Improving Accurate Documentation of Appearance within the MSE based on BMI

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Background

Obesity and/or excessive weight gain are prevalent in the United States and have been associated with metabolic syndrome which increases the risk of other cardiovascular diseases, such as hypertension, diabetes and strokes.[1] Psychiatric patients are vulnerable to these conditions due to psychotropic medication side effects. [2] However, psychiatrist' subjective evaluation of weight can affect the healthcare management of overweight/obese patients. Often, psychiatric patients with overweight/obese BMI will be documented as 'healthy' or 'normal' for appearance. Therefore, accurately identifying overweight/obese patients can lead to early appropriate treatment and management.

Objective

The goal of this project was to increase at least by 50% the documentation of BMI and the accuracy of patient's mental status examination (MSE) appearance in relation to BMI psychiatric discharge summaries. Our study project was conducted on patients admitted to the Behavioral Health Unit at HCA Florida North Florida Hospital.

Methods

Over an 8-month period (Sept. 1 2022-April 30, 2023), our study population consisted of 870 patient admission encounters. Patients were at least 18 years of age, males and females, nonpregnant and diagnosed with at least one psychiatric disorder. The study was divided into two phases.

Phase I (Sept. 1-Dec. 31, 2022): No interventions took place. We obtained data on documentation of BMI values and various MSE appearance descriptive terms.

Phase II (Jan. 10-April 30, 2023): Interventions took place. Interventions included email notification and lectures provided to all the psychiatry residents on inpatient psychiatric services in a virtual format. Pre- and post-tests via Qualtrics were administered to review the residents' understanding of the interventions. Bimonthly data was requested and analyzed as a part of process measures. After the end of Period II (1/10-4/30/23), data was obtained in June and the results were then compared to Period I (9/1-12/31/22). We also administered a post-QI project survey to receive feedback from the residents and staff. The post-QI project survey analyzed if the resident were less or more likely to continue the interventions, recommend them to other residents and if the interventions were time-efficient.

***PHASE II INTERVENTIONS**

Email notification → pre-test → an educational lecture* → post-test

*The lecture educated inpatient psychiatry residents and faculty on how to appropriately document the patients' BMI values in the Quality section and the corresponding weight statuses in the appearance section of the MSE within the patient discharge summaries.

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Results

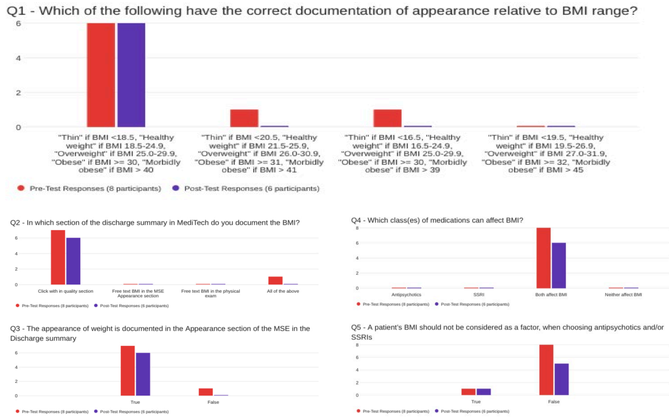
Data Documentation of BMI numbers

	Pre Intervention encounters (*n=453*)	Post Intervention encounters (*n=417*)
BMI not documented	125 (27.5%)	178 (42.6%)
BMI documented	328 (72.4%)	249 (59.7%)
Underweight BMI range	10 (3.0%)	8 (3.2%)
Normal weight BMI range	124 (37.7%)	85 (34.1%)
Overweight BMI range	88 (26.7%)	75 (30.1%)
Obese BMI range	77 (23.4%)	62 (24.9%)
Morbidly obese BMI range	29 (6.4%)	19 (7.6%)

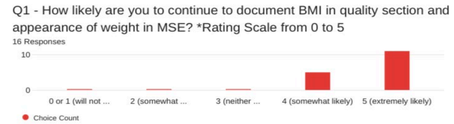
% of Correct Corresponding Descriptions within MSE Appearance Section Among Patients with Documented BMI

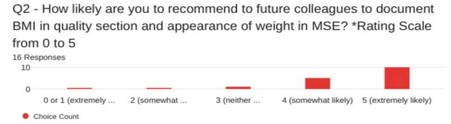
Pre Intervention encounters with documented BMI (*n=328*)	%	Post Intervention encounters with documented BMI (*n=249*)	%
"Very thin" or "thin" for underweight patients (*n=10*)	0 (0%)	**"Very thin" or "thin" for** underweight patients (*n=8*)	4 (50%)
"Normal weight" or "healthy weight" for normal-weight patients (*n=124*)	0 (0%)	**"Normal weight" or "healthy weight" for** normal-weight patients (*n=85*)	38 (44.7%)
"Overweight" for overweight patients (*n=88*)	1 (0.30%)	**"Overweight" for** overweight patients (*n=75*)	43 (57.3%)
"Obese" for obese patients (*n=77*)	21 (6.4%)	**"Obese" for** obese patients (*n=62*)	32 (51.6%)
"Morbidly obese" for morbidly obese patients (*n=29*)	0 (0%)	**"Morbidly obese" for** morbidly obese patients (*n=19*)	9 (47.3%)

Lecture Pre-Test and Post-Test Results



Feedback Responses among Residents, Faculty & Staff





Discussion

Although post-intervention results showed decreased documentation of BMI numbers, there was an increase in the accuracy of MSE appearance documentation by at least 50%. Majority of participants scored highly on the lecture pre-test and post-tests and reported that they were more likely to continue our documentation recommendations in the future. Interventions were also time-efficient as it took only less than 30 seconds to perform. Some limitations of the study include a high turnover rate among faculty & residents during the intervention period which may have affected consistency of documentation and understanding of the intervention. There were issues of attendance to the lecture related to varying resident schedules, leave time, and tardiness. As such, the participant rate was low for the pre- and post-tests. Some attendees were also not able to complete the tests due to technical difficulties. Another limitation was the very few reminders or re-enforcements for adherence to documentation changes during our study.

Conclusion

Active interventions promoted awareness of patients' physical health and the need to detect and manage metabolic syndrome. Therefore, accurate and appropriate documentation of BMI and weight status at the time of discharge can improve discharge planning by arranging necessary follow-up primary care to address and manage weight concerns, metabolic syndrome and associated complications.

References

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