

Health Equity and the Role of Technology in Delivering Whole Patient Care

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Meta Description: Technology can help organize social services, community resources, and non-clinical service providers to manage health outcomes in whole person care models.

Summary

Healthcare is always evolving to better meet the needs of patients and achieve health equity for all.[1] Realizing the need for better health outcomes for more people, the medical community has been working in tandem with non-clinical service providers at federal, state, regional, and community levels to meet patients where they are in terms of their health and other wellness needs to address the whole patient. According to the Robert Wood Johnson Foundation, up to 80% of a patient's health is determined by non-clinical factors.[2]

“Whole person care” is a model that takes into account a wide variety of economic, social, and cultural factors that influence a person’s well-being, and therefore health. It requires that approaches to healthcare be patient-centered, collaborative, and flexible. If they are not, the money and energy spent on addressing relatively small or isolated conditions are less effective for patients, practitioners, and payers.

Adopting the whole person care model is a challenge unlike any other and requires close cooperation between networks of practitioners and payers, as well as social services and other community resources, to effectively address non-clinical factors of health, which are often referred to as the social determinants of health (SDoH). SDoH encompasses the dozens of social, economic, cultural, and political factors that influence a person’s and/or a community’s health and well-being.[3]

Because there are so many factors that make up these social determinants of health, providers and payers have had to grapple with the complexities of a new type of holistic care that must involve not only factors they don’t treat directly but organizations with which they do not typically share information or collaborate closely.

We sat down with three experts on SDoH and have compiled research in order to unpack these non-clinical factors and gain insight into how stakeholders from states, healthcare payers, and community-based organizations are seeking to cooperate to create the best health outcomes for patients. Our consultants included:

- Dr. Susan Beane, Vice President and Executive Medical Director at Healthfirst

- Dr. Joseph Conte, Executive Director of the Staten Island Performing Provider System, and
- Eric Weiskopf, M.Ed. Senior Manager, HIT, and HIE Implementation, NYS Office of Mental Health

This information has guided a new understanding of the bureaucratic and privacy issues involved and suggests ways in which a unique technological infrastructure in the form of Community Resource Network Management (CRNM) can connect the dots to bring available community services to individuals. It can also structure their care, create repeatable intervention plans that improve patient health, protect the data and dignity of patients, and reduce the cost of care.

Treating the Whole Person by Considering the Social Determinants of Health

Unmet non-clinical needs lead to insufficient care, poorer medical outcomes, and a diminished return on investment for payers. These social determinants of health can act as impediments to quality care, positive health outcomes, and sufficient cost management. But SDoH encompasses a wide range of issues that are difficult to address and impossible for any organization to manage.[4]

Social determinants of health include:

- Early childhood development
- Economic stability
- Employment and income
- Ethnicity and susceptibility to discrimination
- Availability of and access to quality health services
- Access to and quality of education
- Food security
- Housing
- Environmental factors such as clean air and water
- Transportation
- Incarceration
- Social support
- Cultural beliefs
- Access to technology

As we come to understand more about the interdependent role these issues play, stakeholders in the public and private sectors are driving changes in the way we conceive of and deliver healthcare and health-related resources to improve overall health outcomes and reduce spending.

“At HealthFirst we really believe that our members are our North Star. It is why we exist. It is what drives our values and I do think that we have historically been very active in understanding how our communities and our members felt about their health. And it became obvious that health is not just a medical condition it is really everything that contributes to

well-being. So I think that it is almost impossible to look at longevity with quality without looking at all of the health needs of a person.

It's clear that economic resources play a gigantic role, but I do think that we can extend our concept of social needs, or medical needs, to include things like stress, knowledge about health, and being able to navigate the healthcare delivery system."

- Dr. Susan Beane, Vice President and Executive Medical Director at Healthfirst

"We do a lot of work with our partners and training for health equity and cultural competency. We also work with our consumers to understand health literacy a little bit better so that it becomes a two-sided equation. As the evolution of people understanding that social factors do impact their health and are intimately connected to the medical side of things, I think [patients] themselves have become advocates of their own, to help have those needs be met, and they are looking to healthcare providers when they did not in the past for relief support referrals.

