

H1N1 and influenza viruses

Why pregnant women might be hesitant to be vaccinated

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Abstract

Question I have been encouraging pregnant women to receive both the H1N1 and influenza vaccines since I became aware of Health Canada's guidelines. However, some of the women in my practice have heard conflicting information, often from media sources, and they are hesitant to be vaccinated. What is the evidence behind these guidelines, and should I really be convincing these women to be vaccinated?

Answer Pregnant women and growing fetuses are considered a population vulnerable to H1N1 and influenza viruses. Health Canada published a report in late 2010 estimating that this population was at increased risk of hospitalization and severe outcomes of H1N1 infection. Recommendations included pregnant women as a priority group to receive the H1N1 vaccine as well as the influenza vaccine. This information should be explained unambiguously to pregnant women, and they should be made aware of the sensationalism of media reports, which are often based on opinion and not evidence.

Les virus H1N1 et de la grippe

Pourquoi les femmes enceintes pourraient hésiter à se faire vacciner

Résumé

Question J'encourage les femmes enceintes à se faire vacciner à la fois contre le H1N1 et contre la grippe depuis que j'ai pris connaissance des lignes directrices de Santé Canada. Par ailleurs, certaines de mes patientes ont entendu parler de recommandations contraires, souvent dans les médias, et hésitent à recevoir le vaccin. Quelles sont les données probantes sur lesquelles reposent ces lignes directrices et faudrait-il vraiment que je convainque ces femmes de se faire vacciner?

Réponse Les femmes enceintes et les fœtus en développement sont considérés comme une population vulnérable aux virus H1N1 et de la grippe. Santé Canada a publié un rapport à la fin de 2010 dans lequel on estime que cette population est à risque accru d'une hospitalisation et de complications graves dues à une infection au H1N1. Selon les recommandations, les femmes enceintes font partie des groupes prioritaires pour recevoir le vaccin contre le H1N1 et celui contre la grippe. Ces renseignements devraient être expliqués sans ambiguïté aux femmes enceintes, et on devrait les renseigner sur le sensationnalisme des articles souvent fondés davantage sur des opinions que sur des données probantes.

Infection with the novel H1N1 influenza virus, initially popularly termed "swine flu," was first reported in April 2009 and prompted the World Health Organization to raise its pandemic alert to the highest level. The World Health Organization also stated that during pregnancy both mother and baby were at increased risk when infected with either pandemic or seasonal influenza and that pregnant women should be vaccinated.¹ Because of concerns about the severity of the disease during pregnancy, the Centers for Disease Control and Prevention implemented enhanced surveillance for infection with this novel virus in pregnant women and placed them in a group that merits priority vaccine administration. It was also suggested that the benefit of treatment with the antiviral medication oseltamivir outweighs any theoretical risk² and that

confirmed H1N1 cases, with associated symptoms, particularly fever, merit immediate attention. In addition, precautions must be taken when confirmed or suspected H1N1-infected pregnant women arrive at hospital in labour. Following delivery, pregnant women infected with H1N1 can breastfeed but must follow specific guidelines.³

A systematic literature review was conducted to examine practices regarding the 2009 H1N1 outbreak and pregnant women, which included a total of 120 studies. Data were extracted regarding number of cases, additional risk factors for influenza-associated complications, treatment, and maternal and pregnancy outcomes. The researchers found that pregnancy was associated with increased risk of hospital and intensive care unit admission and death. Pregnant women who

received delayed treatment with neuraminidase inhibitors or who had additional risk factors were more likely to develop severe disease, and preterm births and emergency cesarean sections were frequently reported.⁴

Influenza vaccine

Women infected with the influenza virus during pregnancy are at increased risk of serious complications and hospitalization. Between 1997 and 2003, the Advisory Committee on Immunization Practices included healthy pregnant women who would be in their second or third trimester of pregnancy during the influenza season among those persons at high risk for whom influenza vaccination was indicated. Also included were women at any stage of pregnancy with certain chronic medical conditions, such as asthma, diabetes mellitus, or heart disease. The Advisory Committee on Immunization Practices emphasized that the influenza vaccine was safe for breastfeeding mothers and their infants. However, despite these recommendations, only 13% of pregnant women received the influenza vaccination in 2003.⁵


Determinants of decision making

Since the start of the H1N1 outbreak, pregnant women have been seeking information from various sources on how safe the vaccine would be for both them and their unborn fetuses. The Motherisk Program at the Hospital for Sick Children in Toronto, Ont, conducted a survey to examine women's perceptions of risk and the associated factors involved with the decision to receive the vaccination. Several interesting and surprising findings emerged from this survey, one of the most important being that women believed the risk from the seasonal flu virus was less than the H1N1 virus, with only 27.7% of the women surveyed stating they would choose to receive seasonal influenza vaccine during pregnancy. In addition, half of the women who had previously received the seasonal influenza vaccine when they were not pregnant stated that they would not have received it if they were currently pregnant. It was also evident from the women's reports that this was because there had not been any media attention surrounding the seasonal influenza.⁶ This is worrisome because there is well established evidence that pregnant women are also at higher risk of complications from seasonal influenza infection than the general population and therefore should receive the influenza vaccine.⁷

Our study demonstrated the considerable effect of the media during the H1N1 pandemic, reflected by the large number of women who reported the media as a trigger

for their calls to the Motherisk Program. However, most of the women found this information not only to be unhelpful, but also quite frightening, especially during a time when they are most vulnerable and worry about anything that might be detrimental to the health of their unborn children. Subsequently, this fear contributes to the decrease in vaccination rates in pregnant women, which leads to more complications resulting from infections in this population.

Conclusion

Evidence-based recommendations by reliable sources promote giving H1N1, seasonal influenza, and other pandemic vaccines to prevent risk of infection in both mother and developing fetus. Pregnant women must be made aware that media reports are often sensationalized and they should not use this information to make important decisions regarding their own health and that of their unborn children. 

Competing interests

None declared

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MOTHERISK

Motherisk questions are prepared by the Motherisk Team at the Hospital for Sick Children in Toronto, Ont. Ms Mirdamadi was a student in Clinical Pharmacology and Toxicology at the University of Toronto at the time of this paper. Ms Einarson is a consultant for the Motherisk Program.

Do you have questions about the effects of drugs, chemicals, radiation, or infections in women who are pregnant or breastfeeding? We invite you to submit them to the Motherisk Program by fax at 416 813-7562; they will be addressed in future Motherisk Updates.

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