

Appendix 1. Supplementary material

Table S1. Data sources and associated study variables

Data source	Variables	Province
Ontario Health Insurance Plan (OHIP)	Primary care visits	Ontario
Registered Person Database (RPDB)	Patient sex, residential postal code, date of birth	Ontario
Immigration, Refugees and Citizenship Canada's Permanent Resident Database	Immigration status	Ontario, Manitoba
Manitoba Health Insurance Registry	Patient sex, residential postal code, date of birth	Manitoba
Manitoba Medical Services	Primary care visits	Manitoba
Ontario Marginalization Index	Material deprivation quintile	Ontario
Canadian Marginalization Index	Material deprivation quintile	Manitoba
2016 Canadian Census	Rurality	Ontario, Manitoba

Table S2. List of primary care fee codes from Ontario and Manitoba.

ONTARIO

Fee code (OHIP)	Description
WELL CHILD VISITS	
K017	ANNUAL HEALTH EXAM-CHILD AFT. 2ND BIRTHDAY.
K130	PERIODIC HEALTH VISIT-ADOLESCENT (AGE 16 & 17)
K267	ANNUAL HEALTH EXAM-CHILD-AFT. 2ND BIRTHDAY PAED.
K269	ANNUAL HEALTH EXAM-PAEDIATRICS-ADOLESCENT-OFFICE
A002	18 MONTH WELL BABY CHECK -GP/FP
A268	18 MONTH WELL BABY CHECK - PAEDS
A007	INTERMED.ASSESS/WELL BABY CARE-F.P./G.P./PAED. With diagnostic code 916 or 917
A262	LEVEL 2 PEDIATRIC ASSESSMENT with diagnostic code 916 or 917
IMMUNIZATIONS	
G372	D./T. PROC.-INJECTIONS-INTRADERMAL/MUSCULAR ETC. EA. ADD.
G373	D./T. PROC.-INJ. INTRADERMAL/MUSC. BASIC FEE (SHICK TEST)
G538	D&T IMMUNIZATION-WITH VISIT, EACH INJECT.
G539	D&T IMMUNIZATION-SOLE REASON,FIRST INJECTION
G590	INFLUENZA AGENT +VISIT
G591	INFLUENZA AGENT SOLE REASON
G840	DTaPIPv-Diphtheria, Tetanus, acellular Pertussis, Inactivated Polio Virus paediatric
G841	DTaPIPVHib-Diphtheria, Tetanus, acellular Pertussis, Inactivated Polio Virus, Haemophilus influenza type b paediatric
G844	MenCC-Meningococcal C Conjugate
G845	MMR-Measles, Mumps, Rubella
G846	Pneu - Pneumococcal Conjugate
G848	Var-Varicella
SICK VISITS	
A003	GEN. ASSESS. -F.P./G.P.
A004	GEN.RE-ASSESS-F.P./G.P.
A007	INTERMED.ASSESS/WELL BABY CARE-F.P./G.P./PAED.
A261	MINOR ASSESS.-PAED.
A262	LEVEL 2 PEDIATRIC ASSESSMENT
A263	MEDICAL SPECIFIC ASSESSMENT-PAED
A264	MEDICAL SPECIFIC RE-ASSESSMENT-PAED
A661	COMPLEX MEDICAL SPECIFIC RE-ASSESSMENT
A901	GENERAL/FAMILY PRACTICE-HOUSECALL ASSESSMENT
A903	GEN/FAM PRACT-PRE-DENTAL/OPER.ASSESS LIMIT 2 PER YEAR/PT
A990	SPEC VIS PHYS OFFICE - WK/DAYTIME
A994	SPEC VIS PHYS OFFICE - MON-FRI., EVE
A996	SPEC VIS PHYS OFFICE - NIGHTS
B910	SPEC.VISIT,7.00AM-12.00M.NMON-FRI.1ST PT SEEN OFF/HOSP/EMERG
B914	SPEC.VISIT,7.00AM-12.00MN,SAT,SUN&HOL.1ST PT EXC.OFF/EMERG/H
B990	SPEC VIS TO PT'S HOME, WK/DAYTIME
B992	SPEC VIS-PT'S HOME/NON-ELECT -SAC OFF HRS. WK/DAYTIME
B994	SPEC VIS TO PT'S HOME/NON-ELECT., EVE
B996	SPECIAL VISIT-HOME-NIGHTS(12MN-7AM) 1ST PT.
G212	D./T. PROC.-ALLERGY-HYPOSENSITIZATION INJECTION PLUS BASIC
G271	D./T. PROC.-CARDIOV.-ANTICOAGULANT SUPERVISION
G365	D./T. PROC.-GYNAECOLOGY-PAPANICOLAOU SMEAR
K002	INTERVIEWS-RELATIVES ON BEHALF OF PATIENT PER 1/2 HOUR
K003	INTERVIEW ON BEHALF OF PATIENT (CAS,LEG.GUARD) PER 1/2HR.
K005	INDIVIDUAL CARE PER 1/2 HR
K007	IND. PSYCHOTHERAPY PER HALF HOUR - GP

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K008	DIAG.INTERVIEW W/CHILD &/OR PARENT-PER 1/2HR.
K013	COUNSELLING-ONE OR MORE PEOPLE-PER 1/2HR.
K014	COUNSELLING-FOR DONOR/RECIP/RECIP FAMILIES RE;ORGAN TRANSPLA
K016	GENETIC ASSESSMENT PATIENT OR FAMILY, DIRECT CONTACT, PER
K022	HIV PRIM CARE INDIVID CARE 1/2 HR OR MAJOR PART
K033	COUNSELLING - 1 PT/YR/UNIT
K040	GROUP COUNSEL - 2 +PTS WITH NO K013/K040X3
P004	OBS.-PRENATAL CARE-MINOR PRENATAL ASSESS.-SUBSEQ.PRENAT.VIS.
Q990	SPEC VIS - OTHER SETTINGS - WK/DAYTIME
Q992	SPEC VIS - OTHER SETTINGS-SAC.OFF.HRS.WK/DAYTIME, ADDIT'L PT
Q994	SPEC VIS - OTHER SETTINGS, MON-FRI., EVE
Q996	SPEC VIS - OTHER SETTING - NIGHTS

Virtual visits were defined as those with either a location code indicating a virtual visit or that included any of the following virtual supplemental codes that were accompanied by an a primary care fee or diagnosis code: B099, B100, B200, B101, B201, B102, B202, B103, B203, B209, K080, K081, K083

Primary care ambulatory visits for Manitoba

This method includes a number of "data conditions" that will either include or exclude specific types of services.

1. Include only those records with the tariff prefix, PREFIX = "7". These are defined as "Visits, Calls and Special Tests" in the Medical Services data.
2. Exclude a visit if it happens during an inpatient hospital stay, identified using the hospital abstracts data and ADT data. A visit on the day of admission or discharge, or in between these two dates is excluded.
3. Exclude Emergency Room services using the variable OPD with the following value: "E" - Emergency Room Services.
4. Exclude nonprimary care visits by keeping visits with mdblocs ('02', '11', '111', '112', '114', '115', '116', '200')
'02'='02. PAEDIATRICS'
'11'='11. GENERAL PRACTICE'
'111'='111. GENERAL PRACTICE - URBAN'
'112'='112. GENERAL PRACTICE - RURAL'
'114'='114. COMMUNITY MEDICINE (PUBLIC HEALTH)'
'115'='115. FAMILY PRACTICE - URBAN'
'116'='116. FAMILY PRACTICE - RURAL'
'200'='200. PRIMARY CARE NURSE'

WELL CHILD VISITS

ICD-9	
Code	Description
V202	ROUTINE CHILD HEALTH EXAM
V700	ROUTINE GENERAL MEDICAL EXAMINATION
Tariff	Tariff Label
8601	IMMUNIZATIONS-DPT, PERTUSSIS VAC AND TET TOX (COMB) (40 LF OF DPT),-1ST DOSE (INIT SERIES)
8602	IMMUNIZATIONS-DPT, PERTUSSIS VAC AND TET TOX (COMB) (40 LF OF DPT),-2ND DOSE (INIT SERIES)
8603	IMMUNIZATIONS-DPT, PERTUSSIS VAC AND TET TOX (COMB) (40 LF OF DPT),-3RD DOSE (INIT SERIES)
8609	IMMUNIZATIONS-DPT, PERTUSSIS VAC AND TET TOX (COMB) (40 LF OF DPT),-REINFORCING DOSES
8611	IMMUNIZATIONS-OVP, LIVE, ORAL (SABIN) (TRIVALENT),-1ST DOSE (INITIAL SERIES)
8612	IMMUNIZATIONS-OVP, LIVE, ORAL (SABIN) (TRIVALENT),-2ND DOSE (INITIAL SERIES)
8613	IMMUNIZATIONS-OVP, LIVE, ORAL (SABIN) (TRIVALENT),-3RD DOSE (INITIAL SERIES)
8619	IMMUNIZATIONS-OVP, LIVE, ORAL (SABIN) (TRIVALENT),-REINFORCING DOSES
8621	IMMUNIZATIONS-MEASLES (RUBEOLA)-VIRUS VAC LIVE ATTENUATED, 1ST DOSE
8641	IMMUNIZATIONS-DT-DIPHTHERIA TOX AND TET TOX (COMB) (50 LF OF DT TOX)-1ST DOSE (INIT SERIES)
8642	IMMUNIZATIONS-DT-DIPHTHERIA TOX AND TET TOX (COMB) (50 LF OF DT TOX)-2ND DOSE (INIT SERIES)
8643	IMMUNIZATIONS-DT-DIPHTHERIA TOX AND TET TOX (COMB) (50 LF OF DT TOX)-3RD DOSE (INIT SERIES)

