854. Invasive Haemophilus influenzae Disease in Children: A Canadian MultiCenter Study on Emerging Serotypes
Craig Frankel, MD,3 Mohammad Alghaumian, MD,2 Jane McDonald, MD,2 John Gunawan2; Joan Robinson, MD,3 Sarah Khan, MD, MSc, FRCP(C),2 Jacqueline K. Wong, BSc, PhM, MD, FRCP(C), FAAP2; Alison Lopez, MD,3 Sergio Fanelli, MD, FRCP(C), DTMM&H, MD, FCFP, FACC, J card; Robert Slinger, MD,2 Angela Kalia1, Ashley Roberts, MD,1 Kirk Leifo, MD,12 and Michelle Barton, MD,12
1Western University, London, ON, Canada; 2Montreal Children's Hospital, Montreal, QC, Canada; 3Stollery Children's Hospital, Edmonton, ON, Canada; 4McMaster University, Hamilton, ON, Canada; 5BC Children's Hospital, Toronto, ON, Canada; 6Winnipeg Children's Hospital, Winnipeg, MB, Canada; 7University of Manitoba, Winnipeg, MB, Canada; 8IKW Health Centre, Halifax, Nova Scotia, Canada; 9Children's Hospital of Eastern Ontario, Ottawa, ON, Canada; 10Children's Hospital, BC, Canada; 11Kingston Health Sciences Centre, Kingston, ON, Canada; 12Children's Hospital at London Health Centre, London, ON, Canada
Session: 85. Pediatric Bacterial Diseases
Thursday, October 3, 2019: 2:45 PM
Background. Our objective was to describe the serotype distribution and clinical spectrum of invasive Haemophilus influenzae (Hi) disease in children admitted to participating centers within the Paediatric Investigator’s Collaborative Network on Infections in Canada (PICNIC).
Methods. All cases of Hi bacteremia were identified from the PICNIC Database of Gram-negative bacteremia (2013–2017). Disease was defined as complicated if the following occurred: (a) ≥2 sites were affected, (b) surgical intervention was required, (c) organ failure or multiorgan failure, (d) symptomatic bacteremia (other than meningitis), (e) therapy-related complications, or (f) death. Results. There were 98 cases of Hi bacteremia. Male to female ratio was 6:4:34 and median age was 12 (IQR: 7–48; range 0–216) months. Hi serotypes included: a (n = 31; 31.6%), b (n = 33; 33.7%), c (n = 22; 22.4%), d (n = 3; 3.1%), and nontypeable (n = 1; 1%), noncultivable (n = 2; 2%) and unknown (n = 7; 7%). Clinical foci included: bacteremia without a focus (n = 19; 19%), meningitis (n = 29; 30%), cellulitis (n = 8; 8%), septic arthritis (n = 6; 6%), pneumonia (n = 3; 34%), epiglottitis (n = 1; 1%), and endocardial infection (n = 3; 3%). Complicated disease occurred in 29 (30%) cases; there was one (1%) death. Where serotyping was available, complication rates were: 42%, 22%, 100%, 0%, 33%, and 21% for Hia, Hic, Hie, Hib, and nontypeable Hi, respectively. Factors associated with complicated disease were: age <5 years (P = 0.009), bacteremia without a focus (P = 0.006) and a CNS focus (P = 0.001). Hia was the leading serotype in meningitis (55%; P = 0.022). Nontypeable Hi was most frequent in pneumonia cases (56%; P = 0.003) and never caused meningitis (0%; P = 0.023). Neonatal disease (n = 5) was predominantly caused by nontypeable Hi (80%; P = 0.040). Of note, 26% (27/67) of our Hi isolates were ampicillin resistant.
Conclusion. In the era of efficacious conjugate Hib vaccines, serotype has emerged as the leading cause of typeable Hi disease in Canada and is highly associated with meningitis, especially in young children. Strategies for preventing Hi disease need to target this emerging serotype and efforts should be focused toward developing an effective vaccine for serotype a disease.
Disclosures. All Authors: No reported Disclosures.

