Analysis of Barriers to Successful Prevention and Management of Pediatric Obesity and their Relationship to Care at Community Health Centers

Rebecca Beesley MPH, Nicole Craker MPH, Sabrina Neeley PhD, MPH and Ashley Fernandes MD, PhD
Wright State University, Boonshoft School of Medicine, Dayton, OH

INTRODUCTION

- Prevalence of childhood obesity in the United States is 16.9% (Ogden, Carroll, Kit, & Flegal, 2014).
- The epidemic of overweight and obesity adds economic burden to our society.
- Only a systematic review of cross-sectional research has been conducted assessing the knowledge, attitudes, beliefs, and practices of healthcare providers in regards to pediatric overweight and obesity (van Gerwen, Franc, Rosman, Le Vaillant, & Pelletier-Fleury, 2009).
- Qualitative methods allow researchers to get a better understanding of the perspectives held by participants (Staniford, Breckon, Copeland, & Hutchison, 2011).
- It is estimated by the end of 2014, an additional 32 million people will seek care at a Community Health Center (CHC) as a result of the Affordable Care Act (Amico, Chilingerian, & van Hasselt, 2014).
- It is important to evaluate how CHCs will be targeted and utilized in efforts to reduce pediatric obesity in the United States .

METHODS

- A qualitative evidence synthesis was conducted (Figure 1, Table 1)
- Databases used: PubMed, PsycINFO, CINAHL, ERIC, and SocIndex
- Different fields of healthcare were searched, such as pediatrics, psychiatry, and psychology.
- Healthcare providers were identified as physician, nurse practitioner, physician assistants, nurses, and health personnel.
- Two readers independently selected articles to include in the final synthesis. The inter-rater reliability for article selection was Kappa = 0.811 ($p<0.0001$).
- All chosen studies were deemed valid and appropriate for use in this qualitative evidence synthesis.

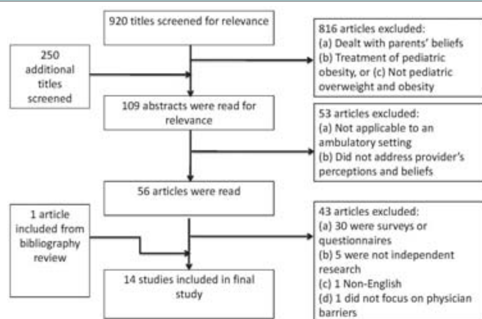

Figure 1. Article selection methodology and results.

- A SWOT Analysis (Table 2) was performed to assess the potential Strengths, Weaknesses, Opportunities, and Threats a CHC model may have in the prevention and management of pediatric obesity.

RESULTS

Table 1. *Themes Extracted from Literature Review*

	Study Number													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
External Factors														
Time	+	-	+	+	+	-	+	+	-	-	-	+	+	+
Reimbursement	-	-	+	-	-	-	-	-	-	-	-	+	-	-
Provider education	+	-	+	+	+	-	+	+	+	-	-	+	-	+
Community resources	-	-	+	+	-	-	+	-	-	-	+	+	-	-
Multidisciplinary care	+	-	+	-	-	-	+	-	-	-	-	+	-	-
Role discrepancies	-	+	+	-	-	+	+	+	+	-	+	+	+	-
Interpersonal Factors														
Patient-provider relationship	+	+	-	-	+	+	-	-	+	+	-	-	+	-
Sensitivity of topic	-	+	+	-	+	-	+	-	+	+	-	+	-	+
Cultural beliefs	-	+	+	+	+	+	+	-	+	+	-	+	+	-
Adverse feeding effects	-	-	+	-	-	+	-	-	-	-	-	-	+	-
Conflicting advice	+	-	-	-	-	+	-	-	+	+	-	-	-	-
Perceptions of Caregiver														
Limited resources	+	-	+	+	+	-	+	+	+	-	-	+	-	-
Use of food as a tool	+	-	-	-	+	+	+	-	+	+	-	-	-	-
Denial of the problem	+	+	-	+	+	-	+	-	-	+	-	+	+	-
Transparency	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Motivation	+	-	+	+	-	-	-	-	-	-	+	-	+	+
Knowledge	+	-	-	+	+	+	+	-	+	+	-	+	+	-
Other					+		+							
Total	10	5	11	8	11	7	12	4	9	7	3	11	8	4

Category 1: External Factors (Figure 2)
- Time and provider education are major barriers
- Those studies mentioning lack of education were almost identical to those mentioning lack of time
- Little mention of reimbursement
- Although less mention of need for multidisciplinary care, much focus on role confusion
- Role confusion not limited to one sector of the healthcare workforce

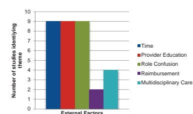

Figure 2. Comparison of external factors.