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8649 IMMUNIZATIONS-DT-DIPHTHERIA TOX AND TET TOX (COMB) (50 LF OF DT TOX)-REINFORCING DOSE
8651 IMMUNIZATIONS-DT-DIPHTHERIA TOX AND TET TOX (COMB) (10 LF OF DT TOX)-1ST DOSE (INIT SERIES)
8670 IMMUNIZATIONS - MMR, MEASLES, MUMPS, RUBELLA COMBINED VACCINE, SINGLE DOSE
8671 IMMUNIZATIONS - MMRV MEASLES-MUMPS-RUBELLA-VARICELLA, SINGLE DOSE
8672 IMMUNIZATIONS - VZIG - VARICELLA ZOSTER IMMUNE GLOBULIN
8674 IMMUNIZATIONS CHICKEN POX VACCINE
8681 IMMUNIZATIONS PNEUMOCOCCAL CONJUGATE VACCINE 1ST DOSE
8682 IMMUNIZATIONS PNEUMOCOCCAL CONJUGATE VACCINE 2ND DOSE
8683 IMMUNIZATIONS PNEUMOCOCCAL CONJUGATE VACCINE 3RD DOSE
8684 IMMUNIZATIONS PNEUMOCOCCAL CONJUGATE VACCINE 4TH DOSE
8685 IMMUNIZATIONS MENINGOCOCCAL CONJUGATE VACCINE 1ST DOSE
8686 IMMUNIZATIONS MENINGOCOCCAL CONJUGATE VACCINE 2ND DOSE
8687 IMMUNIZATIONS MENINGOCOCCAL CONJUGATE VACCINE 3RD DOSE
8778 IMMUNIZATIONS - ROTA-5 (ROTAVIRUS PENTAVALENT)
8781 IMMUNIZATIONS - DPT + PRP-T (ACTIVE - HIB), CONNAUGHT LABORATORY) INITIAL SERIES 1ST DOSE
8782 IMMUNIZATIONS - DPT + PRP-T (ACTIVE - HIB), CONNAUGHT LABORATORY) INITIAL SERIES 2ND DOSE
8783 IMMUNIZATIONS - DPT + PRP-T (ACTIVE - HIB), CONNAUGHT LABORATORY) INITIAL SERIES 3RD DOSE
8789 IMMUNIZATIONS - DPT + PRP-T (ACTIVE - HIB), CONNAUGHT LAB) INITIAL SERIES REINFORCING DOSE
8791 IMMUNIZATIONS-INFLUENZA VACCINE-1ST DOSE (INITIAL SERIES)
8798 IMMUNIZATIONS DTP DIPHTHERIA TETANUS INACTIVATED POLIO
8802 IMMUNIZATIONS DAPTP/HIB - DIPHTHERIA,ACELLAR PERTUSSIS TETANUS INAC POLIO HAEM INFLUENZA B
8804 IMMUNIZ DAPTP/HIB-DIPHTHERIA,ACELL PERTUSSIS TETANUS INAC POLIO HAEM INFLUENZA B 4 MONTHS
8805 IMMUNIZATIONS TDP-TETANUS DIPHTHERIA ANDINACTIVATED POLIO PERSONS>7
8806 IMMUNIZ DAPTHP/HIB-DIPHTHERIA,ACELL PERTTETANUS INAC POLIO HAEN INFLUENZA B 6 MONTHS
8807 IMMUNIZ DAPTP/HIB-DIPHTHERIA,ACELL PERTUTETANUS INAC POLIO HAEN INFLUENZA B 18 MONS
8896 IMMUNIZATIONS-PNEUMOCOCCAL CONJUGATE VACCINE
8901 IMMUNIZATIONS-HAEMOPHILUS INFLUENZA B,- 1ST DOSE (INITIAL SERIES)
8902 IMMUNIZATIONS-HAEMOPHILUS INFLUENZA B,- 2ND DOSE (INITIAL SERIES)
8903 IMMUNIZATIONS-HAEMOPHILUS INFLUENZA B,- 3RD DOSE (INITIAL SERIES)
8907 IMMUNIZATIONS - TETANUS, DIPHTHERIA, ACELLULARPERTUSSIS (TDAP)
8909 IMMUNIZATIONS-HAEMOPHILUS INFLUENZA B,- REINFORCING DOSES
8913 IMMUNIZATIONS - HBV HEPATITIS B VAC 3RD DOSE (INITIAL SERIES)
8921 IMMUNIZATIONS - DPTP DIPHTHERIA, PERTUSSIS TETANUS AND POLIO - 1ST DOSE INITIAL SERIES
8922 IMMUNIZATIONS - DPTP DIPHTHERIA, PERTUSSIS, TETANUS AND POLIO - 2ND DOSE INITIAL SERIES
8923 IMMUNIZATIONS - DPTP DIPHTHERIA, PERTUSSIS, TETANUS AND POLIO - 3RD DOSE INITIAL SERIES
8924 IMMUNIZATIONS DAPTP- DIPHTHERIA,ACELLAR PERTUSSIS TETANUS AND INACTIVATED POLIO
8929 IMMUNIZATIONS - DPTP DIPHTHERIA, PERTUSSIS, TETANUS AND POLIO - REINFORCING DOSES
8931 IMMUNIZATIONS - IVP POLIO (SALK) 1ST DOSE INITIAL SERIES
8932 IMMUNIZATIONS - IVP POLIO (SALK) 2ND DOSE INITIAL SERIES
8933 IMMUNIZATIONS - IVP POLIO (SALK) 3RD DOSE INITIAL SERIES
8939 IMMUNIZATIONS - IVP POLIO (SALK) REINFORCING DOSES
8964 IMMUNIZATIONS - TDAP-IPV TET-DIPHTH-APTERTISSIS, SINGLE DOSE
8971 IMMUNIZATIONS-HPV-9-HUMAN PAPILOMAVIRUS 6,11,16,18,31,33,45,52,58-SINGLE DOSE
8990 IMMUNIZATIONS-MEN-C-ACWY-135 MENINGOCOCCAL CONJUGATE ACWY, SINGLE DOSE
8990 IMMUNIZATIONS-MEN-C-ACWY-135 MENINGOCOCCAL CONJUGATE ACWY, SINGLE DOSE

Tariff	VIRTUAL VISITS
8321	VIRTUAL VISIT BY TELEPHONE OR VIDEO
8533	VIRTUAL PSYCHOTHERAPY BY TELEPHONE OR VIDEO
8527	CHRONIC CARE VIRTUAL VISIT BY TELEPHONE OR VIDEO
8538	HOSPITAL CARE, SUBSEQUENT CARE, 22ND THRU 25TH WEEK, PER VISIT, ACTIVE REHABILITATION CARE
8521	VIRTUAL CONSULTATION BY TELEPHONE OR VIDEO, INVOLVING CHILD OR GERIATRIC PATIENT BY PSYCHIATRIST
8786	VIRTUAL PSYCHIATRIC CARE BY TELEPHONE OR VIDEO
8655	VIRTUAL PSYCHOTHERAPY BY TELEPHONE OR VIDEO BY NON-PSYCHIATRIST

Table S3. Inclusions and exclusions of study population by province and by year, children 29 days to 17 years, inclusive.

Inclusion/Exclusion	2017	2018	2019	2020
ONTARIO				
Ontario valid sex and age 29 days to 17 years at index, (January 1 of each year). New immigrants after index + 90 days also not included.	2919123	2928579	2946507	2969047
Not OHIP eligible at index +/-90 days	113850	107078	100882	93894
Non-Ontario residents at index (January 1 of each year)	43971	44803	45218	45981
Included	2761302	2776698	2800407	2829172
MANITOBA				
All Manitoba children aged 29 days to 17 years inclusive, with Manitoba coverage on Jan 1 each year (+/- 90days)	306937	310151	311261	313560
Non-Manitoba residents at index	124	40	49	165
Included	306813	310111	311212	313395

Table S4. Observed, expected and adjusted relative change (RR, 95% CI) in primary care (overall, virtual, in-person), well-child, and sick visits in Ontario and Manitoba during the post-pandemic era. All rates are weekly visit rates per 1000 population and do not include newborns.

	Ontario			Manitoba		
	Observed rate	Expected rate	RR (95% CI)	Observed rate	Expected rate	RR (95% CI)
All primary care visits						
Overall	39.5	49.5	0.80 (0.77, 0.82)	39.0	47.7	0.82 (0.79, 0.84)
March	38.4	51.9	0.74 (0.73, 0.74)	41.0	50.1	0.82 (0.80, 0.83)
April	29.6	50.8	0.58 (0.58, 0.59)	28.6	49.2	0.58 (0.56, 0.60)
May	32.8	49.0	0.67 (0.66, 0.68)	33.0	47.6	0.69 (0.67, 0.71)
June	34.3	46.4	0.74 (0.72, 0.75)	35.2	44.9	0.78 (0.77, 0.80)
July	37.7	44.0	0.86 (0.84, 0.88)	39.1	41.7	0.94 (0.92, 0.96)
August	38.9	44.6	0.87 (0.83, 0.92)	39.6	43.0	0.92 (0.88, 0.96)
September	43.1	46.8	0.92 (0.90, 0.95)	40.2	46.9	0.86 (0.82, 0.89)
October	50.0	51.5	0.97 (0.95, 0.99)	46.0	50.6	0.91 (0.89, 0.93)
November	52.8	60.5	0.87 (0.84, 0.91)	49.2	54.4	0.90 (0.88, 0.93)
Well-child visits						
Overall	8.9	12.2	0.73 (0.66, 0.80)	10.4	11.2	0.93 (0.87, 1.00)
March	6.2	11.8	0.52 (0.49, 0.56)	6.7	10.2	0.66 (0.64, 0.68)
April	4.4	10.9	0.41 (0.38, 0.44)	5.5	9.8	0.57 (0.55, 0.58)
May	5.4	10.5	0.52 (0.46, 0.58)	7.3	9.6	0.76 (0.74, 0.78)
June	5.9	10.5	0.56 (0.51, 0.61)	8.2	9.7	0.84 (0.81, 0.87)
July	6.9	11.7	0.59 (0.57, 0.61)	9.0	9.8	0.91 (0.88, 0.94)
August	8.0	12.9	0.62 (0.58, 0.66)	9.8	11.4	0.86 (0.80, 0.93)
September	7.6	10.6	0.71 (0.63, 0.81)	9.1	10.6	0.86 (0.84, 0.88)
October	16.9	13.4	1.26 (1.19, 1.34)	17.5	14.3	1.22 (1.08, 1.38)
November	20.5	17.2	1.19 (1.04, 1.37)	22.5	15.8	1.42 (1.23, 1.64)
Well-child visits (with immunizations)						
Overall	7.8	9.3	0.83 (0.73, 0.95)	6.5	6.5	1.00 (0.85, 1.17)
March	4.9	8.7	0.56 (0.54, 0.59)	3.4	4.9	0.69 (0.59, 0.81)
April	4.0	7.5	0.53 (0.49, 0.59)	2.8	4.6	0.61 (0.54, 0.68)
May	4.8	7.1	0.68 (0.58, 0.79)	3.6	4.4	0.80 (0.69, 0.93)
June	5.0	6.9	0.72 (0.61, 0.84)	3.7	4.8	0.78 (0.66, 0.92)
July	5.7	7.1	0.80 (0.69, 0.92)	4.2	4.7	0.88 (0.73, 1.07)
August	6.4	8.2	0.78 (0.73, 0.84)	4.5	5.4	0.83 (0.75, 0.92)
September	6.1	7.5	0.82 (0.71, 0.95)	4.8	5.3	0.90 (0.79, 1.03)
October	15.7	11.8	1.33 (1.19, 1.49)	14.3	11.1	1.29 (1.05, 1.58)
November	19.3	18.3	1.06 (0.86, 1.31)	19.4	12.9	1.50 (1.25, 1.81)
Well-child visits (without immunizations)						
Overall	1.1	2.8	0.39 (0.36, 0.42)	3.9	4.7	0.83 (0.73, 0.94)
March	1.3	3.0	0.43 (0.42, 0.45)	3.4	5.1	0.66 (0.61, 0.73)
April	0.4	2.7	0.15 (0.15, 0.16)	2.8	4.9	0.56 (0.52, 0.61)
May	0.6	2.6	0.24 (0.22, 0.26)	3.7	4.9	0.76 (0.70, 0.84)
June	0.9	2.8	0.32 (0.31, 0.34)	4.4	4.8	0.92 (0.83, 1.03)
July	1.2	3.2	0.38 (0.35, 0.41)	4.8	4.9	0.99 (0.85, 1.15)
August	1.6	3.8	0.41 (0.35, 0.48)	5.3	5.8	0.92 (0.75, 1.13)
September	1.5	3.0	0.48 (0.47, 0.50)	4.3	5.1	0.85 (0.75, 0.96)
October	1.2	2.7	0.44 (0.43, 0.45)	3.2	4.2	0.75 (0.68, 0.82)
November	1.2	2.6	0.45 (0.44, 0.47)	3.1	4.0	0.77 (0.70, 0.86)
Sick visits						
Overall	30.6	37.4	0.82 (0.78, 0.85)	28.6	36.5	0.78 (0.75, 0.81)
March	32.2	40.3	0.80 (0.79, 0.81)	34.3	40.0	0.86 (0.85, 0.87)
April	25.1	40.4	0.62 (0.61, 0.64)	23.0	39.5	0.58 (0.56, 0.61)
May	27.3	39.2	0.70 (0.67, 0.72)	25.7	38.0	0.68 (0.65, 0.70)
June	28.4	36.7	0.77 (0.75, 0.81)	27.0	35.2	0.77 (0.74, 0.79)
July	30.9	34.0	0.91 (0.87, 0.95)	30.2	31.9	0.94 (0.92, 0.97)
August	30.9	33.0	0.93 (0.86, 1.01)	29.8	31.7	0.94 (0.89, 1.00)
September	35.5	35.7	1.00 (0.95, 1.04)	31.1	36.3	0.86 (0.81, 0.91)
October	33.1	37.1	0.89 (0.87, 0.92)	28.5	36.3	0.79 (0.76, 0.81)
November	32.3	40.7	0.79 (0.77, 0.82)	26.7	38.4	0.69 (0.68, 0.71)

