

## SUPPLEMENTAL MATERIAL

Supplementary Table 1. Perceptions of young children's body sizes; the complete sets of pertinent participant quotes.

Table Legends: Gp# - family group number; P - parent; G – grandparent.

\* = parent/grandparent of child with normal weight

\*\* = parent/grandparent of child with overweight

\*\*\* = parent/grandparent of child with obesity

### *Theme 1: Young children are 'pudgy' or 'big for their age', but not obese*

1.1 Gp03P2 (Father) \*\*\*: Yeah, I think personally, my son is a little on the heavy side. (...)But he, in my opinion, I think he's a little on the big side, but he's also strong as an ox, so how much is muscle and fat I don't know. You know, it's hard to tell when they're that age.

1.2 Gp07G1 (Mother's mother) \*: There are going to be kids, that are just by their DNA and genetics, that are a chunkier body build, stuff like that.

1.3 Gp11G1 (Mother's mother) \*\*\*: [My granddaughter's] not small... she's not fat but she's solid. (...) I never find her overweight.

1.4 Gp13G1 (Mother's mother) \*\*\*: [My daughter] was a larger child, she was never 'obese' or fat or whatever, she was never teased or anything like that.

1.5 Gp14P1 (Mother) \*\*: I think [my daughter] has got a big frame, she has big bones.

1.6 Gp01P1 (Father) \*\*\*: but [my daughter], unfortunately... she just is blessed where she is a little chunky at parts.

1.7 GP10G4 (Father's stepmother) \*\*: But if a child is just built bigger, then you need to let that go and just realize that's how a child is made.

1.8 Gp01P1 (Mother) \*\*\*: she's also getting really tall, but I have a concern that she's getting a little pudgier (...) She's pudgy, she is a little overweight and we're working on it.

1.9 Gp03G01 (Mother's mother) \*\*\*: [My grandson] has a little bit of a weight issue.

1.10 Gp10G4 (Father's stepmother) \*\*: I think he is a short little toddler. He is a little bit round.

1.11 Gp10G1 (Father's mother) \*\*: Our middle son, when he was in 4th or 5th grade, he was a little chunky (...) He was 10.6 [lbs] when he was born and just a super stout, robust baby the minute he was born.

1.12 Gp13G2 (Mother's father) \*\*\*: He's not overweight at all, he's almost skinny, but he's tall, he's a tall kid. He's always been big and tall for his age.

1.13 Gp16P1 (Father) \*\*: I think it's just, he's a big boy, yeah they are big for their age.

1.14 Gp11G1 (Mother's mother) \*\*\*: She is a big girl. She is solid and she's like 54 pounds. (...) But we're not concerned... she's definitely not fat or overweight... the doctor has never

been concerned about her weight.

1.15 Gp10P1 (Mother) \*\*: I think he has a good amount of weight on his bones. And he is normally big for his age.

1.16 Gp11P1 (Mother) \*\*\*: she has always been at the 90 or 100 percentile with her age group but in weight and always under in height. She has always been kind of short and stocky.

1.17 Gp03G1 (Mother's mother) \*\*\*: he's very big for his age. He's tall. People think he's six, he's only five.

***Theme 2: 'Baby fat' is cute and healthy***

2.1 Gp02P1 (Father) \*: she's got some cute baby fat but it's nothing to be worried about.

2.2 Gp05P2 (Father) \*: I think children should be nice and thick. (...) A healthy baby, nice thick chubby cheeks, chubby little legs, you know.

2.3 Gp05P3 (Mother's mother) \*: You know, she's got that little girl pudgy on her, that's so cute. Actually, I think a couple times this past year, I thought she might be a little underweight, because she didn't seem to have that little toddler pudgy.

2.4 Gp06P1 (Mother) \*\*: I don't worry about his weight right now, it's really hard at this age because I mean all of them are kinda pudgy.

2.5 Gp07P1 (Mother) \*: She's well within range, she's got that cute little extended abdomen of a toddler, you know.

2.6 Gp10G1 (Father's mother) \*\*: our kids were always in the 95th percentile... robust kids. I think he seems very healthy.

