Projected Wider Societal and Fiscal Impact of Semaglutide in the United Kingdom

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£378 projected net societal value for every eligible person treated over 5 years, with:

+£1,384 — **avoided healthcare costs**, through fewer hospital admissions, complications and resource use.

+£5,885 — **productivity gains** from improved health and ability to work.

Including:

+£337 — **additional tax revenues** associated with improved productivity.

-£6,892 — **treatment costs** at list prices.

Avoided healthcare costs and productivity gains are projected to outweigh treatment costs by year 5.

Background

- Semaglutide has demonstrated clinically meaningful benefits across multiple obesity-related and cardiovascular-renal-metabolic (CVRM) conditions. Evidence from STEP[1-4], SUSTAIN[5], SELECT[6], FLOW[7], and ESSENCE[8], shows benefits including improvement in weight, glycaemic control, cardiovascular outcomes, renal outcomes and liver disease.
- Obesity-related and CVRM conditions frequently overlap in the same individuals[9], contributing to significant healthcare resource use (HCRU)[10] and productivity losses[11].
- Conventional HTA value assessments typically evaluate treatments for a single indication[12] and from a healthcare perspective[13], potentially underestimating the effects of multi-indication semaglutide treatment and overlooking effects outside the healthcare system.

Objective

To estimate the projected health, healthcare resource, productivity, fiscal and environmental impacts of semaglutide in the UK under a theoretical maximal-uptake scenario.

Methods

A UK population-level multi-indication model was developed to estimate the 5-year (2026 to 2030) societal impact of semaglutide under a theoretical maximal-uptake scenario for patients with obesity*, type 2 diabetes (T2D), cardiovascular disease (CVD), metabolic dysfunction-associated steatohepatitis (MASH) and/or chronic kidney disease (CKD).

Population

UK population eligible for semaglutide from 2026 to 2030, with:

- Obesity*
- T2D
- CVD
- MASH
- CKD

Baseline prevalence and overlap between conditions derived from literature and projected to 2030.

Treatment effects

Comparators
Semaglutide vs placebo or standard of care

Incident outcomes
Derived from literature

Clinical evidence
Treatment effects derived from Phase III RCTs and RWE

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Change in rate of outcomes

↓

Quality-of-life gains

Outcomes

Bed days, hospitalisations → **HCRU**

Estimated using a UK health-related quality-of-life-driven productivity model → **Productivity**

HCRU CO_2e vs. LCA CO_2e → **Environment**

Wider societal value of semaglutide

Fiscal
Tax wedge estimated from gains in paid productivity

QALYs

Overall value

Estimated total wider societal value – treatment costs at list prices

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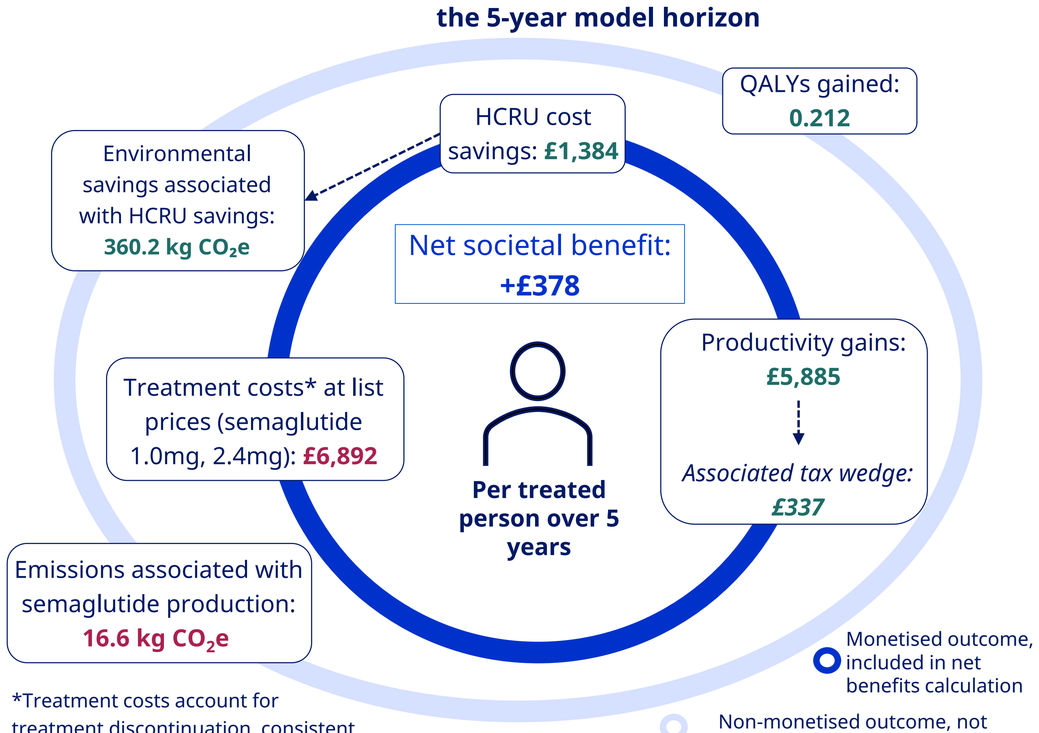
NET SOCIETAL VALUE OVER 2026-2030

All monetary estimates are discounted using an annual rate of 3.5%, in line with NICE guidelines[12].

*Obesity population eligible with BMI ≥ 35 kg/m²

Results

Wider societal value of semaglutide per treated person over the 5-year model horizon



*Treatment costs account for treatment discontinuation, consistent with the ITT treatment effects applied.

