

# Perceptions of Obesity Treatment Options Among Healthcare Providers and Low-Income Primary Care Patients

Betty M. Kennedy, PhD,<sup>1</sup> Kathleen B. Kennedy, PharmD,<sup>2</sup> Daniel F. Sarpong, PhD,<sup>2</sup> Peter T. Katzmarzyk, PhD<sup>1</sup>

<sup>1</sup>The Pennington Biomedical Research Center, Baton Rouge, LA <sup>2</sup>College of Pharmacy, Xavier University of Louisiana, New Orleans, LA

**Background:** Primary care is a key component of medical care delivery and has a role to play in reducing obesity in the United States. The purpose of this study was to explore attitudes and perceptions about obesity in low-income primary care patients and to identify preferences for weight management interventions from the patient and healthcare provider perspectives.

**Methods:** A convenience sample of 28 patients and 6 healthcare providers from across the state of Louisiana participated in 1 of 5 structured focus groups. Demographic information was collected from both the patients and healthcare providers using survey instruments.

**Results:** Patients and healthcare providers were more similar than dissimilar in their perceptions of obesity in that both groups selected referral to a nutritionist, use of medication, and prescribed exercise as the top 3 strategies that would have the greatest impact on losing weight. Referral to a nutritionist was selected as the easiest strategy to implement.

**Conclusion:** Receiving feedback from both patients and healthcare providers gives researchers the opportunity to acquire useful knowledge that may be beneficial in designing and conducting interventions suitable for patients desiring to lose weight, especially those in primary care settings.

**Keywords:** *Obesity, primary health care, weight loss, weight reduction programs*

Address correspondence to Peter T. Katzmarzyk, PhD, The Pennington Biomedical Research Center, 6400 Perkins Road, Baton Rouge, LA 70808. Tel: (225) 763-2536. Email: peter.katzmarzyk@pbrc.edu

## INTRODUCTION

Obesity, defined as having a body mass index (BMI)  $\geq 30$  kg/m<sup>2</sup>, affects 36% of the United States adult population.<sup>1</sup> Despite the numerous health concerns associated with obesity, there is some evidence that mortality rates may not increase significantly until levels of obesity  $>35$  kg/m<sup>2</sup> are achieved.<sup>2</sup> However, obesity in midlife is associated with decreased life expectancy even in the absence of concomitant chronic diseases such as diabetes, hypertension, and coronary artery disease.<sup>3-5</sup>

While the high levels of obesity are of great concern, a greater concern is that our healthcare system has failed to deliver medical interventions capable of producing even modest weight loss.<sup>6</sup> We know that modest weight loss is achievable in some settings; however, this achievement has not been successfully translated to primary care practices.<sup>7,8</sup>

Primary care practitioners (PCPs) are the cornerstone of medical care in the United States. The U.S. Preventive Services Task Force recommends that physicians offer intensive multicomponent behavioral interventions to obese

individuals,<sup>9</sup> and the Centers for Medicare and Medicaid Services (CMS) provides coverage for intensive behavioral therapy for obesity by a qualified PCP.<sup>10</sup> A recent review indicated that obesity treatment options delivered in primary care have resulted in limited success, demonstrating only 1-3 kg (about 1%-3% of baseline weight on average) weight loss during 6-24 months of intervention.<sup>7</sup> The authors concluded that this low weight loss is likely due to the low intensity of the interventions, as most studies typically only employed monthly or quarterly visits of 10-15 minutes' duration.<sup>7</sup> Thus, further research is required to develop sustainable, evidence-based models of obesity treatment in primary care.

Obesity disproportionately affects minorities and people with low socioeconomic status,<sup>11-13</sup> many of whom receive healthcare in university-based public hospital primary care clinics.<sup>13</sup> Important aspects of improving preventive care in primary care clinic settings are to identify patients' knowledge and attitudes about weight loss in this environment and to determine healthcare providers' approaches to weight loss. Therefore, the purpose of this study was to determine the perceptions of obesity treatment options from

a patient and healthcare provider perspective. This information is important for the design and implementation of weight loss interventions in healthcare settings.

## METHODS

### Participants

Patients as well as physicians or nurse practitioners (collectively referred to here as healthcare providers), aged 20 years or older, willing to provide written informed consent and able to speak and understand English were eligible to participate in 1 of 5 structured focus groups held across the state of Louisiana. We did not impose an a priori inclusion criterion based on BMI; rather we solicited participants with an interest in discussing weight loss and weight management strategies. Individuals with a cognitive impairment that would interfere with participation in a group discussion and those who were unable or unwilling to provide informed consent were not eligible.

