

Supplementary Table S1 Association of pregnancy loss, paternal Charlson comorbidity index (CCI) and chronic diseases.*

	Paternal CCI		Ectopic		Spontaneous abortion		Stillbirth		Not live birth†	
	N (%)	RR (95% CI)	N (%)	RR (95% CI)	N (%)	RR (95% CI)	N (%)	RR (95% CI)	N (%)	RR (95% CI)
0	16 039 (2.0)	Ref	117 402 (14.5)	Ref	7416 (0.92)	Ref	140 857 (17.4)	Ref	140 857 (17.4)	Ref
1	2968 (2.6)	1.17 [1.12–1.21]	20 016 (17.2)	1.11 [1.09–1.13]	1248 (1.1)	1.09 [1.03–1.16]	24 232 (20.8)	1.09 [1.08–1.11]	24 232 (20.8)	1.09 [1.08–1.11]
2	644 (3.1)	1.31 [1.20–1.41]	4010 (19.1)	1.17 [1.09–1.21]	255 (1.2)	1.17 [1.03–1.32]	4909 (23.4)	1.15 [1.12–1.18]	4909 (23.4)	1.15 [1.12–1.18]
3+	392 (3.3)	1.32 [1.19–1.45]	2460 (20.8)	1.21 [1.16–1.27]	145 (1.2)	1.12 [0.94–1.31]	2997 (25.3)	1.15 [1.11–1.19]	2997 (25.3)	1.15 [1.11–1.19]
P _{Trend}		<0.0001		<0.0001		<0.0001		<0.0001		<0.0001
Comorbidity										
Presence of comorbidity	N (%)	RR (95% CI)	N (%)	RR (95% CI)	N (%)	RR (95% CI)	N (%)	RR (95% CI)	N (%)	RR (95% CI)
Hypertension										
No	16 862 (2.0)	Ref	123 952 (14.6)	Ref	7850 (0.92)	Ref	148 664 (17.5)	Ref	148 664 (17.5)	Ref
Yes	3181 (2.9)	1.23 [1.18–1.27]	19 936 (18.3)	1.10 [1.08–1.12]	1214 (1.1)	1.04 [0.98–1.11]	24 331 (22.3)	1.09 [1.08–1.11]	24 331 (22.3)	1.09 [1.08–1.11]
Diabetes mellitus										
No	18 984 (2.1)	Ref	137 765 (14.9)	Ref	8680 (0.94)	Ref	165 429 (17.9)	Ref	165 429 (17.9)	Ref
Yes	1059 (3.3)	1.30 [1.23–1.38]	6123 (19.2)	1.10 [1.07–1.13]	384 (1.2)	1.07 [0.96–1.18]	7566 (23.7)	1.08 [1.04–1.13]	7566 (23.7)	1.08 [1.04–1.13]
Obesity										
No	18 692 (2.0)	Ref	136 050 (14.9)	Ref	8542 (0.93)	Ref	163 284 (17.8)	Ref	163 284 (17.8)	Ref
Yes	1351 (3.2)	1.29 [1.22–1.36]	7838 (18.4)	1.12 [1.09–1.14]	522 (1.2)	1.14 [1.03–1.24]	9711 (22.8)	1.10 [1.06–1.14]	9711 (22.8)	1.10 [1.06–1.14]
Hyperlipidemia										
No	16 859 (2.0)	Ref	122 035 (14.5)	Ref	7794 (0.93)	Ref	146 688 (17.5)	Ref	146 688 (17.5)	Ref
Yes	3184 (2.7)	1.15 [1.10–1.19]	21 853 (18.5)	1.12 [1.10–1.13]	1270 (1.1)	1.03 [0.96–1.09]	26 307 (22.3)	1.09 [1.08–1.11]	26 307 (22.3)	1.09 [1.08–1.11]
COPD										
No	18 043 (2.1)	Ref	130 480 (14.8)	Ref	8183 (0.93)	Ref	156 706 (17.8)	Ref	156 706 (17.8)	Ref