2.7 Gp13G1 (Mother's mother) \*\*\*: I think he's in the 50th percentile for weight and over a 100th for height.

2.8 Gp14P1 (Mother) \*\*: I think she is fine, she does have a little belly, but it's not anything I would worry about or say anything. (...) I think she is healthy, I think she is just a big strong girl.

2.9 Gp10P1 (Mother) \*\*: when he got chubby when he was younger, they [grandparents] just thought it was the cutest thing. You know... they are like... they just want to pinch his cheeks.

2.10 Gp11P1 (Mother) \*\*\*: Well we kind of joke about it because my daughter's kind of got the little girl gut.

2.11 Gp01G1 (Mother's mother) \*\*\*: she does have cute little love handles.

2.12 Gp10P1 (Mother) \*\*: I just think chubbier kids are cuter. So I try to keep him a little chubby.

2.13 Gp07G1 (Mother's mother) \*: [My daughter] was the only one, like I said that [she] was in the 95th percentile. She was the only one I ever wondered about, but she was cute chubby, that I

didn't.

***Theme 3: Children go through 'growth spurts' and 'stretching out'***

3.1 Gp10P1 (Mother) \*\*: I really liked how chubby he was. It was really nice to cuddle. And I didn't worry about that. Because I figure when he would grow, that weight would just stretch out.

3.2 Gp01P1 (Mother) \*\*\*: But I do also believe that children have hills and valleys. They are all going to grow at different rates and they going to go through the pudgy phase and then they just, you know they start doing this (makes expanding outward hand movements) and then they just grow like a tree, then they lean up.

3.3 Gp02G1 (Father's mother) \*\*\*: My son goes up and down, my 7 year-old, goes up and down in his weight...but he usually gets plump and then has a growth spurt and so then it evens out. So I don't worry too much about it.

3.4 Gp11P1 (Mother) \*\*\*: When she starts getting kind of chunky I start waiting for that growth spurt because if it doesn't hit soon I get worried and start watching what she's eating.

3.5 Gp12P2 (Father) \*\*\*: When they're growing, they grow up and they grow out.

3.6 Gp14G1 (Mother's mother) \*\*: I know sometimes kids pudge and then they stretch out.

3.7 Gp03P2 (Father) \*\*\*: by the time [my friends] graduated from high school, all of a sudden they went a foot taller, and I think all the width went to height.

3.8 Gp01P1 (Mother) \*\*\*: kids go through different phases and right now is a pudgy stage.

3.9 Gp11G1 (Mother's mother) \*\*\*: we've never been concerned when she goes through those eating phases because we know it's her growth spurt and it's not like she's gaining weight this way (out) growing this way (up).

3.10 Gp14G1 (Mother's mother) \*\*: I know when [my daughter] was in 5th grade, she got heavier, and then she stretched out in high school.

3.11 Gp06G1 (Mother's mother) \*\*: We can tell when he's about to go through a growth-spurt he gets that little teeny tummy.

Supplementary Table 2. Perceptions of the timeline of obesity; the complete sets of pertinent participant quotes.

Table Legends: Gp# - family group number; P - parent; G – grandparent.

\* = parent/grandparent of child with normal weight

\*\* = parent/grandparent of child with overweight

\*\*\* = parent/grandparent of child with obesity

***Theme 4: A high body weight becomes problematic later in childhood***

4.1 Gp02G1 (Father's mother) \*: I think that when you see kids that are very overweight at 5, 7 and on up, that there's something going on with their eating. I think that when you have small children, like babies, who are plump, healthy babies, that's a whole different story. But I think that when they're older there's something to it.

4.2 Gp10G2 (Father's father) \*\*: Someone with a child [my grandson's] age... he is just 3... I don't know what data shows. Is there any issue with childhood obesity at that age? I don't know. When they talk about childhood obesity, later on, because humans go through all these different growth spurts

4.3 Gp01G1 (Father's mother) \*\*\*: I think she is probably okay right now but if she continues on the growth pattern that she's going she's going to be an obese little girl and I think that's sad because kids make fun of kids when they are growing up and they're heavy.

