Supplementary table 1 Definition of health conditions				
Health condition	ICPC-2	ICD-9-CM		
Type II diabetes mellitus	Т90	NΔ		

Health condition	ICPC-2	ICD-9-CM	Others
Type II diabetes mellitus	T90	NA	NA
Cardiovascular diseases	K74-77, K89-91	410.x-414.x, 428.x, 430.x-438.x	NA
Coronary heart disease	K74-76	410.x-414.x	NA
Stroke	K89-91	430.x-438.x	NA
Heart failure	K77	428.x	NA
Peripheral vascular disease	K92	250.6x, 440.2x, 997.2, 997.6x	NA
All-cause mortality	NA	NA	Hong Kong Death Registry

ICPC-2 = International Classification of Primary Care, 2nd edition; ICD-9-CM = International Classification of Diseases, Ninth Revision, Clinical Modification

Measure	Formula
Usual provider continuity index (UPCI)	$UPCI = \frac{n_{max}}{N}$ n_{max} = the number of visits given by the most frequently visited team N = the total number of visits of the patient
Continuity of care index (COCI)	$COCI = \frac{\sum_{i=1}^{k} n_i^2 - N}{N(N-1)}$ k = number of teams n_i = number of visits to team i N = total number of visits of the patient
Modified modified continuity index (MMCI)	$MMCI = \frac{1 - \frac{k}{N+0.1}}{1 - \frac{1}{N+0.1}}$ k = number of teams N = total number of visits of the patient
Sequential continuity index (SECON)	$SECON = \frac{\varphi_i + \dots + \varphi_{N-1}}{N-1}$ $\varphi = 1$ when current and the subsequent visits are given by the same team $\varphi = 0$ when current and the subsequent visits are given by the same team N = the total number of visits of the patient

Supplementary table 2. Calculations of continuity of care measures

Supplementary table 3. Data completion rate of baseline characteristics

	Baseline
	Total = 312,167
Age	312,167 (100.0%)
Sex	312,167 (100.0%)
Smoker	312,167 (100.0%)
Body mass index	264,509 (84.7%)
Systolic blood pressure	311,562 (99.8%)
Diastolic blood pressure	311,563 (99.8%)
Haemoglobin A1c	301,479 (96.6%)
Low-density lipoprotein	269,306 (86.3%)
Estimated glomerular filtration rate	287,188 (92.0%)
Charlson's index	312,167 (100.0%)
Use of anti-diabetic drugs	312,167 (100.0%)
Use of anti-hypertensive drugs	312,167 (100.0%)
Use of lipid-lowering agents	312,167 (100.0%)
Number of attendances	312,167 (100.0%)

	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile	
	UPCI < 0.50	UPCI 0.50-0.72	UPCI 0.73-0.91	UPCI 0.92-1.0	SMD
	(N = 50,060)	(N = 72,273)	(N = 60,335)	(N = 63,716)	
Male	23,302 (46.5%)	33,271 (46.0%)	27,821 (46.1%)	29,456 (46.2%)	0.01
Age, year	62.5 (11.2)	62.7 (11.3)	62.7 (11.3)	62.8 (11.1)	0.03
Smoker	3,333 (6.7%)	4,647 (6.4%)	4,057 (6.7%)	4,459 (7.0%)	0.02
SBP, mmHg	133.8 (17.0)	133.7 (16.6)	133.7 (16.5)	133.9 (16.4)	< 0.01
DBP, mmHg	75.1 (10.3)	74.9 (10.2)	74.9 (9.9)	74.9 (9.8)	0.02
HbA1c, %	7.1 (1.2)	7.1 (1.2)	7.1 (1.2)	7.1 (1.2)	0.02
HbA1c, mml/mol	54.5 (13.6)	54.3 (13.0)	54.3 (12.9)	54.5 (12.8)	0.02
BMI, kg/m ²	25.8 (4.0)	25.8 (4.1)	25.8 (4.1)	25.7 (4.0)	< 0.01
LDL-C, mmol/L	2.8 (0.8)	2.8 (0.8)	2.8 (0.8)	2.8 (0.8)	0.01
eGFR, ml/min/1.73m ²	105.9 (28.3)	104.9 (29.1)	104.9 (29.8)	104.7 (35.4)	0.04
Charlson comorbidity index	3.8 (1.2)	3.8 (1.2)	3.8 (1.2)	3.8 (1.2)	0.02
Use of anti-diabetic drugs	41,191 (82.3%)	59,400 (82.2%)	49,766 (82.5%)	52,748 (82.8%)	0.02
Use of anti-hypertensive drugs	36,579 (73.1%)	53,728 (74.3%)	44,562 (73.9%)	46,562 (73.1%)	0.03
Use of lipid-lowering agents	14,955 (29.9%)	22,075 (30.5%)	18,310 (30.3%)	19,027 (29.9%)	0.01
Number of attendances	12 (5.2)	12 (4.6)	12 (4.2)	12 (4.4)	0.03
Usual provider continuity index	0.37 (0.08)	0.61 (0.07)	0.84 (0.06)	0.99 (0.02)	NA

