[00:00:00] **Michael Donovan:** On this episode of the Evidence-to-Impact Podcast, we'll be discussing innovation in the complex world of health and healthcare in Pennsylvania with broader and more universal implications of beyond today. I'm joined by Dr. Meg Small and Dr. Doug Jacobs.

[00:00:14] Meg is the Director of Social Innovation and Assistant Research Professor at the Penn State Edna Bennett Pierce Prevention Research Center. She also serves as Director of the Health and Human Development Design for Impact Lab, also known as HUDDIL. Dr. Jacobs serves as Chief Medical Officer and Chief Innovation Officer at the Pennsylvania Department of Human Services. I love to start off with some introductions of your backgrounds, if that'd be all right. Dr. Jacobs or Doug, would you start us off?

[00:00:44] **Doug Jacobs:** Yeah, it's great to be here today. So my background, I'm a board certified and practicing internal medicine physician. Before coming to Pennsylvania, I spent a lot of my time and academic work doing research into discrimination, and since coming to Pennsylvania, we'll get to it today, but I work in the Office of the Secretary as the Chief Medical Officer and Chief Innovation Officer, and that's meant many different things throughout the course of the COVID-19 pandemic. Happy to be here and looking forward to the discussion.

[00:01:13] **Michael Donovan:** Excellent. Thank you. And welcome to the show. Dr. Small or Meg. How about yourself?

[00:01:20] **Meg Small:** Thanks Michael. Also for having me today. My background is in public health. My PhD is actually in biostatistics and I started my career with the Centers for Disease Control and Prevention running large surveillance systems that monitored youth health behaviors and school-based health programs.

[00:01:37] What drew me to Penn State when the Prevention Research Center started was this ability to decrease the amount of time it took from discovery using data and research into people's daily lives. I saw that as a real need when I was at CDC, most obviously to impact policy, but then more creatively and innovatively to design interventions that would take the user into account earlier in our research process. So that's what I do at the Prevention Research Center. A lot of experimentation, a lot of human centered design work, and really excited to have this conversation about how we apply that into health and healthcare specifically.

[00:02:16] **Michael Donovan:** Thank you, Meg. Welcome to as a longtime friend of the show, it's great to have you here. Our first question here is for you, Doug. Can you just give us kind of an introduction to the concept of health innovations from your perspective?

[00:02:31] **Doug Jacobs:** Sure, health innovation for the Pennsylvania Department of Human Services has really revolved around three core areas; creating a healthcare system that pays for value, promoting health equity and addressing the social determinants. Because these are areas that our healthcare system is not historically addressed, moving our healthcare system in this direction really is a new and innovative direction. In particular with the COVID-19 pandemic these three areas of value, health, equity, and social determinants of health have become even more powerful.

[00:02:59] So when we say value what we mean in our healthcare system is that historically the healthcare system is paid fee for service, paid doctors like myself, based on how many patients we see how many procedures we do. And what paying for value means instead is instead of paying for the volume of services, it's really paying for the value of services. what is the impact of that's actually having on everyday people. And this whole innovative effort is focused on addressing the whole person.

[00:03:26] So the other parts that are so important are on our health equity. We've been learning more and more about the disparities that exist across Pennsylvania and have existed for generations. And the fact that if you're born in one neighborhoods, your life expectancy could be 20 life years, lower than the neighborhood next door.

[00:03:43] And, and finally with regards to the social determinants of health, as a physician who sees patients in my office and seeing patients in the hospital, I think doctors want to believe that we have complete control over our patient's health when in reality, we, we don't. And the research shows that it's roughly 20% of a person's health is really determined in the doctor's office.

[00:04:02] The rest is determined by the social determinants of health, which means that environment and conditions, where people are born, live, work, and play. So that might be someone's housing. That might be their education. It might be their job and their income. To really look at patients holistically and really improve their health, oftentimes we think outside the doctor's office. I think that's what innovation means in Pennsylvania. And that's what we've been trying to do here, throughout the pandemic and beyond.

[00:04:28] **Michael Donovan:** Thank you. That's a very succinct summary of a whole lot of work I know that you and your colleagues are doing for us all here in Pennsylvania. So how does this this work, as Doug has listed out, how does this work with your work in social innovation, Meg, and the work of your lab, the Health and Human Development Design for Impact. What are the parallels that you see?