4.4 Gp01P1 (Father) \*\*\*: at that young of an age I don't think it really matters. (...) I would say (weight matters) when they hit junior high or middle school. It probably, that's when they're, that's as a girl, as a guy I don't think we really ever care.

4.5 Gp01G1 (Mother's mother) \*\*\*: when they [obese children] get to school they're going to be teased (...) they're going to be the last ones picked for teams in school.

4.6 Gp13P1 (Mother) \*\*\*: I have one friend whose 11 year old is starting to get really chunky... my friends and I have that hard conversation with her: "(...) Look at [your son], he's going to get made fun of at school and he's starting to get really fat, and you need to watch what he's eating."

4.7 Gp15G1 (Mother's mother) \*: as he starts to enter the schooling system that [weight] isn't an additional emotional piece of baggage that he has to carry... being ostracized in the area or personally feeling like different.

4.8 Gp13G1 (Mother's mother) \*\*\*: [His mother] has a pediatrician that is particularly in-tune with larger children, and he's been able to make her aware of possible pitfalls in the future. The importance of getting in to school, getting socialized, cause he's always going to be the big kid.

***Theme 5: Children's body weight becomes problematic when it affects their activities or health***

5.1 Gp03P1 (Mother) \*\*\*: I still feel like it limits him, it makes him tired quicker, things like that. And I wish that that was not the case, I wish things were a little more effortless and things like that.

5.2 Gp11P1 (Mother) \*\*\*: Her doctor has always said that she's very healthy; she's really bright and wants to learn everything and she's still very physically active. (...) And so that has encouraged me that her weight is okay and her doctor has always said that she's just fine.

5.3 Gp05P1 (Mother) \*: if the weight is causing problems and issues in their body and ... then that's a problem.

5.4 Gp08P1 (Mother) \*: If she starts getting like, even more heavier, where I'm noticing maybe that she's depressed, or gaining weight more, or where if I see it affecting the way she looks at herself or her behavior with other kids, her activities, then I would be concerned.

5.5 Gp10P2 (Father) \*\*: If a kid is too fat to do much then it is not going to be healthy.

5.6 Gp01P1 (Father) \*\*\*: I think if they are happy within themselves and they're being active, I don't think it's really a concern.

5.7 Gp14P1 (Mother) \*\*: As long as they are healthy [weight is not an issue]; if you can visibly see that a child is overweight, and not getting enough activity, then that would matter.

### ***Theme 6: Obesity becomes problematic in adulthood***

6.1 Gp01P1 (Mother) \*\*\*: I do think that a child's weight matters. Just because you don't want them to develop unhealthy habits early because it's going to follow them for the rest of their life.

6.2 Gp01G2 (Father's mother) \*\*\*: I don't like seeing a child that age to start out being obese. It carries on with them so... I worry about healthy eating with them a little bit because of that.

6.3 Gp02P1 (Father) \*: You're setting the foundation for what your body's going to be like as an adult.

6.4 Gp06P1 (Mother) \*\*: what motivated me is looking at my child and what I want him – who I want him to be in 25 years as a young man.

6.5 Gp10G2 (Father's stepfather) \*\*: If a child is not getting proper nutrition, especially during certain critical stages, you can have all kinds of long lasting effects, and yes that does speak to weight, certainly.

6.6 Gp13G2 (Mother's father) \*\*\*: I think if they are becoming obese and overweight, and are inactive, that's not a good place to be as a child. *Why?* Because then they are probably going to have more trouble as an adult, if it's already manifesting itself at a young age.

6.7 Gp14G2 (Father's mother) \*\*: I think [weight matters] because what they learn as a child can carry on through their life. What they learn to eat.

6.8 Gp16G1 (Father's mother) \*\*\*: I think it's not just your weight as a child but it goes with you your whole life, if you struggle with weight as a child then you probably will your whole life.

6.9 Gp06P1 (Mother) \*\*: we are more concerned with lifelong patterns and habits, because... they are going to take all those habits into adulthood.

