

## SHORT COMMUNICATION

## Health Professionals' perceptions of insurance coverage for weight loss services

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### Summary

#### Objective

To examine health professionals' (HPs) perceptions of top challenges and solutions in obesity care, and whether these perceptions differ by patient-panel income level.

#### Methods

A 2014 national cross-sectional survey of HPs in nutrition, nursing, behavioural or mental health, exercise and pharmacy was analysed. The dependent variables were identification of insurance coverage for their services as a top (1) challenge or (2) solution for obesity care. The independent variable was self-reported income distribution of HPs' patient panels, which was dichotomized as 'lower-income' if 'mostly low income' or 'higher-income' if 'mostly not low income/evenly split between low-income and not low-income'. Multivariate logistic regression with survey weights was used.

#### Results

Among 450 HPs, mean age was 44.9 years; 86% were women; 44% had lower-income panels. Overall, 25% of HPs endorsed insurance coverage as a current challenge, and 58% viewed improved coverage as a solution. HPs with lower and higher-income patient panels were similarly likely to identify coverage as a challenge (28% vs. 20%,  $p = 0.33$ ) and benefits expansion as a solution (47% vs. 64%,  $p = 0.08$ ).

#### Conclusions

Most HPs perceive insurance coverage for their services to benefit patient weight loss. While the Affordable Care Act expands obesity counselling coverage to many lower-income patients, legislation increasing access to benefits for all patients regardless of insurance type may be beneficial.

**Keywords:** Health policy, health services, obesity.

## Introduction

The U.S. Preventive Services Task Force has suggested that physicians collaborate with non-physician health professionals (HPs) to deliver intensive obesity interventions, ranging from counselling to surgery (1). Furthermore, the American Heart Association, American College of Cardiology, and The Obesity Society guidelines recommended that clinicians refer patients with obesity to intensive interventions with dietary, physical activity and behaviour change components delivered by trained interventionists (2); moreover, the International

Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) recommends that patients with obesity and obesity-related comorbidities receive multidisciplinary counselling from trained interventionists in conjunction with bariatric surgery for weight management (3). These interventionists, whether treating patients in the operative or non-operative setting, are typically non-physician HPs such as dietitians or mental HPs. While scientific evidence supports the efficacy of these interventionist-facilitated weight management programmes, many barriers may exist to successful implementation and patient engagement in real world settings.

Few studies have examined the perceived barriers in weight management care among HPs who routinely deliver these services. One study found that most HPs felt that dietitians were the most qualified group among non-physicians to help patients lose weight, and that high-quality weight loss counselling training was essential to their confidence and success in helping patients achieve weight loss (4). Overall, HPs endorsed that patient non-adherence was the most common challenge in providing obesity treatment, followed by lack of patient willpower (4).

Benefits coverage for weight loss services may also be a challenge. Previous studies of physicians have documented lack of reimbursement for weight management as a major barrier (5–7). Moreover, a study of obesity coverage policies found that most plans had limited coverage for intensive weight loss counselling or bariatric surgery (8). A recent review of preoperative management for bariatric surgery noted that there is inadequate coverage for insurance-mandated weight loss counselling prior to surgery, resulting in a barrier to obesity care (9,10). To date, only eight states' Medicaid programmes cover the recommended obesity treatments for adults, 13 cover some nutritional counselling and 23 cover bariatric surgery (10,11). Currently, there are no studies documenting whether lack of reimbursement for weight management is a barrier for other HPs, and it is unclear whether HPs also perceive barriers in insurance coverage for their services, similar to their physician counterparts. Studies have demonstrated disparities in obesity prevalence, with higher levels more common among patients with low socioeconomic status (12). Many low-income patients cite costs as a barrier to weight loss programme participation (13,14). Past studies have shown that patient with lower-income levels are less likely to engage in weight loss strategies consistent with current recommendations (15,16).

The main objective of this study was to determine HPs' perceptions of insurance coverage as a top challenge and solution to obesity care.

