Assessing Medicine And Surgical Residents' Knowledge And Perceptions Of Obesity and Metabolic/Bariatric Surgery

Leah Timbang, MD, MPH[1]; Alexandra Johns, MD, MPH[1]; Sadaf Sadjadi, BS[2]; Mohamed Ali, MD, FACS[1]; Shushmita M Ahmed, MD, FACS, DABOM[1]

[1]Department of Surgery, University of California, Davis, Sacramento, California; [2]University of California School of Medicine, Sacramento, California

Introduction

- Obesity affects over 40% of the adult American population
- Obesity is a disease of inflammation affecting multiple systems throughout the body
- Bariatric surgery is a safe and effective treatment for obesity, allowing for substantial and durable weight loss
- Less than 1% of eligible patients are referred for metabolic/bariatric surgery (MBS)
- 70% of patients reported MBS not mentioned by primary care physician as treatment option
- Majority of conversations regarding MBS are patient initiated
- Attending physician barriers to referrals including knowledge and bias against surgery
- Trainee knowledge about obesity and MBS referral perceptions and behaviors are unknown

***Study Aim*: To characterize and compare the knowledge and attitudes towards MBS among medical and surgical residents**

Methods

- Anonymous survey assessing knowledge of obesity and MBS outcomes, and attitudes towards MBS referral at single institution
- Inclusion criteria:
  - Medicine residents (specialties include internal medicine, combined internal medicine/psychiatry, family medicine, combined family medicine/psychiatry)
  - General surgery residents
- Compared medicine and surgery resident responses using chi-square analyses, Pearsons' correlations, and likelihood ratios

Results

Table 1. Characteristics of participating medicine and surgical residents.

Variable	Total	Medical Resident	Surgical Resident
	n=49	n=20	n=29
Resident Level			
Junior (PGY 1-2)	26 (53%)	10 (50%)	16 (55.2%)
Senior (PGY 3-5)	23 (47%)	10 (50%)	13 (44.8%)
Age (years)			
25 -30	26 (53%)	14 (70%)	12 (41.4%)
31-35	21 (43%)	6 (30%)	15 (51.7%)
36-40	2 (4%)	0 (0%)	2 (6.9%)

Figure 1. Comparing medicine and surgical resident answers to questions assessing knowledge of obesity and obesity related treatments/MBS.

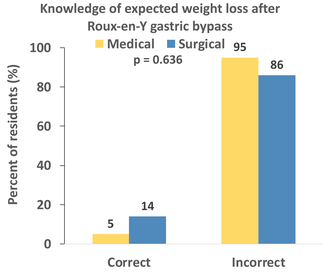


Figure 1A. Percentage of residents who correctly and incorrectly identified expected weight loss 12 months after Roux-en-Y gastric bypass.

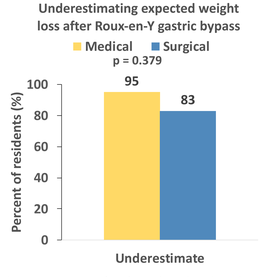


Figure 1B. Percentage of residents who underestimated weight loss expected 12 months after gastric bypass.

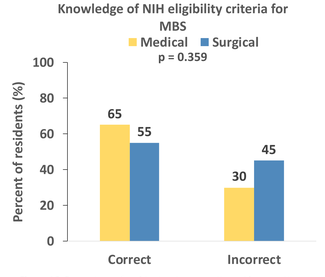


Figure 1C. Percentage of residents who correctly and incorrectly identified the 1991 NIH eligibility criteria for MBS.

Figure 2. Comparing resident perceptions and needs of current curricula on obesity and treatments/MBS.