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Virtual primary care visits	Observed		% virtual visits	Observed		% virtual visits
Overall	20.8		52.8%	11.4		29.3%
March	12.5		32.5%	9.0		22.1%
April	22.3		75.5%	15.1		52.8%
May	22.9		70.0%	13.4		40.7%
June	21.4		62.5%	10.2		29.1%
July	21.3		56.5%	9.6		24.6%
August	20.0		51.6%	10.4		26.1%
September	23.6		54.8%	11.2		27.9%
October	22.9		45.8%	11.2		24.2%
November	22.3		42.2%	12.4		25.3%

March	1271.4	1119.1	1.14 (1.12, 1.15)	68.0	74.0	0.92 (0.91, 0.93)	32.8	42.7	0.77 (0.77, 0.77)	26.8	34.6	0.77 (0.77, 0.78)	33.5	40.5	0.83 (0.83, 0.83)
April	1400.4	1140.8	1.23 (1.21, 1.24)	78.2	73.2	1.07 (1.06, 1.08)	22.0	41.4	0.53 (0.53, 0.54)	18.9	35.1	0.54 (0.53, 0.54)	28.1	41.1	0.68 (0.68, 0.69)
May	1359.3	1119.6	1.21 (1.20, 1.23)	80.6	69.4	1.16 (1.14, 1.18)	23.5	39.1	0.60 (0.60, 0.61)	20.9	34.1	0.61 (0.60, 0.62)	31.4	41.2	0.76 (0.76, 0.76)
June	1322.9	1119.6	1.18 (1.17, 1.20)	74.9	66.0	1.13 (1.12, 1.15)	23.9	36.4	0.66 (0.65, 0.67)	22.2	32.0	0.70 (0.68, 0.71)	33.8	38.5	0.88 (0.88, 0.88)
July	1298.3	1121.3	1.16 (1.14, 1.17)	74.5	59.6	1.25 (1.22, 1.28)	25.3	32.9	0.77 (0.75, 0.78)	24.5	29.5	0.83 (0.82, 0.84)	37.9	35.1	1.08 (1.05, 1.11)
August	1287.9	1136.8	1.13 (1.12, 1.15)	67.1	55.7	1.21 (1.17, 1.24)	24.8	29.6	0.84 (0.83, 0.85)	25.0	29.1	0.86 (0.85, 0.86)	38.9	35.9	1.08 (1.05, 1.11)
September	1290.2	1134.6	1.14 (1.12, 1.15)	71.7	67.2	1.07 (1.04, 1.09)	30.5	35.9	0.85 (0.83, 0.87)	31.2	30.4	1.02 (1.00, 1.05)	40.5	39.6	1.02 (1.02, 1.02)
October	1286.5	1149.6	1.12 (1.11, 1.13)	70.4	67.7	1.04 (1.02, 1.06)	25.8	40.6	0.63 (0.63, 0.64)	27.8	30.8	0.90 (0.89, 0.92)	41.1	38.3	1.07 (1.07, 1.08)
November	-	-	-	70.4	73.5	0.96 (0.95, 0.97)	25.0	46.9	0.53 (0.53, 0.54)	26.2	34.3	0.76 (0.76, 0.76)	41.4	40.0	1.04 (1.03, 1.04)

March	538.2	509.9	1.06 (1.00, 1.11)	53.0	59.9	0.89 (0.87, 0.90)	35.4	43.4	0.81 (0.81, 0.82)	29.4	34.4	0.85 (0.85, 0.86)	36.9	41.9	0.88 (0.87, 0.89)
April	672.2	506.3	1.33 (1.26, 1.40)	47.9	59.9	0.80 (0.78, 0.82)	20.0	41.6	0.48 (0.48, 0.48)	19.0	33.5	0.57 (0.55, 0.58)	27.7	42.8	0.65 (0.64, 0.66)
May	743.3	520.1	1.43 (1.36, 1.51)	47.3	55.1	0.86 (0.86, 0.86)	23.1	39.7	0.58 (0.57, 0.59)	21.8	32.7	0.67 (0.66, 0.68)	30.2	41.6	0.73 (0.72, 0.73)
June	569.4	468.4	1.22 (1.15, 1.28)	47.3	51.2	0.92 (0.91, 0.93)	24.7	37.0	0.67 (0.65, 0.69)	23.1	31.0	0.75 (0.70, 0.79)	31.6	37.0	0.85 (0.85, 0.86)
July	548.1	454.6	1.21 (1.14, 1.27)	48.7	47.7	1.02 (1.01, 1.03)	28.1	33.4	0.84 (0.84, 0.85)	25.3	27.9	0.91 (0.89, 0.93)	36.2	33.5	1.08 (1.06, 1.11)
August	574.6	461.5	1.25 (1.18, 1.32)	44.2	43.9	1.01 (0.98, 1.03)	24.5	31.4	0.78 (0.77, 0.79)	26.6	28.1	0.95 (0.93, 0.96)	37.5	35.3	1.06 (1.05, 1.07)
September	544.8	500.9	1.09 (1.03, 1.14)	47.0	51.6	0.91 (0.89, 0.93)	25.4	36.5	0.70 (0.69, 0.71)	28.4	31.2	0.91 (0.88, 0.95)	38.0	41.2	0.92 (0.91, 0.93)
October	630.9	512.6	1.23 (1.17, 1.30)	47.6	52.1	0.91 (0.91, 0.92)	22.6	39.5	0.57 (0.57, 0.57)	24.8	29.6	0.84 (0.82, 0.85)	37.0	39.8	0.93 (0.92, 0.93)
November	657.8	507.7	1.30 (1.23, 1.37)	46.0	53.6	0.86 (0.85, 0.86)	21.5	42.7	0.50 (0.50, 0.51)	21.9	32.1	0.68 (0.67, 0.70)	35.8	40.9	0.88 (0.86, 0.89)

Overall	32.7	38.2	0.86 (0.81, 0.90)	31.3	38.1	0.82 (0.78, 0.86)	30.5	37.4	0.81 (0.78, 0.85)	29.9	37.4	0.80 (0.77, 0.83)	28.56	36.71	0.78 (0.75, 0.81)
March	33.1	40.9	0.81 (0.80, 0.82)	32.4	41.0	0.79 (0.78, 0.80)	32.2	40.2	0.80 (0.79, 0.81)	32.3	40.3	0.80 (0.79, 0.81)	31.65	39.82	0.79 (0.78, 0.81)
April	26.9	40.8	0.66 (0.64, 0.67)	25.5	40.9	0.62 (0.61, 0.64)	25.0	40.4	0.62 (0.60, 0.63)	24.7	40.5	0.61 (0.60, 0.62)	23.57	39.85	0.59 (0.58, 0.60)
May	29.6	39.7	0.75 (0.71, 0.78)	28.0	39.7	0.70 (0.68, 0.73)	26.9	39.3	0.68 (0.66, 0.71)	26.8	39.3	0.68 (0.66, 0.71)	25.39	38.77	0.65 (0.64, 0.67)
June	30.8	37.6	0.82 (0.78, 0.86)	29.1	37.5	0.77 (0.74, 0.81)	28.3	36.9	0.77 (0.74, 0.80)	27.7	36.6	0.76 (0.73, 0.78)	26.26	35.55	0.74 (0.72, 0.76)
July	33.3	35.1	0.95 (0.89, 1.01)	31.9	34.7	0.92 (0.87, 0.97)	30.8	34.0	0.91 (0.86, 0.95)	30.1	33.8	0.89 (0.86, 0.93)	28.21	32.82	0.86 (0.83, 0.89)
August	33.4	34.2	0.98 (0.88, 1.07)	31.9	33.7	0.95 (0.87, 1.04)	30.9	33.0	0.94 (0.87, 1.02)	29.9	32.8	0.91 (0.85, 0.98)	28.23	31.97	0.88 (0.83, 0.94)
September	38.2	35.8	1.07 (1.01, 1.13)	36.6	35.9	1.02 (0.97, 1.07)	35.4	35.5	1.00 (0.95, 1.04)	34.4	36.1	0.95 (0.91, 1.00)	32.91	35.87	0.92 (0.88, 0.95)
October	35.1	37.6	0.93 (0.91, 0.97)	34.1	37.5	0.91 (0.89, 0.93)	33.1	37.0	0.90 (0.87, 0.92)	32.1	37.3	0.86 (0.83, 0.89)	30.83	36.83	0.84 (0.81, 0.86)
November	34.3	41.7	0.82 (0.80, 0.85)	33.1	41.5	0.80 (0.77, 0.82)	32.2	40.7	0.79 (0.77, 0.82)	31.6	40.6	0.78 (0.75, 0.81)	30.14	39.57	0.76 (0.73, 0.79)

