

Supplementary Data

Disability-related disparities in health outcomes among newly diagnosed diabetic patients: A retrospective cohort

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Table S1. Descriptive statistics of diabetes and CVD hospitalization analysis

	Diabetes-related hospitalization		CVD hospitalization	
	No disability N=20633	Disability N=1507	No disability N=23835	Disability N=1840
Mild disability, N (%)	-	1013 (67.2)	-	1247 (67.8)
Severe disability, N (%)	-	494 (32.8)	-	593 (32.2)
Physical disability, N (%)	-	951 (63.1)	-	1180 (64.1)
Visual disability, N (%)	-	174 (11.5)	-	208 (11.3)
Hearing and speech disability, N (%)	-	182 (12.1)	-	223 (12.1)
Intellectual and developmental disability, N (%)	-	94 (6.2)	-	105 (5.7)
Mental disability, N (%)	-	106 (7.0)	-	124 (6.7)
Male, N (%)	13483 (65.3)	1008 (66.9)	15335 (64.3)	1008 (66.4)
Female, N (%)	7150 (34.7)	499 (33.1)	8500 (35.7)	499 (33.6)
Age, mean (SD), y	53.1 (12.1)	58.4 (12.9)	53.3 (12.2)	58.6 (12.9)
National Health Insurance, N (%)	20282 (98.3)	1296 (86.0)	23404 (98.2)	1296 (85.8)
Medical Aid, N (%)	351 (1.7)	211 (14.0)	431 (1.8)	211 (14.2)
Lowest quintile income, N (%)	3732 (18.1)	498 (33.0)	4322 (18.1)	498 (32.3)
2nd quintile income, N (%)	3248 (15.7)	189 (12.5)	3773 (15.8)	189 (12.8)
3rd quintile income, N (%)	3928 (19.0)	217 (14.4)	4542 (19.1)	217 (14.6)
4th quintile income, N (%)	4397 (21.3)	300 (19.9)	5132 (21.5)	300 (19.7)
Highest quintile income, N (%)	5328 (25.8)	303 (20.1)	6066 (25.4)	303 (20.6)
CCI=0, N (%)	14794 (71.7)	960 (63.7)	16968 (71.2)	960 (62.9)
CCI=1, N (%)	4253 (20.6)	380 (25.2)	4983 (20.9)	380 (25.3)
CCI=2, N (%)	1190 (5.8)	119 (7.9)	1408 (5.9)	119 (8.3)
CCI>=3, N (%)	396 (1.9)	48 (3.2)	476 (2.0)	48 (3.5)
Four or fewer outpatient visits, N (%)	4132 (20.0)	319 (21.2)	4542 (19.1)	319 (20.0)
Low COC & low PDC, N (%)	2725 (13.2)	172 (11.4)	3445 (14.5)	172 (12.3)
High COC & low PDC, N (%)	4452 (21.6)	278 (18.4)	5064 (21.2)	278 (18.5)
Low COC & high PDC, N (%)	2147 (10.4)	170 (11.3)	2660 (11.2)	170 (12.1)
High COC & high PDC, N (%)	7177 (34.8)	568 (37.7)	8124 (34.1)	568 (37.1)

CVD: cardio-cerebrovascular diseases; CCI: Charlson Comorbidity Index; COC: continuity of care; PDC: proportion of days covered

Table S2. Risk of CVD-related hospitalization in persons with disability compared to those without ^a

	Patients, No.	Event, No.	Person- years	Incidence rate	Fully adjusted HR (95% Confidence Interval) ^b		
Acute Myocardial Infarction	26029						
Without disability	24147	164	165,917	0.99	1.000	-	-
Mild disability	1278	14	8,691	1.61	1.211	0.698	2.101
Severe disability	604	5	4,086	1.22	1.179	0.475	2.926
Ischemic Heart Disease	25906						
Without disability	24040	446	164,426	2.71	1.000	-	-
Mild disability	1264	43	8,533	5.04	1.527	1.112	2.096
Severe disability	602	14	4,033	3.47	1.224	0.707	2.119
Stroke	25897						
Without disability	24034	531	164,404	3.23	1.000	-	-
Mild disability	1263	45	8,554	5.26	1.119	0.823	1.522
Severe disability	600	22	4,033	5.46	1.379	0.89	2.136

^a Patients who experienced each event during the first 2 years depending on dependent variables were excluded.

