

### Introduction

- The prevalence of childhood obesity has risen dramatically since the 1970s, prompting efforts within healthcare and community settings to reverse this trend.
- The 2007 Expert Committee Recommendations (ECR) provide clinical guidelines for childhood obesity assessment, prevention, and treatment.
- The ECR include a four-stage approach to treatment, through which patient's progress, based on their need for more structured or specialized care.
- While stages 1 and 2 may be accomplished by primary care providers (PCPs) with or without additional referral (e.g., to a community dietitian or psychologist), stages 3 and 4 typically involve referral to comprehensive multidisciplinary programs or tertiary care centers.
- Although the ECR encourage PCPs to remain involved in treatment stages 3 and 4 after referral, these guidelines do not clearly delineate their role, and models of care coordination relevant to pediatric obesity treatment have not been widely described in the literature.
- During the spring of 2015, the Children's Hospital Association (CHA) and the American Academy of Pediatrics (AAP) partnered to conduct a survey of PCPs, in the context of the Expert Exchange, a think tank of more than 40 highly experienced pediatric weight management specialists (WMS), representing children's hospitals across the nation. The goal was to better understand PCP perceptions and experiences surrounding the co-management of care for patients with overweight or obesity with WMS, with the ultimate aim of helping to optimize care.

### Sample

**Table 1. Characteristics of the Survey Sample of Primary Care Providers and Pediatricians in the 2013 AAP Periodic Survey**

Practice Characteristic	Survey sample (n=71-74)	2013 AAP Periodic Survey of Fellows <sup>a</sup> (n=2226-2283)	
Duration of practice (yr.)	0-5	N/A	
	6-10	12.2 %	
	11-15	13.5 %	
	16-20	14.9 %	
	21-25	16.2 %	
	>20	43.2 %	
Practice setting	Solo or two MD's	8.2%	12.0%
	Pediatric Group (> 2 MD)	27.3%	31.9%
	Multispecialty Group or Staff HMO	9.6%	14.5%
	Medical School or University	32.9%	18.6%
	Hospital/ Clinic	12.3%	14.1%
	Community Health Center	9.6%	3.3%
	Other	0.0%	5.7%
Location of practice	Urban (inner city)	31.1%	23.3%
	Urban (non-inner city)	29.7%	27.5%
	Suburban	25.7%	39.1%
	Rural	13.5%	10.1%
Payer Profile <sup>b</sup>	% Private Insurance	36.9% (30.4)	50.7%
	% Public Insurance	59.8% (29.5)	45.2%
	% Uninsured	3.0% (4.5)	4.1%

<sup>a</sup> Results for the Periodic Survey were limited to primary care providers who had finished residency; N/A= not available. <sup>b</sup> Results for the survey sample are presented as means, with standard deviations included in parentheses.

### Methods

#### Instrument:

- A 21-question survey was developed by a subgroup of the Expert Exchange from Stage 3 and 4 pediatric weight management programs and then reviewed by the larger group and pilot tested by volunteer PCPs.
- Question topics included:
  - Practice/patient characteristics
  - Frequency/patterns of referrals to WMS
  - Preferences/barriers related to patient co-management with WMS
- Response formats included Likert scales, multiple choice, and open-ended formats

