THE NEW ZEALAND MEDICAL JOURNAL
Journal of the New Zealand Medical Association

Why is publicly funded bariatric surgery still not fully supported?

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It is incredulous that New Zealand is still debating the merits of public funded bariatric surgery, when it is close to 40 years since it was introduced.[1,2] Back in the 1970s surgery was freely offered with little data justifying its efficacy.

Fortunately our surgical predecessors were right as we now know the perils of obesity; it reduces life expectancy (by 30% for every 5 kg/m^2 above normal BMI),[3] increases the risk of cancer,[4] is responsible for an alarming rise in diabetes,[5] reduces worker productivity,[6] and is destined to burden the health budget by over $300 million dollars per year.[7]

Furthermore we now know that bariatric surgery can result in significant, long-term weight loss;[8] reduce comorbidities;[9] improve quality of life;[10] improve mortality;[11] and improve health economics;[12] whilst maintaining a very safe perioperative profile.[13] So why is there now a hesitancy from the non-surgical community to adopt bariatric surgery as a viable option for those who are obese?

The first argument against surgery (and often the most fervent) is that obesity is just a product of free will and resources should not be spent to surgically correct a self-inflicted condition.[14] Whilst it is true that most food is ingested willingly, it is also true that factors promoting obesity are not experienced willingly.

Widespread obesogens like bisphenol-A (BPA),[15] prenatal factors such as poor maternal diet that increases the risk of future obesity,[16] socioeconomic status[17] and heavy commercial marketing of poor quality foods are all involuntary factors that have been implicated in the development of obesity.

The ethics of denying patients the chance for surgery because they have been too weak-willed to resist in a pro-obesogenic environment must be questioned. Even if this argument is accepted then it must surely raise a perturbing precedent.

What difference would there be in denying patients treatment for melanoma because they failed to use sunscreen, retrovirals for AIDS because they failed to adopt safe sexual practises, angioplasties for coronary artery disease because they failed to exercise 30 minutes a day, or oxygen therapy for COPD because they used to smoke? Most of healthcare is focused on conditions that could be ameliorated by healthy life choices, but it is disturbing that obese patients are judged on a premorbid sense of 'discipline' that is never debated as a prerequisite to treatment for other conditions.

A further argument against bariatric surgery is that it does not work. Anecdotal tales of a patient pureeing up Mars (chocolate) bars to sabotage their weight loss surgery are often garnered as proof (does anyone know who this patient really is?) However, this conclusion is not supported with scientific evidence.

Randomised controlled trials[18,19] and cohort studies[8,20] have shown bariatric surgery to be vastly superior to dieting. Weight loss is maintained for over a decade[21–25] that not only improves comorbidities but guarantees an increased survival.[8,11,26] However, if we are to accept that the single anecdote of a nameless patient can be used to reject the weight of evidence supporting bariatric surgery, then why is no-one questioning therapies for other conditions.

Why do we not deny drug-eluting cardiac stents when we know that over 10% of patients will fail to continue thienopyridine therapy within the first month so increasing stent thrombosis and subsequent mortality by a factor of 10.[27]

Why should we maintain solid organ transplantation when up to 38% of patients will fail to take their anti-rejection medication.[28] Is it because it is not acceptable to deny people an effective treatment when their survival is at risk. How much more inappropriate can it be to decline bariatric surgery that has been shown to improve annual survival by 80%![29]

But maybe the main reason that bariatric surgery is resisted is the concern that health resources may be overwhelmed. Estimates that a quarter of adult New Zealanders are obese[30] correlated to United States data showing rising popularity of bariatric operations[31] can cause concern over cost blow-outs unless surgery is withheld. Yet not doing anything has an inherent cost.

Obesity increases the cost of inpatient and outpatient care by 36%, the cost of medication by 77%,[32] and accounts for 2.5% of New Zealand's health spending.[7] This can be extrapolated to $344 million a year, yet the true cost can only be greater as this estimate is based on 1990 data that does not account for the recent rise in the rate of obesity. In the face of such sums it seems ironic that withholding surgery will actually cost the health system even more. Numerous studies have indicated that bariatric surgery leads to long-term savings[33–36] with the cost of surgery being recouped within 2 years.[37]

In recognition of such data the Ministry of Health published a business case in 2008 for New Zealand public funded bariatric surgery.[38] The recommendations that 0.5% of the morbidly obese population be offered surgery (equating to 915 operations over a 5-year time period) became closer to reality in October 2010 with the introduction of specific funding earmarked for bariatric surgery on a nationwide basis with geographical equality.[39] Despite being an admirable first step toward an effective treatment for obesity, it is uncertain to guarantee the adoption of bariatric surgery as a mainstream option. The funding is temporary and reliant on District Health Boards to pick up the future costs.

