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Supplementary Material

Article Title: Preventive Health Care Among Children of Women With Schizophrenia: A Population-Based Cohort Study

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Supplementary tables and appendices

Supplementary Table 1: Definitions for preventive service use

Type of service	Definition and timing of measurement	OHIP codes
Age-appropriate well-baby visits		
18 months enhanced visit	(-1 month, +6 months)	A002, A268, Q742
Secondary outcomes		
2 months	(+/- 1 month)	A007 or A262 + Dx Code 916 OR Q180 or Q613
4 months	(+/- 1 month)	A007 or A262 + Dx Code 916 OR Q180 or Q613
6 months	(-1 month/ +2 months)	A007 or A262 + Dx Code 916 OR Q180 or Q613
9 months	(-1 month/ +2 months)	A007 or A262 + Dx Code 916 OR Q180 or Q613
12 months	(-1 month/ +2 months)	A007 or A262 + Dx Code 916 OR Q180 or Q613
15 months	(-1 month/ +2 months)	A007 or A262 + Dx Code 916 OR Q180 or Q613
18 months (general/ enhanced)	(-1 month, +6 months)	A002, A268, A007 or A262 + Dx Code 916, Q742, Q180, Q613
Age appropriate Vaccinations according to the vaccine schedule*		
Up to date vaccinations at 24 months	24 months	4 DTaP-IPV-Hib and 1 MMR using codes below
Secondary outcomes		
DTaP-IPV-Hib - 2 months	1 dose by 3.5 months	G841 (broader definition 1: G841 or G840) (definition 2: G841, G840 or G538)
DTaP-IPV-Hib - 4 months	2 doses by 5.5 months	G841 (broader definition 1: G841 or G840) (definition 2: G841, G840 or G538)
DTaP-IPV-Hib - 6 months	3 doses by 11.5 months	G841 (broader definition 1: G841 or G840) (definition 2: G841, G840 or G538)
DTaP-IPV-Hib - 18 months	4 doses by 24 months	G841 (broader definition 1: G841 or G840) (definition 2: G841, G840 or G538)
MMR 12 months	1 dose by 18 months	G845
MMR 24 months	1 dose by 24 months	G845

DTaP-IPV-Hib = diphtheria, tetanus, acellular pertussis, inactivated polio, and Haemophilus influenzae type b vaccine – given at 2, 4, 6 and 18 months
MMR = measles, mumps, rubella vaccine

*http://www.health.gov.on.ca/en/pro/programs/immunization/docs/immunization_schedule.pdf

Supplementary Table 2: Description of covariates

Variable	Source
Sociodemographic characteristics	
Maternal age	RPDB: age at date of delivery
Parity	CIHI-DAD: number of previous live births from the birth hospitalization
Region of residence (rural/urban)	RPDB: derived from postal codes using linkage to Statistics Canada's postcode conversion file recorded at date of delivery
Neighbourhood income quintile	RPDB: derived from postal codes using linkage to Statistics Canada's postcode conversion file, recorded at date of delivery
Immigrant status	the Ontario segment of the Immigration, Refugees and Citizenship Canada (IRCC) database, recorded at date of delivery
Maternal health (psychiatric and medical) characteristics	
Maternal medical morbidity	Unstable chronic medical conditions: collapsed ambulatory diagnostic groups (CADGs) from the John Hopkins Adjusted Clinical Groups system (ACG®) version 10 where CADG category 5 identifies unstable chronic conditions, identified from outpatient billing claims, recorded in the 2 years pre-conception
Comorbid psychiatric diagnoses	Recorded (1) in the 2 years pre-conception or during pregnancy (2) from birth to 24 months
<i>Mood/ anxiety disorder</i>	CIHI-DAD (ICD-10) prior to 2006, OMHRS from 2006 onward (DSM IV), OHIP
<i>Alcohol or Substance use</i>	CIHI-DAD (ICD-10) prior to 2006, OMHRS from 2006 onward (DSM IV), OHIP
<i>Other (including personality disorders)</i>	CIHI-DAD (ICD-10) prior to 2006, OMHRS from 2006 onward (DSM IV), OHIP
Psychiatric admission	CIHI-DAD (for admissions prior to 2006) OMHRS (from 2006 onward) Recorded (1) in the 2 years pre-conception to the end of pregnancy (2) from birth to 24 months
Severe pregnancy complications	CIHI-DAD OHIP, ICD-10 codes and OHIP codes for pre-eclampsia, eclampsia, venous thromboembolism, severe obstetric morbidity (placental abruption, placental infarction, obstetric embolism, septic shock, uterine rupture) or systemic maternal complications in pregnancy or postpartum (cardiomyopathy, complications of anaesthesia, acute renal failure, MI/pulmonary enema, cerebrovascular disease, acute respiratory distress syndrome, DIC (disseminated intravascular coagulation), status epilepticus, hysterectomy from date of conception to live-birth
Caesarean section	CIHI-DAD
Child characteristics	
Child sex	RPDB recorded during the birth hospitalisation
Preterm birth	gestational age from MOMBABY, preterm birth defined as <37 weeks' gestation, recorded during the birth hospitalisation
Admitted to NICU in the index birth hospitalization	MOMBABY, recorded during the birth hospitalisation
Child discharged to social care at birth	CIHI-DAD, recorded during the birth hospitalization
Child complex chronic condition	defined according Feudtner ¹ , as conditions "involving several organ systems or 1 organ system severely enough to require specialty paediatric care and/or hospitalisation in a tertiary care centre, derived from ICD-9 and ICD-10 codes recorded during the period to 24 months following the index date of birth

