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Assessing Parents' Communication of Weight and Weight Management from Clinic to Home

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Abstract

Background: Family-oriented therapies are the gold standard of childhood obesity treatment, yet little is known about if or how information gathered by one parent from a health care provider is translated to the home. We assessed how families of children and adolescents with overweight and obesity communicate weight-related information received from their provider to family members not present at the visit.

Methods: Parents and children (9–18 years old, $N = 112$) completed the McMaster's Family Assessment Device Communication Subscale (FADc) and investigator-derived questions describing weight-related communication practices with family members. We used descriptive statistics to describe communication practices and separate logistic regression models to assess associations of communication practices with parent-reported FADc, child BMI *z*-score, child sex, parent BMI, household income, and site.

Results: Most parents discuss with other family members: their child's weight (60.4%) or weight management discussions with the child's provider (57.9%). Median parent FADc score was 2.0 (IQR 0.5). The most common facilitator to weight-related conversations was understanding what the provider said (95.1%). Higher FADc score (worse communication) was associated with whether parents ask other family members' opinions about weight information received from their child's provider [odds ratio 0.22 (95% confidence interval 0.05–0.99)]. Higher income was associated with many healthy communication practices.

Conclusions: Slightly more than half of parents discuss with family members what their provider said regarding their child's weight. More effort must be placed on aiding parents in relaying information from the provider to other family members in the home to encourage family lifestyle changes and alleviate childhood obesity.

Keywords: childhood obesity; communication; family; obesity prevention; primary care; weight management

Background

Obesity affects 12.7 million children and adolescents in the United States.[1] These children bear an increased risk of developing adult obesity and complications including heart disease, diabetes, metabolic syndrome, depression, and various cancers.[2] This public health crisis underscores the need to identify barriers to and facilitators of effective interventions for childhood obesity. Although current methods of obesity intervention in the health care setting include family-oriented therapies and motivational interviewing,[3] most visits at the primary care office take place with one parent/caregiver present. While family lifestyle changes are the mainstay of obesity treatment, it is unknown whether or how the information gathered by the parent/caregiver who attended the visit is translated to other caregivers in the home.[4–7] This extended line of communication becomes increasingly important to pediatric patients whose food and activity options are often controlled by caretakers who may not have direct interaction with the health care provider.

Communication has particularly strong associations with childhood obesity and may be a valuable tool to facilitate healthy weight management. Family communication greatly influences variables such as family function, adaptability, and cohesion, which are associated with

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response to treatment of childhood obesity.[7–11] Baiocchi-Wagner et al. demonstrated that both the quality and frequency of health-related conversations within the family impact attitudes that are directly associated with healthy behaviors such as diet and physical activity.[12] Herzer et al. found that families in which a child has overweight or obesity, compared with other chronic diseases, are at an increased risk for having poor communication as indicated by the McMaster's Family Assessment Device (FAD).[13] Additionally, family communication differs significantly among families of various demographic factors, including race and socioeconomic status.[14–16] Collectively, all of the aforementioned factors are important given that families who engage in unhealthy communication surrounding a child's chronic illness generate conflict and separation between family members—often to the detriment of the child's treatment.[17]

Studies also recognize the importance of patient-centered communication and empathetic phrases with regard to obesity-related conversations with health care providers.[16,18,19] The use of stigmatized verbiage, in conversations surrounding obesity and other chronic illnesses, is a barrier to open communication regarding disease process and treatment.[20,21] Patients with physicians who have poor communication skills also have 20% more risk of nonadherence to treatment regimens[22] and are more likely to switch physicians.[23] These lapses in patient–provider communication may lead to inadequately controlled diseases, putting children at risk of a continued cycle of obesity and worse overall health status.

Even with the understanding that communication in the clinic and in the home greatly impact health outcomes, little is known about the translation of information between these settings. The currently accepted weight management interventions for pediatric populations, including motivational interviewing and family-oriented therapy, rely heavily on communication between the provider, patient, and patient's family members. The quality and quantity of communication within a home regarding weight-related information received from the provider may explain some of the great variability in effectiveness of clinical weight management interventions.[5,6] Therefore, the aims of this study were to: (1) describe how families of children with overweight or obesity communicate medical knowledge obtained from their health care provider about weight, weight management, and lifestyle change with family members who are not present at the clinical visit; (2) identify facilitators of and barriers to communication about weight, weight management, and lifestyle change with family members who are not present at the clinical visit; and (3) assess how communication styles affect family communication regarding weight, weight management, and lifestyle change with family members who are not present at the clinical visit. We hypothesized that utilization of various communication practices will differ by patient and family characteristics, including child and parent weight, race, and socioeconomic status. We also hypothesized that communication quality will impact a family's willingness and ability to discuss weight-related information received from the child's provider.

