



Short communication

Physician perception of pediatric obesity screening in an urban emergency department setting

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Abstract

Objective: To inquire pediatric professionals about opinions on obesity screening in the emergency department (ED), assess their standard of care for obese patients, and identify differences between screening agreement and physicians' demographic and professional characteristics.

Material and methods: ED faculty at an urban children's hospital were surveyed. Non-parametric testing was utilized to determine statistical significance.

Results: The physician response rate was 74.7% (62/83). The participants were mostly female (61.3%), non-Hispanic (88.7%), Caucasian (61.3%), with a median age of 37.0 years. Most physicians reported assessing weight status (77.4%), with medical record documentation 22.4% of the time. Approximately half (40.3%) inquired about familial obesity-related conditions. Pediatricians were split on obesity screening in the ED, with 47.5% agreeing and 42.6% unsure. No significant differences across screening agreement and demographic/professional characteristics were found.

Conclusions: ED providers are currently assessing the patient's weight status and are open to the idea of screening for obesity. Tailoring an obesity intervention in the ED to meet physician concerns may increase participation and sustainability along with providing a management option for obese patients and their families.

Key words: obesity, pediatrics, screening, emergency department.

Introduction

The prevalence of youth with obesity (2-19 years old) has grown from 13.9% in 1999-2000 to 17.2% in 2013-2014 [1]. As this population grows, so does the continued need for public education and intervention to prevent or reduce childhood obesity [2,3]. The United States Preventive Services Task Force (USPSTF) has recommended that children aged 6-18 be routinely screened for obesity using body mass index (BMI), age and gender to calculate population percentiles [4]. However, children with obesity have been found to utilize the emergency department (ED) setting for routine care more often than children without obesity suggesting that the ED is a possible location for obesity screening and intervention [2,3,5-8].

Screening in the ED is not novel and has been studied in various caregiver and provider groups [2,6,8]. Previous research focused on obesity screenings found that parents were aware of their children's weight status and were re-

ceptive to the idea of an obesity intervention in the ED [2,6]. Increasingly ED providers have been open to preventive health screening in the area of smoking cessation, mental health and alcoholism [8]. However, it is less clear how ED medical doctors perceive an obesity screening program in this setting. The input from this highly important stakeholder group is needed to improve participation and sustainability [9]. The purpose of this study is to inquire about medical professional's opinions on obesity screening in the ED along with assessing their treatment of care for patients with obesity. Additionally, differences were compared between the physicians' screening agreement and their demographic/professional characteristics to identify relevant factors among screening attitudes.

Material and methods

Participants in this descriptive study were ED employees at an urban, quaternary care, pediatric hospital



Table 1. Demographic and background characteristics of pediatric emergency department physicians ($N = 62$)

Characteristics	<i>n</i> (%) or median (IQR)
Age	37.0 (32.0, 42.0)
Gender: Female	38 (61.3)
Ethnicity	
Hispanic	6 (9.7)
Non-Hispanic	55 (88.7)
Did not report	1 (1.6)
Race	
Caucasian	38 (61.3)
African-American	4 (6.5)
Asian	15 (24.2)
Other ^a	4 (6.5)
Did not report	1 (1.6)
Years practiced with degree	7.0 (4.0, 15.25)
Do you assess the patient's weight status?	
Yes	48 (77.4)
No	13 (21.0)
Not Applicable	1 (1.6)
What method is used? ^b	
Clinical impression based on weight only	8 (16.7)
Weight-for-age percentile (gender specific) only	4 (8.3)
BMI (kg/m ²) only	2 (4.2)
All three methods	12 (25.0)
Percentile and BMI	7 (14.6)
Percentile and clinical impression	11 (22.9)
Clinical impression and BMI	4 (8.3)
Do you record the result in the medical record?	
Yes	11 (22.4)
Sometimes	28 (57.1)
No	9 (18.4)
Not applicable	1 (2.0)
Missing	13
Do you order additional laboratory tests for patients with obesity?	
Yes	5 (8.1)
No	56 (90.3)
Not applicable	1 (1.6)
Do you ask about familial obesity-related conditions?	
Yes	25 (40.3)
No	34 (54.8)
Not applicable	3 (4.8)
Pediatric obesity should be screened for in the ED	
Agree	25 (41.0)
Disagree	13 (21.3)
Not sure	23 (37.7)
Healthcare professionals should discuss obesity as a risk factor for other diseases in the ED	
Agree	47 (77.0)
Disagree	6 (9.8)
Not sure	8 (13.1)