#### Sample & Administration:

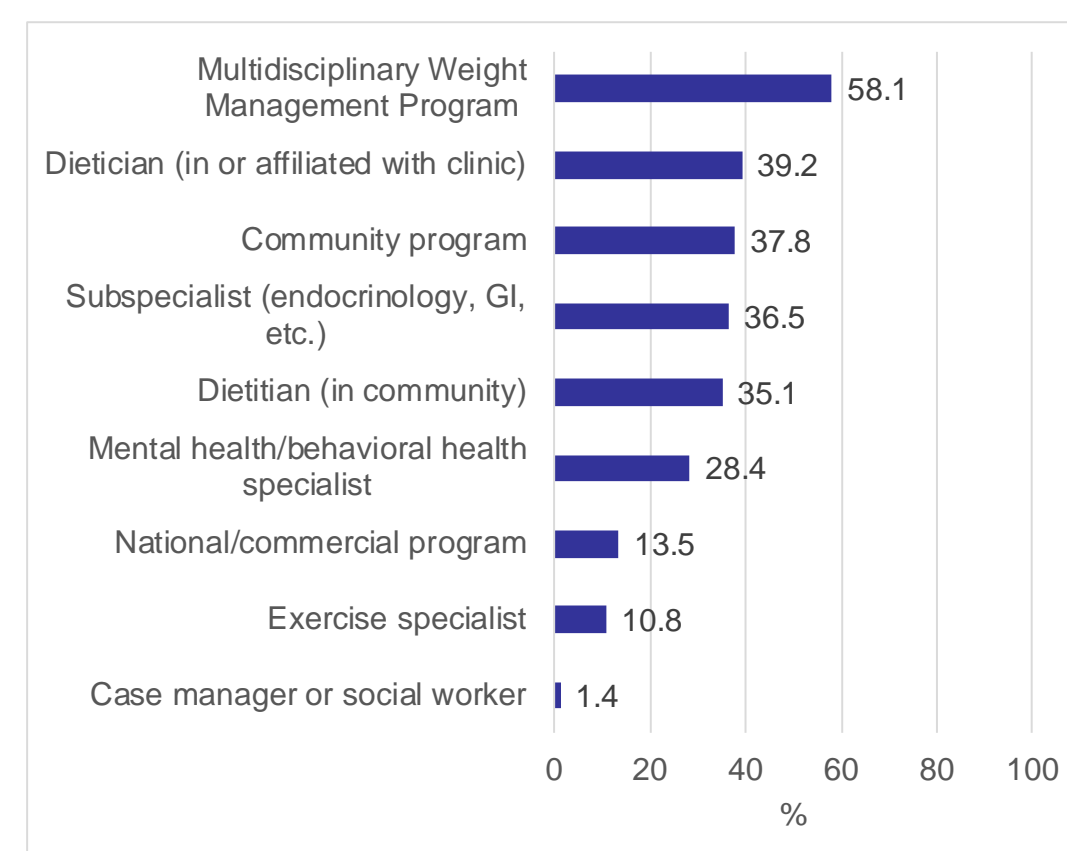
- The protocol was deemed exempt by the AAP Human Subjects Committee.
- PCPs (physicians, physician assistants, nurse practitioners) were invited via email to participate in an online survey, using membership lists from the AAP Sections on Obesity, Community Pediatrics, School Health and Practice Management (n=2572).
- Reminder e-mails were sent at one and two weeks; no incentives were offered.
- A convenience sample of 74 primary care pediatricians completed the survey. Few other types of providers responded, so the sample was limited to this group.

#### Analysis:

- Univariate frequencies generated for sample characteristics. When available, sample characteristics were compared with those from the 2013 AAP Periodic Survey, a representative national sample.
- Observed frequencies for other variables, including preferences, referrals, and barriers related to communication and patient co-management with WMS, were interpreted as a preliminary needs assessment for PCPs.
- Select bi-variate comparisons were also conducted, using Pearson's chi-square or Fischer's exact test, to explore the potential role of setting/location or payer mix on responses for future consideration, with a significance level set at p<.05.

### Results

**Figure 1. Percentage of Pediatric Primary Care Providers Who Report Referring to Various Types of Professionals when Caring for Patients with Overweight or Obesity (n=74)**

