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Progress in Prevention

Leading the Charge in Obesity Management

A Call to Action for Cardiovascular Nursing

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Introduction

Cardiovascular disease (CVD) and heart failure remain leading causes of morbidity and mortality worldwide, imposing significant burden on healthcare systems and individuals alike.[1,2] Compounding this crisis is the growing prevalence of obesity, a complex and costly disease state that has both direct and indirect effects on the cardiovascular system.[3] With nearly 42% of adults in the United States diagnosed with obesity,[2] the urgency to address this epidemic has never been greater. A multimodal, interdisciplinary team approach to treating obesity in the CVD patient population is recommended, with cardiovascular nurses uniquely positioned to lead these efforts.

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Strategies and Resources for Managing Obesity in Patients with CVD

Treatment plans should be multilayered and personalized, integrating lifestyle modifications, pharmacotherapy, and, in some cases, procedural or surgical interventions.[3] The American College of Lifestyle Medicine promotes a comprehensive approach to health that includes the following 6 pillars: Nutrition, Physical Activity, Sleep, Stress Management, Social Connection, and Avoiding Risky Substances.[4] The American Heart Association's recent guidelines advocate for a comprehensive, multidisciplinary approach to obesity management in cardiovascular patients, highlighting the importance of lifestyle interventions combined with pharmacotherapy when appropriate.[5]

Targeted interventions may include but are not limited to the following:

1. Food is Medicine: nutrition-focused approach, emphasizes the role of diet in managing obesity and its associated cardiovascular risks.[6] A whole-food, plant-predominant diet, low in saturated fats, processed foods, refined sugar, and rich in fiber, vitamins, and antioxidants, is particularly beneficial for cardiovascular patients.[7]
2. Exercise is Medicine/FITT Prescriptions: Physical activity is another cornerstone in managing obesity and CVD. The FITT (Frequency, Intensity, Time, Type) principle helps guide exercise treatment plans.[8]
3. Goal setting and tracking: Successful weight management begins with realistic, achievable goals. These might include setting specific weight loss targets (eg, 5%–10% of body weight) or more holistic goals (eg, improved cardiovascular health markers, reduced inflammation).[9] Tracking tools like food diaries, apps, or journaling can help patients stay accountable to their goals.
4. Behavioral education and counseling: identify potential barriers and provide cognitive behavioral interventions to healthy habit formation.
5. Program integration or established referral pathways to supporting interventions including behavioral medicine, endocrine, sleep medicine, and bariatric surgery.
6. Antiobesity Medications (AOMs): medically supervised obesity management programs, which include pharmacological weight loss therapies.

Antiobesity Medications

Three classes of AOMs are currently approved by the Food and Drug Administration:

AOM CLASS	DRUG NAME	ACTION	SIDE EFFECTS	ADDITIONAL INFORMATION
Central acting	Phentermine Phentermine-topiramate Naltrexone-bupropion	Works on the CNS* reducing appetite and increasing satiety	Dry mouth Insomnia Headache Nausea	Limited evidence regarding CV* benefits.
Intragastrointestinal	Orlistat	Inhibits the absorption of 30% of fat	Fecal urgency	Decrease in SBP*, LDL-C*, Ha1c*; weight; No RCT* supporting CV* benefit.
Glucagon-like peptide-1 receptor agonist (GLP1RA)	Liraglutide Semaglutide	Reduces appetite and delay gastric emptying	Nausea Diarrhea Constipation	Indicated for CV* event risk reduction.[10,11] Semaglutide: improvements in HFpEF* by reducing weight, HF* symptoms, CRP*, and 6-min walk distance.[12]
Dual glucagon-like peptide-1 receptor agonist and glucose-dependent insulinotropic polypeptide (GLP1RA/GIP)	Tirzepatide			CV* outcomes trial ongoing.[13] Reduced CV death or worsening heart failure by 38% in patients with HFpEF*.[2]

Table citation for content[10–14]

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CNS-central nervous system
SBP-systolic blood pressure
LDL-C-low density lipoprotein cholesterol
Ha1c-hemaglobin a1c
RCT-randomized controlled trial
CV-cardiovascular
HFpEF-heart failure with preserved ejection fraction
HF-heart failure