Furthermore, it is difficult to see how District Health Boards will be 'convinced' on the utility of bariatric surgery when the results of just 13 operations a year in cities such as Christchurch are expected to influence the adverse effects of the 90,000 obese people in their district. So it is unsurprising that some have intimated that the restriction of bariatric surgery is prejudicial rather than based on a reasoned evaluation of the evidence.[40]

In a time when obesity has increased to near epidemic proportions, New Zealand has progressed from readily available bariatric surgery to a position of near

impossible access. And this is despite the overwhelming evidence that extol the merits of such surgery. Must it take another 40 years to get back to the position we enjoyed in the 1970s?

Competing interests: Both authors are bariatric surgeons.

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References:

1. Burcher S, Sorrell V. Intestinal bypass for obesity. New Zealand Medical Journal. 1971;73:129.
2. Hanson F, Perera A. Surgery for morbid obesity in a provincial centre. New Zealand Medical Journal. 1982;95:426.
3. Whitlock G, Lewington S, Sherliker P, et al. Body-mass index and cause-specific mortality in 900 000 adults: collaborative analyses of 57 prospective studies. Lancet. 2009;373:1083-96.
4. Calle EE, Rodriguez C, Walker-Thurmond K, Thun MJ. Overweight, obesity, and mortality from cancer in a prospectively studied cohort of US adults. N Engl J Med. 2003;348:1625-38.
5. Geiss LS, Pan L, Cadwell B, et al. Changes in incidence of diabetes in US adults, 1997-2003. Am J Prev Med. 2006;30:371-7.
6. Suhrcke M, McKee M, Arce RS, et al. Investment in health could be good for Europe's economies. BMJ. 2006;333:1017-9.
7. Swinburn B, Ashton T, Gillespie J, et al. Health care costs of obesity in New Zealand. Int J Obes Relat Metab Disord. 1997;21:891-6.
8. Sjostrom L, Narbro K, Sjostrom CD, et al. Effects of bariatric surgery on mortality in Swedish obese subjects. N Engl J Med. 2007;357:741-52.
9. Schauer PR, Ikramuddin S, Gourash W, et al. Outcomes after laparoscopic Roux-en-Y gastric bypass for morbid obesity. Ann Surg. 2000;232:515-29.
10. O'Brien PE, Dixon JB, Brown W, et al. The laparoscopic adjustable gastric band (Lap-Band): a prospective study of medium-term effects on weight, health and quality of life. Obes Surg. 2002;12:652-60.
11. Adams T, Gress R, Smith S, et al. Long-term mortality after bariatric surgery. N Engl J Med. 2007;357:753-61.
12. Picot J, Jones J, Colquitt JL, et al. The clinical effectiveness and cost-effectiveness of bariatric (weight loss) surgery for obesity: a systematic review and economic evaluation. Health Technol Assess. 2009;13:1-190, 215-357, iii-iv.
13. Flum DR, Belle SH, King WC, et al. Perioperative safety in the longitudinal assessment of bariatric surgery. N Engl J Med. 2009;361:445-54.
14. Puhl RM, Heuer CA. The stigma of obesity: a review and update. Obesity (Silver Spring). 2009;17:941-64.
15. Newbold RR. Impact of environmental endocrine disrupting chemicals on the development of obesity. Hormones. 2010;9:206-17.
16. Druet C, Ong KK. Early childhood predictors of adult body composition. Best Pract Res Clin Endocrinol Metab. 2008;22:489-502.
17. Vieweg VR, Johnston CH, Lanier JO, et al. Correlation between high risk obesity groups and low socioeconomic status in school children. South Med J. 2007;100:8.
18. Mingrone G, Greco AV, Giancaterini A, et al. Sex hormone-binding globulin levels and cardiovascular risk factors in morbidly obese subjects before and after weight reduction induced by diet or malabsorptive surgery. Atherosclerosis. 2002;161:455-62.

