



EXCLUSIVE COVERAGE
UH CINEMA IVBM

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How Can We Improve Obesity Care in 2024 and Beyond?

By Hayden E. Klein

OBESITY MANAGEMENT IS a growing phenomenon both in the US and around the world, with comprehensive, multidisciplinary programs leading the charge to improve patient outcomes. Among these programs is the University Hospitals Center for Integrated and Novel Approaches in Vascular-Metabolic Disease (UH CINEMA). The success of programs such as UH CINEMA is particularly crucial in the US, where the prevalence of obesity per state ranges from 20% to 45% based on the current classification method, body mass index (BMI).¹ Regardless of other metabolic abnormalities, obesity is a significant risk factor for cardiovascular disease, increasing the risk of coronary heart disease, cerebrovascular disease, and heart failure.

Treating obesity is also extremely complex, requiring multidisciplinary care and multiple therapeutic modalities from lifestyle modifications to pharmacotherapy to surgeries, with treatment intensity increasing alongside adiposity and associated health risks. Each step aims for

a percentage of weight loss and overall health improvement, which is the key to effective obesity treatment.

However, although there is a lot of science behind obesity management, there is a gap in translating this science into clinical practice. This was the main focus of the third annual CINEMA symposium, hosted in partnership with *The American Journal of Managed Care (AJMC)* Institute for Value-Based Medicine (IVBM), chaired by Ian Neeland, MD, codirector of UH CINEMA and director of cardiovascular prevention at the UH Harrington Heart & Vascular Institute.

“There are many different inputs, but many gaps as well,” Neeland said regarding the pipeline of implementing obesity management science into practice. “To move the science of obesity from ideas and hypothesis generation to research to the implementation in the real world takes a lot of steps and there are a lot of gaps we need to fill.”



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Neeland further explained that addressing these gaps requires coordinated efforts and resources. “Building obesity care around these principles requires substantial financial input and engagement from multiple stakeholders,” he quoted from a 2020 American Heart Association (AHA) scientific statement he helped author.² “Still, the rewards of lower mortality, long-term health care cost savings, and improved quality of life warrant the investment.”

PROTECTING THE NEXT GENERATION FROM OBESITY

From 1963 to 2018, the percentage of American children and adolescents with obesity has skyrocketed from less than 5% to more than 20%. Only 1 age group, children aged 2 to 5 years, began to equilibrate in recent years. So what happened in the past few years that led to this change in a decades-long trend? “We got rid of the fruit juice at day care, that’s what happened,” according to Robert Lustig, MD, MSL, endocrinologist and professor emeritus of pediatrics at the University of California, San Francisco.

Although this was met with a laugh from the crowd at first, the truth is “it’s not rocket science,” Lustig said. Starting with the basics, he presented 2 competing obesity models that can apply to any age: the energy balance model (EBM) and the carbohydrate-insulin model (CIM). Lustig believes the latter better explains the obesity epidemic.

The EBM focuses on calorie consumption, suggesting that weight gain results from consuming more calories than are burned. Lustig acknowledged that overeating and reduced physical activity contribute to weight gain, but this model has limitations. For instance, average BMI has increased over the years despite stable caloric intake, and exercise alone does not induce significant weight loss. On the other hand, the CIM emphasizes insulin’s role in weight gain. According to this model, high-glycemic foods and sugars raise insulin levels, promoting fat storage and increased hunger. Lustig noted that this model also has shortcomings, such as not addressing developmental programming and the effects of other ingredients in high-glycemic foods.

Both models are also limited in explaining certain phenomena, such as the increasing obesity rates in infants and animals that cannot be attributed to diet and exercise alone, indicating other underlying factors. With this perspective, Lustig introduced the concept of obesogens—pervasive chemicals that disrupt endocrine function and contribute to weight gain beyond caloric intake.

In addition, reactive oxygen species (ROS) or oxidation-reduction (REDOX) agents have a role in the obesity epidemic, and Lustig highlighted how both food and obesogens contribute to this issue.³ ROS are crucial signaling molecules

within cells that can shift metabolism from burning energy to storing it. This shift is influenced by the REDOX potential within cells, which can be altered by both diet and obesogens.

Ultraprocessed foods, particularly those high in carbohydrates and sugar, along with environmental obesogens, generate ROS, which lead to metabolic changes across various tissues, promoting fat storage, inflammation, and, ultimately, obesity. According to Lustig, the REDOX model of obesity ties together the EBM and CIM while also factoring in the impact of obesogens, providing a comprehensive explanation for the obesity crisis. By reducing exposure to these obesogens and improving diet quality, it is possible to mitigate these effects and address obesity more effectively. But why is this affecting children so much?

“What is the largest fast food chain in America?” Lustig asked the audience. “Our nation’s public schools.”

Many children’s cereals are alarmingly high in sugar, with some containing more than 40% sugar by weight.⁴ Even some milk served in schools is problematic, often containing high levels of sugar and high-fructose corn syrup. According to Lustig, improving the quality of school food could significantly reduce pediatric obesity.

