Cost-Effectiveness of Intensified Versus Conventional Multifactorial Intervention in Type 2 Diabetes

Results and projections from the Steno-2 study

OBJECTIVE — To assess the cost-effectiveness of intensive versus conventional therapy for 8 years as applied in the Steno-2 study in patients with type 2 diabetes and microalbuminuria.

RESEARCH DESIGN AND METHODS — A Markov model was developed to incorporate event and risk data from Steno-2 and account Danish-specific costs to project life expectancy, quality-adjusted life expectancy (QALE), and lifetime direct medical costs expressed in year 2005 Euros. Clinical and cost outcomes were projected over patient lifetimes and discounted at 3% annually. Sensitivity analyses were performed.

RESULTS — Intensive treatment was associated with increased life expectancy, QALE, and lifetime costs compared with conventional treatment. Mean ± SD undiscounted life expectancy was 18.1 ± 7.9 years with intensive treatment and 16.2 ± 7.3 years with conventional treatment (difference 1.9 years). Discounted life expectancy was 13.4 ± 4.8 years with intensive treatment and 12.4 ± 4.5 years with conventional treatment. Lifetime costs (discounted) for intensive and conventional treatment were €45,521 ± 19,697 and €41,319 ± 27,500, respectively (difference €4,202). Increased costs with intensive treatment were due to increased pharmacy and consultation costs. Discounted QALE was 1.66 quality-adjusted life-years (QALYs) higher for intensive (10.2 ± 3.6 QALYs) versus conventional (8.6 ± 2.7 QALYs) treatment, resulting in an incremental cost-effectiveness ratio of €2,538 per QALY gained. This is considered a conservative estimate because accounting prescription of generic drugs and capturing indirect costs would further favor intensified therapy.

CONCLUSIONS — From a health care payer perspective in Denmark, intensive therapy was more cost-effective than conventional treatment. Assuming that patients in both arms were treated in a primary care setting, intensive therapy became dominant (cost- and lifesaving).

From the 1Steno Diabetes Center, Copenhagen, Denmark; 2IMS Health, Allschwil, Switzerland; 3Novo Nordisk Scandinavia, Copenhagen, Denmark; the 4Department of Endocrinology, Rigshospitalet, Copenhagen, Denmark; and the 5Faculty of Health Science, Aarhus University, Aarhus, Denmark.

Corresponding author: Peter Gæde, phag@steno.dk.

Received 27 December 2007 and accepted 18 April 2008.

The costs of publication of this article were defrayed in part by the payment of page charges. This article must therefore be hereby marked "advertisement" in accordance with 18 U.S.C. Section 1734 solely to indicate this fact.
coronary artery bypass grafting), revascularization of the leg, lower-extremity amputation, and cardiovascular disease-related death. Compared with patients in the conventional therapy arm, patients assigned to intensive therapy had a 53% (95% CI 27–76) lower relative risk of cardiovascular disease.

Model

A Markov model was developed using TreeAge Pro (TreeAge Software, Williams-town, MA) to project the long-term clinical and cost outcomes associated with the conventional and intensive treatment arms applied in the Steno-2 study (8–10). The model incorporated event probabilities and risk data from the study (and accounted Danish-specific costs) to estimate life expectancy, quality-adjusted life expectancy, and lifetime direct medical costs associated with the two treatment arms.

A two-state Markov model (alive and dead) with a cycle length of 1 year was developed. The model was designed to capture the occurrence of the following events from the Steno-2 Study: myocardial infarction, coronary artery bypass grafting, percutaneous coronary intervention, stroke (major and minor), hospitalization for congestive heart failure, revascularization of leg, revascularization of carotid artery, lower-extremity amputation (toe and major amputation) due to diabetes, end-stage renal disease, and dialysis.

For the modeling analysis, cohort characteristics and event rates were applied as observed in the Steno-2 study for years 1–8 of the analysis, after which mean event rates were carried forward for subsequent years of simulation (see tables in online appendices 1 and 2, available at http://dx.doi.org/10.2337/dc07-2452). Beyond year 8, mortality was adjusted for age by assuming the risk of mortality doubled every 10 years (11). Age-dependent risk adjustments were also applied for congestive heart failure, cardiovascular events (myocardial infarction, percutaneous coronary intervention, and coronary artery bypass grafting), stroke, and revascularization of the leg (see online appendix 3).