March	30.8	37.9	0.81 (0.80, 0.83)	31.8	37.3	0.85 (0.84, 0.87)	33.9	38.9	0.87 (0.85, 0.89)	35.4	40.6	0.87 (0.85, 0.90)	39.4	45.0	0.88 (0.86, 0.90)
April	21.0	35.9	0.59 (0.57, 0.61)	21.2	36.0	0.59 (0.56, 0.62)	22.3	39.2	0.57 (0.55, 0.58)	23.3	41.1	0.57 (0.54, 0.60)	27.2	45.1	0.60 (0.58, 0.63)
May	23.7	35.1	0.67 (0.65, 0.70)	24.2	35.1	0.69 (0.66, 0.72)	24.7	37.4	0.66 (0.64, 0.68)	26.2	39.6	0.66 (0.63, 0.69)	29.5	42.7	0.69 (0.66, 0.72)
June	23.8	32.7	0.73 (0.69, 0.76)	25.5	32.4	0.79 (0.76, 0.82)	26.2	34.3	0.76 (0.75, 0.78)	27.5	36.3	0.76 (0.73, 0.79)	32.0	40.1	0.80 (0.77, 0.82)
July	27.3	28.6	0.96 (0.93, 0.99)	27.7	29.0	0.95 (0.92, 0.99)	28.8	31.6	0.91 (0.89, 0.94)	31.0	32.9	0.94 (0.89, 0.99)	35.9	37.4	0.96 (0.94, 0.98)
August	27.1	28.5	0.95 (0.88, 1.02)	27.9	29.1	0.96 (0.89, 1.03)	28.4	31.2	0.91 (0.86, 0.97)	30.6	32.9	0.93 (0.87, 1.00)	34.9	36.6	0.95 (0.91, 1.00)
September	27.6	32.5	0.85 (0.80, 0.90)	29.0	32.6	0.89 (0.84, 0.95)	30.7	35.4	0.87 (0.82, 0.91)	30.7	37.3	0.82 (0.76, 0.89)	37.1	43.9	0.84 (0.80, 0.89)
October	25.5	33.1	0.77 (0.75, 0.80)	25.3	33.5	0.76 (0.73, 0.78)	27.8	35.7	0.78 (0.75, 0.81)	29.7	37.3	0.80 (0.76, 0.83)	34.2	41.9	0.81 (0.78, 0.85)
November	24.2	35.5	0.68 (0.66, 0.70)	24.2	35.8	0.68 (0.66, 0.69)	25.8	38.2	0.67 (0.65, 0.70)	27.4	39.6	0.69 (0.68, 0.71)	31.7	43.3	0.73 (0.71, 0.76)

Table S9. ONTARIO: Observed, expected, adjusted relative change (RR, 95% CI) in primary care, well-child, and sick visits in Ontario, during post-pandemic months, by rurality. All rates are weekly visit rates per 1000 population and do not include newborns.

	Observed rate	Expected rate	RR (95% CI)	Observed rate	Expected rate	RR (95% CI)
	Urban			Rural		
All primary care visits						
Overall	41.1	51.8	0.79 (0.77, 0.82)	24.0	28.0	0.86 (0.84, 0.88)
March	40.0	54.3	0.74 (0.73, 0.74)	23.3	29.8	0.78 (0.77, 0.79)
April	30.5	53.1	0.58 (0.57, 0.58)	20.1	29.0	0.69 (0.68, 0.70)
May	34.0	51.2	0.66 (0.65, 0.68)	21.1	28.1	0.75 (0.74, 0.77)
June	35.7	48.6	0.74 (0.72, 0.75)	20.7	26.6	0.78 (0.76, 0.80)
July	39.4	46.1	0.85 (0.83, 0.88)	22.0	24.6	0.89 (0.88, 0.91)
August	40.6	46.6	0.87 (0.82, 0.92)	22.7	25.2	0.90 (0.88, 0.92)
September	44.9	48.9	0.92 (0.90, 0.94)	25.8	26.8	0.96 (0.94, 0.99)
October	52.3	53.8	0.97 (0.95, 0.99)	28.2	29.5	0.95 (0.94, 0.97)
November	54.9	63.3	0.87 (0.83, 0.90)	33.2	34.1	0.98 (0.94, 1.02)
Well-child visits						
Overall	9.2	12.6	0.73 (0.66, 0.80)	6.1	8.1	0.75 (0.69, 0.82)
March	6.4	12.2	0.52 (0.49, 0.56)	4.5	8.3	0.55 (0.54, 0.56)
April	4.5	11.3	0.40 (0.37, 0.43)	3.6	7.4	0.49 (0.47, 0.51)
May	5.6	10.8	0.52 (0.46, 0.58)	4.2	7.2	0.58 (0.54, 0.64)
June	6.0	10.8	0.55 (0.51, 0.61)	4.3	7.0	0.63 (0.56, 0.70)
July	7.1	12.1	0.58 (0.56, 0.61)	5.0	7.4	0.67 (0.63, 0.70)
August	8.2	13.4	0.61 (0.57, 0.66)	5.8	8.5	0.69 (0.64, 0.74)
September	7.8	10.9	0.71 (0.63, 0.80)	5.6	7.5	0.75 (0.69, 0.81)
October	17.8	13.9	1.28 (1.21, 1.36)	9.0	9.1	0.99 (0.94, 1.05)
November	21.2	17.9	1.19 (1.04, 1.36)	13.7	11.2	1.23 (1.06, 1.43)
Well-child visits (with immunizations)						
Overall	8.1	9.7	0.83 (0.73, 0.95)	5.0	6.0	0.84 (0.76, 0.94)
March	5.1	9.0	0.56 (0.54, 0.59)	3.4	6.1	0.56 (0.54, 0.58)
April	4.1	7.8	0.53 (0.48, 0.58)	3.0	5.1	0.60 (0.57, 0.64)
May	4.9	7.3	0.68 (0.58, 0.79)	3.5	4.8	0.72 (0.64, 0.81)
June	5.1	7.1	0.72 (0.61, 0.84)	3.4	4.5	0.74 (0.64, 0.86)
July	5.8	7.4	0.79 (0.69, 0.92)	3.8	4.7	0.80 (0.71, 0.90)
August	6.6	8.4	0.78 (0.73, 0.84)	4.5	5.7	0.79 (0.74, 0.84)
September	6.3	7.7	0.82 (0.70, 0.95)	4.2	5.1	0.83 (0.74, 0.92)
October	16.6	12.3	1.35 (1.20, 1.51)	7.9	7.2	1.10 (1.02, 1.19)
November	20.1	19.1	1.05 (0.85, 1.30)	12.6	10.5	1.20 (1.00, 1.44)
Well-child visits (without immunizations)						
Overall	1.1	2.9	0.38 (0.35, 0.41)	1.1	2.1	0.50 (0.48, 0.53)
March	1.3	3.1	0.43 (0.41, 0.44)	1.1	2.2	0.52 (0.50, 0.53)
April	0.4	2.8	0.14 (0.14, 0.15)	0.6	2.2	0.26 (0.25, 0.27)
May	0.6	2.7	0.23 (0.21, 0.25)	0.7	2.1	0.35 (0.34, 0.36)
June	0.9	2.8	0.31 (0.30, 0.33)	1.0	2.1	0.46 (0.44, 0.48)
July	1.2	3.3	0.37 (0.34, 0.39)	1.2	2.2	0.53 (0.51, 0.55)
August	1.6	3.9	0.40 (0.35, 0.47)	1.3	2.4	0.55 (0.49, 0.62)
September	1.5	3.1	0.47 (0.46, 0.49)	1.4	2.3	0.59 (0.57, 0.62)
October	1.2	2.7	0.43 (0.42, 0.44)	1.2	2.2	0.54 (0.54, 0.55)
November	1.2	2.7	0.44 (0.43, 0.46)	1.2	2.1	0.55 (0.54, 0.57)
Sick visits						
Overall	31.9	39.3	0.81 (0.78, 0.85)	17.9	19.9	0.90 (0.86, 0.94)
March	33.6	42.3	0.80 (0.79, 0.80)	18.8	21.6	0.87 (0.86, 0.88)
April	26.0	42.4	0.61 (0.60, 0.63)	16.5	21.6	0.76 (0.75, 0.77)
May	28.4	41.1	0.69 (0.67, 0.72)	16.9	21.1	0.80 (0.78, 0.83)
June	29.7	38.5	0.77 (0.74, 0.80)	16.4	19.8	0.83 (0.80, 0.85)
July	32.3	35.7	0.91 (0.86, 0.95)	17.0	17.7	0.96 (0.92, 1.00)
August	32.4	34.7	0.93 (0.86, 1.01)	16.8	17.3	0.97 (0.90, 1.05)
September	37.1	37.4	0.99 (0.95, 1.04)	20.2	19.2	1.05 (1.00, 1.11)
October	34.5	38.9	0.89 (0.86, 0.91)	19.2	20.3	0.94 (0.91, 0.98)
November	33.6	42.7	0.79 (0.76, 0.82)	19.5	22.1	0.88 (0.87, 0.90)

Table S10. MANITOBA: Observed, expected, adjusted relative change (RR, 95% CI) in primary care, well-child, and sick visits in Ontario, during post-pandemic months, by rurality. All rates are weekly visit rates per 1000 population and do not include newborns.