Participants were recruited by word of mouth or from flyers posted within primary care clinics. Written informed consent was obtained when participants arrived and prior to the start of each focus group discussion. Light refreshments were provided, and each participant received a \$50 gift card. The study protocol, procedures, and consent form were reviewed and approved by the Pennington Biomedical Research Center's Institutional Review Board.

### Design and Procedures

The nominal group technique (NGT), a qualitative method of data collection, was used to engage patients and healthcare providers to obtain their perspective on potential obesity treatment strategies. NGT is a brainstorming tool for quality improvement and highly structured small group discussions that is used to elicit and prioritize a list of answers to a specific question.<sup>14-18</sup> Similar to traditional focus groups, 4-12 participants per group are considered appropriate for NGT sessions.<sup>19</sup>

The multistep NGT design is useful for systematically stimulating meaningful interpersonal statements among participants by gathering equally weighted responses to a specific question that tends to offer valid representation of group views.<sup>20-23</sup> The NGT method eliminates the need for audio recording and transcription because verbatim responses are written on a flipchart, thereby providing a concise summary of the session that is readily available for dissemination. Prior to conducting NGT sessions, the investigative team articulated the specific question and then pilot tested it with individuals desiring to lose weight to ensure that it would capture the responses intended.

Primary care patients residing in 4 communities (Franklin, Bossier City, New Orleans, and Shreveport, LA) and healthcare providers in Baton Rouge, LA, participated in 1 of 5 NGT sessions. All sessions were conducted during the month of July 2015. Each group consisted of 6-8 participants and included both males and females. All patient sessions were conducted on weekdays within a designated area at each primary care clinic. The healthcare provider session was conducted on a weekday after normal working hours at the Pennington Biomedical Research Center. Each group session lasted approximately 90 minutes.

After welcoming the participants and providing brief introductions, the purpose of the session and ground rules for participation were discussed. Preliminary probing questions were discussed, including "How do you define overweight?" "What are the main reasons that you would want to lose weight?" "What are the best ways to lose weight?" "What are the major things stopping people from losing weight in your community?" and "If researchers were successful in designing a weight management program, what would that look like?"

The facilitator, accompanied by a co-facilitator, then posed the main question to patients: "What has your doctor or other healthcare professional (nurse, etc) done to try to help you lose weight?" Similarly, the healthcare providers were asked, "What are the main things that you have done to help patients lose weight?"

The participants were asked to work silently and to independently write down as many responses to the question as possible in short phrases that represented their individual views. In a round-robin manner, the participants were then asked to share their answers (one response at a time), while the co-facilitator wrote each response verbatim on a flipchart without discussion. Each recorded response was then discussed for the sole purpose of clarification and not for evaluation or debate as to its relative importance. During this step, the participants were asked to combine responses they perceived to be significantly similar. Finally, during the voting phase, the patients and healthcare providers privately selected what they considered to be the top 3 responses likely to have the greatest impact on losing weight. They then ranked the top 3 responses that would be the easiest to implement for weight management.

Each patient and healthcare provider prioritized his/her choices individually without discussing them with others, assigning a rank of 3 to the most impactful and 1 to the least impactful strategy and likewise for the easiest to implement strategy. The facilitator recorded the votes on the flipchart in front of all participants and then tallied the votes for each response. A small number of idiosyncratic ideas were discarded, which is a standard procedure in the NGT. The primary results were the top 3 strategies identified in each group; the secondary results were all other ideas. Through an iterative process, the facilitators categorized responses into common themes until consensus was obtained.

Demographic information was collected from both the patients and healthcare providers using survey instruments that included age, ethnicity, sex, education, employment, annual household income, and marital and health status. In addition, height and weight were self-reported, and healthcare providers selected the number of years in their primary occupation as a physician or nurse practitioner.

