

Appendix Table 1: Cost Inputs		
	Default value (SEK)	Source
Direct costs		
Management costs		
Statins	936.1	TLV 2013 ¹
Aspirin	230.37	TLV 2013 ¹
ACE inhibitors	204.77	TLV 2013 ¹
Screening for microalbuminuria	323.59	Skåne, Södra regionvårdnämnden 2014 ²
Screening for gross proteinuria	323.59	Skåne, Södra regionvårdnämnden 2014 ²
Stopping ACE inhibitors due to side effects	1,426.59	Skåne, Södra regionvårdnämnden 2014 ²
Eye screening	824.5	Skåne, Södra regionvårdnämnden 2014 ²
Foot screening program	3,108.64	Skåne, Södra regionvårdnämnden 2014 ²
Cardiovascular complication costs		
Myocardial infarction, first year	141,066.01	Sigvant et al., 2011 ³
Myocardial infarction, second year plus	37,591.44	Sigvant et al., 2011 ³
Angina, first year	128,371.25	Sigvant et al., 2011 ³
Angina, second year plus	38,330.67	Sigvant et al., 2011 ³
Congestive heart failure, first year	70,717.03	Gerdtham et al., 2009 ⁴
Congestive heart failure, second year plus	6,689.73	Gerdtham et al., 2009 ⁴
Stroke, first year	116,926.81	Sigvant et al., 2011 ³
Stroke, second year plus	31,595.43	Sigvant et al., 2011 ³
Stroke death within 30 days	78,872.72	Gerdtham et al., 2009 ⁴
Peripheral vascular disease, first year	176,029.06	Sigvant et al., 2011 ³
Peripheral vascular disease, second year plus	52,604.29	Sigvant et al., 2011 ³
Renal complication costs		
Hemodialysis, first year	1,081,640.17	Sennfält et al., 2002 ⁵
Hemodialysis, second year plus	1,081,640.17	Sennfält et al., 2002 ⁵
Peritoneal dialysis, first year	883,213.24	Sennfält et al., 2002 ⁵
Peritoneal dialysis, second year plus	883,213.24	Sennfält et al., 2002 ⁵
Renal transplant, first year	288,364.65	Henriksson et al., 2002 ⁶
Renal transplant, second year plus	48,761.11	Henriksson et al., 2002 ⁶
Acute event costs		
SHE1	5,036.14	Jonsson et al., 2006; ⁷ Anderson et al., 2002; ⁸ DCCT, 1991 ⁹
SHE2	0.00	Assumption
NSHE	0.00	Assumption
Eye disease costs		
Laser treatment	6,240.33	Skåne, Södra regionvårdnämnden 2014 ²
Cataract operation	28,284.33	Skåne, Södra regionvårdnämnden 2014 ²
Following cataract operation	0	Goodall et al., 2008 ¹⁰

Blindness, year of onset	6,250.35	Palmer et al., 2008 ¹¹
Blindness, subsequent years	6,251.42	Palmer et al., 2008 ¹¹
Other costs		
Neuropathy, first year	41,876.64	Goodall et al., 2008 ¹⁰
Neuropathy, second year plus	0	Assumption (No data)
Amputation	68,418.34	Ghatnekar et al., 2001 ¹²
Amputation prosthesis	18,351.72	Ghatnekar et al., 2001 ¹²
Gangrene treatment	23,672.81	Ghatnekar et al., 2001 ¹²
After healed ulcer	59,960.91	Apelqvist et al., 1995 ¹³
Infected ulcer	15,832.26	Ghatnekar et al., 2001 ¹²
Standard uninfected ulcer	13,776.38	Ghatnekar et al., 2001 ¹²
Healed ulcer history of amputation	236,949.97	Apelqvist et al., 1995 ¹³

ACE = angiotensin converting-enzyme; DCCT = Diabetes Control and Complications Trial; NSHE = non-severe hypoglycaemic event; SEK = Swedish kroner; SHE = severe hypoglycaemic event; TLV = Tandvårds-Läkemedelförmedlånsverket