[00:04:53] **Meg Small:** Yeah. Thank you. First of all it's really exciting to hear this direction from the Department of Human Services to really embrace innovation, but in a very strategic and evidence driven way, I would say on two levels, it's the work that we do works at a systems level. What I think I heard, Doug saying was there, if you look at their three sort of pillars of innovation, they're taking a systems based approach. So we know that, you can change policy, practice and resource flows, but unless you change sort of the underlying conditions that impact and put stress on those systems, the changes can be reversed very quickly. So here, I'm talking about sort of relationships, power dynamics in the system, and ultimately the mental models, how we think about what is equitable healthcare and doesn't everybody deserve to have access to high quality health care and a healthy life from birth through, through death. So taking that long view, the developmental approach and thinking about the systems that, that impact people's health broadly I think is really exciting. And it's definitely work that we do in the center. We do a lot of cross-disciplinary work across systems. Specifically, I think what's interesting in sort of the innovation space and the work that we do in HUDDIL is around, the social determinants of health. What we've come to understand from a number of the studies that Penn State has been involved with is that there are these common risk and protective factors that get established very early, these start prenatally but they have impacts down the road as children, age into adulthood, across many different what I'll call systems that you see the same risk and protective factors contributing to problems in our juvenile justice system, in our healthcare system, and our education system. So that individuals that have shared these common risk factors end up with problems across each of these systems, but the systems don't necessarily talk to each other. So it's very hard in prevention to get at a root cause problem, especially if it's a social determinant, like where they live, their economic situation which determines where they go to school and the quality of education that they get to then say, okay, first of all, we need to pay for prevention, even though that we know we're not going to realize the benefit of that investment until later in life. Oh. And we need different systems to share that cost. That would be really efficient. So I love to hear this innovation model of where we can now start to think about those things and in our center and the work that we do collaboratively with partners at Penn State is to do the data modeling that we can then convince people that there will be this cost savings, that this would be value in a healthcare system and could we re-

invest that savings earlier downstream to prevent these problems? I think one of the best sayings about prevention and demonstrating outcomes is. Well, when we do our job really well, nothing happens, which is a very hard thing to capture and convince people they should pay for. Again, I think that's really where we intersect and really thinking about that whole person and the user of any particular innovation, what they do individually, what they do within their family, what they do with in school or work context, community, et cetera, that we get to now think about those things simultaneously, and in context I think is really exciting.

[00:08:12] **Doug Jacobs:** So I just wanted to build on exactly what you're saying. Cause it, it just resonates a lot with kind of the work that we're doing now. Just speaking about the siloing in government and the siloing of the state government, in some ways mirrors the siloing in the federal government, because there's all these funding streams that come down to the states and so it's done in some ways purposefully, but when you actually think about people. All the services they use are all intersected, all of their wellbeing. They are a single person. And so it's hard to separate a person up into factors related to the criminal justice system factors related to the healthcare system factors related to their income and employment. It's all related for that person and how they experience the world. And so I think a good example of this is let's take housing. There is in a lot of research showing that housing reduces an individual's healthcare costs. They don't use the emergency department as much. They don't get admitted to the hospital as much. But that's just one sector. It's also doesn't include their involvement in the other sectors, like the employment, the criminal justice system. There's just so much intersectionality in all of this. And so part of what we're trying to do with our work in health equity there are certain neighborhoods across the Commonwealth oftentimes neighborhoods in urban areas that are historically redlined or areas in rural areas where there's been a lot of job loss and divestment over generations and in these areas all those social instruments of health that we're talking about oftentimes do intersect. And so when we look at something like life expectancy, I think I mentioned some life expectancy differences. If you're born in like Northern Philadelphia, your life expectancy might be as low as 63, not even getting to Medicare eligibility. If you're born in a certain spot in Erie your life expectancy might be 61. There's certain rural areas across the state that have really low life expectancies. And so when we look at that life expectancy number, though, what it is in many ways is a culmination of all of these social determinants of health that all intersect across neighborhoods. And these areas that were historically red lined too means that oftentimes housing segregation persists to this day, and we're seeing racial and ethnic differences too, in all of this. Part of what we're trying to do is identify where these neighborhoods are, and also what

those upstream root causes of these downstream inequities so we can really start to address the root causes from a community level as well.

[00:10:22] **Michael Donovan:** Yeah. And really what you both have articulated so well as characterize sometimes it's the wrong pockets problem and how one organization or system isn't going to see the primary benefits of downstream effects. And that's a wicked problem that we see throughout our society.

