Introduction| Why should we talk about Obesity in 2024?

"By 2030 it is predicted that 1 in 5 women and 1 in 7 men will be living with obesity (BMI ≥30kg/m2), equating to over 1 billion people globally.

Over 160 million lost years of healthy life were due to high BMI in 2019, and the figure is likely to be higher still with each passing year. This is more than 20% of all lost years of healthy life caused by preventable chronic ill-health." – World Health Organization [1]

The prevalence of obesity globally presents a critical public health challenge with far-reaching social, economic, and health implications, exacerbating inequalities across and within nations.[2] It can be linked to deaths through Non-communicable Diseases (NCDs) by making the patients more susceptible to cardiovascular diseases, diabetes, cancers, neurological disorders, chronic respiratory diseases, and digestive disorders.[3] Despite being a complex chronic disease, governments worldwide have struggled to address obesity as a nuanced public health issue, opting instead to concentrate on policies that suggest it stems from an individual's failure to make healthier lifestyle choices. For example, since 1992, the UK has implemented 700 policies to combat obesity but has failed to meet its targets.[4] In such a dire situation, the emergence of new weight-loss drugs appears to be a promising solution, potentially even more effective than expecting individuals to make and maintain drastic lifestyle changes.

Medical Research | New weight-loss drugs in the market

While these new drugs offer promising results, they also present their challenges in terms of safety and accessibility. Before delving into these concerns, it is crucial to examine the two key aspects of these medications: their biological underpinnings and their economic implications.

The Biology | What do these drugs do? Who's eligible?

Glucagon-like peptide-1 (GLP-1) agonists, a medication class for Type 2 diabetes management, also support weight loss by imitating the GLP-1 hormone. This action enhances insulin regulation, curbs hunger by suppressing glucagon, and promotes satiety by slowing stomach emptying.[5] Notable GLP-1 agonists include Semaglutide (Wegovy, Ozempic) and Liraglutide (Saxenda). Other weight management medications such as bupropion plus naltrexone

(Contrave), phentermine (Adipex-P), phentermine plus topiramate (Qsymia), and orlistat (Xenical, Alli) complement lifestyle changes to achieve an average weight loss of 5% to 7%.[6] However, GLP-1 receptor agonists stand out for their capacity to secure a substantial weight reduction of 10% to 20% in those with obesity or Type 2 diabetes.[7]

Weight loss medication eligibility hinges on Body Mass Index (BMI), with prescriptions generally for individuals having a BMI of 30+ or 27+ with related health conditions. Candidate evaluation considers health status, concurrent medications, medical history, cost, and side effects. Although most weight loss drugs are for adults, Semaglutide, Liraglutide, and Orlistat are also approved for children aged 12+.[8]

The Business |Which companies are at the forefront? How are they performing?

Being in the weight-loss industry is extremely profitable for the companies involved. J.P. Morgan Research predicts that by 2030, the GLP-1 market, currently valued at $11.99 billion[9] in 2024, will grow beyond $100 billion, fueled by its applications in diabetes and obesity[10]. In the U.S., 1.7% of the population has been prescribed GLP-1 drugs like Wegovy or Ozempic in the current year, with these medications also approved in Europe for weight loss, though availability differs.

In the competitive race for coveted weight loss drugs, the focus is on giants Novo Nordisk and Eli Lilly, amidst interest from major firms like Pfizer, Roche, and Amgen.[11] Remarkably, Novo Nordisk (Ozempic/Wegovy) now boasts a market value surpassing Denmark's GDP, where it is based.[12]

The Battle | Why is this a policy issue?

GLP-1 treatments offer a groundbreaking opportunity for national obesity reduction, achieving an average weight loss of 14 to 25 lbs. per person, despite varying effectiveness and potential side effects, ultimately decreasing risks of heart attack, stroke, and cancer.[13] However, priced at around $1,000 per month on average, they pose considerable financial implications for the 100 million obese American adults.

Despite the drugs' potential benefits, these medications are not covered by insurance, indicating a barrier to widespread accessibility, and exacerbating the care disparities in a country already grappling with high healthcare costs. Moreover, people don't know why these medications work except for their ability to suppress appetite and patients would regain weight if they do not take it for their entire lifetime.

<u>Policy Interventions</u> | Past, Pitfalls and Present

Combating obesity requires a comprehensive approach to address the social and economic root causes through significant changes in government policies, regulations, and laws. The political will to implement these policies is bolstered by the fact that obesity is expected to increase U.S. healthcare spending by $170 billion annually (inc. Medicare and Medicaid).[14]

One of the popular strategies was **improving access to healthier alternatives** by creating food assistance programs, availability of nutritious lunches in public schools, and promoting farmer's markets/community gardens.[15] For instance, The Healthy Food Financing Initiative (HFFI) helps improve access to healthier food by providing financial support to projects that bring healthy food options to low-income and underserved areas.[16] Deals to accept the Supplemental Nutrition Assistance Program (SNAP) at farmer's markets also improve this access. Another approach is **levying taxes on high sugar/ ultra-processed food** to discourage its consumption. In five U.S. cities, the introduction of taxes on sugary drinks led to a significant and sustained drop in sales, with a 33.1% increase in prices resulting in an equivalent 33% decrease in purchases, thus providing support for the effectiveness of this measure.