Variable	Source
Mother-child discordant residence at 24 months	RPDB: derived from postal codes using Statistics Canada's postcode conversion file, recorded at 24 months from the index date of birth
Health service-use characteristics	
Ultrasound before 20 weeks gestation	OHIP
Type of antenatal care provider	OHIP: family physician (GP/FP), obstetrician, shared care between GP/FP and obstetrician, other/fewer than 4 visits
Child usual provider of care	OHIP: In Ontario children may receive primary care from a paediatrician, or a family doctor whereby physicians are remunerated by fee-for-service or are in enrolment models. Enrolment models comprise practices wherein providers receive set funds per patient or are funded through fee-for-services and in addition receive bonuses based on patient enrolment or out-of-hours services ² . All visits to General Practitioners, Family Doctors, or Paediatricians in Ontario recorded during the period 42 days to 24 months following the index date of birth The usual provider of primary care (UPC) was determined by identifying the physician with the greatest number of days of visits for a child. For any ties arising, the provider who most recently saw the child was assigned. Groups were: enrolled (reference group), fee-for-service, paediatrician and no primary care visits.
Continuity of care	from the child usual provider of care: high: $\geq 76\%$ of visits to the same provider, referent; low: $\leq 75\%$ of visits to the same provider, infrequent users: < 4 recorded during the period 42 days to 24 months following the index date of birth

Supplementary Table 3: Sensitivity analysis, well-baby visit and vaccination outcomes up to 24 months of age in children born to women with (N=1231) versus without (N=507,907) schizophrenia, presenting hazard ratios (HR) and 95% confidence intervals (CI), excluding children with no primary care records

	N (%) with outcome	Rate/ 100 person-year	HR (95% CI)	Adjusted HR (95% CI)*
18-month enhanced well-baby visit				
No maternal schizophrenia	NR	34.8	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	NR	29.9	0.82 (0.76-0.89)	0.88 (0.82-0.96)
Secondary well-baby visit outcomes				
2-month visit				
No maternal schizophrenia	NR	445.2	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	NR	414.6	0.92 (0.86-0.99)	0.95 (0.88-1.01)
4-month visit				
No maternal schizophrenia	NR	196.0	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	NR	175.8	0.86 (0.80-0.93)	0.89 (0.82-0.95)
6-month visit				
No maternal schizophrenia	NR	129.7	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	NR	120.6	0.92 (0.85-0.99)	0.94 (0.88-1.01)
9-month visit				
No maternal schizophrenia	NR	60.1	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	NR	54.7	0.90 (0.83-0.98)	0.92 (0.84-1.00)
12-month visit				
No maternal schizophrenia	NR	57.5	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	NR	52.0	0.87 (0.80-0.94)	0.91 (0.84-0.98)
15-month visit				
No maternal schizophrenia	NR	36.9	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	NR	33.7	0.90 (0.83-0.98)	0.95 (0.87-1.03)
Any 18-month visit				
No maternal schizophrenia	NR	43.3	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	NR	38.7	0.85 (0.79-0.91)	0.91 (0.85-0.97)
≥6 visits at 24 months				
No maternal schizophrenia	NR	32.1	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	NR	30.0	0.98 (0.95-1.02)	0.99 (0.96-1.03)
Up to date vaccinations at 24-months				
No maternal Schizophrenia	239,420 (47.1)	26.5	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	510 (41.4)	23.3	0.86 (0.79-0.95)	0.92 (0.84-1.01)
Secondary vaccination outcomes				
DTaP-IPV-Hib 2 months				
No maternal schizophrenia	370,874 (73.0)	348.4	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	874 (71.0)	334.6	0.95 (0.89-1.02)	0.97 (0.91-1.04)
DTaP-IPV-Hib 4 months				
No maternal schizophrenia	328,038 (64.6)	165.8	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	761 (61.8)	156.8	0.91 (0.85-0.98)	0.95 (0.88-1.02)
DTaP-IPV-Hib 6 months				
No maternal schizophrenia	311,123 (61.3)	87.6	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	720 (58.5)	82.3	0.92 (0.86-0.99)	0.97 (0.90-1.04)
4 DTaP-IPV-Hib by 24 months				
No maternal schizophrenia	255,852 (50.4)	28.6	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	557 (45.3)	25.8	0.89 (0.82-0.97)	0.95 (0.87-1.03)
Measles, Mumps, Rubella (MMR)				
No maternal schizophrenia	376,901 (74.2)	57.2	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	853 (69.3)	52.3	0.90 (0.84-0.97)	0.93 (0.87-1.00)