[00:10:40] **Meg Small:** Exactly looking at using data and geography and putting things in a historical context, like the red lining and practices that happened and how they have these reverberations into all domains of life. I think this is really important and for us to make sure that we capture in our research in in our datasets and connect them. And I think there's real innovation there as well and Michael, the works that the Evidence-to-Impact Collaborative does and your colleagues on saying in academia, we're also siloed in the way that science gets funded, you become very much an expert in one particular area, but you're often not connected with expertise across these domains so the questions that we ask aren't comprehensive or socially determined in that way, we're asking very narrow sets of questions, but now data and collaboration and data sharing allow us to that old adage of looking for your keys under the lamppost. It allows us to actually maybe put a couple lampposts together to extend that metaphor where we have a bit of a wider view and to let these sort of associations within datasets emerge and say, we never really understood that there was a relationship back in the day between lead paint and child chronic health conditions, et cetera, and housing intervention would have been the most cost efficient intervention for potentially for some of these conditions. The new area of work that we're taking on in the College of Health and Human Development, and as part of the prevention research center in collaboration with others is to really understand and connect economic development indicators, and what data sets do we even have that capture the economics of an area, job growth types of employment, wages, et cetera, with the health outcomes of those areas. And if we could start to develop interventions, we capture benefit in the other and vice versa. An interesting policy piece that just came out from the Center for American Entrepreneurship showed that they conducted some research with historically underrepresented small business owners and entrepreneurs in some of the community communities that you described, Doug. And the two things that floated to the top that were really holding back their sort of personal economic development were childcare and healthcare. You know, lots of people that come into economic development think it's jobs training, or it's access to capital and loans to start businesses. And those things are incredibly important. I'm not downplaying those, but when you started to talk to the individual, it was about how they live their daily life, like can they ensure high quality care for their children? Do they have to take off time to you know

to seek healthcare. That was what in their view was holding them back. So just one quick example from a recent project.

[00:13:19] **Michael Donovan:** Thank you, Meg that's excellent. And I also really enjoyed seeing that information. It really tells quite a story and kind of showcases where we need to focus some attention. I do want to discuss a little bit another one of the prongs of your work, Doug in health equity, I've had the great luxury of working closely with David Saunders and the Pennsylvania Inter-agency Health Equity Team over at the Department of Health in Pennsylvania. I want to get your take on the general state of health equity in Pennsylvania, and some of the efforts that the Department of Human Services are taking to improve it. And also, you know, another question just broadly is how do we measure this? How do we better understand all of these complex social dynamics? And that can be up for discussion. Of course, it's such a complicated one.

[00:14:04] **Doug Jacobs:** Yeah, absolutely. In terms of how we're approaching health equity, I think just taking a step back and realizing too, that in the past couple of years, COVID-19 for many people was the first time that they realized that we had such profound issues with health inequities. COVID-19, however, fell on the fault lines that really preexisted the pandemic. And we've had issues as a country with health inequities for generations. And COVID-19 has especially been disastrous in our communities of color. I think early estimates show that the black community lost about three life years on their life expectancy compared to around one for white Americans. And there was a disproportionate impact also with the Latin X community. We've been dealing with problems related to these health in equities for generations. And and we've before the pandemic we've been studying some of the effects of health inequities in Pennsylvania. We know that there's a three to one difference in maternal mortality between black women and white women. And we know that there's a three to one difference in infant mortality between black infants and white infants in the Commonwealth. And we really felt like we needed to have a holistic response that went beyond just COVID-19 and our response to COVID-19 is extremely important, making sure we particularly in our vaccination efforts and all the efforts related to COVID-19 that we have an equitable response. We also wanted to see if we can address some of the root causes of these underlying health inequities. As part of the governor's whole person health reform he put into place one of the three parts of this one of the big ones is creating these regional accountable health councils. And the idea here is that we're going to use all the data at our disposal to identify these areas with profound inequities. I mentioned some of them earlier on these areas with really low life expectancies. These are oftentimes the areas that have been historically red lined for housing segregation and by identifying areas as health equity

