SUPPLEMENTARY DATA

Appendix 1. ICD-9 and ICD-10 codes for each outcome.

Mood disorders

The primary and secondary ICD-9 codes for mood disorders are: 296, 300, 311. The ICD-10 codes for mood disorders are: F30-F48, F68.

Suicide attempts

The primary and secondary ICD-9 codes for hospitalization for a suicide attempt are: E950.0-E959.9. The ICD-10 codes for hospitalization for a suicide attempts are: ICD-10 codes: X60 to X84.

Deaths by suicide

The ICD-10 codes for death by suicide are: X60 to X84 and Y87).

Schizophrenia

The ICD-9 codes for schizophrenia are: 295. The ICD-10 codes for schizophrenia are: F20, F21, F23.2, F25).

Combined outcomes

The ICD-9 codes for the combined outcome of any psychiatric disorders are: 290-319. The ICD-10 codes for any psychiatric disorders are: F00-F99. The ICD-9 and ICD-10 codes attention deficit hyperactivity disorder (314 and F91) and autism spectrum disorders (299 and F84) were excluded.

SUPPLEMENTARY DATA

Appendix 2. All psychiatric disorders included in the combined outcome of any psychiatric disorders

Any psychiatric disorders included:

Mood disorders, schizophrenia, schizotypal and delusional disorders, organic psychotic conditions and other psychoses, neurotic disorders, personality disorders and other nonpsychotic mental disorders, intellectual disabilities, organic mental disorders, mental behavioral disorders due to psychoactive substance, neurotic, stress-related and somatoform disorders, behavioral syndromes associated with physiological disturbances and physical factors, disorders of adult personality and behavior, mental retardation, pervasive and specific developmental disorders, behavioral and emotional disorders with onset usually occurring in childhood and adolescence and mental disorder not otherwise specified

SUPPLEMENTARY DATA

Appendix 3. Supplemental analysis

Because the association of diabetes status and psychiatric outcomes could theoretically be modified by certain risk factors such as being female or having a low material or social deprivation indices, interaction between sex and diabetes status as well as between material and social deprivation and diabetes status was explored by adding interaction terms to the multivariate Cox proportional hazard models. The association between diabetes status and the different psychiatric outcomes did not vary by sex nor by social or material deprivation levels and were therefore not included in the main models.

In addition, because our main models evaluated the effect of diabetes itself (regardless of duration) on the various psychiatric outcomes, we conducted additional analyses whereby we included diabetes duration as our main exposure instead of diabetes status and adjusted for all covariates included in the main models. We found that individuals with shorter duration of diabetes were more likely to have a mood disorder (diagnosed in the ED or in-hospital), visit a psychiatrist or have any psychiatric disorders compared to those with longer diabetes duration (Table 1).

SUPPLEMENTARY DATA

Appendix 4. Characteristics of the study population at the cohort entry date

	With Diabetes	Without Diabetes	P-value
	N = 3,544	N = 1,388,397	
	N (%)	N (%)	
Age at diabetes diagnosis in years			
Mean ± SD	10.68 ± 3.52	N/A	
1-4 years	247 (7.0)	N/A	
5-9 years	894 (25.2)	N/A	
10-15 years	2,403 (67.8)	N/A	
Gender (Males)	1,867 (52.7)	706,273 (50.9)	0.03
Duration of follow-up in years			
Mean ± SD	6.67 ± 2.97	7.63 ± 2.93	<0.0001

SUPPLEMENTARY DATA

Range	1-10	0-10	
Social Deprivation†			
1 (Least deprived)	827 (23.3)	325,737 (23.5)	0.63
2	731 (20.6)	301,048 (21.7)	
3	719 (20.3)	281,238 (20.3)	
4	631 (17.8)	242,171 (17.4)	
5 (Most deprived)	504 (14.2)	187,627 (13.5)	
Material deprivation ††			
1 (Least deprived)	705 (19.9)	272,235 (19.6)	0.58
2	725 (20.5)	271,829 (19.6)	
3	640 (18.1)	265,264 (19.1)	
4	671 (18.9)	261,618 (18.8)	

5 (Most deprived)	671 (18.9)	266,875 (19.2)	
Rural Residency †††	719 (20.3)	307,905 (22.2)	0.002
Birth year			
1982	38 (1.1)	66,536 (4.8)	<0.0001
1983	66 (1.9)	85,094 (6.1)	
1984	106 (3.0)	85,093 (6.1)	
1985	124 (3.5)	83,669 (6.0)	
1986	134 (3.8)	81,074 (5.8)	
1987	156 (4.4)	79,618 (5.7)	
1988	185 (5.2)	81,773 (5.9)	
1989	226 (6.4)	86,234 (6.2)	
1990	223 (6.3)	91,002 (6.6)	

1991	253 (7.1)	89,971 (6.5)	
1992	260 (7.3)	88,616 (6.4)	
1993	278 (7.8)	84,950 (6.1)	
1994	290 (8.2)	83,090 (6.0)	
1995	305 (8.6)	80,121 (5.8)	
1996	316 (8.9)	77,993 (5.6)	
1997	308 (8.7)	73,231 (5.3)	
1998	276 (7.8)	70,332 (5.1)	
Number of ED visits in prior year			
Mean ± SD	0.73 ± 1.21	0.26 ± 0.70	<0.0001
Range	0-15.00	0-31.00	
Number of diabetes-related ED visits			

in the prior year			
Mean ± SD	0.30 ± 0.72	0.00 ± 0.00	<0.0001
Range	0-14	0-2	
Number of hospitalizations in prior year			
Mean ± SD	0.27 ± 0.71	0.02 ± 0.17	<0.0001
Range	0-14	0-20	
Number of outpatient clinic visits in prior year			
Mean ± SD	6.27 ± 6.42	1.73 ± 2.58	<0.0001
Range	0-92.0	0-170.0	

Table 1 Legend:
The p-value was obtained using chi-square for categorical variables or t-test for continuous variables
Abbreviations: ED: Emergency Department; IQR: Interquartile range; N/A: not applicable; SD: Standard Deviation
†Missing 50,708 of the study population: 132 with diabetes and 50,576 without diabetes
††Missing 50,708 of the study population: 132 with diabetes and 50,576 without diabetes
†††Missing 23,043 of the study population: 43 with diabetes and 23,000 without diabetes.
Rural population refers to population < 10,000. Urban population refers to population > 10,000.