

SUPPLEMENTARY DATA

Supplementary Table 1. Main and Sensitivity Analysis I: Matched cohort size before and after the index date.

Age at diagnosis: 25-44 Years

Cohort	Years, Pre and Post Index Date																			
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10
2003	0	0	0	0	0	0	0	0	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038	1038
2004	0	0	0	0	0	0	0	940	940	940	940	940	940	940	940	940	940	940	940	0
2005	0	0	0	0	0	0	878	878	878	878	878	878	878	878	878	878	878	878	0	0
2006	0	0	0	0	0	726	726	726	726	726	726	726	726	726	726	726	726	0	0	0
2007	0	0	0	0	688	688	688	688	688	688	688	688	688	688	688	688	0	0	0	0
2008	0	0	0	500	500	500	500	500	500	500	500	500	500	500	500	0	0	0	0	0
2009	0	0	540	540	540	540	540	540	540	540	540	540	540	540	0	0	0	0	0	0
2010	0	396	396	396	396	396	396	396	396	396	396	396	396	0	0	0	0	0	0	0
2011	346	346	346	346	346	346	346	346	346	346	346	346	0	0	0	0	0	0	0	0
Total	346	742	1282	1782	2470	3196	4074	5014	6052	6052	6052	6052	5706	5310	4770	4270	3582	2856	1978	1038

Age at diagnosis: 45-54 Years

Cohort	Years, Pre and Post Index Date																			
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10
2003	0	0	0	0	0	0	0	0	2884	2884	2884	2884	2884	2884	2884	2884	2884	2884	2884	2884
2004	0	0	0	0	0	0	0	3106	3106	3106	3106	3106	3106	3106	3106	3106	3106	3106	3106	0
2005	0	0	0	0	0	0	2898	2898	2898	2898	2898	2898	2898	2898	2898	2898	2898	2898	0	0
2006	0	0	0	0	0	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952	2952	0	0
2007	0	0	0	0	2742	2742	2742	2742	2742	2742	2742	2742	2742	2742	2742	2742	2742	0	0	0
2008	0	0	0	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230	0	0	0	0
2009	0	0	2196	2196	2196	2196	2196	2196	2196	2196	2196	2196	2196	2196	0	0	0	0	0	0
2010	0	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	0	0	0	0	0	0	0
2011	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	0	0	0	0	0	0	0	0
Total	1632	3470	5666	7896	10638	13590	16488	19594	2478	22478	22478	22478	20846	19008	16812	4582	11840	8888	5990	2884

Age at diagnosis: 55-64 Years

Cohort	Years, Pre and Post Index Date																			
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10
2003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	34	34	34	34	34	34	34	34	34	34	34	34	0
2005	0	0	0	0	0	0	442	442	442	442	442	442	442	442	442	442	442	442	0	0
2006	0	0	0	0	0	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	1026	0	0	0
2007	0	0	0	0	1352	1352	1352	1352	1352	1352	1352	1352	1352	1352	1352	1352	1352	0	0	0
2008	0	0	0	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	1764	0	0	0	0	0
2009	0	0	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	0	0	0	0	0	0
2010	0	2194	2194	2194	2194	2194	2194	2194	2194	2194	2194	2194	2194	0	0	0	0	0	0	0
2011	2276	2276	2276	2276	2276	2276	2276	2276	2276	2276	2276	2276	0	0	0	0	0	0	0	0
Total	2276	4470	6578	8342	9694	10720	11162	11196	11196	11196	11196	11196	8920	6726	4618	2854	1502	476	34	0

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Males

Cohort	Years, Pre and Post Index Date																				
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	
2003	0	0	0	0	0	0	0	0	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	
2004	0	0	0	0	0	0	0	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	0
2005	0	0	0	0	0	0	2024	2024	2024	2024	2024	2024	2024	2024	2024	2024	2024	2024	2024	0	0
2006	0	0	0	0	0	2318	2318	2318	2318	2318	2318	2318	2318	2318	2318	2318	2318	0	0	0	0
2007	0	0	0	0	2356	2356	2356	2356	2356	2356	2356	2356	2356	2356	2356	2356	0	0	0	0	0
2008	0	0	0	2202	2202	2202	2202	2202	2202	2202	2202	2202	2202	2202	2202	0	0	0	0	0	0
2009	0	0	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	2358	0	0	0	0	0	0	0
2010	0	2166	2166	2166	2166	2166	2166	2166	2166	2166	2166	2166	0	0	0	0	0	0	0	0	0
2011	2098	2098	2098	2098	2098	2098	2098	2098	2098	2098	2098	2098	0	0	0	0	0	0	0	0	0
Total	2098	4264	6622	8824	11180	13498	15522	17508	19444	19444	19444	19444	17346	15180	12822	10620	8264	5946	3922	1936	

Females

Cohort	Years, Pre and Post Index Date																				
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	
2003	0	0	0	0	0	0	0	0	1986	1986	1986	1986	1986	1986	1986	1986	198	198	198	198	6
2004	0	0	0	0	0	0	0	2094	2094	2094	2094	2094	2094	2094	2094	2094	209	209	209	0	6
2005	0	0	0	0	0	0	2194	2194	2194	2194	2194	2194	2194	2194	2194	2194	219	219	0	0	4
2006	0	0	0	0	0	2386	2386	2386	2386	2386	2386	2386	2386	2386	2386	2386	238	6	0	0	0
2007	0	0	0	0	2426	2426	2426	2426	2426	2426	2426	2426	2426	2426	2426	2426	242	0	0	0	0
2008	0	0	0	2	2292	2292	2292	2292	2292	2292	2292	2292	2292	2292	2292	229	0	0	0	0	0
2009	0	0	6	6	2486	2486	2486	2486	2486	2486	2486	2486	2486	2486	0	0	0	0	0	0	0
2010	0	2	2	2	2262	2262	2262	2262	2262	2262	2262	2262	2262	0	0	0	0	0	0	0	0
2011	6	6	6	6	2156	2156	2156	2156	2156	2156	2156	2156	0	0	0	0	0	0	0	0	0
Total	6	441	690	919	1162	1400	1620	1829	2028	2028	2028	2028	1812	1586	1337	1108	866	627	408	198	6

Note:

Control Cohort: People not diagnosed with diabetes *during the study period.*

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Supplementary Table 2. Main and Sensitivity Analysis I: Summary statistics of matched cohort samples in the year of matching.

Variable	All				Male				Female			
	Diabetes Cohort (n=19,863)		Control Cohort (n=19,863)		Diabetes Cohort (n=9,722)		Control Cohort (n=9,722)		Diabetes Cohort (n=10,141)		Control Cohort (n=10,141)	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Age, Years (Mean)	50.67	0.04	50.67	0.04	50.69	0.06	50.69	0.06	50.65	0.06	50.65	0.06
Female, %	51.05	0.35	51.05	0.35								
Metro, %	70.89	0.32	70.89	0.32	72.96	0.45	72.96	0.45	68.91	0.46	68.9	0.46
Census Region, %:												
Northeast	3.66	0.13	3.66	0.13	4.31	0.21	4.31	0.21	3.03	0.17	3.03	0.17
Midwest	37.32	0.34	37.32	0.34	40.32	0.5	40.32	0.5	34.44	0.47	34.44	0.47
South	44.11	0.35	44.11	0.35	38.81	0.49	38.81	0.49	49.19	0.5	49.2	0.5
West	14.87	0.25	14.87	0.25	16.49	0.38	16.49	0.38	13.31	0.34	13.31	0.34
PPO,%	58.51	0.35	58.51	0.35	61.27	0.49	61.27	0.49	55.86	0.49	55.86	0.49