855. Evolution of Group B Streptococcal Capsular Type V Invasive Infections in Neonates and Young Infants: A Whole Genome Sequencing Study
Anthony R. Flores, MD, MPH, PhD,1 Misa A. Sanson, MD, PhD,2 Brittany J. Shah, BS2; Marcia Retch, BSN2; Samuel A. Shelburne, MD, PhD,2 Samuel A. Shelburne, MD, PhD3 and Carol J. Barton, MD, PhD1
1UTHSC/McGovern Medical School, Houston, Texas; 2UTHSC/McGovern Medical School, Houston, Texas; 3Baylor College of Medicine, Houston, Texas; 4The University of Texas MD Anderson Cancer Center, Houston, Texas; 5University of Texas Health Science Center, Houston, Texas
Session: 85. Pediatric Bacterial Diseases
Thursday, October 3, 2019: 2:30 PM
Background. Since 1970 group B Streptococcus (GBS) has been a frequent cause of sepsis or meningitis in young infants. Capsular polysaccharide type V was first recognized in 1990 and has increased to the point where it now causes ~15% of GBS infections. GBS type V strains are almost entirely sequence type 1 (ST1) in adult infections. To understand the evolution of GBS V, we sequenced infant isolates before 1990 to more contemporary isolates from young infants and adults.
Methods. Thirty-five strains isolated from blood or CSF of infants <90 days of age (Houston, 1979–1996) were compared with the following previously sequenced type V, ST1 strains: (1) 14 from infant blood or CSF from Center for Disease Control and Prevention (CDC) (2015–2017), (2) 193 blood ST1 isolates from adults (Houston, 1992–2013), and (3) 516 invasive isolates from the CDC (2015–2017). Isolates were sequenced using an Illumina MiSeq instrument followed by molecular typing, antimicrobial resistance gene determination, and phylogenetic analysis. Antimicrobial susceptibility testing (AST) was performed using disk diffusion and E-test.
Results. The majority (29/35) of Houston young infant strains were ST1. Type V GBS strains isolated prior to 1990 were more likely to be of ST2 or ST-26 (5/10) compared with those from 1990 or later (24/25 and 14/14 CDC infant invasive type V). Tetracycline resistance was identified in 83% (29/35) while rifampin resistance (MR) occurred in only 23% (8/35) of the strains. Compared with early neonatal isolates, MR was significantly more frequent among contemporary neonatal (12/14, 86%, P < 0.001) and adult (502/710, 71%, P < 0.0001) ST1 GBS. Phylogenetic analysis showed two distinct clades defined, in part, by MR. A high-frequency MR (340/360, 94%) clade was defined by the presence of erm(B) on Tn3872 while the low-frequency MR clade (159/350, 45%) was more diverse in mobile elements contributing to MR. The majority (27/29) of early neonatal ST1 GBS strains were observed in the low-frequency MR clade.
Conclusion. Since 1990, invasive disease defined as GBS infection in <90 days consists of more diverse STs but is now almost exclusively ST1. Differences in the frequency of MR between early neonatal and contemporary type V ST1 GBS suggest MR may, at least in part, have driven the expansion of type V ST1 GBS.
Disclosures. All Authors: No reported Disclosures.

