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[00:00:00] **Speaker 1** We are rolling. So whenever you're ready. Right. Well, I guess let's start with some easy stuff. Tell me give me a description of the research you do and how you got into that research.

[00:00:09] **Speaker 2** Yeah, absolutely. So I'm a speech language pathologist by training, but I mostly do research. So I did a Ph.D. after I did my clinical training, and I do family centered early language and literacy intervention research with families, birth to five, which means mostly that I partner with families who have children, who either have a diagnosed language delay or disorder, or who might be at risk for one, and try to support high quality caregiver child interaction. And we develop existing interventions to see what what works well for certain families and what doesn't work, as well as developing new interventions to try to improve academic health life outcomes. It's really a public health approach.

[00:00:55] **Speaker 1** So a lot of people that are familiar with with speech, with speech language issues, think of it in terms of the schools. Yeah, but there's a lot that goes on before a kid ever reaches the classroom, right?

[00:01:06] **Speaker 2** Absolutely. And so, you know, learning language starts from at or before birth, really. And so we think about language development early on. And children are eligible for special education services as early as the birth to three period. So there are through the same legislation that covers, you know, an individualized education plan in the schools. There's a part C to that which covers birth to three, and there's a separate part that covers 3 to 5, and then there's another part that covers school age. So we really focus in my lab mostly on the birth to five section of that.

[00:01:44] **Speaker 1** So what give me the importance of that age range, because a lot of kids, if they're not finding it there, how much more difficult it is to correct any issues when they do get to school?

[00:01:56] **Speaker 2** Yeah. So, you know, I think it's important to be I'm sort of a glass half full person in the sense that, you know, we can support children whenever, but it's really important, the birth to five period children's language trajectories. So where they perform in the distribution relative to their peers are much more stable after age four or five. So the birth to four birth to five period is a time where there's a great amount of malleability. We can do a lot to change and shape children's language skills and their developmental trajectories for a really high return on investment. So early intervention has a really high potential return on investment for life span outcomes.

[00:02:43] **Speaker 1** And how do people know if they're kids, especially if they're new parents? How do they know if their kids actually need help because they're used to everyone know baby talking? Oh, they sound so cute when they say it that way.

[00:02:53] **Speaker 2** Yeah, Yeah, that's a great question. You know, so I would say that parent concern is a great indicator of just asking some more questions. So if you feel at all concerned about your child's language development, talking to your pediatrician, talking to early intervention, asking for an evaluation, those are really good options from a language development. So in our field, we think about speech, which is sort of the motor component, like the sounds making sounds, producing, producing spoken language. The language is more like the cognitive component, the vocabulary, the grammar. So when we think about early language milestones, you know, children are typically producing their first words around 12 months, typically combining words. So putting two or more words together by 24 months and late word combination, meaning not having started to combine words by 24 months, is a good indicator that you might want to seek out further evaluation. But and especially if a child is late to produce their first word and then late to combined words, that's a pretty good indicator. That might be good to check in. But, you know, parent concern is the first and foremost, and especially if, you know, if it's a first time parent and, you know, maybe you're around other parents or you're around a daycare provider or preschool provider or your pediatrician says, hey, like, you know, you might just want to get this checked out. It's a good, good time to go get looked at.

[00:04:30] **Speaker 1** So what are the things that parents should be doing or typically would be doing that naturally teach their children how to speak?

[00:04:38] **Speaker 2** Yeah, absolutely. So children are really resilient language learners. And so I think it's really important that parents are not doing anything to make their children have a language disorder. Some children just really struggle to learn language even when provided with. Really robust input. That being said, there are ways we can support children. So thinking about. We talk about creating opportunities for communication in daily life activities so it doesn't just have to be in sharing a book or in playing a game. It can be at the bus stop, at the grocery store, at the laundromat, just during daily life activities, taking turns responding to what the child is saying. Children in that age range in that birth, two five age range learn really well about things that are related to what they're interested in or what they're focused on at that time. Having fun. You know, back and forth activities. So letting the child initiate a turn. Responding to that, this kind of it's been called serve return. Conversational duets, we've called it. So really thinking about just kind of a reciprocal exchange where there the child is hearing lots of different words and sentences and all sorts of, you know, different language structures.

