# Weight Bias in Pediatric Inpatient Care

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## Abstract

***Objective:*** Weight bias can influence medical care but has not been studied in the pediatric inpatient setting. We will quantify implicit and explicit weight bias of pediatric inpatient providers and qualitatively explore providers' attitudes toward children with obesity and patient/family perceptions of weight bias in the hospital.

***Methods:*** We performed a mixed-methods study including semistructured key informant interviews and validated tests for implicit (Implicit Association Test) and explicit (Crandall's Anti-Fat Attitudes Questionnaire) bias with pediatric hospitalists, residents, and acute care nurses. We performed semistructured key informant interviews with pediatric inpatients aged 7 to 17 years and the patient's parent(s) or guardian(s). Interviews were coded using an inductive approach to identify recurrent themes.

***Results:*** We enrolled 28 pediatric providers, 12 patients, and 12 parents/guardians. In total, 71% of providers exhibited moderate or strong implicit weight bias, with generally lower scores for explicit bias. Qualitative analysis identified seven themes: the existence of weight bias, shared responsibility for a child's obesity, a potential for provider bias toward the parents of pediatric patients with obesity, possible effects of patient weight on inpatient care, importance of terminology in addressing obesity, and the possibility of addressing obesity inpatient but a preference for obesity to be addressed in the outpatient setting.

***Conclusions:*** Health care providers, patients, and families in the pediatric inpatient setting identified multiple ways that obesity could impact care, including provider weight bias.

**Keywords:** inpatient care; obesity; weight bias

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## What's New

Health care providers, patients, and families in the pediatric inpatient setting identified multiple ways obesity could impact care, including provider weight bias. Providers exhibited high levels of implicit weight bias by validated tests.

Pediatric obesity affects 18% of American youth,[1] with continued increase in rates of severe obesity.[2] When hospitalized, children with obesity may have increased mortality, prolonged length of stay, and greater risk of adverse events.[3-6] Weight bias, which is highly prevalent in society, could contribute to these poor outcomes.[7,8] Clinical providers have a negative attitude toward adult patients with obesity,[9-12] with less physician respect for the patient[13] and a perception of lower patient adherence to medications.[14] In 1 study of adult outpatients, providers indicated they would order more testing for patients with obesity but would spend less time with them.[12] Pediatric nurses and clinical support staff in the hospital demonstrated weight bias by 1 survey[15]; other pediatric inpatient providers have not been studied. Only one study assessed associations between provider weight bias and clinical management, in which it did not affect management of overweight.[16] It is unknown how weight bias affects the care provided to pediatric inpatients.

Bias can be considered implicit or explicit, depending on whether that bias is activated automatically or consciously. Both can be measured quantitatively using validated tests,[17,18] which demonstrate that medical providers express implicit and explicit weight bias at levels comparable with the general population.[9,19,20] Pediatric inpatient providers have not been specifically studied. According to attribution theory, conditions believed to be under personal control are the most likely to be stigmatized[21,22]; such control is difficult to define in pediatric patients, who are highly influenced by their parents, family, and community. Parents of children with medical conditions report feeling stigmatized, a phenomenon termed courtesy stigma.[23,24] It is unclear whether this affects parent−physician interactions in the inpatient setting.

We seek to address the lack of knowledge about providers' attitudes toward obesity in pediatric inpatients. Care in the academic inpatient setting involves a variety of providers, including attending physicians, resident physicians, and bedside nurses; interactions with all of these providers may influence perception of bias. The

objective of this study is to generate hypotheses about the role of weight bias in the care of pediatric inpatients and to quantify the degree of explicit and implicit bias expressed by pediatric inpatient providers.

## METHODS

We used complementary quantitative and qualitative methodologies for this study with (1) quantitative data on implicit and explicit weight bias of medical providers, (2) qualitative data from semistructured key informant interviews with medical providers around their feelings toward children with obesity and perceptions of differences in care provided, and (3) qualitative data from semistructured key informant interviews with pediatric inpatients with and without obesity and their families about their hospital experience and perceptions of weight bias. We collected data from multiple sources to increase the trustworthiness of our findings through triangulation.[25] We also felt it was important to identify whether the patient and family experience in the hospital was influenced by weight bias, regardless of provider recognition. The study protocol was approved by the Wake Forest School of Medicine institutional review board. We obtained written consent from adult study participants; for children, we obtained written assent and written parental consent for participation.

