Conclusion. Our results indicate variation in practice among providers at ECU ID. Clinical screening regarding the need for a follow-up, and the type of follow-up provided. Additionally, research shows that anal cancer is one of the non-defining AIDS cancers whose incidence increases as the patient ages. However, based on the data, anal cancer screening decreases as the patient ages at the ECU ID clinic. Therefore, a standardized clinic protocol is needed, which may help improve the screening of these patients.

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275. Parental Risk Factors for Fever in their Children 7–10 Days After the First Dose of Measles-Containing Vaccines

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Background. Fever 7–10 days after the first dose of a measles-containing vaccine (MCV) clusters among siblings in families suggesting a genetic basis. To further investigate this association, we evaluated whether clinical conditions in parents are associated with fever after a first dose of MCV in the child.

Methods. We conducted a cohort study including children born in Kaiser Permanente Northern California between 2009 and 2016 who received an MCV between ages 1 and 2 years. Each child was linked with his/her mother and father (if possible). We defined MCV-associated fever as a clinic or emergency department visit with fever code 7–10 days after the first dose of an MCV and identified parental clinical conditions present before and after child birth in electronic health record data. We evaluated parental clinical conditions associated with MCV-associated fever in the child using chi square or T test and multivariable logistic regression analyses.

Results. The study included 244,128 children, 192,253 mothers (100% of children). Factors included healthcare seeking behavior, maternal fever (odds ratio [OR] 1.18, 95% confidence interval [CI] 1.10–1.26), preterm delivery (OR 1.20, 95% CI 1.10–1.31), maternal history of fever after MCV (OR 5.90, 95% CI 1.35–25.78), migraines (OR 1.14, 95% CI 1.05–1.24), syncope (OR 1.14, 95% CI 1.01–1.27), arrhythmia (OR 1.21, 95% CI 1.00–1.45), essential thrombocythemia (OR 1.93, 95% CI 1.15–3.25) and Addison’s disease (OR 2.96, 95% CI 0.90–9.33) were significantly associated with infant fever after a MCV. Maternal preterm birth (OR 1.44, 95% CI 1.20–1.72) and (OR 1.60, 95% CI 1.03–2.48) were associated with MCV-associated fever in the child.

Conclusion. Specific parental immune conditions were associated with fever in their child. These results may be related generally to genetics and particularly to familial immune responses.

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276. Immunogenicity of Takeda’s Bivalent Virus-Like Particle (VLP) Norovirus Vaccine (NoV) Candidate in Children From 6 Months up to 4 Years of Age

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Background. With the introduction of routine childhood rotavirus vaccination, norovirus is now becoming the major cause of medically-attended gastroenteritis in children. Takeda is developing a norovirus vaccine (NoV) that contains genotypes GI.1 and GII.4 consensus (GI.4c) sequence VLPs. We report the immunogenicity data of NoV administered to children from 6 months up to 4 years of age.

Methods. Two age cohorts (1 to < 4 years, and 6 to < 12 months, n = 120 per cohort) were enrolled in this ongoing double-blind, randomized, phase 2 dose-finding study conducted in Colombia and Panama. Children received one or two intramuscular doses of NoV formulations containing 15/15, 15/50, 50/50 or 50/150 μg of GI.1 and GI.4c VLPs adjuvanted with 0.5 mg Al(OH)3. Vaccinations were on Days 1 and 9, with saline placebo as dose two to maintain blinding in one dose groups. Antibody responses to each VLP were measured on days 1, 29 and 57 as functional histoo-blood group binding antigen blocking antibodies (HBGA), expressed as seroresponse rates (SSR), the proportions displaying ≥ 2-fold increases over baseline, and geometric mean titres (GMT).

Results. Each formulation induced dosage-dependent HBGA responses after a single dose, with a further increase after a second dose. In 1- to <4-year-old HBGA SRR against GI.1 and GI.4c after one dose were 55-62% and 67-82%, respectively. SRR increased to 93–100% and 83–100% after a second dose. In 6 to <12 month-old responses were lower after the first dose: SRRs were 10–61% and 17–65% for GI.1 and GI.4c, respectively, increasing to 83–100% and 80–92% after a second dose. GMTs reflected this pattern of responses with higher GMTs for GI.1 and GI.4c achieved with the 50/150 μg formulation than the other doses after both vaccinations in both age cohorts.

Conclusion. In 6–12 month-old infants and children up to 4 years of age, robust immune responses to the bivalent norovirus VLP vaccine candidates were observed; the highest HBGA responses in both age cohorts were observed after two doses of the 50/150 μg formulation. Further clinical evaluation of these formulations is underway in infants < 6 months of age.

Clinical Trial Registration (NCT: 02153112, EnduCT: 2014-000778-20)

277. Whooping Cough: Epidemiological Changes After Tdap Maternal Immunization Strategy in a Pediatric Hospital

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Background. Whooping cough is a major cause of morbidity and mortality in infants younger than 1 year old. In 2012 Argentina introduced Tdap in pregnancy to prevent infant mortality. The aim was to describe the clinical and epidemiological profile of Bordetella pertussis (Bp) cases pre and post Tdap maternal immunization periods.

Methods. All laboratory PCR confirmed Bp cases between December 2003 and December 2017 were included in “R. Gutierrez” Children’s Hospital. Statistical analysis was performed comparing clinical epidemiological features, Bp hospitalization rates (per 10,000 discharges) and lethality rates (%), between pre-vaccination (PreV) 2003–2011 and post-vaccination maternal immunization strategy (PostV) 2013–2017 periods, excluding intervention year (2012).

Results. There were 350(32.6%) Bp confirmed cases; median age 3 months (IQ = 2–7 months), 38% <3 months, 68% >6 months, 83% >12 months; 55% females; 18% had comorbidities; prematurity 10%, malnourishment 1%, and immunosuppression 1%; 81% required hospitalization, median length of stay was 6 days (4–10 days), 17% in UCI. Confirmed cases showed a seasonal pattern predominantly from September through February (spring–summer). In comparison with PreV, PostV cases were older (3 vs. 9 months; P < 0.001), required less hospitalization (87% vs. 68%; P < 0.001), HR (22.3 vs. 10.9; P < 0.001) and LR (6.8% vs. 0%; P = 0.03) decreased and had a higher proportion of complete primary vaccination schedule. Hospitalization and lethality rates showed a significant decrease. There were no fatal cases in our center after this intervention.

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278. Maternal Immunization Rates With Tetanus–Diphtheria–Acellular Pertussis and Influenza Vaccines in the United States: A Retrospective Claims Database Analysis

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Background. The Advisory Committee on Immunization Practices (ACIP) recommends maternal immunization (MI) with tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccine during every pregnancy, preferably between 27–36 weeks of gestation, as well as influenza vaccination for all women who are pregnant or who might be pregnant in the influenza season.

Methods. This retrospective cohort analysis characterizes the rate of Tdap and influenza vaccination among large national samples of pregnant women in the United States, from 2000 through 2015. MI, Tdap, and influenza vaccine were identified using International Classification of Diseases claims data. The MarketScan® Commercial Claims and Encounters (“Commercial”) and the Multi-State Medicaid Databases (“Medicaid”) were used to identify pregnancies between January 1, 2010 and April 30, 2017. Diagnosis and procedure codes that describe gestational age at pregnancy end were used to estimate the date of last menstrual period (LMP) or the index date (Figure 1). Eligible pregnancies had 26 months of continuous enrollment prior to index date.