Table 1. Continued

| HD Cohort | SD Cohort | Risk Ratio | P Value |
|-----------|-----------|------------|---------|
| n (%)     | n (%)     | CI (%)     |         |
| 2015-16   | 1036      | 1036       | 1.0     |

Disclosures. All authors: No reported disclosures.

1467. Effectiveness of a Web-Based Intervention to Increase Uptake of Maternal Vaccines
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Background. 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 (VSM), a website with vaccine information only (VI), or usual care (UC). To facilitate interaction on the VSM site, women were randomized 3:2:1 across the VSM:VI:UC 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 VSM and VI arms had access to the same base vaccine content. The VSM site also included a blog, discussion forum, chat room, and ‘Ask a Question’ portal. After randomization, women in the VSM and VI arms were 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 flu vaccination, 94 healthy mothers and partners were followed prospectively from maternal Tdap immunization to infant age 6 months. 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), fimbrial protein (FIM) and pertactin (PRN) was quantified by luminex assay (IU/mL). Mean GMCs were calculated with 95% confidence intervals (CI) for PT-specific IgG and half-life of IgG to PT were calculated.

Conclusion. 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 30.7 weeks (28–32.7). Infants had a mean gestation of 39.1 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% and 29% for PT, FHA, FIM and PRN, respectively) and waned before delivery. Placent 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 PT-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.

Disclosures. All authors: No reported disclosures.

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 barriers 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, 17% somewhat).

Conclusion. Ob-gyn attitudes towards 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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1469. Durability and Kinetics of Maternal Pertussis Antibodies in Infants of Mothers Immunized with Tdap During Pregnancy
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Background. Infant protection against severe pertussis requires sufficient maternal pertussis antibodies until infant immunization begins. The kinetics of maternally-derived Tdap-induced antibodies in infants is poorly understood.

Methods. 94 healthy mothers and partners were followed prospectively from maternal Tdap immunization to infant age 6 months. 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), fimbrial protein (FIM) and pertactin (PRN) was quantified by luminex assay (IU/mL). Mean GMCs were calculated with 95% confidence intervals (CI) for PT-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 30.7 weeks (28–32.7). Infants had a mean gestation of 39.1 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% and 29% for PT, FHA, FIM and PRN, respectively) and waned before delivery. Placent 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 PT-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.

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1470. Tdap and Influenza Vaccination Among Women with a Live Birth, Internet Panel Survey, United States, 2015–2016
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Background. Although the half-life of maternal PT-specific antibodies induced by Tdap immunization during the third trimester of pregnancy is shorter than previously thought, this strategy results in levels likely sufficient to protect infants through the start of the immunization series.

Disclosures. All authors: No reported disclosures.
Background. The Advisory Committee on Immunization Practices recommends that all pregnant women receive a tetanus diphtheria toxoids and acellular pertussis vaccine (Tdap) during each pregnancy and an influenza vaccination annually.

Methods. An opt-in internet panel survey was conducted March 29-April 7, 2016 among women who reported being pregnant any time since August 1, 2015 to assess vaccination coverage with influenza and Tdap among pregnant women and explore reasons for non-vaccination. Analysis was restricted to women who delivered a live birth between August 1 and the time of survey. Respondents were asked about receipt of influenza vaccination since July 1 and Tdap at their prenatal care appointment. Women who received a provider recommended or offered vaccination, and vaccination-related knowledge, attitudes, and beliefs. Estimates were weighted by age, race/ethnicity, and census region to the U.S. pregnant women population.

Results. Among 663 women, 28.8% reported receiving both influenza and Tdap vaccination, 14.9% received influenza vaccination only, and 20.0% received Tdap only. 70.3% of women received a provider recommendation for both vaccines, 16.8% were recommended influenza vaccine only, 6.5% were recommended Tdap only, and 6.4% received no vaccine recommendation. The corresponding estimates for receipt of a provider offer of vaccination were 52.9%, 21.5%, 10.7%, and 15.3%, respectively. The top reported reasons for non-vaccination with influenza vaccine, regardless whether or not Tdap was received, were not thinking the vaccine is effective and fear of getting sick/side effects from the vaccine. The top reported reasons for non-vaccination with Tdap, regardless whether or not influenza vaccination was received, were not knowing if they were supposed to get Tdap and not getting a provider recommendation for Tdap.