### PARTICIPANTS

For medical providers, we included pediatric hospitalist attending physicians, pediatric residents, and acute care nurses practicing at an academic children's hospital. We excluded providers with a predominantly outpatient practice or who practiced fewer than 4 weeks per year. For pediatric patients, we included patients who were 7 to 17 years old, admitted to a medical service, and developmentally able to participate in the interview. We excluded patients who were non−English-speaking or awaiting psychiatric placement, as these factors have been associated with provider bias.[26,27] Patients of all weight categories were included to allow comparisons between groups in terms of their experience in the hospital. Patients were admitted for a variety of disease processes, but none were diseases traditionally associated with obesity. We interviewed available parent(s) or guardian(s) for each inpatient.

### DATA COLLECTION

Two investigators (T.C., M.W.) conducted interviews between June 2015 and September 2016 with medical providers (T.C.), patients (M.W.), and parents/guardians (M.W.) based on semistructured interview guides (Supplemental Table 1). Interviews lasted approximately 15 to 20 minutes. Questions were pilot-tested with representative medical providers, patients, and families and were reviewed for face validity by researchers and clinicians with experience in obesity. Investigators conducting interviews were trained by senior investigators experienced in qualitative research methodologies (E.H., J.S.). Interviews were audiotaped and transcribed verbatim.

At the completion of the interviews, providers completed validated tests for implicit and explicit weight bias. The weight Implicit Association Test is a measure of unconscious attitudes that determines the time required to assign positive or negative terminology to pictures of subjects of different weight classes.[17] For this study, the outcome was categorized as a score indicating neutral, slight, moderate, or strong preference for thin or obese people. For explicit bias, we administered Crandall's Anti-Fat Attitudes Questionnaire, which measures survey takers' responses on 3 subscales. Dislike ($\alpha = 0.84$) measures feelings about people with obesity, Fear of Fat ($\alpha = 0.79$) evaluates personal concern about weight, and Willpower ($\alpha = 0.66$) assesses beliefs about the controllability of obesity.[18] Items are scored on a 10-point Likert scale; high scores indicate greater levels of explicit bias.

Interviews and test results were de-identified before analysis. We collected demographic data, practice type and duration, weight status, and previous training in weight bias by provider self-report. For patients, we reviewed the medical record for demographic and clinical information.

### DATA ANALYSIS

#### *Quantitative Data*

Results were analyzed using descriptive statistics to determine the prevalence of bias among participants by demographic characteristics. Patients were placed into categories representing underweight, normal weight, overweight, or obesity according to Centers for Disease Control and Prevention guidelines.[28,29] Groups were compared using Chi-square tests for proportions and analysis of variance procedure for continuous variables. Statistical analyses were performed using SAS, version 9.4 (SAS Institute Inc, Cary, NC).

#### *Qualitative Data*

Three investigators coded interview transcripts using an inductive approach and the constant comparative technique.[30,31] We created a common coding system and data dictionary based on several initial interviews, then separately assigned agreed-on codes to relevant text. Investigators compared results, modified initial codes, and added new codes as needed in an iterative process. Coding discrepancies were resolved by consensus through discussion and mutual agreement. Representative quotes were identified. Data were organized with HyperRESEARCH 3.7.3 (ResearchWare Inc, Randolph, Mass) and used to identify themes. Enrollment was continued until saturation of themes across the study had been achieved in ongoing qualitative analysis. We used triangulation between participant types and team reflexivity, in which team members reflected as a group on the research process and emerging insights, to assess the trustworthiness of our results.[25,32]

## RESULTS

### PART 1: QUANTITATIVE

We completed 52 interviews: 10 pediatric hospitalists, 10 residents, 8 nurses, 12 patients, and 12 parents/guardians. Demographic data of our participants are summarized in Table 1; notably, our providers were predominantly white (27/28, 96%) and female (22/28, 79%). Our patients included 5 (42%) with overweight or obesity. A majority (71%) of providers exhibited moderate or strong implicit weight bias, with no significant difference between provider types. The providers had low scores for explicit bias, indicating neutral-to-moderate disagreement with negative statements about patients with obesity (Table 2). One exception was agreement with a Fear of Fat by our nurse participants. We also assessed associations between bias scores and provider self-reported weight status; the only significant association identified was higher scores on Fear of Fat for providers with overweight or obesity (Table 3).