You can't have a good care plan if you don't have the social factors built-in."

- Dr. Joseph Conte, Executive Director of the Staten Island Performing Provider System

Key issues in managing health care services, social services, and community resources

While we understand more about the puzzle that determines individual and public health, the question remains: what is the best way to coordinate this type of wide-ranging care?

The development of a new understanding of whole person health among various stakeholders as well as policies and programs to address the social determinants of health is only the first step to addressing health equity for all. In fact, getting the patients themselves to develop trust in a new system can be a hurdle.

"Our network has many partners, and we meet people where they. Talking to a community-based organization's social providers and groups that have developed a real trust equation with people facilitates them opening up about things that are very, very personal.

I think people are very willing [to engage] when they see that there is the capacity to meet their needs. They want to engage, they want to resolve these issues on behalf of their families and themselves. And this is really important. Being able to engage people moves at the speed of trust."

- Dr. Joseph Conte, Executive Director of the Staten Island Performing Provider System

"Trust, once established, is probably one of the most meaningful variables...I think that people are very nervous about the idea of where their information is going. So, when we get consent to be able to look at their information, it goes back to trust. You cannot get the information without consent and you cannot get the information without the trust of the client."

- Eric Weiskopf, M.Ed. Senior Manager, HIT and HIE Implementation,
NYS Office of Mental Health

The Example of Medicaid as a Payer Model in Addressing SDoH

States have begun to find ways to connect people to non-medical services that impact their health, even when those services are not directly covered by payers such as Medicaid. But Medicaid provides a good example of a healthcare payer that can benefit from whole person care because they provide health services for low-income patients and the elderly, who are typically the most disadvantaged when it comes to health equity. In addition, the federal and state funding it receives makes long-term cost-saving measures critical to its continued success.[5]

While federal Medicaid rules prohibit non-medical expenditures, state Medicaid programs have more flexibility, meaning we have multiple examples of how different approaches to incorporating elements of services outside of managed care can affect health outcomes around the country.[6] Of course, these benefits are applicable to a variety of payer models.

Building a System for Whole Person Care

However, a critical step in making whole person care a success is finding an efficient way to manage the cooperation between institutional, governmental, and community partners to benefit the patient health-wise without compromising their data privacy. That's why it's time to apply innovative technology to the problem.

"From the payer point of view, something that we have been really concerned with is if you're going to use technology to benefit people, and people have to have a voice in how the technology is used. I do think that we look for partners who are able to honor people's preferences. So, a lot of consenting goes on..."

I do think that it is really critical for us to allow community-based organizations to stay trusted, and therefore, from our perspective, we don't ask them to download everything into our systems.

I think that they can talk with people about loads of information that would be very hard for someone to share with their payer... So community-based organizations in my mind are advocates for people... We have to give them some independence from pure payer funding so that they can remain trusted partners to address all of the diverse needs of people, including just a need to talk."

- Dr. Susan Beane, Vice President and Executive Medical Director at Healthfirst

Now that payment and reimbursement models have evolved to incorporate the social determinants of health, health equity, and seek to deliver whole patient care, there is an emerging market for CRNM. The best of these management systems will do the following to help simplify care coordination strategies:

- Work with legacy systems to prevent workflow disruption during adoption.

- Offer one platform with a complete patient profile that includes safeguards to provide only the information needed to partners.
- Facilitate proactive interventions that are at once personalized and replicable for pre-defined cohorts.
- Enable cross-organizational workflows that allow for direct messaging between providers and other partners while also automating routine communications.
- Actively track staff performance for instant workflow adjustment and to identify program improvements quickly.
- Help measure performance goals and success criteria to develop a complete picture of how partners are performing as well as benefitting from the platform.