He also emphasized that sugar is highly addictive and is often added to commercial baby foods in the form of apple puree or evaporated juice. This early exposure to sugar can lead to adverse metabolic changes in children, setting the stage for future health problems.

According to Lustig, “the science is clear.” Children need to consume the following:

- less sugar to protect the liver;
- more soluble and insoluble fiber to feed the gut;
- more α -linolenic acid, eicosapentaenoic acid, docosahexaenoic acid, and micronutrients to support the brain; and
- limited emulsifiers to reduce inflammation.

By adhering to these principles and providing children with a “real food diet,” many issues related to obesity and metabolic dysfunction could be addressed. Any food that protects the liver, feeds the gut, and supports the brain is healthy, whereas any food that does none of the 3 will contribute to the obesity epidemic, especially in children who are not dieting or exercising the way adults do.

“Food can be medicine, but it can also be poison,” Lustig closed. “The trick is knowing which is which, and I’ve just told you how to figure it out.”

TREATING OBESITY TO REDUCE DIABETES AND CARDIOVASCULAR DISEASE RISK

There is an urgent need to treat obesity comprehensively, especially because significant weight loss such as that achieved

with innovative treatments like metabolic surgery and glucagon-like peptide 1 (GLP-1) receptor agonists can dramatically reduce the risks of type 2 diabetes and cardiovascular disease. Continuing the discussion at the IVBM event, Jamy D. Ard, MD, FTOS, professor of epidemiology and prevention at Wake Forest University School of Medicine, highlighted the importance of addressing obesity as a primary driver of chronic health conditions for better overall outcomes.

Excess adipose tissue can disrupt metabolism, leading to conditions such as insulin resistance and inflammation, which in turn contribute to broader health issues. With this in mind, Ard advocated for a shift from merely treating individual symptoms to addressing obesity as a primary driver of chronic diseases.

“Obesity is a primary driver of a lot of the health outcomes that we treat on a regular basis, including type 2 diabetes and cardiovascular disease,” Ard said. “If we understand that excess adiposity is the primary culprit, then it means that we will treat that as a chronic disease as a part of a way to modify chronic diseases that come downstream.”

He added that although a modest 5% weight loss can be beneficial, achieving a more substantial reduction around 10% is often crucial for significant improvements in blood pressure, cholesterol levels, and overall cardiovascular health. Evidence from the Finnish Diabetes Prevention Study and the National Diabetes Prevention Program in the US supports the idea that considerable weight loss can prevent or even reverse type 2 diabetes.^{5,6} Further, metabolic and bariatric surgeries offer pronounced benefits, significantly reducing excess fat and improving long-term diabetes remission rates.

Ard also cited the ARMMMS-T2D study published in 2024, which pooled data from various bariatric surgery trials and showed that patients experienced an average 20% weight loss and sustained improvements in hemoglobin A_{1c} levels over 12 years.⁷ Notably, bariatric surgery not only aids in diabetes remission but also significantly reduces cardiovascular events including heart failure and stroke compared with traditional medical treatments. The SELECT trial's findings further reinforced the potential of obesity treatments to improve cardiovascular outcomes, demonstrating that semaglutide led to a 20% reduction in cardiovascular events among patients with preexisting cardiovascular disease.⁸ Additionally, the STEP HFpEF study revealed that semaglutide improved heart failure symptoms and physical function, highlighting the critical role of effective obesity management in addressing both diabetes and cardiovascular risks.⁹

THE ROLE OF POLICY IN OBESITY CARE

The AHA plays a pivotal role in addressing obesity and its associated health risks, drawing on its century-long commitment

to combating heart disease and stroke by leveraging evidence-based research to shape public health policies. With more than \$5 billion invested in research, the AHA focuses on translating scientific discoveries into actionable guidelines through initiatives such as Get With The Guidelines. These efforts, along with community programs, aim to address health disparities and improve outcomes across the nation, explained Melanie Phelps, DrPH, JD, senior advocacy adviser of health system transformation at the AHA.

The AHA's recent presidential advisory forecast that by 2050, over 81% of the US population could be affected by cardiovascular disease, with related costs projected to reach \$1.3 trillion.¹⁰ The AHA addresses these challenges by promoting evidence-based solutions and engaging with policy makers to enhance public health.

Policy plays a crucial role in improving obesity treatment, Phelps highlighted, ranging from federal and state legislation, such as the Affordable Care Act, to local measures and financial incentives such as taxes on sugar-sweetened beverages. These tools are essential for addressing issues related to obesity and cardiovascular disease. The AHA's policy framework involves creating evidence-based statements and advocating for changes to enhance access to and implementation of effective obesity treatments.

“Public policy and advocacy are important, and they go hand in hand,” Phelps said. “To get a public policy enacted, you need advocacy—it doesn't happen on its own—and advocacy requires direction, which is provided by the policy.”

The approach to managing obesity includes primary prevention through lifestyle modifications, secondary prevention via early detection and intervention, and tertiary prevention to manage existing conditions. This comprehensive strategy aims to address obesity at various stages and improve overall health outcomes. Continuous updates to policies ensure they reflect new evidence and focus on key areas such as nutrition security, tobacco control, and health care access.