Methods

Parent–Child Dyads

We performed a cross-sectional study including 112 parent–child dyads who attended a health care visit at one of four pediatric clinics associated with our institution. The clinics include an urban clinic, an urban pediatric residency continuity clinic, a suburban clinic, and a rural clinic. Dyads were included if the parent/legal guardian (subsequently referred to as parent) was present at the visit, was ≥18 years old, and could read and write in English; and if the child was 9–18 years of age, had a BMI ≥85th percentile for age and sex, could read and write in English, and had their height and weight measured on the day of their visit. Dyads were only included if another adult lived in the home with them and partnered in decision making regarding the child's wellbeing. This adult is subsequently referred to as "second caregiver." Children were excluded if the child had a significant developmental delay or a complex medical condition that affects growth, or if the child had not had a well-child visit in the previous 12 months.

Weight Status

The child's height, weight, date of visit, and date of birth were extracted from the child's electronic medical record. At every visit height and weight were measured by nursing staff using a wall-mounted stadiometer and mechanical beam scale as per standard clinical protocol. Clinical measurements have been shown to have good accuracy compared with height and weight obtained for research purposes.[24] Height and weight were used to calculate BMI. BMI *z*-score (BMI*z*) and BMI percentiles were then derived using the CDC reference growth charts for age and sex.[25] Weight status was subsequently classified as overweight (BMI 85th to <95th percentile) and obesity (≥95th percentile). Obesity severity was further categorized as Class 1 Obesity (BMI = 100%–120% of 95th percentile), Class 2 Obesity (BMI = 121%–140% of 95th percentile), and Class 3 Obesity (BMI >140% of 95th percentile).

Study Protocol

All study protocols were approved by the Wake Forest School of Medicine Institutional Review Board. Parent–child dyads who potentially met inclusion criteria were identified through the electronic medical record at each participating clinic. Dyads were approached in the examination room by a research team member and the study was introduced. The research team member described the study to the child and parent, discussed what was involved in participation, and explained that participation was completely anonymous and voluntary. The research team member then reviewed the consent and assent forms with both parent and child, respectively. The rights and welfare of

study participants was protected through the use of measures to maintain the confidentiality of study information.

Survey

Parent and child participants each completed a survey in the examination room and were subsequently each given a $5 gift card for their participation in the study.

Communication quality. The McMaster's FAD communication subscale (FADc) was completed by parents and children and used to assess communication quality. The McMaster's FAD is a self-report questionnaire for assessing family functioning through six domains, including: affective involvement, affective responsiveness, behavioral control, problem solving, roles, and communication. The communication subscale is a six-item measurement using a four-point Likert scale (strongly disagree, disagree, agree, strongly agree) to assess family members' views of communication styles and efficacy. The score is calculated by adding the responses (1–4) and dividing by the number of items in the scale. Scores above 2.2 correlate with unhealthy family communication styles. The FAD has been shown to have internal validity, test–retest reliability, and adequate sensitivity and specificity for assessing healthy vs. unhealthy families in numerous studies.[26,27]

Weight-related communication practices. We developed questions to assess the frequency and quality of family communication regarding weight-related information received from the pediatric provider. Questions utilized a 5-point Likert scale (never, rarely, sometimes, often, or always). Items were reviewed for face validity by clinicians involved in the care of children with overweight and obesity. Parents and children were asked how frequently they discuss weight and weight management with their families following an appointment with the pediatric provider and how frequently they understand what the provider has said regarding their weight, eating, and exercise.

