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What are physicians' and patients' beliefs about diet, weight, exercise, and smoking cessation counseling?

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Over 60% of U.S. adults are overweight or obese (Odgen et al., 2006). While guidelines recommend that physicians counsel obese patients to lose weight, few physicians have received relevant training. Using a preventive health survey, we assessed whether physicians' psychosocial beliefs about counseling and patients' psychosocial beliefs about changing their health behaviors differ for weight, diet, physical activity, and smoking.

We report baseline survey data from Project CHAT (Communicating Health Analyzing Talk), a study assessing patient–physician communication about preventive health issues, which was approved by the Duke Institutional Review Board. Forty physicians were recruited from five community-based primary care (PC) practices (19 family physicians and 21 general internists). Patients had to be ≥18 years of age, have a scheduled visit, speak English, be overweight or

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Conflict of Interest Statement

The authors declare that there are no conflicts of interest.

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obese (BMI ≥25), without cognitive impairment, and not pregnant. Recruitment letters were mailed to a random sample of 3,615 patients. Of these, 2,511 were contacted—910 were ineligible, 434 could not be reached, and 530 refused participation. In all, 637 patients were eligible, and 590 completed baseline surveys.

We assessed physicians' self-reported weight, height, date of birth, sex, race, and PC specialty. We also assessed patients' date of birth, race, smoking status, and self-reported height and weight.

Based on the Social Cognitive Theory (Bandura, 1986), we asked patients about their (a) *motivation* to lose weight, change their nutrition, change their physical activity, and quit smoking (if applicable); (b) *confidence* to make these changes; and (c) *comfort* discussing these topics with physicians. Physicians were asked about their *confidence*, *comfort*, *outcome expectations*, and *barriers to counseling* about nutrition, physical activity, weight, and smoking.

We used generalized estimating equation (GEE) models to examine whether physicians reported differences in confidence, comfort level, outcome expectations, and barriers for the four health behavior topics (Diggle et al., 2002). GEE was used to account for the correlation between the physician-level psychosocial beliefs across the health behavior topics using the SAS procedure GENMOD (SAS 9.1, Cary, NC). We estimated the proportion of physicians who agreed or strongly agreed with the psychosocial belief for each health topic. We then examined the overall test of whether these items differed across health behaviors, conducting specific tests of differences between these items for each weight-related health behavior as compared with smoking. Analyses were performed to identify potential targets for future intervention.

The mean physician age was 47 years (range 33–63), most were female (60%), white (78%), and overweight or obese (54%). Mean patient age was 60 years (range 21–95), most were female (65%), white (63%), and all were overweight (52%) or obese (48%).

Patients were very comfortable discussing weight, diet, exercise, and smoking behaviors with their physicians. More patients felt extremely confident that they could reduce their weight (36%) compared with increasing their physical activity (28%). Patients were highly motivated to lose weight (51%), but fewer were motivated to change their diet (30%).

Physicians agreed that diet and weight counseling required too much time as compared with smoking counseling (Table 1). Physicians felt less adequately trained to counsel about diet than smoking cessation (p=0.0002). Additionally, physicians agreed that patients would find diet, weight, and physical activity topics more embarrassing to discuss than smoking (p=0.004). There were also differences in physician *comfort* (p=0.004) and *confidence* (p=0.001), but none in *outcome expectations* across health topics.

Our results show a potential disconnect between physicians' high level of confidence in their counseling abilities (ranging from 40–70%) and their very low expectations that patients will change (8% across behaviors). Physicians may believe that patients are unmotivated and unwilling to hear messages about prevention, as they believed that many overweight and obese patients do not want to change their diets. Unfortunately, physicians felt least qualified and comfortable counseling about diet relative to other behaviors.

