

Medline ® Abstracts for References 32,35-39 of 'Influenza and pregnancy'

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TI Effectiveness of maternal influenza immunization in mothers and infants.

AU Zaman K, Roy E, Arifeen SE, Rahman M, Raqib R, Wilson E, Omer SB, Shahid NS, Breiman RF, Breiman RE, Steinhoff MC

SO N Engl J Med. 2008;359(15):1555.

BACKGROUND: Young infants and pregnant women are at increased risk for serious consequences of influenza infection. Inactivated influenza vaccine is recommended for pregnant women but is not licensed for infants younger than 6 months of age. We assessed the clinical effectiveness of inactivated influenza vaccine administered during pregnancy in Bangladesh.

METHODS: In this randomized study, we assigned 340 mothers to receive either inactivated influenza vaccine (influenza-vaccine group) or the 23-valent pneumococcal polysaccharide vaccine (control group). Mothers were interviewed weekly to assess illnesses until 24 weeks after birth. Subjects with febrile respiratory illness were assessed clinically, and ill infants were tested for influenza antigens. We estimated the incidence of illness, incidence rate ratios, and vaccine effectiveness.

RESULTS: Mothers and infants were observed from August 2004 through December 2005. Among infants of mothers who received influenza vaccine, there were fewer cases of laboratory-confirmed influenza than among infants in the control group (6 cases and 16 cases, respectively), with a vaccine effectiveness of 63% (95% confidence interval [CI], 5 to 85). Respiratory illness with fever occurred in 110 infants in the influenza-vaccine group and 153 infants in the control group, with a vaccine effectiveness of 29% (95% CI, 7 to 46). Among the mothers, there was a reduction in the rate of respiratory illness with fever of 36% (95% CI, 4 to 57).

CONCLUSIONS: Inactivated influenza vaccine reduced proven influenza illness by 63% in infants up to 6 months of age and averted approximately a third of all febrile respiratory illnesses in mothers and young infants. Maternal influenza immunization is a strategy with substantial benefits for both mothers and infants. (ClinicalTrials.gov number, NCT00142389.)

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PMID18799552

35 PubMed

TI Neonatal outcomes after influenza immunization during pregnancy: a randomized controlled trial.

AU Steinhoff MC, Omer SB, Roy E, El Arifeen S, Raqib R, Dodd C, Breiman RF, Zaman K

SO CMAJ. 2012;184(6):645. Epub 2012 Feb 21.

BACKGROUND: There are limited data about the effect of maternal influenza infection on fetuses and newborns. We performed a secondary analysis of data from the Mother's Gift project, a randomized study designed to test the effectiveness of inactivated influenza and pneumococcal vaccines during pregnancy.

METHODS: In the Mother's Gift project, 340 pregnant women in Bangladesh received either inactivated influenza vaccine or 23-valent pneumococcal polysaccharide vaccine (control). This study was performed from August 2004 through December 2005. We performed a secondary analysis of outcomes following maternal influenza immunization during two periods: when influenza virus was not circulating (September 2004 through January 2005) and when influenza virus was circulating (February through October 2005). We assessed gestational age, mean birth weight and the proportion of infants who were small for gestational age.

RESULTS: During the period with no circulating influenza virus, there were no differences in the incidence of respiratory illness with fever per 100 person-months among mothers and infants in the two groups (influenza vaccine: 3.9; control: 4.0; $p > 0.9$). The proportion of infants who were small for gestational age and the mean birth weight were similar between groups (small for gestational age: influenza vaccine 29.1%, control 34.3%; mean birth weight: influenza vaccine 3083 g, control 3053 g). During the period with circulating influenza virus, there was a substantial reduction in the incidence per 100 person-months of respiratory illness with fever among the mothers and infants who had received the influenza vaccine (influenza vaccine: 3.7; control: 7.2; $p = 0.0003$). During this period, the proportion of infants who were small for gestational age was lower in the influenza vaccine group than in the control group (25.9% v. 44.8%; $p = 0.03$). The mean birth weight was higher among infants whose mothers received the influenza vaccine than among those who received the control vaccine during this period (3178 g v. 2978 g; $p = 0.02$).