Yes	2000 (2.5)	1.13 [1.08–1.18]	13 408 (17.0)	1.09 [1.07–1.11]	881 (1.1)	1.14 [1.06–1.22]	16 289 (20.7)	1.08 [1.06–1.10]	16 289 (20.7)	1.08 [1.06–1.10]
Cancer										
No	19 803 (2.1)	Ref	142 210 (15.0)	Ref	8961 (0.94)	Ref	170 974 (18.0)	Ref	170 974 (18.0)	Ref
Yes	240 (2.5)	1.08 [0.95–1.21]	1678 (17.7)	1.06 [1.01–1.11]	103 (1.1)	1.06 [0.85–1.26]	2021 (21.3)	1.05 [1.01–1.10]	2021 (21.3)	1.05 [1.01–1.10]
Depression										
No	18 787 (2.1)	Ref	135 857 (14.9)	Ref	8596 (0.94)	Ref	163 240 (17.8)	Ref	163 240 (17.8)	Ref
Yes	1256 (2.9)	1.19 [1.12–1.26]	8031 (18.3)	1.11 [1.08–1.14]	468 (1.1)	1.04 [0.94–1.14]	9755 (22.2)	1.10 [1.08–1.12]	9755 (22.2)	1.10 [1.08–1.12]
Heart disease										
No	18 662 (2.1)	Ref	135 051 (14.8)	Ref	8525 (0.94)	Ref	162 238 (17.8)	Ref	162 238 (17.8)	Ref
Yes	1381 (2.9)	1.21 [1.15–1.27]	8837 (18.5)	1.11 [1.09–1.14]	539 (1.1)	1.08 [0.989–1.18]	10 757 (22.5)	1.09 [1.05–1.12]	10 757 (22.5)	1.09 [1.05–1.12]
Chronic diseases[§]										
0	11 827 (1.8)	Ref	88 984 (13.8)	Ref	5718 (0.89)	Ref	106 529 (16.6)	Ref	106 529 (16.6)	Ref
1	4783 (2.4)	1.17 [1.13–1.21]	33 283 (16.4)	1.10 [1.08–1.12]	2011 (0.99)	1.04 [0.988–1.10]	40 077 (19.8)	1.10 [1.08–1.11]	40 077 (19.8)	1.10 [1.08–1.11]
2	2073 (2.8)	1.26 [1.21–1.32]	13 713 (18.3)	1.15 [1.13–1.18]	858 (1.2)	1.12 [1.04–1.21]	16 644 (22.3)	1.15 [1.13–1.16]	16 644 (22.3)	1.15 [1.13–1.16]
3	892 (3.3)	1.40 [1.30–1.49]	5450 (20.2)	1.21 [1.17–1.25]	308 (1.1)	1.05 [0.93–1.17]	6650 (24.6)	1.20 [1.17–1.22]	6650 (24.6)	1.20 [1.17–1.22]
4+	468 (4.2)	1.57 [1.43–1.71]	2458 (21.9)	1.23 [1.17–1.28]	169 (1.5)	1.27 [1.07–1.47]	3095 (27.6)	1.18 [1.11–1.26]	3095 (27.6)	1.18 [1.11–1.26]
P _{Trend}		<0.0001		<0.0001		<0.0001		<0.0001		<0.0001

*Adjusted for outcome year, region, maternal hypertension, diabetes mellitus, obesity, hyperlipidemia, age, smoking, components of all chronic diseases, paternal age and smoking. Chronic diseases included hypertension, diabetes mellitus, obesity, hyperlipidemia, COPD, cancer and depression. Percentages represent row totals of all pregnancy outcomes and may not add to 100% due to rounding.

§Chronic diseases are sums of the listed comorbidities within the table.

†Ectopic + spontaneous abortion + stillbirth.

RR, relative risk; COPD, chronic obstructive pulmonary disease.