(12.5%) patients with disseminated disease died within 30 days from the diagnosis and one of them had a maternal history of previous genital herpes lesion. There was no mention on maternal history of genital herpes in 10 (63%) patients in the medical records.

**Conclusion.** Although not common, NHSV infection occurs in Korean babies with high 30-day mortality rate of 12.5%. Increased awareness is warranted among Korean pediatricians to take a thorough maternal history of genital herpes infection.

**Disclosures.** All Authors: Korean Society of Pediatric Infectious Diseases: Member, Research grant.

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**2344. FDA Analysis of CD4+ Cell Count Declines Observed in HIV-Infected Children Treated With Elvitegravir/Cobicistat/Emtricitabine/Tenofovir Alafenamide**

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**Session:** 248. Pediatric Viral Infections
**Saturday, October 6, 2018: 12:30 PM**

**Background.** Elvitegravir (EVG)/cobicistat/emtricitabine/tenofovir alafenamide (E/C/F/TAF) is approved for treatment of HIV-1 in children weighing ≥25 kg based on a Gilead sponsored study of safety, pharmacokinetics (PK), and antiviral activity among 23 virologically suppressed (VS) children 6–12 years old who switched from a stable antiretroviral (ARV) regimen to E/C/F/TAF. All subjects were perinatally infected with HIV. Though all subjects maintained HIV viral load < 50 copies/mL, a decrease in mean CD4+ cell count (CD4ct) occurred at Week 2 and persisted to Week 12 (201.7) vs. 966 (201.7) meaning that EVG exposure in mice at supra-therapeutic concentrations, caused significant reductions in mature B lymphocytes. The relevance of this finding to humans is unclear.

**Methods.** We explored possible reasons for CD4ct declines including change in overall leukocyte and absolute lymphocyte count (ALC), relationship between CD4ct and PK of each drug in E/C/F/TAF, and trends in subject-level CD4ct. We reviewed prior ARV trials and literature to look for drug class effects.

**Results.** Decreased CD4cts were not explained by declines in total leukocyte counts or ALC. There was no association between CD4ct and area under the curve (AUC) of any of the four drugs. Mean CD4ct decline was not driven by a few outliers; CD4ct declined in 21/23 subjects. Prior ARV trials of VS adults and children, including EVG-containing regimens, show no notable sustained decline in CD4ct. Pediatric studies of other integrase inhibitors (INSTI) in this age group did not have comparable VS subjects. The literature describes structural similarity between human recombinant antigen and RAG1/2. RAG inhibition by INSTIs could potentially interfere with B and T cell development. EVG exposure in mice at supra-therapeutic concentrations, caused significant reductions in mature B lymphocytes. The relevance of this finding to humans is unclear.

**Conclusion.** Decreased CD4ct is a unique finding in this pediatric study of E/C/F/TAF and the etiology remains unclear. Inhibition of RAG1/2 by EVG may play a role, but further research is needed. No subjects had nadir CD4ct < 350 and no opportunistic infections were reported. However, CD4 declines are included in E/C/F/TAF labeling to alert providers of this potential risk.

**Disclosures.** All authors: No reported disclosures.

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2345. Knowledge, Practices, and Attitudes of Youth Providers About STI, HIV Testing, and PrEP

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**Session:** 248. Pediatric Viral Infections
**Saturday, October 6, 2018: 12:30 PM**

**Background.** In 2015, over half of sexually transmitted infections (STI) and 22% of new HIV infections were among youth aged 15–24. Latest Utah data from 2014 showed this group accounted for 62% of chlamydia, 33% of gonorrhea, and 12% of new HIV infections. HIV testing in Utah is low with 24.2% of adults ever tested. There have been no studies published evaluating Utah HIV testing rates in youth.

**Methods.** An anonymous email-based survey was sent to 396 youth providers in Utah during an 8-week span in 2017. 102 (26%) responded and analysis was limited to 83 (21%) providers who reported caring for patients aged 15–24.

**Results.** The median age of providers was 35.5; median years out of residency 8.5; most were female (54%); self-identified as Caucasian (86%); attending level physicians (70%) and many (61%) practiced in urban settings. Over half identified as moderately, very, or extremely comfortable screening for HIV. Approximately 75% were familiar with CDC HIV testing guidelines; however, only 16% report always or often screening patients ages 17–24 and 10% of patients age 13–16. Factors that increased the likelihood of offering an HIV test included: patient request, men who report sex with men, prior STI or a history of injection drug use (Figure 1). Common reasons for rarely or never offering testing included: belief the patient panel is not sexually active, low prevalence of HIV and provider discomfort in discussing sexual behaviors (Figure 2). Less than one-third of providers reported familiarity with the CDC’s PrEP guidelines, but most (91%) expressed interest in more information. Provider discomfort in offering PrEP was highest in the younger patients (Figure 3). The same factors that increased the likelihood of testing for HIV held true for prescribing PrEP.

**Conclusion.** In Utah, the majority of providers are familiar with CDC HIV testing guidelines; however, testing remains low. This may be due to misconceptions around HIV risk and provider comfort. This is a missed opportunity for early detection of HIV in a population with known high rates of other STIs. Youth providers are not familiar with PrEP but they would like further education.

**Disclosures.** All authors: No reported disclosures.

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2346. Severe Head and Neck Infections Following Influenza Virus Infection in Children

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**Session:** 248. Pediatric Viral Infections
**Saturday, October 6, 2018: 12:30 PM**

**Background.** Seasonal influenza infection is associated with secondary bacterial complications involving the upper and lower respiratory tract. However, the association of influenza infection with secondary severe or complicated head and neck infections is not appreciated.

**Methods.** We performed a retrospective review of pediatric patients hospitalized at Texas Children's Hospital with bacterial head or neck infections following influenza infection from October 2017 to March 2018. We queried the infectious diseases consult database using the search terms: orbital cellulitis, mastoiditis, retropharyngeal abscess,