BMI – body mass index, ED – emergency department, IQR – interquartile range

^aOther includes more than one race

^bOnly participants who responded to assessing weight status were included

with an estimated 80,000 annual visits. All personnel involved in ED patient care (i.e. certified nursing assistants, registered nurses, advance practice providers (APP) and medical doctors) were invited to complete the survey. Employees were contacted through their work email and invited to participate by completing the SurveyMonkey® questionnaire or through paper surveys made available during resident meetings. The survey was open for four weeks (March 19 – April 13, 2018) with weekly reminders. Informed consent was acquired through the assent process by opening and completing the survey. This study was approved by an institutional review board.

Frequencies and percentages were reported for categorical data, median and interquartile ranges (IQR) were reported for skewed continuous data. Demographic and professional characteristics were compared to screening attitudes using non-parametric testing (Pearson χ^2 and Kruskal-Wallis). Statistical significance was defined as p -value < 0.05. Analyses were conducted using the Statistical Package for the Social Sciences (SPSS), version 24 (IBM Corp., Armonk, NY).

Results

A total of 264 medical professionals were sent a survey link to participate in the study. Response rate was below 80% for all groups (ED staff = 18 (11.8%), APP = 7 (24.1%)), but was highest for physicians, therefore the focus of the analysis was on pediatricians. Both age and years practiced were skewed, so non-parametric testing was utilized.

A total of 62 surveys (74.7%) were completed by the ED physicians. Participants were mostly female (61.3%), non-Hispanic (88.7%), Caucasian (61.3%), with a median age of 37 years and 7 years of practice (Table 1). Overall, most ED physicians (77.4%) assessed the patient's weight status (e.g. overweight, underweight, etc.) using one or more of the following approaches: clinical impression, weight-for-age-percentiles and BMI (Table 1). Reasons for documenting weight status in the medical record included: relevance to primary/presenting complaint (72.4%), or if weight was not normal (20.7%) (results not shown).

Emergency department physicians were also asked if their standard of care was modified by the patient's weight. Less than 10% of ED physicians order additional laboratory tests (Table 1). When tests were ordered, aspartate aminotransferase (AST) and alanine aminotransferase (ALT) were included 80% of the time (results not shown). Familial history related to obesity is collected less than half the time (40.3%) (Table 1), with most focusing on hypertension, cardiovascular disease, and diabetes (52.0%) (results not shown).

When asked about pediatric obesity screening in the ED, the overall response was split between uncertainty

Table 2. Demographic and background characteristics of pediatricians and their willingness to screen for obesity in the emergency department ($N = 61$)

I would screen for obesity in the ED...	Agree $n = 29$ (47.5%) n (%) or median (IQR)	Disagree $n = 6$ (9.8%) n (%) or median (IQR)	Not sure $n = 26$ (42.6%) n (%) or median (IQR)	P-value
Age	37.0 (32.0, 43.5)	35.0 (31.0, 39.3)	36.5 (31.8, 42.0)	0.71
Gender				0.72
Male	10 (34.5)	3 (50.0)	11 (42.3)	
Female	19 (65.5)	3 (50.0)	15 (57.7)	
Ethnicity				0.16
Hispanic	5 (17.9)	0 (0.0)	1 (3.8)	
Non-Hispanic	23 (82.1)	6 (100.0)	25 (96.2)	
Race				0.29
Caucasian	18 (64.3)	5 (83.3)	14 (53.8)	
African-American	3 (10.7)	0 (0.0)	1 (3.8)	
Asian	5 (17.9)	0 (0.0)	10 (38.5)	
Other ^a	2 (7.1)	1 (16.7)	1 (3.8)	
Years practiced with degree	9.0 (4.5, 15.5)	3.5 (2.6, 9.1)	7.0 (3.9, 14.0)	0.26
Background				0.99
Resident/Fellow	9 (31.0)	2 (33.3)	8 (30.8)	
Physician/Attending	20 (69.0)	4 (66.7)	18 (69.2)	

ED – emergency department, IQR – interquartile range
^aOther includes more than one race

and a positive view (37.7% and 41.0%, respectively) (Table 1). When asked to comment further on why the ED may not be an ideal setting, responses included: limited resources, logistics, time constraints, emergency treatment, and responsibility of their primary care physician (PCP) (results not shown). A majority did however agree (77.0%) that healthcare professionals should discuss obesity as a risk factor for other diseases in the emergency care setting (Table 1).

