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Assessing Prenatal Care Providers' Promotion of Immunization in Pregnancy

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Introduction

Accurate information regarding prenatal immunization is critical for first-time mothers. These women have more concerns regarding the safety of prenatal vaccines, and a third of first-time mothers felt that they did not receive adequate information on vaccines during pregnancy.¹ Additionally, many vaccine-hesitant mothers decide whether to vaccinate their children during pregnancy.²

The Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP) guidelines urge providers to recommend the Tdap and influenza vaccines to pregnant patients to reduce the risk of complications from influenza and pertussis in both expectant mothers and infants.³ In 2018, 49.1% and 54.4% of pregnant women in the US received influenza and Tdap vaccines, respectively⁴; however, uptake varies state to state. Recent surveys of prenatal care providers in New York found that 92% knew the ACIP recommendations, but only 80% of providers recommended Tdap.⁵ No such surveys have been conducted in Vermont.

This study is the first survey of providers regarding prenatal immunization practices in Vermont. We hypothesize that barriers to prenatal vaccine administration exist and hope to identify areas for the Vermont Department of Health to improve prenatal vaccine uptake.

"I strongly recommend vaccinations for pregnant people and their families and feel it is largely unsuccessful due to misunderstanding about the flu and the vaccine."
– Certified Nurse Midwife

"I'm seeing young women who think they don't need vaccines and don't seem to have any prior education ...some VERY easy to read or listen to info on the massive success of vaccination programs worldwide would be great."
– Ob/Gyn Physician

"Many choose to examine personal risks and benefits vs. community health. Data on flu vaccine efficacy is not impressive so it is difficult to provide [pregnant patients] with [compelling] research."
– Certified Nurse Midwife

Methods and Materials

A validated 39-question survey was adapted and distributed to 291 family practice physicians, 72 OB/GYN physicians, 73 nurse practitioners, and 57 certified nurse midwives (CNMs) in Vermont. The survey assessed three parameters:

- 1) practice type and patient population demographics
- 2) provider protocols for education, administration, and reporting vaccinations in pregnant patients and
- 3) provider beliefs regarding safety and efficacy of Tdap and influenza vaccines

Data was deidentified and maintained in a RedCap database on UVM servers. Qualitative statistical analysis was performed in RedCap.

Survey Link



	N (%)
Gender	
Female	55 (85.9)
Male	9 (14.1)
Provider type	
Ob/Gyn	31 (48.4)
Family Medicine	10 (15.6)
Certified Nurse Midwife	13 (20.3)
Nurse Practitioner/RN	10 (15.6)
Community served	
Mostly rural	13 (20.6)
Mixed rural and suburban/urban	41 (65.1)
Mostly suburban/urban	9 (14.3)
Annual pregnant patients seen	
1-9	5 (7.8)
10-50	9 (14.1)
>50	50 (78.1)
Practice setting	
Private practice	10 (15.6)
Hospital owned practice	23 (35.9)
Academic health network	28 (43.8)
Community hospital	8 (12.5)
FQHC	1 (1.6)

Table 1. Demographics of survey participants.