*adjusted for sociodemographic (maternal age, primiparity, rurality, income quintile, immigration status), maternal health (non-psychosis psychiatric diagnosis and/ or hospitalizations in pregnancy or 2 years prior to conception), unstable chronic medical conditions before pregnancy), and pregnancy/ child characteristics (severe pregnancy complications, sex of baby, preterm birth, NICU admission, and child discharged to social services at birth). **NR = Not reportable, as would lead to identifiable cell numbers of < 6 when compared with figure 2.**

Supplementary Table 4: Sensitivity analysis, vaccination outcomes with broader definitions up to 24 months of age in children born to women with (N=1275) versus without (N=520,831) schizophrenia, presenting hazard ratios (HR) and 95% confidence intervals (CI)

	N (%) with outcome	Rate/ 100 person-year	HR (95% CI)	Adjusted HR (95% CI)*
Broader DTaP-IPV-Hib vaccine definition 1 - G841 or G840				
Up to date vaccinations at 24-months				
No maternal schizophrenia	250,015 (48.0)	27.1	1.00 (referent)	1.00 (referent)
Maternal Schizophrenia	531 (41.6)	23.6	0.85 (0.78-0.93)	0.91 (0.83-0.99)
Secondary vaccination outcomes				
DTaP-IPV-Hib 2 months				
No maternal schizophrenia	378,598 (72.7)	347.4	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	885 (69.4)	327.2	0.93 (0.87-0.99)	0.95 (0.89-1.02)
DTaP-IPV-Hib 4 months				
No maternal schizophrenia	336,717 (64.6)	166.6	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	776 (60.9)	155.3	0.90 (0.84-0.97)	0.93 (0.86-1.00)
DTaP-IPV-Hib 6 months				
No maternal schizophrenia	321,357 (61.7)	88.8	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	740 (58.0)	82.3	0.91 (0.85-0.98)	0.95 (0.88-1.02)
4 DTaP-IPV-Hib by 24 months				
No maternal schizophrenia	267,638 (51.4)	29.4	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	580 (45.5)	26.2	0.87 (0.80-0.95)	0.93 (0.85-1.01)
Broader DTaP-IPV-Hib vaccine definition 2 - G841 or G840 or G538				
Up to date vaccinations at 24-months				
No maternal schizophrenia	269,254 (51.7)	29.9	1.00 (referent)	1.00 (referent)
Maternal Schizophrenia	579 (45.4)	26.3	0.86 (0.79-0.93)	0.91 (0.84-0.99)
Secondary vaccination outcomes				
DTaP-IPV-Hib 2 months				
No maternal schizophrenia	406,516 (78.1)	384.9	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	950 (74.5)	362.1	0.92 (0.87-0.99)	0.95 (0.89-1.01)
DTaP-IPV-Hib 4 months				
No maternal schizophrenia	365,076 (70.1)	184.6	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	839 (65.8)	171.2	0.88 (0.82-0.94)	0.91 (0.85-0.98)
DTaP-IPV-Hib 6 months				
No maternal schizophrenia	352,557 (67.7)	101.7	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	809 (63.5)	93.4	0.90 (0.84-0.97)	0.93 (0.87-1.00)
4 DTaP-IPV-Hib by 24 months				
No maternal schizophrenia	310,403 (59.6)	36.3	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	674 (52.9)	32.1	0.86 (0.79-0.93)	0.91 (0.84-0.98)

*adjusted for sociodemographic (maternal age, primiparity, rurality, income quintile, immigration status), maternal health (non-psychosis psychiatric diagnosis and/ or hospitalizations in pregnancy or 2 years prior to conception), unstable chronic medical conditions before pregnancy), and pregnancy/ child characteristics (severe pregnancy complications, sex of baby, preterm birth, NICU admission, and child discharged to social services at birth).

Supplementary Table 5: Characteristics of N=1514 children at age 2 whose mothers had been diagnosed with schizophrenia up to child age 24-months, and 520,592 children without. Characteristics presented in N (%) unless otherwise specified.