zones, that's the term we're going to use for these areas we're really trying to see where those areas are that have had historic divestment because from a community level and just from a historic policy level, these areas haven't received as much investment. And a good example I think is in our education system. Education is funded by property tax and property tax in an area that's really low means you don't have a lot of money to go to schools. And part of the reason that certain areas where the property value is not worth very much is because of this historic redlining saying that areas are hazardous, folks can't get loans, that the houses weren't worth very much. And then if you aren't able to get a good education, you might have worse opportunities throughout your life. Couldn't get a good job, can't make as much money, and your health suffers as a result of all of this. And so part of what we're doing in the identification of health equity zones is to really find areas to focus some of the efforts. We know we're getting some dollars with regards to the American Rescue Plan, for example I think Meg had mentioned lead remediation while there's certain areas that need additional lead remediation and those are the same areas that are these health equity zones with worse health outcomes. We see a lot of these social determinants of health intersect. Our hope is that by identifying where these areas are throughout the Commonwealth, that we can really advance health equity both urban areas, rural areas, and really for Pennsylvanian's going forward. You also asked how we measure this, and of course this is really complicated. In Medicaid we've been measuring the racial and ethnic disparities that exist for over a decade. And as we've been doing that gives us kind of an annual check on what the disparities are. That's not to say it's like a comprehensive look though cause it's just looking at those health inequities and not necessarily the underlying social determines of health. So we're trying to get a little bit more of a broader view looking at some of the population health surveys, but also some of the social determinants of health metrics that we can follow over time. And one, one final piece, sorry, there's a lot going on here. Is that when, because we've been measuring this in Medicaid for so long, we've also realized that we need to put our money where our mouth is so to speak and really make sure that some of the dollars that go to our Medicaid MCO. These insurers called Medicaid Managed Care Organizations that help us basically administer the Medicaid program. They've been incentivized for a long time in terms of improving quality of care, but these inequities have persisted, so we are highlighting some of these areas of inequities to say if the Medicaid MCO's are able to reduce these inequities and hit certain national benchmarks within the African-American community, for example, specifically they'll get rewarded at the end of the year. And so it's part of their business model to make sure that they really reduce these inequities. Yeah, so there's a lot going on and I could probably go on for a while, but I'll stop there.

[00:18:16] **Michael Donovan:** It's a very complex space and a lot of work still to be done. Of course. Meg, I'm wondering where the complex interactions and interventions of prevention science can really come into this conversation and really inform it. Do you have anything to add on kind of the health equity frame with regards to prevention science?

[00:18:35] **Meg Small:** First, Doug take all the time you want. That's exciting to know there is so much going on in this area. It really is. It's so important. A couple of working examples that we have and how we're thinking about equity and how we are trying to know what we don't know. And through partnership, get better at our methods as well as understand sort of the voice from the community directly from the community. But then also as you were talking about Medicaid, giving one quick example of something that I just learned this past week through a project that I'm working on that was funded by the National Science Foundation. The first piece of this we're really lucky in HUDDIL to be working on a project where we're collaborating with a woman named Lavelle Paul Smith, who runs a company. She's a founder and entrepreneur called Mom Logics and her company serves 3,500 black moms and it bubbled out of her own conversations with her friends and family about the unique role they play in their community, that how they often put their own health and wellbeing second to everybody else. She's saying it's cultural at least in the communities that she's working in, but what that means is they often show up with late stage cancer, they don't take preventative action, they don't want to bother their families. They don't want to burden anyone. They have to take care of their children, or this is their own internal, mental model about what it means to be quote unquote, as she would describe a good mother and sister, the backbone of the community and the family, et cetera. So we're working with her to create sort of a digital application where they can use data to show early triggers that you need to go in and see your primary care physician, connecting it to her children, because what we learned through some early empathic inquiry with her moms was that she won't listen necessarily to her friends. She won't listen to medical advice, et cetera. But if her kids ask her to do something, she pays attention. They'll at least get a return text is what she tells me. So really sort of partnering with people that are from that community, seeing that community understanding sort of the culture and the history of that community, and then looking for effective ways to sort of reach them. She has a coaching model, and the coaches have established, trusted relationships with these moms. We're looking at sort of disseminating information through the coaches, using digital technology, et cetera, and Penn State, we're just really, really lucky to be in partnership with her. This is something that we never could have dreamed up understood had the first sense of competence to effectively design without her. So I think those partnership models are really important for individual intervention development in equity issues. The second piece was just on this

Medicare idea. I was actually in a children's museum this week on a National Science Foundation project where we're supposed to be working with pre-K kids in advancing both their STEM skills, but also their parenting practices that support social emotional development. And we're working in rural poor communities trying to get kids kindergarten ready. And I found out and please correct me if I'm wrong about this but somebody said, I think if they're Medicaid eligible, they can get free access into children's museums because we're offering some of these programs as part of children's museums and our library systems as our dissemination strategy. And we were worried about equity, right? Would it be only those people that could afford to get to the museum or pay an entrance fee to the museum or et cetera, let alone take time off. That was a different issue. And somebody said, no, they're trying to expand Medicaid eligibility as criteria for these other services. And I thought that's the perfect example of social determinants of health, right? We're interviewing early for good quality parent child interactions contingent language, et cetera, all the stuff we know from Karen Beirman's research, combining it with stem skills to get them, you know, future ready for workforce, et cetera. And the reason that it's accessible is because of Medicaid. I was really excited. Push back if that's not true, we want to correct any misinformation for sure. And if it's not true, maybe we could make it true.

[00:22:29] **Doug Jacobs:** As far as I know, it's true, but who knows? Maybe some of the staff who have been here longer than I know more detail, I think for sure, but it sounds like a great program.