We also assessed the quality of conversations about weight and weight management to evaluate specific characteristics of healthy communication, including level of engagement, listening skills, openness, self-disclosure, and demonstrating respect.[11] Parents and children responded on a 5-point Likert scale, from strongly disagree to strongly agree. Items were reviewed for face validity by clinicians involved in the care of children with overweight and obesity. Parents reported the degree to which they listen to the child's second caregiver's concerns, talk about lifestyle changes, ask the second caregiver's opinion, share their own opinion, clearly express their thoughts, and engage in or avoid conversations surrounding their child's weight and weight management. Parents rated the importance of a variety of resources in facilitating conversations regarding their child's weight as well as the burden of a variety of barriers to these conversations. Examples of potential facilitators include printed After Visit Summary, online resources, understanding what the doctor said, and having a follow-up appointment scheduled. Examples of potential barriers include lack of time, not remembering what the doctor said, and financial cost of making lifestyle changes. Children reported how interested their family is in what the provider said regarding weight, eating, and exercise and the degree to which children enjoy family conversations about their weight, eating, and exercise or become upset by these conversations.

Demographics. Demographics were collected in the parent survey, including parent report of their child's sex, ethnicity (Hispanic/Latino or not), and race (Asian, Black or African American, White, or Caucasian, Other). Parents also self-reported their weight, height, education level (categorized as some high school or lower, high school graduate, associate degree, some college, and bachelor's degree or higher), and household income (<$20,000; $20–39,999; $40,000–59,999; $60,000–99,999; or $100,000 or more). Food insecurity was assessed using the US Household Food Security 2-item screener: "Within the past 12 months we worried whether our food would run out before we got money to buy more" and "Within the past 12 months the food we bought just didn't last and we didn't have money to get more." Response options include often, sometimes, or never. Families screened positive for food insecurity if they answered sometimes or often on either question.[28]

Statistical Analyses

Univariate analyses were used to describe the sample and communication practices. We used separate logistic regression models to assess correlates of family communication about weight-related information received from the pediatric provider, including parent-reported FADc, child sex, child BMI*z*, parent BMI, household income (<$20,000, $20–40,000, $40–60,000, $60–100,000, or $100,000 or more), and survey site. Child age, parent's perception of their child's weight status, survey completer (mother vs. others), and number of siblings (0, 1, or 2 or more) were not significantly associated with any communication practices and therefore they were not included in the final analyses for simplicity. Communication practice outcome variables were assessed individually and included whether a parent discusses weight information received from their child's provider, asks the child's second caregiver's opinion about this information, shares their own opinion about this information, avoids discussing this information, clearly expresses the information to the second caregiver, listens to the second caregiver's concerns, believes that discussing the information makes it easier to implement healthy lifestyle changes, and whether the parent feels the second caregiver is interested in information about their child's weight and weight management and understands this information. Outcome variables were dichotomized for this analysis as always/often vs. sometimes/rarely/never. All p-values were on the basis of two-tailed tests and compared with a significance of 0.05. All statistical analyses were performed using Stata v. 14.2.

Table 1. Child and Parent Characteristics

	% or mean (SD), $N = 112^a$
Child characteristics	
Age, years	13.6 (3.33)
BMI	28.8 (5.82)
BMIz	1.83 (0.47)
Weight status category ($N = 105$)	
Overweight	43.8%
Obesity	56.2%
Obesity classification ($N = 58$)	
Class 1	34.3%
Class 2	13.3%
Class 3	7.6%
Parent perception of child's weight ($N = 105$)	
Underweight	1.90%
Healthy weight	45.7%
Overweight	44.8%
Obesity	7.6%
Race	
White	39.1%
Black	43.8%
Hispanic	11.4%
Other	5.71%
No. of siblings in the home	
None	25.0%
One	45.0%
Two	23.0%
Three or more	7.0%
Parent characteristics	
Survey completer	
Mother	80.4%
Father	10.8%
Other	8.8%
Weight status ($N = 100$)	
BMI	33.5 (9.53)
Weight status category ($N = 100$)	
Underweight	2.0%
Healthy weight	13.0%
Overweight	25.0%
Obesity	60.0%
Education ($N = 102$)	
Some high school or lower	17.7%
High school graduate	23.5%
Associate degree	19.6%
Some college	18.6%
Bachelor's degree or higher	20.6%
Household income ($N = 100$)	
<$20K	30.0%
$20K–$40K	28.0%
$40K–$60K	15.0%
$60K–$100K	12.0%
>$100K	15.0%
Food insecure	36.8%

[a]$N = 112$ unless indicated otherwise due to missing data points.
BMIz, BMI z-score.

