Bariatric surgery: a dilemma for the health system?
Jonathan Foo, Robyn Toomath, S Kusal Wickremesekera, Simon Bann, Richard Stubbs

It has been 5 years since Professor Iain Martin commented in a NZMJ editorial that bariatric surgery should be accessible for patients through the public system. An important caveat mentioned in that editorial was his concern regarding the mortality and morbidity associated with bariatric surgery.

Since that time, surgical techniques and perioperative management have been refined to reduce complications to very low levels. Yet, over the same time period, only minor progress has been made with the provision of public funding of bariatric surgery. The lack of publicly funded bariatric surgery is not due to a falling rate in obesity; in fact, the World Health Organization has recently recognised obesity as being one of the five greatest risk factors for global mortality.

New Zealand is part of this obesity pandemic, with the prevalence of obesity having risen from 11% in 1977 to 26.5% in 2007, and with 2% of males and 2.8% of females currently being classified as morbidly obese (BMI ≥40). This increase in the prevalence of obesity has occurred with significant disparity between ethnic groups, with Māori and Pacific Island groups having a three to six fold increase in rates of morbid obesity.

The increase in rates of obesity is associated with increasing rates of serious comorbidities, including Type 2 diabetes, hypertension, dyslipidaemia, polycystic ovary disease, musculoskeletal problems and obstructive sleep apnoea. All of these conditions continue to affect quality and length of life despite current efforts at treatment. Furthermore, it has been estimated that for every 5-point increase in BMI over 25 there is a 30% increase in risk of mortality.

Obesity also carries significant socioeconomic implications with those affected often being poorer, less well educated and less likely to marry. Indeed, the economic burden of obesity for society is large and will undoubtedly escalate. This relates not only to the direct cost of healthcare for such individuals, but also the loss of valuable human resource and diminished consumer spending within society.

Although it is laudable that we have been developing national healthy eating and lifestyle strategies, treatment strategies for severe obesity must also be explored. While conventional approaches including dietary and lifestyle modifications, pharmacotherapy and behavioural therapies can achieve short term weight loss of between 1.1 and 6.5kg, attrition rates of 20-45% are observed.

While such levels of weight loss may be of value for the overweight, they are of limited value to those with morbid obesity. For too long society has attributed obesity to sloth and gluttony, while ignoring what are probably far more important, if ill understood factors. The increasing prevalence of obesity is probably due to an “obesogenic” environment with behavioural and important biological influences.
The morbidly obese, at the extreme end of the scale, are thought to have a significant genetic component to their disorder. Weight regulation is controlled centrally by the hypothalamus and brain stem and both the brain and gut work in concert to counter any attempts to lose weight. Thus, weight loss provokes a compensatory response from the gut neuroendocrine axis to increase the orexigenic hormone, ghrelin and decrease satiety hormones such as peptide YY, cholecystokinin and leptin. Internal autoregulation therefore causes the body to resist weight loss and if large amounts of weight are lost, post-starvation hyperphagia occurs with disproportionate fat regain.

What then can be done? Surgery can provide an answer. Large volumes of bariatric surgery are being performed worldwide with the American Society for Metabolic and Bariatric Surgery reporting that 220,000 bariatric procedures are now being performed annually in the United States. This represents a paradigm shift over the last few decades, and one which New Zealand needs to join. A growing number of New Zealand surgeons are offering a variety of procedures, but with few exceptions, these are being performed in the private sector. Surgical mortality can be expected to be less than 1% with major morbidity of less than 5%.\(^7\)

Numerous international studies have now established improved life expectancy following bariatric surgery\(^8,9\) and the effect on comorbidities following surgery is nothing short of extraordinary. A recent meta-analysis shows Type 2 diabetes completely resolving in 77%, hyperlipidaemia improving or resolving in 70%, hypertension resolving in 62% and obstructive sleep apnoea resolving in 86%.\(^10\) These potential benefits are reflected in the Ministry of Health’s projections that bariatric surgery would be cost neutral after 5 years and potentially cost saving by 8 years.\(^11\)

A Canadian experience which followed 1000 patients who had undergone bariatric surgery for 5 years, and 6000 who had not, revealed a cost neutral position after only 3.5 years.\(^12\) Given the accuracy with which Canadian individual healthcare costs can be tracked, this particular cost analysis is of real value.

The New Zealand National Service and Technology Review Advisory Committee from the Ministry of Health recently recommended that a minimum of 915 bariatric procedures (0.5% of the severely obese population) be performed annually. Despite this recommendation and its potential benefits, bariatric surgery remains largely confined to the private sector, for much of the country.

The almost non-availability of bariatric surgery in the public sector is of serious concern, when 1 in 4 of New Zealand adults are classified as obese and nearly 40% of adults in our most disadvantaged regions (NZDep2006 quintile 5) are obese.\(^2\) Such individuals not only have a high rate of obesity but also high rates of dyslipidaemia, diabetes and an elevated risk of cardiovascular disease.

This cohort of patients will experience debilitating chronic disease over the course of their lives. Bariatric surgery provides a means to alleviate that debility, and can be expected to be cost neutral within 5 years.

Prejudice aside, it is a moral, practical and fiscal duty of the New Zealand health system to make bariatric surgery accessible for the morbidly obese.
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Author information: Jonathan Foo, Research Fellow1; Robyn Toomath, Endocrinologist2; S Kusal Wickremesekera, Upper GI Surgeon2; Simon Bann, Upper GI Surgeon2; Richard Stubbs, Professor and Bariatric Surgeon3

1. University of Otago, Wellington
2. Capital and Coast District Health Board, Wellington
3. The Wakefield Clinic, Wellington

Correspondence: Professor Richard Stubbs; Wakefield Gastroenterology Centre, Private Bag 7909, Wellington, New Zealand. Fax: +64 (0)4 3818111; email: rsstubbs@wakefieldclinic.co.nz

References: