Welcome to Conversations About Care, a podcast for pediatric clinical providers.

Hi, this is Sandy Hassink, and I’m the Medical Director for the Institute for Healthy Childhood Weight at the American Academy of Pediatrics. In this conversation I am joined by Jennifer Groos who is a lead physician for the 5-2-1 Healthcare Project that United Way of Central Iowa and the Iowa Medical Society. Today we’re discussing the importance of weight for length measurements in our youngest patients. It’s important in early obesity prevention, how to know when to intervene, and more. I hope you enjoy our conversation.

Sandy: So, Jen, I’m so glad you could be with me today to talk about a very special group of patients, our littlest patients, our infants and young children and how we measure their growth and track their growth. I wanted to just start by asking you, we track weight for length and why are we doing that and why is it important in primary care?

Jennifer: I’m excited to be with you today and this is a great topic to talk about. We track weight for length because the rate at which children grow is really important at all ages, and especially in their youngest phases of their life. So, we track weight and length and talk to families about what it means to look at a growth chart and what we’re looking for when we’re looking at those growth charts. We really talk to them about where those measurements are falling on those growth curves and what those curves tell us about that child’s risk of developing certain health conditions.

Sandy: You know I remember when I first started plotting weight for length. It was easy to plot the weight on the weight curve for the birth to 24 months and the length, and when I turn the paper over and saw that weight for length chart, sometimes that seemed a little daunting. Are you finding that people are easily plotting the weight for length or you have to do a little training in clinic?

Jennifer: I think that we are really fortunate to have the electronic health record that does much of that. That used to be such a manual task and I think that it’s actually easier than it used to be because now we … especially in those older kids. I’m so used to looking at their weight and then their length and then their BMI. It’s just kind of an automatic process, but when I’m looking and working with younger children it’s really a parallel process. So, it’s the weight, the length, and then the weight for length. I think that it’s got easier as time has gone on.

Sandy: I’m so glad to hear that and just as a reminder that although the WHO growth charts come with BMI’s for children under two, the CDC is still recommending that we plot weight for length on the WHO charts for children under 2 and to know that because we focus so much on BMI for older children, that the weight for length has us just rolling into that practice for the younger kids, is reassuring. How do you integrate that measuring and reporting out into your workflow in clinic?

Jennifer: So, when we’re sitting down with families and they’re always interested in knowing where that child falls on that growth chart that that is usually a process that the providers in our clinic go through with the families. We talk about where their weight is and what the percentile means. Then we move onto the length chart. And then on the weight for length chart, we’ll talk about how this tells me how your child’s percentage is tracking on their percentile when we’re comparing their per their length. If it’s elevated, I kind of talk about how do you think … the next questions is how do you think about how your child is growing? That gives me a point or a pause to figure out does this family feel like their child is growing adequately, inadequately, or too quickly. A lot of times its surprising to learn where that family feels that child … how they’re doing on the that growth chart. So, that pause and that ask about how they feel like their child is doing on that growth chart or how they’re doing with their growth has really been helpful for me to kind of meet the families where they are at and then to know where to start the conversation moving forward.

Sandy: You know that’s so important to get the families involved right away. We know that a lot of families look around at their child and the other infants and young children they see. They may feel that their baby is growing absolutely normally when we’re worried that the weight for length is above the 95th percentile. So, we know that families may have a different read on it than we will and it’s really important, as you said, to get them involved right away. We know that there is a real concern just as we look at the BMI of children above the 95th percentile and know that they are at risk for obesity, they have obesity, and they’re at risk for later obesity. We know that children had a weight for length greater than the 95th percentile when they were six months old also had a weight for length greater than the 95th percentile at the 24 month old, they were more likely to maintain that high weight for length. So, we know that looking early is really important to try to assess what the families perception of the weight is and also what’s going on in that little child’s life.

Jennifer: Exactly! That’s really important information to share with the family. As you mentioned, that length between where they are at on the growth chart and the impact that could have on their health, and I think that that part of the conversation is when you can really connect with that family around how do we keep those children healthy. That lends itself nicely into the conversation about what things we can do to build healthy habits to keep that child from developing those comorbidities that we worry about.

Sandy: How do you find it Jen, when you start that conversation and you start talking about later health problems? How are you finding your families responding to that?