Adjustment of the risk of hospitalization for congestive heart failure according to age was calculated from a risk appraisal function derived from 486 cases of heart failure over 38 years of follow-up (12). Risk adjustment for cardiovascular events according to patient age was performed using the risk regression function reported by the UK Prospective Diabetes Study (UKPDS) for first myocardial infarction (13) and was calculated for stroke using data from the UKPDS stroke risk engine (14). The age-related risk adjustment for leg revascularization was assumed to be the same as that for patients with the equivalent of the score for a patient with uncomplicated type 2 diabetes, which captures the reduction in quality of life from the perfect health score of 1 (17). Tracker variables were used in the model to keep a record of all the events experienced by simulated patients. At the beginning of each cycle (or year in the simulation), health-state utilities for each patient were calculated by adjusting their baseline utility scores depending on their history of complications (see online appendix 4). Quality of life for dialysis intervention was assumed to be captured in end-stage renal disease complication and set to zero to avoid double counting.

Discounting, time horizon, and perspective

Clinical and cost outcomes were discounted at a rate of 3% per annum in line with current recommendations for Denmark (18). We modeled a lifetime horizon as the base case analysis and assumed the perspective of a health care payer in Denmark.

Statistical approach

A nonparametric bootstrapping approach was taken in which 1,000 patients were run through the model 100 times using first-order Monte Carlo simulation to calculate the mean and SD of costs, life expectancy, and quality-adjusted life expectancy (QALE) (19). In the base case, mean results of each of the 100 iterations were used to create a scatter plot showing the differences in clinical and cost outcomes for intensive versus conventional treatment. From the scatter plot, an acceptability curve was generated by calculating the proportion of points below a range of willingness-to-pay thresholds (20). This approach was designed to capture statistical uncertainty at the patient level with parameter level uncertainty (e.g., effect of treatment) captured using a qualitative approach (one-way sensitivity analysis).

Sensitivity analyses

The base case analysis was run over a 30-year (patient lifetime) time horizon and captured patient outcomes until year of death. In a sensitivity analysis, the time horizon was set to 8 years, in line with the duration of the Steno-2 study. A further sensitivity analysis was performed on the annual discount rates for cost and clinical outcomes, with discount rates varying from 0 to 6% (base case 3%). In the base case it was assumed that patients in the intensive treatment arm would be treated at the Steno Diabetes Center (it was assumed that patients in the conventional arm received their treatment in a primary care setting). In a sensitivity analysis, it was assumed that patients in the intensive
Cost-effectiveness of intensive diabetes therapy

Table 1—Summary of cost inputs

| Description                                      | Annual cost of pharmaceuticals (€) |
|--------------------------------------------------|-----------------------------------|
| Conventional arm pharmacy (Steno-2)              | 967                                |
| Hypoglycemic agents (insulin and oral agents)    | 646                                |
| Oral agents                                      | 144                                |
| Insulin                                          | 502                                |
| Antihypertensive agents                          | 242                                |
| Aspirin                                          | 12                                 |
| Lipid-lowering agents                            | 67                                 |
| Conventional arm remedies*                       | 139                                |
| Intensive arm pharmacy (Steno-2)                 | 1,577                              |
| Hypoglycemic agents (insulin and OADs)           | 756                                |
| Oral agents                                      | 242                                |
| Insulin                                          | 514                                |
| Antihypertensive agents                          | 390                                |
| Aspirin                                          | 30                                 |
| Lipid-lowering agents                            | 401                                |
| Intensive arm remedies†                          | 310                                |
| Annual costs of consultations                    |                                    |
| Conventional arm primary care consultation‡      | 187                                |
| Intensive arm specialist clinic consultation      | 840                                |
| Base case analysis§                              |                                    |
| Intensive arm primary care consultation           | 187                                |
| Annual costs of complications                    |                                    |
| End-stage renal disease                          | 65,604                             |
| CHF (hospitalization)                            | 3,391                              |
| Myocardial infarction                            | 3,117                              |
| Stroke (major with rehabilitation)               | 10,138                             |
| Stroke (minor without rehabilitation)            | 5,372                              |
| Annual costs of interventions                    |                                    |
| Dialysis (acute)                                 | 6,137                              |
| Revascularization of leg                         | 9,978                              |
| Revascularization of carotid artery              | 6,181                              |
| PCI                                              | 9,566                              |
| CABG                                             | 16,178                             |
| Amputation (major)                               | 12,058                             |
| Amputation (toe)                                 | 8,128                              |

