



## Short communication

## Obesity counseling in obstetrics and gynecology: provider perceptions and barriers

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## ABSTRACT

To determine how obstetricians and gynecologists (OB/GYNs) perceive the gynecologic health effects of obesity and to identify perceived obstacles to counseling. OB/GYNs with 3 St. Louis health systems were emailed a 46-question survey regarding physicians' role in counseling women on the health risks of obesity and barriers faced in achieving this counseling. Differences between respondents' gender, age, practice type, years in practice, and body mass index were assessed using Chi-square or Fisher's exact tests as appropriate. Of 318 OB/GYNs emailed, 134 completed surveys, including 82 generalists and 52 subspecialists. 93% of respondents believed it was necessary to educate patients on health risks of obesity. 90% and 75%, respectively, cited diagnoses of endometrial hyperplasia and cancer as teachable moments for counseling. The most frequently cited barriers to successful counseling were lack of time, referral services, and patient tools/information. Most did not believe they had adequate reimbursement (65%), training (53%) or educational resources (50%) to counsel patients. Survey answers differed by practice setting, gender, and provider age. Although most OB/GYN providers consider obesity counseling important, execution is hindered by perceived barriers that differ by provider gender, age, and practice type. For OB/GYNs, more effective weight management counseling will require better training and practice-specific strategies. Based on survey responses, better reimbursement combined with increased resources for appropriate referrals and cancer prevention counseling are needed in order to improve weight management implementation in OB/GYN.

## 1. Introduction

Obesity affects 37% of the United States population (Flegal et al., 2016) and increases women's risks of numerous health problems treated by obstetricians and gynecologists (OB/GYNs), including abnormal uterine bleeding, infertility, spontaneous abortion, fibroids, urinary incontinence, pelvic organ prolapse, gestational diabetes, and pre-eclampsia (Kahan and Winston, 2018; Pandey and Bhattacharya, 2010; Onstad et al., 2016). Moreover, obesity is a well-established risk factor for multiple cancers, in particular endometrial cancer (Jenabi and Poorolajal, 2015), though most women are not aware of this risk (Connor et al., 2017; Beavis et al., 2015). Lifestyle, medical, and

surgical interventions that decrease a woman's body mass index (BMI) can decrease her likelihood of health problems. The oncology field has begun to note the effect of weight loss interventions on cancer recurrence and survivorship (Zaleta et al., 2017; Liu et al., 2015), and some studies have shown that weight loss can improve patient health markers and quality of life after endometrial cancer treatment (Basen-Engquist et al., 2014; Haggerty et al., 2017).

As providers for women throughout their lifetimes, OB/GYNs are uniquely positioned to educate women on the health risks of obesity. The American College of Obstetricians and Gynecologists recommends providing counseling and referral services to obese women (Practice ACOG. ACOG committee opinion. Number 319, October 2005, 2005),

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although physicians have noted significant barriers to effective counseling and weight-loss interventions, including time constraints, educational gaps for obese patients, patient/provider discomfort with the topic, and poorly aligned incentives for obesity counseling (Power and Schulkin, 2017). Here, we surveyed OB/GYNs regarding their attitudes toward counseling patients on the health effects of obesity in the outpatient setting. Missouri has an obesity rate of 32.5%, the 17th highest in the nation (The State of Obesity in Missouri, 2017), and is thus well-positioned to investigate the effects of obesity counseling in an OB/GYN population. Our goal was to identify barriers to weight management counseling and strategies that could be used to overcome those barriers.

## 2. Materials and methods

This study was approved by the Washington University in St. Louis Institutional Review Board (ID#201701052). Potential participants included all OB/GYN providers associated with Washington University in St. Louis, St. Louis University, and Mercy Hospital St. Louis, three major health systems in the St. Louis metropolitan area. We used listservs at each institution to email potential participants up to three times about the study with a link to the anonymous electronic survey instrument through REDCap, a secure web application for managing online data. Participation was voluntary, and survey completion served as the participant's consent. Individuals could only complete the survey, estimated to require 10 min, one time and were not followed-up after survey completion.

