

■ **eAppendix A. Effectiveness of Bariatric Surgery**

| Clinical Outcome Measure | Change in Baseline Value (SD) | Reference |
|---|-------------------------------|-------------------------------|
| Body mass index, kg/m ² | -15.1 (5.7) | Unpublished data ^a |
| A1C, % | -1.5 (1.2) | Unpublished data ^a |
| Systolic blood pressure, mm Hg | -9.9 (18.2) | Unpublished data ^a |
| Total cholesterol, mg/dL | -17.9 (32.2) | Unpublished data ^a |
| Low-density lipoprotein cholesterol, mg/dL | -13.1 (27.7) | Unpublished data ^a |
| High-density lipoprotein cholesterol, mg/dL | 12.2 (20.5) | Unpublished data ^a |
| Triglycerides, mg/dL | -97.1 (48.1) | Unpublished data ^a |

A1C indicates glycosylated hemoglobin.

^aUnpublished data are from the University of Minnesota Medical Center, Minneapolis.

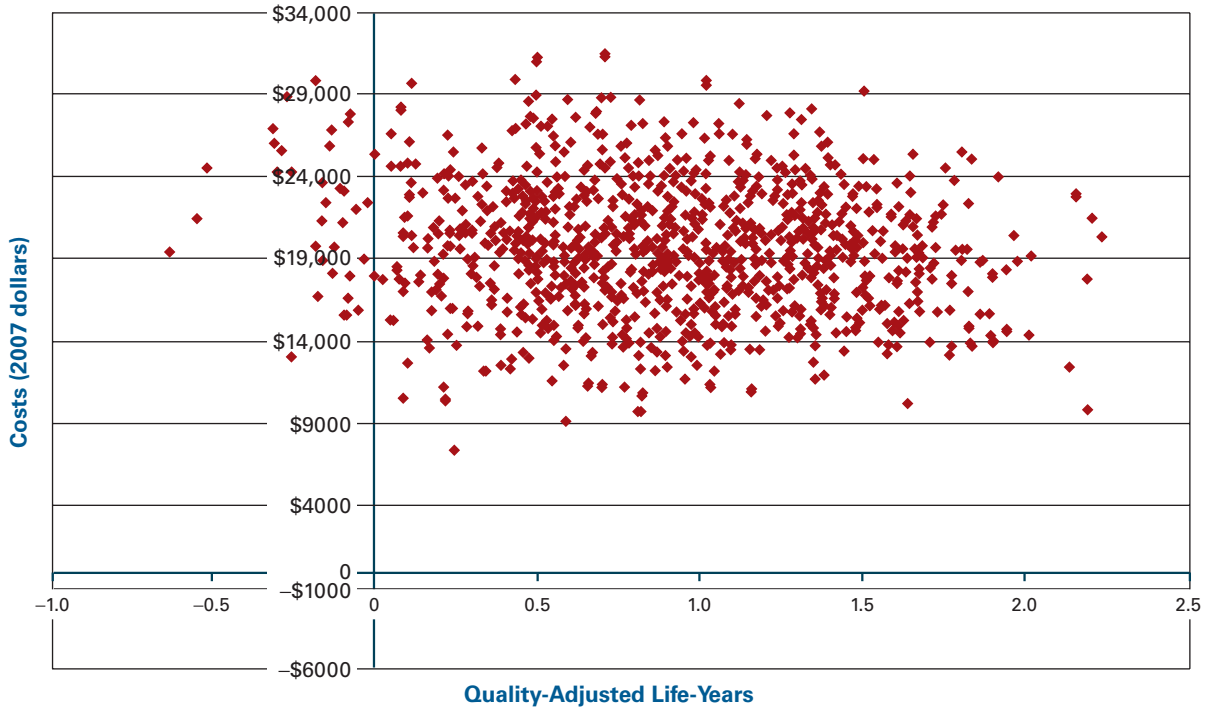
■ **eAppendix B. Adverse Effects of Bariatric Surgery**

| Adverse Effect | Probability, % | Reference |
|---|----------------|-----------|
| Procedure-related death | 0.5 | 29 |
| Major reoperation (early) | 0.8 | 11 |
| Moderate reoperation (early) | 5.8 | 11 |
| Minor medical complication (early) | 2.5 | 11 |
| Major reoperation (late) | 0.9 | 11 |
| Moderate reoperation (late) | 8.6 | 11 |
| Minor medical complication (late) | 4.0 | 11 |
| Any complication (additive for major and minor complications) | 22.6 | 11 |

■ **eAppendix C. Health-State Utilities and Disutilities Used in the Analysis**

| Event/State ^a | Utility/Disutility ^a | Reference |
|--|---------------------------------|---------------------------|
| Bariatric surgery (applied in year 1 only) | | |
| Bariatric surgery procedure | -0.220 | 41, 42 |
| Any complication | -0.200 | See the text ^b |
| Medical management | | |
| Diabetes, no complications | 0.814 | 19 |
| Angina | 0.682 | 19 |
| Congestive heart failure | 0.633 | 19 |
| Myocardial infarction, year of event | -0.129 | 19 |
| Myocardial infarction, years 2+ after event | 0.736 | 19 |
| Stroke, year of event | -0.181 | 19 |
| Stroke, years 2+ after event | 0.545 | 19 |
| Peripheral vascular disease | 0.570 | 19 |
| Microalbuminuria | 0.814 | 19 |
| Gross proteinuria | 0.814 | 19 |
| Hemodialysis | 0.490 | 19 |
| Peritoneal dialysis | 0.560 | 19 |
| Kidney transplant | 0.762 | 19 |
| Background diabetic retinopathy | 0.814 | 19 |
| Cataract | 0.794 | 19 |
| Macular edema | 0.794 | 19 |
| Proliferative diabetic retinopathy | 0.794 | 19 |
| Severe vision loss/blindness | 0.734 | 19 |
| Neuropathy | 0.624 | 19 |
| Active ulcer | 0.600 | 19 |
| Healed diabetic ulcer | 0.814 | 19 |
| Amputation, year of event | -0.109 | 19 |
| Amputation, years 2+ after event | 0.680 | 19 |
| All hypoglycemic events | -0.0052 | 19 |
| Body mass index adjustment for each unit of decrease, kg/m ² | 0.003813 | 38 |
| ^a No state-specific health utility identified; conservatively assumed to be equivalent to complication-free utility; 0.020 = disutility for mild vision loss; 0.190 = disutility for neuropathy. ^b "Costs and Utilities for Bariatric Surgery and Medical Management of Diabetes" in the Methods section. | | |

■ **eAppendix D.** Base-Case Analysis Scatter Plot of Mean Incremental Costs Plotted Against Mean Incremental Effectiveness of Bariatric Surgery (QALYs Gained) for 1000 Patients With Diabetes^a



^aThe majority of the points lie in the upper-right quadrant, indicating higher costs and improved effectiveness for bariatric surgery compared with medical management.