Supplementary table 4a Baseline characteristics by team-based UPCI quartiles after multiple imputation and weighting with complete case only

The groups were adjusted with fine stratification weights with propensity score generated by multivariable logistic regression adjusted with the listed parameters except UPCI

	5	1		8 2	1
	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile	
	UPCI < 0.50	UPCI 0.50-0.74	UPCI 0.75-0.91	UPCI 0.92-1.0	SMD
	(N = 50,787)	(N = 71, 812)	(N = 60, 650)	(N = 63,911)	
Male	24,587 (48.4%)	34,344 (47.8%)	29,118 (48.0%)	30,723 (48.1%)	0.01
Age, year	62.4 (11.2)	62.7 (11.2)	62.6 (11.2)	62.8 (11.1)	0.04
Smoker	3,551 (7.0%)	4,899 (6.8%)	4,251 (7.0%)	4,615 (7.2%)	0.02
SBP, mmHg	132.6 (16.4)	132.5 (16.2)	132.5 (16.0)	132.7 (15.9)	0.01
DBP, mmHg	75.0 (10.3)	74.8 (10.1)	74.9 (9.8)	74.8 (9.7)	0.02
HbA1c, %	7.0 (1.2)	7.0 (1.1)	7.0 (1.1)	7.0 (1.1)	0.03
HbA1c, mmol/mol	53.5 (12.9)	53.2 (12.4)	53.3 (12.3)	53.5 (12.2)	0.03
BMI, kg/m ²	25.9 (4.1)	25.9 (4.1)	25.9 (4.1)	25.8 (4.1)	0.01
LDL-C, mmol/L	2.7 (0.8)	2.7 (0.8)	2.7 (0.8)	2.7 (0.8)	0.02
eGFR, ml/min/1.73m ²	106.7 (28.2)	105.8 (27.2)	105.7 (29.4)	106.7 (70.6)	0.03
Charlson comorbidity index	3.8 (1.2)	3.8 (1.2)	3.8 (1.2)	3.8 (1.2)	0.02
Use of anti-diabetic drugs	41,262 (81.2%)	58,142 (81.0%)	49,245 (81.2%)	52,165 (81.6%)	0.02
Use of anti-hypertensive drugs	37,525 (73.9%)	54,007 (75.2%)	45,347 (74.8%)	47,315 (74.0%)	0.03
Use of lipid-lowering agents	20,926 (41.2%)	30,445 (42.4%)	25,449 (42.0%)	26,340 (41.2%)	0.02
Number of attendances	12 (5.1)	12 (4.6)	12 (4.2)	12 (4.5)	0.02
Usual provider continuity index	0.36 (0.08)	0.60 (0.07)	0.84 (0.06)	0.99 (0.02)	NA

Supplementary table 4b Baseline characteristics by team-based UPCI quartiles after multiple imputation and weighting with at least three years of follow-up

The groups were adjusted with fine stratification weights with propensity score generated by multivariable logistic regression adjusted with the listed parameters except UPCI

