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Supplementary Table 1. Association between key variables and markers of good quality of care (intermediate outcome measures): Sensitivity analysis with country included as a fixed instead of a random effect

Potential predictor	Odds ratio [95% confidence limits], p value for total sample for associations between adherence to quality of care markers and potential predictors			
	HbA1c<7%	BP<130/80 mmHg	LDL <2.6 mmol/l	All 3 targets met
Age	1.01 [1.00,1.02], p<0.01	1.00 [0.99,1.00], p=0.16	1.01 [1.00,1.01], p<0.01	1.00 [0.99,1.01], p=0.68
Any diabetes medication (oral or injected)	0.19 [0.15,0.24], p<0.01	n/a	n/a	0.91 [0.65,1.27], p=0.59
Any BP lowering medication	n/a	0.62 [0.53,0.73], p<0.01	n/a	0.74 [0.56,0.97], p=0.03
Any lipid lowering medication	n/a	n/a	2.94 [2.60,3.34], p<0.01	1.69 [1.26,2.20], p<0.01
Current smoker	0.79 [0.67,0.93], p=0.01	1.17 [0.98,1.41], p=0.08	0.99 [0.83,1.18], p=0.88	1.01 [0.73,1.39], p=0.97
Glucose monitoring (blood or urine)	0.63 [0.55,0.71], p<0.01	1.09 [0.94,1.25], p=0.26	1.15 [1.01,1.31], p=0.03	0.84 [0.66,1.07], p=0.15
Male gender	1.07 [0.9607,1.19], p=0.23	0.86 [0.75,0.97], p=0.01	1.33 [1.19,1.50], p<0.01	1.00 [0.80,1.24], p=0.99
One or more microvascular complication	0.72 [0.63,0.82], p<0.01	0.87 [0.74,1.01], p=0.07	1.02 [0.88,1.18], p=0.79	0.92 [0.70,1.22], p=0.56
One or more macrovascular complication	0.98 [0.87,1.11], p=0.78	1.51 [1.30,1.74], p<0.01	1.15 [1.00,1.32], p=0.05	1.32 [1.03,1.70], p=0.03
Recruitment from primary care	1.21 [0.92,1.59], p=0.17	0.82 [0.60,1.10], p=0.18	0.78 [0.59,1.04], p=0.09	0.94 [0.60,1.48], p=0.79
BMI	0.98 [0.96,0.99], p<0.01	0.98[0.96,0.99], p<0.01	1.01 [1.00,1.02], p=0.08	0.96 [0.94,0.99], p<0.01
Years diagnosed with diabetes	0.95 [0.94,0.96], p<0.01	1.00 [0.99,1.01], p=0.44	1.01 [1.00,1.02], p=0.02	0.98 [0.95,1.00], p=0.03

Notes: microvascular complications = foot sensation abnormal; blindness or retinopathy present; end stage renal disease. Macrovascular complications = ischaemic heart disease; stroke; peripheral arterial disease (including non-palpable dorsal and/or tibial pulses); amputation. All cases from The Netherlands and Sweden recruited from primary care.

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Supplementary Table 2. Association between key variables and markers of good quality of care (intermediate outcome measures) in individual countries participating in the GUIDANCE study.