[00:06:07] **Speaker 1** So how do you get involved with families and how are you interacting with them?

[00:06:12] **Speaker 2** Yes. So most of my research is what we call a behavioral clinical trial. So we are looking at caregiver coaching programs essentially. So we, the researchers, provide caregiver coaching to families and to try to support high quality early interaction. And we look at how effective those interventions are, as well as what works for some and not for others. So we also try to figure out, for instance, how do we support caregivers who come to early intervention with different experiences, different strengths, different needs. Just like we need to support children where they're at with based on their individual skills and needs. We need to support caregivers, too. And so really our job in early intervention is to think about, okay, how do we scaffold or support the caregivers to be able to then support their children?

[00:07:12] **Speaker 1** So there's been a trend that we've seen in Wisconsin and I'm assuming nationwide about the increase in the number of kids coming out of COVID that have needed additional help. Have you seen that in your research as well? And what can we attribute that to?

[00:07:27] **Speaker 2** Yeah, so that's a super interesting area where there's been getting a lot of a lot of interest, certainly because it was a an event, a sequence of events, a long term event that we hadn't seen before. And my understanding and we're still kind of we're going to be looking at the data for a while. Right. But there have been now starting to come out with some cohort studies looking at comparing children who are born during COVID to children who were born, you know, during previous times where we had developmental data. And what it seems like is generally speaking, some people are finding an increase in risk of speech language delay for children born during COVID, a small the effect size is pretty small, and that varies. There have also been people who haven't found that. But I would say the main takeaway from the data that I have seen and to be clear, that's not because of exposure to COVID, it's because of the environmental factors like increased stress and early adversity that that seemed to be the factors that we think might be influencing that. The best thing that I the best way that I can explain it or what seems to be happening is that there was this poem by Damian Barr that came out during the pandemic. And one of the lines in this was that we're all in the same storm but in different boats. And so meaning that the challenges that were brought about by the pandemic highlighted existing systemic inequities and subsequent health disparities that we've seen. And so we know that early childhood adversity, you know, housing insecurity, food insecurity, family stress, all of those sorts of things are barriers to early language development and can be for some families. And so basically their my my hypothesis would be that we will see these differential impacts and you might see different pathways for different families and children. So, for instance, two, you might have a child who like let's say a child was going to be, you know, was sort of predisposed to having a speech language delay and then had a delayed a value. Nation because of COVID, the timing. So the timing and the individual circumstances might really impact on the individual level. But at the group level, it sort of remains to be seen in the in the birth to three period. Like I said, a trend toward higher rates. But it's also hard because awareness has also gone up. And, you know, there's a lot there's a lot to say in terms of the causality of that.

[00:10:31] **Speaker 1** And I mean, I've heard different people have different ideas and there's lots of theories as soon as you say COVID. A lot of people that have very firm ideas. And. Yes. So how is it possible when we're trying to educate people about this to separate their own all the political and all the societal things that come with COVID from just that COVID time period? I mean, as opposed to like the disease or the politicalization of it? Or is it not possible to separate all those issues?

[00:11:00] **Speaker 2** Yeah. So so that's a really I think it's probably a both and situation. We can try to pull apart some pieces and some people have been doing that. So I know there's been some research coming out of Columbia that was comparing, that was looking at potential increased risks of developmental delays for from being exposed to COVID, the actual virus to actually just being born during the pandemic and all of the structural components. And from what I have read, it does not seem that exposure certainly to mild or asymptomatic COVID, COVID prenatally seems to be increasing rates of developmental delays. That seems to be the general consensus as of right now. But that because of the systemic factors, I think that that those, particularly for people who might already have been at risk, might have increased the risk. I think the really important part, though, I think the take away and the separation of that from politics or from whatever strong feelings that people might have about policies is just that we need to support families and children regardless of what the causal mechanism is. Right? So families and children deserve and are entitled to support for participation in society, to support child language, to support child development broadly. And so there are lots of things that we know that we can do to help children develop language. And so I think that is really where I feel kind of the empowerment to to act is just that, okay, if this child has a language delay, we can debate about whether the environmental factors during COVID or, you know, social interaction opportunities might have been part of what contributed to that. But what really matters is that we get services, we identify that the child needs some extra support and we get them the services.