	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile	
	COCI < 0.32	COCI 0.32-0.54	COCI 0.55-0.84	COCI 0.85-1.0	SMD
	(N = 77,906)	(N = 78,044)	(N = 75,799)	(N = 80,304)	
Male	37,099 (47.6%)	36,585 (46.9%)	35,888 (47.3%)	37,819 (47.1%)	0.01
Age, year	63.1 (11.4)	63.4 (11.5)	63.2 (11.5)	63.6 (11.3)	0.04
Smoker	5,048 (6.5%)	4,920 (6.3%)	5,030 (6.6%)	5,481 (6.8%)	0.02
SBP, mmHg	133.6 (17.0)	133.4 (16.6)	133.5 (16.5)	133.7 (16.4)	0.02
DBP, mmHg	74.9 (10.4)	74.7 (10.2)	74.7 (10.0)	74.6 (9.9)	0.03
HbA1c, %	7.1 (1.2)	7.1 (1.2)	7.1 (1.2)	7.1 (1.2)	0.03
HbA1c, mmol/mol	54.1 (13.5)	53.8 (12.9)	54.0 (12.8)	54.2 (12.7)	0.03
BMI, kg/m ²	25.8 (4.1)	25.8 (4.1)	25.8 (4.1)	25.8 (4.0)	0.01
LDL-C, mmol/L	2.8 (0.8)	2.8 (0.8)	2.8 (0.8)	2.8 (0.9)	0.02
eGFR, ml/min/1.73m ²	105.1 (29.5)	104.4 (40.3)	104.4 (33.1)	104.4 (44.9)	0.02
Charlson comorbidity index	3.9 (1.2)	3.9 (1.2)	3.9 (1.2)	3.9 (1.2)	0.02
Use of anti-diabetic drugs	63,457 (81.5%)	63,277 (81.1%)	61,623 (81.3%)	65,745 (81.9%)	0.02
Use of anti-hypertensive drugs	57,963 (74.4%)	58,780 (75.3%)	56,480 (74.5%)	59,471 (74.1%)	0.03
Use of lipid-lowering agents	27,365 (35.1%)	27,813 (35.6%)	26,499 (35.0%)	27,471 (34.2%)	0.03
Number of attendances	12 (5.4)	12 (4.5)	12 (4.0)	12 (4.5)	0.04
Continuity of care index	0.20 (0.08)	0.43 (0.06)	0.71 (0.09)	0.98 (0.04)	NA

Supplementary table 4c Baseline characteristics by team-based COCI quartiles after multiple imputation and weighting

The groups were adjusted with fine stratification weights with propensity score generated by multivariable logistic regression adjusted with the listed parameters except COCI

	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile	
	MMCI <0.72	MMCI 0.72-0.83	MMCI 0.84-0.92	MMCI 0.93-1.0	SMD
	(N = 77,337)	(N = 73,440)	(N = 81, 177)	(N = 79,441)	
Male	36,794 (47.6%)	34,268 (46.7%)	38,331 (47.2%)	37,302 (47.0%)	0.02
Age, year	63.1 (11.5)	63.7 (11.6)	63.1 (11.7)	63.6 (11.3)	0.06
Smoker	5,067 (6.6%)	4,652 (6.3%)	5,340 (6.6%)	5,244 (6.6%)	0.01
SBP, mmHg	133.2 (16.8)	133.6 (16.6)	133.3 (16.4)	133.7 (16.4)	0.03
DBP, mmHg	74.8 (10.4)	74.5 (10.2)	74.7 (10.0)	74.6 (9.9)	0.02
HbA1c, %	7.1 (1.2)	7.1 (1.2)	7.1 (1.1)	7.1 (1.2)	0.03
HbA1c, mmol/mol	53.7 (13.2)	54.0 (13.2)	53.8 (12.5)	54.1 (12.6)	0.03
BMI, kg/m^2	25.8 (4.1)	25.8 (4.1)	25.8 (4.1)	25.8 (4.0)	0.02
LDL-C, mmol/L	2.7 (0.8)	2.8 (0.8)	2.8 (0.8)	2.8 (0.9)	0.04
eGFR, ml/min/1.73m ²	105.4 (29.1)	104.1 (31.0)	104.4 (31.6)	104.5 (69.5)	0.05
Charlson comorbidity index	3.9 (1.2)	3.9 (1.2)	3.9 (1.2)	3.9 (1.2)	0.04
Use of anti-diabetic drugs	63,016 (81.5%)	58,946 (80.3%)	65,569 (80.8%)	65,053 (81.9%)	0.04
Use of anti-hypertensive drugs	58,011 (75.0%)	55,654 (75.8%)	59,969 (73.9%)	59,242 (74.6%)	0.04
Use of lipid-lowering agents	28,596 (37.0%)	26,184 (35.7%)	29,356 (36.2%)	27,298 (34.4%)	0.05
Number of attendances	12 (5.7)	12 (4.8)	12 (4.5)	12 (4.9)	0.04
Modified modified continuity index	0.58 (0.14)	0.79 (0.03)	0.89 (0.02)	0.99 (0.02)	NA