Conclusion. Less than 30% of pregnant women reported being fully vaccinated with recommended maternal vaccines, leaving them and their infants at risk of vaccine-preventable disease. Reported reasons for non-vaccination differed by vaccine: primarily negative attitudes toward influenza vaccine and lack of awareness of the need for Tdap. Clinic-based education along with systems such as standing orders and provider reminders are strategies to increase maternal vaccination.

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1471. Pregnant Women’s Acceptance of Hypothetical Zika Vaccine
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Session: 162. Maternal/Infant Immunization
Friday, October 6, 2017: 12:30 PM

Background. Zika virus is associated with substantial infant morbidity and mortality. Promising Zika vaccines for pregnant women are currently in clinical trials. To prepare for public availability, the acceptability of a hypothetical Zika vaccine was assessed among pregnant women.

Methods. A 16-question, 10-point Likert-scale survey was administered to a convenience sample of 100 pregnant women receiving routine prenatal care at the University of Kansas Medical Center from 07/07/2016 to 9/29/2016. The primary outcome of the survey was vaccine acceptability, which was evaluated by calculating the proportion of respondents who strongly agreed (responded 10/10) with the statement “If a vaccine for Zika virus was available, I would get this vaccine while pregnant.” Multivariable analyses were conducted to examine characteristics associated with Zika vaccine acceptability.

Results. Nearly half of the 100 patients surveyed (48%) expressed strong agreement to getting a hypothetical Zika vaccine while pregnant. Among these women, 98% n = 47 strongly agreed that a recommendation from their prenatal provider would be very important to them. Among the other 52% who did not demonstrate strong agreement to getting a Zika vaccine while pregnant, only 63% n = 33 of them strongly agreed that a recommendation from their prenatal provider would be very important to them. Women indicating strong acceptance of a hypothetical Zika vaccine were also more likely to feel strongly about the importance of children being up to date on all their vaccinations (97% vs. 83%, P = 0.01) and importance of getting recommended vaccinations during her pregnancy (97% vs. 79%, P = 0.003).

Conclusion. A Zika vaccine may be acceptable to pregnant women but would benefit from strong provider support and education about the risks and consequences of Zika infection and the benefits of vaccination.

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1472. Clinical Presentation, Risk Factors, and Cross-Protection from Repeated Respiratory Viral Infections in Infants
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Background. Globally, pneumonia is the leading cause of childhood mortality, and RSV is a leading cause of viral pneumonia among children. Many respiratory viruses, including RSV, parainfluenza virus types 1–4 (HPIV), and rhinovirus (HRV) have the ability to cause recurrent infections throughout a person’s lifetime. However, the incidence, clinical characteristics, and risk factors associated with recurrent RSV are not well described, particularly in low and middle income countries.

Methods. Data were collected from a randomized trial of maternal influenza vaccination conducted in rural southern Nepal from April 2011 to May 2014. Infants were followed weekly for respiratory illness until 180 days after birth. If symptomatic, a nasal swab was collected for analysis by RT-PCR for RSV and other respiratory viruses.

Results. HRV was the leading cause of respiratory infections with an incidence of 1071 per 1000 person-years (p-y). Incidence of RSV and HPIV were 222 and 223/1000 p-y, respectively, followed by CoV, BoV, HMPV, Flu, and AdV. Male gender, maternal smoking, and having other children at home were associated with a higher risk for any respiratory viral infection. Of the 336 infants infected with RSV, 12 (3.6%) had a second RSV infection in the first six months of life. The incidence for a secondary RSV infection was lower than the incidence for a primary infection (167 vs. 222/1000 p-y, respectively). No significant differences in severity or duration of illness were noted between the first and second RSV infections. Repeated infections with HRV, HPIV, and Flu were observed in 466 (34.8%) of 1,341 infants, 12 (3.4%) of 350 infants, and 4 (4.0%) of 177 infants, respectively. Birth between June and September conferred a protective effect against repeat respiratory viral infections.

Conclusion. Repeated infections were observed with all the respiratory viruses tested. However, the incidence of secondary RSV infection was lower than primary respiratory viral infections less than 6 months of age, suggesting a potential protective immune response in infants after natural infection. These data are supportive of using vaccination to protect this vulnerable population against disease.