INTERPRETATION: During the period with circulating influenza virus, maternal immunization during pregnancy was associated with a lower proportion of infants who were small for gestational age and an increase in mean birth weight. These data need confirmation but suggest that prevention of influenza infection in pregnancy can influence intrauterine growth.

TRIAL REGISTRATION: ClinicalTrials.gov: NCT 00142389.

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PMID22353593

36 PubMed

TI Maternal influenza immunization and reduced likelihood of prematurity and small for gestational age births: a retrospective cohort study.

AU Omer SB, Goodman D, Steinhoff MC, Rochat R, Klugman KP, Stoll BJ, Ramakrishnan U

SO PLoS Med. 2011;8(5):e1000441. Epub 2011 May 31.

BACKGROUND: Infections during pregnancy have the potential to adversely impact birth outcomes. We evaluated the association between receipt of inactivated influenza vaccine during pregnancy and prematurity and small for gestational age (SGA) births.

METHODS AND FINDINGS: We conducted a cohort analysis of surveillance data from the Georgia (United States) Pregnancy Risk Assessment Monitoring System. Among 4,326 live births between 1 June 2004 and 30 September 2006, maternal influenza vaccine information was available for 4,168 (96.3%). The primary intervention evaluated in this study was receipt of influenza vaccine during any trimester of pregnancy. The main outcome measures were prematurity (gestational age at birth <37 wk) and SGA (birth weight <10th percentile for gestational age). Infants who were born during the putative influenza season (1 October-31 May) and whose mothers were vaccinated against influenza during pregnancy were less likely to be premature compared to infants of unvaccinated mothers born in the same period (adjusted odds ratio [OR]= 0.60; 95% CI, 0.38-0.94). The magnitude of association between maternal influenza vaccine receipt and reduced likelihood of prematurity increased during the period of at least local influenza activity (adjusted OR = 0.44; 95% CI, 0.26-0.73) and was greatest during the widespread influenza activity period (adjusted OR = 0.28; 95% CI, 0.11-0.74). Compared with newborns of unvaccinated women, newborns of vaccinated mothers had 69% lower odds of being SGA (adjusted OR = 0.31; 95% CI, 0.13-0.75) during the period of widespread influenza activity. The adjusted and unadjusted ORs were not significant for the pre-influenza activity period.

CONCLUSIONS: This study demonstrates an association between immunization with the inactivated influenza vaccine during pregnancy and reduced likelihood of prematurity during local, regional, and widespread influenza activity periods. However, no associations were found for the pre-influenza activity period. Moreover, during the period of widespread influenza activity there was an association between maternal receipt of influenza vaccine and reduced likelihood of SGA birth.

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PMID21655318

37 PubMed

TI H1N1 influenza vaccination during pregnancy and fetal and neonatal outcomes.

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SO Am J Public Health. 2012;102(6):e33. Epub 2012 Apr 19.

OBJECTIVES: We evaluated the relationship between maternal H1N1 vaccination and fetal and neonatal outcomes among singleton births during the 2009-2010 H1N1 pandemic.

METHODS: We used a population-based perinatal database in Ontario, Canada, to examine preterm birth (PTB), small-for-gestational-age (SGA) births, 5-minute Apgar score below 7, and fetal death via multivariable regression. We compared outcomes between women who did and did not receive an H1N1 vaccination during pregnancy.

RESULTS: Of the 55,570 mothers with a singleton birth, 23,340 (42.0%) received an H1N1 vaccination during pregnancy. Vaccinated mothers were less likely to have an SGA infant based on the 10th (adjusted risk ratio [RR]=0.90; 95% confidence interval [CI]=0.85, 0.96) and 3rd (adjusted RR=0.81; 95% CI=0.72, 0.92) growth percentiles; PTB at less than 32 weeks' gestation (adjusted RR=0.73; 95% CI=0.58, 0.91) and fetal death (adjusted RR=0.66; 95% CI=0.47, 0.91) were also less likely among these women.