## RESULTS

Selected demographic characteristics of the 34 focus group participants (28 patients, 6 healthcare providers) are shown in Table 1. Overall, the average BMI for patients was 46.5 kg/m<sup>2</sup> (range 30.9-100.4 kg/m<sup>2</sup>). The overall average BMI for healthcare providers was 26.9 kg/m<sup>2</sup> (range 23.4-36.3 kg/m<sup>2</sup>). Eighty-three percent of the healthcare provid-

**Table 1. Characteristics of Participants in the Focus Groups**

Characteristic	Patients	Healthcare Providers <sup>a</sup>
	n=28 %	n=6 %
<b>Age, years</b>		
18-35	11	33
36-55	32	50
56-65	32	17
≥66	25	
<b>Race</b>		
White	36	67
African American	64	17
Asian		16
<b>Sex</b>		
Male	14	50
Female	86	50
<b>Education</b>		
0-8 grade		
Some high school	14	
High school	18	
1-3 years college	36	
College degree	11	
Postgraduate degree	21	100
<b>Employment</b>		
Full time	14	100
Part time	0	
Medical disability	25	
Unemployed	21	
Retired	40	
<b>Annual income, \$<sup>b</sup></b>		
10,000	36	
10-19,999	11	
20-29,999	7	
30-39,999	21	
50-59,999	7	
60-69,999	7	
≥70,000	11	100
<b>Marital status</b>		
Married	50	67
Divorced/separated	11	16
Never married	32	17
Widowed	7	
<b>Health status</b>		
Excellent	0	50
Very good	11	50
Good	36	
Fair	42	
Poor	11	

<sup>a</sup>Physicians and nurse practitioners.

<sup>b</sup>Total household income.

ers were physicians, and 67% had been in their profession more than 10 years.

**Preliminary Questions-Patients**

Overall, patients defined overweight as having low self-esteem, a reflection of self that does not feel good. Ultimately, the main reasons patients said they want to lose weight are because they are concerned about their health (high blood pressure, diabetes, heart disease), they have family history issues, and they want to have enough energy to keep up with their grandchildren.

Patients consistently stated across all clinical sites that some of the best ways to lose weight are controlling portions (watching calorie intake, reading labels), planning meals, keeping healthy choices (fruits and vegetables) readily available, keeping a food and exercise diary, and joining a social support group for accountability. In addition, patients perceived that a lifestyle change is needed to lose weight because many had taken diet pills and know they work temporarily but that even more weight returns when the pills are stopped. A large number of patients considered diet pills and weight loss surgery as last resorts and options only if absolutely necessary.

The major perceived hindrance to losing weight that patients had in common across all 4 clinical sites was the cost of healthy foods, especially for patients with limited or fixed incomes. Other common barriers included having comfortable and free places to exercise, access to public pools, and the fact that family gatherings center around food.

For researchers to be successful in designing a weight management program, patients commonly reported that the program should be structured and based on individual needs because one size does not fit all. It must also include a support group, enjoyable fun activities, meal preparation (portion control), and exercise (regular and water aerobics) in a comfortable environment.

**Preliminary Questions-Healthcare Providers**

Healthcare providers defined overweight as greater than the 85th percentile on the BMI growth chart and/or elevated BMI, and they said they know it when they see it. Healthcare providers perceived that the main reasons patients want to lose weight are because of appearance, social pressure, or their doctor told them to lose weight. They said the best way for patients to lose weight is to follow a specific plan: eat a low-calorie diet, increase physical activity, limit sugar, limit portion size, and track what they eat.

The most consistent things these healthcare providers have done to help patients lose weight is counseling them on appropriate portion size, advising them to consume foods that are less calorie dense such as fruits and vegetables, encouraging them to read labels to know calorie content, and discussing the comorbidities associated with excess weight. Healthcare providers perceived that the major barriers to losing weight were the influence of family members, seeing discouraging results, lack of access to healthy food choices, staying at different homes, and consuming fast food dollar menu items.

Healthcare providers perceived that a successful weight management program would be multidisciplinary, structured, and easily adaptable as one size does not fit all. It

must be available in different locations, incorporate the whole family, and foster sustainable lifestyle changes. Yet they perceived the real issue with healthcare providers is that they do not have enough time to spend with patients; 15-minute visits are not conducive to combating the obesity problem.

### NGT Sessions-Patients

Four NGT sessions were conducted with patients. The first NGT session was held at the Franklin primary care clinical site, and 8 patients generated 24 responses to the question “What has your doctor or other healthcare professional done to try to help you to lose weight?” At the other sites, 6 patients in Shreveport provided 12 responses, 6 patients in Bossier City initiated 19 responses, and 8 patients in New Orleans produced 25 responses for a total of 80 responses. During the clarification discussions, patients at each clinical site indicated that many of the responses overlapped and as a result, responses were merged and combined. The final lists included 6, 7, 8, and 8 responses for each clinical site, respectively, for the prioritization exercise. These 29 total responses across the 4 clinical sites were organized into 4 themes identified during the iterative process: referred to exercise, referred to nutritionist, referred to medication, and provided advice only. In Table 2, the themes are listed in bold print with the actual patient responses from each clinical site listed under each theme. The relative importance (in terms of its impact on losing weight) of each patient response at each primary care clinical site is reflected by the total number of votes and the sum of the ranks given to that response as shown in Table 2.

