Methods. Study participants included 1285 adolescents, aged 10 to 18 years, who were part of the Mobile Youth Survey, a multiple cohort longitudinal study of adolescents living in the Mobile, Alabama, Metropolitan Statistical Area. Using the SAS macro PROC TRAJ, semiparametric group-based modeling was used to identify trajectories of condom nonuse. Multivariate logistic regression was used to examine variables that predict membership to the trajectories groups.

Results. Results indicated that the best model comprised three distinct trajectory groups of condom nonuse: low, decreasing and increasing-decreasing, and they comprised 80.2%, 15.2% and 4.6% of participants, respectively (Figure 1). In the multivariate logistic regression analysis, the low trajectory group was used as the reference group. After controlling for other variables, gender, alcohol use and suicide ideation predicted belonging to the decreasing group. Males (OR = 4.09; P = 0.002), alcohol users (OR = 1.69; P = 0.003) and those who had thought of suicide (OR = 1.84; P = 0.004) were more likely to belong to the decreasing group vs. the low group. None of the variables predicted membership to the increasing-decreasing group.

Conclusion. Sexual risk behaviors such as condom nonuse may cluster and follow distinct trajectories. Some trajectories form while adolescents are still young. This has implications for STI/HIV preventive programs, which should pay attention to factors that may influence adolescents’ belonging to different trajectory groups of behaviors that put them at risk for STIs at young age. Interventions for alcohol use and suicide should be initiated when adolescents are still young.

2247. No Difference in Antibody Responses to Tetanus Vaccine Among HIV-Exposed and -Unexposed Infants in Botswana

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Background. In Botswana, more than 10% of HIV-exposed, uninfected infants (HEU) are hospitalized or die in the first 6 months of life, largely due to infectious causes. Vaccine responses can act as a marker of the immune response to infectious antigens. Previous studies of antibody responses to vaccines in HEU have had conflicting results. We compared antibody titers to tetanus vaccine between HEU and HIV-unexposed infants (HUU), and explored whether tetanus antibody titers predicted risk of hospitalization in the first 2 years of life among HEU infants.

Methods. 443 HIV-infected and 451 HIV-uninfected mothers and their 453 HIV- exposed and HIV-unexposed infants were followed in a prospective observational study in Botswana ("Tshipidi"). Quantitative tetanus toxoid IgG was measured in plasma samples from 18-month-old infants. Geometric mean antibody titers (GMT) were compared between HEU and HUU infants, and between HEU infants who were or were not hospitalized by age 2.

Results. Plasma was available at 18 months for 39 HEU and 42 HUU infants. Within this subset, there were 15 hospitalizations (12 in HEU) [RR of hospitalization among HEU = 1.34 (P = 0.009)]. 73% of hospitalizations overall, and 83% in HEU, were due to infection (primarily pneumonia/bronchiolitis and gastroenteritis). Among infants who had received 3 or 4 doses of tetanus vaccine by 18 months, there were no significant differences in tetanus GMT between HEU and HUU (Fig A). Among HEU who had received 3 or 4 doses of tetanus vaccine by 18 months, there were no significant differences in tetanus GMT between infants who were hospitalized and infants who were not (Fig B).

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Poster Abstracts

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**2249. Long-term Virological Outcome in Children on First-line Antiretroviral Therapy in India**

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**Background.** Long-term virologic data of children receiving antiretroviral therapy (ART) in India are limited. We examined the long-term virologic outcome of a pediatric cohort on non-nucleoside reverse-transcriptase inhibitor (NNRTI)-based ART in south India.

**Methods.** Perinatally HIV infected children, between 2-12 years of age initiating NNRTI-based ART during 2010-2014 and with at least 12 months of follow-up, were included in analysis. CD4 cell counts and viral load measurements were performed at 24 and 48 weeks. Immunologic Failure (IF) was defined as decrease in CD4 count of >30% from baseline; immunologic recovery (IR) as an increase in CD4 count of ≥25% from baseline while Virologic Failure (VF) was defined as HIV-RNA of >1,000 copies/ml at 48 weeks after ART initiation. Genotypic resistance testing was performed for children with VF. Logistic regression analysis was used to determine predictors of VF.