FIGURE. *Antiobesity medications.*

1. Central acting AOMs (phentermine, phentermine-topiramate, and naltrexone-bupropion)
2. Intra-gastrointestinal AOM (Orlistat)
3. Nutrient-stimulated hormone-based therapies include glucagon-like peptide-1 receptor agonists (liraglutide and semaglutide) and a dual glucagon-like peptide-1 receptor agonist glucose-dependent insulinotropic polypeptide (tirzepatide) (Figure).[15]

The lack of widespread insurance coverage of AOM therapy has a profound impact on the ability of Americans to access these novel medications.[16] Despite research documenting significant reduction in healthcare costs with weight loss,[16] along with the potential CVD benefits, use of AOMs as part of a comprehensive approach to weight loss remains underutilized.[17,18] This approach is divergent to how other chronic diseases are managed, where pharmacotherapy is a tenant in the multimodal approach to optimized care management.[18]

Financial Impact

In 2023, obesity-related medical costs added an additional $1514 per person to the direct per person cost of healthcare annually.[16] Research shows that modest to moderate weight loss would significantly reduce these economic costs.[16] As the percentage of weight loss increases, there is a reciprocal decrease in healthcare spending. The greatest of these expenditure reductions occur for weight loss in patients with obesity related comorbidities.[16] This highlights the significant potential for achievable weight loss among adults with obesity to reduce healthcare costs and the economic burden of disease, particularly for those living with multiple chronic conditions or high BMI levels.[16]

Challenge of Obesity Management in Patients With CVD

Patients with CVD often manage multiple complex chronic diseases, placing extra burden on maintaining medical regimens, time with office visits, and financial resources with prescription costs. Socioeconomic climate including greater inequities in ability to access healthcare, safe spaces for physical activity, and healthy foods within areas with a greater percentage of minority and/or low-income populations correlates with a greater incidence of obesity within these communities.[17] Compounding the social, environmental, and genetic conditions contributing to excess weight is the stigma around obesity as a self-imposed condition. Biases and stereotyping of individuals may lead to decreased quality of care when patients with obesity avoid care, or there is delay in aggressive weight loss management for obesity-related conditions.[17] Patients with obesity often face psychological barriers that can impede open communication and adherence to treatment plans. Given these challenges, the complexities of managing obesity in patients with CVD go beyond weight reduction; it involves addressing the physical, psychological, and social aspects of these conditions while promoting long-term health behaviors and improving overall cardiovascular outcomes.

The Essential Role of Cardiovascular and Advanced Practice Nurses in Obesity Management

Cardiovascular and advanced practice nurses are essential in obesity management because of their trusted relationships with patients and their ability to address sensitive issues like weight management. Their empathetic approach fosters therapeutic connections, which are vital in engaging patients in effective strategies. Nurses take on roles beyond traditional care, including health education, behavior modification, and care coordination, and collaborate with other healthcare professionals to develop and implement comprehensive treatment plans. Nurse-led obesity programs, similar to hypertension clinics, have shown promise in improving outcomes through individualized counseling, weight and cardiovascular risk monitoring, and education on diet and exercise.[19–21] Given the weight loss and cardiovascular benefits of glucagon-like peptide-1 receptor agonists, nurses and advanced practice nurses are essential in implementing these therapies. These include (a) identification of patients who may benefit based on clinical criteria, (b) facilitating informed shared decision-making through patient education efforts, and (c) close monitoring and follow-up to evaluate patients' progress, adherence to therapy, and any adverse effects, thereby ensuring timely adjustments to treatment plans.

Discussion and Conclusion

The rising prevalence of obesity and its impact on CVD requires a multidisciplinary, multimodal approach. Cardiovascular nurses play a crucial role in managing obesity through trusted relationships, education, care coordination, and clinical monitoring. By embracing these roles, nurses can help reduce the burden of obesity-related CVD. Furthermore, given the barriers surrounding obesity management, it is imperative nurses are involved in advocacy efforts to address these gaps and ensure equitable access to evidence-based treatments. Cardiovascular nurses are uniquely positioned to drive meaningful change, ensuring patients receive the support needed to achieve better health and quality of life. The time to act is now, as every effort made today will shape the cardiovascular health of future generations.

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