Some of the patients’ actual responses to what the doctor or other healthcare professional had done to try to help them lose weight across 4 sites are as follows: “*Do exercise.*” “*Diet plan, juice plus, less salt and sugar.*” “*Diet pills.*” “*Encouraged to change portion size, type of food.*” “*Walk 30 minutes after eating.*” “*Appetite suppressants; fat burners.*”

The top 3 themes that patients identified as having the greatest impact on losing weight were the same at the Bossier City and New Orleans sites: (1) referred to nutritionist, (2) referred to exercise, and (3) referred to medication. At the Franklin site, patients ranked the themes in the following order: (1) referred to exercise, (2) referred to nutritionist, and (3) referred to medication. The rank assigned by patients at the Shreveport site was (1) referred to nutritionist, (2) referred to medication, and (3) referred to exercise.

Comments from patients at the Bossier City and New Orleans sites categorized under the provided-advice-only theme included, “*Encouraged me with motivation on how well my health will be and how the changes will improve my life,*” and “*Encouraged me to do something.*” Representative provided-advice-only theme comments from patients at the Franklin and Shreveport sites were “*Everything that is wrong with you is because you are obese,*” and “*Talked to me about losing weight and getting off some medications.*” Patients at all 4 sites perceived the provided-advice-only theme as not requiring a vote because many patients conceived these ideas to be

equivalent to nothing tangibly received from their healthcare provider.

Patients across the 4 clinical sites, regardless of rank order, selected referred to nutritionist, referred to medication, and referred to exercise as the top 3 ideas likely to have the greatest impact on losing weight. However, when choosing the easiest method to implement, patient responses varied at 2 clinical sites. Patients in Bossier City suggested a support group for motivation and talking about weight, patients in Franklin identified medication referrals, and patients in Shreveport and New Orleans said referrals to a nutritionist would have the greatest impact as well as be the easiest method to implement for patients to lose weight.

### NGT Session-Healthcare Providers

In the fifth and final NGT session, 6 healthcare providers generated 19 responses to the question: “What are the main things that you have done to help patients lose weight?” During the clarification discussions, healthcare providers stated that several responses were repetitive, and they were therefore combined. The final list included 9 responses for the prioritization exercise. These responses were organized into 4 themes identified during the iterative process: referred to nutritionist, referred to metabolic medications, referred to exercise, and referred to weight-loss programs. In Table 3, the themes are listed in bold print with the actual healthcare provider responses listed under each theme. The relative importance (in terms of its impact on losing weight) of each healthcare provider response is reflected by the total number of votes and the sum of the ranks given to that response as shown in Table 3.

Some of the responses healthcare providers stated that they had done to help patients lose weight are as follows: “*Talk to them about appropriate portion size and portion control.*” “*Reduce and/or omit sugary drinks.*” “*Eat more fruits and vegetables and less calorie dense foods.*”

The top 3 themes that healthcare providers identified as having the greatest impact on patients losing weight were (1) referred to nutritionist, (2) referred to metabolic medications, and (3) referred to exercise. Healthcare providers also provided responses categorized under the referred-to-weight-loss-programs theme to further assist patients in losing weight: “*Counseling, set goals, motivate,*” “*Discuss comorbidities,*” and “*Comprehensive and/or commercial weight loss programs.*”

Healthcare providers identified referral to a nutritionist as the strategy with the greatest impact and easiest implementation.

## DISCUSSION

The results of this study revealed overall that both patients’ and healthcare providers’ perceptions of obesity treatments were similar in several instances. For example, during the preliminary questioning, patients and healthcare providers both perceived that the best way to lose weight was to follow a specific meal plan including healthy choices such as fruits and vegetables, to exercise, and to track what you eat. These similarities coincide with previous research in which fruits and vegetables were provided along with a

**Table 2. Patient Responses: What Has Your Doctor or Other Healthcare Professional Done to Try to Help You to Lose Weight?**