Factor	With maternal schizophrenia (n=1,514)	With no maternal schizophrenia (n= 520,592)
Maternal socio-demographic characteristics		
Maternal age at delivery in years, Mean \pm SD	30.5 \pm 6.2	30.52 \pm 5.3
Primiparous	622 (43.0)	228,314 (43.9)
Neighbourhood income quintile (Q1, lowest)	576 (38.0)	116,123 (22.3)
Rural residence	134 (8.9)	51,234 (9.8)
Immigrant status		
Non-migrant	1,224 (80.8)	372,071 (71.5)
Immigrant	233 (15.4)	130,065 (25.0)
Refugee	57 (3.8)	18,456 (3.5)
Maternal medical history		
Unstable chronic conditions 2 years pre-conception to birth	185 (12.8)	46,637 (9.0)
Non-psychosis psychiatric diagnosis, 2 years pre-conception to birth		
Mood/ anxiety disorder	932 (61.6)	71,539 (13.7)
Substance or alcohol	165 (10.9)	5,257 (1.0)
Other (inc personality)	160 (10.6)	2,840 (0.5)
Psychiatric admission from 2 years pre-conception to birth	332 (21.9)	2,134 (0.4)
Severe pregnancy complications	237 (15.7)	70,130 (13.5)
Caesarean section	464 (30.6)	150,058 (28.8)
Child characteristics		
Baby's sex (Male)	772 (51.0)	267,142 (51.3)
Preterm birth < 37 weeks' gestation	161 (10.6)	41,133 (7.9)
Admitted to NICU in the index birth hospitalization	360 (23.8)	66,434 (12.8)
Child discharged to social services at birth	69 (4.6)	1,005 (0.2)
Postnatal Characteristics		
Non-psychosis psychiatric diagnosis between birth and child 24 months		
Mood/ anxiety disorder	937 (61.9)	80,598 (15.5)
Substance or alcohol	150 (9.9)	4,610 (0.9)
Other (incl. personality)	116 (7.7)	2,525 (0.5)
Psychiatric admission from birth to 24 months postpartum	419 (27.7)	2,111 (0.4)
Child complex chronic condition	59 (3.9)	15,940 (3.1)
Mother-child discordant residence at 24 months	470 (31.0)	70,913 (13.6)
Child usual provider of care†		
Enrolled	1,010 (66.7)	348,632 (67.0)
Fee-for-service/ no care	108 (7.1)	32,748 (6.3)
Paediatrician	396 (26.2)	139,212 (26.7)
Continuity of Care*		
Low ($\leq 75\%$)	834 (55.1)	243,501 (46.8)
High ($\geq 76\%$)	680 (44.9)	277,091 (53.2)

§ one or more hospitalizations, and/or ≥ 3 outpatient contacts within 3 years of each other with a diagnosis of schizophrenia or schizoaffective disorder (ICD-9 or OHIP: 295; ICD-10: F20, 25).

† We determined the usual provider of primary care (UPC) by identifying the physician with the greatest number of days of visits for a child. For any ties arising, the provider who most recently saw the child was assigned. Groups were: enrolled (reference group), fee-for-service, paediatrician and no primary care visits. No primary care visits were combined with fee-for-service due to small cell sizes.

* For continuity of care, infrequent care (<4 visits) and low ($\leq 75\%$) were combined to stabilize the models and account for small cells **NR = Not reportable, as would lead to identifiable cell numbers of < 6 when compared with main paper Table 1.**

Supplementary Table 6: Sensitivity analysis 18 month enhanced Well-baby visit up to 24 months of age in children born to women with (N=1514) versus without (N=520,592) schizophrenia at child age 24 months, adjusted for sociodemographic, maternal health, child health and postnatal covariates, presenting hazard ratios (HR) and 95% confidence intervals (CI)