Current Barriers to Addressing SDoH

Not only does closing gaps related to the social determinants of health require buy-in and up-front effort from already overburdened care providers, community organizations, and payers, but upgrading to a cooperative technological infrastructure provides its own challenges. These include:

Systemic challenges

- Health systems, social services, and community resources all have their own initiatives. Currently, there is no standard set of tools for developing a consensus between partners about how to share information and best practices.[7]
- Despite sharing a common goal of health equity and overall patient wellness, there are imbalances in resources and power between social services and health care services, putting the latter at an advantage even though the former likely have a better sense of their community's needs. Both sides need to be open to communication and change.[8]

Technological challenges

- Legacy technology can be difficult to replace even if it lacks the ability to respond to beneficial changes in administering care. Resistance can be financial or staff-driven.
- Community organizations may lack the technological resources altogether that would allow them to scale up their participation in a larger network of care.
- Data liquidity and rigid data management systems with poor interoperability can make integration with partners a slow process.[9]
- There must be some agreement about data-sharing across sectors. All partners must agree on how to upload data into the system, especially if they're utilizing cloud technology, which can pose privacy risks.[10]

Collaborative challenges

- Healthcare organizations have long been the sole keepers of patient data. Internal engagement, clear plans for data management, and legal issues must all be addressed before they agree to share data with other partners.[11]

- Partners must be clear on who will collect what data, how it will be collected and stored, how it will be made available, who will take action, and how patients will be linked to social service providers and community resources.[12]
- Staff training in each type of organization needs to be taken into consideration, especially in community-based organizations where staff and volunteer turnover is high.[13] Training often requires upskilling, which can be difficult with rotating staff.

The Role of Technology in Optimizing Whole Person Care

There are many ways in which technology can help drive innovation in whole person care and help create a connected community.[14] At the patient level, healthcare systems are increasingly interested in the passive data that people can provide through smartphone apps or smart devices to understand population-level SDoH. Of course, access to this technology is, in itself, a social determinant of health.

“There is a push on the federal level and on the regional level to get people engaged in their own healthcare by providing healthcare in a way that folks can access it. So now you're going to see more and more apps on smartphones and other smart devices and it is probably the best way to be able to engage people because regardless of health equity many, many people have phones.

And so I think more and more, you're going to see a lot more emphasis on this and it's going to continue to be across all aspects of our life. Of course, infrastructure - getting the Internet into communities that don't have it - is the other half of that. And if you don't have that then all the technology in the world is not quite so effective.”

- Eric Weiskopf, M.Ed. Senior Manager, HIT and HIE Implementation,
NYS Office of Mental Health

On the institutional level, software platforms are the technology that brings all of this information together. It can enable efficient referrals, build referral networks so practitioners and community organizations have access to a list of health resources, and enable communication between health systems and community agencies. What's clear is that technology and the production of new data points, as well as new payer models and the desire to coordinate with community resources, is driving this new phase of whole person care and connected pathways of communication.[15]

A case study from Dallas that produced measurable success in addressing SDoH helps provide a sense of what factors should be considered in building any care community platform.[16] These include:

- Creating and governing data sharing policies and consent strategies
- Building a framework to deal with legal issues such as HIPAA and other privacy issues among technology partners
- Constructing a technology platform infrastructure that can address this broad range of issues
- Engaging clinical staff and community partners

- Determining the most efficient workflows while allowing for ongoing training to use the system to its fullest

Emerging Tools Being Employed in Whole Patient Care

There is currently an infrastructural void when it comes to platforms that can transparently connect states, healthcare payer systems, and community-based organizations. But in order to achieve these health outcomes, social service providers and clinicians need access to information that includes economic, cultural, and educational indicators and other factors that have health impacts. In addition, they need system-agnostic tools that work with the technology they are already using as well as systems that can create repeatable interventions and demonstrate long-term financial viability.

Perhaps most importantly, technology acts as a way to give clients and those who help them a central repository of information from which to pull resources, allowing clients control over their lives but also the chance to see just who can help them should they need it. And these new systems can even create “alerts” to let organizations know when a person may be in need of their services, even if they choose not to engage.