[00:13:11] **Speaker 1** So I want to throw out a few theories that I know comments are on Facebook.

[00:13:18] **Speaker 2** And.

[00:13:18] **Speaker 1** Twitter and feel free to shoot them down as hard as you want.

[00:13:22] **Speaker 2** Okay.

[00:13:23] **Speaker 1** But there is I'm sure there's going to be people who say, oh, this is caused by vaccines. Any evidence of that?

[00:13:28] **Speaker 2** No.

[00:13:29] **Speaker 1** This is caused by people wearing masks.

[00:13:32] **Speaker 2** No, no. And in fact, you know, a lot of just know just now. Yeah. That's the main takeaway there.

[00:13:42] **Speaker 1** Caused by the number of parents who were depressed, distracted and looking at their phones instead of talking to their kids or interacting with their children.

[00:13:48] **Speaker 2** Well, that's actually a multifactorial situation. I would not say it's caused by any of that. I would say that things like stresses on caregivers like mental health can be something that can make it harder to have high quality interaction with your child, which is one of the factors that might contribute to language development. But the thing is, not one of those things in and of itself is going to cause a language delay or disorder.

[00:14:18] **Speaker 1** Yeah, So when we're talking about the kids that are right now entering the school system or experiencing some of these these these issues, is it most likely that they would have had some sort of speech issues to begin with and they're now worse or they're kids that otherwise, in a hypothetical normal scenario, would not have had any speech language delays, but now have some maybe mild.

[00:14:44] **Speaker 2** Yeah, so that's a great question. We don't have the answer to that because we don't have the counterfactual. So this is like one of the things that, you know, is a is is a challenge in science. Even if we had been in a. In an alternative universe. If we had been able to randomly assign people to conditions and control for all of the other things that might be causal, we still wouldn't know what would have happened if, you know, personnel had been assigned to the other condition. My general sense is that children are pretty resilient language learners and in some of the cohorts that we're seeing and depending on when the measurements are taken, because remember, some children might have been born right at the beginning of 2020 and they might have had a very different experience than a child that's born in 2021. And lots of and that's even taking apart individual variability and state level supports and all of these sorts of things. The data coming out of different countries look different because of the way that countries have handled this. So I think that would the children most of my my hypothesis would be that many children who were already predisposed perhaps to having a speech language delay might have just had some additional stressors that that made that more apparent, perhaps sooner or something like that. But I don't think we know that children are pretty robust language learners in with a lot of different barriers that they can encounter. So, yeah.

[00:16:26] **Speaker 1** What is the long term prognosis, prognosis for for these kids that have experienced these setbacks? Do they catch up over time or are these some sort of permanent issues? I mean, there's also I know there's a ton of different variables that goes into that, as well as the quality of the service they get and what other impacts happening to them.

[00:16:46] **Speaker 2** So when we think about early language development, when we're talking about children in that birth to five period, we are often talking about a language delay. And part of the reason we use that is that their language trajectories aren't super stable until four or five, at which point they might get a language disorder diagnosis If they persist in having difficulties with learning and using language in terms of the long term prognosis. You know, there are especially I think it's going to be improved by early intervention. It's going to be improved by early identification. It's going to be improved by, you know, supports for families. So there's a lot that we can do to support that. I am sure that we will be looking at longitudinally following children who have had these experiences and, you know, longitudinally following them over time. But again, I think that the biggest determinant will just be the supports that are available for people.

[00:17:53] **Speaker 1** And that that kind of leads into the next set of questions. And that has to do with special education funding in Wisconsin, because most of the time, once they enter the school system, it is the schools responsibility. Mm hmm. And from everywhere we've spoken to, the staff are overwhelmed with the increasing caseload, the severity of the caseload, which means some of the time and attention gets shrunk for each individual student. Yeah, so does the state. And this is might be a tough question to answer, but does the state have the capacity to handle this?