[00:22:38] **Meg Small:** Good. I'm glad to see it's true, but I think it's a nice example of how the people in healthcare realized right away that a high quality education and a good home environment for learning, we're going to save Medicaid dollars down the road.

[00:22:51] **Doug Jacobs:** So I also wanted to build off of what you were saying too when you were mentioning basically how mothers focused on something when their child was involved, when the child said to do something. One of the things we're also doing, I think I mentioned our efforts in the value space all of these kind of three areas that I mentioned are all very much intersecting and I think a good example of this: we're trying to change the way that we pay for maternity care and postpartum care through Medicaid. And how we're doing that is historically paying fee for service. Again, like I mentioned, per procedure per office visit. And so as a result of that, the pediatricians didn't really talk very much to the OB GYN doctors because it was, they had no incentive to really talk to one another. One of the things that we're doing going forward is also looking at what's called the maternity care bundle payment. And so it looks at

the entire maternity care team, both on the OB GYN side and the pediatrician side and bundles both the payment for the mother and infant together. What that does is for example, if the parent is taking their child to a well-child visit, the pediatrician can screen the mom for for postpartum depression or something like that, so really more holistically treating the entire family. The bundled payment is like a bundle for all of those services together. And so we're also creating incentives to reduce some of the disparities that we see in the maternity care space, in the prenatal space and in the postpartum space. And it also offers us the opportunity to say that we can create incentives to actually screen for issues related to the social determinants of health. We know when there's issues with housing or food insecurity, et cetera. So I think just as an example of kind of to build off exactly what you're saying, that's exactly the direction that we're trying to go as well, because I think that we also realized that the care of the parents is exactly related to the care of the child, too.

[00:24:37] **Meg Small:** That's exciting. And once you start to get to that systems level, like we are actually combining, you know, resources it's sort of beyond coordination, it truly is integration, right? So that's great to hear. I have a colleague, Laura Jana, who's an affiliate at Penn State, but also a pediatrician who also owned an early learning center in Nebraska, who would find that very exciting. She was also one of the founders and sort of early adopters of the reach out and read programs. Doug, I don't know if you're familiar with that, but for the listeners, it's this really innovative program that was developed by a pediatrician. It's gone through many sort of clinical trials, good evidence. But the intervention was when a parent and the child came into the pediatrician's office, the pediatrician would give the parent a picture book and have the child sit on the lap and would just sort of model dialogic reading basically with the child, but the most important thing wasn't that the parent was actually reading or pointing to words. It was the confidence that it built in the parent and the signaling to the parent about how important this was, that if a medical doctor was going to take time out to watch me read or have an interaction with a book, and it was fine if the baby put the book in the mouth that, you know, sort of extending all of that learning and growth that it really empowered them and it built their confidence. And it also signaled how important their role was in brain development and developing the whole child, et cetera. So again, I think that sort of bundling payment services and co-locating and integrating practices, practices that aren't typically delivered are thought of as sort of healthcare and vice versa. I worked on legislation and programming early in the nineties to locate health services in schools. So to sort of really start to integrate these components I think is exciting and really innovative.

[00:26:26] **Michael Donovan:** And there's so much intuitive knowledge here, right? It feels like undoing some of these silos just makes more sense, but we've

created these complex systems which separate out these services. I want to go back to some of the conversation you were pointing out, Doug regarding some of the historical incentives to improve quality. What have you seen as some improvements to expanding access, reducing costs along those lines to healthcare in general? This is innovative and intuitive, you know, policy changes come with a price tag, right?

[00:26:59] **Doug Jacobs:** Sure. I think that one of the biggest things that the Wolf administration has done in Pennsylvania in terms of expanding access to care has been expanding Medicaid, which is something that they did very early on. And hundreds of thousands of people had access to health care that never had access to healthcare before, and we were talking about social determinants, simply access to healthcare is a huge social determinant. And and so for those folks, that means that they can now get preventative care. They could get the good mammograms, they could get pap smears they can get smoking cessation treatment. All these things that we know are really important, preventable things that can can impact people's future health, they now had access to and continue to have access. And so that's something that was just really important to highlight right off the bat. With value-based purchasing more broadly though, we've also really made great strides in this space as well. . And so what's important in that space is that you can derive these models, whereas if providers successfully improve the quality of care that they actually get paid more. And so that now there's motivation to do things that providers hadn't historically done. For example, I think a good example was just mentioned. The social determines of health impact the health of the child, the health of a parent reading to a child like that is not something that a physician or a nurse practitioner would have historically been compensated for. But if you know that fosters a sense of appreciation for education, more likely to get an early childhood education. We know that an early childhood education is something that manifests itself in terms of, I think, savings of $7 for every $1 invested. So these are things that the medical system has not historically done. There's a healthcare system in Pennsylvania that has a fresh food pharmacy that we have physicians prescribing fresh food for families as well. And so when you start to change the payment structures so that physicians and the payers, the Medicaid MCOs can all do better financially when we also address the social determinants of health, it's really a win-win and also motivates the kind of care that we all want to see. So I think we feel pretty good about this direction and it improves cost. That was the element of your question, what is the impact on costs? What's nice in that regard is that we can actually see a decrease in costs by moving towards value. So that's part of the reason that we've been so focused on, on that area as well.