	Observed rate	Expected rate	RR (95% CI)	Observed rate	Expected rate	RR (95% CI)
	Urban			Rural		
All primary care visits						
Overall	44.9	54.0	0.83 (0.80, 0.86)	26.0	33.5	0.78 (0.75, 0.80)
March	46.7	56.9	0.82 (0.80, 0.84)	28.6	35.2	0.81 (0.80, 0.82)
April	32.7	55.5	0.59 (0.57, 0.61)	19.7	35.4	0.56 (0.54, 0.57)
May	37.6	53.7	0.70 (0.68, 0.72)	22.8	34.3	0.67 (0.65, 0.69)
June	40.0	50.5	0.79 (0.77, 0.81)	24.6	32.4	0.76 (0.75, 0.77)
July	44.6	47.0	0.95 (0.92, 0.98)	27.2	29.9	0.91 (0.89, 0.92)
August	45.6	49.0	0.93 (0.89, 0.98)	26.6	29.7	0.89 (0.85, 0.94)
September	45.8	52.8	0.87 (0.83, 0.90)	27.9	33.8	0.82 (0.79, 0.86)
October	54.4	57.8	0.94 (0.92, 0.96)	27.8	34.6	0.80 (0.77, 0.84)
November	58.2	62.4	0.93 (0.90, 0.97)	29.2	36.4	0.80 (0.78, 0.83)
Well-child visits						
Overall	13.4	14.0	0.96 (0.89, 1.03)	3.9	4.8	0.82 (0.77, 0.87)
March	8.4	12.7	0.67 (0.64, 0.69)	3.0	4.6	0.65 (0.64, 0.66)
April	7.0	12.1	0.58 (0.56, 0.59)	2.4	4.5	0.53 (0.52, 0.54)
May	9.3	11.9	0.78 (0.76, 0.80)	3.0	4.6	0.65 (0.62, 0.67)
June	10.4	12.1	0.85 (0.83, 0.88)	3.4	4.3	0.78 (0.75, 0.82)
July	11.3	12.2	0.93 (0.89, 0.97)	3.8	4.5	0.85 (0.82, 0.87)
August	12.5	14.3	0.87 (0.81, 0.94)	4.0	4.9	0.82 (0.75, 0.89)
September	11.6	13.2	0.88 (0.86, 0.90)	3.6	4.8	0.75 (0.73, 0.77)
October	23.2	18.2	1.27 (1.12, 1.45)	5.1	5.7	0.90 (0.81, 0.98)
November	29.2	20.3	1.44 (1.25, 1.66)	7.6	6.0	1.27 (1.12, 1.43)
Well-child visits (with immunizations)						
Overall	8.5	8.5	1.01 (0.86, 1.18)	2.1	2.2	0.93 (0.80, 1.08)
March	4.3	6.2	0.69 (0.59, 0.82)	1.3	1.8	0.69 (0.61, 0.79)
April	3.6	5.9	0.61 (0.54, 0.69)	1.1	1.8	0.61 (0.56, 0.67)
May	4.6	5.7	0.81 (0.70, 0.94)	1.3	1.7	0.78 (0.68, 0.90)
June	4.8	6.2	0.78 (0.66, 0.92)	1.4	1.8	0.78 (0.66, 0.92)
July	5.4	6.0	0.90 (0.73, 1.09)	1.5	1.8	0.84 (0.73, 0.96)
August	5.8	6.9	0.84 (0.75, 0.93)	1.7	2.0	0.84 (0.79, 0.90)
September	6.2	6.8	0.92 (0.80, 1.05)	1.6	2.0	0.79 (0.70, 0.88)
October	19.4	14.6	1.33 (1.08, 1.63)	3.3	3.4	0.99 (0.81, 1.21)
November	25.5	17.0	1.49 (1.25, 1.79)	6.0	3.8	1.58 (1.25, 2.01)
Well-child visits (without immunizations)						
Overall	4.8	5.7	0.86 (0.75, 0.98)	1.9	2.6	0.71 (0.65, 0.77)
March	4.1	6.1	0.67 (0.61, 0.75)	1.7	2.7	0.63 (0.60, 0.66)
April	3.4	5.9	0.58 (0.53, 0.64)	1.3	2.7	0.48 (0.46, 0.51)
May	4.7	5.8	0.80 (0.73, 0.89)	1.6	2.8	0.59 (0.53, 0.65)
June	5.5	5.8	0.95 (0.84, 1.08)	2.0	2.5	0.79 (0.75, 0.83)
July	6.0	5.9	1.02 (0.86, 1.20)	2.3	2.7	0.85 (0.78, 0.94)
August	6.7	7.0	0.95 (0.76, 1.18)	2.3	2.9	0.80 (0.67, 0.96)
September	5.4	6.1	0.87 (0.76, 1.01)	2.0	2.8	0.73 (0.69, 0.78)
October	3.8	5.0	0.77 (0.69, 0.86)	1.7	2.6	0.67 (0.63, 0.72)
November	3.8	4.7	0.80 (0.71, 0.90)	1.7	2.5	0.66 (0.62, 0.70)
Sick visits						
Overall	31.5	40.0	0.79 (0.76, 0.82)	22.1	28.7	0.77 (0.74, 0.80)
March	38.2	44.2	0.86 (0.85, 0.88)	25.6	30.6	0.84 (0.83, 0.84)
April	25.7	43.3	0.59 (0.57, 0.61)	17.3	30.9	0.56 (0.54, 0.58)
May	28.3	41.7	0.68 (0.65, 0.71)	19.9	29.7	0.67 (0.64, 0.70)
June	29.6	38.4	0.77 (0.74, 0.80)	21.3	28.1	0.76 (0.74, 0.77)
July	33.3	34.8	0.96 (0.92, 0.99)	23.3	25.4	0.92 (0.90, 0.93)
August	33.1	34.8	0.95 (0.89, 1.02)	22.6	24.9	0.91 (0.86, 0.96)
September	34.2	39.6	0.86 (0.81, 0.92)	24.2	29.0	0.84 (0.79, 0.89)
October	31.2	39.6	0.79 (0.76, 0.81)	22.7	28.9	0.79 (0.75, 0.83)
November	28.9	42.0	0.69 (0.67, 0.70)	21.6	30.4	0.71 (0.68, 0.74)

Table S11. ONTARIO: Observed, expected, and adjusted relative change (RR, 95% CI) in primary care, well-child, and sick visits in Ontario, during post-pandemic months, by immigrant status. All rates are weekly visit rates per 1000 population and do not include children <3 years.

	Observed rate	Expected rate	RR (95% CI)	Observed rate	Expected rate	RR (95% CI)	Observed rate	Expected rate	RR (95% CI)
	Immigrants			Refugees			Canadian-born		
All primary care visits									
Overall	28.9	36.0	0.80 (0.76, 0.84)	32.5	42.0	0.77 (0.72, 0.83)	31.1	39.1	0.80 (0.77, 0.82)
March	28.7	39.8	0.72 (0.70, 0.74)	36.7	47.3	0.78 (0.72, 0.83)	30.3	40.8	0.74 (0.74, 0.75)
April	18.5	38.2	0.48 (0.47, 0.50)	20.5	45.4	0.45 (0.42, 0.48)	21.8	40.3	0.54 (0.53, 0.55)
May	21.8	36.7	0.59 (0.57, 0.62)	23.2	42.1	0.55 (0.50, 0.60)	24.2	38.9	0.62 (0.60, 0.64)
June	26.1	34.4	0.76 (0.72, 0.80)	27.9	37.6	0.74 (0.68, 0.81)	25.9	36.8	0.70 (0.68, 0.73)
July	29.0	32.9	0.88 (0.82, 0.95)	31.1	37.0	0.84 (0.77, 0.91)	29.1	35.1	0.83 (0.80, 0.86)
August	30.9	34.6	0.89 (0.82, 0.97)	33.1	38.3	0.86 (0.79, 0.95)	31.1	36.6	0.85 (0.81, 0.89)
September	30.5	33.1	0.92 (0.87, 0.97)	36.6	38.6	0.95 (0.88, 1.02)	34.8	36.3	0.96 (0.93, 1.00)
October	37.6	35.4	1.06 (1.02, 1.10)	42.6	42.3	1.01 (0.95, 1.06)	41.2	40.2	1.02 (1.00, 1.05)
November	38.0	41.1	0.93 (0.90, 0.95)	41.5	50.1	0.83 (0.81, 0.85)	43.4	47.4	0.92 (0.88, 0.96)
Well-child visits									
Overall	3.0	5.6	0.54 (0.51, 0.58)	3.3	5.9	0.56 (0.52, 0.61)	3.9	6.0	0.64 (0.60, 0.69)
March	2.1	5.6	0.37 (0.36, 0.39)	3.0	6.7	0.44 (0.39, 0.50)	2.1	5.3	0.40 (0.40, 0.41)
April	0.2	4.3	0.05 (0.05, 0.05)	0.2	5.3	0.03 (0.03, 0.03)	0.3	4.6	0.07 (0.07, 0.07)
May	0.4	3.3	0.11 (0.10, 0.11)	0.4	4.1	0.09 (0.09, 0.10)	0.6	4.0	0.15 (0.14, 0.17)
June	0.8	3.5	0.24 (0.23, 0.25)	0.7	3.3	0.20 (0.19, 0.21)	1.1	4.2	0.26 (0.24, 0.28)
July	1.3	4.4	0.29 (0.28, 0.31)	1.1	4.0	0.28 (0.26, 0.29)	1.7	5.3	0.32 (0.30, 0.34)
August	1.8	5.7	0.32 (0.30, 0.33)	2.2	5.3	0.41 (0.40, 0.42)	3.1	7.1	0.44 (0.41, 0.47)
September	1.5	3.8	0.40 (0.36, 0.44)	1.6	3.8	0.41 (0.37, 0.46)	2.3	4.4	0.53 (0.47, 0.60)
October	9.7	7.1	1.38 (1.30, 1.46)	10.5	7.0	1.49 (1.40, 1.59)	10.9	7.4	1.48 (1.35, 1.61)
November	10.6	10.8	0.98 (0.95, 1.02)	11.5	11.3	1.01 (0.97, 1.06)	14.1	11.2	1.26 (1.16, 1.37)
Well-child visits (with immunizations)									
Overall	2.5	3.8	0.66 (0.60, 0.73)	2.8	4.7	0.59 (0.52, 0.67)	3.4	4.3	0.80 (0.69, 0.92)
March	1.4	3.7	0.38 (0.36, 0.40)	2.4	5.3	0.46 (0.41, 0.51)	1.4	3.6	0.40 (0.39, 0.41)
April	0.2	2.6	0.06 (0.06, 0.06)	0.1	3.9	0.03 (0.02, 0.03)	0.3	2.7	0.10 (0.09, 0.10)
May	0.2	1.8	0.13 (0.12, 0.14)	0.3	2.8	0.09 (0.09, 0.10)	0.5	2.3	0.22 (0.19, 0.25)
June	0.5	1.8	0.28 (0.26, 0.31)	0.4	1.9	0.20 (0.18, 0.22)	0.8	2.3	0.36 (0.31, 0.42)
July	0.6	1.9	0.34 (0.30, 0.38)	0.5	2.2	0.21 (0.19, 0.23)	1.2	2.5	0.49 (0.41, 0.58)
August	0.9	2.8	0.32 (0.28, 0.37)	1.0	3.3	0.30 (0.26, 0.35)	2.3	3.7	0.60 (0.50, 0.73)
September	0.7	2.1	0.35 (0.29, 0.41)	0.8	2.5	0.33 (0.27, 0.40)	1.7	2.5	0.67 (0.57, 0.79)
October	9.2	5.7	1.62 (1.51, 1.74)	9.8	6.0	1.65 (1.53, 1.79)	10.5	6.3	1.66 (1.44, 1.92)
November	10.0	10.1	0.99 (0.95, 1.05)	10.6	12.1	0.88 (0.83, 0.92)	13.5	11.6	1.16 (1.01, 1.34)
Well-child visits (without immunizations)									
Overall	0.5	1.9	0.28 (0.26, 0.30)	0.6	1.3	0.42 (0.36, 0.50)	0.5	1.8	0.26 (0.25, 0.27)
March	0.7	2.3	0.32 (0.29, 0.35)	0.5	1.8	0.30 (0.25, 0.35)	0.7	1.9	0.36 (0.35, 0.38)
April	0.1	1.7	0.03 (0.03, 0.04)	0.1	1.3	0.04 (0.03, 0.05)	0.1	1.6	0.04 (0.04, 0.04)
May	0.1	1.5	0.08 (0.08, 0.08)	0.1	1.3	0.10 (0.09, 0.11)	0.1	1.5	0.08 (0.08, 0.08)
June	0.3	1.7	0.19 (0.18, 0.21)	0.3	1.2	0.24 (0.22, 0.27)	0.3	1.7	0.17 (0.16, 0.18)
July	0.6	2.4	0.26 (0.25, 0.28)	0.6	1.5	0.42 (0.36, 0.50)	0.5	2.1	0.22 (0.21, 0.24)
August	0.9	2.9	0.30 (0.27, 0.34)	1.2	1.9	0.60 (0.51, 0.70)	0.9	2.9	0.30 (0.28, 0.32)