The survey included 46 questions regarding demographic information, personal health practices, professional practice patterns, thoughts on weight and lifestyle counseling, and potential barriers to obesity counseling (see Supplementary Material). Descriptive statistics were used to summarize participants' demographic characteristics and attitudes. Continuous variables are presented as medians and interquartile range, and categorical variables are presented as frequencies and percentages. Differences by participant gender, age, practice type, years in practice, and BMI were determined using Chi-square test or Fisher's exact test as appropriate, with  $p < .05$  considered statistically significant.

## 3. Results

We invited 318 OB/GYNs to participate, and 134 (42%) completed the survey. Of participants, 61% were generalist OB/GYNs, 11% were gynecologic oncologists, and 17% were other subspecialists. 33% of respondents were overweight/obese and 44% were trying to lose weight. Demographics are summarized in Table 1.

Nearly all (93%) respondents considered educating patients on the health risks of obesity necessary, with 80.5% believing that they could make a difference through counseling, and 59.7% endorsing that patients are more likely to adopt healthy lifestyles if counseled to do so by physicians. Respondents thought that multiple parties have the responsibility of counseling, including primary care providers (97.7%), generalist OB/GYNs (90.8%), subspecialists, and allied health professionals (70.8%). Participants identified multiple clinical situations as “teachable moments” for weight management counseling (Fig. 1), and 69.7% agreed that helping patients understand obesity's role in their current OB/GYN problem provided motivation.

Although nearly all participants believed that physicians have a responsibility to promote a healthy diet (96%), adequate physical activity (96%), and healthy weight (94%), fewer felt comfortable counseling patients regarding these topics (59.2%, 68.8%, and 63.2%, respectively). The three most commonly cited barriers to obesity counseling were lack of time, adequate referral services, and effective tools and information to provide patients. Most respondents did not believe that they had adequate reimbursement (65%), training (53%), or educational resources (50%) to provide obesity counseling, and 45% cited poor patient motivation as a barrier. The three biggest needs

**Table 1**  
Respondent characteristics.

Characteristic	N (percent of total respondents)
Age	
> 40 years old	60 (44.8)
≤ 40 years old	57 (42.5)
Missing	11 (8.2)
Gender	
Male	30 (22.4)
Female	91 (67.9)
Missing	13 (9.7)
Race	
White	107 (79.9)
Black	0 (0)
Asian	10 (7.4)
Hispanic	2 (1.5)
Other / Prefer not to answer	6 (4.5)
Missing	9 (6.7)
Practice specialty	
General OB/GYN	82 (61.2)
Gynecologic Oncology	15 (11.1)
Reproductive Endocrinology and Infertility	6 (4.5)
Maternal Fetal Medicine	14 (10.4)
Urogynecology	3 (2.2)
Other	3 (2.2)
Missing	11 (8.2)
Practice type	
Private practice	38 (28.4)
Academic/university-based	84 (62.7)
Other	3 (2.2)
Missing	9 (6.7)
Years in practice	
< 10 years	67 (50)
> 10 years	55 (41)
Missing	12 (9.0)
Body Mass Index	
Underweight/Normal	80 (59.7)
Overweight/Obese	44 (32.8)
Missing	10 (7.5)
Currently trying to lose weight	
Yes	59 (44)
No	65 (48.5)
Missing	10 (7.5)
Days of exercise per week	
0–2	53 (39.6)
3–4	51 (38.1)
5–7	21 (15.7)
Missing	9 (6.7)

providers identified for improved obesity counseling were better mechanisms to connect patients to referral services, better counseling tools to guide patients toward lifestyle modifications, and better tools to communicate with patients about diet, physical activity, and weight problems.

We noted associations between some survey responses and particular participant demographic characteristics (Table 2). Private practice providers were more likely than academic providers to cite inadequate reimbursement and lack of patient interest as barriers to counseling and to identify easy-to-understand management guidelines as a need for improved counseling. In contrast, academic providers were more likely to cite lack of effective tools as a barrier and to identify referral services as a need. Women were significantly less likely than men to cite reimbursement as a barrier and significantly more likely to think they could make a difference with counseling and to identify better counseling tools as a need. Providers younger than 40 years were significantly more likely than those 40 years and older to cite lack of time, lack of training, and fear of offending patients as barriers but were significantly more likely to believe counseling was important. Providers who had been in practice fewer than 10 years were more likely than those in practice longer to cite fear of offending patients as a barrier and less likely to cite reimbursement, information systems, and referral services as barriers.

