

## RESEARCH LETTER OPEN ACCESS

# Older Adults With Obesity: Need for 4Ms Age-Friendly Approach to Care

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## 1 | Introduction

The prevalence of older adults living with obesity is increasing (39%) [1] and their quality of life is diminished by multimorbidity, mobility disability, and frequent healthcare visits [2]. Common comorbidities include cardiometabolic, pulmonary, liver and kidney diseases, memory loss, mental health conditions, and cancers [3–6]. Multimorbidity leads to polypharmacy burden while necessitating care by multiple specialists. The heterogeneity of aging with cumulative disease burden due to obesity further accelerates aging by the dynamic accumulation of biological changes predisposing to geriatric syndromes [7]. This physiological process increases the risk of functional limitation, mobility disability, and early institutionalization. Earlier in life, older adults with obesity often have attempted intensive lifestyle intervention (ILI) including diet and physical activity changes, trialed first-generation anti-obesity medications (AOMs), and a few have undergone weight loss surgery. With aging and obesity, they are faced with multimorbidity and disability and hence have patient-priority goals for weight loss and overall health [8].

The National Council on Aging roundtable discussion on obesity and equitable aging has developed policy recommendations which includes the need for comprehensive assessment with tailored and personalized approach to obesity care [9]. Current evidence supporting weight loss in older adults remains low to moderate [10] and recommends geriatric principles of “start low and go slow.” This monitored approach following a comprehensive geriatric assessment (CGA) warrants emphasis as the newer generation of AOMs help achieve 12%–20% weight loss

with future medications close to bariatric surgery, raising the concern for safety in older adults. This rationalizes a need for an age-friendly model of care using the 4M framework: “What matters most” in terms of patient priority goals for weight loss, recognize mental health disorders and cognitive impairment and medications, including polypharmacy with a focus to de-prescribe weight promoting medications, with consideration of individual’s mobility impairment. This study was designed to study the 4M elements by a priori model of approach to obesity care.

## 2 | Methods

This is a retrospective study of older adults ( $n = 58$ ) with mean age 73,  $\text{BMI} \geq 30 \text{ kg/m}^2$  referred to a geriatric weight-management clinic. Patient-centered obesity care was focused toward top three patient-priority goals after a CGA. Assessments include mental health disorders, obesity-related chronic conditions, polypharmacy review including weight-promoting medications, and assistive device use. Obesity interventions included behavioral, ILI (diet and physical activity), and pharmacological interventions applying geriatric principles.

## 3 | Results

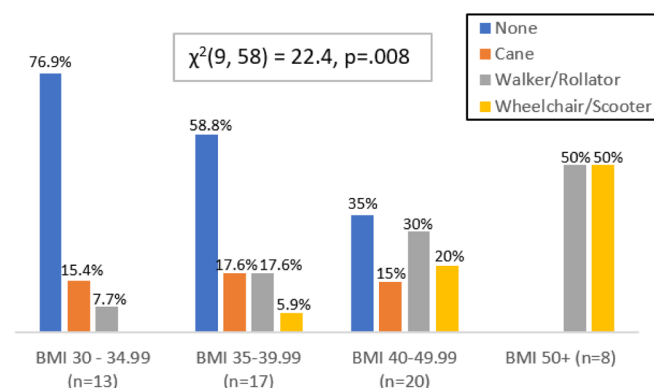
Top three patient priority goals were the desire to achieve weight loss, improve mobility and function, and reduce pain. There was a high prevalence of mental health diagnoses (79%) and

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**TABLE 1** | Mental health disorders and medication use.

Mental health disorders	
Major depression	67.2% (39)
Bipolar disorder	1.7% (1)
Panic disorder	1.7% (1)
Other anxiety disorder	62.1% (36)
Post-traumatic stress disorder	0% (0)
Eating disorders	1.7% (1)
Alcohol use disorder	5.2% (3)
No mental health disorder	20.7% (12)
Medication use	
Taking pain medication	79.3% (46)
Number of medications (range 4–31)	15.8 (6.8)
Number of obesogenic medications (range 0–8)	2.9 (2.0)

**FIGURE 1** | Mobility device use by BMI class.

polypharmacy mean (SD) of 16 (6.8) medications with 2.9 obesogenic (weight-promoting) medications. (Table 1). Over 50% used an assistive device, and with BMI  $\geq 50$ , all were walker or wheelchair/scooter dependent, i.e., used an assistive device beyond a cane (Figure 1).

## 4 | Discussion

This study shows that older adults with obesity have a high prevalence of mental health comorbidities, medication burden, and mobility impairment necessitating assistive device use and have individual priority goals beyond weight loss to include improvement of mobility and function, and pain. This highlights the need for a patient-centered 4M approach, aligning care toward “What Matters Most”. Mental health disorders were highly prevalent in our study cohort which needs recognition and treatment with medications which are weight-neutral or weight-loss promoting preferentially over weight-promoting medications.

Our experience suggests that an initial step in evaluation should begin with a comprehensive geriatric assessment including (1) cognitive function; (2) functional status with screening for ADL and IADL impairment; (3) Mobility testing such as the “Timed up and go”; (4) psychosocial assessment using PHQ-2 screen; and (5) SDOH screen for housing, food insecurity, and transportation. One of the key steps before dietary and physical activity recommendation is the deprescription of weight-promoting medications which is currently overlooked, predisposing to iatrogenic weight gain and resistance to weight loss. Improvement of mobility and functional impairment would be more successful following a referral to physical therapy before physical activity counseling.

In summary, weight management in older adults should follow an age-friendly approach using 4M principles with adoption of a mindful and holistic approach aligned to patient preferences and risk aversion. Recommendations for lifestyle changes should include resistance-based exercises and enhanced protein supplementation to mitigate muscle and bone loss. Treatment of obesity without considering the heterogeneity of aging has potential for unintended consequences due to the loss of muscle mass and bone density leading to worsening illness, functional impairments, frailty, impacting healthcare economics. The clinical effectiveness of the 4M approach on physical function, clinical outcomes, and quality of life in older adults will be shared in future publication.

## Author Contributions

All listed authors had full access to all the data in the study, take responsibility for the integrity of the data and the accuracy of the data analysis, and had authority over manuscript preparation, the decision to submit the manuscript for publication, and approved its current contents. All authors meet the criteria for authorship stated in the Uniform Requirements for Manuscripts Submitted to Biomedical Journals.

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The authors have nothing to report.

## Conflicts of Interest

The authors declare no conflicts of interest.

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