Health Utilities of Type 2 Diabetes-Related Complications: A Cross-Sectional Study in Sweden

The EQ-5D questionnaires were sent to 4760 patients with type 1 and type 2 diabetes 3089 questionnaires were returned 115 questionnaires were excluded as duplicates from the same patient 2947 patients with answers to EQ-5D questionnaire 1020 patients had type 1 diabetes and were excluded. 1927 patients with type 2 diabetes eligible to be included Excluded; -No data on history of events (n = 168)-age at diagnosis < 25 1757 patients with type 2 diabetes were included in the final analysis

Figure S1. Flow diagram of sample selection in the study.

Table S1. Comparison of included and excluded subjects in terms of baseline characteristics.

Variable	Included (n = 1757)	Excluded (n = 170)	p Value of Difference
Age	66.1 (8.8)	64.0 (11.0)	0.004
Age at diagnosis	56.5 (9.4)	58.4 (11.8)	0.02
Diabetes duration	9.5 (7.1)	5.2 (7.9)	< 0.001
Women (%)	43.3	48.2	0.21
BMI	30.0	30.0	0.71
EQ-5D index score	0.77 (0.3)	0.78 (0.3)	0.58

Table S2. Effect of diabetes-related complications on EQ-5D scores over time: results from the UK tariff.

Variable	Model 1	Model 2	Model 3		Model 4	
	Coefficients ^a	Coefficients b	Coefficients c	Equality of Coefficients d	Coefficients c	Equality of Coefficients d
Time since last macrovascular event						
Continuous (year)	0.0066 ***					
No event (ref)						
≤1 year			-0.0792 ***	0.18		
2–5 years			-0.1203 ***			
>5 years			-0.0517 **			
Time since last microvascular event						
Continuous (year)		0.0134 *				
No event (ref)						
≤1 year			-0.0978 *	0.91		
2–5 years			-0.0884			
>5 years			-0.0679			
Time since last AMI						
No event (ref)						
≤1 year					0.0674	0.13
2-5 years					0.0025	
>5 years					-0.0314	
Time since last stroke						
No event (ref)						
≤1 year					-0.0962 **	0.18
2-5 years					-0.2212 ***	
>5 years					-0.0708	
Time since last HF						
No event (ref)						
≤1 year					-0.0128	0.03
2–5 years					-0.2193 ***	
>5 years					-0.0296	

Table S2. Cont.

Variable	Model 1	Model 2	Model 3		Model 4		
	Coefficients ^a	Coefficients b	Coefficients c	Equality of Coefficients d	Coefficients c	Equality of Coefficients ^d	
Time since last NAIHD							
No event (ref)							
≤1 year					-0.0717 **	0.80	
2–5 years					-0.0622 *		
>5 years					-0.0451		
Time since last kidney disorders							
No event (ref)							
≤1 year					-0.1624 **	0.50	
2–5 years					-0.1629 **		
>5 years					-0.0656		
Time since last retinopathy							
No event (ref)							
≤1 year					-0.0329	0.64	
2–5 years					0.0248		
>5 years					-0.0224		
R	0.04	0.17	0.06		0.08		
N	425	87	1757		1757		

*,***,***: significant at 10%, 5%, and 1%, respectively. ^a Additionally adjusted for gender, age at diagnosis, BMI, duration of diabetes, treatment, and history of microvascular complications. ^b Additionally adjusted for gender, age at diagnosis, BMI, duration of diabetes, treatment, and history of macrovascular complications. ^c Additionally adjusted for gender, age at diagnosis, BMI, duration of diabetes, and treatment. ^d We used the *test* command in STATA to check if the estimated coefficients were significantly different.

Table S3. Factors associated with variation in EQ-5D score: results from the Swedish tariff.

