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Disparities in Access and Quality of Obesity Care

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INTRODUCTION

Obesity is a chronic disease and a significant public health threat predicated on complex genetic, psychological, and environmental factors. Although a chronic disease, obesity also exacerbates pre-existing conditions and may engender new ones. Obesity is associated with high mortality rates. These high mortality rates are often secondary to comorbidities such as diabetes, hypercholesterolemia, certain cancers, and cardiovascular disease.¹ Obesity interventions from lifestyle modifications to pharmacotherapy and metabolic and bariatric surgery have significant downstream benefits. Disparities in access and quality of obesity care worsen health inequities for vulnerable populations.

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A body mass index (BMI) ≥ 30 characterizes obesity in adults, whereas a BMI ≥ 40 characterizes severe obesity. Yet, BMI is an indirect measure of adiposity, and there is variation in BMI among various ethnic groups.^{2–5} Obesity is highly prevalent, with 42.4% of the US adult population with obesity and 9.2% with severe obesity. Disparities in obesity rates are significant across racial and ethnic groups, with the lowest rates of obesity in non-Hispanic Asian adults (17.5%) and highest among non-Hispanic Black (49.6%) and Hispanic (44.8%) adults, whereas non-Hispanic White adults have rates of 42.2%.⁶ Individuals' socioeconomic environments impact disparities, and they are worse in areas with more negative social sentiments (ie, racism) that increase stress.⁷ Obesogenic food environments are disproportionately present in areas with a larger population of racial/ethnic minorities.^{8,9}

There is a tremendous stigma associated with obesity, as many believe it to be a consequence of personal behavioral choices despite its complex etiology.¹⁰ Overwhelming data support genetic and environmental causes, but many blame individuals with obesity for their weight status.¹¹ Weight stigma impacts many areas of life for people living with obesity, including the quality of health care they receive. Many physicians have negative or stereotypical beliefs about patients with obesity and primarily attribute obesity to individual behaviors.^{12–14} These stereotypes negatively affect the quality-of-care patients with higher BMI receive, such as a delay in prescribing recommended medications due to a higher prevalence of physician-assumed nonadherence.¹⁵

Individuals with higher BMI are also more likely to avoid health care due to weight stigma. Insurance policies encourage physicians to measure a patient's weight at each visit. Health guidelines require recommendations for weight loss for patients with higher BMI regardless of their visit.¹⁶ Such policies and practices lead to worse health outcomes in non-obesity-related and obesity-related conditions.

Disparities in obesity care disproportionately impact racial and ethnic minorities and, most powerfully, Black individuals with obesity. One study showed that research conducted on predominantly White women failed to consider other groups' racialized and gendered experiences. This lack of inclusion resulted in less recruitment to weight loss programs and less weight loss through behavioral weight interventions (BWIs) for racial/ethnic minority groups than White patients.¹⁷

Obesity-related conditions such as hypertension and pancreatic cancer and treatments for obesity-related diseases such as sleep apnea disproportionately affect racial/ethnic minorities.^{18–20} Even restrictions for treatments based on BMI (such as total knee and hip arthroplasties), which limit access to care by patients with obesity, disproportionately restrict care for racial and ethnic minorities regardless of BMI.²¹ These disparities are most significant for Black Americans. Studies have found that while Black women have the highest rates of obesity, Black men have the highest mortality rates from obesity-related illnesses.¹⁷ Such disparities highlight the need to address the existing inequities in access and quality of obesity care.