CONCLUSIONS: Our results suggest that second- or third-trimester H1N1 vaccination was associated with improved fetal and neonatal outcomes during the recent pandemic. Our findings need to be confirmed in future studies with designs that can better overcome concerns regarding biased estimates of vaccine efficacy.

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PMID22515877

38 PubMed

TI Rates and determinants of seasonal influenza vaccination in pregnancy and association with neonatal outcomes.
AU Legge A, Dodds L, MacDonald NE, Scott J, McNeil S
SO CMAJ. 2014;186(4):E157. Epub 2014 Jan 6.

BACKGROUND: There is growing evidence that seasonal influenza vaccination in pregnancy has benefits for mother and baby. We determined influenza vaccination rates among pregnant women during the 2 nonpandemic influenza seasons following the 2009 H1N1 pandemic, explored maternal factors as predictors of influenza vaccination status and evaluated the association between maternal influenza vaccination and neonatal outcomes.

METHODS: We used a population-based perinatal database in the province of Nova Scotia, Canada, to examine maternal vaccination rates, determinants of vaccination status and neonatal outcomes. Our cohort included women who gave birth between Nov. 1, 2010, and Mar. 31, 2012. We compared neonatal outcomes between vaccinated and unvaccinated women using logistic regression analysis.

RESULTS: Overall, 1958 (16.0%) of 12,223 women in our cohort received the influenza vaccine during their pregnancy. Marital status, parity, location of residence (rural v. urban), smoking during pregnancy and maternal influenza risk status were determinants of maternal vaccine receipt. The odds of preterm birth was lower among infants of vaccinated women than among those of nonvaccinated women (adjusted odds ratio [OR]0.75, 95% confidence interval [CI]0.60-0.94). The rate of low-birth-weight infants was also lower among vaccinated women (adjusted OR 0.73, 95% CI 0.56-0.95).

INTERPRETATION: Despite current guidelines advising all pregnant women to receive the seasonal influenza vaccine, influenza vaccination rates among pregnant women in our cohort were low in the aftermath of the 2009 H1N1 pandemic. This study and others have shown an association between maternal influenza vaccination and improved neonatal outcomes, which supports stronger initiatives to promote vaccination during pregnancy.

AD

PMID24396098

39 PubMed

TI Cancer prevention and screening activities reported by African-American nurses.
AU Olsen SJ, Frank-Stromborg M
SO Oncol Nurs Forum. 1994 Apr;21(3):487-94.

PURPOSE/OBJECTIVES: To describe the cancer prevention and screening activities of African-American nurses prior to their participation in a national workshop on cancer prevention and screening. The hypothesis tested was that African-American nurses would describe few prevention and screening behaviors.

DESIGN: 18-month, longitudinal, descriptive study.

SETTING: National survey.

SAMPLE: 360 African-American nurses who applied for participation in a National Cancer Institute/Oncology Nursing Society workshop received study questionnaires. One hundred forty-six questionnaires were returned. The final sample was 64 nurses citing involvement in prevention/screening activities.

METHODS: Self-administered quantitative/qualitative questionnaire mailed to nurses two weeks prior to the workshop. Quantitative data analyzed using descriptive statistics; a clustering technique was used to categorize responses emerging from qualitative data.

MAIN RESEARCH VARIABLE: Cancer prevention and screening activities of African-American nurses six months prior to the workshop.

FINDINGS: Respondents reported involvement in 11 categories (618 prevention/screening activities), predominantly in those of life-style (86%), education (77%), and clinical screening (58%). Respondents practiced 64% of the activities on a voluntary basis. Respondents provided prevention/screening education to more than 8,900 community members.

CONCLUSION: African-American nurses favorably influence cancer prevention and screening beliefs and practices of clients in their communities.

IMPLICATIONS FOR NURSING PRACTICE: A survey approach can describe cancer prevention/screening behaviors of African-American nurses. These nurses are an effective resource for community education.

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PMID8052545