1467. Effectiveness of a Web-Based Intervention to Increase Uptake of Maternal Vaccines

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Session: 162. Maternal/Infant Immunization
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Background. Tetanus-diphtheria-acellular pertussis (Tdap) and influenza (flu) vaccines are recommended for all pregnant women in each pregnancy. However, vaccination uptake is suboptimal. Our objective was to test the efficacy of an online vaccine and social media resource in increasing uptake of Tdap and flu vaccines.

Methods. The RCT was conducted in an integrated health care system in Colorado from September 2013 to July 2016. Participants were pregnant women in the third trimester of pregnancy. Participants were randomly assigned to a website with vaccine information and interactive social media components (YSM), a website with vaccine information only (VI), or usual care (UC). To facilitate interaction on the YSM site, women were randomized 3:2:1 across the VSMMUC arms. The interventions were designed and pilot tested using focus groups, individual interviews, surveys, and usability testing with vaccine-hesitant parents and pregnant women and included content on maternal and infant vaccination. Participants in the YSM and VI arms had access to the same base vaccine content. The YSM site also included a blog, discussion forum, chat room, and “Ask a Question” portal. After randomization, women in the YSM and VI arms sent a website link. While they were encouraged to use the vaccine website, it was not required. Tdap and flu vaccination outcomes were analyzed separately. Women were included in each analysis if they had no record of vaccination for the relevant vaccine at enrollment and were >2 weeks from delivery.

Results. For Tdap, 94 healthy mother-infant pairs were formed prospectively from maternal Tdap immunization to infant age 6 weeks. Blood was collected from women pre-Tdap, 4 weeks post Tdap and at delivery, and from infants at birth, and age 3 and 6 weeks. IgG to pertussis toxin (PT), filamentous hemagglutinin (FHA), and pertactin (PRN) was quantified by luminex assay (IU/mL). Geometric mean concentrations (GMCS) with 95% confidence intervals (CI) for pertussis-specific IgG and half-life of IgG to PT were calculated.

Results. Mean maternal age was 31.1 years (range 22.7–39.7); 47% were white, 32% Hispanic and 21% Black. Tdap was administered at a mean gestation of 38.7 weeks (28–32). Infants had a mean gestation of 38.1 weeks (36.1–41.1) and birthweight of 3379g (2580–4584). GMCS (95%CI) for maternal pertussis-specific IgG increased significantly 4 weeks post-Tdap (4-fold higher in 59%, 41%, 29% and 44% for PT, FHA, FIM and PRN, respectively) and waned before delivery. Placental transfer was 133% for PT, 141% for FHA, 131% for FIM and 136% for PRN. Maternal antibodies in infants decayed quickly, but at age 6 weeks GMC of infant specific IgG was 21.1 IU/mL (14.7–30.2) and 91% had PT ≥ 10 IU/mL. Estimated half-life of PT-specific IgG in infants was 30.9 days.

1468. Provider Attitudes and Practices Regarding Maternal Vaccination Among Obstetrician-Gynecologists: A National Survey

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Background. Obstetrician-gynecologists (ob-gyns) play a crucial role as vaccinators of pregnant women, yet little is known about their attitudes and practices in this role. Our objectives were to describe, among a nationally representative sample of ob-gyns: 1) practices and attitudes regarding vaccination of pregnant women; and 2) barriers to the use of standing orders.

Methods. An e-mail and mail survey among ob-gyns conducted March-June 2016.

Results. The response rate was 69% (331/477). Overall, 90% reported administering 21 vaccines to pregnant women. Almost all (97% and 93%, respectively) strongly recommended influenza (flu) and tetanus-diphtheria-acellular pertussis (Tdap) vaccines; 80% use standing orders for flu vaccination and 56% for Tdap vaccination. More (68%) always recommend Tdap vaccines to household contacts of pregnant women than flu vaccines (53%). Physician attitudes are shown in the figure.

The most significant barrier to the use of standing orders included provider concern that patients prefer to speak to them first (12% major barrier, 25% somewhat), provider belief that they should be the one to recommend vaccines (11% major, 12% somewhat), and staff discomfort because of having to answer vaccine-related questions 7% major, 7% somewhat.

Conclusion. Ob-gyn attitudes to maternal vaccination are rare, whereas barriers to use of standing orders, a highly effective strategy for increasing vaccination uptake, are common, and less than 2/3 of providers currently use them.

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