Vaccinating Pregnant Women: Knowledge, Beliefs, Attitudes and Practices of Women’s Healthcare Providers

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Learning Objectives

• List the barriers and challenges associated with vaccination in pregnancy

• Review the changes to immunization practices that can reduce the number of cases of maternal and fetal morbidity and mortality

• Describe the benefits associated with vaccination in pregnancy for mothers and their babies
In recent years, more attention has been paid to vaccination during pregnancy.

- Vaccination against influenza is currently recommended for pregnant women in Canada.

- NACI released recommendations for Pertussis vaccination for women in every pregnancy (March 2018).

- Number ONE influencer of vaccine acceptance is a recommendation from a trusted healthcare provider.
Study Questions

• Are healthcare providers hesitant to recommending vaccines to pregnant women?

• What are the barriers?
Here’s what we know (Barriers and Challenges)

• Lack of knowledge
• Concerns about vaccine safety
• Scope of practice
• Not perceiving vaccination as part of routine maternity care
• Remuneration and incentives
• Logistical challenges
• Medical-legal consequences
• Few studies have been conducted among Canadian obstetrical healthcare providers, especially among non-physicians
Study Objective (What we need to know and why)

To determine knowledge, beliefs, attitudes and current practices of women’s healthcare providers related to vaccination during pregnancy

• Identify specific challenges based on the different healthcare professionals (e.g., Obstetricians; Family Physicians; Nurses; Midwives; Pharmacists)
• Inform the development of training and education tools that aim to improve the rate of immunization among pregnant women
• Obtain baseline data to evaluate interventions and programs that may change practice
Methods (Data Collection)

• CIRN conducted a semi-structured interview and then partnered with the SOGC to develop a national survey
• Survey was widely disseminated in English and French (2017)
• Participants were recruited from:
  - The Society of Obstetricians and Gynaecologists of Canada
  - The Canadian Immunization Research Network
  - The College of Family Physicians of Canada
  - The Canadian Association of Midwives
  - The Canadian Association of Perinatal and Women's Health Nurses
  - l'Association des obstétriciens et gynécologues du Québec
• Data Analysis (Descriptive statistics and Content Analysis)
RESULTS

Total of participants  
\( n = 1,542 \)

Total of participants who care for pregnant women  
\( n = 1,413 \) (91.6%)

Excluded because they did not care for pregnant women:  
\( n = 129 \) (8.4%)

Excluded from the analysis*:  
\( n = 278 \) (19.7%)

Participants included in the analysis  
\( n = 1,135 \) of 1,413 (80.3%)

* Participants were excluded if they did not answer the sociodemographic section (\( n = 271 \)) or did not complete any question of the survey (\( n = 7 \)).
Results

Vaccination Practices in Pregnancy

<table>
<thead>
<tr>
<th>Percentage</th>
<th>FP/GP</th>
<th>Ob/Gyn</th>
<th>RM</th>
<th>Nurse</th>
<th>Pharmacist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not Vaccinate</td>
<td>13.1%</td>
<td>11.6%</td>
<td>4.4%</td>
<td>5.2%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Vaccinate</td>
<td>37.3%</td>
<td>39.8%</td>
<td>37.8%</td>
<td>30.7%</td>
<td>15%</td>
</tr>
</tbody>
</table>

- FP/GP: 13.1% Do not Vaccinate, 37.3% Vaccinate
- Ob/Gyn: 11.6% Do not Vaccinate, 39.8% Vaccinate
- RM: 4.4% Do not Vaccinate, 37.8% Vaccinate
- Nurse: 5.2% Do not Vaccinate, 30.7% Vaccinate
- Pharmacist: 3.6% Do not Vaccinate, 15% Vaccinate

Immunization in Pregnancy Online Course
Results

How knowledgeable are you about the following vaccinations during pregnancy (Likert scale responses from “0: know nothing” to “7: expert”)?

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Influenza</strong></td>
<td></td>
</tr>
<tr>
<td>Low Level*</td>
<td>FP/GP 18.6% Ob/Gyn 7.0% RM 39.9% Nurse 22.4% Pharmacist 26.8%</td>
</tr>
<tr>
<td>High Level**</td>
<td>FP/GP 81.4% Ob/Gyn 93.0% RM 60.1% Nurse 77.6% Pharmacist 73.2%</td>
</tr>
</tbody>
</table>

| **Pertussis** | Percentage |
| Low Level*  | FP/GP 34.6% Ob/Gyn 39.9% RM 22.4% Nurse 27.1% Pharmacist 26.8% |
| High Level** | FP/GP 65.4% Ob/Gyn 60.1% RM 72.9% Nurse 60.4% Pharmacist 73.2% |

*Low level (corresponding “know nothing” to 4 responses)
**High level (corresponding “5” to “expert” responses)
What did we find? (Barriers to immunization in pregnancy)

• Differences across healthcare providers
  - Family physicians/General practitioners and nurses are most likely to vaccinate pregnant women

• Targeted education is needed
  - Midwives; Pharmacists

• More information on the Pertussis vaccine

• Scope of practice
So why do we care?