	Odds ratio [95% confidence limits], p value for total sample for associations between adherence to quality of care markers and potential predictors			
Potential predictor	HbA1c<7%	BP<130/80 mmHg	LDL < 2.6 mmol/l	All 3 targets met
Belgium				
Age	1.01 [0.99,1.02], p=0.24	1.01 [0.99,1.03], p=0.45	1.01 [0.99,1.02], p=0.34	--*
Any diabetes medication (oral or injected)	0.19 [0.05,0.67], p=0.01	n/a	n/a	--*
Any BP lowering medication	n/a	0.95 [0.59,1.51], p=0.82	n/a	--*
Any lipid lowering medication	n/a	n/a	3.22 [2.38,4.37], p<0.01	--*
Current smoker	1.00 [0.64,1.55], p=0.99	1.25 [0.75,2.10], p=0.39	0.58 [0.37,0.89], p=0.01	--*
Glucose monitoring (blood or urine)	0.59 [0.44,0.80], p<0.01	1.18 [0.80,1.72], p=0.41	1.51 [1.11,2.05], p<0.01	--*
One or more macrovascular complication	1.07 [0.77,1.48], p=0.69	0.90 [0.60,1.35], p=0.60	1.08 [0.78,1.50], p=0.65	--*
Male gender	1.13 [0.85,1.51], p=0.39	1.23 [0.86,1.75], p=0.26	1.24 [0.93,1.65], p=0.14	--*
One or more microvascular complication	0.53 [0.35,0.80], p<0.01	1.31 [0.79,2.16], p=0.30	0.95 [0.61,1.47], p=0.81	--*
Recruitment from primary care	4.72 [1.35,16.5], p=0.02	0.59 [0.15,2.36], p=0.46	0.56 [0.18,1.78], p=0.33	--*
BMI	0.98 [0.95,1.01], p=0.20	0.98 [0.94,1.02], p=0.40	0.99 [0.96,1.02], p=0.55	--*
Years diagnosed with diabetes	0.96 [0.94,0.98], p<0.01	1.00 [0.98,1.03], p=0.82	1.02 [1.00,1.04], p=0.09	--*
France				
Age	1.02 [1.00,1.04], p=0.01	0.99 [0.97,1.01], p=0.17	1.02 [1.00,1.03], p=0.03	--*
Any diabetes medication (oral or injected)	0.88 [0.15,5.14], p=0.89	n/a	n/a	--*
Any BP lowering medication	n/a	0.50 [0.32,0.79], p<0.01	n/a	--*
Any lipid lowering medication	n/a	n/a	2.46 [1.78,3.39], p<0.01	--*
Current smoker	0.93 [0.58,1.51], p=0.78	0.87 [0.47,1.61], p=0.65	1.13 [0.69,1.85], p=0.63	--*
Glucose monitoring (blood or urine)	0.57 [0.42,0.78], p<0.01	1.36 [0.91,2.03], p=0.14	1.06 [0.79,1.42], p=0.71	--*
One or more macrovascular complication	1.02 [0.72,1.46], p=0.90	1.32 [0.83,2.09], p=0.24	1.20 [0.84,1.71], p=0.32	--*
Male gender	1.13 [0.84,1.51], p=0.43	0.93 [0.64,1.37], p=0.72	1.29 [0.97,1.72], p=0.08	--*
One or more microvascular complication	0.44 [0.30,0.67], p<0.01	0.78 [0.44,1.37], p=0.38	1.24 [0.81,1.89], p=0.32	--*
Recruitment from primary care	2.46 [0.79,7.61], p=0.12	0.61 [0.15,2.47], p=0.49	0.72 [0.26,1.98], p=0.53	--*
BMI	0.98 [0.95,1.00], p=0.10	0.96 [0.93,1.00], p=0.03	1.01 [0.98,1.03], p=0.69	--*
Years diagnosed with diabetes	0.96 [0.94,0.99], p<0.01	1.01 [0.98,1.04], p=0.56	0.99 [0.97,1.01], p=0.48	--*
Germany				
Age	1.00 [0.98,1.02], p=0.93	0.99 [0.96,1.02], p=0.56	1.01 [0.98,1.03], p=0.54	--*
Any diabetes medication (oral or injected)	0.34 [0.20,0.60], p<0.01	n/a	n/a	--*
Any BP lowering medication	n/a	0.54 [0.25,1.16], p=0.11	n/a	--*
Any lipid lowering medication	n/a	n/a	2.56 [1.73,3.79], p<0.01	--*
Current smoker	0.94 [0.56,1.59], p=0.83	1.64 [0.75,3.60], p=0.22	1.21 [0.64,2.32], p=0.59	--*
Glucose monitoring (blood or urine)	0.51 [0.36,0.73], p<0.01	0.80 [0.44,1.45], p=0.46	1.19 [0.76,1.86], p=0.44	--*

One or more macrovascular complication	1.24 [0.88,1.76], p=0.22	1.92 [1.05,3.52], p=0.03	1.41 [0.90,2.21], p=0.14	--*
Male gender	0.91 [0.67,1.22], p=0.52	0.89 [0.53,1.50], p=0.67	1.79 [1.22,2.62], p<0.01	--*
One or more microvascular complication	0.67 [0.46,0.98], p=0.04	1.20 [0.63,2.27], p=0.59	0.93 [0.57,1.54], p=0.79	--*
Recruitment from primary care	2.90 [1.13,7.43], p=0.03	0.93 [0.20,4.21], p=0.92	0.64 [0.17,2.41], p=0.51	--*
BMI	0.97 [0.94,1.00], p=0.04	0.97 [0.92,1.03], p=0.33	0.99 [0.95,1.03], p=0.52	--*
Years diagnosed with diabetes	0.95 [0.92,0.97], p<0.01	0.99 [0.95,1.03], p=0.71	0.99 [0.96,1.03], p=0.70	--*
Ireland				
Age	1.01 [1.00,1.03], p=0.12	0.98 [0.96,1.00], p=0.01	1.02 [1.01,1.04], p=0.01	0.99 [0.97,1.01], p=0.44
Any diabetes medication (oral or injected)	0.17 [0.09,0.32], p<0.01	n/a	n/a	0.67 [0.35,1.30], p=0.24
Any BP lowering medication	n/a	0.95 [0.60,1.49], p=0.81	n/a	1.06 [0.54,2.08], p=0.88
Any lipid lowering medication	n/a	n/a	2.79 [1.85,4.21], p<0.01	0.86 [0.46,1.61], p=0.64
Current smoker	0.80 [0.52,1.21], p=0.29	1.33 [0.85,2.08], p=0.21	1.22 [0.73,2.05], p=0.45	0.94 [0.47,1.88], p=0.86
Glucose monitoring (blood or urine)	0.91 [0.53,1.57], p=0.73	1.10 [0.60,2.01], p=0.77	0.92 [0.47,1.78], p=0.80	0.53 [0.24,1.16], p=0.11
One or more macrovascular complication	0.77 [0.54,1.10], p=0.15	1.34 [0.91,1.98], p=0.14	0.93 [0.60,1.43], p=0.73	0.93 [0.52,1.69], p=0.82
Male gender	0.87 [0.64,1.18], p=0.37	0.91 [0.65,1.27], p=0.59	1.32 [0.93,1.88], p=0.12	0.68 [0.42,1.10], p=0.12
One or more microvascular complication	0.93 [0.61,1.40], p=0.72	1.13 [0.72,1.75], p=0.60	1.41 [0.83,2.39], p=0.20	1.39 [0.74,2.60], p=0.31
Recruitment from primary care	0.84 [0.53,1.34], p=0.47	0.84 [0.51,1.37], p=0.48	0.71 [0.46,1.08], p=0.12	0.69 [0.37,1.29], p=0.25
BMI	0.98 [0.96,1.01], p=0.26	0.97 [0.94,1.00], p=0.05	1.02 [0.98,1.05], p=0.29	0.95 [0.91,1.00], p=0.03
Years diagnosed with diabetes	0.94 [0.91,0.97], p<0.01	1.03 [1.00,1.06], p=0.06	1.01 [0.98,1.04], p=0.57	0.99 [0.94,1.03], p=0.58
Italy				
Age	1.00 [0.98,1.02], p=0.94	1.01 [0.99,1.03], p=0.49	1.00 [0.98,1.02], p=0.84	1.02 [0.96,1.08], p=0.57
Any diabetes medication (oral or injected)	0.20 [0.11,0.39], p<0.01	n/a	n/a	0.74 [0.14,3.87], p=0.72
Any BP lowering medication	n/a	0.53 [0.35,1.80], p<0.01	n/a	0.51 [0.14,1.84], p=0.31
Any lipid lowering medication	n/a	n/a	2.10 [1.51,2.91], p<0.01	0.84 [0.29,2.42], p=0.74
Current smoker	0.76 [0.48,1.20], p=0.23	1.32 [0.81,2.17], p=0.27	0.63 [0.37,1.07], p=0.09	1.26 [0.25,6.27], p=0.78
Glucose monitoring (blood or urine)	0.67 [0.47,0.97], p=0.03	1.03 [0.67,1.58], p=0.89	1.17 [0.76,1.78], p=0.48	0.81 [0.23,2.82], p=0.74
One or more macrovascular complication	0.91 [0.65,1.27], p=0.57	1.37 [0.93,2.02], p=0.11	1.59 [1.10,2.29], p=0.01	2.12 [0.64,7.06], p=0.22
Male gender	1.43 [1.07,1.92], p=0.02	0.69 [0.49,0.96], p=0.03	1.21 [0.88,1.67], p=0.24	0.78 [0.28,2.19], p=0.64
One or more microvascular complication	0.70 [0.50,1.00], p=0.05	0.81 [0.54,1.20], p=0.29	1.01 [0.69,1.47], p=0.96	0.98 [0.29,3.35], p=0.97
Recruitment from primary care	0.83 [0.51,1.35], p=0.45	0.60 [0.25,1.47], p=0.27	1.13 [0.60,2.14], p=0.70	0.62 [0.07,5.21], p=0.66
BMI	0.97 [0.94,1.00], p=0.03	1.01 [0.97,1.04], p=0.75	1.01 [0.98,1.05], p=0.61	0.96 [0.85,1.07], p=0.45
Years diagnosed with diabetes	0.95 [0.93,0.97], p<0.01	1.00 [0.98,1.02], p=0.94	1.02 [1.00,1.04], p=0.10	0.97 [0.90,1.05], p=0.45
The Netherlands				
Age	1.00 [0.98,1.01], p=0.81	0.99 [0.97,1.01], p=0.29	0.99 [0.98,1.01], p=0.44	0.99 [0.97,1.02], p=0.60
Any diabetes medication (oral or injected)	0.11 [0.05,0.23], p<0.01	n/a	n/a	1.53 [0.77,3.06], p=0.23
Any BP lowering medication	n/a	0.58 [0.40,0.84], p<0.01	n/a	0.74 [0.43,1.26], p=0.27
Any lipid lowering medication	n/a	n/a	4.39 [3.16,6.08], p<0.01	2.48 [1.30,4.74], p<0.01
Current smoker	0.59 [0.38,0.90], p=0.01	0.76 [0.47,1.22], p=0.25	1.44 [0.94,2.22], p=0.10	1.01 [0.53,1.94], p=0.97
Glucose monitoring (blood or urine)	0.49 [0.36,0.66], p<0.01	0.89 [0.64,1.24], p=0.50	1.03 [0.78,1.38], p=0.82	0.81 [0.50,1.31], p=0.39
One or more macrovascular complication	1.03 [0.72,1.47], p=0.87	1.61 [1.11,2.35], p=0.01	1.08 [0.77,1.52], p=0.64	1.66 [0.97,2.82], p=0.06
Male gender	0.92 [0.68,1.26], p=0.62	0.82 [0.60,1.14], p=0.24	1.43 [1.08,1.90], p=0.01	0.89 [0.56,1.43], p=0.63