“The role of a navigator is critical so the technology immensely important...It's that human touch of the navigator being kind of in the center point of things. So some people want to manage it on their own and feel comfortable being their own advocates, yes. But many are unsure, overwhelmed, unfamiliar, and for a lot of different reasons not able to make the best decisions without someone being able to give them a little guidance, to be that sounding board, and offer recommendations and suggestions. So I think you know the technology piece is enormously successful, especially when it facilitates that human touch.

What's important here too is not just data gathering, it's the use of alerts, which have been very beneficial over time on the clinical side. And this is a project that we've been working on a lot - trying to develop protocols and standards and identify what things would be considered (like an ER visit or discharge from a hospital). What is the analogy to a social alert? These are things that I think a lot of thoughtful research and conversation needs to go into.”

- Dr. Joseph Conte, Executive Director of the Staten Island Performing

Provider System

One of the first groups to support the coordination of these efforts was the Robert Wood Johnson Foundation (RWJF), which launched its Data Across Sectors for Health (DASH) program in 2015 and awarded grants to communities that used data-informed approaches to identify and address a wide range of community health issues and connection challenges. [17]

The variety of approaches that received investment is a testament to the complexity of this kind of community outreach and connection. Some projects formulated plans to collect new data while other built ways to house data that was already being collected by other organizations so they could use it for new purposes.[18] Others were able to automate data input and save practitioners time that could be spent truly getting to know the needs of their clients. From sending alerts so that clients can receive help when they need it to compiling community resources in their area, the client, clinician, and community entities

are all able to benefit from the application of new technology to address these unmet non-medical needs.

“When we combined met and unmet medical needs, we begin to see value. Maybe it’s value to the payer maybe it’s value to the provider, but it certainly is value to the consumer. And I think that the future of value-based payment is going to have to consider the three-way interface of value - it interfaces with not only the payer and the provider but also interfaces with the person who is in this healthcare relationship.

Community-based organizations travel with people in the communities where they live. And I do think that this really enables us to understand how value can be a three-way exercise, and if we ask the community organization to participate in that value, then they are able to align with the best outcome for their clients or consumers. So I think it allows us to think of measures that are not process-driven. So in our case, we look at value as a great way to achieve the best health and medical and wellbeing outcomes for people. And I think we can find measures that are proxies for that, including what people say themselves about the services that they receive.”

- Dr. Susan Beane, Vice President and Executive Medical Director at Healthfirst

The Complex Calculus of Connecting Communities, Clinicians, and Clients

Changes in the health care landscape have created incentives for addressing SDoH by showing the financial benefits and better health outcomes that go along with connecting people to both the clinical and non-clinical services they need.[19] Payment and reimbursement models are now making attempts to address SDoH and incorporate non-clinical providers into healthcare networks. But even as the pieces are coming together to provide a system of whole person care, there are still challenges that need to be met, especially in underfunded communities where community-based organizations don’t have the resources they require.

“Community-based organizations - if you've seen one you've seen one. They come in all different shapes and sizes and capacities and resources. The common thing is their passion for their work. What's not common is their ability to provide it because of funding constraints, training, the use of technology assessments, closed-loop referral systems, etc. Many organizations are technology-naïve. They don't have the ability to take that next step that will allow them to mobilize at a greater level and do the work at higher effectiveness.

We have done almost 30,000 social determinants of health assessments on our community. And so it's very clear that people don't have one need. There's housing and food, there's social isolation, there's transportation, education, economics, there's domestic concerns, all kinds of things. So, the community-based organizations are squarely positioned to do this where the ability to create a funding path that will allow it to be well integrated with care providers, with the plans, with the QEs [qualified entities].[20] This is really I think the essence of the solution.”

- Dr. Joseph Conte, Executive Director of the Staten Island Performing Provider System

Whole person care not only takes place on multiple levels, but it is more often than not an ongoing need.[21] Providing meals is only one small and temporary part of helping to create the economic stability needed to feed a family long-term, for example. In addition, structural racism underlies every system involved in well-being, even those designed to help people in need. And dismantling that is as complex as it is urgent.