	N (%) with outcome	Rate/ 100 person-year	Unadjusted HR (95% CI)	Adjusted HR 1 (Socio-demographics only) §	Adjusted HR 2 (maternal health characteristics only) §	Adjusted HR 3 (child characteristics only) §	Adjusted HR 4 (postnatal characteristics only) §	Fully-Adjusted HR (95% CI) §
18-month enhanced well-baby visit								
No maternal schizophrenia	305,132 (58.6)	33.9	1.00 (referent)	1.00 (referent)	1.00 (referent)	1.00 (referent)	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	740 (49.4)	28.4	0.82 (0.76-0.89)	0.86 (0.80-0.92)	0.90 (0.84-0.97)	0.84 (0.78-0.90)	0.92 (0.85-0.99)	0.95 (0.88-1.03)
Sociodemographic characteristics								
Maternal age at delivery, mean (SD)	30.5 (5.3)		1.02 (1.02-1.02)	1.03 (1.02-1.03)				1.02 (1.02-1.02)
Parity								
Multiparous	161,239 (55.0)	31.4	1.00 (referent)	1.00 (referent)				1.00 (referent)
Primiparous	144,633 (63.2)	37.2	1.32 (1.31-1.33)	1.40 (1.39-1.41)				1.37 (1.36-1.38)
Income								
Q1 (Lowest)	58,849 (50.4)	28.7	1.00 (referent)	1.00 (referent)				1.00 (referent)
Q2	58,988 (56.5)	32.6	1.18 (1.17-1.20)	1.14 (1.12-1.15)				1.10 (1.09-1.11)
Q3	63,178 (59.5)	34.5	1.27 (1.26-1.29)	1.21 (1.20-1.22)				1.17 (1.16-1.19)
Q4	69,437 (63.7)	37.3	1.42 (1.41-1.44)	1.33 (1.32-1.35)				1.26 (1.24-1.27)
Q5 (check where missing is)	55,420 (64.5)	37.8	1.45 (1.43-1.47)	1.34 (1.32-1.36)				1.25 (1.23-1.27)
Region of residence								
Urban	283,191 (60.2)	35.0	1.00 (referent)	1.00 (referent)				1.00 (referent)
Rural	22,681 (44.2)	24.6	0.62 (0.61-0.63)	0.66 (0.65-0.67)				0.76 (0.75-0.77)
Immigrant status								
Non-migrant/long-term resident	219,224 (58.7)	34.0	1.00 (referent)	1.00 (referent)				1.00 (referent)
Non-refugee immigrant	76,785 (58.9)	34.3	1.03 (1.03-1.04)	1.00 (0.99-1.00)				0.95 (0.94-0.96)
Refugee	9,863 (53.3)	30.5	0.87 (0.85-0.89)	0.88 (0.86-0.90)				0.85 (0.83-0.87)
Maternal health								
Unstable chronic medical condition								
No unstable condition	277,589 (58.4)	33.8	1.00 (referent)		1.00 (referent)			1.00 (referent)
Unstable chronic medical condition	28,283 (60.4)	35.2	1.06 (1.04-1.07)		1.05 (1.04-1.07)			1.03 (1.01-1.04)
Mood/anxiety disorder								
No mood/anxiety disorder	264,025 (58.7)	34.0	1.00 (referent)		1.00 (referent)			1.00 (referent)
Mood/anxiety disorder	41,847 (57.7)	33.3	0.97 (0.96-0.98)		0.98 (0.97-0.99)			0.97 (0.96-0.98)
Alcohol or substance use disorder								
No disorder	303,820 (58.8)	34.1	1.00 (referent)		1.00 (referent)			1.00 (referent)

Alcohol or substance use disorder	2,052 (37.8)	21.0	0.54 (0.52-0.57)	0.56 (0.53-0.58)	0.80 (0.77-0.84)
Other non-psychotic mental disorder					
No other non-psychotic disorder	304,363 (58.6)	33.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Other non-psychotic disorder	1,509 (50.3)	28.7	0.79 (0.75-0.83)	0.91 (0.86-0.96)	1.00 (0.95-1.05)
Psychiatric admission 2 y pre-pregnancy					
No psychiatric admission	304,743 (58.6)	34.0	1.00 (referent)	1.00 (referent)	1.00 (referent)
Psychiatric admission	1,129 (45.8)	25.9	0.70 (0.66-0.74)	0.84 (0.79-0.89)	0.96 (0.90-1.02)
Severe pregnancy complications*					
No severe pregnancy complications*	264,441 (58.5)	33.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Severe pregnancy complications*	41,431 (58.9)	34.3	1.02 (1.01-1.03)	1.02 (1.01-1.03)	1.01 (1.00-1.02)
Caesarean section					
No caesarean section	216,624 (58.3)	33.7	1.00 (referent)	1.00 (referent)	1.00 (referent)
Caesarean section	89,248 (59.3)	34.4	1.03 (1.02-1.04)	1.03 (1.02-1.03)	0.98 (0.98-0.99)
Child characteristics					
Baby's sex					
Male	156,893 (58.6)	33.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Female	148,979 (58.6)	33.9	1.00 (0.99-1.01)	1.00 (0.99-1.01)	1.00 (0.99-1.01)
Preterm birth					
37 weeks gestation or later	282,934 (58.8)	34.0	1.00 (referent)	1.00 (referent)	1.00 (referent)
<37 weeks' gestation	22,938 (55.5)	32.8	0.96 (0.94-0.97)	0.98 (0.96-1.00)	0.92 (0.91-0.94)
NICU in the index birth					
No NICU	268,346 (58.9)	34.1	1.00 (referent)	1.00 (referent)	1.00 (referent)
NICU	37,526 (56.2)	32.8	0.95 (0.94-0.96)	0.96 (0.95-0.97)	0.95 (0.94-0.96)
Discharged to social services at birth					
Not discharged to social services	305,527 (58.6)	33.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Discharged to social services	345 (32.1)	19.4	0.55 (0.49-0.61)	0.56 (0.50-0.62)	0.87 (0.78-0.97)
Postnatal characteristics					
Maternal mood/anxiety disorder					
No mood/anxiety disorder	257,509 (58.4)	33.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Mood/anxiety disorder	48,363 (59.3)	34.0	0.99 (0.98-1.00)	1.02 (1.01-1.03)	1.03 (1.02-1.04)
Maternal substance use disorder					
No disorder	304,200 (58.8)	34.1	1.00 (referent)	1.00 (referent)	1.00 (referent)
Alcohol or substance use disorder	1,672 (35.1)	19.0	0.48 (0.46-0.50)	0.59 (0.57-0.62)	0.75 (0.71-0.79)
Maternal other non-psychotic disorder					
No other non-psychotic disorder	304,554 (58.6)	33.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Other non-psychotic disorder	1,318 (49.9)	28.0	0.76 (0.72-0.80)	0.92 (0.87-0.98)	0.97 (0.92-1.03)
Maternal psychiatric admission					
None from 0-24 months postpartum	304,708 (58.6)	34.0	1.00 (referent)	1.00 (referent)	1.00 (referent)
From 0- 24 months postpartum	1,164 (46.0)	25.6	0.68 (0.65-0.72)	0.88 (0.82-0.93)	0.92 (0.87-0.98)
Child complex chronic condition					

