Weighing the Outcomes: Does Routine Primary Care Reduce BMI in the Obese Population?

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INTRODUCTION

- Obesity is a multifactorial condition which is associated with many leading causes of death in the United States and worldwide. Examples include:

Lethal comorbidities	Nonlethal comorbidities
Cardiovascular (#1 cause of death in USA): CHF, CAD, HLD, A.Fib, HTN	Pulm: OSA, Obesity hypoventilation syndrome
CVA & Venous thrombosis (#5 cause)	MSK: Osteoarthritis, impaired mobility, falls
CKD (#9), as a result of HTN & DM2	GI: GERD, NAFL, Cholecystitis
Neoplasms (GI, GU, Renal)	GU: Urinary incontinence, ED, Nephrolithiasis
Increased risk of all cause mortality	ID: Increased risk / severity of infections
	OBGYN: AUB, perinatal complications
	PSY: Depression

- Obesity is globally pervasive and has been increasing dramatically in prevalence over the past several decades.

Obesity in Adults		**20.9-33.8%**→ (1999-2008)	**42.4%** (2017-2018)
Obesity in Pediatrics:	**Age 6-11:**	**6.5%** (1980)→	**29.6%** (2014)
	Age 12-19:	**5%** (1980) →	**20.6%** (2014)

- There were over 70 million obese adults in the US in 2015.
- Obesity cost healthcare over $147 billion in 2008 alone.
- Fortunately, obesity is a modifiable risk factor.
- Our study sought to determine how well we as primary care physicians were directly addressing and treating obesity in the obese population.

METHODOLOGY

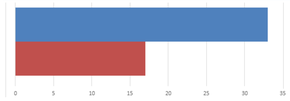
Specifically, our study addressed the following questions:

1. **Is obesity addressed in the course of primary care?**
2. **If obesity was addressed, what recommendations were made?**
3. **If recommendations were made, did they lead to a meaningful (5%*) decrease in total body weight?**

*Based off recommendations of the NHLBI Obesity Education Initiative - Expert Panel on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults

- A randomized sample of 50 patients with obesity were selected between 2016-2019 and were followed over a minimum of six months to allow adequate time for weight loss.
- We determined what percentage of these patients had their obesity addressed, subcategorized the recommendations which were made, and analyzed which patients had achieved a meaningful weight loss.
- We attempted to subcategorize patients based on sex, medical conditions, and medications that predisposed them to weight gain, but our study lacked the statistical power to do so.

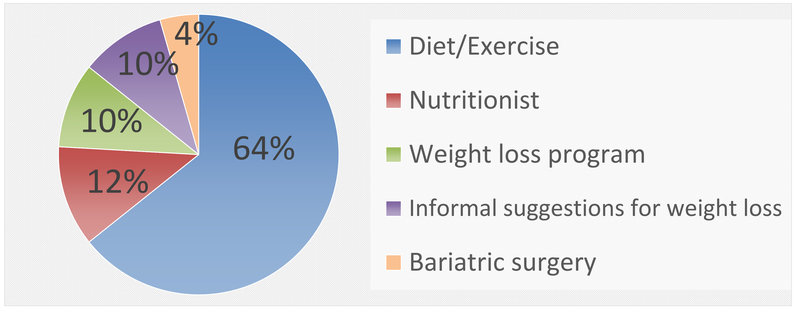
Success Rate of Addressing Obesity in Treatment



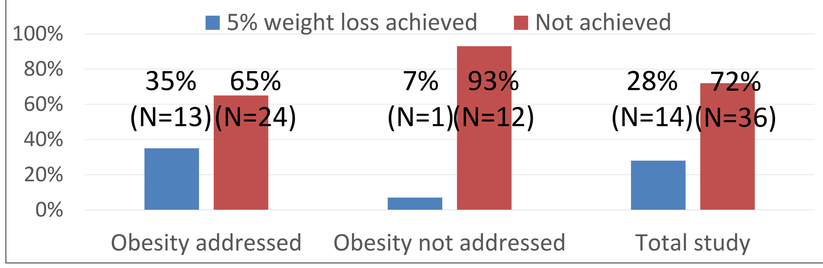
- 66% addressed (N=33)
- 33% not addressed* (N=17)

* N=4 were advised to lose weight for other diagnoses

Primary Recommendations Made by Providers



Effect of Addressing Obesity in Primary Care on Weight



RESULTS

Obesity addressed in Primary care?

- Of the 50 patients who were selected, 33 (66%) had their obesity directly addressed, and 17 (33%) did not.
- 4 received advise to lose weight for different diagnoses, but not obesity.

Which recommendations were made?

- Diet and exercise were the most common recommendations (N=27).
- In some cases, the provider focused on diet (N=3) or exercise (N=2) alone.
- Nine patients were given adjuvant treatments such as referrals to nutritionists (N=5), weight loss programs (N=4), and bariatric surgery (N=2).
- N=4 received nonspecific advice to “lose weight”.

Meaningful weight loss?

- Only 28% (N=14 of 50) of the patients in our study achieved a 5% total body weight loss or greater.
- 35% (N=13 of 37) of our patients who received recommendations achieved a 5% body weight loss, compared to only 7% (N=1 of 13) of patients who did not receive recommendations.
- 93% (N=12 of 13) did not lose weight if no advice was provided. However, 65% (N=24 of 37) did not lose weight despite receiving recommendations.

DISCUSSION

- Despite known health risks and increasing prevalence, obesity was not addressed in 33% of our patients, and 65% of patients who received recommendations still did not achieve meaningful weight loss. However, those who received advice were much more likely to lose weight than those who did not (N=13 of 27 vs. N=1 of 13).
- One significant cause for failure of obesity treatment may be time constraints on the primary care physician. Obesity was most commonly addressed during annual physicals, while 7 patients were noted to be seen for several problem visits over 12-36 months without their obesity being addressed.
- Obesity may also be seen as “commonplace,” and therefore not a directly addressable issue. In many charts, obesity was not listed as a medical problem for patients with a BMI ≥30.
- Diet/exercise was the most common recommendation. This may be due physician familiarity and the intuitive rationale of diet/exercise, vs. unfamiliarity of other adjuvant treatments.
- Reasons why diet/exercise may fail are diverse, including poor patient internalization and understanding, variations in the physician’s specific advice, healthcare disparities, patient motivation, and patients’ time limitations. Again, lack of time for adequate discussion may be significantly contributing.
- The AACE recommends lifestyle therapy to control obesity consisting of three components: 1) Meal plans, 2) Physical Activity, and 3) Behavioral changes. Behavioral changes were not addressed in our patients and doing so may be an opportunity for improvement in our care.
- Both we, and the AACE, recommend scheduled visits and follow-ups directly for obesity for more effective interventions.

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