BACKGROUND

Current evidence-based treatment options for obesity include focusing on medication and lifestyle changes.²² For instance, nutrition-based interventions include limiting the intake of processed foods with high sugar and fat content.^{23,24} Regular physical activity is another common intervention that decreases sedentary behavior.²⁵ Interventions such as obesity pharmacotherapy or metabolic and bariatric surgery (MBS) may be necessary for successful, long-term outcomes.^{22,26}

Health disparities are preventable differences in disease burden or opportunities to achieve optimal health that socially disadvantaged populations experience.^{27,28} For example, residents of low-income neighborhoods disproportionately encounter food deserts, areas where affordable, nutritious food options are scarce.^{29,30}

An analysis of the National Health and Nutrition Examination (NHANES) survey from 1999 to 2016 demonstrates that Black and Hispanic children and adolescents had the highest prevalence of obesity for all years between 1999 and 2016. In the most recent survey year, the prevalence of class I obesity (mild obesity) was most significant for Black women at 25.1% compared with 13.6% for White women.^{22,31,32} Altogether, these findings indicate lifetime racial disparities in obesity prevalence, apparent in early childhood and progressing through adulthood.

In addition to this unequal disease burden, access to obesity treatment varies significantly. Lifestyle intervention programs are more successful with a higher frequency of visits. Still, many treatment facilities fail to account for discrepancies in transportation access, food insecurity, and temporal restrictions (eg, the constraints of a full-time work schedule), which complicate patient adherence.³³ Thus, even if these treatment options are theoretically productive, they may be more difficult for low-income families and racial and ethnic minorities to implement in practice. Indeed, Black and Hispanic Americans lose less weight than White patients in behavioral lifestyle intervention treatments.²⁸

Anti-obesity medication (AOM) is also significantly underutilized. For instance, Claridy and colleagues found the mentioned rate for anti-obesity drugs remains at 1% despite recommendations from the American Medical Association and the Endocrine Society to use AOM for long-term weight reduction.³⁴ This finding may be a consequence of the inadequate coverage for AOM through federal health insurance programs, which disproportionately inhibits low-income patients from pharmacotherapy access.³⁵ Furthermore, Black Americans are less likely than White Americans to have considered surgical interventions.³⁶ Often, Black Americans are less likely to be diagnosed with obesity, and therefore, less likely to be referred to metabolic and bariatric surgery centers.²⁸ Among adolescents with severe obesity, bariatric surgery is most often performed on White patients; moreover, while Medicaid insurance increases the use of MBS for White adolescent patients, it paradoxically decreases the use of MBS among non-White patients.³⁷

The geographic distribution of obesity medicine specialists also contributes to disparate access to care. To visit a certified obesity medicine physician, the median travel time for patients in high-income counties is 9 minutes; concurrently, patients in low-income or

rural counties face a median travel time of 43 minutes.^{38,39} Certain patients, including low-income families and racial and ethnic minorities, are thus more likely to be treated by a physician who does not have specialized training in obesity medicine.

The outcomes of undertreatment are significant. Disparities in obesity foreshadow integral inequality in health outcomes, including disability, the standard of living, and premature mortality.^{23,40} Indeed, Black and Hispanic adults with obesity have higher odds of developing obesity-related diseases, including high blood pressure, heart attack, and stroke.^{24,41} Thus, obesity has a correspondingly high economic burden. In the United States, the mean annual per capita health care cost of obesity is \$1160 for men and \$1650 for women, with an estimated total cost of \$260 billion.^{25,42} To address the obesity epidemic and prevent increasing disparity, more investigations and interventions that address access to treatment are crucial.

Factors Contributing to Disparities in Access and Quality of Obesity Care

Stigma and discrimination toward people with obesity cause multiple harmful effects on their physical and psychological health.⁴³ Many often blame persons with obesity for their weight.^{43–45} Some of the common harmful ideologies associated with obesity include laziness, unattractiveness, and a lack of willpower.^{43–45} Such negative connotations result in lifelong discrimination in various aspects of life, including workspace, schools, and health care.²² Self-stigma is an often overlooked factor that has substantial adverse effects on persons with obesity.^{46,47} Holding negative beliefs about oneself because of weight can lead to poor quality of life, worse health outcomes (independent of obesity-related causes), and poor mental health.^{48–51}