## Methods

### Study design and administration

In 2014, the study team conducted a nationally representative, cross-sectional, internet-based survey of US HPs among dietitians, nurses, mental HPs, exercise professionals and pharmacists. Detailed methods of this survey have been published previously (17). In brief, the survey was designed and implemented in consultation with Social Science Research Solutions, and the content was reviewed by HPs in each of the fields included in the

survey as well as obesity experts for length and comprehensibility. A priori, the study team established that the final sample would include 500 HPs, with 100 in each pre-specified group. Eligibility criteria included: one of the five pre-specified professions and indication that the individual worked at least 15 h per week in an ambulatory setting (e.g. primary care office and bariatric surgery practice). Those who agreed to participate in the survey received a \$50 stipend. Emails were sent to 3,308 randomly selected HPs from the medical market research panel, which includes more than 200,000 HPs and has a 90% yearly retention rate. Of the 1,052 panel members who responded, 290 were excluded as ineligible, and 45 were excluded for incomplete questionnaires. The overall response rate was 25%, and the completion rate was 68%.

For the analytic sample, HPs who endorsed providing weight management services as a part of their practice with no missing outcome data were included ( $n = 450$ ).

### Measures

The independent variable was patient-panel income level. This variable was measured with the question, 'Are most of your obese patients or clients considered low income or not?' with the potential responses of 'most are low income', 'most are not low income' or 'evenly split'. The responses were dichotomized as 'lower income panel' if HPs identified their patient-panel as 'mostly low income' and 'higher income panel' if they identified their patient-panel as either 'mostly not low income' or 'about evenly split'.

The dependent variables were HPs' identification of (1) 'lack of insurance coverage' as a top challenge and (2) 'improved insurance coverage' as a top solution to improve patient weight loss. For top challenges, HPs were asked 'Of the following, which three are the biggest challenges that you face in helping your obese patients or clients lose weight?' with 10 possible responses from which to choose (Table S1). If they selected 'lack of reimbursement', then they were labelled as identifying lack of insurance coverage as a top challenge. For the top solutions variable, HPs were asked: 'Of the following, which three would be the most helpful in your practice to facilitate patient weight loss?' with 12 possible responses from which to choose (Table S1). If they chose 'reimbursement from insurance companies for services not currently covered' or 'higher reimbursement from insurance companies for covered services', then they were labelled as identifying improved insurance coverage as a top solution. Covariates considered were HP age, sex, race and profession, patient-panel insurance coverage, practice region and site.

## Statistical analysis

The study team conducted descriptive analyses of all variables and bivariate analyses examining outcomes by patient-panel income level. Predicted probabilities examining the relationship between patient-panel income level and HP perceptions on insurance coverage were calculated using multivariate logistic regression adjusted for HP age, sex, race and specialty. All analyses were

**Table 1** Health professional, patient panel, and practice characteristics (weighted)

	Overall ( <i>n</i> = 450)	Lower- income panel ( <i>n</i> = 198)	Higher- income panel ( <i>n</i> = 252)	<i>p</i> - value*
<b>Health professional characteristics</b>				
Mean age (SE)	44.9 (1.1)	42.6 (1.6)	46.7 (1.4)	0.05
% Women	86	86	86	0.99
Race				1.00
% White	82	82	82	
% Black	5	5	6	
% Asian	5	5	4	
Profession				0.16
% Nutrition	3	3	3	
% Nursing	80	81	79	
% Behavioural or mental health	5	6	5	
% Exercise	5	3	7	
% Pharmacy	8	8	7	
<b>Patient panel characteristics</b>				
% Low-income patients	44	–	–	NA
% Patients with services covered by insurance				
<25%	27	22	31	
25% to 49%	16	15	16	0.50
50% to 75%	28	34	23	
>75%	29	29	29	
<b>Practice characteristics</b>				
Region				
% Southern	35	31	39	
% Western	19	19	19	0.66
% Midwestern	25	30	21	
% North-eastern	21	20	21	
Practice site location				
% Non-clinical	12	15	10	0.29
% Outpatient	83	83	83	
% Inpatient	5	2	8	

Characteristics of 2014 national survey sample. NA, not applicable; SE, standard error.