Variable	Wo	omen	M	len	Total	
Variable	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Constant	0.8692 ***	0.8666 ***	0.9048 ***	0.9050 ***	0.8991 ***	0.8974 ***
Female gender	NA	NA	NA	NA	-0.0266 ***	-0.0260 ***
Age at diagnosis	0.0004	0.0004	0.0008 *	0.0009 *	0.0006 *	0.0006 *
Diabetes duration	-0.0005	-0.0007	-0.0006	-0.0004	-0.0006	-0.0005
BMI	-0.0030 ***	-0.0030 ***	-0.0024 ***	-0.0023 ***	-0.0027 ***	-0.0027 ***
History of macrovascular events	-0.0338 **		-0.0478 ***		-0.0430 ***	
History of microvascular events	-0.0702 ***		-0.0118		-0.0348 **	
AMI history		-0.0003		-0.0182		-0.0119
Stroke history		-0.0551 ***		-0.0635 ***		-0.0590 ***
HF history		-0.0294	-0.0514 **			-0.0422 ***
NAIHD history		-0.0217	-0.0270 **			-0.0249 ***
Kidney disorders history		-0.1036 ***	0.0076			-0.0406*
Retinopathy history		0.0004	-0.0211			-0.0103
Treatment						
Diet (ref)						
OHA	0.0046	0.0068	-0.0080	-0.0084	-0.0009	0.0000
Insulin \pm OHA	0.0038	0.0065	-0.0045	-0.0048	0.0009	0.0020
R-squared	0.06	0.07	0.06	0.07	0.06	0.07
N	760	760	997	997	1757	1757

*,**,***: significant at 10%, 5%, and 1%, respectively.

Table S4. Effect of single and multiple events on EQ-5D score: results from the Swedish tariff.

Variable		Model 1	Model 2			
	Coefficients ^a	Equality of coefficients b	Coefficients ^a	Equality of coefficients b		
Macrovascular events						
No (ref)						
Single	-0.0314 ***	0.12				
Multiple	-0.0505 ***					
Microvascular events						
No (ref)						
Single	-0.0311	0.84				
Multiple	-0.0364 **					
AMI						
No (ref)						
Single			-0.0113	0.97		
Multiple			-0.0121			
Stroke						
No (ref)						
Single			-0.0460 ***	0.05		
Multiple			-0.1217 ***			
NAIHD						
No (ref)						
Single			-0.0035	0.05		
Multiple			-0.0352 ***			

^{**,***:} significant at 5%, and 1%, respectively. ^a Additionally adjusted for gender, age at diagnosis, BMI, duration of diabetes, treatment, history of heart failure, retinopathy, and kidney disorders. ^b We used the test command in STATA to check if the estimated coefficients were significantly different.

Table S5. Effect of diabetes-related complications on EQ-5D scores over time: results from the Swedish tariff.

Variable	Model 1	Model 2		Model 3		Model 4
	Coefficients ^a	Coefficients b	Coefficients c	Equality of coefficients d	Coefficients c	Equality of coefficients d
Time since last macrovascular event	0.0032 ***					
Continuous (year)						
No event (ref)						
≤1 year			-0.0479 ***	0.16		
2–5 years			-0.0556 ***			
>5 years			-0.0283 **			
Time since last microvascular event		0.0042				
Continuous (year)						
No event (ref)						
≤1 year			-0.0239	0.76		
2–5 years			-0.0354			
>5 years			-0.0475 **			
Time since last AMI						
No event (ref)						
≤1 year					0.0110	0.42
2–5 years					0.0084	
>5 years					-0.0135	
Time since last stroke						
No event (ref)						
≤1 year					-0.0696 ***	0.44
2–5 years					-0.0848 ***	
>5 years					-0.0429 **	

Table S5. Cont.

Variable	Model 1	Model 2		Model 3		Model 4
Variable	Coefficients a	Coefficients b	Coefficients c	Equality of coefficients d	Coefficients c	Equality of coefficients ^d
Time since last HF						
No event (ref)						
≤1 year					-0.0114	0.01
2–5 years					-0.1123 ***	
>5 years					-0.0196	
Time since last NAIHD						
No event (ref)						
≤1 year					-0.0290 **	0.88
2–5 years					-0.0318 **	
>5 years					-0.0224 *	
Time since last kidney disorders						
No event (ref)						
≤1 year					-0.0459	0.94
2–5 years					-0.0615 *	
>5 years					-0.0465	
Time since last retinopathy						
No event (ref)						
≤1 year					0.0063	0.52
2–5 years					-0.0046	
>5 years					-0.0358	
R	0.05	0.17	0.07		0.09	
N	425	87	1757		1757	

^{*,**,***:} significant at 10%, 5%, and 1%, respectively. ^a Additionally adjusted for gender, age at diagnosis, BMI, duration of diabetes, treatment, and history of microvascular complications. ^b Additionally adjusted for gender, age at diagnosis, BMI, duration of diabetes, treatment, and history of macrovascular complications. ^c Additionally adjusted for gender, age at diagnosis, BMI, duration of diabetes, and treatment. ^d We used the *test* command in STATA to check if the estimated coefficients were significantly different.

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