[00:29:10] **Michael Donovan:** Excellent. Thank you. I do want to pivot a little bit. We've been discussing innovations in terms of systems and processes. I want to talk a little bit as well about more tangible innovations, and some of that could mean leveraging technology. Meg, you referenced earlier digital applications. There's mobile device, healthcare innovations, health tracking apps that have relevance here. How are those developing and how can they interact with these more process and social system innovations?

[00:29:44] **Meg Small:** I'll take a first stab at it. So digital technology and other technologies have, sort of opened up all kinds of possibilities and risk as well. You think about patient privacy or individual privacy for data that we need to obviously work through. Thinking about sort of Doug's last response, really exciting that we're able to sort of combine these pay lines, but I think it makes data and smart, strategic use of data really important and thinking about ways that we can combine data to show the collective value. Yeah. Of any particular intervention and to start to think about reducing the burden of data collection, so making it passive, building it into workflow, et cetera. So trying to get the highest quality connected data in with the least amount of burden to practitioners or patients by doing smart combinations in a really safe, secure environment, I think are would go a long way in terms of, you know, capitalizing on what's even possible let alone what's coming down the pike. I also think that this really speaks to the need for cross-functional interdisciplinary teams because the kinds of things that I work on and my colleagues most closely to me work on aren't necessarily the things that a data scientist or a computational scientist or a process engineer, or somebody in the Medicaid system and administrator would come up with. So again, I think it's the way that the innovations in the future of work and the way that we're training our undergrad and graduate students is to, you know, have a specialty and area of expertise, but then have these, you know, there's all different kinds of words for these, but like social emotional competency, I call them the horizontal skills. Laura calls them the key skills, the QI skills sort of the reverse of the IQ, but it allows you to work effectively to take your sort of vertical knowledge and combine it with other people's vertical knowledge into this sort of thing that could be more rapidly translated because you're thinking about these different dimensions right at the inception, you're able to prototype rapidly, test rapidly, not wait to something's fully baked and then sort of release it into the world, but start that agile design really early on in, in technology and technical solutions with the voices of lots of people that will touch and interact with that technology from the user, designer ,cultural anthropologists, like lots of voices on these design teams.

[00:32:02] **Doug Jacobs:** One area that we've seen a lot of expansion during COVID-19 in particular, as it relates to technology is tele-health. And this has

been really out of necessity. Folks leaving their homes, going to a doctor's appointment. That would be another opportunity for them to be exposed to COVID-19 in particular, when COVID-19 was presenting itself in doctor's offices and hospitals, and a lot of people didn't feel comfortable doing that. There was a huge expansion of our ability to do tele-health as a state and as a country. I think that this in many ways if there's any silver lining to the pandemic I'm hopeful that this will be one of them. In that basically what tele-health taught us is that a lot of people really like receiving care where they're at. For example, in the behavioral space an individual with social anxiety. It might be really challenging for them to leave their home to get therapy because they don't want to be in an area with a whole bunch of people. it's much more comfortable for some folks to receive that treatment at home. And whether that's therapy, whether that's a prescription of a medication. A lot of the regulations also allowed it to happen not only via video, which would demand that people would need to have certain technology, but also just via voice call. And I think a lot of this flexibility really spoke to meeting people where they're at and really allowed a lot of people access to care that didn't have access to care previously. So I think that was one area where a technological intervention, but also a change in our regulatory policy as a country, really spurred some of this innovation and collectively allowed folks across across the country to benefit.

