

The need to personalise approaches for the prevention and management of obesity

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Empirical evidence has demonstrated the complex, multifactorial nature of obesity,¹ where the causes and manifestations of obesity vary from individual-to-individual and thus, there is no one cause or combination of factors that may lead to obesity. As such, we suggest that obesity becomes pluralised (i.e., obesities) to reflect the diverse drivers and manifestations of excess adiposity. However, disseminating the well-evidenced message that obesity is complex and multifaceted, and can be caused by factors outside or partially outside of an individual's control is far from easy.

The reality is that the overriding public perception, which has also been highlighted amongst healthcare professionals (HCPs) and policymakers, is one that reflects the simplified and individual behaviour focused “eat less and move more” ideology, which is not aligned to the wealth of scientific evidence. Indeed, this one size fits all approach, which centres around eliciting individual behaviour change has been the focus of obesity policies,² despite evidence highlighting the role of factors beyond individual behaviours.

As such, there is a need for a more nuanced and personalised approach to obesities given the individual differences in the factors that may cause obesities, and likewise, factors that may affect the effectiveness of interventions for obesities. Personalisation has been encouraged and there is evidence that principles of personalisation are becoming adopted in primary and secondary care. However, there is less evidence in relation to personalised approaches to obesities. Where evidence does exist, research has suggested that personalised approaches to obesities can have a beneficial effect on outcomes whereby tailoring content, customising feedback, and personalised goal setting can lead to improved outcomes.³ Personalisation can be informed by underlying genetic drivers of obesities, for example setmelanotide.⁴ Another approach is to use phenotyping and tailor the choice of anti-obesity medications. Acosta et al.⁵ reported greater weight reduction and proportion of patients whose weight reduced >10% at 12 months

following a pragmatic phenotype-guided compared to non-phenotype guided approach. However, we must also understand and adapt systems to be flexible in their approach to supporting people with different needs and experiences, not only in terms of the treatments that could be effective for an individual, but also the facilitation of those treatments. For instance, advances in the effectiveness of obesity-related treatments alongside health behaviour change have been reported, leading to wide-ranging outcomes including weight reduction and maintenance.^{6,7} This combination of therapeutic interventions and health behaviour change may be an effective route to improving health and health-related outcomes for some people living with obesity, whilst for others, this combination, or indeed therapeutic interventions on the whole may not be the optimal treatment path.

At the core of personalisation is the individual. Indeed, each person should have control and choice regarding the planning and delivery of their care, considering their individual needs, preferences and circumstances.⁸ Involvement of people with lived experience of obesities, and thus co-production is seen across the system from policy to practice needs to be central to personalising approaches in healthcare. This would represent a paradigm shift in obesity care, and reflect the much needed understanding of the complexity of obesity. Unlike other health outcomes with less associated stigma and for which there are fewer people, including HCPs, who believe that these outcomes can be entirely prevented and cured through a commitment to a healthy lifestyle,⁹ the message of complexity is not an easy one to accept due to the decades of simplistic “eat less, move more” messaging for both the prevention and treatment of obesities. The ingrained belief that obesities is simple and can be easily prevented and treated through individual agency is perhaps one of the factors holding back personalisation and tailoring of approaches within healthcare. Different approaches are needed in terms of the types of



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interventions that are more likely to be effective, but also how to improve uptake and adherence, not only in the short-to-medium term, but also in the long-term. As such, there is a clear need to address the inaccurate and often misleading simplification of the causes and treatment of obesities. This will likely support the adoption of personalised approaches to prevention and treatment for people living with obesities, leading to more effective, person-centred care models. Within the NHS Long Term Plan,⁸ there are clear visions for the adoption of personalised care for cancer, “By 2021, where appropriate every person diagnosed with cancer will have access to personalised care, including needs assessment, a care plan and health and wellbeing information and support”.⁸ In line with the NHS core value of equity of care for all,¹⁰ we argue that a similar vision should be adopted for people living with obesities.

Contributors

S.W.F. & R.L.B. contributed equally to the article; conception, literature search, writing, review and editing.

Declaration of interests

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R.L.B.'s current roles include Director of the UCL/UCLH BRC Obesity Theme, Royal College of Physicians' (RCP) special advisor for obesity, Chair of the RCPs Advisory Group on nutrition, weight and health, member of RCP Advisory Group on health inequalities, Council member of British Obesity and Metabolic Surgery Society, member of National Bariatric Surgery Registry, Co-chair of NHS England clinical advisory group on specialist weight management, Chair and Trustee of Obesity Empowerment Network UK, Committee member of NICE Weight Management Advisory Group and member of the European Society for Endocrinology Clinical Committee. Previous roles member of Obesity Health Alliance Strategy Group, Trustee for the Association for the Study of Obesity, Co-Chair for the International Federation for surgery for obesity and metabolic disorders.

References

- 1 Butland B. *Foresight. Tackling obesities: future choices—project report. 2007.* Government Office for Science; 2007.
- 2 Theis DR, White M. Is obesity policy in England fit for purpose? Analysis of government strategies and policies, 1992–2020. *Milbank Q.* 2021;99(1):126–170.
- 3 Lau Y, Chee DG, Chow XP, Cheng LJ, Wong SN. Personalised eHealth interventions in adults with overweight and obesity: a systematic review and meta-analysis of randomised controlled trials. *Prev Med.* 2020;132:106001.
- 4 Trapp CM, Censani M. Setmelanotide: a promising advancement for pediatric patients with rare forms of genetic obesity. *Curr Opin Endocrinol Diabetes Obes.* 2023;30(2):136–140.
- 5 Acosta A, Camilleri M, Abu Dayyeh B, et al. Selection of antiobesity medications based on phenotypes enhances weight loss: a pragmatic trial in an obesity clinic. *Obesity.* 2021;29(4):662–671.
- 6 Jastreboff AM, Aronne LJ, Ahmad NN, et al. Tirzepatide once weekly for the treatment of obesity. *N Engl J Med.* 2022;387(3):205–216.
- 7 Wilding JP, Batterham RL, Calanna S, et al. Once-weekly semaglutide in adults with overweight or obesity. *N Engl J Med.* 2021;384(11):989–1002.
- 8 NHS. *The NHS long term plan*; 2019. <https://www.longtermplan.nhs.uk/>. Accessed February 23, 2023.
- 9 O’Keeffe M, Flint SW, Watts K, Rubino F. Knowledge gaps and weight stigma shape attitudes toward obesity. *Lancet Diabetes Endocrinol.* 2020;8(5):363–365.
- 10 NHS England. *The NHS Constitution for England*; 2019. <https://www.gov.uk/government/publications/the-nhs-constitution-for-england/the-nhs-constitution-for-england>. Accessed February 24, 2023.