Data are 2005 Euros. *Conventional arm remedies include 50 strips for home measurement of blood glucose, 2.7 measurements of blood glucose at the general practitioner (GP), 3.3 measurements of A1C, 0.2 measurements of lipid values, and 0.5 measurements of urinary albumin-to-creatinine ratio. †Intensive arm remedies include 200 strips for home measurement of blood glucose, 4.0 measurements of blood glucose at the GP, 4.0 measurements of glycated hemoglobin A1C, 4.0 measurements of lipid values, and 4.8 measurements of urinary albumin-to-creatinine ratio. ‡Conventional arm consultations include an average of 4.5 yearly consultations at the general practitioner and 0.6 consultations at a diabetes clinic including dietary consultations by a dietitian. §Intensive arm consultations include 4 yearly consultations at Steno Diabetes Center with dietary consultations by a dietitian as needed. According to Danish reimbursement rules the price for a visit at a specialist clinic is 15 times higher than a GP consultation. All pharmacy and consultation costs were calculated based on resource use data from the Steno Diabetes Center and published prices. All annual costs of complications and annual costs of interventions were based on Danish National Health Board 2005 data. CAGB, coronary artery bypass grafting; CHF, congestive heart failure; ESRD, end-stage renal disease; PCI, percutaneous coronary intervention.

RESULTS

Base case analysis

In the base case, intensive treatment was associated with increased life expectancy, QALE, and lifetime costs compared with conventional treatment. Mean ± SD undiscounted life expectancy was 18.1 ± 7.9 life-years with intensive treatment and 16.2 ± 7.3 life-years with conventional treatment (difference 1.9 years). Discounted life expectancy was improved by ~1.1 year in the intensive arm compared with the conventional treatment group (13.4 ± 4.8 vs. 12.4 ± 4.5 years). Taking patients’ quality of life into account, simulated patients were projected to live for 10.2 ± 3.6 and 8.6 ± 2.7 quality-adjusted life years (QALYs) for intensive and conventional treatments, respectively (difference 1.66 QALYs).

Lifetime direct medical costs for intensive and conventional treatment were projected to be €45,520 ± 19,697 and €41,319 ± 27,500, respectively (difference €4,201). A breakdown of costs revealed that the increased costs associated with intensive versus conventional treatment were attributable to increased pharmacy and consultation costs (€25,400 versus €11,289, respectively). However, the incremental costs for intensive treatment were less than those for conventional treatment for all complications and interventions modeled in the analysis, despite patients living longer in the intensive treatment arm.

The incremental cost-effectiveness ratio for intensive versus conventional treatment was €2,538 per QALY gained (Table 2). A scatter plot of mean incremental costs and effectiveness for all 100 iterations was created. From this, an acceptability curve was generated showing that, using a willingness-to-pay threshold of €40,000 per QALY gained (21), there was a 74% probability that the intensive treatment would be considered cost-effective versus conventional treatment in a Danish cost setting (Fig. 1).

Sensitivity analyses

The results of the base case were most sensitive to assumptions regarding the costs associated with physician consultation and variation in the time horizon. In the base case, it was assumed that patients in the conventional treatment arm received all of their medical care in a primary care setting, whereas patients in the intensive treatment arm attended consultations at the Steno Diabetes Center. As-
increasing to the incremental cost-effectiveness ratio (from a lifetime horizon in the base case) led

Undiscounted life expectancy (years) 18.1

Life expectancy (years)* 13.4 ± 4.8

QALE (QALYs)* 10.2 ± 3.6

Direct medical costs (€)* 45,521 ± 19,697

Incremental cost-effectiveness ratio €3,927 per life year gained*

€2,538 per QALY gained*

Data are means ± SD unless otherwise indicated. *Values were discounted at 3% annually. All Euros are in 2005 values.

assuming that patients in both treatment arms received their care in the same primary care setting, intensive treatment was found to be dominant (cost- and lifesaving) versus conventional treatment (Table 3).

Shortening the time horizon to 8 years (from a lifetime horizon in the base case) led to the incremental cost-effectiveness ratio for intensive versus conventional treatment increasing to €41,934 per QALY gained. When it was assumed that consultation costs were equal for both treatment arms over this shorter time horizon, intensive treatment was highly cost-effective versus conventional treatment (€320 per QALY gained). Sensitivity analyses on the discount rates applied for cost and clinical outcomes and reducing the clinical effectiveness of intensive treatment by up to 20% had little impact on the overall findings. The application of different methodologies to estimate QALE (multiplication only or addition only versus multiplication and addition in the base case) also had little impact on the overall findings.