[00:33:29] **Meg Small:** Yeah, that's a great example. And I agree the silver lining. An example of that: one of our doctoral students had to quickly switch and deliver his intervention, which was going to be done in a high school, a preventative intervention. It's about caring, compassion, et cetera., part of our student flourishing initiative. He had to do it online. The collective thinking going into that was like, oh, online, it was supposed to be in person, but he had the wherewithal and the foresight to in his measures to include ways that the digital experience helped as well as sort of hindered. And he was able to detect some things that we wouldn't have seen before. So it was a zoom format, but the way that the students use the chat was giving him information privately that he would never have gotten in a group facilitated preventative intervention. There was a safe space for them. They gave more and more direct responses. He got higher quality information in the moment that he could then adapt his lessons to, to specifically address. And he never would've had access to that to smartly adapt in the moment if they were in person, they just never would've spoke up in a group and disclose that. And then the second area, the students wrote on an exit interview that the nice thing about being online was they were coming in, they didn't know each other, they weren't part of a preexisting group. They said, there's always that, you're in high school, there's always that moment. Who do you sit next to that? Walking in the room is so terrifying that it would have prevented them from signing up for this, but the fact that it was going to be digital meant you just pop in and you're somewhere on the screen and it takes

that moment of social anxiety, which was an actual barrier away. So looking at how digital technology not only increased access, which is great, but also might've contributed to efficacy, and we often think of what the efficacy might be lower if you're in a telehealth or a sort of group delivery type format, but there might be ways now to innovate and amplify and intentionally design these types of platforms to get more of that benefit.

[00:35:24] **Michael Donovan:** So many opportunities here. Of course, you have to always remember other barriers to entry for many folks in the digital divide, lack of broadband access, so being careful to build that into these systems is really vital. It's good to hear, Doug that the expansion of voice tele-health has also been robust. I want to talk about one of my favorite questions here, which is what are ways, concrete and obtuse that we could build the bridges between the academic community and government communities. I think you two are excellent examples because you've worn both hats, serving in government and also in research and academic environments. So, What are ways that we could better efficiently and effectively work together?

[00:36:12] **Doug Jacobs:** I think there's so many ways that academics and government workers and policymakers can work together on. And I just want to say at the onset, that is extremely important because good decisions are oftentimes evidence-based or at least evidence informed. And to really do that effectively, oftentimes it demands partnerships with academic institutions where folks are really looking into those questions. And so I think it starts from the moment when folks who are in government have a, more of a policy question and and really turning to academic folks because oftentimes the policy questions policymakers have in government are the same questions that policymakers have in other states maybe at the federal level. And I think that these partnerships are extremely important. That is to say that also a lot of government workers don't have the time to to oftentimes opening up the latest academic journal and flipping through and reading all the articles and finding the ones that are relevant to them. And so it oftentimes demands, I think, some more upfront interactions and so that when there is a question that pops up, the policymakers turn to the academics and also vice versa. I think if there is something that is particularly interesting that is really pertinent to policy making having the academics actually reach out to the policymakers to help inform them and to highlight certain things can be extremely important to take into consideration as we move forward.

[00:37:29] **Meg Small:** I agree with all of that. Relationships and getting to know people outside of goal directed contexts, but like creating, learning communities, collaborative learning communities, where we sort of get together

regularly to share what we're working on and we can learn what are the challenges and the sort of issues and the context that the policy folks are struggling with. And they can have access to our theory driven evidence-driven types of research components that we're producing in the ways that we're thinking about it. Sometimes it's really helpful just to say, oh, I didn't think about it that way. We think about it this way, but you think about it that way and that can inform what we ask and vice versa. So I think a lot of it is sort of establishing these relationships are really critical. You know, data is always a great way to come together. I think it just is a nice way to start some of these relationships. And it's obviously something that is important to both of our organizations. And then I'll just throw in there that I think the third leg of the stool here should be the social sector. There's a great book called The Common Good by Robert Reich. who makes the argument that there's the private sector, the public sector and the social sector, like foundations and large philanthropies, many of whom are working significantly in this space. He argues that they should be the risk capital. So they should be maybe focusing some of their funding on allowing for failure, for trial and error and then as we learn and as solutions emerge that appear to produce the outcomes that then that can get sort of baked into policy, things that, that tax dollars and the democratic process should be supporting. So thinking about maybe all three of us together and how do we more rapidly innovate and how do we get resource flows more rapidly moving through it to try things, have the space to fail. And then when we find something that is working rapidly get it into a policy solution so that everybody in a state or country or region has equitable access to it.