"We can't talk about health equity without talking about structural racism and institutional racism. And what we're finding with our data is that we can discern different patterns of health access for people who reveal to us their preference for how they want to be considered in terms of their race and ethnicity...We know in this country that the color of a person's skin often drives their health outcomes and other outcomes as well. So I think that we find at HealthFirst that our providers have a good handle on quality health care, but they need some help when it comes to the stresses that our members or the community bring with them packaged up because of years of being treated differently because of their race or their religion or their ethnic status or their immigrant status or their abilities or lack of those abilities."

- Dr. Susan Beane, Vice President and Executive Medical Director at Healthfirst

In light of these layers of complexity, it's not a surprise that many healthcare CIOs still lack a strategic approach to community resource network management.[22] But all available evidence shows that it's essential in addressing the wide variety of health determinants at both the individual and population levels.[23]

Ready Computing CNRM offers care program creation, oversight, and measurement in one platform. It includes analytics, integrated workflows, service provider directories, referrals management, and outcomes measurement, all in a cloud-based model and more information about its Channels platform can be found

at: <https://readycomputing.com/en/offerings/channels-complete-clinical-program-management-solution>

[1] <https://www.cdc.gov/nchhstp/socialdeterminants/faq.html>

[2] <https://www.rwjf.org/en/library/research/2019/02/medicaid-s-role-in-addressing-social-determinants-of-health.html>

[3] <https://www.rwjf.org/en/library/research/2010/01/a-new-way-to-talk-about-the-social-determinants-of-health.html>

[4] <https://www.cdc.gov/nchhstp/socialdeterminants/faq.html>

- [5] <https://www.milbank.org/publications/medicaid-coverage-social-interventions-road-map-states/>
- [6] <https://www.kff.org/medicaid/issue-brief/medicaid-authorities-and-options-to-address-social-determinants-of-health-sdoh/>
- [7] <https://www.rwjf.org/en/library/research/2016/04/using-social-determinants-of-health-data-to-improve-health-care-.html>
- [8] <https://www.rwjf.org/en/library/research/2016/04/using-social-determinants-of-health-data-to-improve-health-care-.html>
- [9] <https://www.healthleadersmedia.com/technology/technology-vendors-embrace-social-determinants-health>
- [10] <https://www.rwjf.org/en/library/research/2016/04/using-social-determinants-of-health-data-to-improve-health-care-.html>
- [11] <https://www.healthleadersmedia.com/technology/technology-vendors-embrace-social-determinants-health>
- [12] <https://www.rwjf.org/en/library/research/2016/04/using-social-determinants-of-health-data-to-improve-health-care-.html>
- [13] <https://www.healthleadersmedia.com/innovation/how-build-connected-community-address-social-determinants-health>
- [14] <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/life-sciences-health-care/deloitte-uk-connected-health.pdf>
- [15] <https://www.gartner.com/en/documents/3975267/create-connected-care-pathways-that-bridge-consumer-and->
- [16] <https://www.healthleadersmedia.com/innovation/how-build-connected-community-address-social-determinants-health>
- [17] <http://dashconnect.org/wp-content/uploads/2017/09/DASH-care-coordination-brief.pdf>
- [18] <https://www.rwjf.org/en/library/research/2016/04/using-social-determinants-of-health-data-to-improve-health-care-.html>
- [19] <https://www.gartner.com/en/documents/3988521-healthcare-cios-address-sdoh-with-community-resource-net>
- [20] <https://www.nyehealth.org/shin-ny/qualified-entities/>
- [21] <https://dashconnect.org/2021/06/15/co-creating-a-new-vision-for-health-wellness/>
- [22] <https://www.gartner.com/en/documents/3623617/u-s-healthcare-cios-must-master-a-new-pillar-of-populati>

[23] <https://www.kff.org/racial-equity-and-health-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/>