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One or more microvascular complication	1.04 [0.68,1.57], p=0.87	1.02 [0.66,1.58], p=0.93	1.16 [0.78,1.73], p=0.46	0.93 [0.49,1.76], p=0.82
Recruitment from primary care	n/a	n/a	n/a	n/a
BMI	0.97 [0.94,1.00], p=0.03	0.97 [0.93,1.00], p=0.08	1.02 [0.99,1.05], p=0.13	0.95 [0.91,1.00], p=0.07
Years diagnosed with diabetes	0.95 [0.91,0.99], p<0.01	1.00 [0.96,1.04], p=0.88	1.01 [0.97,1.05], p=0.63	0.95 [0.90,1.02], p=0.15
Sweden				
Age	1.01 [0.99,1.03], p=0.25	0.99 [0.97,1.01], p=0.47	1.01 [0.98,1.03], p=0.63	0.98 [0.94,1.04], p=0.56
Any diabetes medication (oral or injected)	0.23 [0.11,0.48], p<0.01	n/a	n/a	0.49 [0.13,1.90], p=0.30
Any BP lowering medication	n/a	0.46 [0.27,0.79], p<0.01	n/a	0.76 [0.21,2.80], p=0.68
Any lipid lowering medication	n/a	n/a	3.38 [1.99,5.74], p<0.01	4.33 [1.11,16.9], p=0.04
Current smoker	0.77 [0.43,1.35], p=0.36	1.25 [0.69,2.24], p=0.46	1.24 [0.60,2.57], p=0.55	0.91 [0.20,4.11], p=0.90
Glucose monitoring (blood or urine)	0.58 [0.36,0.95], p=0.03	0.87 [0.54,1.40], p=0.57	1.13 [0.66,1.95], p=0.66	1.14 [0.36,3.56], p=0.82
One or more macrovascular complication	1.01 [0.63,1.63], p=0.97	2.13 [1.29,3.52], p<0.01	1.36 [0.76,2.42], p=0.30	1.72 [0.58,5.03], p=0.33
Male gender	1.19 [0.79,1.80], p=0.40	0.98 [0.64,1.52], p=0.94	1.27 [0.79,2.06], p=0.33	1.40 [0.51,3.82], p=0.52
One or more microvascular complication	1.19 [0.79,1.80], p=0.40	0.60 [0.38,0.96], p=0.03	1.06 [0.63,1.78], p=0.82	1.01 [0.36,2.83], p=0.98
Recruitment from primary care	n/a	n/a	n/a	n/a
BMI	0.98 [0.93,1.03], p=0.36	0.96 [0.91,1.01], p=0.10	1.04 [0.98,1.09], p=0.20	0.96 [0.86,1.07], p=0.46
Years diagnosed with diabetes	0.94 [0.91,0.97], p<0.01	1.01 [0.97,1.04], p=0.69	1.04 [1.00,1.08], p=0.05	1.02 [0.93,1.11], p=0.68
UK				
Age	1.02 [1.00,1.03], p=0.03	1.00 [0.99,1.02], p=0.51	1.02 [1.00,1.03], p=0.05	1.03 [1.00,1.05], p=0.04
Any diabetes medication (oral or injected)	0.17 [0.11,0.29], p<0.01	n/a	n/a	0.73 [0.39,1.38], p=0.34
Any BP lowering medication	n/a	0.59 [0.41,0.85], p<0.01	n/a	0.54 [0.29,1.01], p=0.05
Any lipid lowering medication	n/a	n/a	3.62 [2.40,5.44], p<0.01	2.98 [1.14,7.75], p=0.03
Current smoker	0.70 [0.44,1.12], p=0.14	1.42 [0.90,2.23], p=0.13	0.93 [0.55,1.59], p=0.80	1.27 [0.58,2.81], p=0.55
Glucose monitoring (blood or urine)	0.97 [0.71,1.32], p=0.83	1.45 [1.04,2.02], p=0.03	1.19 [0.83,1.72], p=0.34	1.08 [0.64,1.87], p=0.79
One or more macrovascular complication	0.95 [0.66,1.37], p=0.79	2.12 [1.48,3.03], p<0.01	0.90 [0.58,1.40], p=0.64	1.91 [1.09,3.37], p=0.02
Male gender	1.03 [0.77,1.37], p=0.87	0.67 [0.50,0.91], p=0.01	1.35 [0.95,1.91], p=0.10	1.05 [0.62,1.78], p=0.85
One or more microvascular complication	0.96 [0.71,1.29], p=0.76	0.69 [0.50,0.95], p=0.02	0.79 [0.55,1.13], p=0.20	0.76 [0.44,1.30], p=0.32
Recruitment from primary care	1.10 [0.72,1.68], p=0.66	0.93 [0.64,1.34], p=0.69	0.90 [0.57,1.44], p=0.67	1.06 [0.49,2.28], p=0.89
BMI	0.98 [0.95,1.00], p=0.08	0.98 [0.96,1.01], p=0.18	1.03 [1.00,1.06], p=0.05	0.99 [0.95,1.04], p=0.71
Years diagnosed with diabetes	0.96 [0.93,0.98], p<0.01	1.00 [0.97,1.02], p=0.73	1.03 [1.00,1.07], p=0.07	0.96 [0.91,1.01], p=0.13

