



## Economic Evaluation of Semaglutide and Tirzepatide for Obesity Treatment: Implications for Health Policy in the Gulf Region

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### Abstract

**Background:** Obesity prevalence and its cardiometabolic sequelae impose large and growing costs across Gulf Cooperation Council (GCC) health systems. Two incretin-based anti-obesity medicines (AOMs)—semaglutide 2.4 mg (Wegovy) and tirzepatide (Zepbound)—produce unprecedented weight loss and, for semaglutide, proven cardiovascular (CV) risk reduction. **Objective:** To synthesize current clinical and economic evidence, sketch a GCC-relevant cost-effectiveness framework, and translate findings into policy recommendations. **Findings:** Semaglutide yields ~15% mean weight loss and proven CV risk reduction; tirzepatide yields ~21% weight loss and FDA approval for OSA. Both drugs are expensive at Gulf retail prices. Semaglutide's value is strongest in CVD patients; tirzepatide's in OSA. **Conclusions:** Payers should prioritize high-risk subgroups, negotiate outcomes-based pricing, and integrate registries for long-term monitoring.

### 1. Introduction

Obesity and overweight are pervasive across GCC countries and strongly linked to type 2 diabetes, CVD, NAFLD/MASLD, OSA, and musculoskeletal disorders. In Saudi Arabia, obesity accounts for billions in healthcare spending and productivity loss. Incretin-based anti-obesity medications are a paradigm shift. The policy question is: how should GCC payers evaluate and cover them?

### 2. Clinical efficacy and safety

Semaglutide STEP-1 trial: ~14.9% mean weight loss at 68 weeks. SELECT trial: 20% reduction in MACE. Tirzepatide SURMOUNT-1: ~21% mean weight loss,  $\geq 20\%$  loss in



~50% participants. FDA approved tirzepatide for OSA in Dec 2024. Comparative evidence: tirzepatide yields larger weight loss; semaglutide uniquely has CV outcome data.

### **3. Gulf-relevant costs and prices**

Saudi Arabia: Wegovy pens SAR 799–899; Tirzepatide SAR 4,000–6,000. UAE: Wegovy AED 743.5–2,500; Tirzepatide AED 2,700–4,300. Prices are based on retail/clinic listings, not official payer contracts.

### **4. Economic evidence**

NICE (UK) recommended semaglutide under specialist services. ICER (US) found semaglutide not cost-effective at U.S. prices unless discounted. Lifetime models show tirzepatide more effective but both exceed cost-effectiveness thresholds at list prices. Semaglutide's CV benefit improves value in CVD patients.

### **5. GCC payer-perspective model**

Perspective: Government payer. Horizons: 10 years and lifetime. Comparators: lifestyle programs and bariatric surgery. Inputs: STEP-1 and SELECT for semaglutide, SURMOUNT-1 for tirzepatide. WTP thresholds: KSA ~US\$35k, UAE ~US\$49k, Qatar ~US\$76k per QALY. Broad access not cost-effective, but targeted funding for high-risk groups may be.

### **6. Budget-impact considerations**

Estimate eligible populations with BMI  $\geq 30$ –35. Apply uptake caps (0.5–1% of population). Require response  $\geq 5$ –10% weight loss by 12–16 weeks. Bundle drug + lifestyle program. Define maximum duration (1–2 years).

### **7. Policy options**

Prioritize semaglutide for patients with established CVD and tirzepatide for OSA. Negotiate outcomes-based rebates and price-volume agreements. Begin with specialist centers, then expand. Build national AOM registries for tracking outcomes and costs.

### **8. Purchasing guide**

Negotiate per-dose net prices. Tie payment to responder-only continuation. Include outcomes guarantees (MACE, OSA improvement). Require real-world evidence reporting and supply assurances.

### **9. Limitations**

Retail prices may not reflect final payer costs. Semaglutide has proven CV benefit; tirzepatide CV outcome data pending. International cost-effectiveness models may not transfer directly to Gulf settings without calibration.



## 10. Conclusions

Tirzepatide achieves the largest weight loss; semaglutide uniquely has proven CV benefit. At current Gulf prices, broad coverage is not cost-effective. Targeted access for high-risk groups, with negotiated contracts and outcomes-based rules, is the most sustainable policy approach.

## Tables and Figures

**Table 1. Comparison of Semaglutide vs Tirzepatide**

Parameter	Semaglutide (Wegovy)	Tirzepatide (Zepbound)	Notes
Average weight loss	~15% (STEP-1)	~21% (SURMOUNT-1)	Tirzepatide generally higher
Cardiovascular outcomes	20% MACE reduction (SELECT)	Ongoing trials; no published outcomes yet	Semaglutide unique proven CV benefit
Other indications	CV risk reduction in obesity with CVD (FDA 2024)	Obstructive sleep apnea in obesity (FDA 2024)	Different added-value indications
Price range (KSA)	SAR 799–899 per injection	SAR 4,000–6,000 per injection	Retail/clinic listings
Price range (UAE)	AED 743–2,500 per injection	AED 2,700–4,300 per injection	Retail/clinic listings

## References

- 1) Wilding JPH, et al. STEP-1: Once-weekly semaglutide in adults with overweight/obesity. NEJM 2021.
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- 8) Gulf burden of obesity: Saudi and UAE health expenditure reports (2019–2025).
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