Estimated aggregate wider societal value for the entire eligible population over the 5-year model horizon

Under a **theoretical maximal-uptake scenario**, approximately **6.6 million people** per year were estimated to be eligible for semaglutide. The 5-year cumulative projected impacts are estimated to be:

HCRU cost savings: **£9.2bn**

Productivity gains: **£38.9bn**
Associated tax wedge: £2.2bn

Treatment costs* at list prices (semaglutide 1.0mg, 2.4mg): **£45.6bn**

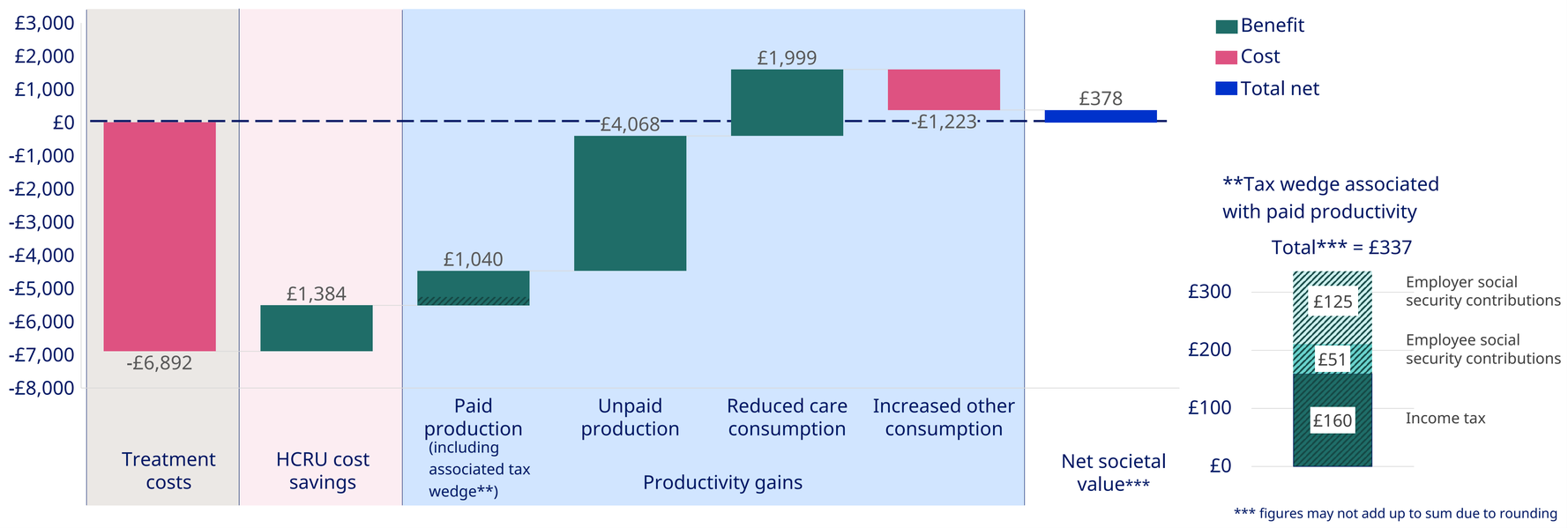
Net societal benefit: **+£2.5bn**

QALYs gained: **1,403,157**

Emissions avoided after accounting for semaglutide production: **2.3bn kg CO_2e**

In this scenario, HCRU savings and productivity gains are projected to outweigh treatment costs by **year 5**.

Breakdown of monetary benefits and costs of semaglutide per treated person over the 5-year model horizon



*** figures may not add up to sum due to rounding

HCRU was calculated by applying UK HCRU unit costs from literature to differences in disease cases between treated and untreated populations. Hospitalisations and bed days avoided were included.

Productivity effects were estimated using the Premji 2024 UK quality of life (QoL) framework[13], which translates QoL changes into monetary impacts across paid and unpaid productivity, care consumption, and other consumption using UK age-specific wages and condition-specific utility inputs from the literature.

Fiscal impact was estimated from OECD tax wedge data informing income tax and social security payments from employer and employee contributions[14]. Fiscal impacts are not additive to productivity to avoid double counting.

Environmental impacts were derived by converting HCRU reductions into avoided emissions using a UK carbon intensity factor of 0.23 kg carbon dioxide equivalent (CO_2e) per GBP[15]. Net environmental benefit was calculated by comparing estimated avoided direct and indirect emissions with semaglutide's footprint estimated from its life-cycle assessment (LCA)[16].

Incremental quality-adjusted life-years (QALYs) were estimated by applying condition-specific utility weights to the modelled population distribution across health states under treated and untreated scenarios over the 5-year time horizon.

Conclusions

- The value of semaglutide treatment extends well beyond the health system, with meaningful societal and fiscal benefits. True net societal benefits are likely to be greater than reported, reflecting confidential net pricing in place in the UK for semaglutide.
- Assessing interventions solely through the lens of health system costs and savings risks understating their true value to patients, governments and society.

Abbreviations: CKD, chronic kidney disease; CO_2e, carbon dioxide equivalent; CVD, cardiovascular disease; CVRM, cardiovascular-renal-metabolic; GBP, British Pound; HCRU, healthcare resource use; HTA, health technology assessment; ITT, intention-to-treat; LCA, life cycle assessment; MASH, metabolic dysfunction-associated steatohepatitis; NICE, National Institute for Health and Care Excellence; OECD, Organisation for Economic Co-operation and Development; QALYs, quality-adjusted life-years; QoL, quality of life; RCT, randomised controlled trial; RWE, real-world evidence; T2D, type 2 diabetes.

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Additional poster from this research at ISPOR 2026
Projected Impact of Semaglutide on Healthcare Resource Utilisation in the United Kingdom (Poster code EE636).
Results have been updated since abstract submission following a data correction affecting HCRU costs, associated emissions and net societal value.