**Table 1.** Demographic Characteristics of Study Participants

| Characteristic | N (%) or Median (IQR) |
|---|---|
| Hospitalist attendings (N = 10) | |
| Age, y | 34.0 (30.0–38.0) |
| Male sex | 3 (30%) |
| White race | 10 (100%) |
| Weight status | |
| Underweight | 1 (10%) |
| Healthy-weight | 8 (80%) |
| Overweight | 1 (10%) |
| Obese | 0 (0%) |
| Previous training in weight bias | 1 (10%) |
| Pediatric residents (N = 10) | |
| Age, y | 29.0 (28.0–30.0) |
| Male sex | 3 (30%) |
| White race | 10 (100%) |
| Weight status | |
| Underweight | 0 (0%) |
| Healthy-weight | 6 (60%) |
| Overweight | 3 (30%) |
| Obese | 1 (10%) |
| Previous training in weight bias | 3 (30.0%) |
| Pediatric nurses (N = 8) | |
| Age, y | 31.5 (29.0–41.5) |
| Male sex | 0 (0%) |
| White race | 7 (87.5%) |
| Weight status | |
| Underweight | 0 (0%) |
| Healthy-weight | 3 (37.5%) |
| Overweight | 5 (62.5%) |
| Obese | 0 (0%) |
| Previous training in weight bias | 1 (12.5%) |
| Patients (N = 12) | |
| Age, y | 15 (10–16) |
| Male sex | 3 (25%) |
| White race | 6 (50%) |
| Black race | 4 (33%) |
| Hispanic/other | 2 (17%) |
| Weight status | |
| Underweight | 3 (25%) |
| Healthy-weight | 4 (33%) |
| Overweight | 3 (25%) |
| Obese | 2 (17%) |
| Parents/guardians (N = 12) | |
| Mother | 9 (75%) |
| Father | 2 (17%) |
| Grandmother | 1 (8%) |

IQR indicates interquartile range.

### PART 2: QUALITATIVE

Analysis revealed 7 themes around the impact of weight status on hospital care and perceptions of weight bias. These are shown in the text to follow and in Table 4.

#### *THEME 1: CHILDREN DO NOT HAVE FULL RESPONSIBILITY FOR THEIR OWN OBESITY*

Providers and parents noted that children were a product of their family and environment, which play a large role in a child's weight: "I don't think there is really a specific stage where the child becomes really responsible for their own weight because it is just so ingrained in them when they are growing up." Many providers did note that they attribute additional responsibility to children as they get older. Parents and guardians generally felt this responsibility for their child's weight and expressed feelings of guilt if their child was overweight or obese.

#### *THEME 2: WEIGHT BIAS EXISTS, BOTH IN AND OUT OF THE HOSPITAL*

Participants from all groups noted that weight bias exists in various forms. Many providers expressed concern for children with obesity, especially in terms of the psychosocial outcomes of obesity. Some providers expressed insight into their own biases: "If people have medical complications from their weight, I know that I tend to be less sympathetic." Even providers with low individual scores for bias noted the potential for the patient's weight to change how he or she was treated in the health care setting. Patients/families with overweight or obesity denied weight bias during their acute hospitalization but reported multiple previous experiences with weight bias, including in other health care encounters.

#### *THEME 3: POTENTIAL FOR PROVIDER BIAS TOWARD PARENTS OF PEDIATRIC PATIENTS WITH OBESITY*

Providers and families recognized the strong role parents play in a child's weight status; therefore, providers tended to express bias toward the parents of patients with obesity, rather than the patients themselves. Other providers extrapolated concerns about a child's weight to broader concerns about parenting: "Occasionally it can be a sign that there is poor parenting or poor role enforcing at home. I will usually see more evidence of that in the room."