Variable	Aged: 25-44 Years				Aged: 45-54 Years				Aged: 55-64 Years			
	Diabetes Cohort (n=3,026)		Control Cohort (n=3,026)		Diabetes Cohort (n=11,239)		Control Cohort (n=11,239)		Diabetes Cohort (n=5,598)		Control Cohort (n=5,598)	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Age, Years (Mean)	40.11	0.06	40.11	0.06	50.31	0.03	50.31	0.03	57.1	0.02	57.1	0.02
Female, %	53.60	0.91	53.60	0.91	50.32	0.47	50.32	0.47	51.16	0.67	51.16	0.67
Metro, %	62.49	0.88	62.49	0.88	71.68	0.43	71.68	0.43	73.85	0.59	73.83	0.59
Census Region, %:												
Northeast	2.51	0.28	2.51	0.28	3.70	0.18	3.70	0.18	4.18	0.27	4.18	0.27
Midwest	31.10	0.84	31.10	0.84	38.66	0.46	38.66	0.46	38	0.65	38	0.65
South	51.82	0.91	51.82	0.91	43.46	0.47	43.46	0.47	41.23	0.66	41.23	0.66
West	14.51	0.64	14.51	0.64	14.13	0.33	14.13	0.33	16.54	0.5	16.54	0.5
PPO,%	56.77	0.90	56.77	0.90	58.66	0.46	58.66	0.46	59.15	0.66	59.15	0.66

Notes:

Control Cohort: People not diagnosed with diabetes *during the study period*.

Aged= age at diagnosis.

The testing of balance propensity score matching shows that the % biases for each covariates after matching in each year were less than 1%. Metro= residence in Metropolitan statistical area; PPO= Preferred Provider Organization; SE= Standard error.

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Supplementary Table 3. Main Analysis: Estimated per capita annual and cumulative excess medical expenditures during the 10 years before and after the index date (2013\$)

Follow-up Year	Annual medical expenditures							Cumulative medical expenditures			
	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	%	Diabetes Cohort	Control Cohort	Excess	%
-10	4,722	237	3,679	165	1,043	289	28.4	4,722	3,679	1,043	28.4
-9	5,382	216	4,129	147	1,253	262	30.3	10,104	7,809	2,296	29.4
-8	5,477	154	4,351	126	1,126	199	25.9	15,581	12,160	3,421	28.1
-7	5,781	130	4,475	105	1,306	167	29.2	21,362	16,635	4,727	28.4
-6	6,120	128	4,674	114	1,446	171	30.9	27,482	21,309	6,173	29.0
-5	6,475	125	4,785	95	1,690	157	35.3	33,957	26,093	7,863	30.1
-4	6,856	125	4,933	102	1,923	161	39.0	40,812	31,026	9,786	31.5
-3	7,084	116	5,021	88	2,064	146	41.1	47,897	36,047	11,850	32.9
-2	7,500	115	5,110	94	2,390	148	46.8	55,397	41,157	14,240	34.6
-1	9,586	204	5,094	81	4,492	219	88.2	64,982	46,251	18,732	40.5
1	13,727	213	5,618	124	8,109	247	144.3	78,710	51,869	26,841	51.7
2	9,985	152	5,724	115	4,261	190	74.4	88,695	57,593	31,102	54.0
3	9,914	165	5,696	116	4,217	202	74.0	98,608	63,289	35,319	55.8
4	9,608	169	5,622	128	3,985	212	70.9	108,216	68,912	39,304	57.0
5	9,845	203	5,695	137	4,150	245	72.9	118,061	74,607	43,455	58.2
6	9,877	219	5,515	172	4,362	278	79.1	127,938	80,122	47,816	59.7
7	10,751	363	5,824	189	4,927	409	84.6	138,689	85,946	52,743	61.4
8	10,733	413	5,428	200	5,305	459	97.7	149,422	91,374	58,048	63.5
9	10,700	408	5,733	388	4,967	563	86.6	160,122	97,107	63,015	64.9
10	11,886	751	5,724	377	6,162	840	107.6	172,008	102,831	69,177	67.3
Annual and cumulative average											
Before the index date	6,498		4,625		1,873			64,982	46,251	18,732	
After the index date	10,703		5,658		5,044			107,025	56,581	50,445	
Difference	4,204		1,033		3,171			42,043	10,330	31,713	
Ratio	1.6		1.2		2.7			1.6	1.2	2.7	

Notes:

Diabetes Cohort: The follow-up Year 1 *includes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *during the study period*.

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort. %= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant (p<0.05, paired Student t-test).

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Supplementary Table 4. Main Analysis: Estimated per capita total medical expenditures by components and follow-up years before and after the index date (2013\$).

Follow-up Year	Outpatient						Inpatient						Prescription Drugs					
	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE
-10	2,521	131	2,178	101	343	166	971	157	608	89	363	181	1,231	49	893	44	337	66
-9	2,720	90	2,435	87	285	125	1,283	157	704	82	579	177	1,379	37	990	44	389	58
-8	2,813	76	2,492	71	321	104	1,093	101	813	75	280	126	1,571	36	1,046	34	525	50
-7	2,990	70	2,646	64	345	95	1,116	81	765	61	351	101	1,674	32	1,064	25	610	41
-6	3,139	66	2,756	61	383	89	1,225	84	815	78	410	115	1,756	29	1,103	23	653	37
-5	3,294	64	2,876	58	417	87	1,343	87	740	55	603	103	1,838	28	1,168	22	670	36
-4	3,503	62	2,948	58	555	85	1,432	87	781	61	651	106	1,921	27	1,204	21	718	35
-3	3,691	61	2,985	54	706	81	1,394	78	822	52	572	93	1,999	25	1,214	21	785	33
-2	3,821	56	3,033	52	789	76	1,572	79	841	59	731	99	2,106	26	1,236	21	870	33
-1	4,784	73	3,089	52	1,695	90	2,532	170	724	40	1,808	175	2,270	28	1,281	24	989	37
1	5,905	93	3,343	67	2,561	115	4,611	157	973	72	3,638	173	3,212	33	1,302	26	1,910	42
2	4,991	87	3,400	63	1,591	108	2,003	94	1,008	75	995	120	2,991	36	1,316	27	1,675	44
3	4,860	95	3,418	75	1,442	121	2,109	100	964	59	1,145	117	2,944	36	1,315	29	1,630	47
4	4,759	103	3,360	85	1,399	134	1,909	91	973	62	936	111	2,940	39	1,290	30	1,650	49
5	4,787	119	3,345	88	1,442	148	2,064	116	1,075	77	988	139	2,995	46	1,276	30	1,719	55
6	4,789	120	3,342	112	1,447	164	1,998	131	943	94	1055	161	3,089	56	1,230	32	1,859	65
7	5,031	151	3,371	98	1,660	180	2,613	291	1,239	118	1,373	314	3,107	62	1,214	39	1,893	73
8	4,934	198	3,134	104	1,800	224	2,624	312	1,086	135	1,539	340	3,174	74	1,208	44	1,966	86
9	4,813	198	3,272	147	1,541	246	2,661	273	1,306	331	1,355	429	3,226	92	1,155	55	2,071	107
10	5,314	346	3,449	261	1,865	434	3,148	531	1,031	175	2,118	559	3,423	237	1,245	95	2,178	256
Annual Average																		
Before the index date	3,328		2744		584		1,396		761		635		1,775		1,120		655	
After the index date	5,018		3,343		1,675		2,574		1,060		1,514		3,110		1,255		1,855	
Difference	1,691		600		1,091		1,178		299		879		1,336		135		1,201	
Ratio	1.5		1.2		2.9		1.8		1.4		2.4		1.8		1.1		2.8	

Notes:

Diabetes Cohort: The follow-up Year 1 *includes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *during the study period*.

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort.

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%= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant ($p < 0.05$, paired Student t-test), except ^{NS}=not significant at $p < 0.05$.

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Supplementary Table 5. Main analysis: Estimated per capita total medical expenditures by age group and follow-up years before and after the index date (2013\$).

Follow-up Year	Aged: 25-44 Years						Aged: 45-54 Years						Aged: 55-64 Years					
	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE
-10	3,743	826	2,108	312	1,635	883	4,404	320	2,974	223	1,430	390	5,100	357	4,359	263	740	443
-9	3,574	336	3,818	517	244 ^{NS}	616	4,113	192	3,356	234	757	303	6,668	387	4,623	270	2,044	472
-8	3,450	272	2,818	217	632	348	4,961	205	3,597	173	1,364	268	6,317	255	4,798	189	1,519	318
-7	4,060	278	3,271	276	790	392	5,282	180	3,647	127	1,635	220	6,620	213	5,166	175	1,454	276
-6	4,596	300	3,227	267	1,368	402	5,482	171	3,872	124	1,610	211	7,209	221	5,285	159	1,923	272
-5	4,806	251	3,651	244	1,155	350	6,047	169	4,025	98	2,023	196	7,514	226	5,881	204	1,633	304
-4	5,046	282	3,336	194	1,710	342	6,722	182	4,297	109	2,425	212	7,713	206	5,896	168	1,817	266
-3	4,983	206	3,431	160	1,552	261	6,873	148	4,579	107	2,293	183	8,396	249	5,896	164	2,500	298
-2	6,269	356	3,683	194	2,586	405	7,221	135	4,977	135	2,244	191	8,725	235	6,318	219	2,407	321
-1	7,132	264	3,347	143	3,785	300	9,152	215	4,946	106	4,206	240	11,784	560	6,974	321	4,810	645
1	11,522	486	3,702	196	7,820	523	13,213	245	5,271	123	7,942	274	15,951	512	6,844	241	9,107	566
2	7,947	270	4,188	261	3,759	376	9,894	195	5,366	141	4,528	241	11,269	338	7,124	309	4,144	458
3	8,111	306	3,910	194	4,201	363	10,137	225	5,512	146	4,625	268	10,544	341	6,932	304	3,611	457
4	8,289	359	4,194	219	4,094	421	9,779	225	5,553	158	4,226	275	10,165	357	6,779	261	3,385	442
5	8,615	379	4,066	213	4,549	434	10,044	264	5,781	175	4,263	317	10,393	499	6,807	359	3,586	614
6	9,308	577	4,077	225	5,232	619	9,859	251	5,705	208	4,154	326	10,819	620	7,360	609	3,458	869
7	9,483	660	4,408	292	5,075	722	11,311	469	6,090	245	5,221	529	9,359	770	7,074	986	2,285	1,251
8	10,634	1,232	4,079	301	6,555	1,268	10,810	401	5,785	251	5,025	472	9,887	1,357	6,392	910	3,495	1,634
9	9,785	683	4,622	444	5,163	815	11,021	496	6,189	499	4,832	704						
10	10,614	1,171	4,832	765	5,782	1,398	12,344	930	6,045	432	6,298	1,025						
Annual average																		
Before the index date	4,766		3,269		1,546		6,026		4,027		1,999		7,604		5,520		2,085	
After the index date	9,431		4,208		5,223		10,841		5,730		5,112		11,048		6,914		4,134	
Difference	4,665		939		3,677		4,816		1,703		3,113		3,444		1,395		2,049	
Ratio	2.0		1.3		3.4		1.8		1.4		2.6		1.5		1.3		2.0	

Notes:

Diabetes Cohort: The follow-up Year 1 *includes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *during the study period*.

SUPPLEMENTARY DATA

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort.

%= Percent more for diabetes cohort compared to control cohort. The excess expenditures are all statically significant ($p < 0.05$, paired Student t-test), except ^{NS}=not significant at $p < 0.05$.

SUPPLEMENTARY DATA

Supplementary Table 6. Main Analysis: Estimated per capita total medical expenditures by sex and follow-up years before and after the index date (2013\$).

Follow-up Year	Males						Females					
	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE
-10	4,078	347	2,921	216	1,157	409	5,349	322	4,408	247	942	406
-9	4,744	299	3,375	213	1,369	367	5,998	311	4,862	204	1,136	372
-8	4,490	166	3,464	162	1,027	232	6,423	254	5,192	192	1,231	318
-7	4,909	182	3,670	136	1,239	227	6,617	184	5,245	158	1,372	242
-6	5,122	164	3,793	151	1,329	223	7,080	194	5,501	167	1,579	256
-5	5,591	174	3,972	136	1,618	221	7,327	179	5,572	132	1,755	223
-4	6,075	189	4,170	161	1,905	248	7,604	164	5,666	125	1,938	206
-3	6,239	161	4,117	120	2,122	201	7,893	167	5,882	127	2,012	210
-2	6,741	177	4,266	140	2,475	226	8,227	148	5,916	125	2,311	193
-1	8,861	325	4,255	105	4,605	342	10,256	248	5,903	123	4,353	277
1	13,390	330	4,790	141	8,600	358	13,979	273	6,391	201	7,588	339
2	9,322	222	5,159	182	4,164	287	10,431	207	6,166	142	4,264	251
3	9,130	246	4,982	153	4,148	290	10,429	220	6,279	172	4,150	279
4	8,636	210	4,650	142	3,986	253	10,280	261	6,383	206	3,896	333
5	8,810	250	4,916	162	3,894	298	10,521	315	6,251	214	4,270	381
6	8,917	276	4,764	231	4,153	360	10,407	333	6,015	248	4,392	415
7	9,609	521	5,349	293	4,260	597	11,335	501	6,043	239	5,292	555
8	10,204	497	4,831	233	5,373	549	10,632	648	5,724	316	4,908	721
9	10,365	575	5,479	697	4,886	904	10,070	571	5,612	354	4,458	671
10	11,861	1,305	5,824	582	6,037	1,429	10,135	723	4,993	458	5,142	856
Annual average												
Before the index date	5,685		3,800		1,885		7,277		5,415		1,863	
After the index date	10,024		5,074		4,950		10,822		5,986		4,836	
Difference	4,339		1,274		3,065		3,544		571		2,973	
Ratio	1.8		1.3		2.6		1.5		1.1		2.6	

Notes:

Diabetes Cohort: The follow-up Year 1 *includes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *during the study period*.

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort.

%= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant (p<0.05, paired Student t-test).

SUPPLEMENTARY DATA

Supplementary Table 3a. Sensitivity Analysis I: Estimated per capita annual and cumulative excess medical expenditures during the 10 years before and after the index date (2013\$)

Follow-up Year	Annual medical expenditures							Cumulative medical expenditures			
	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	%	Diabetes Cohort	Control Cohort	Excess	%
-10	4,722	237	3,679	165	1,043	289	28.4	4,722	3,679	1,043	28.4
-9	5,382	216	4,129	147	1,253	262	30.3	10,104	7,809	2,296	29.4
-8	5,477	154	4,351	126	1,126	199	25.9	15,581	12,160	3,421	28.1
-7	5,781	130	4,475	105	1,306	167	29.2	21,362	16,635	4,727	28.4
-6	6,120	128	4,674	114	1,446	171	30.9	27,482	21,309	6,173	29.0
-5	6,475	125	4,785	95	1,690	157	35.3	33,957	26,093	7,863	30.1
-4	6,856	125	4,933	102	1,923	161	39.0	40,812	31,026	9,786	31.5
-3	7,084	116	5,021	88	2,064	146	41.1	47,897	36,047	11,850	32.9
-2	7,500	115	5,110	94	2,390	148	46.8	55,397	41,157	14,240	34.6
-1	9,586	204	5,094	81	4,492	219	88.2	64,982	46,251	18,732	40.5
1	12,403	194	5,618	124	6,785	230	120.8	77,386	51,869	25,517	49.2
2	9,985	152	5,724	115	4,261	190	74.4	87,371	57,593	29,778	51.7
3	9,914	165	5,696	116	4,217	202	74.0	97,284	63,289	33,995	53.7
4	9,608	169	5,622	128	3,985	212	70.9	106,892	68,912	37,981	55.1
5	9,845	203	5,695	137	4,150	245	72.9	116,738	74,607	42,131	56.5
6	9,877	219	5,515	172	4,362	278	79.1	126,614	80,122	46,492	58.0
7	10,751	363	5,824	189	4,927	409	84.6	137,365	85,946	51,419	59.8
8	10,733	413	5,428	200	5,305	459	97.7	148,098	91,374	56,724	62.1
9	10,700	408	5,733	388	4,967	563	86.6	158,798	97,107	61,691	63.5
10	11,886	751	5,724	377	6,162	840	107.6	170,684	102,831	67,853	66.0
Annual and cumulative average											
Before the index date	6,498		4,625		1,873			64,982	46,251	18,732	
After the index date	10,570		5,658		4,912			105,702	56,581	49,121	
Difference	4,072		1,033		3,039			40,719	10,330	30,389	
Ratio	1.6		1.2		2.6			1.6	1.2	2.6	

Notes:

Diabetes Cohort: The follow-up Year 1 *excludes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *during the study period*.

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort. %= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant (p<0.05, paired Student t-test).

SUPPLEMENTARY DATA

Supplementary Table 4a. Sensitivity Analysis I: Estimated per capita total medical expenditures by components and follow-up years before and after the index date (2013\$).

Follow-up Year	Outpatient						Inpatient						Prescription Drugs					
	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE
-10	2521	131	2178	101	343	166	971	157	608	89	363	181	1231	49	893	44	337	66
-9	2720	90	2435	87	285	125	1283	157	704	82	579	177	1379	37	990	44	389	58
-8	2813	76	2492	71	321	104	1093	101	813	75	280	126	1571	36	1046	34	525	50
-7	2990	70	2646	64	345	95	1116	81	765	61	351	101	1674	32	1064	25	610	41
-6	3139	66	2756	61	383	89	1225	84	815	78	410	115	1756	29	1103	23	653	37
-5	3294	64	2876	58	417	87	1343	87	740	55	603	103	1838	28	1168	22	670	36
-4	3503	62	2948	58	555	85	1432	87	781	61	651	106	1921	27	1204	21	718	35
-3	3691	61	2985	54	706	81	1394	78	822	52	572	93	1999	25	1214	21	785	33
-2	3821	56	3033	52	789	76	1572	79	841	59	731	99	2106	26	1236	21	870	33
-1	4784	73	3089	52	1695	90	2532	170	724	40	1808	175	2270	28	1281	24	989	37
1	5792	93	3343	67	2449	115	3400	136	973	72	2427	154	3212	33	1302	26	1910	42
2	4991	87	3400	63	1591	108	2003	94	1008	75	995	120	2991	36	1316	27	1675	44
3	4860	95	3418	75	1442	121	2109	100	964	59	1145	117	2944	36	1315	29	1630	47
4	4759	103	3360	85	1399	134	1909	91	973	62	936	111	2940	39	1290	30	1650	49
5	4787	119	3345	88	1442	148	2064	116	1075	77	988	139	2995	46	1276	30	1719	55
6	4789	120	3342	112	1447	164	1998	131	943	94	1055	161	3089	56	1230	32	1859	65
7	5031	151	3371	98	1660	180	2613	291	1239	118	1373	314	3107	62	1214	39	1893	73
8	4934	198	3134	104	1800	224	2624	312	1086	135	1539	340	3174	74	1208	44	1966	86
9	4813	198	3272	147	1541	246	2661	273	1306	331	1355	429	3226	92	1155	55	2071	107
10	5314	346	3449	261	1865	434	3148	531	1031	175	2118	559	3423	237	1245	95	2178	256
Annual Average																		
Before the index date	3328		2744		584		1396		761		635		1775		1120		655	
After the index date	5007		3343		1664		2453		1060		1393		3110		1255		1855	
Difference	1680		600		1080		1057		299		758		1336		135		1201	
Ratio	1.5		1.2		2.8		1.8		1.4		2.2		1.8		1.1		2.8	

Notes:

Diabetes Cohort: The follow-up Year 1 *excludes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *during the study period*.

SUPPLEMENTARY DATA

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort. %= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant ($p < 0.05$, paired Student t-test).

SUPPLEMENTARY DATA

Supplementary Table 5a. Sensitivity Analysis I: Estimated per capita total excess medical expenditures by age group and follow-up years before and after the index date (2013\$).

Follow-up Year	Aged: 25-44 Years						Aged: 45-54 Years						Aged: 55-64 Years					
	Diabetes	SE	Control	SE	Excess	SE	Diabetes	SE	Control	SE	Excess	SE	Diabetes	SE	Control	SE	Excess	SE
	Cohort		Cohort		Cohort		Cohort		Cohort		Cohort		Cohort		Cohort		Cohort	
-10	3,743	826	2,108	312	1,635	883	4,404	320	2,974	223	1,430	390	5,100	357	4,359	263	740	443
-9	3,574	336	3,818	517	244 ^{NS}	616	4,113	192	3,356	234	757	303	6,668	387	4,623	270	2,044	472
-8	3,450	272	2,818	217	632	348	4,961	205	3,597	173	1,364	268	6,317	255	4,798	189	1,519	318
-7	4,060	278	3,271	276	790	392	5,282	180	3,647	127	1,635	220	6,620	213	5,166	175	1,454	276
-6	4,596	300	3,227	267	1,368	402	5,482	171	3,872	124	1,610	211	7,209	221	5,285	159	1,923	272
-5	4,806	251	3,651	244	1,155	350	6,047	169	4,025	98	2,023	196	7,514	226	5,881	204	1,633	304
-4	5,046	282	3,336	194	1,710	342	6,722	182	4,297	109	2,425	212	7,713	206	5,896	168	1,817	266
-3	4,983	206	3,431	160	1,552	261	6,873	148	4,579	107	2,293	183	8,396	249	5,896	164	2,500	298
-2	6,269	356	3,683	194	2,586	405	7,221	135	4,977	135	2,244	191	8,725	235	6,318	219	2,407	321
-1	7,132	264	3,347	143	3,785	300	9,152	215	4,946	106	4,206	240	11,784	560	6,974	321	4,810	645
1	10,579	457	3,702	196	6,878	497	11,943	218	5,271	123	6,672	250	14,314	469	6,844	241	7,469	528
2	7,947	270	4,188	261	3,759	376	9,894	195	5,366	141	4,528	241	11,269	338	7,124	309	4,144	458
3	8,111	306	3,910	194	4,201	363	10,137	225	5,512	146	4,625	268	10,544	341	6,932	304	3,611	457
4	8,289	359	4,194	219	4,094	421	9,779	225	5,553	158	4,226	275	10,165	357	6,779	261	3,385	442
5	8,615	379	4,066	213	4,549	434	10,044	264	5,781	175	4,263	317	10,393	499	6,807	359	3,586	614
6	9,308	577	4,077	225	5,232	619	9,859	251	5,705	208	4,154	326	10,819	620	7,360	609	3,458	869
7	9,483	660	4,408	292	5,075	722	11,311	469	6,090	245	5,221	529	9,359	770	7,074	986	2,285	1,251
8	10,634	1,232	4,079	301	6,555	1,268	10,810	401	5,785	251	5,025	472	9,887	1,357	6,392	910	3,495	1,634
9	9,785	683	4,622	444	5,163	815	11,021	496	6,189	499	4,832	704						
10	10,614	1,171	4,832	765	5,782	1,398	12,344	930	6,045	432	6,298	1,025						
Annual average																		
Before the index date	4,766		3,269		1,546		6,026		4,027		1,999		7,604		5,520		2,085	
After the index date	9,337		4,208		5,129		10,714		5,730		4,985		10,844		6,914		3,929	
Difference	4,571		939		3,583		4,689		1,703		2,986		3,239		1,395		1,845	
Ratio	2.0		1.3		3.3		1.8		1.4		2.5		1.4		1.3		1.9	

Notes:

Diabetes Cohort: The follow-up Year 1 *excludes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *during the study period*.

SUPPLEMENTARY DATA

Aged= Age at diagnosis.

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort. %= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant ($p < 0.05$, paired Student t-test).

SUPPLEMENTARY DATA

Supplementary Table 6a. Sensitivity Analysis I: estimated per capita total excess medical expenditure by sex and follow-up years before and after the index date (2013\$).

Follow-up Year	Males						Females					
	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE
-10	4,078	347	2,921	216	1,157	409	5,349	322	4,408	247	942	406
-9	4,744	299	3,375	213	1,369	367	5,998	311	4,862	204	1,136	372
-8	4,490	166	3,464	162	1,027	232	6,423	254	5,192	192	1,231	318
-7	4,909	182	3,670	136	1,239	227	6,617	184	5,245	158	1,372	242
-6	5,122	164	3,793	151	1,329	223	7,080	194	5,501	167	1,579	256
-5	5,591	174	3,972	136	1,618	221	7,327	179	5,572	132	1,755	223
-4	6,075	189	4,170	161	1,905	248	7,604	164	5,666	125	1,938	206
-3	6,239	161	4,117	120	2,122	201	7,893	167	5,882	127	2,012	210
-2	6,741	177	4,266	140	2,475	226	8,227	148	5,916	125	2,311	193
-1	8,861	325	4,255	105	4,605	342	10,256	248	5,903	123	4,353	277
1	11,962	305	4,790	141	7,172	335	12,755	242	6,391	201	6,364	315
2	9,322	222	5,159	182	4,164	287	10,431	207	6,166	142	4,264	251
3	9,130	246	4,982	153	4,148	290	10,429	220	6,279	172	4,150	279
4	8,636	210	4,650	142	3,986	253	10,280	261	6,383	206	3,896	333
5	8,810	250	4,916	162	3,894	298	10,521	315	6,251	214	4,270	381
6	8,917	276	4,764	231	4,153	360	10,407	333	6,015	248	4,392	415
7	9,609	521	5,349	293	4,260	597	11,335	501	6,043	239	5,292	555
8	10,204	497	4,831	233	5,373	549	10,632	648	5,724	316	4,908	721
9	10,365	575	5,479	697	4,886	904	10,070	571	5,612	354	4,458	671
10	11,861	1,305	5,824	582	6,037	1,429	10,135	723	4,993	458	5,142	856
Annual average												
Before the index date	5,685		3,800		1,885		7,277		5,415		1,863	
After the index date	9,882		5,074		4,807		10,699		5,986		4,714	
Difference	4,197		1,274		2,923		3,422		571		2,851	
Ratio	1.7		1.3		2.6		1.5		1.1		2.5	

Notes:

Diabetes Cohort: The follow-up Year 1 *excludes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *during the study period*.

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort. %= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant (p<0.05, paired Student t-test).

SUPPLEMENTARY DATA

Supplementary Table 1a. Sensitivity Analysis II: Matched cohort size and follow-up years before and after the index date.

All Sample

Cohort	Years, Pre and Post Index Date																			
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10
2003	0	0	0	0	0	0	0	0	3922	3922	3922	3901	3874	3853	3834	3808	3793	3784	3763	3763
2004	0	0	0	0	0	0	0	4080	4080	4080	4080	4063	4039	4016	3985	3963	3948	3925	3925	0
2005	0	0	0	0	0	0	4218	4218	4218	4218	4218	4192	4171	4144	4115	4092	4072	4072	0	0
2006	0	0	0	0	0	4704	4704	4704	4704	4704	4704	4668	4639	4607	4580	4557	4557	0	0	0
2007	0	0	0	0	4782	4782	4782	4782	4782	4782	4782	4755	4728	4711	4686	4686	0	0	0	0
2008	0	0	0	4494	4494	4494	4494	4494	4494	4494	4494	4469	4435	4418	4418	0	0	0	0	0
2009	0	0	4844	4844	4844	4844	4844	4844	4844	4844	4844	4822	4793	4793	0	0	0	0	0	0
2010	0	4428	4428	4428	4428	4428	4428	4428	4428	4428	4428	4395	4395	0	0	0	0	0	0	0
2011	4254	4254	4254	4254	4254	4254	4254	4254	4254	4254	4254	4254	0	0	0	0	0	0	0	0
Total	4254	8682	13526	18020	22802	27506	31724	35804	39726	39726	39726	39519	35074	30542	25618	21106	16370	11781	7688	3763

Age at diagnosis: 25-44 Years

Cohort	Years, Pre and Post Index Date																			
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10
2003	0	0	0	0	0	0	0	0	1038	1038	1038	1033	1031	1026	1022	1020	1017	1015	1014	1014
2004	0	0	0	0	0	0	0	940	940	940	940	939	937	935	934	932	930	927	927	0
2005	0	0	0	0	0	0	878	878	878	878	878	875	871	869	866	865	861	861	0	0
2006	0	0	0	0	0	726	726	726	726	726	726	722	720	718	717	716	716	0	0	0
2007	0	0	0	0	688	688	688	688	688	688	688	685	683	683	681	681	0	0	0	0
2008	0	0	0	500	500	500	500	500	500	500	500	499	496	495	495	0	0	0	0	0
2009	0	0	540	540	540	540	540	540	540	540	540	539	538	538	0	0	0	0	0	0
2010	0	396	396	396	396	396	396	396	396	396	396	394	394	0	0	0	0	0	0	0
2011	346	346	346	346	346	346	346	346	346	346	346	346	0	0	0	0	0	0	0	0
Total	346	742	1282	1782	2470	3196	4074	5014	6052	6052	6052	6032	5670	5264	4715	4214	3524	2803	1941	1014

SUPPLEMENTARY DATA

Age at diagnosis: 45-54 Years

Cohort	Years, Pre and Post Index Date																			
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10
2003	0	0	0	0	0	0	0	0	2884	2884	2884	2868	2843	2827	2812	2788	2776	2769	2749	2749
2004	0	0	0	0	0	0	0	3106	3106	3106	3106	3090	3068	3045	3015	2995	2983	2965	2965	0
2005	0	0	0	0	0	0	2898	2898	2898	2898	2898	2883	2871	2854	2836	2820	2804	2804	0	0
2006	0	0	0	0	0	2952	2952	2952	2952	2952	2952	2929	2909	2891	2872	2852	2852	0	0	0
2007	0	0	0	0	2742	2742	2742	2742	2742	2742	2742	2732	2717	2710	2696	2696	0	0	0	0
2008	0	0	0	2230	2230	2230	2230	2230	2230	2230	2230	2218	2206	2201	2201	0	0	0	0	0
2009	0	0	2196	2196	2196	2196	2196	2196	2196	2196	2196	2187	2177	2177	0	0	0	0	0	0
2010	0	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1825	1825	0	0	0	0	0	0	0
2011	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	1632	0	0	0	0	0	0	0	0
Total	1632	3470	5666	7896	10638	13590	16488	19594	22478	22478	22478	22364	20616	18705	16432	14151	11415	8538	5714	2749