Appendix Table 2: Quality of Life Inputs

	Default Value	References/Assumptions
Utilities		
T1D, no complications	0.785	Clarke et al., 2002 ¹⁴
Post myocardial infarction	0.73	Clarke et al., 2002 ¹⁴
Angina	0.695	Clarke et al., 2002 ¹⁴
Congestive heart failure	0.677	Clarke et al., 2002 ¹⁴
Post stroke	0.621	Clarke et al., 2002 ¹⁴
Peripheral vascular disease	0.724	Bagust et al., 2005 ¹⁵
Microalbuminuria	0.785	Assumed to be asymptomatic
Gross proteinuria	0.737	Bagust et al., 2005 ¹⁵
Hemodialysis	0.621	Wasserfallen et al., 2004 ¹⁶
Peritoneal dialysis	0.581	Wasserfallen et al., 2004 ¹⁶
Renal transplant	0.762	Kiberd and Jindal, 1995 ¹⁷
Background diabetic retinopathy	0.745	Fenwick et al., 2012 ¹⁸
Background diabetic retinopathy, wrongly treated	0.745	Fenwick et al., 2012 ¹⁸
Proliferative diabetic retinopathy	0.715	Fenwick et al., 2012 ¹⁸
Proliferative diabetic retinopathy, no laser	0.715	Fenwick et al., 2012 ¹⁸
Macular edema	0.745	Fenwick et al., 2012 ¹⁸
Severe vision loss	0.711	Clarke et al., 2002 ¹⁴
Cataract	0.769	Lee et al., 2005 ¹⁹
Neuropathy	0.701	Bagust et al., 2005 ¹⁵
Healed ulcer	0.785	Assumed not to have impact on QoL
Active ulcer	0.615	Bagust et al., 2005 ¹⁵
Post amputation	0.505	Clarke et al., 2002 ¹⁴
Disutilities		
Myocardial infarction event disutility	-0.055	Clarke et al., 2002 ¹⁴
Stroke event disutility	-0.164	Clarke et al., 2002 ¹⁴
Amputation event disutility	-0.28	Clarke et al., 2002 ¹⁴
SHE1 (T1D), daytime or nighttime disutility	-0.0183	Marrett et al., 2011 ²⁰
SHE2 (T1D), daytime disutility	-0.055	Evans et al., 2013 ²¹
SHE2 (T1D), nighttime disutility	-0.057	Evans et al., 2013 ²¹
NSHE (T1D) disutility	Diminishing disutilities	Lauridsen et al 2014 ²²

NSHE = non-severe hypoglycaemic event; QoL = quality of life; SHE = severe hypoglycaemic event; T1D = type 1 diabetes; TLV = Tandvårds-Läkemedelförmånsverket.

References

1. Tandvårds-Och Läkemedelsförmånsverket (TLV). Sök i database [Drug database, in Swedish]. 2017. Available at: <http://www.tlv.se/beslut/sok/lakemedel/> (accessed 31 April 2013).
2. Skåne, Södra regionvårdsnämnden. Regionala priser och ersatningar för södra sjukvardsregionen 2014. Available at:
http://www.skane.se/Upload/Webbplatser/Sodra%20regionvardsnamnden/prislista/2014/hela_prislistan2014.pdf (accessed 2 March 2015).
3. Sigvant B, Henriksson M, Lundin F, Wahlberg E. Asymptomatic peripheral arterial disease: is pharmacological prevention of cardiovascular risk cost-effective? *Eur J Cardiovasc Prev Rehabil.* 2011;18:254–61.
4. Gerdtham UG, Clarke P, Hayes A, Gudbjornsdottir S. Estimating the cost of diabetes mellitus-related events from inpatient admissions in Sweden using administrative hospitalization data. *Pharmacoeconomics.* 2009;27:81–90.
5. Sennfält K, Magnusson M, Carlsson P. Comparison of hemodialysis and peritoneal dialysis – a cost utility analysis. *Perit Dial Int.* 2002;22:39–47.
6. Henriksson F. Applications of economic models in healthcare: the introduction of pioglitazone in Sweden. *Pharmacoeconomics.* 2002;20:43–53.
7. Jönsson L, Bolinder B, Lundkvist J. Cost of hypoglycemia in patients with Type 2 diabetes in Sweden. *Value Health.* 2006;9:193–8.
8. Anderson S, Høgskilde PD, Wetterslev J, et al. Appropriateness of leaving emergency medical service treated hypoglycaemic patients at home: a retrospective study. *Acta Anaesthesiol Scand.* 2002;46:464–8.