Results

Of the 130 eligible patients approached to complete a survey, 18 dyads declined to participate for a response rate of 86%. Children had a mean age of 13.6 (SD 3.33) years and were racially diverse (39% white, 44% black, 11% Hispanic, 6% other), with a broad range of household incomes (Table 1). Forty-four percent of children were overweight and 56% had obesity. Based on the percent of the 95th percentile BMI curves, 34% of children had Class 1 Obesity, 13% had Class 2 Obesity, and 7.6% had Class 3 Obesity. The mean BMIz was 1.83 (SD 0.47). Parent/legal guardian respondents were mostly mothers (80%), followed by fathers (11%), and grandparents (8%). The average BMI of parents was 33.5 (SD = 9.53), with 60% of parents categorized as having obesity and 25% being overweight (Table 1).

Communication Practices

Parent-reported FADc scores ranged from 1.2 to 3.2. The median score was 2.0; a score above 2.2 indicates unhealthy family communication (Fig. 1) and 68% of parents reported a score ≤2.2. Most parents (58%) stated they discuss information that they receive from their child's doctor regarding their child's weight and weight management with the child's second caregiver, whereas 11% stated they actively avoid discussing their child's weight and weight management with the second caregiver.

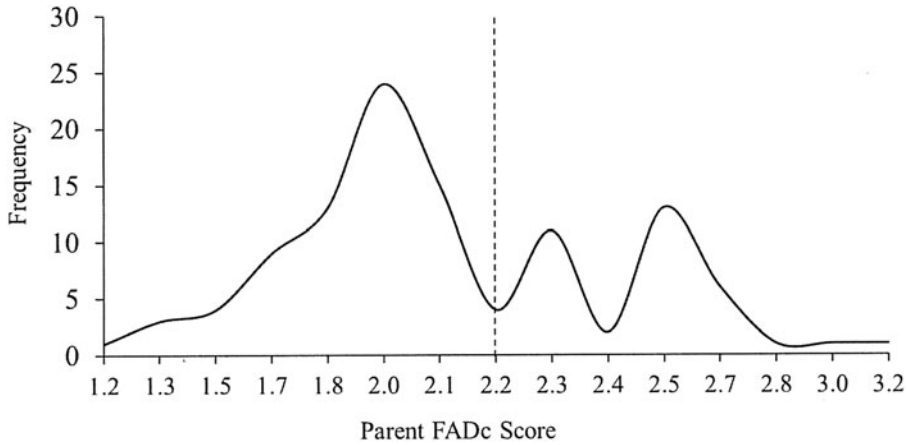

Figure 1. Parent FADc (Family Assessment Device Communication Subscale) score distribution. Score >2.2 indicates poor communication.

A greater percentage of parents reported sharing their own opinion about this information (75%) than asking the second caregiver's opinion (59%). Fewer parents were willing to discuss their child's weight (60%) and weight management (57%) with the second caregiver than were willing to discuss other health-related topics (71%). For 23% of parents, discussions regarding their child's weight and weight management resulted in conflict, and only 11% of parents stated that their child participates in conversations about the child's weight and weight management. Comparatively, 67% percent of children stated that they contribute to these family conversations.

Children were less likely than parents to report discussing their weight (30%), eating (32%), or exercise (31%) with their family after a doctor's appointment. A great majority of children stated that they understand what the doctor said regarding their weight (89%), eating (86%), and exercise (89%). Most children also perceived that their families are interested in what the doctor said regarding their weight (76%), eating (82%), and exercise (77%). Of the children who discuss weight, eating, or exercise with their families, 47% reported they enjoy these conversations, whereas 21% reported that these conversations are upsetting.

The three most commonly parent-reported barriers to communicating with their child's second caregiver about what the provider said regarding their child's weight and weight management were: lack of time (29%), financial cost of making lifestyle changes (25%), and not understanding what the doctor said (18%). The most commonly reported facilitators to these conversations were: understanding what the doctor said (92%), willingness of family members to make lifestyle changes (82%), and agreement among family members on how to manage the child's weight (80%) (Table 2).

