ABSTRACT
Objective: To describe families’ selections of Conversation Cards (CCs), a priority-setting tool in pediatric weight management, and examine CC-related differences based on families’ anthropometric and sociodemographic characteristics.
Methods: A retrospective medical record review was conducted of 2- to 17-year-olds with obesity and their families who enrolled in a pediatric weight management clinic between January, 2012 and September, 2016.
Results: Medical records of 146 children were included. On average, families selected 10 CCs (range, 3–32 CCs); only 50% of families (n = 73) indicated perceived readiness to make healthy changes. Adolescents (vs children) revealed less healthy eating behaviors (P = .001) and physical activity habits (P = .002). Goal setting was perceived to be a motivator across several sociodemographic characteristics (all P < .05).
Conclusions and Implications: The CCs were useful in describing families’ priorities. The diversity of issues identified by families highlighted the importance of multidisciplinary expertise in pediatric weight management.
Key Words: family, goals, lifestyle, motivation, pediatric obesity, healthy eating, physical activity (J Nutr Educ Behav. 2017; -:1-5.)
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INTRODUCTION
Obesity is a complex public health issue that influences the health and well-being of an increasing number of children and adolescents and remains a difficult topic for many health care providers (HCPs) and families to discuss. Health care providers expressed difficulty in counseling families with regard to weight management as well as nutrition and physical activity habits. In particular, they reported a range of barriers, including a lack of motivation, time, and support services. Along these lines, HCPs identified a need for educational tools to support their clinical work in pediatric weight management, especially with regard to enabling constructive conversations and informing care.

In 2012, Conversation Cards (CCs) were developed to foster priority setting for behavior change for families enrolled in pediatric weight management and to stimulate communication and collaboration between HCPs and families. As such, CCs were developed and applied for 2 primary reasons: first, to help families think about and prioritize key challenges and issues that they believed were relevant to pediatric weight management; and second, to serve as practical points of reference for HCPs at treatment initiation and during future clinical encounters, which could assist in tailoring treatment plans for families based on their priorities that often evolved over time.

Informed by a knowledge synthesis and qualitative data, a deck of CCs contained 44 cards organized across 6 categorical suits, including communication, interpersonal relationships, nutrition, parenting, physical activity, and weight management. The cards included a number of common topics (eg, child behavior, child–parent relationship, role of HCPs) in which families often desired support. Each card contained an individual statement within 1 of the suits and was worded positively (eg, Ongoing contact with our clinician keeps us motivated) or negatively (eg, I feel overwhelmed and lack support). Conversation Cards were well received by families and HCPs and were easily integrated into the practices of HCPs working in pediatric weight management.

1Department of Pediatrics, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Canada
2Department of Agricultural, Food, and Nutritional Science, Faculty of Agricultural, Life, and Environmental Sciences, University of Alberta, Edmonton, Canada
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Address for correspondence: Geoff D. C. Ball, PhD, R.D., Department of Pediatrics, Faculty of Medicine and Dentistry, University of Alberta, 4-515 Edmonton Clinic Health Academy, 11405–87 Ave, Edmonton, Alberta T6G 1C9, Canada; Phone: (780) 492-8727; E-mail: gdball@ualberta.ca
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The purpose of the current study was to investigate families’ use of CCs in a family-centered, multidisciplinary pediatric weight management clinic. More specifically, the objectives of this medical record review were to describe families’ selections of CCs and examine whether family characteristics varied according to the number and type of CCs selected.

METHODS

This study was a cross-sectional, retrospective medical record review. The researchers optimized methodological rigor along with data accuracy and completeness when retrieving information by adhering to established recommendations for performing medical record reviews (eg, using a standardized electronic form for data collection, training a data abstractor and data auditor, completing an independent data audit). Data retrieved from medical records were established after team meeting consultations (MK, SD, and GDCB). The data abstraction form was created and managed using Excel (Office 2016 for Mac; Microsoft Corp., Redmond, WA) and consisted of variable entries organized in an order similar to that found in the original medical records. The form was modified as needed, after a 1-day training period of the data abstractor and data auditor, which included (1) a revision of the included variables and the format of the abstraction form, (2) pilot-testing the abstraction form using a random sample of data from 5 medical records, and (3) a joint revision of the coding and consensus on any discrepancies (eg, clear operationalization of variables, consistency in data recording styles).

Data Collection

Data were retrieved from all families (consecutive sampling) who enrolled in pediatric weight management at the Pediatric Centre for Weight and Health between January, 2012 and September, 2016 and whose medical records contained CC-related information. The clinic provided care to 2- to 17-year-olds with an age- and sex-specific body mass index (BMI) ≥ the 85th percentile; all children included in the current study satisfied these criteria.