A complex relationship between obesity and socioeconomic factors creates barriers to obesity prevention and care. Low-income and minority families face additional barriers contributing to increased obesity rates, including racism, chronic stress, and even the affordability of quality food such as vegetables, fruits, and lean meats.^{52–55} Low-income families might find it more challenging to dedicate time and resources to healthy meal preparation.^{53,56}

The struggle for quality obesity care continues even after diagnosis. Obesity care comprises lifestyle modifications, pharmacologic therapy, and weight loss surgery.²⁸ Unfortunately, minority communities face significant barriers in access to many of these measures.^{28,54} Unfortunately, non-Hispanic African Americans and Hispanics are more likely to face food insecurity, making it much harder to adhere to a specific diet. Increased food insecurity rates may play a role in findings that minorities lose less weight than White patients in lifestyle intervention treatments.⁵⁷

Black patients are less likely to be diagnosed with obesity than non-Hispanic White patients. This underdiagnosis could decrease referrals to weight loss centers where weight loss medications are generally prescribed.²⁸ Weight loss surgery remains the most effective treatment of moderate to severe obesity. Despite this, racial and ethnic minorities have limited access to bariatric surgery.^{28,37} Many believe that limited access to MBS is due to a combination of factors, including the higher likelihood of being insured by Medicare/

Medicaid insurance. Medicare/Medicaid covers many minorities. Their reimbursement policies are often unfavorable for those with obesity; moreover, many of these centers are not located in areas where minorities receive their health care.⁵⁸

Despite the common misbelief that people with obesity are primarily responsible for their weight gain, many systemic factors such as racism, stigma, and policy likely play a significant role in our obesity epidemic. Efforts to address systemic factors are critical, and these measures should target preventing and treating obesity.

DISPARITIES IN ACCESS AND QUALITY OF OBESITY CARE: AMELIORATING FACTORS

Targeted, evidence-based strategies are needed to address obesity prevalence and obesity-specific care disparities. As certain groups, such as racial and ethnic minorities and those of lower socioeconomic status, have a higher prevalence of obesity, interventions need to address the unique challenges experienced by these populations. Lifestyle and behavioral therapy are the first lines in the treatment of obesity. Pharmacotherapy and bariatric surgery are also cornerstones of obesity treatment, with medical devices becoming more commonly used. Access to and utilization of these therapies is crucial to reducing obesity-related care disparities.

Lifestyle interventions, including promoting healthy food choices, increased physical activity, and decreased sedentary time, are more effective when incorporating behavioral strategies, such as goal setting, self-monitoring, and cognitive restricting.⁵⁹ Frequent contact or visits with trained coaches or health care providers also increases effectiveness.³³ Historically, lifestyle and behavioral interventions tailored to address social or community factors of diverse populations have had mixed results.^{60,61} However, more recently, there has been more success in reaching underserved populations. High-intensity lifestyle interventions targeted at those with low socioeconomic status (SES) and racial and ethnic minorities have shown sustained success (5% weight loss at 24 months) with content tailored to the health literacy of the individual.⁶² A lifestyle behavioral intervention that utilizes a personalized range, delivered through a mobile, digital platform, has also shown success (5% weight loss at 12 months) in low-income and racial and ethnic minority populations.⁶³ In the latter study, high engagement with digital content was cited as a positive factor in weight loss, likely due to reduced barriers to accessing content given the use of a mobile application. Combining a lifestyle intervention with home-based parent education decreased post-partum weight gain at 12 months for Black women of low SES.⁶⁴ These studies highlight the importance of highly engaging interventions tailored for specific populations and decreasing barriers to accessing information.

