Transcript: The Pediatric Workforce: Right-sizing the HHR system for kids

Connected by purpose. Driven by passion. This is Children's Healthcare Canada's SPARK: Conversations podcast series.

Katharine: Welcome to SPARK conversations, Children's Healthcare Canada's monthly podcast series. SPARK Conversations is one component of Children's Healthcare Canada SPARK Knowledge Mobilization program during the 2024 2025 fiscal year, SPARK Conversations will be dedicated to right sizing children's healthcare systems. Thanks to our SPARK Conversations podcast sponsor, the IWK Health Center for their ongoing support. I'm Dr. Katharine Smart and today I'm absolutely delighted to be speaking with two real heroes in pediatric healthcare, Dr. Meredith Irwin and Dr. Steven Miller.

Dr. Meredith Irwin is the chief of Pediatrics at the Hospital for Sick Children, and Professor and Chair of the Department of Pediatrics at the Temeryty Faculty of Medicine at the University of Toronto. She is the first woman to hold these two roles, which she assumed in April of 2020.

Dr Irwin received her medical doctor degree from Harvard Medical School and completed her pediatrics and oncology training at Boston Children's Hospital and the Dana Farber Cancer Institute. She joined the Hospital for Sick Children, affectionately known as Sick Kids, as staff physician in Hematology-Oncology and the clinical clinician scientist in 2002. From 2008 to 2020 she was Associate Chair of Pediatrics research and held the position of solid tumor suction head from 2011 to 2020.

Dr. Irwin's research focuses on identifying novel genes, treatments and biomarkers to optimize risk classification and precision medicine approaches for neuroblastoma. She has received funding from the NIH, Canadian Cancer Society Research Institute and CIHR.

Dr. Irwin is the chair of the Children's Oncology Group neuroblastoma committee. As Chief of Pediatrics, she's committed to integrating precision child health approaches to research and clinical care and training the next generation of academic pediatricians. She is also the Vice President of the Pediatric Chairs of Canada, and co-leads the PCC workforce theme, which is focused on advancing solutions to address the current and future general and subspecialty pediatric workforce challenges.

Dr. Steven Miller is the Head and Professor of the UBC Department of Pediatrics and Chief of the Pediatric Medicine Program at BC Children's Hospital. He is a fellow of the Royal Society of Canada and holds the Hudson Family Hospital Chair in pediatric medicine and the James and Annabelle McCreary Chair in Pediatrics, and was previously a Canada Research Chair in neonatal neuroscience. Leading a multidisciplinary team, Dr. Miller's research program focuses on better understanding how intensive care impacts brain development and injury in the newborn, with a focus on those born preterm or with congenital heart disease. The goal of his team's work is to promote strategies to prevent brain injury and promote recovery, with the ultimate goal of improving the lifelong health of children and their families. He's passionate about supporting their career trajectory of child health researchers and served as the president of the Society for pediatric research.

So, we've got two real experts with us today to share their knowledge. As our listeners know, Children's Healthcare Canada is on a mission to right size children's healthcare systems. From coast to coast to coast and across the continuum of a care children, youth and their families are experiencing long and costly delays for essential and time sensitive healthcare services. We'll explore what this means in real world contexts, along with collective action required to change the way systems work and interact and intersect. Right sized healthcare systems for children are accessible, equitable, connected healthcare systems, designed for the needs of children, youth and their families. For this episode, we will be focused on exploring how we right size from the perspective of human health resources. Specifically, we will explore pediatric and subspecialty workforce capacity and training. So welcome Meredith and Steven.

Meredith: Thank you.

Steven: Thank you so much for having us for this really critical topic.

Katharine: Absolutely so as you both know, and I'm sure our listeners are very aware, Canada is in the midst and an ongoing, real crisis in terms of human health resources. This has been a long-standing issue, and it's really coming to bear in the field the three of us work in, which is pediatrics. There's a need for a highly specialized health workforce to care for children and youth in our country, and there must be an intentional focus on national health workforce planning initiatives. And today, we have two people with a lot of expertise to help us think about how we solve this complex problem. So, Meredith, you know, when we think about specifically pediatricians and pediatric sub specialists, how would you describe for our listeners the current state of HHR in Canada, and what are you most worried about?

Meredith: Thanks, Catherine. I think it's a really a critical issue, and it's one of the reasons that at the Pediatric Chairs of Canada that we've really focused our energy on this as our main

strategic priority over the next few years. I think what I think about is you mentioned how the three of us are different types of pediatricians, and I think there are many types of pediatricians, and currently, I don't think there's enough of any of us, right now, in Canada. We need to be able to take care of children with general pediatric complaints, and we also need to be able to take care of children who have very complex disorders. I'm an oncologist. I see children with cancer. Steven sees children who have various brain disorders. And you actually see everything in a rural setting. And I think there's actually not enough of any of us. So what actually keeps me up at night is the fact that I think fewer of our graduates are choosing many of the careers that the three of us represent, and other critical needs in pediatrics. We need to develop a plan to both train but also recruit and attract and retain the brightest graduates and more of them to do pediatric training so that they become pediatricians of the future to take care of the population that we're all so passionate about in Canada.

