

**RESEARCH LETTER**

# Coding and Obesity: Room to Grow

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**Introduction:** Obesity is the leading health problem in the United States. Providers often fail to document obesity in patients whose body mass index (BMI) is more than 30.

**Methods:** Using a structured data query of the military health system electronic medical record, we determined the BMI and presence of an associated International Classification of Disease code in a cohort of more than 3 million patients.

**Results:** Fifteen percent of patients (482,628) had a BMI exceeding 30. Of those patients with a BMI more than 30, 78,776 (16%) had an associated International Classification of Disease 9 code documenting obesity in their record.

**Conclusion:** Coding and documentation of obesity is inadequate. This has implications for delivery of preventive counseling and efforts to mitigate rising trends in obesity. (*J Am Board Fam Med* 2011;24: 329–330.)

**Keywords:** Coding, Delivery of Health Care, Obesity

Despite the well-recognized increase in obesity, weight status is documented for only 1 of 5 obese patients presenting for care.<sup>1</sup> One in 3 obese adults have not received specific advice from their physician to address their weight.<sup>2</sup> Complications of obesity make it the leading cause of preventable death in the United States.<sup>3</sup> Failure to document the patient's weight status is associated with lower rates of physician counseling and recommendations regarding appropriate weight loss.<sup>1</sup>

The Military Health System (MHS) uses an integrated electronic medical record (EMR) that records patient height, weight, body mass index (BMI), and International Classification for Disease (ICD-9) code at every clinical encounter. Using this data architecture, we sought to determine how

many obese patients had a corresponding (ICD-9) entry for obesity in their medical record.

## Methods

After institutional review board approval and information systems security clearance, we queried the MHS Clinical Data Repository. Our first Clinical Data Repository query identified all individuals with a BMI greater than 30. This was used as the denominator. Unique identifier codes were matched with each entry and a repeat query was performed to determine which individuals had an associated ICD-9 code for obesity in their EMR problem summary list. This provided the numerator for our sample. We then used simple descriptive statistics to calculate prevalence rates for obesity in the MHS along with associated documentation and coding status.

## Results

We used calendar year 2007 as the reference year for our analysis. Complete records were available for more than 3 million individuals older than 18. These individuals included active duty military personnel, family members, and retired personnel. Of the 3,423,426 people with complete height, weight, and BMI measures, 482,628 (15%) had BMI measures exceeding  $30 \text{ kg/m}^2$ , the National Heart Lung and Blood Institute's definition for obesity.

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Of those individuals with a recorded BMI of more than 30, only 78,776 (16%) had an associated ICD-9 code for obesity (278.xx) in their EMR.

## Discussion

Our results suggest that the prevalence of obesity in individuals who are eligible for care within the MHS (active duty, family members, and retired personnel) is at least 15%. Our results further support the hypothesis that providers fail to code for obesity for patients with a BMI more than 30.<sup>1</sup> Because providers may not routinely code for obesity during an acute visit, we used a full calendar year for our analysis to try and include at least one routine preventive visit for our analysis to increase the likelihood that our methodology would capture at least one visit that would include preventive counseling. It remains unclear, however, why so many providers fail to adequately document obesity in the medical record. There are potentially many explanations for this. Some physicians may fail to recognize obesity in their patients.<sup>4</sup> Others may be uncomfortable counseling obese patients.<sup>5</sup> Competing priorities for time, perceived resistance on the part of the patient, and poor success when counseling previous patients are other factors that likely contribute to generally poor documentation and counseling rates for obesity.

Recognized limitations of our study include that our data are not specific to active duty personnel. Our sampling technique includes patients who are family members and retirees. Intended only as a

pilot analysis for point prevalence purposes, our analysis does not examine demographic or geographic trends in obesity data.

Despite these limitations, our findings suggest that physicians do not routinely code for obesity in individuals with BMI exceeding national standards. Physician discomfort with obese patients, lack of knowledge about obesity treatment, or lack of obesity recognition may explain the low prevalence of formally documented obesity in the medical record. Improved understanding of these factors could yield important improvements in the treatment and prevention of obesity, the leading cause of preventable death in America.

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