Pharmacologic treatment of obesity is generally underutilized, with only 1.3% of eligible patients having prescriptions for AOMs across several large health care organizations throughout the United States.⁶⁵ There are few studies examining disparities in AOM use among underserved populations. Significant differences in prescription rates among racial and ethnic groups do not appear to be lower from majority groups, though estimates trend toward Hispanic individuals having lower rates of prescriptions.⁶⁵ Another study found that

less than 10% of Black and Hispanic individuals with overweight or obesity reported using weight loss medications.⁶⁶

Notably, Hispanic, Black, and low-income individuals are more likely to lack insurance coverage and are less likely to have adequate access to primary care, which may skew the results of these studies.⁶⁷ Once obtained, there is also a lack of evidence on whether or not responses to anti-obesity medication differ significantly among different racial and ethnic groups. In a post hoc analysis of the satiety and clinical adiposity–liraglutide evidence in nondiabetic and diabetic people (SCALE) randomized control trial, Hispanic individuals achieved similar weight loss as non-Hispanic individuals.^{68–70}

Bariatric surgery is one of the most effective treatments of sustained weight loss, but only 1% of eligible individuals undergo the procedure.⁷¹ Racial and ethnic minorities and those of low income, groups most affected by obesity, are the least likely to undergo the procedure and have less weight loss when they do, compared with Whites and those of higher income.^{72,73} Similarly, those without non-private insurance or insurance coverage are less likely to have the procedure.^{74–76} Interestingly, no significant racial or ethnic differences in resolving obesity-related comorbid conditions, such as type 2 diabetes mellitus and hypertension post-bariatric surgery, have been found.⁷³ Among low-income individuals receiving Medicaid, there was an increase in bariatric surgery rates for those living in states that expanded Medicaid through the Affordable Care Act.⁷⁷

FDA-approved medical devices, such as intragastric balloons and vagal blockade devices, have gained traction as less invasive alternatives to bariatric surgery that may augment lifestyle changes.^{78–80} There is a lack of data to speculate on how feasible or effective these treatment options are for underserved groups. A US study of the dual intragastric balloon, which included racial and ethnic minorities, effectively induced weight loss. Still, they did not compare results among racial and ethnic groups.^{78–81} Insurers do not typically cover medical devices and have exorbitant out-of-pocket costs, limiting their use in socioeconomically disadvantaged groups.

We must address barriers to coverage and access to care to ensure that racial and ethnic minorities and socioeconomically disadvantaged groups can obtain all available therapies to treat obesity. The use of technology may be a means to improve the dissemination of information and reach of health care organizations to these underserved populations.^{82–85}

SUMMARY

Obesity disproportionately affects racial and ethnic minorities and, most severely, Black persons with obesity.²⁸ Health inequities affect many populations, including historically disadvantaged populations, persons living in rural areas, people with disabilities, and marginalized racial and ethnic groups.⁸⁶ Many factors lead to this, including limited access to *quality* obesity care and socioeconomic factors, such as living in an obesogenic food environment or experiencing frequent microaggressions and racism, which can ultimately increase chronic stress and the development of obesity.^{7,86}

Not surprisingly, these disparities in disease prevalence mirror similar inequality in access to quality obesity care and stem from many places, including poor access to care, inability to access quality obesity care with obesity-trained physicians and clinicians, and decreased rate of receiving official diagnosis obesity. Despite research supporting the use of lifestyle modification in addition to weight loss medications and surgery, when necessary, there is decreased utilization in persons with lower socioeconomic status or who are ethnic minorities. Some studies indicate that weight loss therapies and surgery are less effective in racial and ethnic minorities, but these disparities are likely repercussions of the unique challenges faced by minority communities^{1,28}

With the growing number of individuals with obesity, there is an urgent need to address disparities in access and quality of care. Improving formal medical obesity education and health care policies that expand coverage for obesity care may also be an impactful intervention.^{16,17} With the varying efficacy of different dietary or surgery interventions, precision medicine needs to have a growing role in Obesity medicine.¹⁸

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KEY POINTS

- We should provide adequate access to obesity care to all those affected by the disease.
- There is a need for improved obesity health policies and precision medicine to treat obesity.
- Education about obesity, including management, weight stigma, and disparities in care, should be included in the education and training of all health care professionals.
- Every patient with obesity should be offered all appropriate treatment options regardless of age, race/ethnicity, or socioeconomic status.