Katharine: Absolutely, and as the three of us know, it's absolutely the best job. So, we've got to get that message out to our future pediatricians. Steven, how do you see the HHR crisis from your perspective?

Steven: So, this is something Meredith and I work on together. We speak about a lot. I think it's worth calling out that for the Pediatric Chairs of Canada, where I lead the advocacy theme team, it's HHR that is our advocacy priority. There's nothing more important than supporting people, supporting children and families. And so, Meredith and I joined our teams together so that we have a combined work team, so that we're really pushing in the same direction to enhance the pipeline of our pediatric workforce. And Katharine, I just want to emphasize what you just said, there's nothing more rewarding than helping children and youth and helping families through very stressful periods of their time. So, if there's anybody earlier in their careers listening or just thinking about careers, strongly encourage child health as a career, whether that's in medicine or in other health related disciplines.

To build on Meredith's comment about capacity, I also want to call out this increasing specialization that we're all aware of. And as a neurologist, I'm living a life that I would have thought was science fiction just 10 years ago. We now have treatments for serious diseases that used to be fatal within the first years of life. We now see children flourishing. Spinal Muscular Atrophy is one example seeing the reality of genetic based therapies to help these children. So, if I think about my own career path in neurology, where, when I was training in a five-year Aurora college program, a year of that was spent doing adult neurology. Now pediatric neurology is such an intensive field with advances in so many areas, we really need to look at the entire training system to be sure that we are supporting people for the careers that are needed today. And I know from our earlier conversations that that is just as true in oncology or in rural pediatrics.

Katharine: Yes, absolutely. I think you're right. I mean, we have these challenges across the board. And you know, listening to you guys talk and thinking about the future of the Health Resources. The other thing I'm really thinking about is just how much we value working in a team in pediatrics. You know, in my work, I'm very fortunate to interact with many sub specialists like yourselves in the care for complex children. And obviously many of these children live in different communities and families want to be home, and that ability to work

together to have an adequate workforce so that the people like myself that are situated more in the community in general practice have that support of the big centers, and you guys can confidently send your patients back home and know that they're going to be supported by a team of community pediatricians that will be caring for them and interacting with you is important, and I think that's a really unique aspect of Pediatrics, of how we work together. But again, if we don't have the people situated in each of those places, it makes those connections really challenging, and it makes having that continuity of care for families really challenging, and I think that can sometimes limit people's ability to be home and return home. You know, both of you have that that focus of academic pediatrics, which is so important. And I think, Steven, you've given some examples of how that clinical academic science work has really made very real changes in the lives of children, and it's a really great example SMA gene-based therapy, of how those lab based advances, can have real world impacts.

So, I'm sure both of you are really thinking about that academic perspective of how do we get those clinician scientists in play? How do we make sure that we're advancing science for children so that we continue to improve their qualities of life. So, I'm curious, from the academic perspective, do you have any particular worries there that are different, perhaps, in pediatrics in general, and any strategies that you think need to be implemented to ensure we have that academic workforce in place?

Meredith: Yeah, I think that's so important, Katharine, and you see us both smiling, because it's another topic that we're both and I think you are as well, very passionate about and very concerned about at the same time. I think one thing we're hearing from trainees across the board is that training is a long time. We just heard about how there's more and more sub specializations. So just to take care of children with all of these disorders, we need many years of training just to become the expert clinicians that we all hope to be when we go out to practice in the different areas. But then if we also want to have a laboratory, as Steven and I do, and hopefully contribute to these really pivotal discoveries that are helping our children live longer, be treated with better treatments, safer treatments, that they'll grow up into healthier adults, it's really critical that we also help support those trainees who do want to go on these pathways. And there are fewer of them, so, I think it's critical that we have funding mechanisms, number one, that support institutions, some of ours. I think both Steven and I are at institutions where we try to support trainees who want to go on the pathways, like we have to have these double lives where they do some research and also take care of patients. And then I think, also work tightly with the governments, with our funding agencies, with our universities, to really make sure we have the right supports in place, because this is a much longer pathway. It's not, It's can be considered harder by some, but I think for those who want to do this, there is no more rewarding career, at least in my own opinion. And I think I speak for Steven as well, but it's really becoming harder and harder to find, I think trainees who see that that long pathway will lead to such a fruitful career and such important discoveries down the road. So we really need to continue to support the programs that we have in Canada and

internationally that help do this, but we have to see people understand this is a long process, and we may not have something we can measure in one year or two years, but this is really something we've seen, as Stephen pointed out with SMA, and I've seen in the cancer world as transformational for our children who are living, you know, in with diseases that would have been, as he said, science fiction or a movie years ago. But we have to support these types of careers. It's, there's nothing, you know, more important, I think, to make sure that we continue to see the advances that we've seen.

