

Table 1: Characteristics of participants

Variable	Sub-Category	Case (n = 21)	Control (n = 84)	P-TT	P-LR
Birth weight (in kilograms)		3.07 ± 0.58 (20)	3.06 ± 0.49 (83)	0.9081	.
Family size (number of people)		4.29 ± 2.22 (21)	4.73 ± 2.52 (84)	0.466	.
Crowding (Family size/rooms in home)		1.43 ± 1.15 (21)	1.57 ± 0.99 (84)	0.5893	.
Weeks gestation		39.83 ± 1.79 (21)	39.80 ± 1.77 (84)	0.9405	.
Socioeconomic status score		36.92 ± 3.62 (21)	37.61 ± 3.25 (84)	0.3966	.
Maternal Vaccine	Influenza	5 (23.81%)	49 (58.33%)	.	0.0039
	Pneumococcal	16 (76.19%)	35 (41.67%)	.	***
Infant Gender	Female	13 (61.90%)	45 (53.57%)	.	0.49
	Male	8 (38.10%)	39 (46.43%)	.	***
Smoker In Home	No	13 (61.90%)	53 (63.10%)	.	0.9197
	Yes	8 (38.10%)	31 (36.90%)	.	***

P-TT: p value for t-test
P-LR: p value for Chi-square test

Table 2: Vitamin D levels in cord blood in cases versus controls

Variable	Case (n = 21)	Control (n = 84)	P (t-test)
25(OH)D (ng/ml)	8.73 ± 3.34 (21)	10.67 ± 4.08 (81)	0.048

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2633. Influenza and Tdap Vaccination Coverage among Pregnant Women in the PREVAIL Cohort

Elizabeth P. Schlaudecker, MD, MPH¹; Shannon Conrey, MS²; Brady J. Gelvin, BS²; Allison R. Cline, RN, BSN²; Emily A. DeFranco, DO, MS²; Angela P. Campbell, MD, MPH³; Alexandra Piasecki, MPH³; Lauren Beacham, MA³; Barbara Bardenheier, PhD, MPH, MA³; Daniel C. Payne, PhD, MSPH⁴; Ardythe L. Morrow, PhD¹; Mary. A. Staat, MD, MPH⁵; ¹Cincinnati Children's Hospital Medical Center, University of Cincinnati College of Medicine, Cincinnati, Ohio; ²University of Cincinnati College of Medicine, Cincinnati, Ohio; ³Centers for Disease Control and Prevention, Atlanta, Georgia; ⁴Centers for Disease Control and Prevention, Atlanta, Georgia, Atlanta, Georgia; ⁵Cincinnati Children's Hospital Medical Center, University of Cincinnati College of Medicine, Cincinnati, Ohio

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Background: The ACIP recommends influenza and Tdap vaccination during pregnancy to reduce the risk of influenza and pertussis in the mother and her infant. We assessed influenza and Tdap vaccination coverage and associated factors among pregnant women enrolled in PREVAIL, a prospective birth cohort study in Cincinnati, OH. We assessed sensitivity and specificity of self report for both vaccines against state registry, maternal healthcare provider, and work-place records.

Methods: We enrolled and interviewed 265 pregnant women regarding self-reported receipt of influenza and Tdap vaccines, and obtained vaccine records from registry, electronic medical record, provider, employer, or pharmacy. We grouped subjects by documented vaccination status and analyzed demographic variables and vaccine attitudes regarding efficacy, safety, and hesitancy using unadjusted Fisher exact tests. We analyzed sensitivity and specificity of maternal recall.

Results: We identified documentation of influenza and Tdap vaccine receipt during pregnancy in 172/265 (64.9%) and 238/265 (89.8%) of women, respectively (Figure 1); by self report, 177/265 (66.8%) reported receiving influenza and 221/265 (83.4%) Tdap vaccine. The two most common primary reasons cited for receiving influenza vaccine were "to protect my baby" (36.7%) and "to protect myself" (26%; Figure 2). Pregnant women were more likely to get Tdap vaccine if a healthcare worker recommended it (OR 5.4). Subjects were more likely to get influenza vaccine if they believed it was effective in preventing influenza in themselves (OR 9.0) or their babies (OR 8.1). While positive recall had a high concordance (95.2% and 93.4% for influenza and Tdap, respectively), 12.5% and 32.1% of mothers incorrectly recalled not receiving an influenza or Tdap vaccine, respectively, that was documented as received in the records (Figure 3).

