Introduction

More than one-third of American adults are obese with an estimated annual medical cost of $147 billion.1 Weight positive medications (WPMs) commonly prescribed for chronic conditions associated with obesity could exacerbate obesity and related comorbidities by causing weight gain. For example, gabapentin for chronic pain can lead to weight gain of 10% or more.2 Patients on chronic beta-blocker or sulfonlurea therapy is associated with higher body weight than patients using alternate classes of medications.3,4 Substitution of more weight negative or weight neutral drugs such as captopril and sitagliptin has been shown to have significant weight reductions patients with hypertension and/or diabetes.4,5 Risperdone conveys a lower risk of metabolic syndrome than olanzapine in obese/overweight patients.6

Methods

We developed a list of 17 ICD 9 codes for obesity, overweight and weight gain, and a list of 33 common weight-related comorbidities (e.g. diabetes, hypertension, depression, low back pain, etc.). We then developed a table of medications of interest that are commonly used to treat these comorbidities (>42,000 unique products/NDC’s), classified as either weight positive (medication is associated with weight gain) (Wpos), weight negative (Wneg) or weight neutral (Wneu). UAHN Family Medicine claims data (for past 1 year) was requested for patients assigned to either FCM Alvernon or South Campus clinics who met the following criteria: 1) diagnosis of obesity, overweight, or abnormal weight gain, 2) at least one of the codes for 33 weight-related comorbidities, and 3) pharmacy claim for at least one of medications of interest. Claims data was analyzed descriptively and graphically, examine patterns of drug use (which drugs, numbers of fills, ratio of Wpos to Wneg/Wneu medications alone. In contrast, 4/5 of the patients primarily on weight negative/neutral medications lost weight without formal interventions. However, the study was limited by low n=162, discrepancies in height measurements up to 2” for certain patients, as well as short interval for which weight was followed. In addition, only patients from one payer (UFC) was examined. It is possible that this represents a less diverse subset of patients. Future studies need to look at weight and BMI longitudinally over multiple years, while broadening to patients from a variety of insurance groups. Additionally, future research should focus on the magnitude of effects of specific medications on weight.

Results

A total of 162 patients met the criteria of Obesity (n=123), Overweight (n=14), or Abnormal Weight Gain (n=25).

Conclusions

PCPs plays a crucial role in choosing appropriate medications for obese or overweight patients. Choosing Wneg or Wneu medications when allowable over Wpos medications can potentially have a significant impact on long-term weight. Only 1/5 patients with the most weight positive med fills category had Wpos medications when alternatives existed. Of the top five, all of whom had DM, 3 were on neuropathic drugs (which are all weight positive) and all were on at least 30 units of Lantus insulin for previous failure of oral hypoglycemics. In addition despite taking Wpos medications, only 1 had significant weight gain (>10lbs), while 2 had relatively stable weight (<3lb change), and 2 actually lost weight, which may indicate that other lifestyle habits or clinical conditions may have a greater influence on net weight than medications alone. In contrast, 4/5 of the patients primarily on weight negative/neutral medications lost weight without formal interventions.

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References