Supplementary table 4d Baseline characteristics by team-based MMCI quartiles after multiple imputation and weighting

The groups were adjusted with fine stratification weights with propensity score generated by multivariable logistic regression adjusted with the listed parameters except MMCI

The SMD listed is the largest SMD between any pairs of the quartiles. A SMD less than 0.2 indicates sufficient balance for the characteristic

MMCI = Modified modified continuity index; SMD = Standardized mean difference; SBP = Systolic blood pressure; DBP = Diastolic blood pressure; HbA1c = Haemoglobin A1c; BMI = Body mass index; LDL-C = Low density lipoprotein - cholesterol; eGFR = Estimated glomerular filtration rate; NA = Not applicable

	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile	
	SECON <0.50	SECON 0.50-0.72	SECON 0.73-0.90	SECON 0.91-1.0	SMD
	(N = 74,865)	(N = 80,953)	(N = 76, 152)	(N = 80,038)	
Male	35,872 (47.9%)	38,058 (47.0%)	35,706 (46.9%)	37,737 (47.1%)	0.02
Age, year	62.9 (11.4)	63.4 (11.6)	63.3 (11.4)	63.5 (11.4)	0.06
Smoker	4,984 (6.7%)	5,114 (6.3%)	4,922 (6.5%)	5,467 (6.8%)	0.02
SBP, mmHg	133.5 (16.9)	133.5 (16.6)	133.5 (16.6)	133.7 (16.4)	0.01
DBP, mmHg	74.9 (10.5)	74.7 (10.2)	74.6 (10.0)	74.7 (9.9)	0.03
HbA1c, %	7.1 (1.3)	7.1 (1.2)	7.1 (1.2)	7.1 (1.2)	0.03
HbA1c, mmol./mol	54.2 (13.7)	53.8 (12.9)	54.0 (12.8)	54.2 (12.8)	0.03
BMI, kg/m^2	25.8 (4.1)	25.8 (4.1)	25.8 (4.1)	25.8 (4.1)	0.01
LDL-C, mmol/L	2.8 (0.8)	2.8 (0.8)	2.8 (0.8)	2.8 (0.9)	0.02
eGFR, ml/min/1.73m ²	105.5 (33.2)	104.3 (28.3)	104.4 (64.6)	104.9 (65.1)	0.04
Charlson comorbidity index	3.9 (1.2)	3.9 (1.2)	3.9 (1.2)	3.9 (1.2)	0.04
Use of anti-diabetic drugs	60,889 (81.3%)	65,399 (80.8%)	61,912 (81.3%)	65,493 (81.8%)	0.03
Use of anti-hypertensive drugs	55,210 (73.7%)	61,188 (75.6%)	57,056 (74.9%)	59,113 (73.9%)	0.04
Use of lipid-lowering agents	26,183 (35.0%)	28,871 (35.7%)	26,741 (35.1%)	27,455 (34.3%)	0.03
Number of attendances	12 (5.3)	12 (4.4)	12 (4.2)	12 (4.5)	0.05
Sequential continuity index	0.28 (0.14)	0.61 (0.08)	0.83 (0.05)	0.99 (0.02)	NA

Supplementary table 4e Baseline characteristics by team-based SECON after multiple imputation and weighting

The groups were adjusted with fine stratification weights with propensity score generated by multivariable logistic regression adjusted with the listed parameters except SECON

Supplementary table 4f Baseline characteristics by team-based UPCI quartiles after multiple imputation and weighting of patients with at least five attended
medical consultations

