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**Introduction:** [00:00:01] This Adrian Hernandez and welcome to the NIH Collaboratory Grand Rounds Podcast. We're here to give you some extra time with our speaker and ask them the tough and interesting questions you want to hear most. If you haven't already, we hope you'll watch the full Grand Rounds webinar recording to learn more. All of our Grand Rounds content can be found at rethinkingclinicaltrials.org. Thanks for joining.

**Kevin:** [00:00:25] Today we're here with Karen DeSalvo who just gave a really great presentation on health is more than health care. We wanted to talk with her today about a few more interesting issues related to this topic. I wonder if you can start out maybe by just touching on the highlights of your talk and what some of the main points you're trying to get across.

**Karen DeSalvo:** [00:00:45] The concept that health is more than health care is really foundational in public health for decades and I think the idea that we must not only provide clinical excellence but really attend to the environment where people live and learn and work and play, and that there are other factors that influence health outcomes is evolving into something that is part of the more mainstream of health care for people to realize that even though this is an older concept that there are these social determinants of health, it's unresolved in many ways, and it's receiving increased attention because the parts of the health care system that are increasingly responsible financially for health outcomes are recognizing that they can't just attend to people's health by achieving clinical excellence, they're going to have to really think about these non-medical determinants. So, there's a real tremendous opportunity for the scientific community to work to catch up and hopefully get ahead of the practice community so that at the end of the day we really have some replicable models that can be spread and scaled to really intervene and help people achieve the health outcomes that we want them to.

**Kevin:** [00:01:58] I wonder if you could give a few examples of some of the non-medical, the social determinants of health that were the focus your talk.

**Karen DeSalvo:** [00:02:06] Sure. There's a set of domains that we typically think about. So for example, economic opportunity, education, the built environment, so exposure to toxins but also things like green space and the availability of sidewalks. Then there's a set of issues that relate to things like public safety. And then of course even social cohesion and social relationships, the sense of community. And I think a lot of us would easily come to the sense that if for example people don't have access to healthy food or access to food period that that would affect their health, particularly if they have a significant chronic disease like diabetes.

**Kevin:** [00:02:53] Let's turn to this idea of gathering more evidence, and you know you made a really compelling case that there was a need for a lot more research, and I'm kind of curious to know where you think resources should be directed the most.

**Karen DeSalvo:** [00:03:08] You know this is an interesting story Kevin, because as a public health person I've been inclined for years to say that health care accounts for 10 to 20 percent have health outcomes and the rest is you know some mix of genetics and then our social context and our behaviors in that context you know, so if we have access to healthy food and then if we choose to consume that like pick it off the shelf and eat more fruits and vegetables, and those relative percentages I think that's the common way that community, public health in particular, has talked about the significant influence of the social determinants of health. But as you begin to dig into the origins of that widely accepted belief you learn pretty quickly that some of that is inferred, that the relative percent of impact, so it's inferred that health care doesn't have that much impact on health outcome whereas the others have maybe up to 60 percent. And I think that though they used the

best evidence they had available some of the states back for example to the 80s in thinking about how much genetics influences health outcomes and science has really evolved quite a bit. I think there's for me a call to action to really work on that foundational piece so that we are all in agreement about what we can expect from health care and what we can expect from various social determinants. The issue is also about aligning resources to those areas. So sometimes we will say well you know 10 to 20 percent of your health outcomes are from health care, but we spend 90 percent of our health dollars on health care, so we've got a misalignment of applying resources to a less impactful area of health. And in fact it was a mother of a kid with chronic disease who raised this for me. She said well we think that health care accounts for say 10 to 20 percent of health outcomes, and what about if we looked at it in today's world what we are practicing better evidence based medicine and we have better therapeutics at our disposal. Could we expect more out of healthcare if we really achieved clinical excellence? Perhaps great health care does require a lot of resources for some populations because they have more to gain. In the field though, the work is already also under way to start to not risk adjust for social determinants but to stratify. And the stratification tools identifying people who have significant social determinant challenges is well underway in the various assessment tools these kinds of survey instruments that have variability in their sensitivity and specificity and some from a survey design standpoint have a need to be improved. I mean this is not again sort of academic. This is in a sense that health plans and providers are doing this every day. They're saying well let's try Uber for transportation, let's try building our own transportation system. So they're actively experimenting in the field. But I don't think that we've got a sense of rigor going on to not only allow us to know what works but what doesn't work.