No	297,562 (58.8)	34.0	1.00 (referent)	1.00 (referent)	1.00 (referent)
Yes	8,310 (51.9)	30.7	0.88 (0.86-0.90)	0.82 (0.80-0.83)	0.84 (0.82-0.86)
Mother-child residence at 24 months					
Concordant	267,552 (59.4)	34.5	1.00 (referent)	1.00 (referent)	1.00 (referent)
Discordant	38,320 (53.7)	30.3	0.83 (0.82-0.84)	0.85 (0.84-0.86)	0.89 (0.88-0.90)
Child usual provider of care†					
Enrolled	201,877 (57.7)	33.2	1.00 (referent)	1.00 (referent)	1.00 (referent)
Fee-for-service/ no care	5,570 (17.0)	9.4	0.23 (0.23-0.24)	0.26 (0.25-0.27)	0.28 (0.27-0.29)
Paediatrician	98,425 (70.5)	42.1	1.49 (1.47-1.50)	1.49 (1.48-1.51)	1.45 (1.43-1.46)
Continuity of Care*					
Low ($\leq 75\%$)	125,931 (51.5)	29.5	1.00 (referent)	1.00 (referent)	1.00 (referent)
High ($\geq 76\%$)	179,941 (64.8)	37.9	1.41 (1.40-1.42)	1.29 (1.28-1.30)	1.27 (1.26-1.28)

severe pregnancy complications comprise pre-eclampsia, eclampsia, venous thromboembolism, severe obstetric morbidity (placental abruption, placental infarction, obstetric embolism, septic shock, uterine rupture) or systemic maternal complications in pregnancy or postpartum (cardiomyopathy, complications of anaesthesia, acute renal failure, MI/pulmonary enema, cerebrovascular disease, acute respiratory distress syndrome, DIC (disseminated intravascular coagulation), status epilepticus, hysterectomy). † We determined the usual provider of primary care (UPC) by identifying the physician with the greatest number of days of visits for a child. For any ties arising, the provider who most recently saw the child was assigned. Groups were: enrolled (reference group), fee-for-service, paediatrician and no primary care visits. No primary care visits were combined with fee-for-service due to small cell sizes For continuity of care, infrequent care (<4 visits) and low ($\leq 75\%$) were combined to stabilize the models and account for small cells.

§Including maternal schizophrenia in the model

Supplementary Table 7: Sensitivity analysis Up-to-date vaccinations at 24 months of age in children born to women with (N=1514) versus without (N=520,592) schizophrenia up to child age 24-months, adjusted for sociodemographic, maternal health, child health and postnatal covariates, presenting hazard ratios (HR) and 95% confidence intervals (CI)