883. Evidence from a Multistate Cohort: Enrollment in Affordable Care Act Qualified Health Plans
Kathleen A. McManus, MD, MSCR1,2 Bianca R. Kristensen, MPH3; V P Nagraj1; Elizabeth T. Rogowski, MD, MBA, MPP; Renae Fuel, MPH; Lauren Verkes, MPH1; Susan Swindells, MBBS2; Sharon Weissman, MD3; Anne Rhodes, PhD1; Paul V. Targonski, MD, PhD1 and Rebecca Dillingham, MD, MPH1
1University of Virginia, Charlottesville, Virginia; 2University of Nebraska Medical Center College of Medicine, Omaha, Nebraska; 3University of British Columbia, Vancouver, BC, Canada; 4BC Children’s Hospital, Vancouver, BC, Canada; 5IWK Health Centre, Halifax, Nova Scotia, Canada; 6Children’s Hospital at London Health Centre, London, ON, Canada; 7University of South Carolina, Columbia, South Carolina; 8University of Virginia School of Medicine, Charlottesville, Virginia
Session: 96. HIV Viral Suppression or Burst
Thursday, October 3, 2019: 3:15 PM
Background. In individual states, the Patient Protection and Affordable Care Act has been associated with improved viral suppression (VS) rates for AIDS Drug Assistance Program (ADAP) clients or low-income people living with HIV (PLWH). This study aims to assess whether this association is consistent in multiple states (Nebraska, South Carolina, Virginia).
Methods. The multistate cohort included ADAP clients who were eligible for ADAP-funded Qualified Health Plans (QHPs). Data were collected from 2014 through 2015. A log-binomial model was used to estimate the association of demographics (age, race/ethnicity, sex, AIDS, viral load, risk factor, previous VS) and healthcare delivery factors (income, previous ADAP plan, previous HIV engagement care) with HIV engagement prevalence and 1-year risk of V2.
Results. For the cohort (n = 7,800; 5% NE, 36% SC, 59% VA), 52% enrolled in ADAP-funded QHPs with enrollment ranging from 35% to 63% by state. Enrollment in ADAP-funded QHPs in 2015 was higher for those who had AdapQHPs in 2014 (80% vs. 58%; 95% confidence interval [CI] 0.73-0.83) and those who were engaged in care in 2014 (APR 1.16; 95% CI 1.05–1.27), and it was lower for those with a rural residence (APR 0.91; 95% CI 0.81–1.00). Of those who were consistently engaged in care (n = 4,597), as defined by one viral load in 2014 and one viral load in 2015 separated by at least 180 days, those who received medications from
Adherence to injection visits through week 48, with 98% of injections occurring within the allowed 7-day dosing window of the projected dosing date. Of 461, 24% had suppressed VL and 48% died; and 73% switched to PI-based regimen. Median CD4 count at 48 weeks was 375 (range 1–1,543), 21% were on NNRTI-based (median CD4 286 (range 0–1,143)), 31% on PI-based (median CD4 608 (range 0–1,803)), and 48% on NNRTI/PI-based (median CD4 452 (range 0–1,865)). Children with high treatment failure rates and extensive drug resistance with poor clinical outcomes were examined for subjects in the ATLAS and FLAIR studies. **Conclusion.** Subjects receiving CAB LA + RPV LA demonstrated high rates of adherence to injection visits through week 48, with 98% of injections occurring within the 7-day dosing window. Oral bridging with CAB and RPV was an effective strategy for maintaining viral load suppression to cover missed injection visits. Injections were well-tolerated with few associated discontinuations.

### 885. HIV-1 Treatment Failure and Extension of Drug Resistance in Perinatally Infected Children Failing First-line Antiretroviral Therapy in Western Kenya

Winstone Nyandiko, MD;1 Sabina Holland, MD;2 Rachel Vreeman, MD;1 Allison DeLong, MS;2 Akash Manne, MS;3 Vladimir Novitsky, MD, PhD;4 Mia Coetzer, PhD;4 Anthony Ngareka, BS;5 Carol McAteer, MPH;1 Josephine Alasoo, BS;1 Mildred Orudo, BS;4 Soya Sam, PhD;4 Michael Ayaya, MD, PhD;2 Joseph Hodg, PhD and Rami Kantor, MD;1 Academic Model Providence Access to Healthcare (AMPATH), Eldoret, Western Kenya;2 Brown University, Providence, Rhode Island;3 Indiana University, Indianapolis, Indiana;4 Lifespan, Providence, Rhode Island

**Session:** 96. HIV Viral Suppression or Bust

**Thursday, October 3, 2019: 3:45 PM**

**Background.** Understanding drug resistance in perinatally HIV-infected children (PHIC) while viral load (VL) monitoring is limited is critical for life-long antiretroviral use. Resistance data in PHIC in sub-Saharan Africa are limited. Though guidelines recommend PI-based first-line regimens in PHIC, many worldwide remain on NNRTI-based regimens. We examined treatment failure, resistance, and outcomes in PHIC on first-line versus NNRTI-based therapy.