Some providers indicated concerns about compliance in families where the child had obesity: "If [the parents] have a hard time influencing their children [to have a healthy lifestyle] then they might have a hard time influencing other medical treatments as well." Other providers attributed a child's obesity to poor health literacy and understanding of healthy behaviors by the parents. Multiple providers expressed relief and positive feelings toward a family when parents admitted concern about a child's

**Table 2.** Provider Tests for Implicit and Explicit Weight Bias

| Test | Hospitalists | Residents | Nurses | *P* Value |
|---|---|---|---|---|
| Implicit Association Test, n (%) with moderate or strong preference for thin people | 7 (70%) | 8 (80%) | 4 (50%) | .39 |
| Anti-Fat Attitudes Questionnaire – Mean subscale scores (95% CI) | | | | |
| Willpower | 4.7 (3.3–7.3) | 5.3 (3.7–6.0) | 5.3 (4.0–6.5) | .87 |
| Fear of Fat | 3.7 (2.7–4.0) | 5.0 (3.3–7.7) | 7.0 (4.3–8.2) | .06 |
| Dislike | 3.1 (1.3–3.7) | 2.2 (1.7–3.4) | 1.6 (1.2–3.0) | .73 |

CI indicates confidence interval.

**Table 3.** Tests for Implicit and Explicit Weight Bias by Provider Self-Reported Weight

| Test | Underweight/Normal Weight (N = 18) | Overweight/Obese (N = 10) | *P* Value |
|---|---|---|---|
| Implicit Association Test, n (%) with moderate or strong preference for thin people | 12 (60%) | 8 (80%) | .27 |
| Anti-Fat Attitudes Questionnaire – Mean subscale scores (95% CI) | | | |
| Willpower | 5.0 (4.1–6.0) | 5.1 (4.0–6.2) | .92 |
| Fear of Fat | 4.2 (3.2–5.1) | 6.0 (4.1–7.8) | .04 |
| Dislike | 2.3 (1.7–2.8) | 2.6 (1.7–3.5) | .47 |

CI indicates confidence interval.

obesity. Both concerns about parenting and compliance were more common in providers with greater scores for bias, especially explicit bias, on quantitative testing.

This finding was corroborated by parents and guardians of children with obesity. Family members in our study were very aware of these judgments by providers and often expressed feeling nervous or uncomfortable about these interactions. As before, our participants described these experiences in other health care settings but not during the hospital admission.

### *Theme 4: Weight Affects Inpatient Care*

Providers identified multiple areas in which obesity directly affected inpatient care. Many providers noted that obesity comorbidities could affect a patient's hospital course and mentioned hypertension and obstructive sleep apnea syndrome as examples. Some noted that children with obesity seemed to have a harder time recovering from their illness, especially for asthma and respiratory illnesses. A few physicians noted difficulties with the physical exam and with diagnostic studies, especially in radiology.

Nurses commented more frequently than physicians on ways that obesity impacts the care they provide. Vascular access was noted to be complicated by obesity: "Even on our little kids, our *chunky monkeys* as we call them, it's really hard to find IVs, and if they are overweight and an older kid, it is harder too. It takes more time and requires more skill." Several nurses noted difficulties transferring or moving patients with obesity. They also noted differences in skin care, dressing changes, and wound-healing.

Physicians and nurses were concerned about airway maintenance during sedation and weight-based dosing of medications in children with obesity. Providers with both high and low scores for weight bias commented frequently on the impact of weight on inpatient medical care.

All our participants were asked a neutral question about weight influencing care in the hospital. In contrast to our providers, patients and families expressed very little concern about obesity affecting inpatient care. They were much more concerned about low weight or changes in weight in the hospital and did not volunteer concerns about obesity.

### *Theme 5: Obesity May Be Addressed in the Inpatient Setting*

Some participants felt the hospitalization was an effective opportunity to discuss weight management, especially if the acute illness could motivate the family to change. Most providers classified obesity as an outpatient problem but felt they could participate in the discussion, either to reinforce messages from the primary care provider or out of concern that the patient wasn't being counseled effectively by that provider. Providers noted they were more likely to address weight management if the patient's primary diagnosis was related to obesity, but they varied in terms of which diagnoses they felt should "trigger" obesity counseling; some felt respiratory disease was associated with obesity, whereas others only associated hypertension and type 2 diabetes. Patients and families who had received obesity counseling, which was predominantly from dietitians, did say they felt those sessions were helpful.