	N (%) with outcome	Rate/ 100 person-year	Unadjusted HR (95% CI)	Adjusted HR 1 (Socio-demographics only) §	Adjusted HR 2 (maternal health characteristics only) §	Adjusted HR 3 (child characteristics only) §	Adjusted HR 4 (postnatal characteristics only) §	Fully-Adjusted HR (95% CI) §
Up to date vaccinations 24 months								
No maternal schizophrenia	239,464 (46.0)	25.9	1.00 (referent)	1.00 (referent)	1.00 (referent)	1.00 (referent)	1.00 (referent)	1.00 (referent)
Maternal schizophrenia	577 (38.5)	21.6	0.84 (0.77-0.92)	0.88 (0.81-0.96)	0.92 (0.84-1.00)	0.86 (0.79-0.94)	0.94 (0.86-1.03)	0.97 (0.89-1.06)
Sociodemographic characteristics								
Maternal age at delivery, mean (SD)	30.5 (5.3)		1.02 (1.02-1.02)	1.02 (1.02-1.02)				1.01 (1.01-1.01)
Parity								
Multiparous	128,976 (44.0)	24.5	1.00 (referent)	1.00 (referent)				1.00 (referent)
Primiparous	111,065 (48.5)	27.6	1.19 (1.18-1.20)	1.26 (1.25-1.27)				1.23 (1.22-1.24)
Income								
Q1 (Lowest)	46,858 (40.2)	22.3	1.00 (referent)	1.00 (referent)				1.00 (referent)
Q2	47,198 (45.2)	25.4	1.17 (1.15-1.18)	1.14 (1.12-1.15)				1.10 (1.09-1.12)
Q3	49,528 (46.7)	26.3	1.21 (1.20-1.23)	1.17 (1.16-1.19)				1.15 (1.13-1.16)
Q4	53,826 (49.4)	28.0	1.31 (1.30-1.33)	1.26 (1.24-1.28)				1.19 (1.18-1.21)
Q5 (check where missing is)	42,631 (49.6)	28.1	1.32 (1.30-1.34)	1.26 (1.25-1.28)				1.18 (1.16-1.19)
Region of residence								
Urban	223,830 (47.5)	26.9	1.00 (referent)	1.00 (referent)				1.00 (referent)
Rural	16,211 (31.6)	17.1	0.58 (0.57-0.59)	0.63 (0.62-0.65)				0.73 (0.72-0.74)
Immigrant status								
Non-migrant/long-term resident	167,020 (44.7)	25.1	1.00 (referent)	1.00 (referent)				1.00 (referent)
Non-refugee immigrant	64,777 (49.7)	28.3	1.18 (1.17-1.19)	1.13 (1.12-1.14)				1.05 (1.04-1.06)
Refugee	8,244 (44.5)	25.0	1.00 (0.97-1.02)	0.99 (0.97-1.02)				0.95 (0.92-0.97)
Maternal health								
Unstable chronic medical condition								
No unstable condition	217,895 (45.8)	25.8	1.00 (referent)		1.00 (referent)			1.00 (referent)
Unstable chronic medical condition	22,146 (47.3)	26.7	1.05 (1.03-1.06)		1.05 (1.03-1.06)			1.02 (1.00-1.03)
Mood/anxiety disorder								
No mood/anxiety disorder	206,973 (46.0)	25.9	1.00 (referent)		1.00 (referent)			1.00 (referent)
Mood/anxiety disorder	33,068 (45.6)	25.6	0.98 (0.97-0.99)		1.00 (0.99-1.01)			1.00 (0.98-1.01)
Alcohol or substance use disorder								

No disorder	238,527 (46.2)	26.0	1.00 (referent)	1.00 (referent)	1.00 (referent)
Alcohol or substance use disorder	1,514 (27.9)	15.2	0.54 (0.51-0.56)	0.55 (0.53-0.58)	0.81 (0.77-0.85)
Other non-psychotic mental disorder					
No other non-psychotic disorder	238,927 (46.0)	25.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Other non-psychotic disorder	1,114 (37.1)	20.6	0.76 (0.72-0.81)	0.86 (0.81-0.92)	0.97 (0.91-1.03)
Psychiatric admission 2 y pre-pregnancy					
No psychiatric admission	239,192 (46.0)	25.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Psychiatric admission	849 (34.4)	19.1	0.69 (0.65-0.74)	0.84 (0.78-0.90)	0.96 (0.89-1.03)
Severe pregnancy complications*					
No severe pregnancy complications*	207,969 (46.0)	25.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Severe pregnancy complications*	32,072 (45.6)	25.7	1.00 (0.99-1.01)	1.00 (0.98-1.01)	1.01 (0.99-1.02)
Caesarean section					
No caesarean section	169,502 (45.6)	25.6	1.00 (referent)	1.00 (referent)	1.00 (referent)
Caesarean section	70,539 (46.9)	26.4	1.04 (1.03-1.05)	1.04 (1.03-1.05)	1.00 (0.99-1.01)
Child characteristics					
Baby's sex					
Male	123,245 (46.0)	25.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Female	116,796 (45.9)	25.8	1.00 (0.99-1.01)	1.00 (1.00-1.01)	1.01 (1.00-1.02)
Preterm birth					
37 weeks gestation or later	222,127 (46.2)	25.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
<37 weeks' gestation	17,914 (43.4)	24.9	0.96 (0.94-0.97)	0.98 (0.96-1.00)	0.92 (0.90-0.94)
NICU in the index birth					
No NICU	210,743 (46.3)	26.0	1.00 (referent)	1.00 (referent)	1.00 (referent)
NICU	29,298 (43.9)	24.9	0.95 (0.94-0.96)	0.96 (0.95-0.98)	0.97 (0.96-0.98)
Discharged to social services at birth					
Not discharged to social services	239,791 (46.0)	25.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Discharged to social services	250 (23.3)	13.8	0.53 (0.46-0.60)	0.54 (0.47-0.61)	0.83 (0.73-0.94)
Postnatal characteristics					
Maternal mood/anxiety disorder					
No mood/anxiety disorder	202,117 (45.9)	25.8	1.00 (referent)	1.00 (referent)	1.00 (referent)
Mood/anxiety disorder	37,924 (46.5)	25.9	0.99 (0.98-1.00)	1.03 (1.02-1.05)	1.04 (1.03-1.06)
Maternal substance use disorder					
No disorder	238,838 (46.2)	26.0	1.00 (referent)	1.00 (referent)	1.00 (referent)
Alcohol or substance use disorder	1,203 (25.3)	13.4	0.46 (0.44-0.49)	0.58 (0.55-0.62)	0.73 (0.69-0.77)
Maternal other non-psychotic disorder					
No other non-psychotic disorder	239,091 (46.0)	25.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Other non-psychotic disorder	950 (36.0)	19.6	0.71 (0.67-0.76)	0.87 (0.82-0.93)	0.92 (0.86-0.98)