Conclusion: We found high concordance between maternal recall and verification for both influenza and Tdap vaccines. In this single-site cohort of 265 women,

self report was a reliable measure of vaccination status among pregnant women. Provider communication to pregnant women regarding effectiveness of influenza and Tdap vaccinations for themselves and their infants may lead to higher maternal vaccination rates.

Figure 1. Demographic characteristics of the population stratified by verified vaccine receipt status.

Group	Category	All Enrolled		Influenza vaccine verified as received		Tdap vaccine verified as received	
		n=265	% of total	n=172	% Yes	n=238	% Yes
Age group (at baseline)	18-24	57	21.5%	34	59.6%	53	93.0%
	25-34	166	62.6%	109	65.6%	149	89.8%
	35-49	42	15.9%	29	69.0%	36	85.7%
Race/ethnicity	White/non-Hispanic	132	49.8%	95	72.0%	115	87.1%
	Black/non-Hispanic	117	44.2%	66	56.4%	110	94.0%
	Hispanic	6	2.3%	5	83.3%	5	83.3%
	Other	9	3.4%	5	55.6%	7	77.8%
Education	≤ High School	126	47.6%	73	57.9%	119	94.4%
	Some college	40	15.1%	21	52.5%	34	85.0%
	Bachelor's	54	20.4%	40	74.1%	45	83.3%
	Graduate degree	45	17.0%	38	84.4%	40	88.9%
Marital Status	Married/lives with partner	174	65.7%	125	71.8%	156	89.7%
	Single	91	34.3%	47	51.6%	82	90.1%
Insurance	Private	111	41.9%	84	75.6%	97	87.4%
	Public	152	57.4%	86	56.6%	139	91.4%

Vaccine compliance by maternal demographics. P values represent significance level of difference in proportion between vaccine verified received group and vaccine not received/unverified group (Fisher's exact test).

Figure 2. Maternal primary reasons for receiving influenza vaccine.

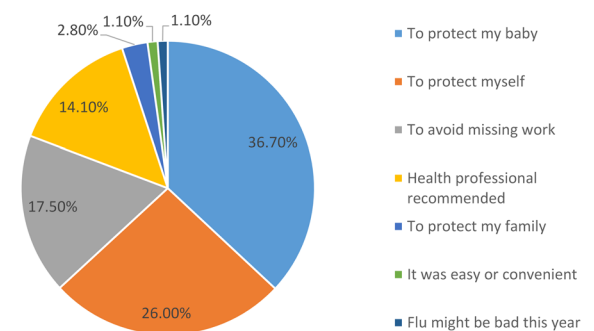


Figure 3. Maternal recall versus verification of influenza and Tdap vaccine receipt.

Influenza Vaccine Recall Concordance				
Vaccine Recall	Documented vaccination	Documented vaccination		Sensitivity: 95.2% Specificity: 87.5% PPV: 96.9% NPV: 81.4% % Agreement: 93.7%
		Yes	No	
		Yes	No	
Yes	158	5		
No	8	35		
Concordance between maternal recall of influenza vaccine receipt at baseline interview and verification of vaccine receipt from state registry, maternal healthcare provider, and work-place records. Only subjects whose vaccine status was verified as yes or declined were included (n=206). Six subjects who recalled not receiving a vaccine, but received a vaccine after the baseline visit as well as 59 subjects whose vaccine status was not verified were excluded.				
Tdap Vaccine Recall Concordance				
Vaccine Recall	Documented vaccination	Documented vaccination		Sensitivity: 93.4% Specificity: 67.9% PPV: 95.9% NPV: 55.9% % Agreement: 90.6%
		Yes	No	
		Yes	No	
Yes	212	9		
No	15	19		
Concordance between maternal recall of Tdap vaccine receipt at baseline interview and verification of vaccine receipt from state registry, maternal healthcare provider, and work-place records. Only subjects who responded to the recall question were included in analysis (n=255).				

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