Supplementary Table 3. Perceptions of parental responsibility and blame for childhood obesity; the complete sets of pertinent participant quotes.

Table Legends: Gp# - family group number; P - parent; G – grandparent.

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***Theme 7: Parents have control over children's eating, physical activity, and body weights***

7.1 Gp01P1 (Mother) \*\*\*: We're the ones that are solely responsible for their food that goes into their mouth, how much food goes onto their plate, and what their activities are. (...) If they have some thymus gland issue, or whatever, then obviously that's going to be out of your control but you're going to be looking to a doctor to get it back under control.

7.2 Gp01P1 (Father) \*\*\*: the parents and grandparents have control of what the children eat.

7.3 Gp02P1 (Father) \*: I think with proper feeding and keeping the proper foods in the house you can control the weight. If you have a bunch of snack foods and junk food all throughout the house and people sit around and watch TV and eat food, you're controlling the weight there and not in a good way – you're going to get heavier.

7.4 Gp02G1 (Father's mother) \*: I think that if you buy a lot of junk food and that's what you have: soda, chips and things like that... and that's what your child is mostly eating, and they're getting overweight from that, then yes, you have a lot of control.

7.5 Gp04G3 (Mother's mother) \*: Genetics are a factor, but not strong enough to be above food and activity levels. I think it's completely manageable no matter what if you are making it a priority and taking your kid to the doctor and following good nutrition then I think it will be an acceptable weight, unless there is a medical problem but they should be able to figure out if it's a medical problem.

7.6 Gp06G1 (Mother's mother) \*\*: Just make them [fast foods] a treat, a special treat. Not because you are tired and don't want to cook, because then that becomes too easy for them.

7.7 Gp09G1 (Mother's mother) \*: I think if you sit down and eat as a family, you're not sitting in front of the TV feeding your face, so you're going to limit the amount... you're talking so you're not eating as much.

7.8 Gp13G1 (Mother's mother) \*\*\*: Yeah, a child's weight is easy to control, if you control what goes in and out of their mouth.

7.9 Gp14P1 (Mother) \*\*: She does like to eat, you could hand her a bag of cookies and put her in front of the TV, and she might sit there all day. Or she might not, I don't know, I've never done that. I could see if some parents were lazy, that might be an easy option. I think parents have a lot of influence on the weight of the child.

7.10 Gp13P1 (Mother) \*\*\*: They (parents) need to monitor what their child's eating and make

sure they're being active.

7.11 Gp04G2 (Mother's father) \*: I see a lot of kids just go and play their computer games and TVs sitting down eating chips, and that's not the kid's fault.

7.12 Gp09P1 (Mother) \*: three year-olds should be running around, they should be active and they shouldn't be sitting on the couch eating Cheetos all day. So that's not a very healthy lifestyle and to each their own with parenting but in my personal opinion, I think it can be controlled.

7.13 Gp12G3 (Father's mother) \*\*\*: If you are active, the kids will be active. If you are into nutrition, the kids will be into nutrition.

7.14 Gp12P2 (Father) \*\*\*: There are some genetic factors. In terms of parents directing nutrition and activity, they have probably 95% control.

7.15 Gp15P1 (mother) \*: some kids will be more susceptible to gaining weight than others (...) but I think it's totally controllable what you're going to feed them.

***Theme 8: The parents of obese children are blamed by themselves and by others***

8.1 Gp04P2 (Mother) \*: Honestly, when I see kids that are incredibly overweight I think it's child abuse, it really upsets me.

8.2 Gp05G3 (Mother's mother) \*: Sometimes I see heavy parents who don't seem to exercise, and don't seem to eat right. And I see their children, and I say, "Oh my gosh, they are passing that down to the next generation."

8.3 GP10G4 (Stepmother of the father) \*\*: They [obese children] are trying to get some safety net through food because they are neglected by their parents or grandparents.

8.4 Gp13P1 (Mother) \*\*\*: If I had a fat kid, it would be looking at me every day, "I'm a failure. I'm doing something wrong."