• Despite advancements in vaccines, large groups of the Canadian population are unimmunized and/or under-immunized
• Pregnancy is the opportune time to evaluate immunization status
• Pregnancy is associated with altered immune response
  - Increased risk of infection
  - Increased risk of severe outcomes

• Number ONE influencer of vaccine acceptance is a recommendation from a trusted healthcare provider
How do vaccines help?

• Infection in the fetus, neonate and young infant can lead to:
  - Congenital abnormalities
  - Impaired fetal growth
  - Several neonatal illnesses

• Passive immunity provided to the baby through maternal vaccination

• Flu and Pertussis vaccines in each and every pregnancy

• Vaccination during pregnancy also protects newborn baby up to the first year of life!
How can we change practice?

<table>
<thead>
<tr>
<th>IDEAS</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>CLINICAL PRACTICE GUIDELINE</td>
<td>✔️</td>
</tr>
<tr>
<td>WORKSHOPS/WEBINARS</td>
<td>✔️</td>
</tr>
<tr>
<td>E-COURSE</td>
<td>✔️</td>
</tr>
<tr>
<td>TOOLKITS</td>
<td>✔️</td>
</tr>
</tbody>
</table>
Take Home Messages

1. Prenatal care provider plays a pivotal role in a pregnant patient’s acceptance of a vaccine during pregnancy.

2. Many vaccines are safe for use during pregnancy.

3. Influenza vaccine is universally recommended for all pregnant women.

4. Tdap vaccine is universally recommended for all pregnant women.
Workshops & Webinars

• Workshops
  - SOGC Regional CME Meetings
  - National SOGC Conference

• Webinar
  - Tdap Vaccine in Pregnancy

• Q & A
Do I need to get vaccinated if I’m pregnant?

Myth vs. Science

<table>
<thead>
<tr>
<th>Myth</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have heard that vaccines are not safe during pregnancy.</td>
<td>There are vaccines that you should receive during pregnancy in order to keep you and your newborn healthy—vaccines include Hepatitis B and Tdap (whooping cough). Tell your health-care provider to learn more.</td>
</tr>
<tr>
<td>My baby was not vaccinated when it was born.</td>
<td>Vaccines recommended for pregnant women protect your baby for up to 1 month after birth.</td>
</tr>
<tr>
<td>I rarely get sick.</td>
<td>Sometimes pregnant women can be at higher risk of getting sick, having the flu.</td>
</tr>
<tr>
<td>I have had the flu before. It isn’t dangerous.</td>
<td>Flu symptoms can be much worse for pregnant women and newborns.</td>
</tr>
</tbody>
</table>

The science is clear

Staying vaccinated during pregnancy is the most important thing you can do to protect yourself and your newborn baby. It’s easy. Talk to your health-care provider about the vaccines you should receive when you are pregnant.

Get the vaccine

• WHO-based vaccines are recommended. Vaccination is the best way to protect against flu. The flu vaccine is recommended for pregnant women.

Follow flu prevention measures

• Wash your hands with soap and water for at least 20 seconds. Avoid touching your mouth, nose, and eyes (where the flu can enter your body). Flu is also effective in dripping droplets.
• Cover and wash your nose or mouth when you cough or sneeze.
• Keep sick people separated from others who are healthy.
• Have a non-smoker at home to check your temperature or bring a friend with you. |

Stay home if you have flu symptoms.

Pregnant women face higher risk for the flu

It’s your season!

Pregnant women who get the flu are more likely to develop serious complications, so it’s important to get vaccinated.

Know the flu symptoms

• Mid-flu symptoms: fever, chills, severe muscle pain, cough, headache, 6 hours or more after birth.
• Severe flu symptoms: shortness of breath, difficulty breathing, facial flushing or pale skin, palpitations, and severe or persistent vomiting.

Remember!

• Being vaccinated can protect you and your family. Your baby will not be born 6 months after birth.
• Talk to your health-care provider about being vaccinated and its benefits now.