Through strategic advocacy and resource allocation, the AHA seeks to drive significant improvements in obesity treatment and overall cardiovascular health. By evolving policy efforts and collaborating closely with policy makers, the AHA aims to enhance the effectiveness of obesity interventions and ensure equitable access to evidence-based treatments.

WHO PAYS FOR OBESITY CARE IN 2024?

The financial complexities of obesity care in 2024 highlight significant challenges, including the barriers to scaling up these treatments, according to Jeff Levin-Scherz, MD, MBA, population health leader at WTW.

It is not news that novel medications, particularly GLP-1 receptor agonists, have shown promising results in

managing obesity. These drugs not only aid in weight loss but also offer additional health benefits, such as reducing the progression to diabetes and mitigating cardiovascular risks. However, the high costs associated with these medications pose a significant barrier. Even with rebates and discounts of about 45%, and with an average employer-sponsored health plan paying about \$10,000 annually per patient for drugs such as semaglutide (Wegovy) after these rebates rather than the list price of \$21,000, the financial burden on health care systems and employers remains daunting given the large number of people eligible for these treatments under several indications. Zooming out, obesity management is linked to \$261 billion in annual excess medical costs in the US, with \$2060 in average annual medical costs per adult on private health insurance and \$1670 in lost annual productivity.^{11,12}

Under the constraints of the 2003 Medicare Part D laws, Medicare does not cover obesity medications and this has not yet changed despite growing recognition of obesity as a complex medical condition influenced by hormonal and metabolic factors rather than a lifestyle result. Although CMS has allowed Medicare Part D plans to cover Wegovy for obese individuals without heart disease, most plans have not adopted this option due to budgetary constraints and concerns about adverse selection. Medicaid coverage for obesity treatments is similarly limited, with only 10 states offering some degree of coverage for adults, often with significant restrictions such as prior authorization. These limitations create barriers to access for low-income individuals who could benefit the most from these treatments.

Employer-sponsored health insurance plans exhibit significant variation in coverage for obesity medications. According to the WTW 2023 Best Practices in Healthcare Survey, only 38% of more than 750 employers provided coverage for antiobesity medications.¹³ Larger employers are more likely to offer coverage, with more than half of companies with 25,000 or more employees including obesity drugs in their health plans. However, smaller employers are less likely to cover these treatments, with only 1 in 5 offering coverage. Even when employers do provide coverage, it often comes with conditions such as higher BMI thresholds, step therapy requirements, or participation in lifestyle modification programs. These measures, aimed at controlling costs, can delay access to effective treatments. The economic implications are significant, as employers face potential increases in overall medical expenses, with estimates suggesting that covering these drugs could lead to a 2% rise in total health care costs.

“If you think about all health insurance as a social justice issue, it’s worse for low-income people, because if you make health insurance so expensive—either the premiums are ridiculously high or they have very high out-of-pocket

costs—whose income is hurt by that most?” Levin-Scherz asked. “It’s not investment bankers who are hurt by that. It’s really lower-wage workers.”

The high cost of GLP-1 agonists exacerbates these challenges. The cost of obesity drugs in the US is also notably higher than in other countries, where the same medications are available at a fraction of the price, highlighting the broader issue of drug pricing in the US health care system. In response to these challenges, some employers are exploring alternative strategies, such as using telemedicine networks to manage obesity care or focusing on bariatric surgery, which is covered by most employer-sponsored plans. But although bariatric surgery is effective, it is not scalable enough to address the widespread obesity epidemic.


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In 2024, significant financial and policy challenges exist in expanding access to obesity treatments. Broad coverage of antiobesity medications would be prohibitively expensive, potentially costing \$2 trillion if all eligible individuals were treated. Current policies, such as Medicare’s exclusion of obesity drugs and limited Medicaid coverage, are based on outdated views of obesity as a lifestyle issue. Many employer-sponsored health plans also do not cover these medications or impose strict conditions, further limiting access.

In terms of solutions, Levin-Scherz presented a number of potential avenues. The expiration of drug patents could lower costs, although most patents on effective obesity drugs will not expire until the 2030s. Additionally, the FDA’s efforts to remove inappropriate device patents could foster competition, and numerous GLP-1–related drugs are in development, although the acquisition of smaller firms by large pharmaceutical companies may hinder price reductions. Government actions such as Medicare price negotiations

could lead to lower drug prices, and various payment models—value-based payments, amortized payments, and subscription models—are being considered as potential strategies to make these drugs more affordable and accessible. However, these solutions face significant challenges, particularly with existing rebate structures and market dynamics.

Ultimately, a multifaceted approach is necessary to treat obesity on all fronts. This includes advocating for policy changes to expand coverage, negotiating lower drug prices, and continuing to support lifestyle interventions and medical management. By addressing these issues, stakeholders can work toward a more equitable and effective system for managing obesity, ultimately improving public health outcomes. 

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