### *Theme 6: Terminology for Addressing Obesity Is Important*

Providers and families agreed that weight could be a difficult subject to discuss. A majority of our providers worried about the sensitivity of addressing obesity directly with families, especially families with whom they did not have a longitudinal relationship. A few providers, however, worried more that their message about obesity was being lost. The majority of providers said they used

**Table 4.** Themes with Representative Quotations

| Theme | Quotation |
|---|---|
| Children do not have full responsibility for their own obesity | "I don't think that a child should be assigned personal responsibility because they're obese to some extent. . .I usually think that there's something in the home environment that they are not getting encouragement or support or socioeconomic reasons why they are overweight." [PROVIDER] |
| | "If you put a lot of logic on this, you might say, well if a kid is overweight, then he or she is probably not being fed correctly and a child doesn't feed by himself because he doesn't even work, so he doesn't grocery shop, so that goes back to the parents." [FAMILY] |
| Weight bias exists, both in and out of the hospital | "Personally, I grew up in a family that had weight bias. . .I am sure that a little part of me has a hard time never thinking about weight in relation to, I guess, laziness. . .I work very hard not to do that." [PROVIDER] |
| | "I've even wrote down what I've ate before and took it to the doctor, and they're like, 'welll, you could just not be recording something.' And I'm like, 'they're calling me a liar or something.' I mean, they haven't done that here, but at my primary doctor, you know, they've done that. . .It's like they don't trust me or something." [PATIENT] |
| Potential for provider bias toward parents of pediatric patients with obesity | "Like if I am going to have negative feelings at all, I will usually have negative feelings towards to parents, like 'come on guys.' (um) But I don't feel like it (um) changes my attitude towards the patient in the way of how I deliver care to the patient. It might change how the approach I take to the parents in the way of (um) making sure they are doing what they need to do for their child." [PROVIDER] |
| | "I don't think it has anything to do with discrimination, but I guess as a doctor you try to get as much information as you can in the shortest amount of time possible. That can be a judgment that you easily reach by just pinpointing the fact that [the patient is] overweight with unresponsible parents that aren't present because they work full-time or whatever." [FAMILY] |
| Weight affects inpatient care | "If they are heavier it can affect their gait, how you get them out of bed and how I assist the family in getting them out of bed, so it can affect the way I care." [PROVIDER] |
| | "I guess what they are looking for is any changes in his weight, if he were to lose a lot of weight, because he's not really eating a lot. Any swings in his weight, I imagine it would come up on the radar. But it really hasn't been anything further than getting the correct dosing for his weight." [FAMILY] |
| Obesity may be addressed in the inpatient setting | "I try to spin it that their weight can worsen the medical condition which brought them to the hospital in the first place, whether that's asthma or constipation. That, in order to stay out of the hospital, stay healthy, live longer, that it's something they really should get on top of as a child." [PROVIDER] |
| | "I think {the medical providers} focus on the whole person and not just the actual disease process, but on the individual as a whole." [FAMILY] |
| Terminology for addressing obesity is important | "I try to keep it as nonjudgmental and objective as possible. So what I don't want the family to do is think that I am passing judgment on them or their child because I need to build rapport with them, and I need them to trust me and be compliant with what I am recommending." [PROVIDER] |
| | "I mean, to a certain extent, you need to get it in their head that they are overweight, but I don't think you have to be harsh about it because they are in there for a reason. They came to you for a reason. Not to be fussed at or criticized." [PATIENT] |
| Preference for obesity to be addressed in the outpatient setting | "I leave {obesity management} up to the PCP, because I feel like they have a more longitudinal relationship with the patient, where I'm just getting a snapshot of them and haven't developed that rapport with the patient." [PROVIDER] |
| | "They do talk to us at the well-child check-ups and make sure she is eating enough fruits and vegetables and getting her Vitamin C and Vitamin D in and making sure she stays active. And always doing something everything to stay active." [FAMILY] |

medical definitions and growth curves when initiating this discussion: "I probably just use scientific terminology, like I try not to sugarcoat it too much."

In contrast, patients and families reported negative associations with many medical terms, especially with the word "obese." One patient described, "I know with my experiences with my family and somebody coming in and telling them they're obese. I mean, that's a harsh word." Providers who self-reported as overweight or obese also described a reluctance to use the word "obese" when counseling patients and families, but terminology did not seem to vary substantially by provider bias scores.