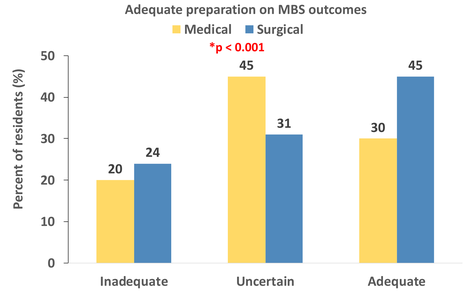


Figure 2A. Resident perception of adequacy of training to prepare them to identify weight Loss, safety and complications following MBS. *Statistically significant ($p<0.05$)

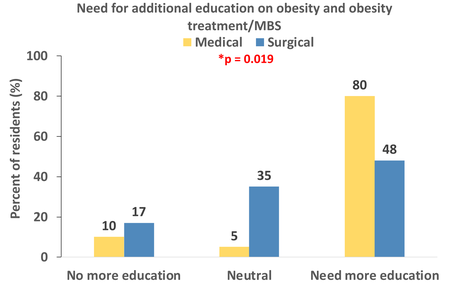


Figure 2B. Percentage of residents who felt additional education was needed on obesity and obesity related treatment (including MBS). *Statistically significant ($p<0.05$)

Results Continued

Figure 3. Comparing resident beliefs and attitudes towards MBS as effective treatment for obesity.

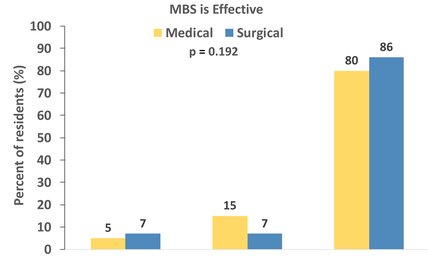


Figure 3A. Percentage of residents who felt MBS was an effective treatment for obesity.

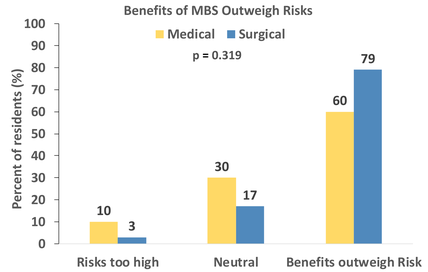


Figure 3B. Percentage of residents who felt benefits of MBS outweighed risks.

Figure 4. Comparing resident likelihood to refer patients of different ages and comorbidities meeting NIH Criteria for MBS.

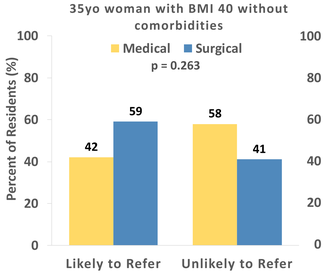


Figure 4A. Likelihood to refer young patient with BMI 40 without comorbidities.

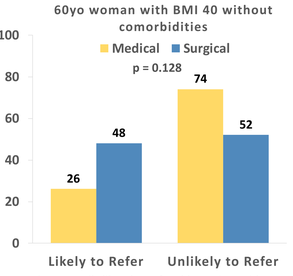


Figure 4B. Likelihood to refer older patient with BMI 40 without comorbidities.

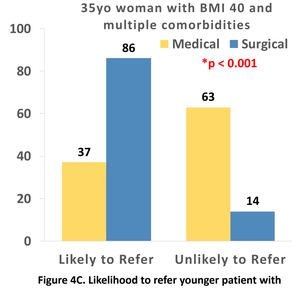


Figure 4C. Likelihood to refer younger patient with BMI 40 with multiple comorbidities.
*Statistically significant ($p<0.05$)

Conclusion

- Despite acknowledging the efficacy and safety of MBS, both medicine and surgical residents were unlikely to refer eligible patients for surgery
- This may be due to the knowledge deficit seen on MBS outcomes, and the lack of preparedness both groups felt in addressing obesity and its treatment
- Formal and robust curricula in obesity management/treatment are necessary to better prepare medicine and surgery residents to counsel patients on the disease of obesity and, importantly, eliminate treatment bias