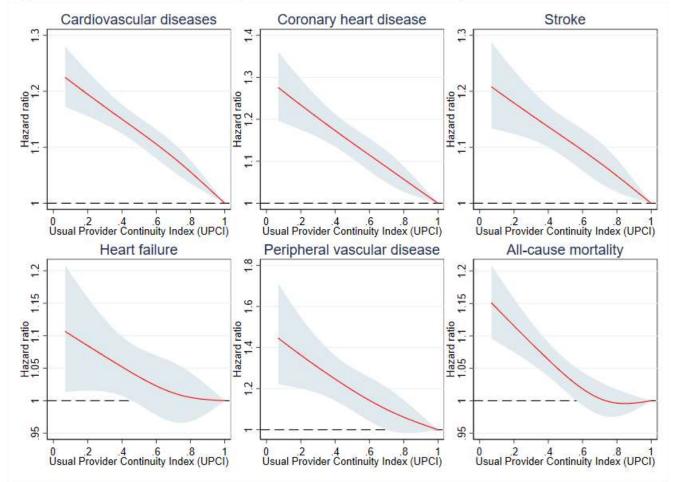
	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile	
	UPCI <0.51	UPCI 0.51-0.74	UPCI 0.75-0.92	UPCI 0.93-1.0	SMD
	(N = 76,350)	(N = 73,982)	(N = 78,355)	(N = 76,937)	
Male	36,217 (47.4%)	34,572 (46.7%)	36,770 (46.9%)	36,078 (46.9%)	0.01
Age, year	63.2 (11.5)	63.5 (11.5)	63.4 (11.4)	63.7 (11.2)	0.04
Smoker	4,990 (6.5%)	4,678 (6.3%)	5,161 (6.6%)	5,142 (6.7%)	0.01
SBP, mmHg	133.5 (16.9)	133.5 (16.5)	133.5 (16.5)	133.7 (16.3)	0.02
DBP, mmHg	74.8 (10.3)	74.6 (10.2)	74.6 (10.0)	74.6 (9.9)	0.02
HbA1c, %	7.1 (1.2)	7.1 (1.2)	7.1 (1.2)	7.1 (1.1)	0.02
HbA1c, mmol/mol	54.0 (13.3)	53.8 (12.8)	53.9 (12.6)	54.1 (12.6)	0.02
BMI, kg/m ²	25.8 (4.1)	25.8 (4.1)	25.8 (4.1)	25.8 (4.0)	< 0.01
LDL-C, mmol/L	2.8 (0.8)	2.8 (0.8)	2.8 (0.8)	2.8 (0.9)	0.02
eGFR, ml/min/1.73m ²	105.0 (29.3)	104.2 (40.2)	104.2 (33.5)	104.2 (45.4)	0.02
Charlson comorbidity index	3.9 (1.2)	3.9 (1.2)	3.9 (1.2)	3.9 (1.2)	0.03
Use of anti-diabetic drugs	62,461 (81.8%)	60,367 (81.6%)	64,160 (81.9%)	63,290 (82.3%)	0.02
Use of anti-hypertensive drugs	57,153 (74.9%)	56,186 (75.9%)	59,096 (75.4%)	57,881 (75.2%)	0.03
Use of lipid-lowering agents	26,607 (34.8%)	26,237 (35.5%)	27,405 (35.0%)	26,295 (34.2%)	0.03
Number of attendances	12 (4.9)	12 (4.4)	12 (4.2)	12 (4.5)	0.03
Usual provider continuity index	0.40 (0.09)	0.63 (0.06)	0.84 (0.06)	0.99 (0.02)	NA

The groups were adjusted with fine stratification weights with propensity score generated by multivariable logistic regression adjusted with the listed parameters except UPCI

Supplementary table 4g Baseline characteristics by team-based UPCI quartiles after multiple imputation and weighting of patients with at least eight attended
medical consultations