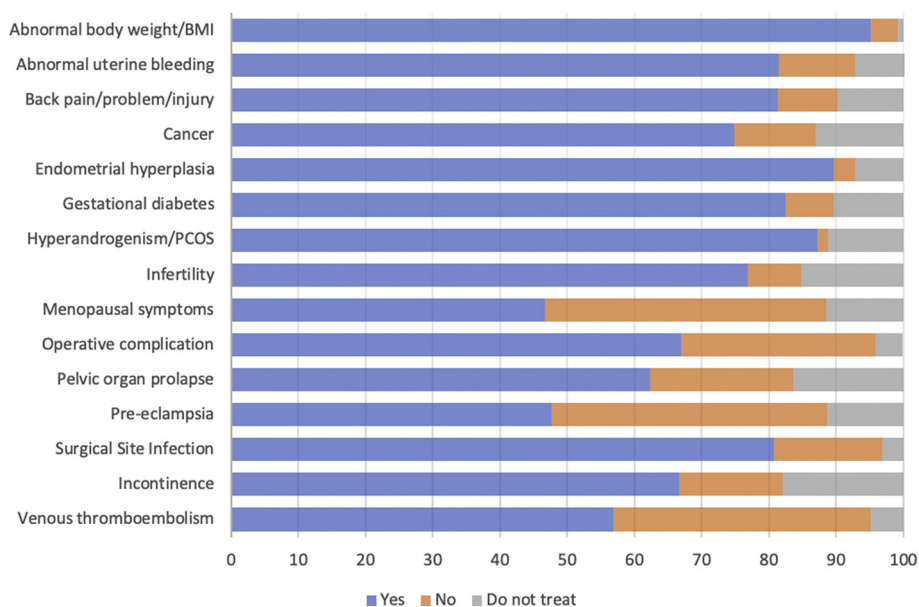


Fig. 1. Teachable moments for weight loss counseling.

#### 4. Discussion

Consistent with previous studies (Kahan and Winston, 2018; Zaleta et al., 2017; Liu et al., 2015; Cogswell et al., 2010), OB/GYNs in our study overwhelmingly believe weight management counseling is important. However, our respondents did not uniformly feel comfortable providing counseling or referral services to their overweight and obese patients. The most common perceived barriers included lack of time, referral services, and effective tools/information to provide to patients.

These barriers are not insurmountable. For example, bariatric centers exist in the St. Louis region, so mechanisms could be arranged to streamline patient referrals to these centers as well as to follow-up when OB/GYN patients do pursue further treatment. Additionally, providers could be familiarized with OB/GYN-specific resources and guidelines such as the Society of Gynecologic Oncology Obesity Toolkit or continuing medical education resources addressing weight management. In this study, we did not ask whether general OB/GYNs are aware of existing resources in the field, which could be a future area of study. However, simply improving provider awareness of guidelines and toolkits, such as through specialty-wide meetings and campaigns, could facilitate better provider comfort with the topic. Because perceived barriers and needs differed by provider characteristics, improvements should be tailored to specific providers and practices. Nearly half of our respondents cited lack of patient motivation as a barrier to providing care. Given that OB/GYNs who believe they can help patients lose weight are more likely to counsel their patients (Power and Schulkin, 2017), professional society and health system leaders should encourage providers to address weight loss. Since reimbursement is perceived to be a substantial barrier to counseling, health systems should design incentives for providers to adequately address obesity with patients. Strategies to overcome time barriers could include adopting obesity education toolkits and waiting room videos, mailing educational pamphlets to women before appointments, creating electronic medical record prompts for obese patients, and educating the public about the association between endometrial cancer and obesity.

The key strengths of this study were the inclusion of participants from three diverse health systems with both generalist and subspecialist OB/GYNs, thus ensuring generalizability and reflecting diverse perspectives. However, this was a regional survey and may reflect region-specific issues regarding weight management counseling. As previously mentioned, Missouri has a high obesity rate and thus our results may be

particularly ungeneralizable to states or cities with a lower obesity rate. In addition, the majority of our respondents were white and female, which may not accurately reflect the population of providers in St. Louis. Additionally, we surveyed fewer participants than in previous similar studies. However, this is one of the first studies to be conducted after recent guidelines addressing weight counseling were released and after new weight-loss medications and surgical interventions have become available.

