Supplementary Appendix

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Supplementary Methods

Vaccination during the oral glucose challenge test (aggregated data)

For the oral glucose challenge test (OGCT) model, VC was calculated using aggregated data collected daily at the blood procurement centre for all women, regardless of their recruitment in the study. Results were compared to the baseline VC of the primary analysis.

Sensitivity Analyses

Sensitivity analyses were performed to test the robustness of the results. Since no medical charts were reviewed for the CLSC model, an analysis was performed assuming as vaccinated women who indicated unknown vaccination status or who did not answer the self-reported questionnaire and for whom information in the Immunization Registry was unavailable. This led to a higher VC for the CLSC model which was again compared with VC of other models. A second sensitivity analysis was performed for the OGCT model where we excluded pregnant women who were known to have diabetes according to their medical charts.

Supplementary Results

Vaccination during OGCT

The aggregated data showed that, among recruited women who attended the OGCT in the participating site, 99/210 (47.1%; 95%CI, 40.5%-53.9%) were vaccinated during or after the OGCT waiting hour. Tdap VC was significantly lower than the baseline model-specific VC (63.8%; $p<0.001$). Regardless of recruitment status, 290/802 (36.2%; 95%CI, 32.9%-39.5%) of women who came to their OGCT received the Tdap vaccine during their appointment.

Sensitivity analyses

For the CLSC model where medical charts were not reviewed, we found 17 women who indicated unknown vaccination status or who did not answer the self-reported questionnaire, for whom there was no information available in the Immunization Registry. Assuming that these 17 women would have been vaccinated in a CLSC, the analysis showed that the model-specific VC of the FMG model remained similar to the CLSC model ($p=0.528$), and the FMG model ($p=0.001$) and the obstetrics model ($p<0.001$) still achieved significantly higher overall VC than the CLSC model (Table S2).

A second analysis was performed for the OGCT model specifically after the exclusion of 19 diabetic and pre-diabetic women who were not present at the OGCT during which the Tdap vaccine was offered (Table S3). Comparisons of the model-specific and overall VC to the baseline again aligned with our primary analysis results.

Supplementary Tables

Table S1. Baseline socio-demographic characteristics from the recruitment questionnaire (Family medicine group model).

	No. (%)*		
	Recruitment site		
Characteristics†	FMG 1 n = 48 (28.1%)	FMG 2 n = 42 (24.6%)	FMG 3 n = 81 (47.4%)
Median maternal age (IQR)	31 (8)	29 (5)	30 (5)
If born in Canada (%)			
Yes	24 (50.0%)	34 (81.0%)	71 (87.7%)
No	22 (45.8%)	8 (19.0%)	4 (4.9%)
No response	2 (4.2%)	0 (0%)	6 (7.4%)
Marital Status (%)			
Married	45 (93.8%)	38 (90.5%)	75 (92.6%)
Other	3 (6.2%)	3 (7.1%)	5 (6.2%)
No response (Prefer not to answer + no response)	0 (0%)	1 (2.4%)	1 (1.2%)
Level of education (%)			
University	29 (60.4%)	23 (54.8%)	36 (44.4%)
Other (College or less)	19 (39.6%)	18 (42.9%)	45 (55.6%)
No response (Prefer not to answer + no response)	0 (0%)	1 (2.4%)	0 (0%)
Language (%)			
French	35 (72.9%)	38 (90.5%)	77 (95.1%)
Other	13 (27.1%)	4 (9.5%)	4 (4.9%)
Number of infants (%)			
First Pregnancy	14 (29.2%)	19 (45.2%)	33 (40.7%)
1 child or more prior to this pregnancy	34 (70.8%)	23 (54.8%)	48 (59.3%)
Diabetes (%)			
Yes	1 (2.1%)	1 (2.4%)	5 (6.2%)
No	47 (97.9%)	39 (92.9%)	76 (93.8%)
Unknown (Do not know + no response)	0 (0%)	2 (4.8%)	0 (0%)
Type of health professional following the pregnancy (%)			
Family physician	30 (62.5%)	25 (59.5%)	59 (72.8%)
Obstetrician	10 (20.8%)	5 (11.9%)	10 (12.4%)
Other (including multiple health professionals)	6 (12.5%)	8 (19.0%)	12 (14.8%)

No response	2 (4.2%)	4 (9.5%)	0 (0%)

Note: FMG = family medicine group, IQR = interquartile range.

*Unless otherwise specified.

† P-values calculated from Kruskal-Wallis test and Pearson's Chi Squared test. For cells with expected count <5, p-values are computed by Monte Carlo simulation. Differences in participants characteristics across the recruitment sites were statistically significant at p<0.001 for the characteristics: country of birth (Canada or not) and language.