\*Bivariate analyses conducted using *t*-tests and  $\chi^2$ , as appropriate, with survey weights to address systematic over-representation or under-representation of subpopulations or non-response.

weighted to address concerns with systematic under-representation or over-representation of HP subpopulations in the panel and to account for systematic nonresponse along known demographic parameters of these professions. The final weighted sample approximates the known distribution of these occupations according to the American Community Survey (18). The weighted margin of error for the survey was  $\pm 5.3\%$ . Statistical analyses were performed using svy functions to adjust for the complex survey design in STATA (StataCorp LP, College Station, TX).

The Johns Hopkins Bloomberg School of Public Health Institutional Review Board determined this study to be exempt.

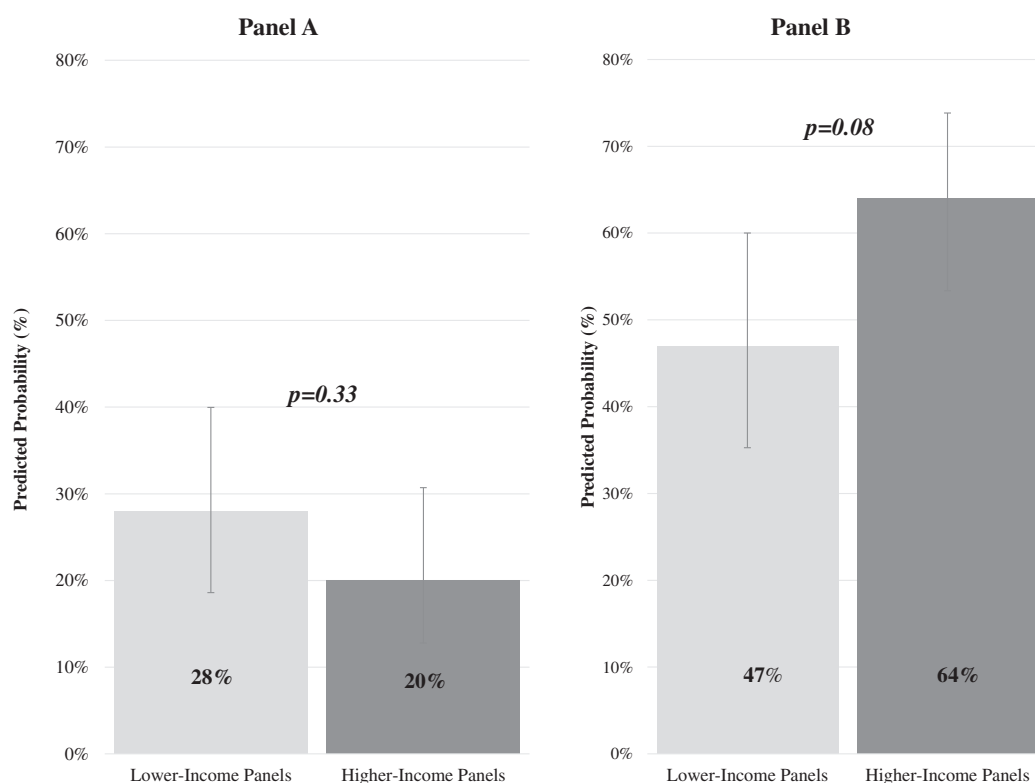
## Results

In the sample, most HPs were women (86%) and White (82%) with a mean age of 44.9 (SD 1.1) (Table 1). Majority of HPs were in nursing (80%). Overall, 44% of HPs had lower-income patient panels. Most HPs practiced in an outpatient setting (83%), with the largest proportion working at a primary care physician office. Only a small fraction was affiliated with a bariatric surgery practice (5%). Characteristics did not significantly differ by patient-panel income level or practice characteristics (Table 1), including the percent of patients with services covered by insurance ( $p = 0.50$ ) and the geographic region of practice ( $p = 0.66$ ).

Overall, 25% of HPs felt that lack of insurance coverage was a top challenge for their patients' weight loss, and 58% HPs felt that improved insurance coverage could facilitate weight loss. In adjusted analyses, there was no significant difference between the predicted probabilities for HPs identifying lack of insurance coverage as a top challenge by patient-panel income level ( $p = 0.33$ ) (Figure 1A). The predicted probabilities for improved insurance coverage as a top solution approached statistical significance, with HPs with higher-income panels more likely to identify improved coverage as a top solution ( $p = 0.08$ ) (Figure 1B).