After referral for weight management by local physicians, families attended a monthly group-based orientation session in which they were informed about available services at the clinic. At this time, CCs were made available to attendees. A clinical or research team member instructed families to select and document the cards that reflected their priorities (enablers or challenges) for weight management; families were not limited by the number of cards they could choose. Upon completion, families’ card choices were collected and inserted into children’s medical records, which allowed HCPs to gain insight into families’ priorities before their first clinical appointment. Baseline anthropometric (eg, children’s height and weight) and sociodemographic (eg, ethnicity, family income) data were retrieved from children’s medical records using a standardized protocol. To optimize data accuracy and rigor, a 10% random sample of records was audited independently (by SD) after all data were retrieved (by MK). Across all variables, there was high internal consistency (Cronbach α = .89) and reproducibility (intraclass correlation coefficient = 0.89). Any discrepancies were discussed by MK and SD, verified, and agreed on by consensus. This study received research ethics approval by the Human Research Ethics Board at the University of Alberta (Edmonton, Alberta) and operational approval from Alberta Health Services (Stollery Children’s Hospital, Edmonton, Alberta).

Data Analysis

Children’s height (in centimeters) and weight (in kilograms) were used to calculate BMI, BMI percentiles, and BMI z-scores. Descriptive statistics (eg, means, SDs, proportions) were performed for anthropometric, sociodemographic, and CC data. Differences in CC selections (frequency and type) were examined across the following groups: (1) age at baseline assessment, <13 years (children) vs ≥13 years (adolescents); (2) sex, male vs female; (3) ethnicity, Caucasian vs non-Caucasian; (4) weight status, overweight (+1 BMI SD units) and obese (+2 BMI SD units) vs severely obese (≥3 BMI SD units); (5) enrollment status, discharged vs active; (6) dropout time point, <7 vs ≥7 months (median split); (7) parental education, postsecondary vs less than postsecondary; and (8) household income, <$80,000 vs ≥$80,000 (CDN). Group differences for categorical data were examined using chi-square test of independence or Fisher’s exact test, where applicable. SPSS (version 24.0; SPSS, Inc, Chicago, IL) was used for data analysis, and group differences at P < .05 were considered statistically significant.

RESULTS

This medical record review yielded a sample of 146 participants for inclusion (Table), which represented 48% of the total sample (N = 307) of children who enrolled in the clinic during the study time frame. Parents were primarily female (89%) and Caucasian (69%); approximately one half completed postsecondary education (51%) and had an annual household income of ≥$80,000 (CDN) (46%). On average, families selected 10 ± 6 cards (range, 3–32 cards), including equal proportions of positively and negatively worded cards. When CCs selected by families were grouped according to suit and rank-ordered from most to least popular, they were organized accordingly (percentage of total selected cards): nutrition (25%), physical activity (24%), parenting (24%), interpersonal relationships (23%), communication (20%), and weight management (19%). Each of the 44 cards in the deck was selected at least 7 times. The top 5 most frequently selected CCs (Figure) included (1) families’ readiness to make healthy changes (n = 73; 50%), (2) the benefit of involving children and adolescents in discussions (n = 61; 42%), (3) the importance of children and adolescents in sharing their thoughts (n = 59; 40%), (4) wanting to learn how to make healthy foods fun (n = 57; 39%), and (5) the desire for a specially trained fitness instructor to work with children and adolescents (n = 56; 38%).

Categorical analyses generated a number of noteworthy differences among groups based on their card selections. Specifically, (1) compared with children, a greater proportion of adolescents disliked exercising (χ² = 9.4; P = .002) and bought fast food in the absence of their parents.
DISCUSSION

This retrospective medical record review revealed several findings of relevance to families enrolled in multidisciplinary pediatric weight management. The number and type of cards selected by families reflected a range of enablers and challenges that were relevant to their health services. Card choices varied across anthropometric and sociodemographic characteristics at both patient (ie, age, ethnicity, weight status) and family (ie, parent education, household income) levels. Specifically, the most salient themes related to elements of motivation for healthy lifestyle behaviors and providing tailored care to subgroups of patients (and families) that may be at increased risk for psychological and physical health risks.