[00:18:24] **Speaker 2** Well, I. That's beyond my scope, probably. What I will say is what would be the most supportive long term is to really help support early identification and early intervention, because the earlier we can intervene, the better the long term prognoses are. And for some children who might who might just need a little bit of a boost in the early intervention period and might be might not need to receive more services when they when they hit school. Like that's the way that we can make the most efficient use of the resources that we have. And certainly continuing to advocate for the needs and expansive, expanding the resources would be really important to that.

[00:19:13] **Speaker 1** So if we have more kids with delays or that become disorders and they're entering a system that's already a little overwhelmed, does that lengthen the amount of time it may take them to reach their peers?

[00:19:26] **Speaker 2** So that's really going to depend at the individual level. So there are there are more children who have language delays then go on to persist to have a language disorder. So it's not it's by no means a 1 to 1 pathway. And so and there are certain risk factors that that we can use to try to to anticipate some of that. But some of it. We just don't know. There's growing awareness around developmental language disorder, which is, you know, roughly like a 10% prevalence. So we think about like in a 30% classroom, like a two kids in a classroom kind of thing. And that's more of something that like a school age diagnosis or, you know, at least 4 to 5 year olds would get. I don't think with with developmental language disorder, we typically see the need for support across the lifespan. So it is not something that goes away in adulthood, but outcomes can be improved a lot through special education supports and things like that. So I think one really important thing to think about is that in speech language pathology, it's not it's not all going to be the speech language pathology services. So it's really the social support infrastructure, because if the barrier to the child's learning is a resource related one or a a need for social support, then that's not that child having a speech language disorder. That is the child needing social supports infrastructure. And so I think that it's really a multi-pronged approach. And thinking about addressing it just through special education services is not going to provide the only answer.

[00:21:35] **Speaker 1** So have you seen have you changed what you're looking for in your research because of this increase or because of COVID and how the ramifications of that? Or is that altered anything you've looked at?

[00:21:49] **Speaker 2** I have not altered that. So what what has changed in our research has been that we pivoted to a remote model of data collection and intervention. So we do everything remotely now via phone or zoom. We can do all of our assessments that way. We do our coaching that way, which is more flexible. It's been really great in terms of providing equitable access to participation in research as well. And so that is one thing I would not say that we have, that any like rates of speech, language delay have have have influenced our research. What I think is that because our research focuses on health disparities a lot and in systemic inequities, that that has been exponentially aided because of differential experiences during the pandemic and that has influenced the kind of the direction that I see going forward in our work and the need to have a very collaborative program so that we are providing social supports for families or figuring out how to improve access to that in combination with early intervention. It's very hard to focus on early language intervention when you're experiencing housing insecurity, food insecurity, all those sorts of things.

[00:23:18] **Speaker 1** So where what do you use your research for? Are you trying to influence policy then to help create more of a structure, or are you just trying to give the information back to caregivers who have the capacity?

[00:23:30] **Speaker 2** Yeah, all of the above. So we I, I see direct clinical implications for what we're doing as well as policy implications. So, you know, part of what we look at is to say, okay, what are the things that make intervention work for some people on an individual level? So we look at things like caregivers, knowledge of child development, their self-efficacy, perceptions, how much do they believe themselves able to effect change in their child's development and how that influences the quality of their interaction with the child and how they benefit from the caregiver coaching? We also develop new interventions. So the first line that I was talking to you about was we have a project called Koala that we're working on that's related to that, looking at these caregiver characteristics for children who have a language delay with or without autism, two and a half to four. And then we also have this kind of novel intervention development through this community based research. So I am I also speak Spanish. It's my second language, and I work with families who are English and or Spanish speakers. And so our duet research is a community based project that really focuses on primary prevention. So Koala is working with families whose children have existing language delays or disorders. Duet is really a primary preventative kind of light touch. You can think about it like a vaccine. See in or something at that public health model. And then the next thing that I am really interested in looking at is how policy and access to services and how families are receiving social supports might influence how they're able to participate in or benefit from early intervention. And so I think like all of those things are really important because it's really important to me to have a direct working relationship with families and to have an ear to the ground and to to have that ongoing relationship. But we also know that there are systemic level barriers that without some change will make it that make it hard to to improve beyond a certain point.