**Methods.** PHIC were enrolled in 2010–2013 at the Academic Model Providing Access to Healthcare in Eldoret, Kenya, a large program caring for >160,000 HIV patients; >15,000 PHIC. VL testing, not routinely available then, was done for all, and resistance testing was done in viremic PHIC. Clinical data were derived from medical records. Subtype and resistance interpretation were with Stanford Database tools. Associations between failure (>100 copies/mL or resistance, and demographic, clinical or lab variables were evaluated with Fisher exact and Wilcoxon rank-sum tests.

**Results.** Of 482 PHIC, 52% were female, median age 8.4 years (range 1–15), median CD4% 28% (range 0–53), 79% on zidovudine (AZT)/abacavir (ABC)/lamivudine (3TC)/efavirenz (EFV)/nevirapine (NVP) for median 2.3 years. Treatment failure was seen in 31%, associated with low CD4% and count. Genotypes were prevalent in 124, 47% with age ≤ 8.3 years (range 2–15), median CD4% 22% (range 0–45), 81% on AZT/ABC/3TC/EVF/NVP for median 2.5 years, median VL 7,515 copies/mL. Subtypes were A 76%, C 3%, D 5%, recombinants 6%. Reverse transcriptase mutations were in 93%; 93%-NNRTIs, median 2/patient, most common Y181C (44%); 89%-NRTIs, median 3/patient, most common M184V (85%); 89%-dual, median 5/patient. Intermediate-high resistance to potential second-line drugs included 62% stavudine, 66% rilpivirine, and 19% tenofovir. Of 92/124 (74%) PHIC with follow-up data, 27% remained on NNRTI-based first-line (median CD4 count 524 (range 0–1,705), 96% had suppressed VL and 86% died (P < 0.05 for both).

**Conclusion.** PHIC in western Kenya on NNRTI-based first-line regimens had high failure treatment rates and extensive drug resistance with poor clinical outcomes, demanding urgent intervention.

**Disclosures.** All Authors: No reported Disclosures.

### 886. Pregnancy Outcomes Following Raltegravir Exposure

Hala Shamussuddin, MD;1 Casey Raudenbush, MSN/CRNP;2 Brittany Sciba, BSN;2 Erica Gooch, PharmD;3 Wayne Graves, MD;4 Ronald W. Lewin, MD;4 and Walter Strauss, MD, MPH;5 1Merc, North Wales, Pennsylvania;2 Merc Sharp & Dohme, Upper Gwynedd, Pennsylvania;3 Merc & Co., Philadelphia, Pennsylvania;4 Merck Research Labs, Edison, New Jersey;5 Merc & Co., Inc., North Wales, Pennsylvania

**Session:** 96. HIV Viral Suppression or Bust

**Thursday, October 3, 2019: 4:00 PM**

**Background.** Data are needed regarding HIV treatment in women of reproductive potential and during pregnancy. This review is to evaluate pregnancy outcomes following prospective exposures (exposure report prior to knowledge of pregnancy outcome) to raltegravir during pregnancy.

**Methods.** Exposures to raltegravir during pregnancy reported cumulatively through March 26, 2019 to the internal safety database at Merck & Co., Inc. were reviewed. This database includes all reports of pregnancy from clinical trials sponsored by the company, spontaneous post-marketing reports, and interventional data sources. Prospective pregnancy reports were evaluated to determine rates of spontaneous abortion, stillbirth, and congenital anomalies, including neural tube defects. Data from two ongoing cohorts of pregnant women with HIV-1 infection, not included in the internal safety database, were also reviewed.

**Results.** A total of 2,508 prospective pregnancy reports with reported outcomes were identified among women exposed to raltegravir: 919 from the internal safety database (Table 1) and 1,589 from the UK/Ireland and French pregnancy cohorts. Among the 2,508 prospective pregnancy exposures, 945 were in the first trimester, of which 757 were within the periconception period (within 28 days of conception). Of the 471 documented first trimester exposures identified in the internal safety database, the rates of spontaneous abortion (6.9%), stillbirth (1%), and congenital anomalies (1.5% per live births) were similar to the rates observed in the background populations of the United States Among outcomes following any exposure, the rate of congenital anomalies was 3.4% per live births. There were no reports of neural tube defects identified within the internal safety database or among the cohort data.

**Conclusion.** Prospectively collected pregnancy outcome data do not suggest an association between raltegravir exposure and spontaneous abortion, stillbirth, or...