	Total Votes	Sum of Ranks <sup>a</sup>
<b>Clinical Site: Franklin, LA</b>		
<b>n=8 patients</b>		
<b>Theme 1: Referred to Exercise</b>		
“Do exercise.”	8	24
<b>Theme 2: Referred to Nutritionist</b>		
“Diet plan, juice plus, less salt and sugar.”	4	12
“Gave me diet sheets.”	2	6
<b>Theme 3: Referred to Medication</b>		
“Diet pills.”	6	12
<b>Theme 4: Provided Advice Only</b>		
“Preached at me with no advice how to do it; told me the risk of being overweight.”	4	0
“Everything that is wrong with you is because you are obese.”	2	0
<b>Clinical Site: Shreveport, LA</b>		
<b>n=6 patients</b>		
<b>Theme 1: Referred to Nutritionist</b>		
“Encouraged to change portion size, type of food.”	4	12
“Drink more water before meals.”	2	6
<b>Theme 2: Referred to Medication</b>		
“Said there will be additional medications.”	5	10
“Prescribed Invokana.”	2	4
<b>Theme 3: Referred to Exercise</b>		
“Walk 30 minutes after eating.”	3	9
<b>Theme 4: Provided Advice Only</b>		
“Hear the same things about what to avoid; education doesn’t help.”	1	0
“Talked to me about losing weight and getting off some medications.”	1	0
<b>Clinical Site: Bossier City, LA</b>		
<b>n=6 patients</b>		
<b>Theme 1: Referred to Nutritionist</b>		
“Nutritionist.”	5	15
“Diets.”	3	9
<b>Theme 2: Referred to Exercise</b>		
“Exercise, walking.”	4	8
“Physical therapy.”	2	4
<b>Theme 3: Referred to Medication</b>		
“Appetite suppressants; fat burners.”	3	6
“Diet pills.”	3	3

**Table 2. Continued**

	Total Votes	Sum of Ranks <sup>a</sup>
<b>Theme 4: Provided Advice Only</b>		
“Told me what would happen if I don’t lose weight.”	2	0
“Encouraged me with motivation on how well my health will be and how the changes will improve my life.”	1	0
<b>Clinical Site: New Orleans, LA</b>		
<b>n=8 patients</b>		
<b>Theme 1: Referred to Nutritionist</b>		
“Combination of portion control, diet and exercise, and visit with dietitian.”	8	24
“Recommended to track my weight and what I eat.”	4	12
<b>Theme 2: Referred to Exercise</b>		
“Advised me to exercise more; showed me exercises for the pool.”	4	12
“Improve fitness level.”	2	6
<b>Theme 3: Referred to Medication</b>		
“Prescribed diet pills.”	5	10
“Approved bariatric surgery.”	1	3
<b>Theme 4: Provided Advice Only</b>		
“Just said how overweight is detrimental to health.”	1	0
“Encouraged me to do something.”	1	0

<sup>a</sup>Calculated by summing the ranks of responses (3=most important, 2=second most important, and 1=least important). A higher score equals greater perceived importance.

nutrition education component; participants lost an average of 2.0 kg of weight by the end of the study.<sup>24</sup> Yet the major hindrance to losing weight perceived by both patients and healthcare providers is either a lack of access to healthy food choices or the costs associated in obtaining these items. Research has shown that U.S. supermarkets today stock an average of 60,000 foods, so people can choose from a vast array of food options.<sup>25,26</sup> However, despite all the food options hypothetically available to U.S. consumers, the participants in this study—like those in others—stressed the realities of living on a limited budget and with limited access to healthy foods, especially when fast foods and highly processed foods are perceived to be less expensive and more readily available than fresh fruits and vegetables.<sup>25</sup>

Patients and healthcare providers commonly reported that if researchers are to be successful in designing a weight management program it must be multidisciplinary, structured, and easily adaptable to individual needs because, as both groups stated verbatim, “one size does not fit all.” Research purports that weight-loss programs generally adopt a one-size-fits-all behavioral model that subscribes to the culture of the dominant majority without attention to the cultural attitudes and preferences of

**Table 3. Healthcare Provider (n=6) Responses: What Are the Main Things That You Have Done to Help Patients Lose Weight?**

	Total Votes	Sum of Ranks <sup>a</sup>
<b>Theme 1: Referred to Nutritionist</b>		
“Talk to them about appropriate portion size, and portion control.”	6	18
“Reduce and/or omit sugary drinks.”	4	11
“Eat more fruits and vegetables and less calorie dense foods.”	5	10
<b>Theme 2: Referred to Metabolic Medications</b>		
“Diet pills.”	5	13
“Insulin.”	4	8
<b>Theme 3: Referred to Exercise</b>		
“Discuss exercise and diet.”	6	11
<b>Theme 4: Referred to Weight-Loss Programs</b>		
“Comprehensive and/or commercial weight loss programs.”	4	10
“Counseling, set goals, motivate.”	4	9
“Discuss comorbidities.”	5	8