Appendix 1, as supplied by the authors. Appendix to: Saunders N, Guttman A, Brownell M, et al. Pediatric primary care in Ontario and Manitoba after the onset of the COVID-19 pandemic: a population-based study. *CMAJ Open* 2021. DOI:10.9778/cmajo.20210161. Copyright © 2021 The Author(s) or their employer(s). To receive this resource in an accessible format, please contact us at cmajgroup.cmaj.ca.

September	0.8	1.8	0.44 (0.42, 0.46)	0.8	1.2	0.64 (0.58, 0.70)	0.7	1.9	0.35 (0.34, 0.35)
October	0.5	1.5	0.34 (0.33, 0.36)	0.6	1.0	0.61 (0.50, 0.74)	0.5	1.7	0.29 (0.28, 0.30)
November	0.6	1.5	0.36 (0.35, 0.38)	0.8	1.1	0.73 (0.57, 0.95)	0.5	1.7	0.30 (0.29, 0.32)
Sick visits	0.5	1.9	0.28 (0.26, 0.30)						
Overall	25.9	30.5	0.85 (0.80, 0.90)	29.1	36.3	0.80 (0.74, 0.87)	27.2	33.1	0.82 (0.79, 0.86)
March	26.6	34.2	0.78 (0.76, 0.80)	33.8	40.7	0.83 (0.78, 0.88)	28.2	35.4	0.80 (0.78, 0.81)
April	18.3	34.1	0.54 (0.52, 0.55)	20.4	40.8	0.50 (0.47, 0.53)	21.4	35.8	0.60 (0.59, 0.61)
May	21.5	33.8	0.64 (0.60, 0.67)	22.8	38.9	0.59 (0.53, 0.64)	23.6	35.0	0.67 (0.65, 0.70)
June	25.2	31.3	0.81 (0.76, 0.86)	27.3	35.4	0.77 (0.71, 0.84)	24.8	32.8	0.76 (0.73, 0.79)
July	27.7	29.1	0.95 (0.88, 1.03)	30.0	33.9	0.88 (0.81, 0.96)	27.4	30.4	0.90 (0.86, 0.95)
August	29.1	29.4	0.99 (0.90, 1.09)	31.0	33.5	0.93 (0.83, 1.03)	28.0	30.1	0.93 (0.87, 0.99)
September	28.9	28.9	1.00 (0.93, 1.08)	35.0	35.5	0.99 (0.90, 1.08)	32.5	31.6	1.03 (0.98, 1.09)
October	27.9	28.1	0.99 (0.94, 1.05)	32.1	35.1	0.91 (0.85, 0.98)	30.2	32.5	0.93 (0.89, 0.97)
November	27.5	29.3	0.94 (0.91, 0.96)	30.0	36.5	0.82 (0.79, 0.85)	29.4	35.4	0.83 (0.81, 0.86)

eTable S12. MANITOBA: Observed, expected, and adjusted relative change (RR, 95% CI) in primary care, well-child, and sick visits in Manitoba, during post-pandemic months, by immigrant status. All rates are weekly visit rates per 1000 population and do not include children <3 years.

	Observed rate	Expected rate	RR (95% CI)	Observed rate	Expected rate	RR (95% CI)	Observed rate	Expected rate	RR (95% CI)
	Immigrants			Refugees			Canadian-born		
All primary care visits									
Overall	29.4	33.8	0.87 (0.80, 0.95)	35.3	37.7	0.94 (0.88, 1.00)	34.5	41.6	0.83 (0.81, 0.85)
March	29.6	37.2	0.80 (0.77, 0.83)	39.2	39.6	0.99 (0.93, 1.06)	36.1	43.7	0.83 (0.81, 0.84)
April	16.1	34.4	0.47 (0.43, 0.50)	27.1	40.3	0.67 (0.63, 0.72)	24.1	43.0	0.56 (0.54, 0.58)
May	21.9	34.1	0.64 (0.60, 0.69)	27.1	38.6	0.70 (0.67, 0.74)	28.4	42.1	0.68 (0.66, 0.70)
June	26.9	30.7	0.88 (0.83, 0.93)	34.6	33.7	1.03 (0.98, 1.08)	30.3	39.1	0.77 (0.75, 0.80)
July	33.5	32.3	1.04 (0.91, 1.18)	36.5	35.2	1.04 (1.00, 1.08)	34.1	35.3	0.97 (0.95, 0.99)
August	33.1	33.6	0.99 (0.87, 1.13)	37.0	36.5	1.01 (0.95, 1.08)	35.9	37.6	0.96 (0.93, 0.99)
September	29.8	31.5	0.95 (0.85, 1.05)	31.2	36.6	0.85 (0.79, 0.92)	36.4	41.5	0.88 (0.84, 0.91)
October	36.7	34.7	1.06 (1.00, 1.12)	43.5	39.9	1.09 (1.02, 1.16)	41.9	44.7	0.94 (0.91, 0.96)
November	37.7	36.8	1.02 (1.00, 1.05)	42.5	40.5	1.05 (0.97, 1.13)	44.1	48.1	0.92 (0.89, 0.94)
Well-child visits									
Overall	6.8	6.3	1.08 (1.00, 1.17)	5.6	5.0	1.10 (0.95, 1.28)	6.6	6.9	0.95 (0.92, 0.99)
March	3.3	5.4	0.61 (0.57, 0.66)	3.3	4.3	0.76 (0.64, 0.89)	3.2	5.8	0.56 (0.54, 0.58)
April	0.8	4.9	0.17 (0.17, 0.18)	2.3	4.5	0.52 (0.45, 0.61)	1.8	5.5	0.33 (0.32, 0.34)
May	2.9	4.7	0.61 (0.60, 0.63)	2.9	3.6	0.80 (0.67, 0.96)	3.4	5.6	0.62 (0.60, 0.64)
June	4.6	4.9	0.94 (0.89, 0.99)	4.1	3.7	1.11 (0.88, 1.40)	4.3	5.4	0.80 (0.77, 0.83)
July	5.9	5.9	0.99 (0.87, 1.13)	4.4	3.6	1.24 (1.12, 1.37)	5.2	5.7	0.92 (0.87, 0.96)
August	6.2	6.8	0.92 (0.81, 1.03)	5.8	4.5	1.29 (1.15, 1.45)	6.4	7.5	0.85 (0.82, 0.88)
September	5.2	5.1	1.01 (0.94, 1.09)	3.0	3.8	0.81 (0.72, 0.91)	5.3	6.4	0.84 (0.81, 0.86)
October	15.4	9.1	1.69 (1.58, 1.80)	10.8	8.9	1.21 (1.11, 1.31)	13.5	10.0	1.35 (1.29, 1.40)
November	18.8	10.3	1.82 (1.70, 1.95)	14.6	9.4	1.56 (1.31, 1.84)	17.7	11.1	1.59 (1.49, 1.69)
Well-child visits (with immunizations)									
Overall	4.2	3.0	1.40 (1.22, 1.59)	3.2	2.7	1.17 (0.88, 1.56)	3.9	3.4	1.16 (0.96, 1.40)
March	1.3	1.9	0.68 (0.62, 0.75)	0.8	1.9	0.41 (0.30, 0.57)	1.1	1.8	0.59 (0.54, 0.64)
April	0.3	1.7	0.18 (0.16, 0.21)	0.9	1.6	0.54 (0.39, 0.74)	0.4	1.8	0.24 (0.20, 0.29)
May	0.9	1.5	0.57 (0.48, 0.67)	0.9	1.4	0.67 (0.55, 0.81)	1.0	1.7	0.59 (0.50, 0.70)
June	1.4	1.7	0.81 (0.67, 0.97)	1.1	0.9	1.29 (1.00, 1.67)	1.4	1.7	0.80 (0.64, 1.00)
July	2.0	1.8	1.14 (1.06, 1.23)	1.0	1.2	0.79 (0.57, 1.10)	1.8	1.8	1.01 (0.84, 1.20)
August	2.0	2.0	1.00 (0.91, 1.10)	1.2	1.4	0.87 (0.56, 1.35)	2.2	2.3	0.98 (0.74, 1.28)
September	2.2	1.9	1.19 (1.12, 1.25)	1.6	1.6	0.99 (0.76, 1.28)	2.4	2.3	1.01 (0.92, 1.11)
October	13.1	6.7	1.94 (1.68, 2.25)	9.7	7.0	1.39 (1.19, 1.62)	11.4	7.7	1.48 (1.24, 1.77)
November	17.1	7.8	2.19 (1.87, 2.57)	12.9	7.7	1.67 (1.44, 1.94)	15.6	9.0	1.73 (1.42, 2.11)
Well-child visits (without immunizations)									
Overall	2.6	3.2	0.79 (0.72, 0.87)	2.4	2.3	1.03 (0.86, 1.24)	2.7	3.6	0.75 (0.72, 0.77)
March	2.1	3.5	0.58 (0.53, 0.64)	2.5	2.4	1.03 (0.88, 1.21)	2.2	3.7	0.58 (0.57, 0.59)
April	0.5	3.1	0.17 (0.16, 0.18)	1.5	2.8	0.52 (0.44, 0.60)	1.4	3.5	0.39 (0.38, 0.41)
May	2.0	3.1	0.64 (0.60, 0.69)	2.0	2.2	0.90 (0.71, 1.14)	2.4	3.6	0.68 (0.65, 0.71)
June	3.2	3.2	1.01 (0.96, 1.06)	3.0	2.7	1.08 (0.82, 1.42)	3.0	3.5	0.86 (0.84, 0.89)
July	3.8	4.1	0.93 (0.81, 1.07)	3.5	2.3	1.48 (1.32, 1.67)	3.5	3.7	0.94 (0.90, 0.98)
August	4.2	4.7	0.90 (0.79, 1.02)	4.6	3.0	1.50 (1.34, 1.69)	4.1	4.8	0.85 (0.81, 0.90)