	1 st quartile	2 nd quartile	3 rd quartile	4 th quartile	
	UPCI <0.50	UPCI 0.50-0.74	UPCI 0.75-0.91	UPCI 0.92-1.0	SMD
	(N = 56,243)	(N = 81, 827)	(N = 68,727)	(N = 72,644)	
Male	26,055 (46.3%)	37,796 (46.2%)	31,878 (46.4%)	33,874 (46.6%)	< 0.01
Age, year	63.7 (11.5)	63.8 (11.4)	63.7 (11.4)	63.8 (11.2)	0.01
Smoker	3,667 (6.5%)	5,239 (6.4%)	4,455 (6.5%)	4,986 (6.9%)	0.02
SBP, mmHg	133.8 (16.8)	133.7 (16.5)	133.7 (16.5)	133.7 (16.3)	< 0.01
DBP, mmHg	74.6 (10.3)	74.5 (10.2)	74.5 (10.0)	74.5 (9.9)	< 0.01
HbA1c, %	7.1 (1.2)	7.1 (1.2)	7.1 (1.1)	7.1 (1.1)	0.01
HbA1c, mmol/mol	53.9 (13.1)	53.8 (12.7)	53.9 (12.5)	54.0 (12.4)	0.01
BMI, kg/m ²	25.8 (4.1)	25.8 (4.1)	25.8 (4.1)	25.8 (4.0)	< 0.01
LDL-C, mmol/L	2.8 (0.8)	2.8 (0.8)	2.8 (0.8)	2.8 (0.9)	0.01
eGFR, ml/min/1.73m ²	104.3 (28.9)	103.9 (43.2)	104.1 (66.9)	104.6 (68.0)	0.01
Charlson comorbidity index	3.9 (1.2)	3.9 (1.2)	3.9 (1.2)	3.9 (1.2)	< 0.01
Use of anti-diabetic drugs	46,613 (82.9%)	67,531 (82.5%)	56,836 (82.7%)	60,159 (82.8%)	< 0.01
Use of anti-hypertensive drugs	42,928 (76.3%)	62,811 (76.8%)	52,690 (76.7%)	55,352 (76.2%)	0.01
Use of lipid-lowering agents	18,633 (33.1%)	27,675 (33.8%)	22,912 (33.3%)	24,447 (33.7%)	0.01
Number of attendances	13 (4.6)	13 (4.3)	13 (4.3)	13 (4.3)	0.02
Usual provider continuity index	0.37 (0.08)	0.61 (0.07)	0.84 (0.05)	0.99 (0.03)	NA

The groups were adjusted with fine stratification weights with propensity score generated by multivariable logistic regression adjusted with the listed parameters except UPCI



Supplementary figure 1 Restricted cubic splines on the association between usual provider continuity index and cardiovascular diseases or mortality

Regression was adjusted by age, sex, smoking status, systolic and diastolic blood pressure, body mass index, haemoglobin A1c, low-density lipoprotein cholesterol, estimated glomerular filtration rate, Charlson comorbidity index, number of attendances, use of anti-hypertensive drug, use of lipid-lowering drug and use of anti-diabetic drug at the baseline

Supplementary figure 2a. Sensitivity analyses on association of team-based continuity of care with CVD of patients with diabetes mellitus