Jennifer: I think that when we’re looking at the growth chart, every family wants the best for their child and so when you can really connect with them and meet them where they are about where they feel like their child is as far as their growth, and understand their perspective. Then it’s easier to gage how to approach the conversation about next steps. So, a lot of times when I’m looking at the growth chart, like I mentioned, we say I talked to them about where the child is at on the growth chart, what are your thoughts about how your child is growing, and then I tell them that there’s information about where they’re at on the growth chart can relate to what health risks they may have as they get older. If their weight for length persists in this range, it can put them at risk for type II diabetes, high blood pressure, high cholesterol, kidney and liver problems. Is there anyone in your family that has any of those conditions? That gets them thinking about their family history and then I think shifts that focus away from that growth chart and classification to really their health. Once they start to think about if my mom has Type II Diabetes, I’ve been told that I’ve got pre-diabetes, they start to realize that they want to make changes to be able to prevent this same experience for their child. Then they are really open to having those discussions in a way that before I started approaching the conversations in that method, it wasn’t received quite as well. So, that’s been really helpful in my practice and in my experience.

Sandy: Jen, you just said two extremely important things. The shift from the curve, you’re explaining the curve, which is important to health implications of the curve, and then the shift from the general health implications of that curve, to the specific family history and specific potential concerns of that family. I think those two shifts from the growth chart that you’re looking at to health concerns to the specific family history and the concerns of the family are really important. Now you have the family really understanding that you’re concerned about the child’s health, but you’re concerned about their individual situation and their individual child. You now have personalized this discussion and I think that’s … I just want to emphasize that because I think that’s so important to families. We hear over and over again that the families want to have an individualized, personalized discussion. I think those two shifts are really worth focusing on and remembering.

 I have a question because often I would ask my families just to go through their day as a way of understanding their eating and feeding schedules, their potential tummy time or activity, and the different caretakers. Do you find that that’s helpful to you as well or do you have another way to kind of gain that information?

Jennifer: I think that’s extremely helpful, especially in those younger children when you’re seeing that they are crossing percentiles, taking pause and taking the time to kind of … what does a day in your child’s life look like? Who is doing the feedings, who is in the home when they are getting the feedings, are they attending daycare or are they being taken care of by a grandparent? All of those things are really important and it’s so variable the responses. Then kind of the information that I think families find most useful in their individualized situations. So, that is an approach that I found really helpful as well.

I think that in older kids, using a questionnaire such as the Healthy Habits Questionnaire or like the Family and Nutrition and Physical Activity Questionnaire can be really helpful, but in this younger age category, I don’t know that we’ve got great questionnaires that have been validated to this point, but I think they are coming. So, I’m excited for that point to be able to help streamline that process as well.

Sandy: I was always surprised when a family would begin to go through their day that sometimes they were surprised at what was happening in their child’s day. When they reflected on maybe the family or childcare provider and what food they were giving the baby or the child and what was happening with grandma. So, I think for the family often that period of reflection on what is actually going on each day also seemed to be helpful as a way of getting them aware of the whole situation and kind of emphasizing their role as being sort of the captain of that ship of what was happening to their baby. So, I also found it very helpful.

So, when you begin to think about this approach, and maybe you’ve asked the parent about the day of the child, how are you focusing on what items to key in on in that individual child situation?

Jennifer: I think that it’s really variable. Sometimes during the course of the discussion some low hanging fruit or some things that might be easier to address and better received by families kind of come to lights, and so we’ll address those issues first. Sometimes I’ll ask families, “Are there certain things about your routines or your family or your child’s nutrition that you feel like you would like to focus or have questions about?” So, sometimes asking that family if they have ideas is helpful as well.

Sandy: So, do you have thoughts about some of the important things that you sort of observed in talking to these families of young children that might be frequent issues for them or areas where they want to focus or are areas that pay off to focus on when you’re talking about rapid weight gain?