Maternal psychiatric admission					
None from 0-24 months postpartum	239,170 (46.0)	25.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
From 0- 24 months postpartum	871 (34.4)	18.7	0.68 (0.64-0.73)	0.89 (0.83-0.95)	0.93 (0.86-0.99)
Child complex chronic condition					
No	233,992 (46.2)	26.0	1.00 (referent)	1.00 (referent)	1.00 (referent)
Yes	6,049 (37.8)	21.6	0.81 (0.79-0.83)	0.74 (0.72-0.76)	0.76 (0.74-0.78)
Mother-child residence at 24 months					
Concordant	210,299 (46.7)	26.3	1.00 (referent)	1.00 (referent)	1.00 (referent)
Discordant	29,742 (41.7)	22.9	0.84 (0.82-0.85)	0.87 (0.86-0.88)	0.89 (0.88-0.91)
Child usual provider of care†					
Enrolled	150,332 (43.0)	23.9	1.00 (referent)	1.00 (referent)	1.00 (referent)
Fee-for-service/ no care	5,084 (15.5)	8.5	0.32 (0.31-0.33)	0.38 (0.36-0.39)	0.40 (0.39-0.41)
Paediatrician	84,625 (60.6)	35.4	1.71 (1.70-1.73)	1.72 (1.70-1.73)	1.64 (1.62-1.65)
Continuity of Care*					
Low ($\leq 75\%$)	90,683 (37.1)	20.5	1.00 (referent)	1.00 (referent)	1.00 (referent)
High ($\geq 76\%$)	149,358 (53.8)	30.7	1.63 (1.61-1.64)	1.51 (1.49-1.52)	1.49 (1.48-1.51)

severe pregnancy complications comprise pre-eclampsia, eclampsia, venous thromboembolism, severe obstetric morbidity (placental abruption, placental infarction, obstetric embolism, septic shock, uterine rupture) or systemic maternal complications in pregnancy or postpartum (cardiomyopathy, complications of anaesthesia, acute renal failure, MI/pulmonary enema, cerebrovascular disease, acute respiratory distress syndrome, DIC (disseminated intravascular coagulation), status epilepticus, hysterectomy). † We determined the usual provider of primary care (UPC) by identifying the physician with the greatest number of days of visits for a child. For any ties arising, the provider who most recently saw the child was assigned. Groups were: enrolled (reference group), fee-for-service, paediatrician and no primary care visits. No primary care visits were combined with fee-for-service due to small cell sizes For continuity of care, infrequent care (<4 visits) and low ($\leq 75\%$) were combined to stabilize the models and account for small cells.

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Appendix 1: Additional ICES datasets

Additional ICES linked datasets were the: (1) Ontario Registered Persons Database (RPDB) that comprises individual-level dates of birth, death, and postal codes of residence for all Ontario residents and allows for estimation of socioeconomic status; (2) the Ontario segment of the Immigration, Refugees and Citizenship Canada (IRCC) database, that contains data on all immigrants to Ontario since 1985;³ (3) the Ontario Health Insurance Plan (OHIP) dataset with physician billing data dating from 1992 including diagnostic data to provide information on ambulatory visits for maternal schizophrenia, well-baby visits and vaccine-specific codes (the latter since March 2011);^{4,5} (4) the National Ambulatory Care Reporting System (NACRS) that includes all emergency department data from 2002 onward; (5) the Canadian Institute for Health Information Discharge Abstract Database (CIHI-DAD) that contains demographic and clinical information about hospital admissions and discharges, including psychiatric hospitalizations prior to 2006;⁶ (6) the Ontario Mental Health Reporting System (OMHRS) that contains inpatient psychiatric hospitalization data from 2006 onward.⁷⁻⁹

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