CONCLUSIONS — The current health economic modeling analysis based on the 8-year Steno-2 study outcome indicates that in a Danish setting, intensive treatment is likely to be associated with increased life expectancy and QALE compared with conventional treatment, thus representing good value for the money in patients with type 2 diabetes and microalbuminuria. For simplicity and transparency, the model was designed only to simulate events (not states). Therefore, state costs in the years following clinical events were not captured. Furthermore, the costs of medications used in the intensive arm were those of the original patented drugs and not the cheaper generic versions. This very conservative approach was likely to underestimate the economic benefits of intensive versus conventional therapy. Despite this, and given that the overall results were most sensitive to variation in assumptions regarding the costs associated with physician consultation, intensive treatment became dominant (cost- and lifesaving) compared with conventional therapy when it was assumed that patients in both treatment arms received care in a primary care setting. Even in the case where patients in the intensive group were assumed to continue the most expensive treatment in a specialist setting and the treatment effect between the intensive and conventional groups was assumed to decline after the end of the 7.8-year intervention period, this case would still represent good value for the money compared with other well-established interventions.

In the base case analysis, costs and clinical outcomes were projected over patient lifetimes, beyond the duration of intervention in the Steno-2 study. This is common practice in health economic cost-effectiveness analyses because many important events occur after the study has finished. However, assumptions need to be made on modeled data, and these could introduce uncertainty in long-term projections and are a limitation of such an approach. In the present analysis, beyond year 8 of simulation, mean Steno-2 study event rates were applied in the model with risk of congestive heart failure, myocardial infarction, and revascularization procedures adjusted according to patient age. These age-related risk adjustments were based on calculations from the UKPDS and studies by Kannel et al. and Murabito et al. (12–15).

The Steno-2 study was not designed to identify those factors in the intensive treatment arm that were most effective in reducing the incidence of diabetes-related complications. Had this been the case, costs of treatment could be optimized by specifically targeting those factors that contribute most to improved patient outcomes, thereby improving the cost-effectiveness of intensive versus conventional treatment. However, in this respect, previous publications from single-risk factor intervention in patients with newly diagnosed type 2 diabetes in the UKPDS study have demonstrated the cost-effectiveness of interventions against hyperglycemia (22) and hypertension (23), whereas the cost-effectiveness of cholesterol-lowering therapy is well documented from other studies (24,25).

The cost-effectiveness of intensive versus conventional multifactorial treatment could also vary among patient subgroups and in different patient settings. In the Steno-2 study, all patients had type 2

Table 2—Summary of cost and clinical outcomes in the base case analysis

|                      | Intensive     | Conventional | Difference |
|----------------------|---------------|--------------|------------|
| Undiscounted life expectancy (years) | 18.1 ± 7.9    | 16.2 ± 7.3   | 1.9        |
| Life expectancy (years)* | 13.4 ± 4.8    | 12.4 ± 4.9   | 1.1        |
| QALE (QALYs)*         | 10.2 ± 3.6    | 8.6 ± 2.7    | 1.7        |
| Direct medical costs (€)* | 45,521 ± 19,697 | 41,319 ± 27,500 | 4,202     |

Figure 1—Acceptability curve from base case analysis.
Cost-effectiveness of intensive diabetes therapy

Table 3—Summary of cost and clinical outcomes: sensitivity analyses

|                          | QALE (QALYs) | Direct medical costs (€) | ICER (€ per QALY gained) |
|--------------------------|--------------|-------------------------|--------------------------|
|                          | Intensive    | Conventional            | Difference               | Intensive    | Conventional            | Difference               |                          |
| 8-year time horizon      | 5.4 ± 0.8    | 5.3 ± 0.7               | 0.1                      | 21,577 ± 5,953          | 17,081 ± 12,324 | 4,495                   | 41,934                   |
| 0% discount rate         | 13.5 ± 5.7   | 10.8 ± 4.2              | 2.8                      | 62,122 ± 32,261         | 57,154 ± 43,242 | 4,969                   | 1,828                    |
| 6% discount rate         | 8.1 ± 2.4    | 7.0 ± 1.9               | 1.1                      | 35,114 ± 12,994         | 31,438 ± 19,025 | 3,676                   | 3,517                    |
| Same consultation costs  | 10.2 ± 3.6   | 8.5 ± 2.7               | 1.7                      | 36,681 ± 16,860         | 41,428 ± 27,721 | −4,747                  | Dominant                 |
| 30-year time horizon     |              |                         |                          |                         |                         |                         |                          |
| Same consultation costs  | 5.4 ± 0.8    | 5.3 ± 0.7               | 0.1                      | 17,105 ± 5,644          | 17,071 ± 12,317 | 34                      | 320                      |
| 8-year time horizon      | 9.6 ± 3.5    | 8.5 ± 2.7               | 1.1                      | 44,308 ± 20,243         | 41,378 ± 27,543 | 2,930                   | 2,865                    |