### *Theme 7: Preference for Obesity to be Addressed in the Outpatient Setting*

Obesity was not considered a priority in the hospital setting by either providers or families. Many providers prioritized low weight rather than overweight or obesity in the inpatient setting. One provider noted that "you have so many pressing demands on your time in the inpatient world. Maybe a patient is overweight, but you know if I have somebody who might code down the hallway, I am not really going to prioritize that particular concern." Providers focused on the need to manage the patient's acute issues, the lack of time for extensive counseling, and the

lack of continuity and follow-up as reasons that obesity was better addressed in the outpatient setting. Some providers also felt that families were more focused on the patient's acute issue and that the timing might not be appropriate for weight management discussions. Patients and families felt their primary care provider was already addressing weight at outpatient visits, and it was not necessary to discuss in the hospital.

## DISCUSSION

Medical providers, patients, and families perceive multiple ways obesity could impact inpatient care, including through provider weight bias. Although our patients and families did not report experiencing weight bias during their hospitalizations, some of our providers expressed negative perceptions of patients with obesity, which were directed more toward the patient's parents. To our knowledge, this is the first study assessing weight bias in pediatric inpatient providers.

Previous studies show that medical students, self-identified physicians, and the general population demonstrate high levels of implicit and explicit weight bias.[9,19,20] The low scores for explicit bias in our cohort are unusual. Social desirability and participants' ideals about their roles as pediatric providers could have influenced responses. Pediatric physicians typically receive training on the multifactorial nature of obesity, which may influence their views on people with obesity, as might be expected according to attribution theory. Despite low scores, many provider interviews reflected explicit weight bias, raising concern about the sensitivity of the Anti-Fat Attitudes Questionnaire within our study population. This may indicate a need for additional measures capturing attitudes of health care providers.

In the interviews, providers, patients, and families volunteered ideas related to attribution theory, that we are more likely to stigmatize conditions perceived as being under personal control.[21,22] Participants identified multiple factors that lessened a child's degree of personal control, including young age, influence of family and friends, and organic diseases contributing to obesity. Some providers did express insight that this affected their feelings of weight bias. Participants also recognized courtesy bias, similar to other pediatric medical conditions.

Our providers recognized multiple ways obesity could impact the care of a pediatric inpatient, some of which have been validated in the literature. Nurses frequently noticed issues with vascular access in children with obesity. In previous studies, children with obesity are more likely to have a failed first attempt at intravenous cannulation, and critically ill children with severe obesity are less likely to undergo successful placement of a central line.[33,34] Concerns have been raised about the utility of diagnostic imaging, airway maintenance during sedations, and correct medication dosing in children with obesity.[6] It is possible this existing literature influenced our providers' responses. It remains unknown whether weight bias or any of these potential complications of obesity impact outcomes for hospitalized children.

All participant types acknowledged difficulties in addressing obesity, especially in terms of the best terminology for that discussion. A recent policy statement by the American Academy of Pediatrics and The Obesity Society provides guidance for clinicians but focuses primarily on the outpatient environment.[35] Our study suggests that such literature may not be well disseminated within the inpatient setting. One previous survey found the majority of parents wanted providers to discuss their child's obesity during a hospitalization.[36] In contrast, many providers and families we interviewed felt obesity was better handled in the outpatient setting due to a perception of better longitudinal care, additional time for counseling, and willingness to focus on more chronic medical issues.

There are several limitations to this study. The sensitivity of the research topic could have affected the yield of our interviews, with the possibility for differential effects between participant types. We selected 2 medical students as our research interviewers to ensure they would not have an ongoing professional relationship with participants; attending and resident physicians, charged as role models for medical students, may have felt more pressure to give socially desirable responses in the interview than nurses, patients, or families. Our patient and family participants may have felt uncomfortable discussing experiences with weight bias in the hospital during the acute hospitalization. The limited racial and ethnic background of our providers and the single geographic location and hospital type examined may limit generalizability. Although we asked our participants to focus on the inpatient setting, some did discuss outpatient experiences; our predominantly inpatient providers may not be best qualified to comment on the outpatient setting. As this was an exploratory study and the first conducted in a pediatric inpatient setting, the sample size was small, resulting in limited power for our quantitative calculations. However, qualitative responses were consistent between providers, as well as patients and caregivers, so we believe this was an adequate first step to investigate this topic.

Health care providers, patients, and families in the pediatric inpatient setting identified multiple ways obesity could impact care, including provider weight bias. Efforts to mitigate provider weight bias have largely focused on the outpatient setting and may not be disseminated within inpatient practice. Further study is needed to assess the contribution of provider weight bias to patient outcomes for children with obesity.

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## SUPPLEMENTARY DATA

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