Correlates of Communication Practices

In the multivariate logistics regression model, parents' self-report of discussing weight-related information received from their child's health care provider with the child's second caregiver did not differ according to FADc, child sex, child BMI*z*, parent BMI, income, or survey site (Table 3). Parents with a higher FADc had 0.22 times the odds of asking the second caregiver's opinion about the weight information they received from their child's provider compared with parents with a lower FADc (95% CI 0.05–0.99). Family income and survey site were associated with the parent's use of various communication practices such that parents with a higher family income had a higher odds of willingness to discuss the child's weight and weight management, to share an opinion about weight-related information received from the child's provider, and to discuss other health-related information. For example, compared with households making <$20,000/year, parents from more affluent households were more likely to report clearly expressing weight information received from child's doctor to the second caregiver [$20–40,000 (odds ratio (OR) 1.61, confidence interval (95% CI) 0.35–7.42), $40–60,000 10.49 (0.42–258.89), and $60–100,000 52.14 (1.31–2077.71)], Parents with a higher BMI were less likely to listen to the child's second caregiver's concerns about weight information received from the provider than parents with a lower BMI (OR 0.93; 95% CI 0.86–0.99). Specific study sites were not consistently associated with healthy or unhealthy communication practices (data not shown). Other covariates were not related to communication practices between caregivers when discussing information received from the child's provider regarding the child's weight and weight management.

Discussion

Slightly more than half of parents reported that they discuss weight-related information they receive from their child's pediatric provider with their child's second caregiver who was not present at the clinical visit. Fewer parents reported that they are willing to discuss weight-related information with the second caregiver than are willing to discuss other health-related topics. Higher parent-reported FADc scores (worse communication) and higher parent BMI were associated with a lower odds that a parent will ask the second caregiver's opinion about weight-related information received from the provider, but these characteristics

Table 2. Descriptors of Communication Between Caregivers Regarding Information Received from the Child's Doctor About the Child's Weight and Weight Management

	% of respondents endorsing item, *N* = 108
Child-reported communication practices	
Discusses weight with family after a doctor's appointment	30.4%
Discusses eating with family after a doctor's appointment	32.4%
Discusses exercise with family after a doctor's appointment	31.3%
Understands what the doctor said regarding weight	89.1%
Understands what the doctor said regarding eating	85.7%
Understands what the doctor said regarding exercise	89.3%
Contributes to family conversations about weight	67.3%
Perceives that their family is interested in what the doctor said regarding weight	79.5%
Perceives that their family is interested in what the doctor said regarding eating	82.1%
Perceives that their family is interested in what the doctor said regarding exercise	76.8%
Enjoys discussing information the doctor gave regarding weight, eating, and exercise with family	42.0%
Becomes upset when discussing weight with family	20.5%
Parent-reported communication practices	
Discusses weight information received from child's doctor	57.9%
Asks partner's opinion about weight information received from child's doctor	58.5%
Shares opinion about weight information received from child's doctor with partner	75.0%
Discusses child's weight with partner	60.4%
Discusses child's weight management with partner	57.0%
Discusses other health-related topics with partner	71.2%
Partner is interested in information about child's weight and weight management	70.4%
Partner understands information about child's weight and weight management	77.6%

continued

Table 2. Descriptors of Communication Between Caregivers Regarding Information Received from the Child's Doctor About the Child's Weight and Weight Management ***continued***

	% of respondents endorsing item, *N* = 108
Avoids discussing child's weight and weight management with partner	11.2%
Clearly expresses weight information received from child's doctor to partner	79.0%
Listens to partner's concerns about weight information received from child's doctor	78.3%
Discussing child's weight with partner makes it easier to implement healthy lifestyle changes	75.0%
Conversations with partner regarding child's weight and weight management lead to conflict	23.2%
Child contributes to family conversations about his or her weight	11.0%
Parent-reported barriers and facilitators to communication	
Barriers	
Lack of time	28.7%
Not understanding what the doctor said	18.4%
Not remembering what the doctor said	18.4%
Disagreeing with the doctor	6.5%
Financial cost of making lifestyle changes	25.0%
Facilitators	
After visit summary (handout)	78.1%
Other handouts	74.8%
Online resources	64.8%
Recipes	51.9%
Both parents attending appointment	33.0%
Understanding what the doctor said	92.4%
Scheduling a follow-up appointment	72.9%
Setting specific goals	79.4%
Discussing specific activities	78.5%
Agreement among family on how to manage the child's weight	79.6%
Willingness of family members to make lifestyle changes	82.4%

Table 3. Logistic Regression Models Reporting Correlates of Communication Practices