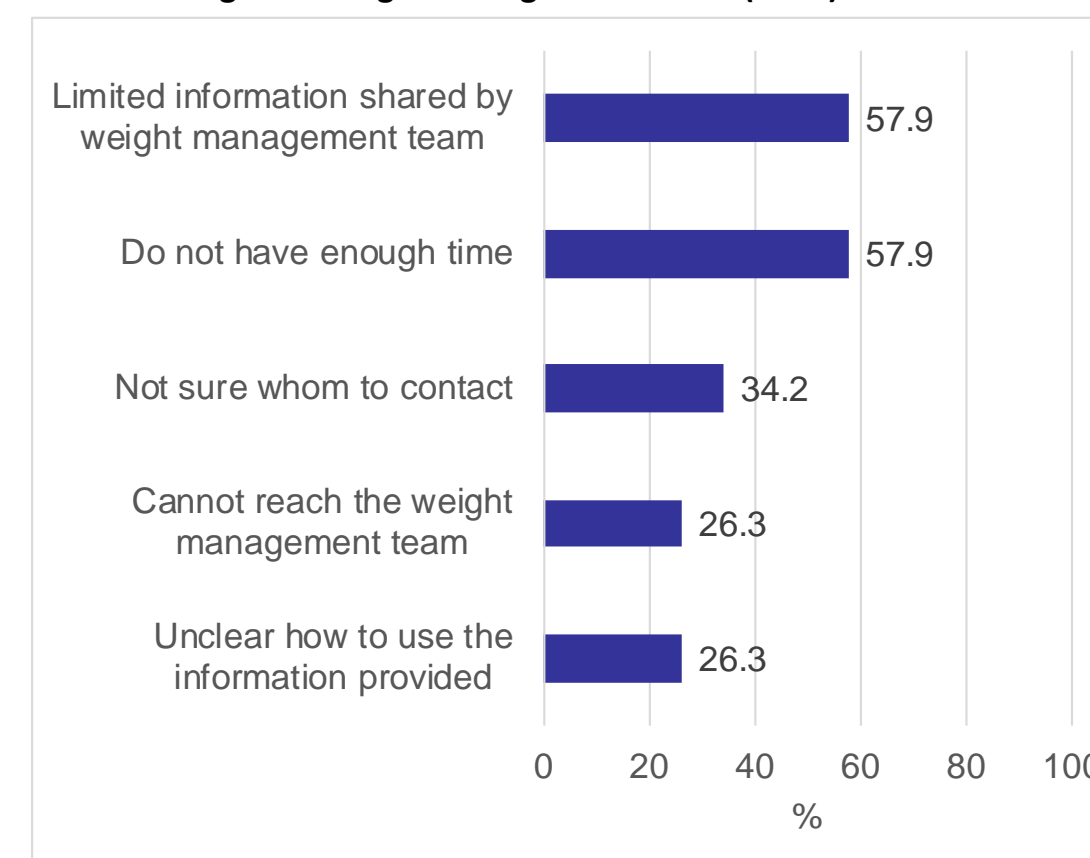


#### Additional exploratory results:

- Pediatricians practicing in urban (vs. non-urban) settings or academic (vs. non-academic) medical centers or with a low (vs. high) percentage of patients with private insurance were significantly less likely to refer patients to community dietitians.
- Pediatricians in academic (vs. non-academic) settings were also significantly more likely to refer patients to Multidisciplinary Weight Management programs.

### Results (cont'd)

**Figure 2. Percentage of Pediatric Primary Care Providers Who Report Barriers in Communicating with Weight Management Teams (n=38)**



#### Additional exploratory results:

- Pediatricians practicing in urban (vs. non-urban) settings were significantly more likely to report being unable to reach weight management teams.

**Table 2. Barriers to Co-management Reported by Primary Care Providers**

Barrier	n	Not a barrier or N/A	Minor barrier	Moderate barrier	Major barrier
Individual patient and family factors	71	2.8%	8.5%	21.1%	67.6%
Too much time needed for weight management visits	72	6.9%	18.1%	37.5%	37.5%
Inadequate reimbursement for follow-up visits	70	22.9%	25.7%	30.0%	21.4%
Limited knowledge of primary care weight management	71	35.2%	36.6%	18.3%	9.9%
Limited confidence in managing pediatric obesity	71	39.4%	35.2%	16.9%	8.5%

#### Additional exploratory results:

- Pediatricians with more (vs. fewer) years of experience were significantly less likely to report barriers related to patient/family factors.
- Pediatricians with a high (vs. low) percentage of patients with private insurance were significantly less likely to report reimbursement for weight management as a barrier.

### Discussion

#### Results Summary:

- Almost 60% of PCPs reported referring patients to multidisciplinary weight management programs, with a sizeable minority—almost 40%—referring to subspecialists, dietitians within their practices, and dietitians within their communities. Few refer to exercise specialists or social workers.
- Nearly all participating providers (96%) wished to remain engaged in treatment, with about half desiring a significant role in care.
- The majority of providers use communication received from WMS to inform follow-up visits and help plan patient transitions back to primary care.
- The majority of PCPs reported highly valuing communication about patient comorbidities and progress during weight management and clarifying role expectations between providers.
- Reports of barriers to co-management of comorbidities or weight management efforts were extremely common and most typically involved limited information shared by the weight management specialist, various patient factors, insufficient time, and inadequate reimbursement.
- Compared with national averages, participating PCPs disproportionately represented those practicing in urban locations and academic settings, with a relatively low percentage of patients covered by private insurance.
- Various practice characteristics, including urban settings, academic practice type, provider experience, and the insurance profile of the patient population appear to affect PCP perceptions and experiences related to co-management of patients with WMS.

#### Conclusions:

- Results are based on a small sample and were intended to serve as a preliminary needs assessment.
- However, findings speak to issues for which there is limited previous research and suggest areas of potential importance to explore in future research.
- Results suggest that primary care providers wish to remain involved in caring for their overweight and obese patients and wish to participate in co-managing the comorbidities associated with obesity.
- The role in ongoing management is often unclear, and factors, such as ineffective communication with the WMS, insufficient time, and inadequate reimbursement serve as barriers to this ongoing involvement in follow-up.
- Additional research and interventions appear warranted to optimize the coordination of care between PCPs and WMS.

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