8.5 Gp04P2 (Mother) \*: I think most adults who are overweight can probably attribute it to their parents.

8.6 Gp11P1 (Mother) \*\*\*: I hate those parents who are like, "Well, she'll only eat at McDonald's." "No! She won't. You let her only eat at McDonald's. Or you let her only eat fruit snacks."

8.7 Gp13P1 (Mother) \*\*\*: you see these kids that can barely move, and it's like how do you not be judgmental about that, because you look at the parent, and they look like a miniature of their parent.

8.8 Gp13G2 (Mother's father) \*\*\*: to me, seeing an overweight six year old, it's like what is going on here? I think it's the adults, the parents, guardians, are the ones who have the most effect on that.

8.9 Gp11G1 (Mother's mother) \*\*\*: if I were to see my child gaining weight and being lethargic

and had no interest... [I'd] say, okay, I've messed up and I've got to fix this now... because I wouldn't want them to spend the rest of their life having to be on *The Biggest Loser* or something at 400 pounds because I was too lazy.

8.10 Gp03P1 (Mother) \*\*\*: They [medical staff] kept asking me what I was feeding him because he was getting so chubby (...) I kept thinking, "What am I doing wrong?"

Supplementary Table 4. Perceptions of appropriate contexts for speaking about preschoolers' body weights; the complete sets of pertinent participant quotes.

Table Legends: Gp# - family group number; P - parent; G – grandparent.

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***Theme 9: Parents and grandparents do not discuss preschoolers' body weights with them, unless the children raise the topic***

9.1 Gp01G1 (Mother's mother) \*\*\*: And with [the child], she steps on the scale and she knows she weighs more than her brother but we've never, I've always told her, "Look at me, I'm fat, you're not fat".

9.2 Gp03P1 (Mother) \*\*\*: I have never talked to him about being heavy, but like, a few weeks ago he talked about being fat, and I don't know where he got that from, like another kid, or if he saw it on TV, I have no idea. But he is kind of aware of it, but only on kind of a surface level.

9.3 Gp13G1 (Mother's mother) \*\*\*: He knows that he's taller than most. Probably more than anything, he's probably tired of hearing that he's bigger, [he says,] "It's not my fault I'm bigger, I'm still only five years old".

9.4 Gp09P1 (Mother) \*: I don't like this but she does have a fascination with my scale—she doesn't know what the numbers mean but she likes to get on there and I'll be like, "Oh my God, you gained a pound!" and she'll get excited (...) but I think she's still too young to know what (body) image is.

9.5 Gp01G1 (Father's mother) \*\*\*: I think she is totally oblivious to it [weight] which is good in a way.

9.6 Gp02P1 (Father) \*: I don't think she's noticed any difference between the her and her sister... she's not really conscious of it yet, she is just her.

9.7 Gp10P1 (Mother) \*\*: I don't think he thinks about his weight. We never talk about it. It is almost like nonexistent, especially at his age

9.8 Gp05P3 (Mother's mother) \*: She's very comfortable with her body. (...) I think she's aware that she has a body, and that it functions. (...) But I don't think she's really aware of, "oh, I'm too skinny, I'm too fat."

9.9 Gp14P1 (Mother) \*\*: I don't think she thinks anything of it. She is comfortable walking around the house with no clothes on. I don't think she thinks anything of it, she has never said anything.

***Theme 10: It's acceptable to discuss how big or strong preschoolers are***

10.1 Gp12G2 (Father's father) \*\*\*: I can't say that it's [the child's weight] ever come up. Other

than to say that “he’s sure getting heavy”, in growing up.

10.2 Gp12G3 (Father’s mother) \*\*\*: We talk about how fit he is. He’s a very fit child.

10.3 Gp13P1 (Mother) \*\*\*: His body shape is very athletic, so we go, “Yeah, look at his muscles”.

10.4 Gp11G1 (Mother’s mother) \*\*\*: we talk about her weight and her height a lot because she’s a big girl, but not that we’re concerned.

10.5 Gp10G1 (Father’s mother) \*\*: We might have in passing commented to how healthy he seems. I mean, just something sort of innocuous and nothing really of concern.