Age at diagnosis: 55-64 Years

Cohort	Years, Pre and Post Index Date																			
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10
2003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	34	34	34	34	34	34	34	34	33	33	33	33	0
2005	0	0	0	0	0	0	442	442	442	442	442	441	440	433	430	429	427	427	0	0
2006	0	0	0	0	0	1026	1026	1026	1026	1026	1026	1020	1008	1001	995	987	987	0	0	0
2007	0	0	0	0	1352	1352	1352	1352	1352	1352	1352	1338	1322	1315	1305	1305	0	0	0	0
2008	0	0	0	1764	1764	1764	1764	1764	1764	1764	1764	1751	1736	1725	1725	0	0	0	0	0
2009	0	0	2108	2108	2108	2108	2108	2108	2108	2108	2108	2088	2076	2076	0	0	0	0	0	0
2010	0	2194	2194	2194	2194	2194	2194	2194	2194	2194	2194	2179	2179	0	0	0	0	0	0	0
2011	2276	2276	2276	2276	2276	2276	2276	2276	2276	2276	2276	2276	0	0	0	0	0	0	0	0
Total	2276	4470	6578	8342	9694	10720	11162	11196	11196	11196	11196	11127	8795	6584	4489	2754	1447	460	33	0

SUPPLEMENTARY DATA

Males

Cohort	Years, Pre and Post Index Date																			
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10
2003	0	0	0	0	0	0	0	0	1936	1936	1936	1930	1915	1901	1889	1876	1867	1862	1854	1854
2004	0	0	0	0	0	0	0	1986	1986	1986	1986	1974	1960	1947	1929	1919	1910	1896	1896	0
2005	0	0	0	0	0	0	2024	2024	2024	2024	2024	2010	2004	1993	1976	1961	1953	1953	0	0
2006	0	0	0	0	0	2318	2318	2318	2318	2318	2318	2303	2288	2268	2249	2238	2238	0	0	0
2007	0	0	0	0	2356	2356	2356	2356	2356	2356	2356	2344	2330	2318	2308	2308	0	0	0	0
2008	0	0	0	2202	2202	2202	2202	2202	2202	2202	2202	2192	2177	2168	2168	0	0	0	0	0
2009	0	0	2358	2358	2358	2358	2358	2358	2358	2358	2358	2346	2330	2330	0	0	0	0	0	0
2010	0	2166	2166	2166	2166	2166	2166	2166	2166	2166	2166	2154	2154	0	0	0	0	0	0	0
2011	2098	2098	2098	2098	2098	2098	2098	2098	2098	2098	2098	2098	2098	0	0	0	0	0	0	0
Total	2098	4264	6622	8824	11180	13498	15522	17508	19444	19444	19444	19351	17158	14925	12519	10302	7968	5711	3750	1854

Females

Cohort	Years, Pre and Post Index Date																			
	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10
2003	0	0	0	0	0	0	0	0	1986	1986	1986	1971	1959	1952	1945	1932	1926	1922	1909	1909
2004	0	0	0	0	0	0	0	2094	2094	2094	2094	2089	2079	2069	2056	2044	2038	2029	2029	0
2005	0	0	0	0	0	0	2194	2194	2194	2194	2194	2182	2167	2151	2139	2131	2119	2119	0	0
2006	0	0	0	0	0	2386	2386	2386	2386	2386	2386	2365	2351	2339	2331	2319	2319	0	0	0
2007	0	0	0	0	2426	2426	2426	2426	2426	2426	2426	2411	2398	2393	2378	2378	0	0	0	0
2008	0	0	0	2292	2292	2292	2292	2292	2292	2292	2292	2277	2258	2250	2250	0	0	0	0	0
2009	0	0	2486	2486	2486	2486	2486	2486	2486	2486	2486	2476	2463	2463	0	0	0	0	0	0
2010	0	2262	2262	2262	2262	2262	2262	2262	2262	2262	2262	2241	2241	0	0	0	0	0	0	0
2011	2156	2156	2156	2156	2156	2156	2156	2156	2156	2156	2156	2156	2156	0	0	0	0	0	0	0
Total	2156	4418	6904	9196	11622	14008	16202	18296	20282	20282	20282	20168	17916	15617	13099	10804	8402	6070	3938	1909

Notes: Control Cohort: People not diagnosed with diabetes *in the year of case control matching.*

SUPPLEMENTARY DATA

Supplementary Table 2a. Sensitivity Analysis II: Summary statistics of matched cohort samples in the year of matching.

Variable	All				Males				Females			
	Diabetes Cohort (n=19,863)		Control Cohort (n=19,863)		Diabetes Cohort (n=9,722)		Control Cohort (n=9,722)		Diabetes Cohort (n=10,141)		Control Cohort (n=10,141)	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Age, Years (Mean)	50.67	0.04	50.67	0.04	50.69	0.06	50.69	0.06	50.65	0.06	50.65	0.06
Female, %	51.05	0.35	51.05	0.35	72.96	0.45	72.96	0.45	68.91	0.46	68.91	0.46
Metro, %	70.89	0.32	70.89	0.32								
Census Region, %:					4.31	0.21	4.31	0.21	3.03	0.17	3.03	0.17
Northeast	3.66	0.13	3.92	0.13	40.32	0.50	40.32	0.50	34.44	0.47	34.44	0.47
Midwest	37.33	0.34	38.00	0.34	38.81	0.49	38.81	0.49	49.19	0.50	49.19	0.50
South	44.11	0.35	44.80	0.35	16.49	0.38	16.49	0.38	13.31	0.34	13.31	0.34
West	14.87	0.25	15.36	0.25	61.27	0.49	61.27	0.49	55.86	0.49	55.86	0.49
PPO,%	58.51	0.35	59.19	0.35	50.69	0.06	50.69	0.06	50.65	0.06	50.65	0.06

Variable	Aged: 25-44 Years				Aged: 45-54 Years				Aged: 55-64 Years			
	Diabetes Cohort (n=3,026)		Control Cohort (n=3,026)		Diabetes Cohort (n=11,239)		Control Cohort (n=11,239)		Diabetes Cohort (n=5,598)		Control Cohort (n=5,598)	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Age, Years (Mean)	40.11	0.06	40.11	0.06	50.31	0.03	50.31	0.03	57.10	0.02	57.10	0.02
Female, %	53.60	0.91	53.60	0.91	50.32	0.47	50.32	0.47	51.16	0.67	51.16	0.67
Metro, %	62.49	0.88	62.49	0.88	71.68	0.43	71.68	0.43	73.85	0.59	73.83	0.59
Census Region, %:												
Northeast	2.51	0.28	2.51	0.28	3.70	0.18	3.70	0.18	4.18	0.27	4.18	0.27
Midwest	31.10	0.84	31.10	0.84	38.66	0.46	38.66	0.46	38.00	0.65	38.00	0.65
South	51.82	0.91	51.82	0.91	43.46	0.47	43.46	0.47	41.23	0.66	41.23	0.66
West	14.51	0.64	14.51	0.64	14.13	0.33	14.13	0.33	16.54	0.50	16.54	0.50
PPO,%	40.11	0.06	40.11	0.06	50.31	0.03	50.31	0.03	57.10	0.02	57.10	0.02

Notes:

Control Cohort: People not diagnosed with diabetes *in the year of case-control matching*.

