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VIEWPOINT

Bariatric surgery should lead South Africa's obesity treatment strategy

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Obesity is a chronic relapsing disease driven by complex biological, environmental, and socio-economic factors. South Africa (SA) has one of the highest obesity prevalence rates in sub-Saharan Africa, with obesity representing a major driver of non-communicable disease morbidity and mortality, including cardiovascular disease, chronic kidney disease, non-alcoholic fatty liver disease, obstructive sleep apnoea, osteoarthritis, and obesity-related malignancies.[1,2]

Despite its scale and cost, obesity care in SA remains fragmented and largely focused on managing downstream complications rather than treating obesity as a primary disease. In a resource-constrained healthcare system, interventions that provide durable clinical benefit and long-term economic value are essential. The robust clinical effectiveness and cost-effectiveness of metabolic and bariatric surgery (MBS) position it centrally in SA's obesity treatment strategy for patients with severe disease.

Superior efficacy and durability

Surgical treatment of obesity consistently outperforms non-surgical therapies in both magnitude and durability of weight loss.[3] Procedures such as Roux-en-Y gastric bypass and sleeve gastrectomy typically achieve sustained excess weight loss of 50–70% with durability extending beyond a decade.[3] In contrast, pharmacological therapies require continuous use to maintain lower percentages of weight loss, and weight regain following discontinuation is almost universal.[4]

Regarding resolution of comorbidities after treatment, repeated meta-analysis of randomised controlled trials confirm superior remission and control of type 2 diabetes mellitus (T2DM), hypertension, and dyslipidaemia following MBS compared with intensive medical therapy.[5,6] The recent addition of glucagon-like peptide-1 receptor agonist (GLP-1 RA) to the medical therapy arms has not changed this finding.[7] The weight regain seen after discontinuation of GLP-1 RAs is likewise accompanied by worsening of cardiometabolic risk markers emphasising the loss of initial benefit.[4]

The ultimate outcome by which any treatment or intervention is measured in the scientific argument is its effect on mortality – its ability to prolong life. In the context of obesity, treatment effect on cardiometabolic risk can be added to mortality as a major outcome. In this regard, recent meta-analyses report MBS superior when compared to GLP-1 RAs when effects on long-term mortality and major adverse cardiovascular events are compared.[8,9]

The health economics argument

The cost of obesity includes both direct costs (hospital admissions, outpatient visits, pharmacotherapy) and indirect costs (absenteeism, reduced productivity, caregiver burden). A national modelling study estimated that overweight and obesity cost our country ZAR 33 million annually, representing 15.38% of government health expenditure and 0.67% of gross domestic product.[10] A substantial proportion of this burden is attributable to T2DM with the cost of diagnosed T2DM estimated at ZAR 2.7 billion annually, increasing to ZAR 21.8 billion when undiagnosed cases are included.[11] These findings highlight the considerable hidden burden of disease and suggest that current estimates likely underappreciate the true economic impact of obesity. Importantly, money is spent on chronic management of complications rather than on disease-modifying interventions – a reactive model of care that is unlikely to be sustainable as obesity prevalence increases.[12]

Although surgery involves a higher upfront cost, this is offset by the long-term reduction in healthcare utilisation (medication, hospital admissions, and complications) while improving life expectancy and quality of life. Economic evaluations consistently demonstrate that MBS is the most cost-effective treatment option compared with best medical care, whether lifestyle modification (diet and exercise) or GLP-1 RA therapy.[13,14] Incremental cost-effectiveness ratios (ICERs) for bariatric procedures vary between US $6 000–17 000 per quality-adjusted life year (QALY), compared to GLP-1 RAs, where semaglutide has an ICER of $467 000/QALY and tirzepatide an ICER of $197 000/QALY, mostly due to the need for lifelong therapy.[13,14]

Cost for MBS procedures are well below accepted willingness-to-pay QALY thresholds.[15] Real-world cost-utility analyses consistently find MBS cost neutral 2 years after surgery and cost-saving therafter.[16] From a societal perspective, economic value is further raised when indirect costs are considered in addition to direct cost.[16] In contrast, pharmacotherapy represents a recurring cost with uncertain

long-term sustainability in SA. From a public-sector and private health insurer perspective, a front-loaded investment in surgery, rather than a last-resort approach, is more likely to provide long-term value than indefinite expenditure on medications.

Capacity building and workforce development

The establishment of high-volume obesity surgery units, associated with improved outcomes, lower complication rates, and reduced unit costs, offers additional system-level benefits.[17] Bariatric surgery serves as a platform for advanced minimally invasive surgical training. Exposure to complex laparoscopic techniques, perioperative care pathways, and complication management enhances skills that are transferable across multiple surgical disciplines. Investment in MBS strengthens broader surgical capacity rather than competing with it.

Multidisciplinary team development in bariatric care enhances expertise in endocrinology, nutrition, and perioperative medicine, creating centres of excellence that can support wider healthcare networks consisting of general practitioners and/or primary care clinics. Positioning MBS as the leading intervention for obesity does not diminish the importance of prevention, lifestyle modification, or pharmacotherapy. Optimal care integrates surgery with nutritional and psychological support, essential to ensure safe weight loss, prevent complications such as sarcopenia and micronutrient deficiencies, and support sustained behavioural change.

Limitations of non-surgical therapies at scale

As long-term effects of taking a GLP-1 RA are not yet known, the concern for adverse outcomes (sarcopenia, osteoporosis) remains. This concern grows if GLP-1 RAs are taken intermittently, for doubtful indications, or prescribed in isolation (without lifestyle and psychological support). In real world studies 30–60% of patients prescribed GLP-1 RAs discontinue their treatment due to inefficacy, side-effects, or cost.[18]

Maximum weight loss after medical therapy is seen with the most costly regimen, high dose (15 mg weekly) tirzepatide (57% of participants had a reduction in body weight of 20% or more).[19] In a patient with a BMI $\geq$ 50 kg/m^2 this will unlikely be enough to treat excess adiposity and complications adequately. In addition, surgery has as one of its main outcomes a reduction in the need to take medication (reduced polypharmacy). In this context, it seems counterintuitive to add yet another item to the script when initiating GLP-1 RA therapy.

Promising but limited effect on weight and comorbidities, high cost and poor long-term adherence to GLP-1 RAs restrict their utility and scalability. While pharmacotherapy remains an important adjunct, it is unlikely to represent a standalone solution for obesity in SA.

Conclusion

South Africa's obesity epidemic poses a major threat to population health and healthcare sustainability. For patients with severe obesity, MBS offers unmatched efficacy, durability, and economic value. Strategic investment in high-volume, multidisciplinary obesity care units, with MBS at their core, provides a pragmatic approach to improving patient outcomes, reducing long-term healthcare costs, and strengthening surgical capacity. In this context, MBS should lead South Africa's obesity treatment strategy.

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