#### 5. Conclusions

To increase cancer prevention efforts through weight management counseling in OB/GYN, improved training and provider- and practice-specific strategies to address obesity and weight loss with proven interventions are needed. Research is needed to assess the impact of interventions designed to improve the frequency and content of counseling and its effectiveness in weight loss. Reimbursement will likely remain a problem, especially for private practice providers in our area, unless payment streams and incentives change. It is paramount for us as a specialty to argue for increased incentives for providers to address this topic adequately. We have evidence that weight reduction attenuates cancer risk. Thus, it is necessary to implement weight loss counseling early in a woman's reproductive life, and we must supply the resources to aid all providers and patients regarding this vital topic.

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#### Conflict of interest statement

The authors report no direct conflict of interest. Sarah Huepenbecker, Diane Rosen, Andrea Leon, Leping Wan, Katherine Fuh, and Andrea Hagemann have no conflicts of interest. David Mutch reports fees from Clovis for speaking on genetic disease outside the submitted work. John Hoff reports personal fees from Myriad Genetics

**Table 2**  
Selected survey response differences by respondent characteristic.

	Male (N = 30)	Female (N = 91)	P value	Age ≥ 40 (N = 77)	Age < 40 (N = 58)	P value	Underweight/ BMI (N = 80)	normal	Overweight/ obese BMI (N = 44)	P value	In practice ≤10 years (N = 67)	In practice > 10 years (N = 55)	P value
It is important to address weight and lifestyle modification*	24 (80.0%)	84 (92.3%)	0.06	57 (74.0%)	53 (91.4%)	<b>0.01</b>			44 (100.0%)	<b>0.05</b>			
Physicians have a responsibility to promote healthy weight*	20 (69.0%)	79 (87.8%)	<b>0.018</b>	60 (77.9%)	56 (96.6%)	<b>0.013</b>	72 (90.0%)						
I can make a difference in patient's lives with counseling*	13 (43.3%)	18 (19.8%)	<b>0.01</b>										
Reimbursement				46 (59.7%)	46 (79.3%)	<b>0.016</b>					23 (34.3%)	8 (14.5%)	<b>0.013</b>
Lack of time				9 (11.7%)	5 (27.6%)	<b>0.019</b>					10 (14.9%)	21 (38.2%)	<b>0.003</b>
Lack of training				11 (14.3%)	21 (36.2%)	<b>0.003</b>					40 (59.7%)	21 (38.2%)	<b>0.018</b>
Fear of offending patients	15 (50.0%)	19 (20.9%)	<b>0.002</b>										
Too difficult for patients to change	13 (43.3%)	18 (19.8%)	<b>0.01</b>										
Better reimbursement	11 (36.7%)	50 (54.9%)	0.08	27 (35.1%)	35 (60.3%)	<b>0.004</b>	45 (56.3%)		17 (38.6%)	0.06			
Better referral services													

Survey respondents selected the 3 biggest barriers and potential improvements from a provided list of options (see Supplementary Material). The bold numbers were statistically significant.

\* Question used a Likert scale with respondents selecting from 'strongly disagree', 'disagree', 'neutral', 'agree', and 'strongly agree'.

outside the submitted work. Lindsay Kuroki reports grants from Washington University Institute of Clinical and Translational Sciences (R25 STRENGTH), grants from Washington University Institute of Clinical and Translational Sciences (KL2), during the conduct of the study; Graham Colditz has an IOTA SMS application pending. Matthew Powell reports personal fees from Roche/ Genentech, Tesaro, Clovis Oncology, Astra Zeneca, and Merck, all outside the submitted work.

**Author contributions**

Andrea Hagemann designed the study, oversaw IRB application, and wrote and edited the final manuscript. Sarah Huepenbecker was involved in study design and statistical analysis and wrote and edited the final manuscript. Leping Wan provided statistical oversight during study design and performed the statistical analysis for the study. Andrea Leon was involved in study design, collection, and analysis. Diane Rosen, John Hoff, and Graham Colditz contributed to study design and data collection and were involved in manuscript writing and editing. David Mutch, Matthew Powell, Katherine Fuh, and Lindsay Kuroki helped with study design and provided manuscript writing and editing oversight.

**Appendix A. Supplementary data**

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.gore.2018.12.001>.

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