Table S2. Sensitivity analyses of the Tdap vaccine coverage, considering higher vaccine coverage for the CLSC model*

Vaccine delivery models	Model-specific			Overall		
	Model-specific VC [95% CI]	OR[†] [95% CI]	aOR[‡] [95% CI]	Overall VC [95% CI]	OR[†] [95% CI]	aOR[‡] [95% CI]
CLSC (n = 246)	174/246 (70.7%) [64.8%, 76.1%]	1 (Reference)	1 (Reference)	180/246 (73.2%) [67.3%, 78.3%]	1 (Reference)	1 (Reference)
FMG (n = 171)	116/171 (67.8%) [60.5%, 74.4%]	0.87 [0.57, 1.33]	0.95 [0.61, 1.48]	148/171 (86.5%) [80.6%, 90.9%]	2.36 [1.42, 4.04]	2.98 [1.72, 5.34]
Obstetrics (n = 241)	85/241 (35.3%) [29.5%, 41.5%]	0.23 [0.15, 0.33]	0.23 [0.15, 0.34]	207/241 (85.9%) [80.9%, 89.7%]	2.23 [1.42, 3.57]	2.57 [1.59, 4.21]
OGCT (n = 288)	127/288 (44.1%) [38.5%, 49.9%]	0.33 [0.23, 0.47]	0.33 [0.22, 0.48]	178/288 (61.8%) [56.1%, 67.2%]	0.59 [0.41, 0.86]	0.63 [0.42, 0.94]

Note: CLSC = local community service centre, FMG = family medicine group, OGCT = oral glucose challenge test, VC = vaccine coverage, OR = odds ratio, aOR = adjusted odds ratio.
*The sensitivity analyses assumed that 17 additional participants would have been vaccinated in the CLSC model.
[†]Odds ratios calculated from univariate logistic regression.
[‡]Adjusted odds ratios calculated from multivariable logistic regression, adjusting for maternal age, country of birth (Canada vs. other), education, language and the number of prior children

Table S3. Sensitivity analyses of the Tdap vaccine coverage, excluding some women from the Oral Glucose Challenge Test model*

Vaccine delivery models	Model-specific			Overall		
	Model-specific VC [95% CI]	OR[†] [95% CI]	aOR[‡] [95% CI]	Overall VC [95% CI]	OR[†] [95% CI]	aOR[‡] [95% CI]
CLSC (n = 246)	157/246 (63.8%) [57.6%, 69.6%]	1 (Reference)	1 (Reference)	163/246 (66.3%) [60.1%, 71.9%]	1 (Reference)	1 (Reference)
OGCT (n = 269)	127/269 (47.2%) [41.3%, 53.2%]	0.51 [0.36, 0.72]	0.50 [0.34, 0.73]	174/269 (64.7%) [58.8%, 70.2%]	0.93 [0.65, 1.34]	0.99 [0.66, 1.48]

Note: CLSC = local community service centre, OGCT = oral glucose challenge test, VC = vaccine coverage, OR = odds ratio, aOR = adjusted odds ratio.
*The sensitivity analysis was done after the exclusion of 19 women diagnosed with gestational diabetics or pre-gestational diabetics. Comparisons of VC, ORs, and aORs were against the baseline CLSC model of the primary analysis.
[†]OR = Odds ratios calculated from univariate logistic regression.
[‡]aOR = Adjusted odds ratios calculated from multivariable logistic regression, adjusting for maternal age, country of birth (Canada vs. other), education, language and the number of prior children.

Table S4. Places of vaccination for the vaccinated participants in each vaccine delivery model.

Vaccine delivery models	Places of vaccination for the vaccinated participants					Vaccination Total
	CLSC	FMG	Obstetrics	OGCT	Other*	
CLSC	157 (96.3%)	1 (0.6%)	0 (0%)	0 (0%)	5 (3.1%)	163 (100%)
FMG	25 (16.9%)	116 (78.4%)	0 (0%)	0 (0%)	7 (4.7%)	148 (100%)
Obstetrics	113 (54.6%)	5 (2.4%)	85 (41.1%)	0 (0%)	4 (2.0%)	207 (100%)
OGCT	38 (21.3%)	2 (1.1%)	0 (0%)	127 (71.3%)	11 (6.2%)	178 (100%)

Note: CLSC = local community service centre, FMG = family medicine group, OGCT = oral glucose challenge test.

*Other places of vaccination included pharmacies, hospitals, other medical clinics and other settings offering vaccination.