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September	3.0	3.3	0.91 (0.84, 0.99)	1.5	2.2	0.68 (0.60, 0.78)	3.0	3.9	0.76 (0.73, 0.79)
October	2.3	2.4	0.94 (0.85, 1.04)	1.0	2.0	0.51 (0.46, 0.58)	2.0	3.2	0.64 (0.63, 0.65)
November	1.7	2.4	0.69 (0.66, 0.72)	1.6	1.8	0.93 (0.71, 1.22)	2.1	3.1	0.68 (0.66, 0.70)
Sick visits									
Overall	22.6	27.5	0.82 (0.75, 0.90)	29.8	32.7	0.91 (0.86, 0.97)	27.9	34.8	0.80 (0.78, 0.83)
March	26.3	32.0	0.82 (0.80, 0.84)	36.0	35.6	1.01 (0.95, 1.07)	32.9	37.8	0.87 (0.86, 0.88)
April	15.2	29.7	0.51 (0.48, 0.55)	24.7	36.2	0.68 (0.64, 0.73)	22.3	37.4	0.60 (0.58, 0.62)
May	19.1	29.6	0.65 (0.60, 0.69)	24.2	35.6	0.68 (0.64, 0.73)	25.0	36.5	0.69 (0.66, 0.71)
June	22.3	25.8	0.86 (0.82, 0.91)	30.5	30.3	1.01 (0.98, 1.04)	25.9	33.6	0.77 (0.75, 0.80)
July	27.6	26.3	1.05 (0.92, 1.19)	32.1	32.0	1.00 (0.97, 1.03)	28.9	29.6	0.98 (0.96, 0.99)
August	26.9	26.6	1.01 (0.88, 1.16)	31.2	32.3	0.97 (0.90, 1.04)	29.6	30.2	0.98 (0.93, 1.03)
September	24.6	26.4	0.93 (0.84, 1.04)	28.1	33.2	0.85 (0.78, 0.91)	31.1	35.1	0.89 (0.84, 0.93)
October	21.3	25.0	0.85 (0.78, 0.93)	32.7	29.8	1.10 (1.01, 1.20)	28.4	34.9	0.81 (0.78, 0.85)
November	18.9	26.0	0.73 (0.69, 0.76)	27.9	29.9	0.94 (0.89, 0.99)	26.4	37.3	0.71 (0.69, 0.72)

Table S13. Virtual primary care visits among children and adolescents, in post-pandemic months, by equity lens All values are the percent of observed visits in 2020 that were virtual and do not include newborns.

	Ontario					Manitoba				
	Age group									
	Newborns	Age 29 - 365 days	Age 1 to 5 years	Age 6 to 12 years	Age 13 to 17 years	Newborns	Age 29 - 365 days	Age 1 to 5 years	Age 6 to 12 years	Age 13 to 17 years
Overall	18.9	35.7	44.7	58.3	64.0	15.4	25.0	27.0	31.6	33.2
March	25.6	26.2	29.9	33.4	37.8	26.8	26.4	20.0	30.5	32.5
April	25.7	51.3	67.5	88.0	89.2	21.5	40.1	52.5	58.0	55.5
May	20.8	46.2	60.5	82.2	84.0	15.9	30.1	38.0	45.4	44.3
June	17.8	40.2	54.1	71.9	74.9	11.0	24.0	27.4	30.7	31.8
July	15.5	35.5	48.5	64.1	68.2	12.8	19.7	24.1	25.3	26.5
August	15.0	31.7	43.5	58.1	62.0	12.0	20.4	24.9	27.8	27.7
September	15.3	31.2	48.7	62.3	64.6	12.6	20.1	26.8	30.8	29.0
October	15.8	30.2	35.8	49.8	57.7	13.7	20.8	21.2	24.7	28.2
November		29.6	32.3	44.2	55.0	17.0	23.5	20.5	24.8	32.1
	Material deprivation									
	Q1 (least deprived)	Q2	Q3	Q4	Q5 (most deprived)	Q1 (least deprived)	Q2	Q3	Q4	Q5 (most deprived)
Overall	54.6	53.6	53.1	51.4	50.1	27.9	29.3	30.0	30.3	32.0
March	34.5	33.3	32.8	31.2	30.0	24.0	32.0	29.5	28.3	25.6
April	77.6	76.4	76.0	73.4	73.1	57.0	54.0	52.6	51.9	49.0
May	72.6	71.4	70.0	67.8	66.5	41.6	42.0	39.6	40.3	40.2
June	65.5	63.8	62.8	60.4	58.4	28.6	28.6	28.9	29.4	30.0
July	59.4	57.8	57.1	54.6	52.0	23.6	24.2	24.3	24.5	26.1
August	54.5	52.9	51.8	49.4	47.5	23.9	24.8	26.1	26.8	28.9
September	58.4	56.2	54.8	52.5	50.3	26.8	26.9	28.2	27.6	29.7
October	45.6	45.9	46.6	45.8	45.0	20.2	21.7	25.0	25.4	29.8
November	41.5	41.8	42.9	42.7	42.9	20.5	21.8	25.0	26.6	34.0
	Immigrant status									
	Immigrants	Refugees	Canadian born	Immigrants	Refugees	Canadian born	Immigrants	Refugees	Canadian born	
Overall	61.2	49.5	52.7	27.7	22.1	31.5	27.7	22.1	31.5	
March	32.1	25.5	32.9	24.9	23.3	23.4	24.9	23.3	23.4	
April	88.7	79.7	75.0	57.6	42.6	57.5	57.6	42.6	57.5	
May	82.5	72.4	69.6	41.6	27.6	45.2	41.6	27.6	45.2	
June	73.3	60.7	62.2	28.6	17.3	31.5	28.6	17.3	31.5	
July	66.9	54.6	56.3	22.5	16.6	26.5	22.5	16.6	26.5	
August	61.2	48.8	51.4	23.9	14.8	28.1	23.9	14.8	28.1	
September	63.9	50.0	54.7	26.9	21.7	30.3	26.9	21.7	30.3	
October	53.6	41.6	45.7	20.7	21.8	26.0	20.7	21.8	26.0	
November	52.6	41.7	42.0	21.9	21.6	27.0	21.9	21.6	27.0	
	Rurality									
	Urban	Rural	Urban	Rural	Urban	Rural				
Overall	53.0	49.7	28.0	34.9	28.0	34.9				
March	32.4	34.9	21.6	31.2	21.6	31.2				
April	75.7	73.1	52.7	53.1	52.7	53.1				
May	70.2	66.4	40.2	42.8	40.2	42.8				
June	62.8	57.8	28.0	33.0	28.0	33.0				
July	56.8	51.6	23.4	29.0	23.4	29.0				
August	51.9	46.1	24.5	32.1	24.5	32.1				
September	55.1	49.6	26.6	32.5	26.6	32.5				
October	45.9	43.4	22.5	31.8	22.5	31.8				
November	42.5	37.2	23.1	34.6	23.1	34.6				

Appendix 1, as supplied by the authors. Appendix to: Saunders N, Guttman A, Brownell M, et al. Pediatric primary care in Ontario and Manitoba after the onset of the COVID-19 pandemic: a population-based study. *CMAJ Open* 2021. DOI:10.9778/cmajo.20210161. Copyright © 2021 The Author(s) or their employer(s). To receive this resource in an accessible format, please contact us at cmajgroup.cmajca.

