

Appendix 1 (as supplied by the authors): Supplementary tables

Table A1: Databases used in the current study

Database	Abbreviation	Data held
Canadian Institutes of Health Information Discharge Abstract Database	DAD	Demographic and clinical information about all hospital admissions and discharges, including transfers and deaths.
National Ambulatory Care Reporting System	SDS/NACRS	Emergency department visits, day surgery and mandated outpatient clinics
Ontario Health Insurance Plan database	OHIP	Physicians claims for services provided
Ontario Laboratory Information System	OLIS	Inpatient and outpatient laboratory data
---	MOMBABY	Inpatient admission records from the Discharge Abstract Database for mothers and their newborns delivered
Statistics Canada census data	CENSUS	Income quintile and location of residence (rural v. non-rural) defined according to postal code
Better Outcomes Registry and Network	BORN	Information related to maternal, perinatal and newborn health including maternal weight
Immigration, Refugees and Citizenship Canada Permanent Resident Database	REF	Identify maternal world region of origin as a proxy for ethnicity
Registered Persons Database	RPDB	Individual health card number, date of birth, sex, postal code and death date (where applicable)

Table A2. Variables used to define study entry and exclusion criteria, renal function measures, and stratification variables.

Assessment	Timing	Disease or procedure or condition	ICD-10-CA codes	OHIP ICD-9 diagnostic codes or fee codes {or other source if in parentheses}	PubMed link to related validation studies for some codes
Cohort entry criterion	April 2007 to October 2016	All obstetrically delivered mothers and newborns (liveborn or stillborn) in the province of Ontario	Main patient service code indicating “obstetrical delivery” (in MOMBABY: https://datadictionary.ices.on.ca/Applications/DataDictionary/Library.aspx?Library=MOMBABY)	--	
	March 2007 to December 2015	Women who underwent serum creatinine measurement in the 10 weeks prior to conception	--	{OLIS}	
Exclusion criteria	At the time of the maternal serum screening	Woman’s postal code is non-Ontario or she has an invalid OHIP number (M_VALIKN not ‘V’, SEX not ‘F’, BDATE missing, or DTHDATE < serum screening date) or problematic delivery record (WARN^=‘N’)	--	{Registered Persons Database (RPDB) contains demographic information and encrypted healthcare numbers for all individuals eligible for OHIP}	
	Same	Maternal age < 16 or > 50 years or unknown	--	{RPDB}	
	At the time of the index delivery hospitalization	Gestational age < 20 weeks or unknown	M_GESTWKS_DEL < 20 or B_GESTWKS_DEL < 20 in MOMBABY	--	
	Same	Multifetal pregnancy	M_MULTIBIRTH=‘T’ or B_MULTIBIRTH=‘T’ in MOMBABY	--	

Table A2. Variables used to define study entry and exclusion criteria, renal function measures, and stratification variables.

Assessment	Timing	Disease or procedure or condition	ICD-10-CA codes	OHIP ICD-9 diagnostic codes or fee codes {or other source if in parentheses}	PubMed link to related validation studies for some codes
	Anytime prior to the index pregnancy estimated date of conception	End-stage renal disease (chronic dialysis)	1PZ21*	R849, G323, G325, G326, G860, G862, G865, G863, G866, G330, G331, G332, G333, G861, G082, G083, G085, G090, G091, G092, G093, G094, G095, G096, G294, G295, G864, H540, H740	10.1186/1471-2288-11-25
	Anytime prior to the index pregnancy estimated date of conception	Kidney transplantation	1PC85*	S435, S434 {CORR database: treatment code 171; transplanted organ type code: 10,11,12,18,19}	10.1186/s40697-015-0054-9
Main study measures	Within the 10 weeks prior to estimated date of conception	Abnormal serum creatinine (SCr) > 95 th percentile of 77 µmol/L	--	{OLIS}	

Table A2. Variables used to define study entry and exclusion criteria, renal function measures, and stratification variables.

Assessment	Timing	Disease or procedure or condition	ICD-10-CA codes	OHIP ICD-9 diagnostic codes or fee codes {or other source if in parentheses}	PubMed link to related validation studies for some codes
	Same	Abnormal estimated glomerular filtration rate (eGFR) < 5 th percentile of 88 mL/min/1.73 m ²	--	{OLIS: Equation provided by: CKD-EPI = 141 x min (Scr/κ, 1) ^α x max(Scr/κ, 1)-1.209 x 0.993Age x 1.018 x 1.159 [if origin is African or Caribbean**]; κ = 0.7 for females, α = -0.329 for females, min = the minimum of Scr/κ or 1, max = the maximum of Scr/κ or 1 **See World region of origin below	
Identification of the chronic kidney disease sub-cohort	Up to 4 years before the estimated date of conception of the index pregnancy	- Outpatient albumin to creatinine ratio > 2.0 - Dipstick positive proteinuria	--	{OLIS: 14959-1, 30000-4, 32294-1} {OLIS: 5804-0, 50561-0}	
	Up to 4 years before the estimated date of conception of the index pregnancy	Chronic kidney disease (identified either by ICD-10-CA or OHIP codes, or an OLIS eGFR < 60 mL/min/1.73 m ²)	E102, E112, E132, E142, I12, I13, N08, N18, N19	403, 585 {OLIS: 14682-9, 14959-1, 30000-4, 32294-1}	https://www.ncbi.nlm.nih.gov/pubmed/23560464

Table A2. Variables used to define study entry and exclusion criteria, renal function measures, and stratification variables.