Data are means ± SD. ICER = incremental cost-effectiveness ratio. *Applies to the intensive treatment arm. All Euros are in 2005 values.

diabetes and microalbuminuria (an independent risk factor for cardiovascular disease), representing approximately one-third of patients with type 2 diabetes (7). Patients with newly diagnosed type 2 diabetes who have no cardiovascular risk factors would not be expected to receive the same clinical benefit from intensified multifactorial treatment as patients in the Steno-2 study, but treatment costs would be the same. Another factor that could affect the cost-effectiveness of the intensive treatment arm is common to all intensified treatments in real-life settings. Patients recruited for the Steno-2 study may have been more motivated, compliant, and persistent with treatment than patients in a more realistic real-life environment. Implementing the intensive treatment arm in a real-life setting would require training on the part of physicians and patients and a firm commitment from patients to adhere to strict treatment guidelines.

In conclusion, intensive multifactorial intervention as applied in the Steno-2 study is likely to be highly cost-effective from a third-party health care payer perspective in patients with type 2 diabetes and microalbuminuria versus conventional multifactorial intervention. If the intensified intervention is implemented in a primary care setting, cost savings would be anticipated.

Acknowledgments—This study was supported by unrestricted grants from the Steno Diabetes Center and from Novo Nordisk A/S.

References

1. Say dah SH, Eberhardt MS, Loria CM, Brancati FL: Age and the burden of death attributable to diabetes in the United States. Am J Epidemiol 156:714–719, 2002
2. Jonsson B, CODE-2 Advisory Board: Revealing the cost of Type II diabetes in Europe. Diabetologia 45:S9–S12, 2002
3. American Diabetes Association: National Diabetes Fact Sheet [article on line], 2005. Available from http://www.cdc.gov/diabetes/pubs/pdf/diabetes fact sheet.pdf. Accessed 19 February 2007
4. American Diabetes Association. Standards of medical care for patients with diabetes mellitus (Position Statement). Diabetes Care 26 (Suppl. 1):S33–S50, 2003
5. Gaede P, Vedel P, Larsen N, Jensen GY, Parving HH, Pedersen O: Multifactorial intervention and cardiovascular disease in patients with type 2 diabetes. N Engl J Med 348:383–393, 2003
6. Mogensen CE: Microalbuminuria predicts clinical proteinuria and early mortality in maturity-onset diabetes. N Engl J Med 310:336–360, 1984
7. Gall MA, Borch-Johnsen K, Hougaard P, Nielsen FS, Parving HH: Albuminuria and poor glycemic control predict mortality in NIDDM. Diabetes 44:1303–1309, 1995
8. Naimark D, Krahn MD, Naglie G, Redelmeier DA, Detsky AS: Primer on medical decision analysis: Part 3-Working with Markov processes. Med Decis Making 17:152–159, 1997
9. Briggs AH: Handling uncertainty in cost-effectiveness models. Pharmacoeconomics 17:479–500, 2000
10. Sonnenberg FA, Beck JR: Markov models in medical decision making: a practical guide. Med Decis Making 13:322–338, 1993
11. Leibson CL, O’Brien PC, Atkinson E, Palmombo PJ, Melton LJ III: Relative contributions of incidence and survival to increasing prevalence of adult-onset diabetes mellitus: a population-based study. Am J Epidemiol 146:12–22, 1997
12. Kannel WB, D’Agostino RB, Silbershatz H, Belanger AJ, Wilson PW, Levy D: Profile for estimating risk of heart failure. Arch Intern Med 159:1197–1204, 1999
13. Stevens RJ, Kothari V, Adler AI, Stratton IM, Holman RR: The UKPDS risk engine: a model for the risk of coronary heart disease in Type II diabetes (UKPDS 56). Clin Sci 101:671–679, 2001
14. Kothari V, Stevens RJ, Adler AI, Stratton IM, Manley SE, Neil HA, Holman RR: UK-PDS 60: risk of stroke in type 2 diabetes estimated by the UK Prospective Diabetes Study risk engine. Stroke 33:1776–1781, 2002
15. Murabito JM, D’Agostino RB, Silbershatz H, Wilson WF: Intermittent claudication: a risk profile from The Framingham Heart Study. Circulation 96:44–49, 1997
16. Sundhedsstyrelsen, Center for Evaluering og Medicinsk Teknologivurdering. Type 2 diabetes. Medicinsk teknologivurdering af screening, diagnostik og behandling. Copenhagen, Sundhedsstyrelsen, 2003
17. Clarke P, Gray A, Holman R: Estimating utility values for health states of type 2 diabetic patients using the EQ-5D (UK-PDS 62). Med Decis Making 22:340–349, 2002
18. Tarn T, Smith M: Pharmacoeconomic guidelines around the world. ISPOR Conferences 10:5–15, 2004
19. Briggs AH, Wonderling DE, Mooney C: Pulling cost-effectiveness analysis up by its bootstraps: a non-parametric approach to confidence interval estimation. Health Econ 4:327–340, 1997
20. Fenwick E, Claxton K, Sculpher M: Representing uncertainty: the role of cost-effectiveness acceptability curves. Health Econ 10:779–787, 2001
21. Heslet L, Andersen JS, Keiding H: Metoder til sundhedsøkonomisk evaluering af intensiv terapi. Ugeskr Læger 169:721–724, 2007 [in Danish]
22. Clarke P, Gray A, Adler A, Stevens R, Raikou M, Cull C, Stratton I, Holman R, UKPDS Group, United Kingdom Prospective Diabetes Study: Cost-effectiveness analysis of intensive blood-glucose control with metformin in overweight patients with type II diabetes (UKPDS No. 51). Diabetologia 44:298–304, 2001
23. UK Prospective Diabetes Study Group: Cost-effectiveness analysis of improved
blood pressure control in hypertensive patients with type 2 diabetes: UKPDS 40. BMJ 317:720–726, 1998.