And maybe I'll also point out it's, you know, a little bit about the lab research, but also about learning from everything we do, collecting data on the patients we treat with all sorts of disorders, so that we know that we continue to do it better, because we're learning as we go. So, there's so many aspects of research that really are things we need to pay close attention to and to build on some of Steven's issues, we're talking about physicians today, but there's many who contribute to pediatric research who aren't only physicians. There's nurse researchers. There's all sorts of other researchers who are critical to the mission that we're speaking of. I know Steven is going to jump in. I can see.

Katharine: Yeah, Steven, please share, share your perspective.

Steven: Yes, I'm going to try to build on Meredith's comment, because I'd say, when I visit other organizations in North America, Canada and the US and we discuss these issues, the pushback I often receive is at a time where there is such a clinical need. How can we take our attention away from the clinical demands to build an academic profiling capacity. And I think that misses the point that had we invested appropriately in academic pediatrics over the last decades, we wouldn't have the clinical demands that we have today. And so, you know, I gave one example of Spinal Muscular Atrophy, and we can give many examples of research advances coming to the point of care, whether at our hospitals or in our clinics, that really changes the lives of children and their utilization of healthcare resources. But there's this full spectrum of research that Meredith alluded to, and I think of my colleagues doing community engaged research in the downtown East side of Vancouver, and the importance of that work of supporting healthier children and healthier youth that then decreases lifetime healthcare requirements. And so, I'd encourage anyone listening to think about this as an integrated system, and not about clinical care on one side and research and education on the other, that they really have to go hand in hand.

Katharine: I think that's such an important point, and I think what you've touched on is an issue that I think plagues our healthcare system too much, right this sense of either or that we have to make, you know, choices and sacrifice one thing over here to have something over there in this scarcity mindset, rather than a both and mindset, right? And this is really what you're talking about. We need both. We need to be able to provide clinical care to children, and we need the scientific advances to make sure that we're improving people's outcomes, their quality of life, and in some cases, you know things you guys have been talking about, literally

saving their lives. And I think you're absolutely right. You know, investments in children pay dividends throughout their lifetime, and those are things we all benefit from as a society. So, I think we really need to work on shifting that perspective away from, it's an “either or” rather, to “it's a both and.” And I think that type of thinking in our system would really help us not make that mistake of, you know, choosing to constantly be shifting resources at the expense of other areas, which just lead to ongoing crises. And I think that's partly why we find ourselves where we do today.

So, you know, Meredith, you and Steven have shared some really compelling ideas around the workforce in general, and specifically around academic. Can you share with our listeners your view on what impact what we've been talking about is going to have on this overarching goal of right sizing healthcare systems for children in Canada, and also what policy recommendations you think might be important for the government to think about in this space in order to get us further towards this goal?

Meredith: Yeah, I think that's important, because obviously when we talk about a challenge or a problem we need to think about, like, what would we suggest, I guess, as the experts or the people seeing this on the ground, as possible solutions for us to think about, or possible ways to mitigate, you know, potential things coming down the road. So, you know, as I mentioned, I'm definitely awake at night, a little bit worrying we're not going to have enough of certain types of pediatricians, not just the clinician scientists, but really the pediatricians caring for all different types of kids, including those with subspecialty needs. And I think there's a few things we can think about that might help in the short term, and some of them are going to be more long term, and they're not all financial or investments, I think. I think the first one is actually quite simple. I think we need to count us. I think we actually need some data here. I think one of the big challenges we have in Canada, and you alluded to this Katharine, is we kind of lump all pediatricians together, whether we're sub specialists in oncology or rural pediatricians like yourself, most of the time when we do big HHR exercises, and we're doing a lot of that, which I really laud currently in Canada, that we're having a lot of initiatives to get a better sense of our HHR. We tend to lump pediatricians together, and we've done that for a long time, where we say we're one specialty. So then when you're going to ask Steven and I, what are the problems, where are the gaps? We're going to say we have some ideas, but we don't actually have the data. Now, our colleagues south of the border are a bit better at this, and they have been collecting that data. But my number one wish, which isn't really a policy, but it's to impact some of the initiatives that have been put in place, is to make sure we get counted properly, so that we actually get helpful, useful data from all of the great investments being made in the HHR workforce initiatives that are ongoing right now. So that maybe wasn't exactly answering your question, but I think it's going to be hard to answer these questions moving forward without data.

And then I think there are some, I think, simpler things, which I know the government is working on that could potentially help. I think making licensing a little easier across provinces,

especially, I mean, for everyone, but I think for subspecialists, we see this as a particular challenge in areas, including your own, in rural areas, where it's very difficult. Even if a subspecialist wants to practice virtually or in person one day a month, it can be quite challenging with all the differences in licensing needs. And I know, again, the government's working on it, and that sometimes pediatrics isn't the first thing they think about, but there's many fewer of us, so I think we actually would benefit significantly from having some impact on harmonizing some of the licensing processes.

