT Strategic Plan.

So in all the time in the background when you're writing your rule with one set of expectations, it's not going to hit the street for years; the world is changing all around you and you're getting in new data. So this is a difficult thing for government. It's one of the reasons we use tools like subregulatory methods for our standards recommendations and for trust frameworks because I didn't want to have to—and by the way, when you rule make, you can't bring in stakeholders because you go quiet. So being able to do subregulatory efforts allows you to do this with the private sector and iterate going forward.

So it's a really fine balance. And this is out of the scope of the conversation, but I just want to say that I think that it seems to me Scott Gottlieb and his team at the FDA are doing a really good job of finessing that dial of we need to be protecting people and using our regulatory levers, but we also need to not get in the way of innovations. So think about their work in nutrition, or tobacco, or smoking as a way that they're trying to protect the public's health, but also their pre-cert for products and how they're trying to get out of the way of innovation.

IMPACT OF NEW ENTRANTS INTO HEALTHCARE [18:28]

Patrick: We just did a survey with New England Journal of Medicine, and then we're going to go into some Q&A from the audience here. And we asked providers about the impact on the healthcare industry of some major new entrants, and they expect the CVS Aetna deal and the entrance of Amazon will have the most impact in the coming years. So what do you think? I'm not thinking of nailing you to a specific company, but the thought of new entrants—

Karen: You're going to spend the morning talking about it, and I bet you I'm going to say the same thing everybody else thinks because this is—at least I hope I do. And here's the thing. For the second year in a row in this country, people are dying or living less of a life expectancy than in years prior. This is unconscionable in America, that we are losing life years. And when you look at the graph compared to our peers, it is diverging. It's not like a little tiny blip from opioids. This is an ongoing challenge that we're finally beginning to see in the data and the numbers, and the costs continue to rise though the curve has been bent.

So if nothing else, the burning platform, for me, is that we are not well as a country, which affects our ability to be productive and happy and competitive. So, we got to wake up. And if you are to think in the way of the national healthcare system and the way that we thought about Louisiana—we re-engineered Louisiana, particularly New Orleans, because everything that we had put into place was designed to create the outcomes that we were getting which were poor health and a high cost.

So we went upstream, we built outpatient clinics; the numbers are all moving in the right directions for that community. We've got to do something similar in the U.S., but it's more than just primary care and moving to a community. I think this is calling the question of all of our assumptions about the primacy of medicine in taking care of the health of this country. There's a recognition that there are other inputs to health. That if you go to bed hungry or you have unsafe housing or you have mold or insect parts in your house, you are more likely to end up in the emergency room and accrue to somebody's bottom line, if you just want to make it that simple.

You're also going to keep a kid out of school and you're going to keep people from being able to go to work or go to church or take care of their family. So all this together, it's not just about—medicine is not going to solve this alone, clinical excellence alone is not going to keep people healthier and living longer or bend these cost curves.

And that's why these new entrants are so interesting because they're not walking into this with the same assumptions that we've had in the house of medicine or even in public health for so long. They're understanding that there are other inputs to health, that there are ways to help people make the right choice when it is available to them.

They have a retail approach to being able to customize decision-making and the availability of services to meet people where they are. And that is just not something that medicine is really set up to do and, frankly, even public health, as important as I think, that public health responsibility is.

So there are consumer issues for me in here that are to watch. So they involve things like equity, sorry to use that word, but I do believe that I don't want to leave communities behind because

they don't have means. I don't want people, because they don't have Internet access, to not be able to avail themselves to these tools.

On the other hand, if you think about, say, an Amazon stepping into the food business and taking on the work of like a Meals on Wheels, or you think about rural America and the opportunity there if we can get over some of the Internet pieces, a drone can drop off food at somebody's house in rural America probably more easily than a Meals on Wheels program. Now, they're not going to fix the lights or the attic stairs or whatever Meals on Wheels can do, but there are some social services supports, is where I'm trying to go with this.

I think even more than the medical component, Patrick, the idea that we could professionalize the social services industry that's very cottage still, it's not digitized and it's having a really impossible time meeting the medical system, and we need to strengthen it. Otherwise, we're not going to do something about things like life expectancy, quality of life, well-being, and cost. And I think all of these companies have some really particular opportunity to think about the world in that lens.

Patrick: I think we're running out of time. Can we take one question, Nadia?

Audience member: So what I've been wondering over the last year or so is the interoperability standard, for example, coming out now recently. It seems to me, and this chart seems to support it, that a lot of the healthcare services are very broken up and not consolidated right across the country. I think a lot of the ideas that are going to come on the tech side are going to come out of Silicon Valley, like the Apple, Google, Microsoft. What do you think about that? Do you think that we're going to see Silicon Valley be a real driver in healthcare services over the next few years?

Karen: Okay, I'm going to say what I want to say immediately, which is I hope so. And the reason I hope so is for some of the reasons that I've articulated, but I think also because we really need some serious innovation to happen and we need to get rid of some of these assumptions that we've been holding onto. When I was the National Coordinator, the thrust of our work was to free data. When I got there, the strategic approach to interoperability was a direct approach. It was about point-to-point connections from one part of the healthcare system to another, which is an almost impossible task to accomplish. And our work was to require open-source APIs, and that would then free data for many use cases.

We've mentioned several of them today, Public Health Disaster. But also for the needs of, for example, artificial intelligence, and machine-learning to better customize care and do better prediction, and to create consumer-mediated exchange in longitudinal health records. There's a whole host of opportunities then that unveil themselves, or federated data, doesn't have to all

be aggregated. There are some problems in the API piece and even in our rule-making. We couldn't call "fire"; we couldn't call things because we had to put our rule out before some of the standards were mature, but we tried to squishy around it.

Anyway, the point is, some of, also, what we heard a lot from Silicon Valley—I'll just use that as a generic term for innovators, and people who are great with data—is, "We don't care if the data's dirty. Don't over-standardize it. We'll deal with it. We'll impute, we'll figure it out, and we're not going to give somebody cancer based on it." Maybe. Some people are trying that [laughter].

Cancer therapy, I should say. But I think we were—so it's a culture shift for medicine. And boy, they fought hard. But then once they got onboard, especially the electronic health record companies, they realized that that could be a new business opportunity potentially for them.

But the data's still not free. And we're not going to get to this world until people start demanding that their data is available and useful in that way. And I hate to say this, but it's about a movement. Consumers are going to have to get a lot more savvy, and you have to start asking for that, and demanding these products. Because the system doesn't have a lot of pull yet, the health system. They still have a—in spite of great work we did, and from a regulatory standpoint, in spite of Congress' support in 21st Century Cures about data blocking, the demand yet hasn't quite come. So I'm excited about it. The policy framework is there, and I think the technology's available, but the culture still needs to evolve.

Patrick: Karen, thank you very much for a very candid conversation with us.

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