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Weight loss drugs are effective, but can healthcare systems afford them?

Obesity is a chronic relapsing condition, and treatment options need to reflect this reality, write Sam West, Dimitrios A Koutoukidis, and Susan A Jebb

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The use of glucagon-like peptide-1 (GLP-1) receptor agonist drugs for weight loss is increasing rapidly, with an estimated one in 50 adults in the UK using these treatments to help manage their weight.[1] These drugs have been licensed based on trials that show a weight reduction of 15-20%, along with improvements in obesity related comorbidities.[2 3] Obesity is, however, a chronic, relapsing condition, and these trials did not consider weight change after people had stopped treatment.

In the linked article in *The BMJ* (doi:10.1136/bmj-2025-085304), we systematically reviewed studies that have followed people who stopped taking weight management medications.[4] On average, people regained about two thirds of their weight within a year and are projected to regain their weight about 1.5 years after stopping treatment with new incretin mimetics (semaglutide and tirzepatide).

The obvious solution is to continue treatment—as is normal practice for the management of other cardiometabolic risk factors, such as hypertension and dyslipidaemia.[5 6] A trial of continued treatment with semaglutide for up to four years showed successful maintenance of weight.[7] However, emerging evidence suggests that around 50% of people choose to stop taking GLP-1 receptor agonists for reasons such as side effects, cost for those self-funding, or dissatisfaction with the results, especially when weight loss plateaus.[8 9] Therefore, although ongoing treatment will undoubtedly benefit some patients, this is not a silver bullet.

Weight regain after weight management programmes is common, but in our study the rate of regain after drug treatment was notable.[4] We compared our results with data from a similar review that quantified the rate of weight regain after behavioural weight management programmes.[10] We found that although the weight reduction in those who took part in trials of the new incretin mimetics was 9.6 kg compared with those who took part in behavioural programmes, weight regain was predicted to be about four times faster and to return to baseline body weight 2.4 years earlier.

Guidelines from the National Institute for Health and Care Excellence (NICE) and World Health Organization emphasise the importance of adjunct behavioural support with use of GLP-1 receptor agonists.[11-13] In the UK, the new NICE quality standard recommends the provision of support for a year after the cessation of weight management drugs.[14] Although that was not the focus of our review, sensitivity analysis showed that weight loss in people who receive adjunct behavioural support was 4.6 kg more than in those receiving only brief support during treatment with liraglutide, cagrilintide, semaglutide, or tirzepatide. However, we found no evidence that behavioural support during or after drug treatment affected the rate of weight regain.

Implications for cost effectiveness

Currently, more than 90% of people who use GLP-1 receptor agonists in the UK pay privately for these drugs—although a wider rollout through the NHS is underway. The base NICE model suggests that semaglutide is likely cost effective compared with behavioural weight management programmes if weight is regained at three years, with an incremental cost effectiveness ratio of £16 337 per quality adjusted life year. In a scenario analysis where weight was regained over two years, the ratio increased to £21 060 per quality adjusted life year. Based on our updated data of a return to baseline weight within 1.5 years, semaglutide would greatly exceed the standard NICE willingness-to-pay threshold of £20 000 per quality adjusted life year. This means it would not be cost effective for the population considered by NICE.

If long term treatment is needed to sustain weight and the associated clinical benefits of semaglutide, this will considerably increase the cost of treatment, eroding cost effectiveness. Further health economic evaluation is necessary, as the cost effectiveness of semaglutide may vary by clinical subgroup and it remains unclear for whom it would meet the willingness-to-pay threshold for the NHS.

The evidence gap

The development of new and effective weight management medications is a huge milestone in the treatment of obesity. Our analysis used data from studies in selected populations to examine weight regain and health outcomes and suggested that ongoing treatment will be needed to sustain the benefits. Analysis of real world data, however, will be crucial in informing key decisions about deployment in publicly funded healthcare systems such as the NHS. This is important to know because people currently receiving NHS funded drugs have more severe and complex obesity than those in the trials used for licensing.

For the 90% of people using weight management medication who are accessing it privately, we have little information on their clinical or demographic characteristics, the nature of behavioural support is

different to that used in trials and can be minimal; the discontinuation rate seems high, and the rate of weight regain in this scenario is unknown.

There are no quick fixes for obesity. Weight management drugs have galvanised the specialty, but we need to use them as one option within the wider obesity treatment portfolio, so that deployment at scale is cost effective and equitable.

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