[00:25:45] **Speaker 1** So if you will put a put a bow on this for me.

[00:25:48] **Speaker 2** Yeah.

[00:25:48] **Speaker 1** What what is the ramifications for kids that don't get the services they need? What is the long term impact on their ability to learn, their self-confidence, their ability to go out, new member of society, all that, all that stuff?

[00:26:05] **Speaker 2** Yeah, well, you know, early language skills are one of the best predictors of academic, social, vocational outcomes. So not receiving the support that that they need for children who have speech language disorders is can be really detrimental to lifespan outcomes. You know, you think about participation in the workforce. Think about health literacy. Right. All of these things are really critical for outcomes across the lifespan. So and then I would also just say that, you know, we have a policy in this country to provide free and appropriate public education and to make sure that we are providing the individualized supports that children need to access the curriculum and to participate in that intervention or in that in their education. And so I think that we owe it to our future. We owe it to the children who will become the adults of the future to ensure that we are providing equitable access to these really valuable educational experiences.

[00:27:26] **Speaker 1** So I want to end, but you talked a lot about the health disparities through. Yeah. During COVID and a lot of those focused on age and morbidity and obesity, all those other things. How many have we really found that affected primarily young kids, which doesn't seem like as much focus went to them as it did to, you know, someone who's had cancer or someone who has had heart issues or.

[00:27:52] **Speaker 2** Mm hmm. Yeah. So I think that's a great question. When we think about health disparities, so what you're talking about related to some of the socio biological characteristics that might make a person at higher risk for four negative outcomes from COVID are a little bit different than the health disparities that I'm thinking about or that related to my work. So what I'm thinking about is that different people have very different access to things like high quality child care, to secure housing, to food, to the ability to stay at home with their child when, you know, a school was closed or a daycare, it was closed. And so the additional stressors or even just in a work environment where you have to go and be at work. Right. Essential workers. We've talked a lot about this during COVID. There's then an increased potential for getting sick, which then might affect how you are able to interact with and provide for your children. So I think it's more what I think about is just that kind of getting back to that same storm, different boats idea is that caregivers had very different experiences related to how much the pandemic and and quarantine impacted their daily lives and their economic standing and their employment. And that has direct effects on the children for whom they're providing and for whom they're caring. Yeah.

[00:29:37] **Speaker 1** Anything else you want to add along these lines?

[00:29:49] **Speaker 2** I think the only other thing that I wanted to mention is just that that another like myth that sometimes is circulating that I always want to dispel is just that bilingualism is great and learning multiple languages is wonderful and has educational advantages, and that part of providing appropriate services is providing culturally and linguistically valid services. So that's a question I get a lot.

[00:30:24] **Speaker 1** So I'm maybe confused. Are you just billing it as good or you're saying it?

[00:30:30] **Speaker 2** No, no, it is good. I am saying it is good. I am saying it is good. There is. Yes. No, no, no. That there sometimes people ask me like, does does learning more than one language cause a language delay or is it bad for language learning? And it is not learning more than one Language is great. It is supports medal, linguistic skills and children who have developmental disorders are also very capable of learning multiple languages. So we just always want to support.

[00:31:06] **Speaker 1** That makes more sense with words. Yes.

[00:31:08] **Speaker 2** Yes. I'm glad you clarified.

[00:31:10] **Speaker 1** Can I get you to say and spell your name and give you a title just so I have it all correct? Yes.

[00:31:15] **Speaker 2** My name is Rebecca Alper. R. E. B. E. C. C. A. L. P. As in Peter e. R. I am an assistant professor and a principal investigator at the Weizmann Center and also a speech language pathologist. Excellent. Great. Thank you. Thank you.

[00:31:34] **Speaker 1** So what we would like to do next is we're going to put a.