**Kevin:** [00:06:17] It seemed like there's a real opportunity here for organizing all the different resources that are being put into studying these things and maybe standardizing, and I want to know what efforts are you aware of that are underway to try to do that.

**Karen DeSalvo:** [00:06:32] Yeah, that rush of activity around the social determinants of health is in really the last year and a half that has caused philanthropic world and the business community, big payers and providers to start putting a lot of money towards interventions in particular but also in thinking about how to create a scientific agenda. So SIREN, which is run out of UCSF by Nancy Adler and others, is the largest national effort to organize the scientific community across the country and develop a research agenda that will allow us to tackle the important issues that need to be addressed and hopefully do that in a time ordered way. There's been other discussions about how to bring together another set of efforts, so each foundation or maybe a big corporation like GE fund these kinds of projects in the field, and they're just starting to talk to each other about what the goals are, what the outcome measures are, how they're thinking about prioritizing the social determinants. All these institutions are realizing that they shouldn't do this in a proprietary way but they should be doing this in a way that allows for sharing best practices. I think that government is a little bit slower in getting into the space and we were just starting some work like this before I left the administration. So even foundationally within HHS, there's work still to be done on defining much less building their research adgenda for what they're going to look to fund. But I hope that they'll continue with that work because that's also what the scientific community needs is some significant support from NIH, and ARC and others to help guide the research agenda.

**Kevin:** [00:08:12] So Karen, you know you're describing these different efforts to try to learn more and it seems like a lot of these efforts involve collecting data from people about sometimes fairly private, personal issues and also intervening on people's lives, and wondering what are your thoughts about the degree to which the community needs to be engaged in the learning and the implementation.

Karen DeSalvo: [00:08:37] This is going to be a concern especially in the health care sphere for

individuals who are getting asked questions about their housing situation or their ability to self manage their social relationships. The housing one just as an example is a sensitive question that sometimes we take for granted. And it's not even just are you having to couch surf right now, or can you afford electricity. Because some of those questions, especially things like I can't pay my water bill and I can't pay my electricity bill so we're living in a house but we're marginally housed, and if somebody answers a question like that but they have children as an example that puts them at risk for having those kids taken away from them. And we should have a big discussion from an ethical and societal point of view about once we learn that kind of thing about someone and their family, what is our obligation to help and support them not just get them referred to a housing agency but immediately make sure they get in good housing. Public health is much more tuned in to that and this is an opportunity I think for the health care system and for the academic research community to partner with the practical public health world that heightens the need for all of us to make sure that we're attending to the identification of data in ways that really means it's de-identified, especially if we're going to be putting it out there into the public domain for others to use for scientific advancement. And so the same principles around cybersecurity but also de-identification and being thoughtful about how granular the data becomes a have heightened importance because you don't want people to now not only be exposed medically but be exposed socially.

**Kevin:** [00:10:24] So it sounds like it is a lot of important discussions that need to happen with a lot of key stakeholders. Karen, this has been so fascinating and I really enjoyed talking to you about these challenging issues and so grateful that you've brought these issues before the group, and we'll look forward to following these things.

**Karen DeSalvo:** [00:10:42] Well thank you very much Kevin. I look forward to that following the advancement of the field. It's an exciting time, and someone once said to me the adventure is just beginning. But it is just so important because increasingly these underlying social issues are what are causing rising morbidity and mortality in the U.S., so I do hope people will keep busy trying to understand and not risk adjust for it but stratify and really find a way to develop interventions that make a difference in people's lives.

**Kevin:** [00:11:10] Wonderful. And I just want to let folks know that our next podcast will be with Greg Simon on bringing machine learning to the point of care to improve suicide prevention. And that's going to be posted the week of October 30th so please dial in for that.

**Closing:** [00:11:28] Thanks for joining today's NIH Collaboratory Grand Rounds podcast. Let us know what you think by rating this interview on our website. And we hope to see you again on our next Grand Rounds, Fridays at 1:00 p.m. Eastern Time.