JNP

# Implementing the Evidence-based Guidelines for Overweight/Obese Adults

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**ABSTRACT**

Recognition and management of weight conditions is suboptimal in primary care. This quality improvement project assessed the feasibility of using nurses and staff in a patient-centered medical home to implement the National Institutes of Health evidence-based weight management guidelines. The goal was to increase the percentage of adults receiving proper documentation of weight diagnosis and weight management plan during their annual exam. A retrospective analysis detected a significant increase in the documentation of correct weight diagnosis and weight management plan for overweight or obese patients after implementation of the guidelines. Results support the use of patient-centered medical home nurses and staff to address the epidemic of adult obesity.

**Keywords:** evidence-based guideline, meaningful use, nurse-led initiative, overweight/obesity, weight-loss counseling



## INTRODUCTION

Overweight and obesity are health conditions that significantly increase the risk of serious health problems such as hypertension, dyslipidemia, and type 2 diabetes (T2DM).[1-4] In the United States, 34% of adults are overweight [body mass index (BMI) $\geq$ 25.0 and $\leq$ 29.9], 34.9% are further classified as obese (BMI $\geq$ 30.00), and obesity rates are $>$ 20% in every state.[5]

Weight loss has been shown to decrease blood pressure, reduce cardiovascular disease, improve cholesterol measures, and prevent/improve T2DM.[3,4,6-8] Evidence-based guidelines, such as *The Practical Guide to the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults* by the National Institutes of Health (NIH),[9] can direct the management of overweight and obesity in adults. Research suggests that, although primary care providers (PCPs) perceive behavioral interventions to be effective, evidence-based guidelines for weight management are often not implemented.[10] Medical professionals have identified lack of time, inadequate skills in weight-loss counseling, and a perception that counseling would be ineffective as barriers to implementing these guidelines.[11,12]

Furthermore, PCPs do not consistently document a diagnosis or treatment plan for overweight or obesity in the electronic medical record (EMR).[13,14] Studies show physicians record BMI in only 38.9%-50.0% of patients with excess weight.[15,16] The US Centers for Medicare and Medicaid's meaningful use guidelines tie reimbursement to EMR documentation of health information such as BMI.[17]

The NIH guidelines recommend "predicting a patient's readiness for weight loss" as an important step in understanding the needs of the patient.[9(p21)] A systematic review by Armstrong et al.[18] demonstrated that the technique of motivational interviewing (MI) was effective in weight-loss counseling. Further studies demonstrated that nurses and staff can deliver weight-loss interventions to effect weight change.[19,20]

### Local Problem and Intended Improvement

In a primary care medical home (PCMH) with 10,000 patients, a 2-week retrospective analysis of EMR documentation of 68 adult patients, whose encounter was a complete physical exam (CPE), revealed only 16.2% had a correct weight diagnosis

and 17.6% a weight management plan. Providers mentioned lack of time, lack of expertise, and a feeling that patients are disinterested as reasons weight was not addressed. An evidence-based guideline for weight management was not in use.

### Study Questions

The following questions were posed: (a) Is it feasible to use nurses and staff [2 registered nurses (RNs), 3 licensed practical nurses (LPNs), and 2 medical assistants (MAs)] to implement the NIH's guidelines[9]? (b) Can guideline implementation increase EMR documentation of an appropriate weight diagnosis and weight management plan compared with preintervention measures?

## METHODS

### Setting, Sample Size, and Selection

This quality improvement project was approved as non-research by the institutional review boards of the institution and practice site. No author conflicts of interest were identified. The clinical setting was a family practice PCMH located in southeastern Virginia. Three physicians (MDs), 4 nurse practitioners (NPs), 1 physician assistant (PA), 2 RNs, 3 LPNs, and 2 MAs made up the PCMH team.

Participants were a convenience sample of patients $\geq$ 18 years of age with a CPE (according to the *International Classification of Diseases, 9th edition*) encounter diagnosis during the study months (July to November 2014). English-speaking adults with a BMI $\geq$ 25.0 were invited to participate in a weight management discussion based on the NIH guidelines. Exclusion criteria included: pregnant or lactating women; patients with severe psychiatric illness or developmental disabilities; or medical illness in which calorie restriction may be contraindicated.

The principle investigator (PI) conducted a retrospective chart review of eligible records to obtain demographic information and study measures. All data were password protected on a secure server to insure patient confidentiality.

### Planning the Intervention

A team of key players (the PI, office manager, lead physician, and RN nurse leader) assisted in planning implementation of the NIH guidelines. Potential barriers identified included the time to implement this intervention during the CPE, lack of training in weight-loss counseling, and lack of PCMH team awareness of this issue.

Four 1-hour educational sessions were provided to educate the PCMH team on use of the guideline. Education included the MI technique with video examples of MI being used in weight-loss counseling.[21,22] Opportunities were provided with the PI to practice the MI technique. A licensed dietician also reviewed weight-loss strategies with the PCMH team.

The PCMH team requested that patients complete a lifestyle questionnaire to serve as an opener for discussing weight. The AIM-HI Fitness Inventory (FI) was selected.[23] An information packet consisting of handouts found in the appendix of the NIH guidelines was assembled for each patient.

A pre-set electronic phrase was developed for the EMR documentation, indicating completion of the intervention. The PCMH team was oriented to correct use of this phrase and a prompt was posted on exam room computers. The PI met monthly during the project with the PCMH team to address any concerns.

The patient received the AIM-HI FI to complete when checking in for their CPE. The patient's height and weight were recorded and the EMR calculated their BMI. The AIM-HI FI, which assessed patient motivation to engage in weight loss, was reviewed by the nurse or staff member. If the patient's BMI $\geq$ 25 and they agreed, a discussion based on the principles of MI was conducted by the nurse or staff member to develop a weight management plan. Education materials from the NIH guidelines were given to each patient. The PCP reinforced the plan during the visit. The appropriate weight diagnosis and plan was documented in the EMR.

The PI retrospectively reviewed the EMR of every adult $\geq$ 18 years old, whose encounter was a CPE during the study period for the presence of the correct weight diagnosis; pre-set electronic documentation phrase; height, weight, and BMI; presence of hypertension, sleep apnea, diabetes, coronary artery disease, and hyperlipidemia; and fasting blood glucose (FBG). Data were entered by the PI into IBM-SPSS Statistics (version 21) software for analysis.