And I mean, I'm going to come back to research a little bit because of Steven's important notion that he mentioned, which we all share, which is that research does actually eventually impact patient care, and is, you know, going to have important impact. And that is that, I think we have to make sure that constantly, when there are investments in research and in various types of healthcare, that pediatrics is included because most of the diseases that we see, and as family as the family doctors see often start in childhood, and that's our real opportunity to not just cure kids, but also sometimes prevent both physical and mental health disorders early on. So, I think we have to make sure that we're doing appropriate and significant research in pediatrics, and the investments are there, because sometimes we're also not counted there. So, I guess those would be my three sort of policy type asks for pediatrics. But Steven may have some other ones.

Katharine: Yes, Steven, what? What do you think? Anything we're missing?

Steven: Yeah, I think I'll answer this with a question, which is, why do we accept paying people for the healthcare of children less than that of adults. And I think that is a major driver to why there is an existing crisis in pediatrics in the United States with so many unfilled residency match positions, approaching almost 10% of positions not being filled.

I think we need to listen to that in Canada and prevent that from being an issue. I think reflecting on the comments that we've made already, pediatricians often see their role as promoting lifelong health, and we think about the potential of the child as developmental is. And I'll say, I reflect back to comments I have with policy makers or decision makers about children being 20% of our Canadian population and 100% of our future. And I think that misses the point, actually, that children are also our present, and it's time, as a country, that we take care of them as our present, and recognize that physicians are one component of that, and look to sort of equalize how we promote pediatrics, the entire range of Pediatrics in the health system.

Katharine: Yeah, absolutely, I couldn't agree with you more. Kids are both our present and our future. There's no question.

I also think what's really interesting is both of you have touched on some things that are, I think, broader challenges for our healthcare system. And I think again, link back to why we

have our ongoing crisis in healthcare in Canada. You know, Meredith, you talked about the lack of data in human health resource planning for pediatrics, and we know that this is true across health professionals in medicine, in nursing, other health professionals. And again, as we know, as physicians, you know, we're one part of a broader team, and we certainly can't execute on our clinical mission without all the other people that work alongside us. And there's no great data really on anyone, so we don't really know what we even are trying to do in terms of HHR. So, it's a huge problem. Data, just in general, is challenging. So, I think that's an important thing to reflect on, is, how are we in this situation? And then I think, Steven, your touch on pay equity, I think this is, again, a really broad challenge across areas of medicine. What has been the thinking and the planning there? And as we know, that tends to, you know, payments provincial tends to be sort of negotiated amongst physicians. And again, it's the scarcity mindset, where, you know, we're pulling from one pot to put into another pot, and it gets negotiated sort of every few years between different groups of people with different interests, rather than really having a broad strategy around what's equitable pay for equitable work, and how do we make sure we're enumerating people in a way that's sustainable and equitable? And I think that there's also been a lack of systems-based planning there, and that leads to some of the challenges that we see now. So, I think it's really interesting how these broader health systems challenges are manifesting specifically in our specialty of Pediatrics, and I think both of you have made a really compelling case for the impact that it's having on children and youth.

Steven, you know you mentioned some of the work coming out of the United States. And what we know is that in 2023 the National Academies of Science, Engineering and Medicine in the US released a report that was pretty concerning “The Future of Pediatric Subspecialty Physician Workforce: Meeting the Needs of Infants, Children's and Adolescents.” And this report also really highlighted the need for a systems focused approach for children's HHR and I think also had some data that you've already alluded to that was quite concerning. So, I want to ask you guys some specific questions around some of the things that came out. You know, they also found that in the US, there's a dearth of National Child Health Data and a lack of data around the health workforce, education and training data. You know, both of you work in teaching hospitals where the next generation of pediatricians are being forged. So, what do you think, Steven like, how do we ensure, from a training perspective, if we come down to the educational level, that we're getting a sufficient number of general and specialized pediatricians to meet that ever complex and evolving need of children in Canada?

Steven: Yeah, so that's a really key question, and complex. I think a lot of this needs to start well before I would get involved, right? So how do we ensure that we have enough that we're training enough medical students, that our medical students have exposure to pediatrics in a way that they can see a future in this field, and some of that deals with the very practicalities of will they be able to pay their debts when they're in practice? And some of this is having

exposure to role models who inspire them across the different specialties, and we continue to constrain the amount of exposure to pediatrics and child health in medical school, right? There's a lot to learn over that time. I acknowledge that. Pediatrics has also evolved considerably and including its specialization. So being in touch with any of the three of us in medical school would give you a totally different perspective on pediatrics. I'd also call on my colleagues in pediatrics that it's our responsibility to show people the positives and the fulfillment of a career helping children. And it comes back to where we started our conversation.

The other broader theme that's been embedded in our conversation today, and I just want to call out, is the importance of prevention. And as I go back to the history of Pediatrics, right, our field really started from a public health and disease prevention perspective, and that has been consistently undervalued by health systems around the world. And so that's another part of this conversation. If we want to elevate the voice of Pediatrics, I think that the recent pandemics we've had certainly have elevated the public discourse around the importance of prevention, and that's not just about communicable diseases, right? Mental health is another example of where we really have to be serious as a nation about how we promote mental health and prevent mental illness, and we have those tools. So that's another one of those themes that as we want to increase capacity in pediatrics, is to recognize the important work that our pediatric colleagues do, physicians and non-physicians, in terms of disease prevention.