Comparisons were made across physician attitudes towards ED obesity screening and demographic and professional characteristics (Table 2). When asked if they would personally screen for obesity, pediatric ED physicians agreed 47.5% of the time, while 42.6% were uncertain (Table 2). There were no statistically significant differences between demographics, years practiced, current physician role, and screening agreement (Table 2). It is interesting to note that physicians who disagree with screening in the ED ($n = 6$) have fewer years practiced than those who agree or are not certain about screening (Table 2).

Discussion

Overall, pediatric ED physicians support the idea of obesity screening, but are uncertain of the setting. Al-

though a majority of the ED physicians are assessing the patient's weight status, it is not always recorded in the medical record, unless it is relevant to the chief complaint. In evaluating ED medical records over a 6-month period in 2018, BMI was documented 23.5% of the time; this is likely due to a lack of triage attainment of height. In this study, less than half of the ED pediatricians asked about familial obesity-related conditions (e.g. diabetes, hypertension and cardiovascular disease). In comparison, pediatric health care providers in a non-emergent setting asked families of patients who are overweight over half the time [10]. A possible explanation for the difference in rates could be that the ED setting is focused on an acute issue as opposed to a general outpatient health exam.

Although pediatricians support discussing obesity as a risk factor in the ED, they are less certain about screening for obesity in this setting. Pediatricians in other settings are also aware of the effects of obesity, but report a low proficiency in nutritional management counseling, lack of patient/parent motivation and time, limited available services, and reimbursement issues as barriers to treatment [10-13]. In this study, less than one-fourth of ED pediatricians who commented felt discussing obesity was too sensitive of an issue and the families may not be receptive to hearing about their child's weight in this setting. Despite concerns, previous studies have shown

that interventions for sensitive topics such as smoking, alcohol consumption, and attempted suicide can be successful when implemented in the ED [8].

Although not statistically significant, the number of years practiced may be a factor in screening for obesity in the ED. Providers who have practiced in emergency medicine for a longer period of time reported a more favorable response to screening for obesity than those with fewer years of experience. However, when resident and physician attitudes toward obesity screening were compared, there were no significant differences. In the primary care setting, residents are aware of health risk factors (such as smoking or an unhealthy diet), but do not often attempt to counsel patients, and when they do, their communication skills are minimal [14].

Previous studies suggest that obese children utilize the ED more frequently making this setting a potential location for screening and a brief intervention [2,3,5-8]. Although emergency health conditions and injuries are the primary focus of the ED, wait times due to condition severity and available resources, provide a unique opportunity for staff and faculty to communicate with parents about the effects of childhood obesity. Information regarding weight management can be offered to the parents along with a list of obesity programs located in the community (e.g. YMCA, food banks, school districts, etc.).

Our study had several limitations. First, the original intent of the study was to get obesity screening perceptions from all ED personnel. Unfortunately, only physicians responded. Attending all personnel meetings, as a way to notify participants of the study, may have increased the response rate from other staff and APPs. Secondly, the response rate from the ED physicians participating in this study was 75%. Non-responders can create a bias which may not be representative of all ED personnel. However, our response rate was similar to the response rates found in other pediatrician survey studies (52-81%) [15]. Thirdly, the comparison analysis is under-powered due to the small sample size, which results in non-significant findings. And lastly, two participants reported having technical difficulties accessing the online survey.

Conclusions

Emergency department providers currently assess patient's weight status and are open to obesity screening. Tailoring an obesity intervention in the ED to meet the concerns of physicians may increase participation and sustainability along with providing a feasible management option for patients with obesity and their families. This study further validates interest for future obesity screening in the ED [2,3].

Disclosure

The authors report no conflict of interest.

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