Jennifer: Absolutely! I think that one of the resources I found most helpful when I started to think more about how do I help families earlier than that two year old period was building a foundation for Healthy Active Living on the Institute for Healthy Childhood Weight website, and a lot of those mini-modules were really helpful in kind of helping me think through really practical ways that I could engage families in these discussions. One of the things that really stuck with me were that there were these key periods of time where I think there is some great anticipatory guidance that can be really helpful for families as far as getting ahead of issues. So, thinking about talking to families about responsive feeding right away at that two-week visit because I won’t be seeing them until their two months. So, talking about those hunger satiety cues and how do they soothe their baby in other ways if it’s not hunger, and then also getting ahead of that conversation about starting solids. We used to recommend starting solids at the two-month visit because many families were starting to hear that their child should start to eat solids at four-months. So, how do I help give them that information sooner so that by the time I see them at four-months they haven’t already started down that road. So, really thinking about those key periods of time that I can help give families information when its timely and can help get that child started on those healthy habits. Talking about starting family meals kind of at that six-month period of time and thinking about even though your child is going to be eating pureed food for the next few months, it’s really a great time to take the time to think about what your family is eating because soon your child is going to be not only watching and saying things that they are seeing, but doing what we are doing as well. So, how can we optimize our nutrition that we as a entire family are taking in because that’s what our child is going to be starting to eat when we’re nine-months. So, I think those key periods have really been helpful for me in engaging my families around these topics.

Sandy: You know it’s so important and there has actually been a few studies that have showed that the emphasis on responsive feeding and parenting actually minimize the amount of children that had rapid weight gain. Minimizing the use of feeding for non-hunger related fussiness, responding to hunger and satiety cues, and self-soothing to sleep were all things that in studies have shown that that responsive approach does help to reduce that rapid weight gain. What about the child you’re seeing and maybe they are nine-months old and they are above the 95th percentile for weight per height? We don’t have an official definition of obesity in children under two, but that’s a range where we are certainly becoming concerned. What things have you seen that are common that people are doing that might be targets for intervention?

Jennifer: I think that sometimes when we transition off of the puree foods and onto table foods, I think that the fruit and veggie consumption, in my experience, seems to go down. I think that in part of it is due to concerns of choking hazards, and so the Institute on Healthy Childhood Weight also has a great new finger foods poster, which I think has been really helpful in giving families and parents ideas about how can I prepare fresh fruits and vegetables in a way that is safe and I’m comfortable offering them to my younger child. So, I think one the fruit and veggie consumption is something that’s important when making sure families are being mindful that they’re incorporating those fruits and veggies in their own diet so they are modeling good behaviors. Then two, how do we get those tools to know how to prepare them in a safe way for their younger child as well?

 The other thing is the introduction that bridges beyond formula. So, sometimes families will be introducing juices at that period so making sure that I’m ahead of the curve in telling families about the recommendation to delay offering juices to children until they are at an older age as well.

Sandy: Jen, I’m always surprised when I see data on sugar sweetened beverages and very young children. I think that we all need to remember that those beverages sneak in and in fact, data would show that by nine-months old the child is eating just like the family, less portions, but in the same patterns that the family is eating. So, we know that fruit and vegetable consumption goes down and sugar beverage consumption goes up. As might some of the other snack foods go up in their lives. There are some convenience foods that parents like to use like little packets of food and pouches of food. Do you have any feelings about how you’re dealing with that semi-solid food in pouches or the little snack packages? Is there any counseling that you give parents about that?

Jennifer: Yes, that’s a great topic to talk about as well. I do think that that convenience and that snacking behavior really comes out around nine-months. They move from the little puffs and then a lot of times they have a lot more of the snackie crackers in their diet. So, a lot of times talking about the importance of getting kids used to a variety of flavors and making sure that snack time often includes a fruit or vegetable as well. That’s a great time to introduce it and parents are really interested in on how they can offer those more healthy snacks at that young age as well.

Sandy: Do you have any cases at the top of your mind where you notice something and intervene and can talk just a little bit about how that went for you.

Jennifer: So, I had a child in my office, a Hispanic patient, who around nine to twelve months I started to notice that the weight for length curve percentile was increasing. During the course of the conversation and the visit, we realized that grandma was providing much of the care for the child and planning many of the meals and taking care of the child throughout the day. She had been introducing Gatorade in a bottle to that child. So, we were able to talk to grandma about the importance because some of the older kids had been involved in some sports activities and had started to drink Gatorade. She had felt like it was helpful for them for their sports activates so thought that it would be helpful for the child as well. So, was really interested in what’s healthiest for my child and open to the suggestion of perhaps not offering Gatorade in a bottle. It was really interesting to see the impact that that had. By the next visit, we could see that there was flattening of the curve in that very short time frame. It’s interesting how many calories children can consume in those sugar sweetened beverages and parents are not aware of the consequences.