These findings are similar to others showing that PC physicians have low confidence in their ability to manage patient weight, low expectations in patients' ability to lose weight, and low success in helping obese patients to lose weight (Price et al., 1987; Harris et al., 2004; Frank, 1993). Also, the study confirms that patients have high motivation to lose weight primarily by

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increasing exercise, with lower motivation to change their diet (Befort et al., 2006; Foster et al., 2003; Potter et al., 2001; Ruelaz et al., 2007). Our study was unique in that both the patients and physicians were told the study would examine how they address preventive health but not that it was specifically about weight loss counseling. Our survey included items about tobacco and alcohol use to mask the weight-related topics on the survey. Another unique aspect included recruitment from both internal medicine and family practice community-based clinics, whereas previous studies were conducted in single-specialty, academic, or veteran populations. A study limitation is that our data were cross-sectional.

In summary, physicians perceived significant barriers to weight-related counseling, particularly diet, when compared with smoking cessation counseling. Tools are needed to reduce these barriers, and physicians must believe that their counseling efforts will help patients change for the counseling to be effective. This analysis suggests that patients are motivated and comfortable discussing dietary change and weight loss with their physicians—knowing this may help physicians feel more effective and willing to counsel on these critical topics.

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Table 1

Physician psychosocial beliefs about weight, diet, exercise, and smoking counseling

PHYSICIAN PSYCHOSOCIAL BELIEFS	**HEALTH BEHAVIOR**				
Estimated proportion (%) **OR (95% CI)**	**Weight**	**Diet**	**Exercise**	**Smoking**	***p*-value**
Barriers to discussing (% agree/strongly agree)					
Too much time is required	53% 1.8 (1.0–3.4)	73% 4.4 (2.1–9.4)	38% 1.0 (0.6–1.8)	38% ref	0.0002
Patient may not be interested in discussing	40% 0.6 (0.3–1.1)	44% 0.6 (0.4–1.2)	50% 0.8 (0.4–1.6)	53% ref	0.37
I do not feel adequately trained	13% 1.8 (0.6–5.4)	40% 8.2 (2.7–25.3)	10% 1.4 (0.3–5.5)	8% ref	0.0002
Health problems other than those related to this topic require attention	55% 0.9 (0.6–1.4)	60% 1.1 (0.7–1.7)	58% 1.0 (0.7–1.5)	58% ref	0.84
This topic may be too embarrassing for patients to discuss	38% 11.4 (2.9–45.1)	20% 4.7 (1.1–21.2)	23% 5.5 (1.5–20.1)	5% ref	0.004
Overall barrier score	33% 4.3 (1.5–12.3)	28% 3.4 (1.2–9.7)	13% 1.3 (0.5–3.0)	10% ref	0.003
Comfort discussing topic (% very comfortable)	53% 0.7 (0.4–1.1)	43% 0.4 (0.3–0.7)	60% 0.9 (0.6–1.3)	63% ref	0.004
Confident discussing topic (mostly/extremely confident)	70% 1.1 (0.5–2.4)	40% 0.3 (0.2–0.6)	63% 0.8 (0.4–1.7)	68% ref	0.001
Outcome expectations of the discussion (very/extremely likely)					
To what extent do you expect that your patients will listen to your advice on this topic?	33% 1.4 (0.7–3.2)	25% 1.0 (0.4–2.5)	33% 1.4 (0.6–3.4)	25% ref	0.78
To what extent do you expect that your patients will become upset when you counsel them on this topic?	5% 2.1 (0.2–24.6)	5% 2.1 (0.2–24.6)	3% 1.0 (0.1–17.2)	3% ref	0.87
To what extent do you expect that your patients will follow your advice on this topic?	8% 1.0 (0.2–4.1)	8% 1.0 (0.2–4.1)	8% 1.0 (0.4–2.7)	8% ref	1.00

This study was conducted from December 2006 through June 2008 at five community-based primary care practices in central North Carolina.

The values in the *p*-value column represent the overall association of physician's psychosocial beliefs across behaviors.

Odd ratios and 95% CI from GEE models by health behavior topic are the comparison of physicians' psychosocial beliefs for weight, diet, and exercise to smoking.

CI = confidence interval; GEE = generalized estimating equation; OR = odds ratio.