Katharine: Absolutely. And you know, I always find it fascinating when I'm speaking with colleagues in adult medicine and talking about prevention and pediatrics. You know, particularly in my area of work, I'm really interested in developmental trauma, childhood adversity and the impacts that has. And I think a lot of people make the natural connection that those you know, if you experience trauma in your childhood, it likely would link to your mental health. But what I find fewer people understand is that direct link to a lot of chronic disease that we see in adults, heart disease, diabetes, hypertension, all these physical illnesses that are really plaguing our healthcare system on the adult side. And again, you know, when you look at the resource limitations in our country, I often think, well, why aren't we just really focused on healthy families, healthy communities for children, to try to limit their traumatic experiences. Because not only would we have a more flourishing population, happier children and families today, but we're going to see a huge impact on chronic disease, both physical health and mental health, down the road. And you know, even though that research has been around for a long time, I think we're failing to make those connections in our policy and spending choices. So, I think the voice that you're bringing to that idea of prevention, and what we mean by that, is really critical. And I think the only way we're going to really fix our healthcare system in Canada is to really be much more focused on prevention, so that we're not having all this spending on what was preventable chronic illness later on, and hopefully a population that's much healthier, flourishing and really finding that wellbeing in their day to day life.

Meredith, we've talked a bit about, or quite a bit about, subspecialty training for new pediatricians. Do you think there's a role for the college in terms of streamlining and recognizing subspecialty training for new pediatricians? Is that important? What do we need to really do there? I imagine some of it is more spots for training, but other aspects of it might be how people are recognized, credentialed, and then their job opportunities from there. So, do you see a role for the colleges across the provinces in that regard?

Meredith: Yeah, I think so. I mean, I think for the colleges, and also the Royal College that's responsible for training. And maybe it's such an important question. Katharine, maybe I'll just go back to some of the data you mentioned from our US colleagues from the 2023 report. Really, for 10 years, they've seen they're a bit better at the data collection. They've seen a steady decline in medical graduates choosing pediatrics, and a very steep decline in the last year or two. So, it's 10 years of declines of MD graduates choosing pediatrics, and that's now translating to a decline also over many years of subspecialty choices in pediatrics. So, they only filled 80% which is an all-time low of their subspecialty pediatric spots. So I think it's really a wakeup call to us, because, you know, we think we're different, we're actually not that different, and we do know that medical training is not that different across and I worry as we run out of specialists in the US, you know, we don't want to lose our few Canadian trainees and graduates to US jobs as well. So, I really think, as Steven said, this is an alarm bell or a wakeup call for us to get that data. And related, some of the other really important data was quite qualitative that came out, where they spoke with trainees and asked them why they're not choosing pediatrics, quite a large number and many things were raised that you all have talked about already, compensation differences, which are also an issue, by the way, in the US, getting lower compensation for pediatric work. They also talked about the time to training, the time of training.

So currently in Canada to become a pediatric sub specialist, that's four years now of general pediatric training, followed by often two to three years, sometimes more, in some of these highly specialized areas. So, you're talking about at least seven years, usually post your eight years of undergraduate and medical school. So, I think what we're hearing is that's a long time, maybe too long. So, I do think, as we heard for family medicine this year when there was a talk of moving the residency to three years, you know, the graduates spoke for themselves and said “that's not okay.” I think we are going to need to speak with the trainees, but also listen to the data from south of the border, and ask ourselves, is longer training always necessary and is the same training, we've all talked about that, to be a rural pediatrician and to be a neurologist or an oncologist or cardiologist, do we all need all of the exact same training? Or instead of having to do everything, could we choose or stream trainees into different fields so that they feel like they're not just adding on years and years of training. Because that may be one of the things that is making people not choose pediatrics. I think it definitely is. We're hearing that anecdotally, and definitely in that 2023 report that you referenced, we've seen that

in writing now in a scientific way, so I am very concerned. We need to think a little differently, at least for some of our graduates. Because, you know, Steven and your data, you quoted how few folks are matching, or the gap in matching in the United States to pediatrics, the number that they don't match is actually higher than our total pediatric spots we have in all of Canada. I think that's really important to realize that that's that number. I mean, they try to match close to 3000 we only match each year about 150 across the whole country. So, you're right, more spots for sure. And that is a provincial thing sometimes, but I think we have to advocate nationally. But also, I think the streaming may help us in some cases. And I think Steven and myself, our colleagues who are pediatric chairs at the main universities that do the training, have started to advocate for at least thinking about these things with our education expert colleagues across. I know Steven actually sits on one of the committees that some of these things are discussed as well, so he may have other thoughts to share.

Katharine: Please, Steven.

