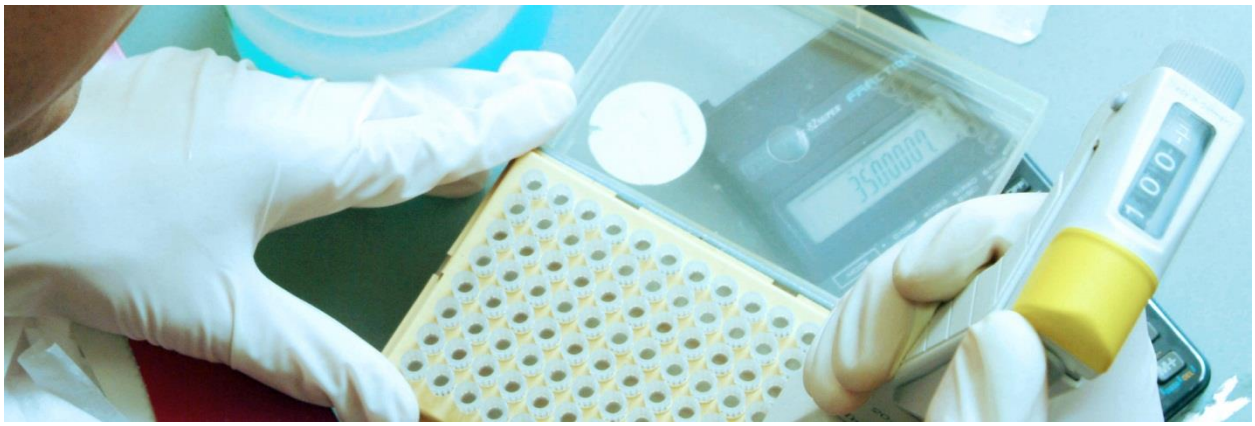
swiss medical board

Bariatric surgery vs. conservative treatment for obesity and overweight



Summary and Recommendations of the Appraisal Committee of the Swiss Medical Board

December 2nd, 2016

Executive Summary of Appraisal Report

"Bariatric surgery vs. conservative treatment for obesity and overweight"

In Switzerland 10.3% of residents were obese and 30.8% overweight in 2012. The estimated healthcare costs due to obesity in 2011 were CHF 7990 Mio. Obese individuals have a high prevalence of concomitant diseases such as type 2 diabetes, which can result in increased morbidity and mortality. Lifestyle interventions and pharmacotherapy have failed to show long-term effect on quality of life and health outcomes in individuals with severe obesity (BMI ≥35 kg/m^2). Bariatric surgery has been discussed as an alternative intervention for improving long-term health outcomes and QoL, and has been recommended by health technology assessment agencies in the USA and Europe. In Switzerland, 4167 bariatric surgeries were performed in 2014. Currently, the Swiss statutory health insurance covers certain types of bariatric surgery for individuals with BMI ≥35 kg/m^2.

This appraisal report examines the evidence on effectiveness, safety and cost-utility of bariatric surgery compared to conservative treatment for obesity in adults, taking into account legal and ethical implications. Randomized controlled trials were considered and complemented by long-term and safety data from well-conducted observational studies. The GRADE approach was used for summarizing and appraising the evidence. Subgroup analyses according to BMI (< versus ≥ 35 kg/m^2) and to different types of bariatric surgery were conducted. Relevant HTA reports were reviewed as part of the appraisal.

Sixteen RCTs were included, most of which recruited individuals with specific comorbidities and reported outcomes up to 2-3 years. Evidence from these studies suggests that obese individuals, in particular those with BMI ≥35 kg/m^2, who receive bariatric surgery are more likely to achieve a reduction of body weight in the first 2-3 years than those who are treated using a conservative approach. The mean reduction with surgery was 18% (95%CI 15%-21%) and ranged from 1% to 7% with conservative treatment (moderate quality of evidence). In addition, based on few studies with low quality of evidence, bariatric surgery was also significantly associated with improvement in the physical functioning component of QoL scales, reduction in mean HbA1c concentration in blood and higher diabetes remission rates. Serious adverse events may be more frequent with surgery, but this result was not conclusive and of very low quality. In the subgroup analyses, there were no differences in effectiveness between BMI groups. The evidence was not sufficient to provide a definite answer about which type of surgery is more effective. Data from observational studies suggested a substantial long-term benefit of bariatric surgery for all-cause mortality and a reduction in cardiovascular events despite an increase in peri-operative mortality and in deaths not directly related to surgery such as suicides.

The assessment of health economic studies and application to the Swiss context showed that for BMI ≥35 kg/ m^2 with or without comorbidities bariatric surgery is either cost-saving or cost-effective if commonly accepted cost-utility thresholds are applied. Adaptation to Switzerland resulted in an incremental cost-utility ratio below CHF 50'000 per QALY. Observational cost utility data suggested that total costs are higher with bariatric surgery compared to conservative treatment, because the cost savings due to reduced prevalence of type 2 diabetes after surgery do not fully compensate the high initial costs of the surgery.

Considerable uncertainties remain related to bariatric surgery. There is a clear need for shared decision making by patients who are candidates for bariatric surgery and their health care providers. While some centres provide patients with decision aid material, this is not a uniform requirement and variation between centres is likely.

The Appraisal Committee makes the following recommendations:

1. Individuals with BMI >35 kg/m^2 (obesity of class II or more) should be offered the possibility of bariatric surgery after a careful evaluation of their eligibility for surgery and their individual risks and benefits by an inter-disciplinary team.

2. For individuals with BMI $\geq$30 to <35 kg/m^2 (class I obesity) and related co-morbidities such as type 2 diabetes, bariatric surgery can be considered a treatment option after careful evaluation of the severity and duration of the co-morbidities and the risks and benefits of surgery.

3. It is reasonable to delay bariatric surgery for a certain period of time in favour of conservative treatment.

4. Bariatric surgery should be performed in a recognized centre.

5. All individuals eligible for surgery should receive balanced and unbiased information on short- and long-term risks and benefits of bariatric surgery including an explanation of the uncertainties around long-term outcomes.

6. All patients undergoing bariatric surgery should be enrolled in a registry such as the current SMOB registry to ensure long-term follow-up for somatic and mental health outcomes.

7. The criteria for reimbursement by the statutory health insurance (i.e., a minimum of 2 years of conservative management before bariatric surgery for individuals with BMI >35 kg/m^2) should be re-evaluated taking into account the current state of knowledge.

8. Given the limited evidence from RCTs and observational studies, there is a strong case for more research. Patients and health professionals need better evidence to be able to take informed decisions about bariatric surgery.
    - Research should provide data on the life course of obese individuals with or without surgery.
    - Special attention should be given to metabolic co-morbidities as additional prognostic factors and as criteria for bariatric surgery.
    - Risk prediction tools should be developed to better determine participants most likely to benefit from either bariatric surgery or conservative treatment.

Abbreviations:

BMI:	Body Mass Index
CI:	Confidence interval
GRADE:	Grading of Recommendations Assessment, Development and Evaluation
HbA1c:	Haemoglobin A_{1c}
HTA:	Health Technology Assessment
QALY:	Quality-Adjusted Life Year
QoL:	Quality of Life
RCT:	Randomized Controlled Trial
SMOB:	Swiss Society for the Study of Morbid Obesity and Metabolic Disorders