Accredited Vaccination in Pregnancy E-Course

8 modules

- Immunization in Pregnancy
- Making Recommendations & Increasing Access to Vaccines
- Vaccine Hesitancy
- Storage, Handling and Administration of Vaccines in Pregnancy
- Adverse Reactions to Vaccinations in Pregnancy
- Inadvertent Vaccine Exposure during Conception and Pregnancy
- Preconception and Postpartum Vaccines
- Travel Vaccines in Pregnancy
Vaccination in Pregnancy Toolkit

How to Start a Vaccination Clinic

1. Ensure the clinic has:
   - Good lighting and ventilation
   - A sink for hand washing
   - Sinks to prepare specific syringes and storage for sharp containers
   - A vaccine refrigerator and temperature monitoring devices
   - Shelves or cabinets to store needles, syringes, vials, and educational brochures

2. Follow recommendations for safe vaccine handling and storage.
   - Refer to module “Storage, Handling, and Administration of Vaccines”.

3. Follow safety protocols and recommendations to decrease risk of infection.

4. Be prepared for minor and severe adverse reactions.
   - Ensure all staff are trained to respond to adverse reactions related to vaccination.
   - Have anaphylaxis kit available in your clinic.
   - Report adverse events to the Canadian Adverse Events Following Immunization Surveillance System (CAEFISS).
   - Refer to module “Adverse Reactions to Vaccinations in Pregnancy”.

5. Assess immunization status during every visit.
   - Help your patients identify the vaccines they need using vaccine questionnaires based on maternal conditions and future timelines.

6. Assist patients in making informed decisions about vaccination during pregnancy by providing them with the relevant vaccines recommended by the Canadian Immunization Advisory Committee (CIAC) or other sources of reliable information about the vaccine(s) in question.

Vaccination pendant la grossesse : Réactions indésirables possibles

Les réactions indésirables fréquentes et rares suivantes ont été signalées après l’administration du vaccin pendant la grossesse. La réaction indésirable la plus fréquente aux vaccins est la douleur et l’œdème au site d’injection.

<table>
<thead>
<tr>
<th>Réactions indésirables fréquentes</th>
<th>Réactions indésirables rares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mal de tête</td>
<td>Reactions immédiate de type allergique (urticaire, angio-oedème, asthme allergique, anaphylaxie)</td>
</tr>
<tr>
<td>Fièvre</td>
<td>Syndrome de Guillain-Barre (SGB) &lt; 0,1 %*</td>
</tr>
<tr>
<td>Convulsions</td>
<td>Syndrome myobrücklisme (SMR) &lt; 0,1 %*</td>
</tr>
</tbody>
</table>

*Sévère et nécessite un soin médical immédiat.
HOW TO
Properly Store Vaccines

Vaccine safety is patient safety.
Do your part to maintain the vaccine refrigerator.

1. Keep refrigerator between 2°C and 8°C
2. Stock only a one-month supply of vaccines
3. Use only to store vaccines (no food or beverage)
4. Always keep refrigerator plugged in
5. Do not store vaccines on door shelves
6. Store full bottles of water on empty shelves and on the door
7. Open door only when necessary
8. Check and log twice a day
9. Never leave vac outside the refrig

Rx

Patient Name: ____________________________
Date: _________ / _________ / _________

Vaccines recommended during pregnancy:

- Tetanus, diphtheria, pertussis (whooping cough) 0.5 mL IM x 1
- Inactivated Influenza 0.5 mL IM x 1

Prescriber’s Signature: ____________________________
License #: ____________________________

These vaccines may be available from your primary care physician, local health department, or pharmacy. For more information, please visit www.pregnancyinfo.ca
Social Media Campaign

Visit SOGC’s YouTube Channel

https://youtu.be/ymtT9HakUls
Conclusions

• Vaccination during pregnancy is a critical issue for healthy mothers and babies
• Vaccine hesitancy is an issue of global concern
  - Some will never choose to vaccinate
  - Some will always choose to vaccinate
  - Those who are “unsure” should be the focus of education efforts
• Evidence about safety, harm and short- and long-term health outcomes is important for women and their healthcare providers
• Working together with healthcare providers and women to better understand factors that influence decisions to vaccinate and how to talk to women (and the public) about the issue will take ongoing effort as evidence continues to evolve
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Thank you!!

www.popsugar.com/moms/Woman-Wears-Vaccines-Cause-Adults-Shirt-45311647