<sup>a</sup>Calculated by summing the ranks of responses (3=most important, 2=second most important, and 1=least important). A higher score equals greater perceived importance.

nonmajority members.<sup>27-30</sup> In addition, patients perceived that a successful weight management program should include a support group, enjoyable fun activities, meal preparation, and exercise (regular and water aerobics) in a comfortable environment. Healthcare providers further stated that the successful weight management program must be comprehensive and available in various locations, incorporate the whole family, and foster sustainable lifestyle changes. Emerging evidence suggests that the best outcomes derive from multidisciplinary approaches that utilize a broad range of expertise and varied interventions with proven synergy.<sup>31</sup>

Finally, patients and healthcare providers identified the top 3 strategies having the greatest impact on losing weight as referrals to a nutritionist, medications, and exercise. In fact, patients at 3 clinical sites (Bossier City, New Orleans, and Shreveport) were in agreement with healthcare providers, citing referrals to a nutritionist as having the greatest impact on losing weight. Additionally, healthcare providers and patients at the New Orleans and Shreveport clinical sites identified referrals to a nutritionist as the easiest strategy to implement for losing weight. Research has shown that nutrition/dietary consultation is one of the most useful supplementary services available in clinical practice for weight management.<sup>32,33</sup>

While patients agreed with some of the ideas generated by the healthcare providers, they indicated that providing advice only does not tangibly assist them in losing weight. Previous research has indicated that patients prefer healthcare providers to give direct and specific recom-

mendations for weight loss, including exercise and diet instructions.<sup>34,35</sup> However, as confirmed by participants in this study, many healthcare providers feel that they cannot devote clinical time to weight management when faced with acute and chronic demands to manage disease states and illnesses stemming from diabetes, dyslipidemias, heart disease, and hypertension.<sup>36,37</sup> For their part, primary care patients may have a limited understanding of disease-focused care goals and therefore may not always feel that their weight concerns are being thoroughly addressed.<sup>35</sup>

This study has several strengths. Some advantages to using the NGT include the fact that the weight of each participant's opinion is the same, and process loss seems less likely to occur.<sup>38</sup> The highly structured format of the NGT provides an opportunity for group participants to achieve a substantial amount of work in a relatively short period of time. Another advantage of the NGT is the deliberate avoidance of interpretation from a facilitator who has the responsibility to explore but not to interfere with or influence participants in the group.<sup>14</sup>

NGT also has some limitations: the composition and representativeness of participants may limit the generalizability of the results, training and preparation are required, the discussion is restricted to a single question, and the NGT does not allow further elaboration of other ideas.<sup>39</sup> This study is further limited by its convenience sampling of primary care patients at designated clinical sites (Bossier City, Franklin, New Orleans, and Shreveport, LA) and healthcare providers in Baton Rouge, LA.

## CONCLUSION

Although patients and healthcare providers were perceived as being aware of the key elements necessary for losing weight, results from this study highlight the need for healthcare providers to focus on giving specific guidance and instructions to their patients so that patients do not feel that they are simply being given advice. Further, the ideas generated by these patients and healthcare providers may assist researchers in designing and planning sustainable interventions for weight management in primary care clinics across the state of Louisiana.

## ACKNOWLEDGMENTS

*This research was supported by the Patient-Centered Outcomes Research Institute (PCORI) Contract #OB-1402-10977. Additional support was provided by 1 U54 GM104940 from the National Institute of General Medical Sciences of the National Institutes of Health that funds the Louisiana Clinical and Translational Science Center.*

*The authors would like to thank Ms. Amina Massey and Ms. Beverly K. Conish for co-facilitating the focus groups and all primary care clinics and their staffs for providing the space and especially for recruiting the patients for the study. Special thanks to all focus group participants in Baton Rouge, Bossier City, Franklin, New Orleans, and Shreveport, LA, for completing this study.*

## REFERENCES

1. Flegal KM, Carroll MD, Kit BK, Ogden CL. Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999-2010. *JAMA*. 2012 Feb 1;307(5):491-497. doi: 10.1001/jama.2012.39.