19. O'Brien PE, Dixon JB, Laurie C, et al. Treatment of mild to moderate obesity with laparoscopic adjustable gastric banding or an intensive medical program: a randomized trial. Ann Intern Med. 2006;144:625-33.
20. Buddeberg-Fischer B, Klaghofer R, Krug L, et al. Physical and psychosocial outcome in morbidly obese patients with and without bariatric surgery: a 4 1/2-year follow-up. Obes Surg. 2006;16:321-30.
21. Scopinaro N, Marinari G, Camerini G, Papadia F. Biliopancreatic diversion for obesity: state of the art. Surg Obes Relat Dis. 2005;1:317-28.
22. Favretti F, Segato G, Ashton D, et al. Laparoscopic adjustable gastric banding in 1,791 consecutive obese patients: 12-year results. Obes Surg. 2007;17:168-75.
23. Pories WJ, Swanson MS, MacDonald KG, et al. Who would have thought it? An operation proves to be the most effective therapy for adult-onset diabetes mellitus. Ann Surg. 1995;222:339-50; discussion 50-2.
24. Fobi MA, Lee H, Felahy B, et al. Choosing an operation for weight control, and the transected banded gastric bypass. Obes Surg. 2005;15:114-21.
25. White S, Brooks E, Jurikova L, Stubbs RS. Long-term outcomes after gastric bypass. Obes Surg. 2005;15:155-63.
26. Sjostrom L, Lindroos A, Peltonem M, et al. Lifestyle, diabetes, and cardiovascular risk factors 10 years after bariatric surgery. N Engl J Med. 2004;351:2683-93.
27. Spertus JA, Kettelkamp R, Vance C, et al. Prevalence, predictors, and outcomes of premature discontinuation of thienopyridine therapy after drug-eluting stent placement: results from the PREMIER registry. Circulation. 2006;113:2803-9.
28. Germani G, Lazzaro S, Gnoato F, et al. Nonadherent behaviors after solid organ transplantation. Transplant Proc. 2011;43:318-23.
29. Sjostrom CD, Lissner L, Wedel H, Sjostrom L. Reduction in incidence of diabetes, hypertension and lipid disturbances after intentional weight loss induced by bariatric surgery: the SOS Intervention Study. Obes Res. 1999;7:477-84.
30. Gerritson S, Stefanogiannis N, Galloway Y. A portrait of health. Key results of the 2006/07 New Zealand health survey. http://wwwmohgovtnz/mohnsf/indexmh/portrait-of-health#summary. Wellington: Ministry of Health; 2008.
31. Trus TL, Pope GD, Finlayson SR. National trends in utilization and outcomes of bariatric surgery. Surg Endosc. 2005;19:616-20.
32. Sturm R. The effects of obesity, smoking, and drinking on medical problems and costs. Health Aff (Millwood). 2002;21:245.
33. Ackroyd R, Mouiel J, Chevallier JM, Daoud F. Cost-effectiveness and budget impact of obesity surgery in patients with type-2 diabetes in three European countries. Obes Surg. 2006;16:1488-503.
34. van Mastrigt GA, van Dielen FM, Severens JL, et al. One-year cost-effectiveness of surgical treatment of morbid obesity: vertical banded gastroplasty versus Lap-Band. Obes Surg. 2006;16:75-84.
35. Craig BM, Tseng DS. Cost-effectiveness of gastric bypass for severe obesity. Am J Med. 2002;113:491-8.
36. Jensen C, Flum DR. The costs of nonsurgical and surgical weight loss interventions: is an ounce of prevention really worth a pound of cure? Surg Obes Relat Dis. 2005;1:353-7.
37. Cremieux PY, Buchwald H, Shikora SA, et al. A study on the economic impact of bariatric surgery. Am J Manag Care. 2008;14:589-96.
38. Assessment of the business case for the management of adult morbid obesity in New Zealand. Wellington: Ministry of Health; 2008.
39. Turia delighted with funding for life-saving weight-loss operations. 2010. www.beehive.govt.nz/release/

40. Foo J, Toomath R, Wickremesekera SK, et al. Bariatric surgery: a dilemma for the health system? N Z Med J. 2010;123:12-4. http://journal.nzma.org.nz/journal/123-1311/4027/content.pdf