Steven: Well, Meredith, I agree with how you've characterized this and how, you know, my experience is that we really need to think about the training pathway and ensure that we're training people towards their career goals. And that includes general pediatrics and recognizing that a general pediatrician in a highly urban environment a few blocks away from a tertiary care hospital has different clinical demands than someone working in a remote rural area hundreds or 1000s of kilometers from that tertiary care center, and they have different skill requirements than sub specialists. And so it's ensuring that we're supporting people towards their career goals, because our numbers are so small. There's capacity for these people to graduate and come into our system.

Katharine: Yeah, well, and one of the things I reflect on a lot, and you have both touched on it, is, you know, the breadth of Pediatrics is so huge, right? We're doing everything from caring for premature babies, infants, toddlers through to adolescents and young adulthood, and then the range. You know, we're not only dealing with medical concerns in pediatrics, but we have all the whole span of developmental health and developmental behavioral challenges and then mental health. And I think that's one of the really unique aspects of Pediatrics, is the breadth is so huge. And I often joke with my rural colleagues that we're psychiatrists by day and intensivists by night, because in our work, you know, often we spend our day dealing with mental health and behavior developmental challenges, and then often we're in the evenings, you know, we're sometimes looking after very critically ill children and trying to stabilize and get them to higher levels of care. So that skill set is huge. And then both of you have really highlighted in your specialties just how much advancement there's been. So just the depth and the level of knowledge you need to execute as a sub specialist in these areas, like oncology and neurology for children, to make sure that that precision medicine is there and all that these research advances are actually getting to your patient. I mean, that is also just such a deep

depth of knowledge that you need to be able to bring that to the bedside. So it's true, we're just talking about really such very different ways of working and skills, all of which are needed. And as you highlighted, Steven with a really tiny workforce, and I think this is a something that a lot of people don't really fully understand. So thank you, both of you, for highlighting that, and then I think the other piece you really talked about was important was the reimbursement aspect of it, and the fact that, just traditionally, pediatricians have always been one of the lowest earners and aren't compensated the same as other specialists and sub specialists.

So, before we move into some of our final conversation, I'm just curious if either of you think there's any models of reimbursement that are important for us to be thinking about or moving towards to try to remedy that problem.

Meredith: You want to start this time, Steven?

Katharine: Yeah, go ahead, Steven.

Steven: Yes, I'm going to share my comment as a department head, because I really, I don't have the expertise to answer that question, Katharine, from your environment, you're much better positioned to understand how to make rural pediatrics feasible economically, given the important roles that span prevention all the way through to intensive medical complexity.

Within a Children's Hospital, I really think that integration is the magic word, and we like to align budgets around clinical care, research, quality improvement, education, the silos go on. And as we think about how we fund people's activities, especially in pediatrics, where there's such important intersection across these domains, we need to come to terms with integrated funding models, and I think that there are some organizations in Canada that are leading the way in this and in conversations with the Pediatric Chairs of Canada, I know that I'm not alone in my enthusiasm to see us move towards integrated models of funding and reimbursement.

Katharine: What do you see, Meredith, on your side of the country?

Meredith: So, I agree completely, probably not surprisingly, with Steven. I think at most of especially the very large academic sites where we have, you know, 18 or more specialists and all of us do, to some degree, some amount of teaching, because that's hugely important in our sites. We are training, as you mentioned, all of the next generation of pediatricians at our 17 sites. We all do some teaching. I think everyone does some scholarship and research or quality improvement, as Steven said, and, of course, clinical care.

But I think trying to always come up with a fraction of that to figure out how many hours people spend doing everything, I think is a very difficult model. And I think various provinces, without

getting into specific ones, have different ideas about counting hours versus this more integrated model. And I think coming up with a more integrated model, especially given all the teamwork we all do in our complex specialties, and even in general pediatrics, as you pointed out, I think means we need to think differently about it and get away from what did you do this many hours? And instead, are you able to deliver care in an excellent, you know, data informed way, and at the same time are you teaching, you know, and bringing up the next generation of not just pediatricians, but all of the other pediatric healthcare specialists that we train, whether they're nurses, family doctors who need pediatric experience, etc. So, I would like to see us much like Steven, think about a more integrated model for how we fund, I'm not sure it will cost more. Of course, you know, none of us are special specialists in this, as Steven said, but I do think there's a way of doing it where when cost more, and it would probably reduce the administrative burden from both the hospital side and also, I would imagine from the government side as well, if we could come up with a model like that,

Katharine: Yeah, absolutely. You really see the vestiges of the fee for service medicine, right from what you guys are describing, that desire to really try to break everything we do down into sort of services that you can bill for, rather than looking at the care of a patient holistically and from a team centric approach. And you know, you've touched again on two big themes, I think, that are emerging right, that need for integrated team-based care that obviously needs to be funded differently than the old school fee for service way of thinking and the impact of administrative burden and how, again, that takes us away from patient care. It's a lot of hours, a lot of time that really benefits no one. So, thinking, I think differently, as you both described about how we deliver care, I think is important, and I think it's also part of retention. You know, you touched on both aspects, right, recruitment into pediatrics, retention. These are the pebbles in people's shoes, right, that drive them away from certain things, and they're frustrating aspects of clinical work and academic work that could be solved by just looking at the way we deliver care differently and funding it as a package, rather than trying to pull out every little widget of what people did day to day. So, thank you for that conversation, because I think it's really important for the future of our healthcare system, and also really important for pediatrics as a whole, recognizing the complexity of the work that we all do.

So, this brings us a little bit to this idea of models of care. And before we conclude, I just you know, at the beginning, we talked a bit about partnerships. We talked we've talked today a lot about academic pediatrics. We've also talked about rural pediatrics. We've talked about, you know, the need for integrated care. I want to get your perspective, both of you a little bit on the importance of models of care and partnerships. You know, Steven, I'm going to start with you

BC Children's Hospital situated in Vancouver, but covers an absolutely massive geographical area of British Columbia, which has tons of remote and small communities you also cover us in the Yukon. What are some examples of partnerships that your hospitals embrace, that you

think are important to build those linkages between people working in the community, whether they're pediatricians, nurses, family doctors and pediatric sub specialists to try to deliver care closer to home. And what are some successes, perhaps, that you've had at BC children's?

Steven: So, Katharine, I think the issue is partnership, and you've said it, and it's a question of forming partnerships that are meeting the needs of children and families wherever they are in the province, and supporting providers closer to home to do that. And so there are programmatic partnerships you just mentioned your work with the Charlie Program to help provide care close to home and ensure that there's some seamless integration of care across the different levels of care.

There's also more specialized outreach programs where our highly specialized pediatric workforce that is located at BC Children's Hospital will spend time in communities delivering that care in recent conversations there, the highlight is that that works best when it's done in partnership with the pediatricians in that community. They know who's coming. They know what families are going to be seen, what children are going to be cared for, and there's an overt emphasis on communication so that we're not creating more silos in this. And it's been really wonderful to see the engagement across the province in how we support each other to provide that care, and there's certainly ongoing work to do.

Katharine: Yeah, absolutely. And I've been fortunate to be involved in the two programs you talked about. We have several specialists that come sub specialists that come to white horse in the Yukon and work with us there, and I've absolutely just so enjoyed those relationships, and I think it's really allowed us to deliver comprehensive care to kids close to home, and for our listeners, Steven referenced the Charlie Program, and what that stands for is “Child Health Advice in ReaL timE.” And it's a program through the rural Coordination Center of British Columbia. Pediatrics is a component of it. There's other areas as well, but what that is is a pediatrician who's available on Zoom 24 hours a day to any provider in the province to reach out to for support. And that's a program that I work with as well, and I think it's another great example of getting specialty care directly into the community, directly to the bedside. And it's also about partnership. It's about culturally sensitive care. It's about good communication. It's about working to support clinicians that are in these really rural and small parts of the province of BC, to be able to bring excellent care to children, and it's something that I've really enjoyed. And again, I think we're talking here about all these different levels of integration, different levels of partnership to really deliver for our patients.

You know, Meredith, you're in Ontario, it's obviously a bit different, because you have several children's hospitals, but also a much bigger population. So maybe you can give our listeners a little bit of some of your experiences with what these types of partnerships look like in Ontario?

Meredith: Yeah, maybe I was thinking you gave some really great examples in BC, where there's one central Children's Hospital that sort of can help think about the best models across. I think in Ontario we have five academic sites with pediatric programs with a variety of sub specialists at each of those sites. I think it's really important we all work together, because not all the sites necessarily always have the same expertise. So, I think that happens across specialties. But maybe one example that gets at your theme, Katharine, of bringing care closer to home for our patients, probably comes from my own specialty of oncology or cancer care across Ontario, where there's a group called POGO, or “Pediatric Oncology Group of Ontario”, that not only organizes the oncology care across the five main centers, but across what they call satellite centers, which are community hospitals across the entire province, where patients can go for much of their care in between what they do need to come to Toronto or Hamilton or other sites or Ottawa to get and we found most of our families find that to be hugely beneficial. These are sites staffed by nurse practitioners, by pediatricians, sometimes family doctors, who really take a very primary role in helping children, often during two to three years, sometimes longer of therapy, be able to get as much of that therapy and supportive care closer to home. And I've just seen that pay off in dividends, not just for the patients, but for their families, their siblings. It's really an incredible example. And when, when we meet each other, and there are these annual meetings, you really get a sense of community from the pediatricians and the nurses who work with those patients. And again, I think it really has transformed how we deliver care to those kids. Because, as you know, most of the centers are all located, you know, in southern Ontario or in other pockets, and a lot of our patients, of course, don't live there, and it's just really hard when you have to drive far to see your specialist all the time, and I think it is one example. There are many other examples, I think in Ontario, they're often around different areas or different specialties where people have teamed up, and some of them also include specialists who go into more rural areas as well, and get it, get at helping populations that have much less access to our specialists, as you described in the programs in BC. So, I do think we have those opportunities too, and I think we need to continue to build those. I think it's a key and again, not just with our physician partners, but with other pediatric HHR as well. So, I think there are huge opportunities that haven't yet been realized.