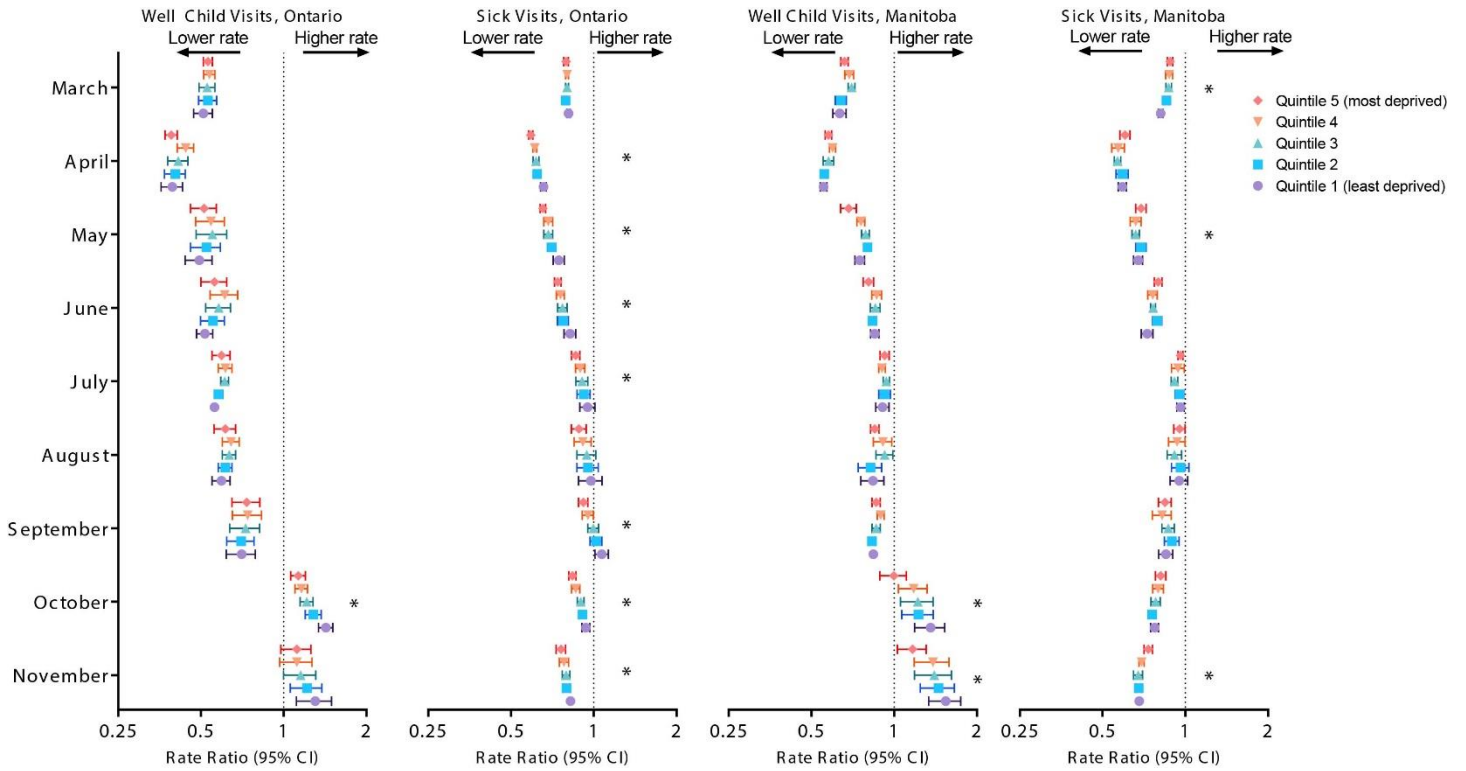


Figure S1. Adjusted rate ratio of monthly well-child and sick visits in Ontario and Manitoba following the onset of the COVID-19 pandemic by material deprivation quintile. Asterisk indicates significant differences from Quintile 1 to Quintile 5 within each month.

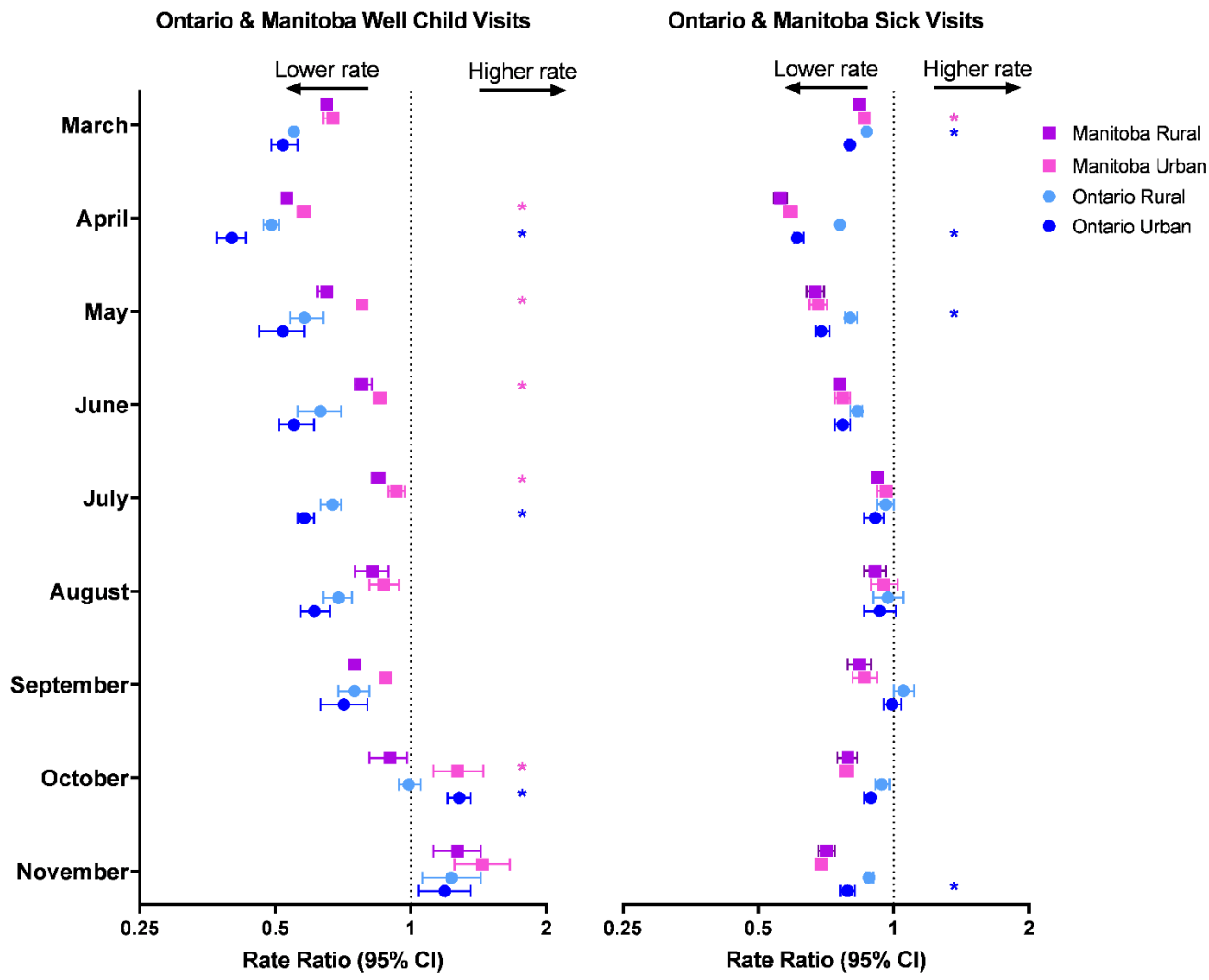


Figure S2. Adjusted rate ratio of monthly well child and sick visits in Ontario and Manitoba following the onset of the COVID-19 pandemic by rurality. Asterisk indicates significant differences from urban within each month and province.

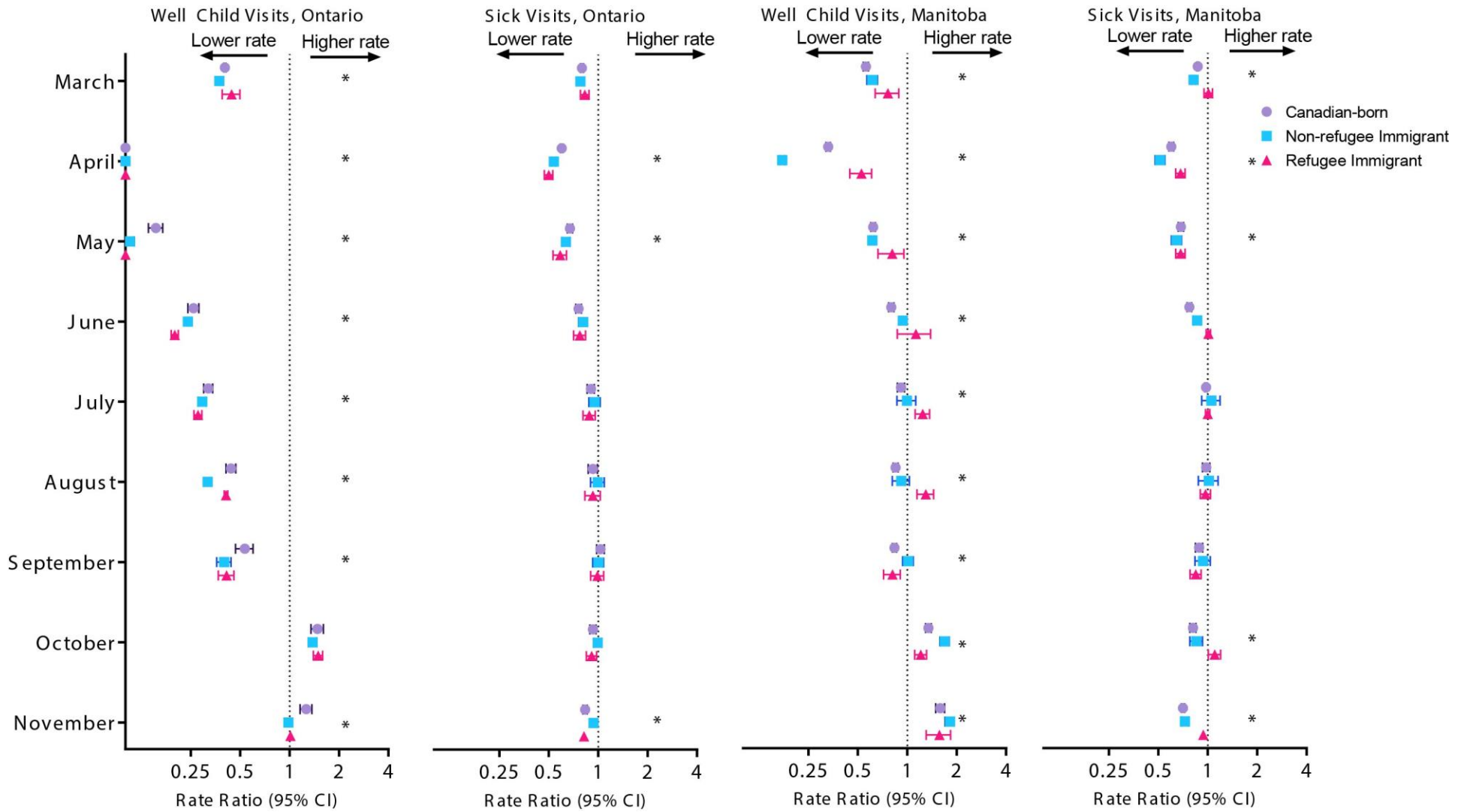


Figure S3. Adjusted rate ratio of monthly well-child and sick visits in Ontario and Manitoba following the onset of the COVID-19 pandemic by immigrant status. Asterisk indicates significant differences Canadian-born within each month.