2. Flegal KM, Graubard BI, Williamson DF, Gail MH. Excess deaths associated with underweight, overweight, and obesity. *JAMA*. 2005 Apr 20;293(15):1861-1867.
3. Peeters A, Barendregt JJ, Willekens F, Mackenbach JP, Al Mamun A, Bonneux L; NEDCOM, the Netherlands Epidemiology and Demography Compression of Morbidity Research Group. Obesity in adulthood and its consequences for life expectancy: a life-table analysis. *Ann Intern Med*. 2003 Jan 7;138(1):24-32.
4. Hu FB. Overweight and increased cardiovascular mortality: no French paradox. *Hypertension*. 2005 Oct;46(4):645-646.
5. Yan LL, Daviglius ML, Liu K, et al. Midlife body mass index and hospitalization and mortality in older age. *JAMA*. 2006 Jan 11; 295(2):190-198.
6. Carvajal R, Wadden TA, Tsai AG, Peck K, Moran CH. Managing obesity in primary care practice: A narrative review. *Ann N Y Acad Sci*. 2013 Apr;1281:191-206. doi: 10.1111/nyas.12004.
7. Wadden TA, Neiberg RH, Wing RR, et al; Look AHEAD Research Group. Four-year weight losses in the Look AHEAD study: factors associated with long-term success. *Obesity (Silver Spring)*. 2011 Oct;19(10):1987-1998. doi: 10.1038/oby.2011.230.
8. Hamman RF, Wing RR, Edelstein SL, et al. Effect of weight loss with lifestyle intervention on risk of diabetes. *Diabetes Care*. 2006 Sep;29(9):2102-2107.
9. Moyer VA; U.S. Preventive Services Task Force. Screening for and management of obesity in adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2012 Sep 4;157(5):373-378.
10. Centers for Medicare & Medicaid Services. Decision Memo for Intensive Behavioral Therapy for Obesity (CAG-00423N). <http://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?&NcaName=Intensive%20Behavioral%20Therapy%20for%20Obesity&bc=ACAAAAAIAAA&NCAid=253&>. November 29, 2011. Accessed March 8, 2016.
11. Mokdad AH, Bowman BA, Ford ES, Vinicor F, Marks JS, Koplan JP. The continuing epidemics of obesity and diabetes in the United States. *JAMA*. 2001 Sep 12;286(10):1195-1200.
12. Mokdad AH, Ford ES, Bowman BA, et al. Prevalence of obesity, diabetes, and obesity-related health risk factors, 2001. *JAMA*. 2003 Jan 1;289(1):76-79.
13. Huang J, Marin E, Yu H, et al. The prevalence of overweight, obesity, and associated diseases among outpatients in a public hospital. *South Med J*. 2003 Jun;96(6):558-562.
14. Pena A, Estrada CA, Soniat D, Taylor B, Burton M. Nominal group technique: a brainstorming tool for identifying areas to improve pain management in hospitalized patients. *J Hosp Med*. 2012 May-Jun;7(5):416-420. doi: 10.1002/jhm.1900.
15. Castiglioni A, Shewchuk RM, Willett LL, Heudebert GR, Centor RM. A pilot study using nominal group technique to assess residents' perceptions of successful attending rounds. *J Gen Intern Med*. 2008 Jul;23(7):1060-1065. doi: 10.1007/s11606-008-0668-z.
16. Crenshaw K, Shewchuk RM, Qu H, et al. What should we include in a cultural competence curriculum? An emerging formative evaluation process to foster curriculum development. *Acad Med*. 2011 Mar;86(3):333-341. doi: 10.1097/ACM.0b013e3182087314.
17. Van de Ven AH, Delbecq AL. The nominal group as a research instrument for exploratory health studies. *Am J Public Health*. 1972 Mar;62(3):337-342.
18. Safford MM, Shewchuk R, Qu H, et al. Reasons for not intensifying medications: differentiating "clinical inertia" from appropriate care. *J Gen Intern Med*. 2007 Dec;22(12):1648-1655.
19. Corbie-Smith G, Thomas SB, Williams MV, Moody-Ayers S. Attitudes and beliefs of African Americans toward participation in medical research. *J Gen Intern Med*. 1999 Sep;14(9):537-546.
20. Jefferson WK, Zunker C, Feucht JC, et al. Use of the Nominal Group Technique (NGT) to understand the perceptions of the healthiness of foods associated with African Americans. *Eval Program Plann*. 2010 Nov;33(4):343-348. doi: 10.1016/j.evalprogplan.2009.11.002.
21. Elliott TR, Shewchuk RM. Problem solving therapy for family caregivers of persons with severe physical disabilities. In: Radnitz CL, ed. *Cognitive-Behavioral Therapy for Persons with Disabilities*. Northvale, NJ: Jason Aaronson, Inc.; 2000.