* = no convergence obtained

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Supplementary Table 3. Organisation of care including costs to patients, for people with type 2 diabetes (at the time of the GUIDANCE study) in participating countries

Anecdotal information about the organisation of care in participating countries at the time of the study (provided by GUIDANCE study collaborators in participating countries at the conclusion of the study):

Belgium
Patients on oral treatment only were managed in primary care, but specialist care providers assumed the main responsibility for care of patients on 2 or more insulin injections per day (although patients might still also see their primary care physician). With the introduction of care trajectories in September 2009, however, primary care physicians took on greater responsibility for the treatment of patients who were not controlled on oral treatment only. Consultations and monitoring supplies were free of charge. A 'diabetes passport' system provided no-cost access to a limited number of dietician and podiatrist consultations. Other fees were reimbursed under a system of co-payment, up to a maximum amount per year depending on family income.

France
The majority of people with diabetes were managed in primary care. Most patients were referred to specialist care for insulin initiation. Consultations and medication costs (including monitoring supplies) were covered by national health system

Germany
Patients could choose whether they wished to be managed in primary or specialist care. The majority were seen in primary care, unless they had problems associated with treatment or high levels of complications. Patients contributed (at fixed levels) to the cost of consultations, medication and monitoring supplies, but those on low income could apply for costs to be covered by government funding. Since 2002, a disease management programme for diabetes has been implemented, which provides additional remuneration for physician and patient involvement in the quality assurance process.

Ireland
Primary care providers did not receive additional reimbursement for managing people with diabetes, so care was delivered mainly in specialist care, with some input from primary care doctors. Medications and monitoring supplies were provided free of charge to people with diabetes.

Italy
Approximately 50% of those with type 2 diabetes were seen in specialist care clinics. Consultations and tests for type 2 diabetes were free to patients; insulin and oral agents (except acarbose) were free. Monitoring strips were provided free at locally agreed level, if prescribed by a doctor.

The Netherlands
Management was based on national guidelines, including criteria for referral to specialist care, for example, because of poor control of blood glucose, blood pressure or lipids. Most patients (approx 80%) were managed in primary care, including checks by practice nurses. Patients were provided with the following free of charge: 3-monthly reviews, all prescribed medication, self-monitoring supplies for those on insulin or maximum oral medication, foot care (for those meeting set criteria) and dietician referral. Weight reduction programmes were provided only for those with additional insurance.

Sweden
Care organised was at 'county' level, with less than 10% managed in specialist care. Organisation of primary care was undergoing major changes at time of study. A fee for hospital and primary care visits applied, up to a maximum amount per year; insulin was free of charge and there was a maximum annual payment for other prescribed medications.

UK
The majority of patients with type 2 diabetes were managed in primary care, with referral to specialist care based on clinical judgement of primary care doctors and local guidance. Primary and secialist care consultations were funded by the National Health Service and prescribed medication was free for people with diabetes. This included monitoring supplies if prescribed by a physician; other patients could choose to buy these themselves if not prescribed.