Sensitivity analysis	Number of events	Median Follow-up period	Person-year	Incidence rate (cases/1000 person-years)	HR (95% CI)	
Cardiovascular diseases						
Without weighting					1	
UPCI <0.50	10,136	77.5	423,788	23.92		1 (Reference)
UPCI 0.50-0.74	15,599	77.5	617,163	25.28	-	0.93 (0.91, 0.96)
UPCI 0.75-0.91	12,977	77.5	511,452	25.37	-	0.90 (0.88, 0.93)
UPCI 0.92-1.0	13,831	78.5	548,039	25.24		0.85 (0.83, 0.88)
Complete case						
UPCI <0.50	7,175	69.5	301,689	23.78		1 (Reference)
UPCI 0.50-0.72	10,126	69.5	441,159	22.95		0.94 (0.91, 0.97)
UPCI 0.73-0.91	8,587	69.5	382,617	22.44		0.92 (0.89, 0.95)
UPCI 0.92-1.0	8,999	70.5	421,493	21.35		0.85 (0.83, 0.88)
≥ 3 years of follow-up						
UPCI <0.50	6,656	96.5	390,713	17.04		1 (Reference)
UPCI 0.50-0.74	9,761	97.5	578,181	16.88		0.95 (0.92, 0.99)
UPCI 0.75-0.91	8,192	95.5	488,635	16.76		0.94 (0.91, 0.98)
UPCI 0.92-1.0	8,595	96.5	530,610	16.2		0.89 (0.86, 0.92)
Quartiles by COCI						
COCI <0.32	12,931	75.5	498,567	25.94		1 (Reference)
COCI 0.32-0.54	13,050	79.5	519,734	25.11		0.94 (0.92, 0.96)
COCI 0.55-0.84	12,596	78.5	519,839	24.23	-	0.91 (0.89, 0.93)
COCI 0.85-1.0	13,482	78.5	570,717	23.62	-	0.87 (0.84, 0.89)
Quartiles by MMCI						
MMCI <0.72	12,128	68.5	480,448	25.24		1 (Reference)
MMCI 0.72-0.83	12,525	82.5	487,815	25.68		0.96 (0.93, 0.98)
MMCI 0.84-0.92	13,502	84.5	554,280	24.36		0.91 (0.89, 0.94)
MMCI 0.93-1.0	13,444	78.5	560,364	23.99		0.88 (0.86, 0.91)
Quartiles by SECON						
SECON < 0.50	12,252	74.5	475,521	25.77		1 (Reference)
SECON 0.50-0.72	13,759	78.5	536,748	25.63	-	0.95 (0.92, 0.97)
SECON 0.73-0.90	12,740	79.5	525,751	24.23	-	0.90 (0.87, 0.92)
SECON 0.91-1.0	13,441	78.5	568,878	23.63	-	0.86 (0.84, 0.89)
≥ 5 attendances						
UPCI <0.51	12,829	77.5	494,377	25.95		1 (Reference)
UPCI 0.51-0.74	12,364	79.5	492,612	25.1		0.94 (0.92, 0.97)
UPCI 0.75-0.92	13,261	78.5	538,064	24.65		0.93 (0.90, 0.95)
UPCI 0.93-1.0	13,058	78.5	548,764	23.8	-	0.87 (0.85, 0.89)
≥ 8 attendances						
UPCI <0.50	9,725	80.5	370,139	26.27		1 (Reference)
UPCI 0.50-0.74	14,263	81.5	557,678	25.58	-#-	0.97 (0.94, 0.99)
UPCI 0.75-0.91	12,071	77.5	478,988	25.2	-=-	0.95 (0.92, 0.97)
UPCI 0.92-1.0	12,752	85.5	529,809	24.07		0.90 (0.87, 0.92)
				0.7	0.85 1	

All cut-offs were based on quartiles of the sample. Hazard ratio was adjusted by age, sex, smoking status, systolic and diastolic blood pressure, body mass index, HbA1c, low-density lipoprotein cholesterol, estimated glomerular filtration rate, Charlson comorbidity index, number of attendances, use of anti-hypertensive drug, use of lipid-lowering drug and use of anti-diabetic drug at baseline.

CVD includes coronary heart disease, heart failure and stroke; HR = Hazard ratio; CVD = Cardiovascular diseases; HbA1c = Haemoglobin A1c; CI = Confidence interval; UPCI = Usual provider continuity index; COCI = Continuity of care index; MMCI = Modified modified continuity index; SECON = Sequential continuity index

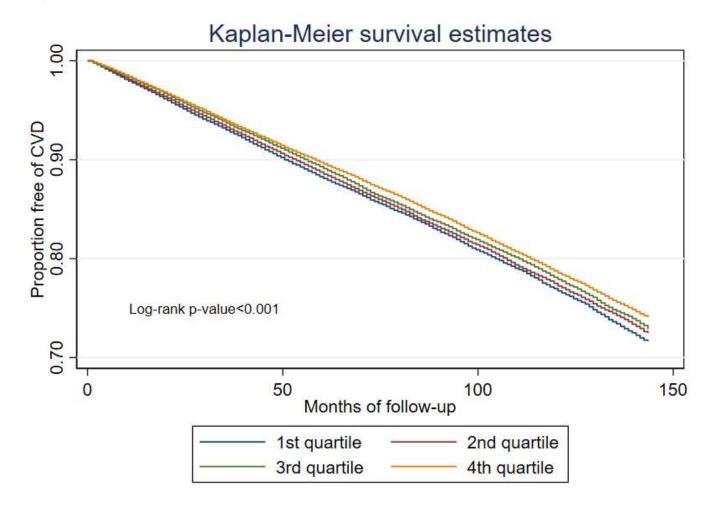
Supplementary figure 2b. Sensitivity analyses on association of team-based continuity of care with CVD or all-cause mortality of patients with diabetes mellitus

