

Supplementary Data 4: Cost parameters

Table 4A Summary of the costs considered for each strategy

	No Testing	Ad Hoc Testing	Clinical Prediction Model Testing	Biomarker Testing	All Testing
Diabetes-specific consultations	○	○	○	○	○
Current treatment	○	○	○	○	○
HBGM on current treatment	○	○	○	○	○
Blood test (for genetic test or autoantibody testing)		○	○	○	○
UCPCR test				○	
Autoantibody test				○	
Genetic test		○	○	○	○
Treatment transfer assistance ^a		○	○	○	○
New treatment		○	○	○	○
HBGM on new treatment		○	○	○	○
Long-term management	○	○	○	○	○

^aIncludes telephone calls with nurse and visit(s) to GP for changes in treatment during 12 month follow-up. UCPCR, urinary c-peptide to creatinine ratio; HBGM, home blood glucose monitoring

Table 4B Costs of testing associated with the strategies

Cost	Value (£, 2018)	Source
GP nurse time for collecting blood sample	£6	10 minutes at £36 per 1hr GP nurse patient contact time ¹
Genetic test for GCK mutation	£350	Sanger sequence analysis from UK referral centre ²
Genetic test for HNF1/4A mutation	£450	Sanger sequence analysis from UK referral centre ²
Genetic test for known mutation	£100	Sanger sequence analysis from UK referral centre ²
Nurse time for successful treatment transfer	£24	Four 10 minute phone calls (expert opinion) at £36 per 1hr GP nurse patient contact time ¹
GP time for informing patient of genetic test result and treatment change	£28	Cost of GP consultation ¹
UCPCR pack	£3.90	Postage
UCPCR test	£10.50	RD&E laboratory ²
Autoantibody test	£20	RD&E laboratory ²

UCPCR, urinary c-peptide to creatinine ratio

Table 4C Cost estimates (£, 2018) used in the IMS CDM model

Event	Cost (£, 2018)	Source
CVD complications		
Myocardial infarction (MI) in 1st year of MI	£7,550	Clarke ³
Second and subsequent yrs after an MI	£1,250	Clarke ³
Angina in 1st year of angina	£250	Ward ⁴
Second and subsequent yrs after an angina	£200	Ward ⁴
Congestive heart failure (CHF) in 1st year of CHF	£3,500	Clarke ⁵
Second and subsequent yrs after a CHF	£500	Clarke ⁵
Stroke in 1st year of stroke	£4,600	Clarke ³
Second and subsequent yrs after a stroke	£850	Clarke ³
Stroke death within 30 days of stroke	£6,350	Clarke ³
Peripheral vascular disease (PVD) in 1st year of PVD	£1,150	Clarke ⁵
Second and subsequent yrs after a PVD	£450	Clarke ⁵
Renal complications		
Hemodialysis in 1st year of needing hemodialysis	£43,500	Baboolal ⁶
Hemodialysis in second & subsequent yrs of needing hemodialysis	£43,500	Baboolal ⁶
Peritoneal dialysis in 1st year of needing peritoneal dialysis	£24,250	Baboolal ⁶
Peritoneal dialysis in second & subsequent yrs of needing peritoneal dialysis	£24,250	Baboolal ⁶
Renal transplant in 1st year of needing renal transplant	£13,100	NHS Schedule Reference costs ⁷ ; Wight ⁸
Renal transplant in second & subsequent yrs of needing renal transplant	£7,050	Wight ⁸
Acute events		
Major hypoglycaemic event	£200	Hammer ⁹
Minor hypoglycaemic event	£0	Would not require medical assistance
Ketoacidosis event	£1,250	Scuffham ¹⁰
Lactic acid event	£2,500	Curtis ¹¹
Edema onset	£50	Curtis ¹¹
Edema follow-up	£0	Assume no follow-up
Eye disease		
Laser treatment	£100	NHS Schedule Reference costs ⁷
Cataract operation	£800	NHS Schedule Reference costs ⁷
Following cataract operation	£550	Clarke ³
Blindness in the yr of onset	£7,250	Mitchell ¹²
Blindness in the following yrs	£7,250	Mitchell ¹²
Neuropathy/foot ulcer		
Neuropathy in the first yr	£150	BNF ¹³
Neuropathy in subsequent yrs	£150	BNF ¹³
Amputation (one-off cost)	£7,950	Kerr ¹⁴

Amputation prosthesis (one-off cost)	£3,200	Kerr ¹⁴
Gangrene treatment	£2,700	
After a healed ulcer	£0	Assumption
Infected ulcer	£4,050	Kerr ¹⁴
Standard uninfected ulcer	£4,050	Kerr ¹⁴
Healed ulcer in those with an amputation history	£0	Assumption
Other		
Statins	£0	NICE guidance and BNF ¹³
Aspirin	£0	NICE guidance and BNF ¹³
Angiotensin-converting enzyme (ACE)	£0	BNF
Screening for microalbuminuria	£0	NICE ¹⁵
Screening for gross proteinuria	£0	Assume as for MA
Stopping ACEs due to side effects	£0	Assumptions
Eye screening	£50	NICE ¹⁵
Foot screening programme	£100	NICE ¹⁶ and Curtis ¹⁷
Non-standard ulcer treatment (e.g. Regranex)	£0	Assumptions
Anti-depression treatment	£0	Assumptions
Screening for depression	£0	Assumptions

Table 4D Annual number of primary care consultations (taken from Currie et al 2010¹⁸)

Type of consultation	Type 1	Type 2	Type 1 control	Type 2 control	Cost per consultation
GP surgery	7.3	8.7	4.5	5.4	£34
GP home visit	0.3	0.6	0.1	0.4	£41
GP telephone	0.5	0.7	0.3	0.4	£20
Community nurse clinic	0.9	1.5	0.3	0.6	£12
Total cost	£278	£349	£165	£213	
Additional cost over controls	£113	£136			

References

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