Perceived Barriers to Immunization of Pregnant Women

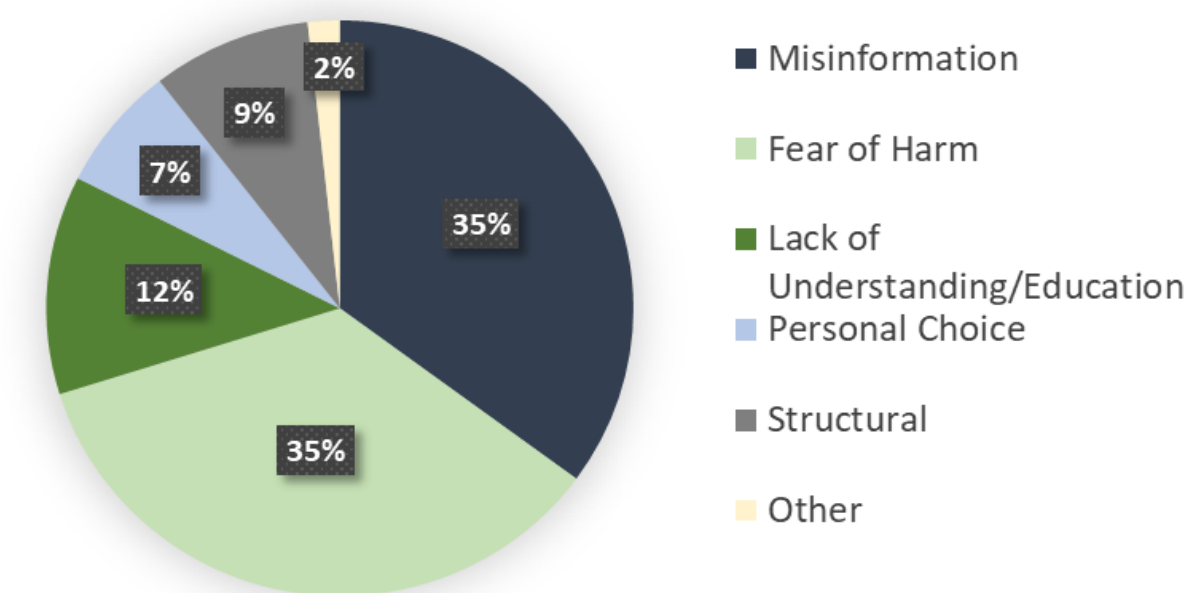


Figure 1. Perceived barriers to immunization of pregnant women.

How Often do Providers Discuss Vaccines with Pregnant Patients?

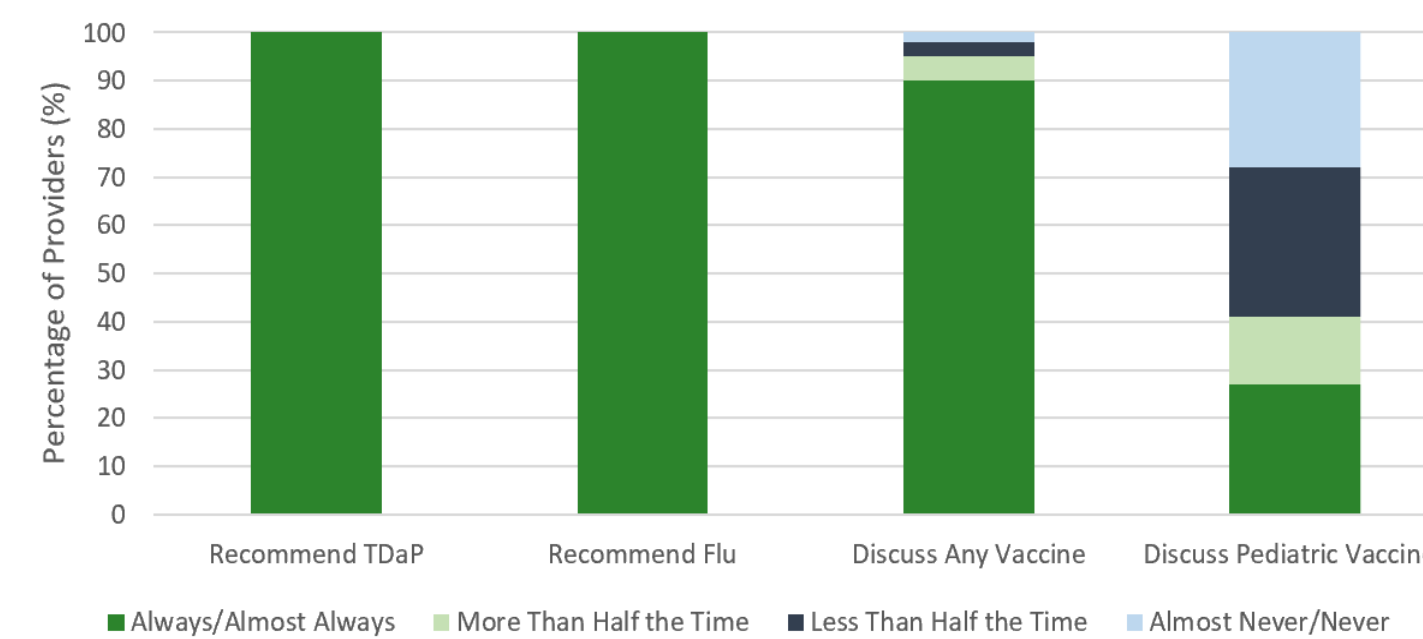


Figure 2. Providers discussion of vaccines with pregnant patients.

How Often do Providers Discuss Pediatric Vaccines with Pregnant Patients?