**Results.** A total of 378 ART-naive HIV infected children with mean age: 7.6 ± 3 years, mean CD4%:16% (8) and median HIV-RNA: 5.1 (3.5 – 5.7) log10 copies/ml were enrolled. 74 % were started on nevirapine and 24% on efavirenz-based ART. At 48 weeks, 331 of 378 (88%) children completed follow-up, 15 died, 3 transferred out and 29 were lost to follow up. Significant improvement occurred in weight-for-age and height-for-age z-scores from baseline (all P < 0.001). 79% of children showed IR. VF was seen in 29% (94 / 328), while IF was seen in only 3% (10 / 331) of children. 62% of children with VF reported ≥90% adherence to ART. Of the 94 children with VF, 5 children showed IR. Correlation between VF and IR was absent. Sensitivity (95% CI) of IF to VF was 6% (2.2–14.6), specificity 98% (94.9–99.5), PPV 56% (26.7–81.1) and NPV was 73.4% (67.8–78.4). At the time of VF, multiple NNRTI-associated mutations were conserved in 80% (52/65) of children - K103N and Y181C were the major NNRTI DRMs observed. M184V also was observed in 79% of children with VF. No definite predictors of VF could be determined.

**Conclusion.** Though ART provides significant benefit to children in India, over a quarter of them had VF, and non-adherence is one of the major reasons for VF. The program over 48 weeks of ART. There is a lack of correlation between IF and VF, leading to delay in identifying treatment failure. Periodic plasma HIV-RNA testing should be performed to detect treatment failures early.

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**2250. Assessing the Acceptability of a Community-Based Intervention to Improve the Continuum of Care of Postpartum Women Living with HIV**

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**Background.** Many women living with HIV (WLWH) fall out of the care continuum after delivery. Existing evidence-based interventions are aimed at increasing retention of WLWH outside the perinatal period but none, in the US, focus on improving retention postpartum.

**Methods.** In-depth interviews were conducted with five pregnant and four postpartum WLWH receiving prenatal and HIV care in a Philadelphia clinic, to assess barriers and facilitators to retention in HIV care during pregnancy and postpartum.

**Results.** Participants included low-income Black and Hispanic women with a mean age was 35 (range 23–42). Regardless of their stage in the care continuum, women found m2m to be an acceptable intervention to help sustain engagement in care after delivery and discussed ways to tailor the program to fit their needs. Participants reported experiencing trauma related to interpersonal violence and conflicts, stigma from HIV or HIV disclosure, and struggles with substance use. Many experienced depression or had a history of suicidal ideation or attempt. An overarching finding was that women’s strongest motivator for staying in care was to protect the health and well-being of their baby. In addition, the majority of women found that family support, especially from their mothers, enhanced their coping skills, and in turn, facilitated their retention in care.

**Conclusion.** m2m is a promising intervention with the potential to improve the continuum of WLWH who are pregnant or postpartum. The program will need to be adapted using a trauma informed approach to meet the needs of WLWH. Messaging will need to maximize on maternal support and women’s motivation to keep their infant healthy to leverage retention in care postpartum.

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**2251. Identifying Demographic, Social, and Environmental Determinants of Treatment Failure among HIV-Infected Children in Uganda**

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**Background.** Of the 1.8 million children (0–14 y.o.) living with HIV worldwide, over 80% live in sub-Saharan Africa. Children’s access to antiretroviral treatment (ART) remains low (ext. 63% in east/central Africa), and even with access, long-term adherence is difficult. Uganda has been upheld as a model country for its response to HIV, and therefore offers an ideal place to assess children’s adherence.

**Objectives.** Identify early indicators of treatment failure for children on ART to facilitate health care worker intervention to improve adherence prior to clinical indicators of treatment failure.

**Methods.** Chart review of 188 case files of children living with HIV in Uganda; systematic univariate and multivariate analysis of demographic, social, and environmental variables which correlate with HIV treatment failure among reintegrated children; semi-structured interviews with staff, caregivers, and children about predictors of treatment failure.

**Results.** HIV-positive children present late to the program with a mean enrollment age of 9.7 years [n = 137]. Of the HIV-positive children enrolled in the program, one in five (20%) [28/137] had died and 10% [14/137] had rebounded to the center