Only half of the families communicated a readiness to make healthy changes, which suggested that families were not universally motivated to participate in care. In an earlier, independent report,14 only about 40% of parents (n = 43 of 113) were engaged in making lifestyle behavior changes in nutrition and physical activity at the time of enrollment in pediatric weight management.15 In the pursuit of healthy lifestyle, behavioral, and cognitive changes, HCPs are encouraged to establish measurable and achievable goals with families. Indeed, in this study, parents with a higher level of education and lower household income considered goal setting as a motivational strategy that likely contributed positively to their care. That goal setting was an important motivational activity in weight management complemented a previous study16 in which adolescents cited motivation as the most common enabler of healthy behavior change. Goal setting can assist with adherence to healthy behaviors by motivating adolescents who tend to have the developmental capacity and interest to be autonomous. Because adolescence marks a period of increased independence, and lifestyle behaviors17 and weight status18 during this dynamic stage in life are likely to extend into adulthood, there is clear value in adopting healthy lifestyle behaviors from an early age. Accordingly, conveying healthy behaviors through behavior change strategies such as goal setting as part of the clinical care received by families in this sample was consequential.

Families enroll in pediatric weight management for a variety of reasons (eg, concern about children’s weight, improvement in lifestyle habits, need for external support)19 and present clinically with variable characteristics, needs, and priorities. These realities emphasize that a singular therapeutic approach will not suit all families. In this study, families whose sons and daughters had severe obesity highlighted (to a greater degree than their peers with overweight and obesity) the merit of follow-up visits to help them to stay on track. This suggests that support from HCPs may be particularly important and meaningful to those with severe obesity to help them with weight management. Akin to differences resulting from anthropometric factors, some families were more likely to encounter challenges in navigating the health care system because of contextual and socioeconomic factors. Children and adolescents of non-Caucasian origin who took part in this study selected a CC that reflected difficulty in communicating with HCPs, which implied that cultural differences or language barriers reflected important challenges in their clinical interactions. Within families with a lower level of education and lower household income, the CC selections identified that financial limitations influenced their ability to engage in healthy lifestyle behaviors. Because these factors can impede successful weight management and engagement in care,20 there is a need to offer complementary support for families when it is indicated (eg, translation services, financial assistance). Clinical assessments may not always reveal the challenges faced by families, so CCs represent a tangible tool that can prompt families to share relevant insights and priorities with HCPs. Of note, no group differences were observed for enrollment status or dropout time point, which suggests that although the cards were helpful during treatment (eg, priority setting), they were not able to differentiate families based on treatment initiation or termination of care, at least according to how these constructs were operationalized in this study.

This study had limitations. First, most families were Caucasian and included children and adolescents...
with severe obesity, so findings may differ among non-Caucasian families and families with individuals who have less excess weight. Second, despite instructions shared with families to select CCs as a family unit, it is unclear whether CCs were selected by parents exclusively or if parents and children completed this task together. Clearly defining the target of CC selections can help to ensure consistency among families for analytic and research purposes, but is less important clinically. Finally, although this study’s sample included approximately one half of all children who attended the clinic during the study time frame, the demographic and anthropometric characteristics of these children did not differ from those in previous reports that included children from the same weight management clinic.

IMPLICATIONS FOR RESEARCH AND PRACTICE

Families presenting to a multidisciplinary pediatric weight management clinic used CCs to report a variety of issues that were relevant to their health services and their capacity and ability to make healthy changes. The needs and preferences of families relating to motivation and clinical support, especially across socioeconomic groupings, revealed the complexity of patient- and family-level priorities that HCPs can address. Implicitly, data from this study highlighted the value of a team of HCPs with diverse and complementary expertise in pediatric medicine, weight management, lifestyle behaviors, and psychosocial health, which is best suited to support families managing pediatric obesity.

Offering families a menu of services that align with their readiness, motivation, and ability to participate actively in pediatric weight management is ideal. As part of a comprehensive initial assessment in a clinical setting, CCs may be useful to complement existing processes and procedures for both HCPs and families, which can tailor therapeutic interventions to families’ individual needs and explore potential changes over time. Additional research is needed to determine the perceptions and experiences of HCPs and families using CCs in their clinical interactions and whether CCs can serve as a practical tool to enable goal setting and motivation related to changing lifestyle habits for managing pediatric obesity.

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REFERENCES

8. Farnesi BC, Newton AS, Holt NL, Sharma AM, Ball GDC. Exploring
collaboration between clinicians and parents to optimize pediatric weight management. *Patient Educ Couns.* 2012; 87:10-17.


CONFLICT OF INTEREST

GDCB co-developed Conversation Cards with Ms Carla Farnesi (former graduate student) and worked in partnership with the Canadian Obesity Network to distribute the cards through their online store. GDCB has derived no direct financial benefit from this distribution. GDCB is also the director of the weight management clinic from which study data were derived. All other authors have no conflicts of interest to declare. No honorarium or other form of payment was given to anyone involved in the production of this manuscript.