10.6 Gp04P1 (Father) \*: We talk about how he's growing and how he weighed and checked up.

10.7 Gp04P2 (Mother) \*: He [the child] just thinks it’s a cool number. He gets excited to get weighed, “am I getting bigger?”

10.8 Gp04G3 (Mother’s mother) \*: it's been awhile since we've talked about it. We used to talk about it every time he came back from the doctor. The percentile he was in and such.

10.9 Gp16P1 (Father) \*\*: Oh we always talk about how big they are and they are always showing their muscles and stuff like that. We encourage them to eat their veggies so then they can get big muscles and then they want to show off their muscles.

10.10 Gp07G1 (Mother’s mother) \*: She’s [the child’s mother] never, that I can think has ever expressed any concern about her weight. She makes comments, like “Boy, I can tell [the child] must be going through a growth spurt.”

10.11 Gp09P1 (Mother) \*: They [grandparents] always joke and say that she looks just like Daddy because Daddy’s kind of tall and lean.

***Theme 11: Discussing preschoolers’ body weights can affect their self-esteem negatively***

11.1 Gp03P1 (Mother) \*\*\*: So when he [the child] asks me stuff like that [about his weight] we talk about being strong versus being big and not strong. So it’s all about trying to be strong and healthy so, that’s what we talk about.

11.2 Gp03P2 (Father) \*\*\*: By far I don’t think that parents should focus on it [weight] because then it will become a focal point for the child.

11.3 Gp01G1 (Father’s mother) \*\*\*: I wouldn’t sit with an iron fist and say, “You can’t have that because it will make you fat.” Because that effects their mental (wellbeing).

11.4 Gp01P1 (Mother) \*\*\*: I have a concern that she’s getting a little pudgier so I’m like, “If you’re going to do milk, please go down to the skim or 1%, lay off the juice or dilute it”, to start doing the things that she won’t notice.

11.5 Gp14G2 (Father’s mother) \*\*: I don't think a parent should badger them about their eating habits, I think there are ways to slowly and gradually make changes to lose weight rather than

pointing it out.

11.6 Gp14G1 (Mother's mother) \*\*: I think it's dangerous to make a child conscious of their weight in some ways. Especially when it's just a healthy thing. I think it's best to not say anything.

11.7 Gp02G1 (Father's mother) \*: I probably wouldn't want to talk about her weight too much because I do think that girls get set up in this world to worry a lot about that and that it could lead to some problems.

***Theme 12: Parents and grandparents do not discuss preschoolers' body weights with each other, unless there is a perceived problem***

12.1 Gp10G1 (Father's mother) \*\*: I think she [the child's mother] over worries [about] that a bit, personally, but I don't know because I haven't asked her.

12.2 GP10G4 (Stepmother of the father) \*\*: I never talk about his [the child's] weight.

12.3 Gp06P1 (Mother) \*\*: No, I don't think she [grandmother] thinks he's at an unhealthy weight. (...) She's never said anything to me.

12.4 Gp12G3 (Father's mother) \*\*\*: I think they [the parents] should be very pleased with it [the child's weight], but I don't know.

12.5 Gp12G2 (Father's father) \*\*\*: I don't think about what his parents think about his weight. I know [his father] is certainly concerned with nutrition

12.6 Gp07P1 (Mother) \*: I think that my mom probably would think it [the child's weight] doesn't matter. (...) [I]t's never something we discuss.

12.7 Gp01G1 (Father's mother) \*\*\*: I haven't yet [discussed the child's weight]. They [the parents] – I am not sure they consider it an issue yet.

12.8 Gp03P1 (Mother) \*\*\*: I always tell them like, "Please don't encourage this, or that because I don't want him eating it if that's ok". That sort of thing. So we have talked about it.

12.9 Gp03G1 (Mother's mother) \*\*\*: with [my daughter], I've talked about it [the child's weight]. (*Interviewer: Not with [her husband]?*) Um, [my daughter] and I have a closer, more intimate [connection], like [we can] talk about that kind of thing.