Category 2: Interpersonal Factors (Figure 3)
- Much concern about sensitivity of topic and overweight/obese caregivers
- Providers concerned about jeopardizing relationship and losing patient
- Conflicting cultural norms seen as a major barrier

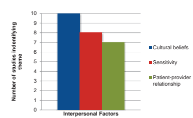

Figure 3. Comparison of interpersonal factors.

Category 3: Perceptions about Caregiver (Figure 4)
- Providers feel that the caregiver's lack of resources or knowledge prohibits their discussion of the topic
- Many caregivers perceived as in denial of the child's weight problems

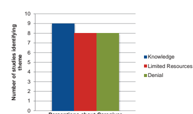

Figure 4. Comparison of perceptions of caregivers.

ACKNOWLEDGEMENTS

We would like to thank Bette Sydelko for her expertise and guidance in performing literature searches and Sylvia Ellison for her help with the statistical analysis for this project.

RESULTS CONTINUED

Table 2. *SWOT Analysis of the Community Health Center (CHC)/ Federally Qualified Health Center (FQHC) Model in Regards to Pediatric Obesity*

	STRENGTHS	WEAKNESSES
INTERNAL	1. Provide care regardless of patients' ability to pay 2. Offer a sliding fee scale for the poor and uninsured 3. Prospective payment system (PPS) reimbursement for FQHCs 4. Must provide pediatric services 5. Must provide preventive services 6. Must provide comprehensive care 7. UDS tracking of quality improvement measures	1. Relying on grant revenues leads to decreased technical efficiency 2. Larger health center negatively increase probability of being fully efficient 3. Scarce resources → extend staff too much 4. Descriptive representation does not always happen in FQHCs
	OPPORTUNITIES	**THREATS**
EXTERNAL	1. FQHC consumers sit on board – hear from them and about what services they desire 2. Quality assurance plans to ensure serving the population appropriately	1. Pressures to transform to PCMH 2. Requirements to implement EHR 3. Lack of staff

CONCLUSIONS

- Barriers felt across different regions and cultures and various fields of the healthcare workforce.
- Healthcare providers face difficulties before, during, and after the discussion.
- Underlying issue of role confusion amongst healthcare professionals.
- Key stakeholders need to have a clear understanding of the issue at hand and the barriers to its successful resolution.
- Desire for primary healthcare providers to learn more and effectively counsel their patients about diet and nutrition vs. their limiting time constraints and desire to refer patients to other disciplines for care.
- FQHCs provide a multidisciplinary atmosphere providers desire.
- Uniformed Data System gives FQHC ability to monitor yearly outcomes.
- FQHCs focused on grant funding rather than efficient business model.
- Overextended in staff, money, and time → must prioritize what to address.
- FQHC status requires quality assurance plans that assess the utilization of services provided to the communities which can identify if an FQHC is meeting the needs to prevent and manage pediatric obesity.
- FQHCs must be explored further for their potential role in prevention and management of pediatric obesity due to their increased relevance.

REFERENCES

Amico, P. R., Chilingerian, J. A., & van Hasselt, M. (2014). Community health center efficiency: The role of grant revenues in health center efficiency. *Health Services Research, 49*(2), 666-682. doi:10.1111/1475-6773.12106

Ogden, C. L., Carroll, M. D., Kit, B. K., & Flegal, K. M. (2014). Prevalence of childhood and adult obesity in the united states, 2011-2012. *JAMA : The Journal of the American Medical Association, 311*(8), 806-814. doi:10.1001/jama.2014.732

Staniford, L. J., Breckon, J. D., Copeland, R. J., & Hutchison, A. (2011). Key stakeholders' perspectives towards childhood obesity treatment: A qualitative study. *Journal of Child Health Care, 15*(3), 230-244. doi:10.1177/1367493511404722

van Gerwen, M., Franc, C., Rosman, S., Le Vaillant, M., & Pelletier-Fleury, N. (2009). Primary care physicians' knowledge, attitudes, beliefs and practices regarding childhood obesity: A systematic review. *Obesity Reviews, 10*(2), 227-236. doi:10.1111/j.1467-789X.2008.00532.x