Parent-reported communication practices	Mean parent reported FADc[a]	Male sex[a]	Child BMIz[a]	Parent BMI[a]	Income[a]	Survey site[a]
Discusses weight information received from child's doctor	0.26 (0.06–1.04)	1.34 (0.51–3.53)	0.56 (0.21–1.53)	0.98 (0.92–1.03)	1.11 (0.76–1.63)	1.25 (0.70–2.24)
Asks partner's opinion about weight information received from child's doctor	0.22 (0.05–0.99)*	2.69 (0.97–7.44)	0.57 (0.20–1.62)	0.95 (0.90–1.01)	1.23 (0.83–1.84)	1.24 (0.68–2.27)
Shares opinion about weight information received from child's doctor with partner	1.20 (0.22–6.45)	0.97 (0.29–3.24)	0.62 (0.18–2.07)	0.94 (0.88–1.00)	1.70 (1.03–2.82)*	2.32 (1.09–4.92)*
Discusses child's weight with partner	0.63 (0.15–2.65)	1.73 (0.64–4.63)	1.73 (0.59–5.11)	0.95 (0.90–1.01)	1.24 (0.83–1.85)	1.32 (0.71–2.47)
Discusses child's weight management with partner	0.52 (0.13–2.09)	1.79 (0.69–4.66)	1.73 (0.61–4.89)	0.96 (0.91–1.02)	1.21 (0.82–1.77)	0.99 (0.55–1.78)
Discusses other health-related topics with partner	0.53 (0.11–2.67)	1.70 (0.55–5.20)	0.82 (0.26–2.59)	0.96 (0.90–1.03)	2.11 (1.20–3.68)**	1.29 (0.64–2.56)
Partner is interested in information about child's weight and weight management	0.32 (0.07–1.57)	1.73 (0.55–5.48)	0.39 (0.12–1.22)	0.99 (0.93–1.06)	1.12 (0.72–1.74)	2.37 (1.13–4.97)*
Partner understands information about child's weight and weight management	0.32 (0.05–1.97)	1.78 (0.48–6.66)	0.33 (0.09–1.20)	0.99 (0.92–1.06)	1.47 (0.88–2.47)	3.18 (1.34–7.56)**
Avoids discussing child's weight and weight management with partner	1.0 (0.13–7.83)	0.69 (0.16–2.99)	1.40 (0.30–6.57)	1.03 (0.95–1.12)	0.48 (0.23–0.97)*	0.42 (0.18–0.98)*
Clearly expresses weight information received from child's doctor to partner	1.03 (0.15–7.00)	1.33 (0.35–5.10)	0.41 (0.11–1.60)	0.94 (0.87–1.01)	2.50 (1.25–4.99)*	2.61 (1.13–6.01)*
Listens to partner's concerns about weight information received from child's doctor	0.49 (0.09–2.73)	0.99 (0.29–3.44)	0.48 (0.14–1.61)	0.93 (0.86–0.99)*	1.81 (1.05–3.12)*	1.95 (0.93–4.08)
Discussing child's weight with partner makes it easier to implement healthy lifestyle changes	0.50 (0.11–2.33)	1.37 (0.46–4.14)	0.61 (0.20–1.85)	0.97 (0.91–1.03)	1.16 (0.75–1.78)	1.79 (0.91–3.51)
Conversations with partner regarding child's weight and weight management lead to conflict	0.43 (0.09–2.07)	0.99 (0.34–2.88)	0.79 (0.24–2.53)	0.98 (0.92–1.04)	0.78 (0.50–1.23)	1.39 (0.71–2.71)
Child contributes to family conversations about his or her weight	0.54 (0.06–4.59)	2.67 (0.48–14.9)	1.47 (0.33–6.59)	0.98 (0.89–1.07)	0.68 (0.36–1.29)	0.82 (0.31–2.16)

[a]Odds ratio (95% confidence interval).

*Denotes $p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

FADc, Family Assessment Device Communication Subscale.

were not associated with other factors of weight-related communication. Higher family income was predictive of several healthy-weight communication practices.

To our knowledge, this is the first study to demonstrate the correlates of communication practices with family communication about a child's weight. Communication is a cornerstone of several weight management interventions.[3,4,6] There is significant evidence that poor family functioning, including ineffective communication, is associated with an increased risk of development and perpetuation of childhood obesity.[8,9] Providers, therefore, should be aware of whether and how the information they give one parent regarding a child's weight is translated to other members of the family who are not present at the clinical visit. Historically, health care providers have focused on effective patient–provider communication throughout a clinical visit to elicit desired behavioral changes.[3,4,6] It is well documented that building rapport with patients and then engaging patients in their own medical care leads to greater adherence to treatment recommendations.[29,30] Engaging family members who are not present for the clinical visit, however, may be necessary to elicit family lifestyle changes that alleviate childhood obesity.