Aged= Age at diagnosis.

The testing of balance propensity score matching shows that the % biases for each covariates after matching in each year were less than 1%. Metro= residence in Metropolitan statistical area; PPO= Preferred Provider Organization; SE= Standard error.

SUPPLEMENTARY DATA

Supplementary Table 3b. Sensitivity Analysis II: Estimated per capita annual and cumulative excess medical expenditures during the 10 years before and after the index date (2013\$).

Follow-up Year	Annual medical expenditures							Cumulative medical expenditures			
	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	%	Diabetes Cohort	Control Cohort	Excess	%
-10	4,722	237	3,905	188	817	302	20.9	4,722	3,905	817	20.9
-9	5,382	216	3,907	130	1,475	252	37.7	10,104	7,813	2,292	29.3
-8	5,477	154	4,371	128	1,106	200	25.3	15,581	12,184	3,398	27.9
-7	5,781	130	4,410	115	1,370	173	31.1	21,362	16,594	4,768	28.7
-6	6,120	128	4,759	124	1,361	178	28.6	27,482	21,353	6,129	28.7
-5	6,475	125	4,788	91	1,687	155	35.2	33,957	26,141	7,816	29.9
-4	6,856	125	5,075	98	1,781	159	35.1	40,812	31,216	9,597	30.7
-3	7,084	116	5,091	101	1,993	154	39.1	47,897	36,307	11,590	31.9
-2	7,500	115	5,170	97	2,330	150	45.1	55,397	41,477	13,920	33.6
-1	9,586	204	5,373	112	4,213	232	78.4	64,982	46,850	18,132	38.7
1	13,727	213	5,635	109	8,092	240	143.6	78,710	52,485	26,224	50.0
2	9,985	152	5,640	107	4,345	186	77.0	88,695	58,126	30,569	52.6
3	9,914	165	5,694	108	4,220	198	74.1	98,608	63,819	34,789	54.5
4	9,608	169	5,642	123	3,966	211	70.3	108,216	69,462	38,754	55.8
5	9,845	203	5,550	127	4,296	242	77.4	118,061	75,011	43,050	57.4
6	9,877	219	5,598	178	4,279	284	76.4	127,938	80,609	47,329	58.7
7	10,751	363	5,918	218	4,832	431	81.6	138,689	86,528	52,161	60.3
8	10,733	413	5,916	313	4,817	524	81.4	149,422	92,444	56,978	61.6
9	10,700	408	5,526	254	5,173	490	93.6	160,122	97,970	62,152	63.4
10	11,886	751	5,688	384	6,198	865	109.0	172,008	103,658	68,349	65.9
Annual and cumulative average											
Before the index date	6,498		4,685		1,813			64,982	46,850	18,132	
After the index date	10,703		5,681		5,022			107,025	56,808	50,217	
Difference	4,204		996		3,209			42,043	9,958	32,085	
Ratio	1.6		1.2		2.8			1.6	1.2	2.8	

Notes:

Diabetes Cohort: The follow-up Year 1 *includes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *in the year of case-control matching*.

When the outpatient or inpatient costs on diagnosis day were excluded (as in Sensitivity Analysis I), the estimated medical and corresponding excess expenditures (SE) for Diabetes cohort in the follow-up year 1 were \$12,403 (194) and \$6,768 (\$223).

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort. %= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant (p<0.05, paired Student t-test).

SUPPLEMENTARY DATA

Supplementary Table 4b. Sensitivity Analysis II: Estimated per capita total medical expenditures by components and follow-up years before and after the index date (2013\$).

Follow-up Year	Outpatient						Inpatient						Prescription Drugs					
	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE	Diabetes Cohort	SE	Control Cohort	SE	Excess	SE
-10	2,521	131	2,373	128	148 ^{NS}	183	971	157	578	87	393	180	1,231	49	954	53	276	72
-9	2,720	90	2,306	77	414	118	1,283	157	592	72	690	173	1,379	37	1,009	43	370	57
-8	2,813	76	2,590	74	223	106	1,093	101	752	75	341	126	1,571	36	1,029	32	542	48
-7	2,990	70	2,598	62	393	94	1,116	81	744	78	373	113	1,674	32	1,069	26	605	41
-6	3,139	66	2,862	72	277	97	1,225	84	778	72	448	111	1,756	29	1,120	23	636	37
-5	3,294	64	2,924	60	370	88	1,343	87	691	49	652	100	1,838	28	1,173	22	665	36
-4	3,503	62	3,009	59	494	86	1,432	87	836	56	595	103	1,921	27	1,230	24	691	36
-3	3,691	61	2,961	54	730	81	1,394	78	892	68	502	103	1,999	25	1,238	22	761	34
-2	3,821	56	3,070	57	751	80	1,572	79	839	58	733	98	2,106	26	1,260	23	846	34
-1	4,784	73	3,225	60	1,559	94	2,532	170	851	66	1,681	182	2,270	28	1,297	24	972	37
1	5,905	93	3,297	58	2,608	110	4,611	157	1,018	73	3,593	173	3,212	33	1,320	24	1,892	41
2	4,991	87	3,376	61	1,615	106	2,003	94	945	67	1,058	115	2,991	36	1,319	25	1,672	44
3	4,860	95	3,361	67	1,499	116	2,109	100	1,031	60	1,078	117	2,944	36	1,302	27	1,643	45
4	4,759	103	3,387	86	1,372	135	1,909	91	965	61	943	111	2,940	39	1,290	27	1,650	48
5	4,787	119	3,217	72	1,570	141	2,064	116	1,060	75	1,003	140	2,995	46	1,272	29	1,723	55
6	4,789	120	3,257	86	1,532	149	1,998	131	1,075	120	923	178	3,089	56	1,266	38	1,823	68
7	5,031	151	3,425	115	1,606	191	2,613	291	1,250	133	1,363	328	3,107	62	1,244	49	1,863	80
8	4,934	198	3,286	119	1,648	236	2,624	312	1,384	260	1,241	410	3,174	74	1,246	48	1,928	89
9	4,813	198	3,267	163	1,546	258	2,661	273	1,055	131	1,606	311	3,226	92	1,204	60	2,021	##
10	5,314	346	3,438	261	1,876	439	3,148	531	1,061	187	2,087	582	3,423	##	1,189	93	2,234	##
Annual Average																		
Before the index date	3,328		2,792		536		1,396		755		641		1,775		1,138		637	
After the index date	5,018		3,331		1,687		2,574		1,084		1,490		3,110		1,265		1,845	
Difference	1,691		539		1,151		1,178		329		849		1,336		127		1,208	
Ratio	1.5		1.2		3.1		1.8		1.4		2.3		1.8		1.1		2.9	

Notes: Diabetes Cohort: The follow-up Year 1 *includes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *in the year of case-control matching*.

SUPPLEMENTARY DATA

When the outpatient or inpatient costs on diagnosis day were excluded (as in Sensitivity analysis I), the estimated medical and corresponding excess expenditures (SE) for Diabetes cohort in the follow-up year 1 were; outpatient care: \$5,792 (93) and \$2,495 (\$110), and inpatient care: \$3,400 (136) and \$2,381(\$154).

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort. %= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant ($p < 0.05$, paired Student t-test).

SUPPLEMENTARY DATA

Supplementary Table 5b. Sensitivity Analysis II: Estimated per capita total excess medical expenditures by age group and follow-up years before and after the index date (2013\$).