Sensitivity analysis	Number of events	Median Follow-up period	Person-year	Incidence rate (cases/1000 person-years)		HR (95% CI)	
Adjusted HbA1c as a time-va	rying covaria	ite					
Cardiovascular diseases							
UPCI <0.50	10,513	78.5	401,064	26.21		1 (Reference)	
UPCI 0.50-0.74	15,309	78.5	603,138	25.38	-	0.93 (0.91, 0.95)	
UPCI 0.75-0.91	12,731	77.5	519,365	24.51	+	0.90 (0.88, 0.92)	
UPCI 0.92-1.0	13,371	79.5	567,381	23.57	-	0.82 (0.80, 0.84)	
All-cause mortality							
UPCI <0.50	8,306	90.5	439,040	18.92		1 (Reference)	
UPCI 0.50-0.74	12,291	91.5	660,228	18.62		0.93 (0.91, 0.96)	
UPCI 0.75-0.91	10,333	89.5	566,574	18.24	-	0.93 (0.90, 0.95)	
UPCI 0.92-1.0	11,677	91.5	617,849	18.9	-	0.80 (0.78, 0.83)	
Adjusted with uses of SGLT2	inhibitors or	GLP1R ago	nists				
Cardiovascular diseases	10 622	77 F	407 547	20.00			
UPCI <0.50	10,632 15,461	77.5	407,547 609,890	26.09	_	1 (Reference)	
UPCI 0.50-0.74		77.5		25.35	-	0.95 (0.92, 0.97)	
UPCI 0.75-0.91	12,841	77.5	523,169	24.55		0.92 (0.89, 0.94)	
	13,475	78.5	570,800	23.61	-	0.87 (0.84, 0.89)	
All-cause mortality	0 700	00 F	445 305	10.05			
UPCI <0.50	8,760	89.5	445,725	19.65		1 (Reference)	
UPCI 0.50-0.74	12,952	90.5	667,153	19.41		0.95 (0.92, 0.98)	
UPCI 0.75-0.91	10,835	88.5	570,488	18.99		0.93 (0.91, 0.96)	
UPCI 0.92-1.0	12,188	90.5	621,362	19.61	-	0.94 (0.91, 0.96)	
Adjusted with yearly average Cardiovascular diseases	of attendand	es during th	e follow-up pe	eriod			
UPCI <0.50	10,191	78.5	406,061	25.1		1 (Reference)	
UPCI 0.50-0.74	14,970	78.5	605,768	24.71		0.97 (0.95, 1.00)	
UPCI 0.75-0.91	12,675	77.5	518,614	24.44		0.95 (0.93, 0.98)	
UPCI 0.92-1.0	13,299	79.5	566,966	23.46	-	0.91 (0.88, 0.93)	
All-cause mortality							
UPCI <0.50	8,437	90.5	443,372	19.03		1 (Reference)	
UPCI 0.50-0.74	12,458	91.5	662,535	18.8		0.96 (0.93, 0.99)	
UPCI 0.75-0.91	10,504	89.5	566,719	18.53		0.95 (0.92, 0.97)	
UPCI 0.92-1.0	11,891	90.5	618,004	19.24		0.96 (0.93, 0.99)	
				0.7	0.85 1		

All cut-offs were based on quartiles of the sample. Hazard ratio was adjusted by age, sex, smoking status, systolic and diastolic blood pressure, body mass index, HbA1c, low-density lipoprotein cholesterol, estimated glomerular filtration rate, Charlson comorbidity index, number of attendances, use of anti-hypertensive drug, use of lipid-lowering drug and use of anti-diabetic drug at baseline.

CVD includes coronary heart disease, heart failure and stroke; HR = Hazard ratio; CVD = Cardiovascular diseases; HbA1c = Haemoglobin A1c; CI = Confidence interval; UPCI = Usual provider continuity index; SGLT2 = Sodium-glucose transport protein 2; GLP1R = Glucagon-like peptide-1 receptor

Supplementary figure 3 Kaplan-Meier survival curve of cardiovascular diseases for patients with diabetes mellitus by team-based usual provider continuity index quartiles



UPCI cut-offs of the quartiles were: <0.5; 0.5-0.74; 0.75-0.91; 0.92-1.0. CVD = Cardiovascular diseases; UPCI = Usual provider continuity index