CLINICS CARE POINTS

Evidence-Based Pearl #1

Education about obesity, including management, weight stigma, and disparities in care, should be included in the education and training of all health care professionals.

- Faculty in curricula development often cite a lack of time, knowledge, and practical guidelines as barriers to obesity education and training.³⁰ Current literature highlights the need to incorporate obesity education into health care professionals' curricula, given its increasing prevalence.^{54,61}
- Several interventions in health care disciplines have positively impacted the competency and skills surrounding obesity treatment.^{1,6,23,30}

Pitfall: Nevertheless, many graduates of health care professional schools continue to report discomfort in the management of obesity.^{19,63} Inadequate preparation for the care of patients with obesity is particularly evident among primary care providers who play a vital role in the early identification and treatment of obesity.⁷⁴ International and national studies indicate that physicians, among other health care providers, receive minimal education about obesity.

Evidence-Based Pearl #2

Every patient with obesity should be offered all appropriate treatment options regardless of age, race/ethnicity, or socioeconomic status.

- The foundation of obesity management is lifestyle-based interventions (ie, nutrition, physical activity, and behavioral modification). The United States Preventative Services Task Force recommends patients with obesity receive intensive multi-component behavioral intervention, including multiple behavioral interventions (in either individual or group sessions), setting weight loss goals, improving diet or nutrition, physical activity sessions, addressing barriers to change, active use of self-monitoring, and strategizing on how to maintain lifestyle changes.⁸⁷

Pitfalls: Unfortunately, lack of health care provider knowledge⁸⁸ and insurance coverage limits some patients' ability to receive appropriate treatment. In addition, disparities exist in who receives care for the treatment of obesity, even when insurance status among individuals is the same.^{12,28,37}

Evidence-Based Pearl #3

We should provide adequate access to obesity care to all those affected by the disease.

- Although lack of education and training among health care professionals affects a patient's access to obesity care, geography is another barrier. Obesity disproportionately affects those living in the Midwest and Southeast of the United States.¹⁷ With the growing number of physicians certified in obesity medicine via the American Board of Obesity Medicine (ABOM), several

studies have evaluated the geographic distribution of ABOM diplomates concerning obesity prevalence.^{32,67}

- Although more physicians are becoming certified in obesity medicine to provide evidence-based care,^{89,90} children and adults have difficulty accessing a physician to treat their disease, though this improves adequately. Pollack and colleagues noted the population-weighted median drive time to an ABOM diplomate decreased from 28.5 minutes in 2011 to 9.95 minutes in 2019.⁵⁹
- This decrease in driving time does not consider race/ethnicity, distrust of medical care, financial restraints, transportation concerns, or cost of living.⁶⁶ In addition, those with severe obesity candidates for MBS may not have access to surgery due to geographic location.⁹¹

Areas for future research and treatment options

With the growing number of individuals with obesity, there is a continued need to address disparities in access and quality of care. With the increased popularity of the ABOM board certification examination, we propose greater emphasis and additional resources for obesity in education and training programs.^{18,34}

- *Improved obesity health policies:* In addition, the development of health care policies to expand coverage for obesity care would allow more patients to obtain adequate treatment of their disease. The Treat and Reduce Obesity Act (TROA) was initially introduced in 2013 to the Congress but has yet to pass. With the passage of this bill, effective treatment options will be available to all those with obesity at a lower cost.⁹² TROA is one tool that could help reduce health inequities.
- *A need for Precision medicine:* Current literature also highlights disparities in response among different obesity treatment modalities.⁹³ For example, some dietary interventions are more effective in specific racial and ethnic groups. Likewise, distinct differences are noted in how patients respond to anti-obesity pharmacotherapy or surgical procedures. Precision medicine needs to have a growing role in obesity medicine.