Follow-up Year	Aged: 25-44 Years						Aged: 45-54 Years						Aged: 55-64 Years					
	Diabetes		Control		Excess		Diabetes		Control		Excess		Diabetes		Control		Excess	
	Cohort	SE	Cohort	SE	Cohort	SE	Cohort	SE	Cohort	SE	Cohort	SE	Cohort	SE	Cohort	SE	Cohort	SE
-10	3,743	826	2,933	810	809 ^{NS}	1,157	4,404	320	3,084	206	1,320	381	5,100	357	4,322	311	777 ^{NS}	473
-9	3,574	336	3,395	384	179 ^{NS}	510	4,113	192	3,344	204	768	280	6,668	387	4,198	162	2,470	420
-8	3,450	272	2,923	230	527 ^{NS}	357	4,961	205	3,534	164	1,427	262	6,317	255	4,877	189	1,440	318
-7	4,060	278	3,472	317	589 ^{NS}	422	5,282	180	3,673	140	1,609	228	6,620	213	5,322	212	1,297	301
-6	4,596	300	3,210	246	1,386	388	5,482	171	3,876	114	1,606	205	7,209	221	5,382	169	1,827	278
-5	4,806	251	3,654	237	1,153	346	6,047	169	4,024	95	2,023	194	7,514	226	5,946	195	1,568	299
-4	5,046	282	3,438	202	1,608	347	6,722	182	4,397	119	2,325	217	7,713	206	5,942	208	1,771	293
-3	4,983	206	3,478	192	1,505	281	6,873	148	4,664	113	2,209	186	8,396	249	6,234	190	2,162	313
-2	6,269	356	3,646	184	2,623	401	7,221	135	4,989	132	2,231	189	8,725	235	6,627	243	2,098	338
-1	7,132	264	3,452	146	3,680	302	9,152	215	5,045	107	4,106	240	11,784	560	6,933	275	4,851	623
1	11,522	486	3,746	195	7,776	523	13,213	245	5,276	121	7,937	273	15,951	512	7,007	247	8,945	568
2	7,947	270	4,132	260	3,816	375	9,894	195	5,410	148	4,484	245	11,269	338	7,478	337	3,790	478
3	8,111	306	3,997	192	4,114	363	10,137	225	5,482	126	4,655	259	10,544	341	6,935	274	3,608	439
4	8,289	359	4,139	214	4,149	420	9,779	225	5,566	140	4,213	267	10,165	357	7,041	327	3,124	485
5	8,615	379	3,908	206	4,706	434	10,044	264	5,674	159	4,370	312	10,393	499	6,891	339	3,502	610
6	9,308	577	4,127	230	5,181	627	9,859	251	5,664	180	4,195	312	10,819	620	7,950	800	2,869	1,004
7	9,483	660	4,315	290	5,169	729	11,311	469	6,269	290	5,042	561	9,359	770	7,548	1,108	1,811 ^{NS}	1,333
8	10,634	1,232	4,092	307	6,542	1,291	10,810	401	6,344	411	4,466	574	9,887	1,357	6,770	988	3,117	1,698
9	9,785	683	4,807	467	4,978	834	11,021	496	5,838	309	5,182	598	7,416	2,580	5,611	3,324	1,805 ^{NS}	4,178
10	10,614	1,171	5,125	827	5,489	1,446	12,344	930	5,902	427	6,442	1,058						
Annual average																		
Before the index date	4,766		3,360		1,406		6,026		4,063		1,962		7,604		5,578		2,026	
After the index date	9,431		4,239		5,192		10,841		5,743		5,099		10,645		7,026		3,619	
Difference	4,665		879		3,786		4,816		1,679		3,136		3,040		1,447		1,593	
Ratio	2.0		1.3		3.7		1.8		1.4		2.6		1.4		1.3		1.8	

Notes: Diabetes Cohort: The follow-up Year 1 *includes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *in the year of case-control matching*.

SUPPLEMENTARY DATA

When the outpatient or inpatient costs on diagnosis day were excluded (as in Sensitivity analysis I), the estimated medical and corresponding excess expenditures (SE) for Diabetes cohort in the follow-up year 1 were; Aged 25-44 Years: \$10,579 (457) and \$6,833 (\$479), Aged 45-54 Years: \$11,947 (218) and \$6,667 (\$250), Aged 45-54 Years: \$14,314 (469) and \$7,307 (\$530).

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort. %= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant ($p < 0.05$, paired Student t-test).

SUPPLEMENTARY DATA

Supplementary Table 6b. Sensitivity Analysis II: Estimated per capita total excess medical expenditures by sex and follow-up years before and after the index date (\$2013).

Follow-up Year	Males						Females					
	Diabetes	SE	Control	SE	Excess	SE	Diabetes	SE	Control	SE	Excess	SE
	Cohort		Cohort		Cohort		Cohort		Cohort		Cohort	
-10	4,078	347	3,133	237	945	420	5,349	322	4,646	289	703 ^{NS}	432
-9	4,744	299	3,019	164	1,725	341	5,998	311	4,751	197	1,247	369
-8	4,490	166	3,408	151	1,082	224	6,423	254	5,303	203	1,121	325
-7	4,909	182	3,592	147	1,317	234	6,617	184	5,187	173	1,430	253
-6	5,122	164	3,983	194	1,139	254	7,080	194	5,529	156	1,550	249
-5	5,591	174	3,846	115	1,744	209	7,327	179	5,709	140	1,618	228
-4	6,075	189	4,115	128	1,960	228	7,604	164	6,009	147	1,594	220
-3	6,239	161	4,213	147	2,026	218	7,893	167	5,925	138	1,968	217
-2	6,741	177	4,391	150	2,351	232	8,227	148	5,936	124	2,291	193
-1	8,861	325	4,497	123	4,364	348	10,256	248	6,219	184	4,037	309
1	13,390	330	4,695	136	8,694	357	13,979	273	6,542	169	7,437	321
2	9,322	222	5,022	148	4,301	267	10,431	207	6,235	153	4,196	257
3	9,130	246	5,035	145	4,095	287	10,429	220	6,318	158	4,112	271
4	8,636	210	4,817	143	3,818	256	10,280	261	6,425	198	3,855	329
5	8,810	250	4,827	168	3,983	305	10,521	315	6,215	189	4,306	371
6	8,917	276	4,844	233	4,073	364	10,407	333	6,331	267	4,076	429
7	9,609	521	5,735	373	3,874	649	11,335	501	6,091	237	5,244	565
8	10,204	497	5,586	537	4,617	731	10,632	648	6,224	340	4,408	747
9	10,365	575	5,236	374	5,128	701	10,070	571	5,800	344	4,270	678
10	11,861	1,305	5,735	603	6,126	1,481	10,135	723	5,643	480	4,492	883
Annual average												
Before the index date	5,685		3,820		1,865		7,277		5,521		1,756	
After the index date	10,024		5,153		4,871		10,822		6,182		4,639	
Difference	4,339		1,334		3,006		3,544		661		2,883	
Ratio	1.8		1.3		2.6		1.5		1.1		2.6	

Notes:

Diabetes Cohort: The follow-up Year 1 *includes* outpatient or inpatient expenditures on diagnosis day.

Control Cohort: People not diagnosed with diabetes *in the year of case-control matching*.

When the outpatient or inpatient costs on diagnosis day were excluded (as in Sensitivity analysis I), the estimated medical and corresponding excess expenditures (SE) for Diabetes cohort in the follow-up year 1 were; Males: \$11,962 (305) and \$7,267 (\$334), Females: \$12,755 (242) and \$6,213 (\$296).

Excess= Average expenditures for diabetes cohort – average expenditures for control cohort. %= Percent more for diabetes cohort compared to control cohort. SE=standard error around the mean. The excess expenditures are all statically significant (p<0.05, paired Student t-test).