Steven: Meredith, you're sorry, Katharine.

Katharine: You go ahead, Steven.

Steven: Yeah, so your comment of community brings me back, actually, to Katharine's comments. And one of the most important lessons I've had in being back in British Columbia for the last two years is the importance of distributed medical education. So having residency programs in communities has been so important for our trainees to learn directly from the pediatricians and specialists in those communities, and I hope to encourage them to then stay where they've done their training and help build the workforce locally.

Meredith: The other thing we've done just to build. Sorry, Katharine, we do this a lot, Steven and I. We've also seen, you know, in closer communities, even sharing faculty, which I think is another great model where they work across more than one system, and that's been a great other partnership to help build capacity.

Katharine: Yeah, absolutely. What I was going to say is, just as one of the people that has opportunity to work with residents coming from teaching hospitals in my community clinic in Whitehorse, in our community hospital, you know, we definitely see those benefits. A lot of the people, you know, some of the people I've been able to recruit to come and stay and live in Whitehorse I first met as residents when they were training with me. We get a lot of locums that have started off as our residents. And we've, had a lot of success of attracting people into community or rural pediatrics after they've had that experience. And I know one of the really common pieces of feedback I hear from residents was just they had no idea how much they would enjoy rural pediatrics, and it's a real eye opener for them, I think, to come and just see and also, then, when we're calling down to get support from the subspecialty hospital, often you're talking to trainees who have had the chance to work in your environment, and I think they're able to provide better support, a better understanding of what kids are coming home to. So, I think again, really what we're talking about here, right? Partnership, linkages, understanding each other's roles, really working in teams, because we're all necessary, and when we support each other and we understand each other, I think we just execute so much more efficiently and effectively and compassionately for the children and families we serve. So, it's really I always feel gratitude to be part of that and that that those of you at the Children's Hospital share your excellent residents with us and our patients and families really enjoy meeting them and working with them as well. So, I think that's so important.

Steven: Your gratitude is mutual.

Katharine: Well, thank you. Thank you. So before we've been I think this has been a great conversation, and we've been talking for a long time, but before we wrap up, I want to give each of you a chance to really in a nutshell, sort of help our listeners understand what Canada can do to ensure an adequate pediatric subspecialty physician workforce and broad access to high quality subspecialty care, including a robust research portfolio to advance the health and healthcare of infants, children and adolescents.

So, Meredith, if you could tell us, you know, in a few words, what's your vision for that, what's essential? And then Steven, I'm going to come to you after Meredith.

Meredith: Sure. I'm going to come back to a couple bullet points that I've said a few times. Count us. We have to count the pediatric physician and all pediatric HHR in order to be able to tackle this issue. I do think we have to recognize that, you know, health starts in childhood,

physical and mental health, so we really need to focus on making sure we have adequate supports for pediatric patients. I do think we have to address one of the elephants in the room, the compensation difference, because maybe it didn't impact the three of us, and I don't know if it maybe did, but I think it is going to we're hearing it's impacting trainees and making their choices. So, I think we are going to have to figure out across all of our provinces and across parts of the world as well, how we deal with the issue of compensation being different when you take care of children versus adults with very similar disorders. And finally, I know Steven will talk about this too in his take home, but academic medicine, scholarship, quality improvement, teaching all of it. It leads to better care for our patients and better outcomes for our patients. So we can't forget about research and academics and scholarship along the way as well.

Katharine: Thank you. Steven?

Steven: Rather than repeating what Meredith just said, I want to come back to where we started the conversation, which is the last decade, we've seen these transformational changes in pediatric care, new technologies, whether in the community, in highly sub, specialized care, that is creating a reality that would have been unimaginable just a few years ago for how we could support children, youth and families. So, what an incredible time to be part of Pediatrics, to think of joining pediatrics, and I would love it if our policy makers would join us in recognizing the excitement and the potential for advancing child health that exists today in Canada.

Katharine: Thank you. Well, if this conversation hasn't inspired the next generation of medical learners to choose pediatrics, I don't know what will. I think we've made a strong case for why pediatrics is the best and most rewarding specialty. So, thank you so much, Dr Meredith Irwin, Dr Steven Miller, it's been an absolute pleasure having you on the podcast today, and thank you for sharing your wealth of knowledge and experience and most especially your passion for pediatrics and the future that we all envision for the children's and families that we serve.

Meredith: Thank you.

Steven: Thank you.

Katharine: Thanks again to our SPARK Conversations podcast sponsor, the IWK Health Center for their ongoing support. That's it for today. Thanks for listening to SPARK Conversations. To stay up to date on all our spark offerings, including upcoming podcast episodes, visit our website, at Children's Healthcare canada.ca, and subscribe to our spark news biweekly e bulletin, if you haven't already. If you like this podcast, show us some love by

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