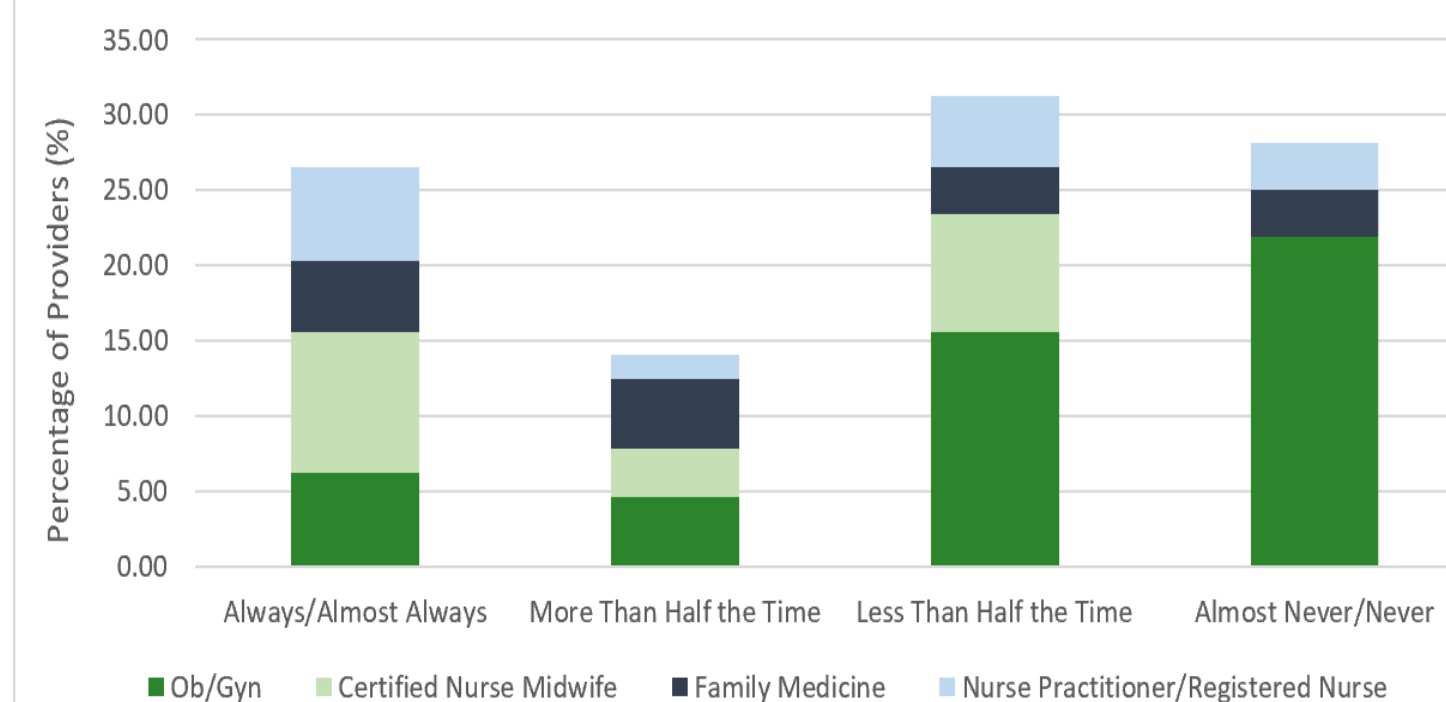


Figure 3. Providers' discussion of pediatric vaccines with pregnant patients.

Results

31 OB/GYNs, 10 family medicine practitioners (NP), 13 CNMs, and 10 NPs that provide prenatal care completed the survey (Table 1). We assessed providers' discussion of vaccines with pregnant patients (Figure 2), including pediatric vaccines (Figure 3), and perceived barriers to immunization in pregnant patients (Figure 1). Select representative quotations of issues regarding prenatal immunization are captioned. We found that providers always or almost always recommend Tdap and influenza vaccines to pregnant patients. Additionally, we found that providers' discussion of pediatric vaccines varied by discipline, with 46% of CNMs always or almost always recommending them and 45% of OB/GYNs never or almost never recommending them.

Discussion

1. Most VT providers discuss prenatal vaccination with pregnant patients and offer vaccinations in office.
 - Recommendation** → Continue to discuss and recommend the importance of vaccination with patients.
2. Pediatric vaccination decisions are often not discussed during prenatal care.
 - Recommendation** → Target obstetric and midwifery practices to inform providers of the importance of discussing pediatric vaccination.
3. Providers perceive that patient's misinformation and fear of vaccination outcomes is limiting vaccination uptake. In neighboring New York state, physicians identified cost as a major barrier to providing vaccines⁵. Cost barriers are negated in Vermont because providers have access to free vaccines for adults via a state funded program.
 - Recommendation** → Provide easily comprehensible education materials that can be distributed in offices to pregnant women regarding vaccine safety.

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