Assessment	Timing	Disease or procedure or condition	ICD-10-CA codes	OHIP ICD-9 diagnostic codes or fee codes {or other source if in parentheses}	PubMed link to related validation studies for some codes
	Up to 4 years before the estimated date of conception of the index pregnancy	Acute kidney injury	N17		10.1136/bmjopen-2012-001821
	Up to 4 years before the estimated date of conception of the index pregnancy	Hypertensive disorder of pregnancy	O11, O13, O14, O15, O16	642	10.1093/aje/kwm139 ; 10.1016/j.ajog.2005.08.058
Study outcomes	At the time of the index delivery hospitalization	Preterm live birth < 37 completed weeks' gestation	B_GESTWKS_DEL < 37 in MOMBABY (if missing use M_GESTWKS_DEL)	--	https://www.ncbi.nlm.nih.gov/pubmed/?term=Validation+of+perinatal+data+in+the+Discharge+Abstract+Database+of+the+Canadian+Institute+for+Health
	Same	Provider-initiated preterm live birth < 37 weeks: 1) PTB and 2) absence of preterm spontaneous labour and 3) presence of c-section or induction	1) Preterm live birth < 37 weeks (see above); and 2) absence of O601, O602, O42, O756; and 3) presence of 5MD60* or 5AC30*	--	https://www.ncbi.nlm.nih.gov/pubmed/28646095
	Same	Spontaneous preterm live birth < 37 weeks	Preterm live birth < 37 weeks and not provider-initiated (see above)	--	
	Same	Preterm live birth < 32 completed weeks' gestation	B_GESTWKS_DEL < 32 in MOMBABY (if missing use M_GESTWKS_DEL)	--	

Table A2. Variables used to define study entry and exclusion criteria, renal function measures, and stratification variables.

Assessment	Timing	Disease or procedure or condition	ICD-10-CA codes	OHIP ICD-9 diagnostic codes or fee codes {or other source if in parentheses}	PubMed link to related validation studies for some codes
	Same	Preeclampsia or eclampsia	O11, O14, O15	--	https://www.ncbi.nlm.nih.gov/pubmed/19527567
	Same	Severe small for gestational age birthweight < 5 th percentile	B_GESTWKS_DEL, B_WEIGHT and B_SEX in MOMBABY	--	https://www.ncbi.nlm.nih.gov/pubmed/29117948
	Same	Stillbirth	M_STILLBIRTH='T' in MOMBABY	--	
Covariates	At the time of the index conception	Maternal age	--	RPDB	
	At the time of SCr measurement	World region of origin	--	{IRCC Permanent Resident Database: COUNTRY_BIRTH }	https://www.ncbi.nlm.nih.gov/pubmed/25384653
	Same	Maternal area-level income Quintile	--	{Statistics Canada census data}	
	Same	Maternal rural residence	--	{Statistics Canada census data}	
	Same (recorded at the index delivery hospitalization)	Parity	PREVBIRTH in MOMBABY	--	

Table A2. Variables used to define study entry and exclusion criteria, renal function measures, and stratification variables.

Assessment	Timing	Disease or procedure or condition	ICD-10-CA codes	OHIP ICD-9 diagnostic codes or fee codes {or other source if in parentheses}	PubMed link to related validation studies for some codes
	Same (recorded at the index delivery hospitalization)	Maternal Weight	--	{BORN: MATWGKKG (Niday link on M_KEY) or PRE_PREG_MATERNAL_WT_KG (BIS, AGG_PREGNANCY, link on M_IKN and B_BDATE/M_ADMDATE +/- 7 days)}	
	Up to 4 years before the estimated date of conception of the index pregnancy	Pre-pregnancy diabetes mellitus	E10, E11, E13, E14, O244	250	https://www.ncbi.nlm.nih.gov/pubmed/11874939
	Same	Chronic hypertension	I10, I15, O10, O11	401	https://www.ncbi.nlm.nih.gov/pubmed/19858407
	Same	Drug-dependence or tobacco use	F10-F19, F55, G312, O354, O355, T51, T652, Z720, Z721, Z722	291, 292, 303, 304, 305	

Table A2. Variables used to define study entry and exclusion criteria, renal function measures, and stratification variables.

Assessment	Timing	Disease or procedure or condition	ICD-10-CA codes	OHIP ICD-9 diagnostic codes or fee codes {or other source if in parentheses}	PubMed link to related validation studies for some codes
	Up to 4 years before the estimated date of conception of the index pregnancy (and only used as additional covariates in analyses among the chronic kidney disease sub-cohort)	Prior proteinuric renal disease - Outpatient albumin to creatinine ratio > 2.0 - Dipstick positive proteinuria	--	{OLIS: 14959-1, 30000-4, 32294-1} {OLIS: 5804-0, 50561-0}	

*Indicates coding by Canadian Classification of Interventions (corresponding to ICD-10-CA years)

BORN: Better Outcomes Registry & Network; CORR: Canadian Organ Replacement Registry; ICD-9: International Classification of Diseases, 9th Revision; ICD-10-CA: International Classification of Diseases, 10th Revision, Canada; IRCC: Immigration, Refugees and Citizenship Canada; OHIP: Ontario Health Insurance Plan; OLIS: Ontario Laboratories Information System