[00:39:26] **Doug Jacobs:** I just wanna say, it's so great that you brought up also the social sector and all these nonprofits, because I know we talked a lot today about the social determinants of health. The entities that are really addressing those social determines of health are those social service organizations and nonprofits. And when we think about the healthcare system, oftentimes we just think about the insurance companies. We think about the health systems and the doctor's offices, when really what's probably very key to a lot of people's health is the social services that they get from these nonprofits. One of the things that we've tried to do here, we talked about these regional accountable health councils. We made sure that community based organizations and nonprofits are on these regional accountable health councils. The other thing is that when we talked about value based purchase, We had a new requirements starting this year that the the Medicaid managed care organizations have to work with community-based organizations to address the social determinants of health as part of value-based purchasing. And so we really see community-based organizations as a key part of our healthcare system that hasn't been tapped into. And so to your point of developing these relationships, we also realized that the community- based organization, sometimes it's a different language on

healthcare and some of the social services. I remember just as a side anecdote, I went to a housing conference and someone said that they were talking about AMI, and I thought they were talking about an acute myocardial infarction and it turns out they were talking about area median income. The language and bridging these gaps between the social sector, the academic sector and government sector is really important and so we've come out with four different trainings now for community based organizations to play a much larger role, and sometimes you just need to bridge some of the language barriers and the the the cultural barriers that exist across academia, government, social services. But I'm so glad that you brought that one up too.

[00:41:09] **Meg Small:** I completely understand. We have to get, again, the relationships and the language and our traditions of our disciplines I think are really important, but those community-based organizations are critical. They are often the first to spot trends in the community, to pick up problems. Understand how things will sort of be seen by the community, what's possible in a community. They're contextual wisdom, and knowledge is just essential in innovation.

[00:41:34] **Michael Donovan:** Certainly seems like a theme is expanding and building, maintaining relationships, expanding touchpoints, providing the fora for those touch points to grow, and entering into partnerships with humility, right? To understand that part of a diverse working group means you don't know everything and you may have a different body of knowledge that you're bringing to the table. That's a fascinating point. I do want to give each of you the chance for any closing thoughts that we weren't able to cover today. Anything that comes to mind.

[00:42:04] **Doug Jacobs:** I think one thing that that has really motivated me throughout all of this has been, so I mentioned at the beginning, I'm a practicing physician. I continue to see patients. And so I know we talked predominantly today about a systems perspective and all these systems issues are so there's so many systems issues to tackle, it can oftentimes feel overwhelming. One thing that is continuously been motivating for me is to just hear people and their everyday stories. If I sometimes try to prescribe a medicine um, uh, Difficulty getting that medicine because it either costs too much or they don't have the transportation to go to the pharmacy. And so I think as we think about these system issues, and the reason I got into policy more broadly from the get-go is these stories are very motivating to just help people navigate the system as it exists today. And I think if we it's easy to talk at this very high level and and talk about numbers and statistics. But also putting faces to some of these problems can hopefully collectively help us work together to tackle some of the

most intense problems that continue to exist and will continue to exist for a while but hopefully over the course of our lifetimes, we can chip away at them as much as we can.

[00:43:13] **Meg Small:** Completely agree with that. That was my motivating factor for understanding and learning human centered design is that as academics, when we develop programs and quote unquote interventions, we're really testing theory. But when you start with a human centered approach, you're asking somebody about their day. Tell me about the best day you had in the last week. Tell me about a challenging time and you always start with that narrative because if the person doesn't see that they have a problem or they can't access a potential solution to a problem it really doesn't matter what all the theory and the research says there's going to always be a disconnect and then absolutely limiting public health impact. The only thing I would think about too, in addition to that, Doug, and you used the word inspiring is that we also need to look at our current situation as an opportunity to build on strengths and in, in many of these communities and in many of the patients you have People I talk to, it's just this amazing resilience that they have and studying that and understanding that and baking that into some of our programs and getting them to see their own strength as an individual, as a family, as a community, I think is another thing that I would just like to close with. We often are really focused on the problems as we should be in risk is super important, but so are the protective processes and the strengths coming out of these communities.

[00:44:29] **Michael Donovan:** Excellent. Thank you. I think it's very telling of both of your motivations for much of this work that you rely upon the human experience and the resiliency there, and that's vital. I do you want to thank both of my guests for a really lovely discussion today. Today we discussed a variety of topics focused on innovation in extremely complex world of health, healthcare prevention science in Pennsylvania with a lot of implications for universal adoption. My guests today were Dr. Meg Small and Dr. Doug Jacobs. Meg serves as the director of Social Innovation and Assistant Research Professor at the Penn State Edna Bennett Pierce Prevention Research Center. She also serves as the Director of the Health and Human Development Design for Impact, also known as HUDDIL. Dr. Jacobs serves as the Chief Medical Officer and Chief Innovation Officer at the Pennsylvania Department of Human Services. Thank you both so much for your time today and for a lovely discussion. Appreciate it.

[00:45:35] **Meg Small:** Thank you, Michael. It was great to talk with you and have this conversation.

[00:45:39] **Doug Jacobs:** Same here.This is great. Anytime. Happy to do it again.