24. Jonsson B, Cook JR, Pedersen TR: The cost-effectiveness of lipid lowering in patients with diabetes: results from the 4S trial. Diabetologia 42:1293–1301, 1999

25. CDC Diabetes Cost-Effectiveness Group: Cost-effectiveness of intensive glycemic control, intensified hypertension control, and serum cholesterol level reduction for type 2 diabetes. JAMA 287:2542–51, 2002

26. Danish National Health Board: Takstsystem 2005: Vejledning [article online], 2006. Available from www.sst.dk. Accessed 19 February 2007

27. Tengs TO, Wallace A: One thousand health-related quality-of-life estimates. Med Care 38:583–637, 2000

28. Bagust A, Beale S: Modelling EuroQol health-related utility values for diabetic complications from CODE-2 data. Health Econ 14:217–230, 2005

29. Scuffham PA, Chaplin S: A cost-effectiveness analysis of fluvastatin in patients with diabetes after successful percutaneous coronary intervention. Clin Ther 27:1467–1477, 2005

30. Author: Harvard Preference Scores 1998–2001 [article online], 2002. Available from http://www.hsph.harvard.edu/cearegistry/data/phaseIIpreferenceweights.pdf. Accessed 19 February 2007
Author/s:
Gaede, P; Valentine, WJ; Palmer, AJ; Tucker, DMD; Lammert, M; Parving, H-H; Pedersen, O

Title:
Cost-effectiveness of intensified versus conventional multifactorial intervention in type 2 diabetes: results and projections from the Steno-2 study.

Date:
2008-08

Citation:
Gaede, P., Valentine, W. J., Palmer, A. J., Tucker, D. M. D., Lammert, M., Parving, H. -H. & Pedersen, O. (2008). Cost-effectiveness of intensified versus conventional multifactorial intervention in type 2 diabetes: results and projections from the Steno-2 study.. Diabetes Care, 31 (8), pp.1510-1515. https://doi.org/10.2337/dc07-2452.

Persistent Link:
http://hdl.handle.net/11343/255458

File Description:
Published version

License:
CC BY-NC-ND