Only about half of parents surveyed discuss the weight-related information received from their pediatric provider with their child's second caregiver who was not present at the clinical visit. By emphasizing the need for weight-related communication beyond the walls of the clinic, providers may facilitate the translation of weight information from the health care setting to the home. Health care providers should utilize research-driven communication methods involved in motivational interviewing, such as teach-back and reflections, throughout clinical encounters to aid families in exploring the importance of their child's weight and to empower caregivers to generate solutions for their families.[24,31,32] Equipping parents with phrases to initiate weight-related conversations may also be beneficial. Asking parents "how would you tell this information to other members of your household?" in the clinic may help parents engage in conversations about weight management at home. Furthermore, supporting this parent in the transfer of information to other members in the home, through targeted written or digital materials, or even telephone calls, may aid inclusion of additional family members into treatment. Further research should include qualitative work to understand how parents perceive best receiving this support from their provider and evaluate the effect of family communication interventions on family communication about child weight status and the child's weight trajectory.

Emphasizing the importance of communicating about weight and weight management may empower parents to discuss lifestyle changes with family members who are not present at the clinical visit. This is especially important for parents with high BMIs and with lower household incomes. Studies demonstrate that children of parents with obesity and children of families with a lower socioeconomic status are at a significantly increased risk for developing overweight and obesity.[25] Parents with food insecurity are more likely to underestimate their child's weight status, which can lead to disagreements with health care providers regarding the need for weight management interventions.[33] Our study similarly revealed that parents with higher BMIs and with lower household incomes are less likely to engage in healthy-weight communication practices. For these populations in particular, it is critical that health care providers relay objective, nonjudgmental weight information and encourage parents to communicate with their household members about healthy practices to inspire healthy family lifestyle changes.

Interestingly only 11% of parents report that their child participates in conversations about the child's weight and weight management, however, 67% of children stated that they contribute to these family conversations. More qualitative research is necessary to understand this difference. It is possible that adults first discuss the information and make decisions, and then children are included in conversations implementing those decisions. From the perspective of the adult, the child was not included in the conversations about weight, but the child feels that they were. Alternatively, parents may not intend to include children in these conversations, but the child may pick up on comments and cues made by parents to each other or to the child.

Our results also suggest that supporting parent–child dyads as they develop their understanding of weight and weight management as it relates to their family is more important to eliciting family conversations about weight and weight management than merely providing information about these topics. Research demonstrates that patients who exhibit both high levels of knowledge about their medical condition and participation in their care plan are more likely to feel ownership over their treatment, leading to greater treatment adherence.[34] This comprehensive level of medical understanding is best achieved through tailored patient education rather than through generic materials[35] and through the cocreation of solutions rather than the transfer of information from provider to patient.[36] In our study, parents did not find printed materials, online resources, or scheduled follow-up appointments to be as impactful as understanding what the provider said about their child's weight. Future research may also examine how caregiver readiness and motivation to change impacts communication surrounding their child's weight and weight management. Only 6.5% of parents stated that "disagreeing with the doctor" was a barrier to weight-related communication in the home, which may indicate that a large proportion of our study population was ready to make weight-related lifestyle changes.

This study has several limitations. We surveyed parent–child dyads at sites that were affiliates of a single institution in the same geographical area. Surveys and interviews were only conducted in English and therefore may not be generalizable to other populations. Parent–legal guardian height–weight was self-reported. Additionally, only families of children with overweight or obesity were studied. Future work should assess possible differences in

the communication of weight and weight management information between families of children with overweight or obesity and families of children with healthy weights. Demographics and relationships of the second caregiver were not collected and may explain some of the variability in our results given that the communication between partners may differ from communication between a parent and grandparent caring for a child, for example. Finally, there is currently no established measure of how families communicate about their child's weight or weight management information after a visit with their child's provider.

Conclusions

There are many factors that impact the frequency and quality of weight-related communication within families of children with overweight and obesity. Pediatric providers should emphasize the need for family communication of weight information beyond the walls of the clinic. Acknowledging the importance of involving family members who are not present at the clinical visit in the treatment plan of children with overweight and obesity may lead to better adherence to weight management plans and to improved weight outcomes.

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