9. The DCCT Research Group. Epidemiology of severe hypoglycemia in the Diabetes Control and Complications Trial. *Am J Med*. 1991;90:450–9.
10. Goodall G, Jendle JH, Valentine WJ, et al. Biphasic insulin aspart 70/30 vs. insulin glargine in insulin naive type 2 diabetes patients: modelling the long-term health economic implications in a Swedish setting. *Int J Clin Pract*. 2008;62:869–76.
11. Palmer JL, Goodall G, Nielsen S, et al. Cost-effectiveness of insulin aspart versus human soluble insulin in type 2 diabetes in four European countries: subgroup analyses from the PREDICTIVE study. *Curr Med Res Opin*. 2008;24:1417–28.
12. Ghatnekar O, Persson U, Willis M, Odegaard K. Cost effectiveness of becaplermin in the treatment of diabetic foot ulcers in four European countries. *Pharmacoeconomics*. 2001;19:767–78.
13. Apelqvist J, Ragnarson-Tennvall G, Larsson J, Persson U. Long-term costs for foot ulcers in diabetic patients in a multidisciplinary setting. *Foot Ankle Int*. 1995;16:388–94.
14. Clarke P, Gray A, Holman R. Estimating utility values for health states of type 2 diabetic patients using the EQ-5D (UKPDS 62). *Med Decis Making*. 2002;22:340–9.
15. Bagust A, Beale S. Modelling EuroQol health-related utility values for diabetic complications from CODE-2 data. *Health Econ*. 2005;14:217–30.
16. Wasserfallen JB, Halabi G, Saudan P, et al. Quality of life on chronic dialysis: comparison between haemodialysis and peritoneal dialysis. *Nephrol Dial Transplant*. 2004;19:1594–9.
17. Kiberd BA, Jindal KK. Screening to prevent renal failure in insulin dependent diabetic patients: an economic evaluation. *BMJ*. 1995;311:1595–9.
18. Fenwick EK, Xie J, Ratcliffe J, et al. The impact of diabetic retinopathy and diabetic macular edema on health-related quality of life in type 1 and type 2 diabetes. *Invest Ophthalmol Vis Sci*. 2012;53:677–84.

19. Lee AJ, Morgan CL, Morrissey M, et al. Evaluation of the association between the EQ-5D index (health related utility) and body mass index (Obesity) in hospital-treated people with type 1 diabetes, type 2 diabetes and with no diagnosed diabetes. *Diabet Med.* 2005;22:1482–6.
 20. Marrett E, Radican L, Davies MJ, Zhang Q. Assessment of severity and frequency of self-reported hypoglycaemia on quality of life in patients with type 2 diabetes treated with oral antihyperglycaemic agents: a survey study. *BMC Res Notes.* 2011;4:251.
 21. Evans M, Khunti K, Mamdani M, et al. Health-related quality of life associated with daytime and nocturnal hypoglycaemic events: a time trade-off survey in five countries. *Health Qual Life Outcomes.* 2013;11:90.
 22. Lauridsen JT, Lønborg J, Gundgaard J, Jensen HH. Diminishing marginal disutility of hypoglycaemic events: results from a time trade-off survey in five countries. *Qual Life Res.* 2014;23:2645–50.
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