22. Miller D, Shewchuk R, Elliot TR, Richards S. Nominal group technique: a process for identifying diabetes self-care issues among patients and caregivers. *Diabetes Educ*. 2000 Mar-Apr; 26(2):305-314.
23. Shewchuk RM, O'Connor SJ, Fottler MD, et al. Understanding the meaning of health care management research through the use of a cognitive mapping approach. In: Fottler MD, ed. *Advances in Health Care Management*. Greenwich, CT: JAI Press; 2001.
24. Kennedy BM, Champagne CM, Ryan DH, et al; Lower Mississippi Delta Nutrition Intervention Research Initiative. The "Rolling Store:" an economical and environmental approach to the prevention of weight gain in African American women. *Ethn Dis*. 2009 Winter;19(1):7-12.
25. Fukuoka Y, Lindgren TG, Bonnet K, Kamitani E. Perception and sense of control over eating behaviors among a diverse sample of adults at risk for type 2 diabetes. *Diabetes Educ*. 2014 Feb; 40(3):308-318.
26. Food Marketing Institute. Supermarket facts: industry overview 2011-2012. Food Marketing Institute. <http://www.fmi.org/research-resources/supermarket-facts>. Accessed September 29, 2015.
27. Blixen CE, Singh A, Xu M, Thacker H, Mascha E. What women want: understanding obesity and preferences for primary care weight reduction interventions among African-American and Caucasian women. *J Natl Med Assoc*. 2006 Jul;98(7): 1160-1170.
28. Kumanyika SK, Obarzanek E, Stevens VJ, Hebert Pr, Whelton PK. Weight loss experience of black and white participant in NHLBI-sponsored clinical trials. *Am J Clin Nutr*. 1991 Jun;53(6 Suppl): 1631S-1638S.
29. Kumanyika SK, Morssink C, Augurs T. Models for dietary and weight change in African-American women: identifying cultural components. *Ethn Dis*. 1992 Spring;2(2):166-175.
30. Kennedy BM, Ard JD, Harrison L Jr, et al. Cultural characteristics of African Americans: implications for the design of trials that target behavior and health promotion programs. *Ethn Dis*. 2007 Summer;17(3):548-554.
31. Yanovski SZ, Yanovski JA. Long-term drug treatment for obesity: a systematic and clinical review. *JAMA*. 2014 Jan 1; 311(1):74-86. doi: 10.1001/jama.2013.281361.
32. Huang J, Yu H, Marin E, Brock S, Carden D, Davis T. Physicians' weight loss counseling in two public hospital primary care clinics. *Acad Med*. 2004 Feb;79(2):156-161.
33. Elson RB, Splett PL, Bostick RM, Aepli D, Haberman M. Dietitian practices for adult outpatients with hypercholesterolemia referred by physicians. The Minnesota Dietitian Survey. *Arch Fam Med*. 1994 Dec;3(12):1073-1080.
34. Greiner KA, Born W, Hall S, Hou Q, Kimminau KS, Ahluwalia JS. Discussing weight with obese primary care patients: physician and patient perceptions. *J Gen Intern Med*. 2008 May;23(5):581-587. doi: 10.1007/s11606-008-0553-9.
35. Potter MB, Vu JD, Croughan-Minihane M. Weight management: what patients want from their primary care physicians. *J Fam Pract*. 2001 Jun;50(6):513-518.
36. Jaén CR, Stange KC, Nutting PA. Competing demands of primary care: a model for the delivery of clinical preventive services. *J Fam Pract*. 1994 Feb;38(2):166-171.

37. Jaén CR, McIlvain H, Pol L, Phillips RL Jr, Flocke S, Crabtree BF. Tailoring tobacco counseling to the competing demands in the clinical encounter. *J Fam Pract.* 2001 Oct;50(10):859-863.
38. Gallagher M, Hares T, Spencer J, Bradshaw C, Webb I. The nominal group technique: a research tool for general practice? *Fam Pract.* 1993 Mar;10(1):76-81.
39. Department of Health and Human Services; Centers for Disease Control and Prevention. Gaining consensus among stakeholders through the nominal group technique. Evaluation Briefs. No. 7, November 2006. <http://www.cdc.gov/HealthyYouth/evaluation/pdf/brief7.pdf>. Accessed September 28, 2015.

*This article meets the Accreditation Council for Graduate Medical Education and the American Board of Medical Specialties Maintenance of Certification competencies for Patient Care and Practice-Based Learning and Improvement.*