^b Adjusted for sex, age, health coverage status, income, CCI (Charlson Comorbidity Index), and COC-PDC (continuity of care; proportion of days covered)

Table S3. Risk of death and hospitalization in persons with disability compared to those without, using usual provider index ^a

	Death ^b			CVD hospitalization ^b			Diabetic hospitalization ^b		
Without disability	1.00			1.00			1.00		
With disability	1.25	1.07	1.47	1.30	1.08	1.56	1.31	1.20	1.43
Mild disability	1.20	0.99	1.45	1.30	1.05	1.61	1.35	1.22	1.50
Severe disability	1.40	1.06	1.85	1.28	0.91	1.79	1.22	1.04	1.42
Physical disability	1.13	0.91	1.40	1.18	0.94	1.50	1.31	1.17	1.46
Visual disability	1.06	0.68	1.65	1.59	1.02	2.48	1.46	1.16	1.85
Hearing and speech disabilities	1.58	1.17	2.15	1.43	0.92	2.22	1.16	0.91	1.47
Intellectual/developmental disability	1.80	0.85	3.83	1.27	0.47	3.44	1.70	1.22	2.37
Mental disability	1.91	0.98	3.72	1.69	0.83	3.45	1.09	0.77	1.54

^a Patients who experienced each event during the first 2 years depending on dependent variables were excluded.

^b Adjusted for sex, age, health coverage status, income, CCI (Charlson Comorbidity Index), and UPI-PDC (usual provider index; proportion of days covered)

Table S4. Risk of hospitalization and death in persons with disability compared to those without - Including patients being hospitalized for 90 days or longer ^a

	Patients, No.	Event, No.	Person- years	Incidence rate	Fully adjusted HR (95% Confidence Interval) ^b		
Diabetic hospitalization	22202						
Without disability	20673	5441	128,831	42.23	1.000	-	-
Mild disability	1017	391	5,990	65.27	1.357	1.223	1.506
Severe disability	512	190	2,964	64.09	1.281	1.101	1.492
Physical disability	955	356	5,609	63.47	1.313	1.178	1.464
Visual disability	175	72	1,014	71.04	1.444	1.143	1.823
Hearing/speech disabilities	182	68	1,012	67.20	1.154	0.905	1.469
Intellectual/developmental disability	95	38	557	68.26	1.725	1.244	2.393
Mental disability	122	47	717	65.56	1.408	1.046	1.894
CVD hospitalization	25909						
Without disability	24002	1047	162,734	6.43	1.000	-	-
Mild disability	1267	94	8,476	11.09	1.297	1.048	1.605
Severe disability	640	39	4,224	9.23	1.286	0.924	1.79
Physical disability	1201	78	8,019	9.73	1.181	0.936	1.489
Visual disability	212	20	1,390	14.38	1.561	1	2.434
Hearing/speech disabilities	224	21	1,406	14.94	1.441	0.931	2.23
Intellectual/developmental disability	114	4	777	5.15	1.228	0.454	3.32
Mental disability	156	10	1,054	9.49	1.718	0.905	3.261
Death	26360						
Without disability	24401	1182	167,879	7.04	1.000	-	-
Mild disability	1304	129	8,867	14.55	1.213	1.009	1.457
Severe disability	655	63	4,434	14.21	1.447	1.115	1.878
Physical disability	1237	101	8,425	11.99	1.144	0.932	1.403
Visual disability	218	21	1,477	14.22	1.011	0.656	1.559
Hearing/speech disabilities	230	46	1,496	30.75	1.538	1.139	2.076
Intellectual/developmental disability	114	10	783	12.78	2.357	1.249	4.445
Mental disability	160	14	1,096	12.77	2.251	1.311	3.863

^a Patients who experienced each event during the first 2 years depending on dependent variables were excluded, and hazard ratios were estimated for disability severity and types using separated analyses.

^b Adjusted for sex, age, health coverage status, income, CCI (Charlson Comorbidity Index), and COC-PDC (continuity of care; proportion of days covered)

Table S5. Association of COC-PDC with diabetes- and CVD-related hospitalization and mortality risk by disability status ^a

	Death ^b			CVD hospitalization ^b			Diabetic hospitalization ^b		
Without disability									
Low COC-PDC ^c	1.50	1.29	1.74	1.47	1.32	1.65	1.09	1.03	1.16
Middle COC-PDC ^c	1.53	1.31	1.78	1.40	1.25	1.57	1.03	0.97	1.10
High COC-PDC ^c	1.00			1.00			1.00		
With disability									
Low COC-PDC ^c	1.32	0.93	1.87	1.47	1.10	1.95	1.01	0.83	1.22
Middle COC-PDC ^c	1.06	0.72	1.56	1.21	0.89	1.64	1.10	0.90	1.33
High COC-PDC ^c	1.00			1.00			1.00		

^a Patients who experienced each event during the first 2 years depending on dependent variables were excluded.

^b Adjusted for sex, age, health coverage status, income, and CCI (Charlson Comorbidity Index) and included interaction terms between COC–PDC (continuity of care; proportion of days covered) and disability status.

^c COC–PDC groups were categorized into three groups: 1) the low COC-PDC group, representing four or fewer outpatient visits or low COC and low PDC; 2) the middle COC-PDC group, comprising high COC and low PDC or low COC and high PDC; and 3) the high COC-PDC group. The high COC-PDC group was used as the reference group.