Sandy: You bring up such an important point and that also helps us focus on the role of the extended family in making sure that we understand what all the caregivers approaches to infant feeding are and there may be many different approaches within one family and one caregiving circle around that child. I think it’s really important to try to understand what each of the players is thinking and doing. As you said, the families really care about the children and grandma was thinking she was doing something that would be helpful. It’s important to just approach with a calm, nonjudgmental attitude about what everybody is doing and try to get everyone in the family and caregiving circle on the same page. Are there any other cases that might come to mind about something that you noticed and intervened with?

Jennifer: I think the other case was a child that we saw increasing again shortly after the introduction of solid foods and by a year it became clear that as they transitioned off of the baby food and the fruits and vegetables from that, there wasn’t a continued offering of fruits and vegetables. So, the diet became more of kind of a grazing patter and more of the higher snack foods and so we were able to talk to the family about opportunities to include set meal times so that the child would be hungry at meal times and then introducing then this great snack periods halfway between those meals that included a fruit and vegetable. And again quickly, that child’s growth chart showed improvement and a decrease in growth velocity in the weight for length curve.

Sandy: So, I think this points out the importance and also the rapid feedback that you can get when you make an intervention in a young child. As you said, between one visit and the next, making an intervention can really show that slowing of the weight gain and flattening of the curve. I think for everybody it’s very satisfying to see that they made a healthy change and can see the results so quickly. So, I think that makes it kind of fun when we talk about our youngest children. We see them so frequently that we can really see how changes improve their weight trajectory.

 We also look at weight for length in terms of under weight. I think we’re pretty keyed into that. Are you seeing much problem in your practice with underweight and do you have an approach for that?

Jennifer: Yes, I think the approach for underweight, the process that we take is similar to when we see an acceleration in that growth curve, really kind of taking a step back and asking the family what does a day in your child’s life look like? Who is giving the feedings, what types of feedings and beverages is your child consuming? Then we also think too about other medical causes that could be contributing to that. If it seems like the nutritional intake is on track.

Sandy: So, I think it’s important for us to remember how important the weight for length is in tracking the child’s overall health and that those questions that you ask when you see a decreasing slope or an increasing slope are so important and really encompass not only the child’s nutrition activities, but also the rest of their health. I think of one patient that I had at 18 months old who was gaining weight rapidly and turns out had the diagnosis of asthma and would wake up at night crying and then would trigger wheezing. The parents would feed her preemptively to keep her from crying and wheezing and prevent a wheezing episode. This was how they were approaching it, until we got to the bottom of the intersection of her asthma and her feeding, we didn’t understand what was going on, and when we developed different strategies to treat her asthma and to take care of the feeding, we were able to get her back on track. I think it’s important to think about the nutrition and activity, but also the overall medical condition of that child and the factors that may interact and influence feeding one way or the other.

Jennifer: Absolutely! I think that one thing that we often think about is screening for food insecurity is we see a flattening of that growth curve and that maybe if they’re underweight is making sure that they have access to nutritious foods. I think that’s also something that we are standardly doing in our practices now and that food insecurity and access to healthy food is important no matter where that child is on that growth curve. I think that for many families, connecting them with resources such as WIC that can give them nutritious food or programs in our state we have Double up Food Bucks which allows families to get double the benefits with their EBT card towards fresh fruits and vegetables. So, knowing about things that are in our community that can make it easier to offer nutritious foods to our families is really important to be able to offer.

Sandy: Jen, that’s always so important to ask about food insecurity and even more important in this time when we’re under a lot of duress with the pandemic. So, I think that taking care of our families, watching their infant, helping them watch the infant’s growth, making sure that they have adequate resources for healthy food are so important.

 So Jen, thank you for being here today to talk about weight for length and infant growth and feeding. I so appreciate your perspective and it’s been of delight to talk to you. Thank you Jen.

Jennifer: Thank you so much for the opportunity.

*Thank you for joining me today in my conversation with Dr. Jennifer Groos about weight for length. Please see The Institute website where we have listed the related resources mentioned in this podcast. Thank you very much.*

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