A third approach focused on **promoting informed choices** by mandating calorie labeling on restaurant menus or pushing for clear labeling about the nutritional content of the food. However, A measure to include such labeling on menus in New York and some other states hasn't demonstrated any improvement in the choices made by the customers.[17] Finally, there are various **measures to promote physical activity** through best practices and infrastructural support. Rural municipalities are investing in greenways and trails, with Granville County, North Carolina, developing 13 miles of greenways to combat obesity and poor health outcomes, and planning an additional 200 miles.[18]

Incorporating anti-obesity medicines (AOMs) into a policy intervention would require leveraging important elements from the interventions implemented in the past. We would have to make sure that its access is equitable, the consumer is informed about its benefits and side effects, and make sure there are systemic levers that ensure this adoption is **safe, easy, and holistic**. *The Treat and Reduce Obesity Act of 2023* represents a significant step forward in the use of medication for effective obesity treatments19. By covering intensive behavioral therapy, improving access to AOMs for Medicare beneficiaries, and enabling a wider range of healthcare professionals to contribute to obesity treatment, this legislation addresses critical gaps in obesity care.

The effectiveness and safety of weight loss medications may not be fully understood across all populations due to the underrepresentation of diverse racial, ethnic, and gender groups in clinical trials, highlighting the need for caution.20 While these drugs are a useful tool for immediate weight management, there is still a need to facilitate healthy lifestyles and sustainable nutritious eating habits to improve public health overall. Furthermore, with individual companies consolidating market share in this domain, there is room for regulation to ensure that the incentive to make AOMs is balanced with checks to discourage exploitative tendencies displayed by powerful pharmaceutical industries.

Behavioral & Psychological Concepts | Obstructing Weight Management or Promoting AOM

Present Bias | We can draw a lot of parallels between weight management and retirement savings especially for lower-income communities. Overweighting the short-term costs both on time (exercising instead of spending time with family or relaxing) and money (buying cheaper ultra-processed things) instead of long-term benefits like living longer or reduced healthcare expenditure. Thus, most policies based on information access didn't move the needle as they still relied on individuals to overcome their present bias on their own. Taxes and improvements in access show promise in this domain because they make the better option a financially sustainable one. AOMs also tackle this by making it less time-intensive to approach weight management thus averting pitfalls of the traditional recommendations of diet and exercise routines.

Availability | With AOMs being the rage in the media and speculations about their usage among celebrities, people might be more inclined to try it if it's financially feasible. Thus, focusing on policies that increase awareness and access to these drugs could prove beneficial.

Procrastination and Status Quo | Another place where policy measures could fail is when people fail to act upon them due to the status quo. The outcomes of obesity become worse with age but if they're not feeling them in the present, they're less inclined to acknowledge the problem and do anything about it thus making it very difficult for policymakers to reach the people in need. A way this can work to benefit of AOMs is once prescribed and adopted since it's a simple enough step people will stick to it much longer than exercise or diet where one slip could deter an individual from getting back on track. Default nutritional lunches were also a could way to counter this bias. Another outcome of this bias is that people just accept the overconsumption and production of ultra-processed food which could deter the much-needed advocacy for regulation of such products.

Discussion |

Managing obesity is not a testament to the individual's will power and the root causes influencing obesity are deeply entrenched in social, economic, and psychological factors. It needs to be said that AOMs should not be seen as a panacea for solving obesity owing to the lack of research about the generalizability of their effect and high costs. The progress made in AOMs ensures they are highly effective for weight management but offers no additional insight into overall nutrition. Thus, using them as a supplement to reduce risks of obesity-related hospitalizations in the short term while creating systemic support for the adoption of healthier lifestyles in the long term is crucial for a holistic approach to the problem. Efforts made towards AOM adoption should not drive focus away from creating an environment where people can make healthy informed choices and have access to goods with nutritional value.

References

[1] World Obesity Atlas 2022. World Obesity Federation. London: 2022 (https://s3-eu-west-1.amazonaws.com/wof-files/World_Obesity_Atlas_2022.pdf, accessed 26 February 2024)

[2] "Who Acceleration Plan to Stop Obesity." World Health Organization. Accessed February 26, 2024. https://www.who.int/publications/i/item/9789240075634.

[3] Ibid, 2.

[4] https://www.institute.global/insights/public-services/fit-for-the-future-making-fair-deal-on-food-for-healthier-britain?utm_source=pocket_saves

[5] https://my.clevelandclinic.org/health/treatments/13901-glp-1-agonists

6 https://www.medicalnewstoday.com/articles/diabetes-shot-for-weight-loss#medication-options

7 https://obesitymedicine.org/blog/weight-loss-medications/?utm_source=pocket_list

8 Ibid 7

9 https://www.mordorintelligence.com/industry-reports/glucagon-like-peptide-1-agonists-market?utm_source=pocket_saves

10 https://www.jpmorgan.com/insights/global-research/current-events/obesity-drugs

11 https://www.cnbc.com/2024/01/17/weight-loss-drugs-boehringer-ingelheim-terns-viking-may-join-market.html#:~:text=Most%20of%20Wall%20Street's%20attention,as%20Pfizer%2C%20Roche%20and%20Amgen.

12 https://www.science.org/content/article/breakthrough-of-the-year-2023?utm_source=pocket_list

13 https://www.forbes.com/sites/robertpearl/2023/07/10/how-the-us-government-can-solve-the-obesity-epidemic/?sh=3aac26116632&utm_source=pocket_saves

14 https://jheor.org/post/1690-state-of-obesity-2022-better-policies-for-a-healthier-america

15 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4282160/

16 https://www.healthyfoodaccess.org/take-action-now-policy-efforts-impacts

17 Ibid 14

18 https://www.americanprogress.org/article/public-policies-promoting-healthy-eating-exercise/

19 https://www.congress.gov/bill/118th-congress/house-bill/4818?s=1&r=53

20 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10645628/