## Discussion

Most HPs perceived improved insurance coverage as a top solution to help patients lose weight, and a quarter of HPs felt insurance coverage was currently a challenge. Interestingly, there were no differences in these perceptions by patient-panel income level. This is the first study to examine HPs' perspectives of insurance coverage as a barrier or facilitator for weight loss. Importantly, this study expanded upon a previous study of the same dataset, which discussed HP's perspectives on causes of obesity,



**Figure 1** Predicted probabilities of health professionals' perceptions of insurance coverage by patient-panel income level. Perspectives of 2014 national survey sample. (A) Depicts predicted probabilities for health professionals identifying lack of insurance coverage as a top challenge to patient weight loss. (B) Depicts predicted probabilities for health professionals identifying improved insurance coverage as a top solution for patient weight loss. Predicted probabilities calculated using results from logistic regression analysis adjusted for health professional age, sex, race and profession. Survey weights used to address systematic over-representation or under-representation of subpopulations or non-response.

weight management training and self-efficacy in providing obesity care (17).

Past literature found that physicians cited the lack of reimbursement as a significant challenge to providing weight loss counselling (5,9). Indeed, third-party payers frequently have not reimbursed clinicians for weight loss care (6,10). Historically, HPs' weight loss services also were not routinely reimbursed (19). Although our results did not find insurance coverage to be commonly reported as a current top challenge, HPs currently in clinical practice might consider including an assessment and discussion of benefits coverage for their services with their patients given that they do perceive that improved benefits coverage promotes better weight loss outcomes. For patients who have limited coverage, frequency of follow-up or engagement/referral to affordable evidence-based programmes available in the community might need to be considered (2).

In 2013, the Affordable Care Act (ACA) expanded insurance coverage to low-income individuals (20) and introduced a provision that includes expansion of coverage

obesity screening and treatment (21). However, there is no uniform legislation regarding obesity care benefits for other health insurers. While some non-governmental health insurers provide obesity-related benefits, ranging from counselling to surgical intervention, others prohibit such coverage (11) or offer benefits that are not uniformly available (6). Given that HPs see benefits expansion as a potential solution, universal coverage of these services regardless of insurance type might be considered. Additional research could then examine whether this expansion leads to improved access to services and better health outcomes.

This study has several limitations. It relied on self-reported measures, which may be subject to HPs' biases or inaccurate perceptions of their patient panels. Several different types of outpatient care were combined into a single category, including primary care physician clinics and bariatric surgery clinics. Different clinic types may lead to different perceptions in challenges and solutions based on varying experiences with programme goals and insurance coverage of services. The analyses were

unable to account for the degree of HPs' weight management expertise, which might influence their perceptions regarding insurance coverage. Lower-income patient panel was used as a proxy for governmental insurance. The response rate was low, although similar for other Internet-based surveys (22). Finally, this study was conducted in early 2014, before full implementation of the ACA.

Future investigations might consider parsing out different opinions of HPs working in different obesity care fields. They also might consider directly examining access and outcomes by patient insurance status, which was unavailable in the current data. Finally, given the ACA is now fully implemented, future investigators should explore whether the perceptions of professionals have since changed.

Despite the limitations, this study is the first to survey HPs about their perception about insurance as a barrier and facilitator for weight loss counselling. The study findings suggest that HPs believe that increased benefits coverage for weight loss services is a potential solution to improve obesity care. The ACA offers a way to expand these benefits to low-income patients. However, given that over one third of the population is obese (23) and that HPs with higher-income panels also endorsed insurance coverage a solution, obesity care benefits expansion for all insurance types and income levels might be considered.

## Conflicts of Interest Statement

The authors declare that they have no conflicts of interest.

## Authors' contributions

KAG and SNB were responsible for conception and design of the database, as well as acquisition of the data. All authors were responsible for analysis and interpretation of the data. RSD was primarily responsible for drafting the manuscript, and KAG and SNB revised it critically for important intellectual content. All authors read and approved the final manuscript.

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## Supporting Information

Additional Supporting Information may be found online in the supporting information tab for this article.

Supplemental Table 1.  
Questions and Complete List of Answer Choices for Dependent Variables