**LEARNING OBJECTIVES:** Learners will be able to identify the prevalence of congenital CMV infection in a prospective cohort study in Colombia.

## 26 Association of maternal hygiene behaviors and cytomegalovirus (CMV) serostatus

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**OBJECTIVES:** To examine whether maternal hygiene behaviors or risk-perception are associated with maternal cytomegalovirus (CMV) serostatus.

**METHODS:** Secondary analysis of a randomized controlled trial of the effect of behavioral intervention on hygiene-based compliance. All participants provided serum samples and completed surveys assessing maternal hygiene behaviors, anxiety, and risk perception for CMV infection prior to trial enrollment. The primary outcome of this analysis was CMV seropositivity (CMV IgG+). Chi-square or Fisher's exact test was used for categorical variables and student's T-test or Wilcoxon rank sum for continuous variables. Multiple stepwise logistic regression assessed the association of maternal hygiene behavior and risk perception with IgG seropositivity controlling for potential confounders including type of obstetric practice maternal age, ethnicity, race, household type, income level, educational level, and insurance status.

**RESULTS:** 195 women were enrolled: 99 (50.8%) were seronegative and 96 (49.2%) seropositive. The Behavioral Compliance or Risk-Perception scores were not associated with CMV IgG+ (aOR 0.94, 95% CI 0.69-1.28 and aOR 1.04, 95% CI 0.91 -1.19). Women with an annual household income of < $50,000 were 2.4 times more likely to be CMV IgG+ (aOR 2.41, 95% CI 1.14 -5.07). Women who identified as Black or African American were approximately 7 times more likely to be CMV IgG+ (aOR 6.94, 95% 2.42-19.86).

**CONCLUSION:** Maternal hygiene behaviors and personal risk perception were not associated with CMV IgG seropositivity. African American race and lower household income were associated with an increased likelihood of maternal CMV seropositivity suggesting that exposure to CMV may be more related to socioeconomic status than to hygiene behaviors. Further research is needed to determine the reason behind these risk disparities.

**LEARNING OBJECTIVES:** Listeners should be able to identify factors that influence CMV seropositive status.

## 27 Association between maternal obesity and group B streptococcus (GBS) colonization in a national US cohort

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**OBJECTIVES:** The association between obesity and group B streptococcus (GBS) colonization remains to be fully defined, and has implications for antibiotic prophylaxis in an era of increasing obesity prevalence and severity. We estimated the association between maternal pre-pregnancy body mass index (BMI) and GBS colonization.

**METHODS:** A secondary analysis of women who underwent a trial of labor from the Consortium on Safe Labor study. The exposure was maternal pre-pregnancy BMI, categorized as normal weight or below (<25 kg/m2), overweight (25 to <30 kg/m2), class I obesity (30 to <35 kg/m2), class II obesity (35 to <40 kg/m2), and class III obesity (≥40 kg/m2). The outcome was GBS colonization in pregnancy. Logistic regression with generalized estimating equations modeled the association while accounting for within-woman correlations. Models adjusted for maternal age, parity, race, pre-gestational diabetes, insurance status, study site/region, and year of delivery.

**RESULTS:** Among 228,438 pregnant women, 84.1% underwent a trial of labor, of whom 128,305 (66.8%) had available BMI data. With regards to BMI, 60.5% of women were classified as normal weight, 22.4% overweight, 10.0% class I obesity, 4.3% class II obesity, and 2.9% class III obesity. The overall prevalence of GBS colonization was 19.4% (24,992/128,305), which increased with rising maternal BMI. In multivariable analysis, increasing obesity severity as defined by BMI class was associated with higher odds of colonization with GBS, namely overweight (adjusted odds ratio, AOR: 1.09, 95% confidence interval, CI: 1.05 - 1.13), class I obesity (AOR: 1.20, 95% CI: 1.15 - 1.26), class II obesity (AOR: 1.42, 95% CI: 1.33 - 1.51), and class III obesity (AOR: 1.50; 95% CI: 1.38 - 1.62) compared to normal weight women.

**CONCLUSION:** This study, performed within a national US sample, identified a higher likelihood of maternal GBS colonization with increasing maternal BMI. This finding has implications for antibiotic prophylaxis to prevent neonatal sepsis in an era of rising obesity in pregnancy.

**LEARNING OBJECTIVES:** Upon completion of this session, the learner will describe trends in GBS colonization by BMI category.

## 28 Is group B streptococcus colonization associated with chorioamnionitis in an era of intrapartum antibiotic prophylaxis?

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**OBJECTIVES:** To assess whether colonization with group B streptococcus (GBS) is associated with chorioamnionitis in an era of routine intrapartum antibiotic prophylaxis.

**METHODS:** A secondary analysis of women who underwent a trial of labor from the U.S. Consortium on Safe Labor study. The primary exposure was colonization with GBS in pregnancy. The primary outcome was a diagnosis of chorioamnionitis in the medical record or billing code. Secondary outcomes included other infectious morbidities (antepartum urinary tract infection, and postpartum diagnoses of endometritis and incisional wound infection after cesarean). Logistic regression with generalized estimating equations modeled the associations while accounting for within-woman correlations. Models adjusted for maternal age, parity, race, pre-pregnancy body mass index, pre-gestational diabetes, insurance status, study site/region, and year of delivery.

**RESULTS:** Among 228,438 pregnant women, 192,074 (84.1%) underwent a trial of labor. A total of 6,470/192,074 (3.4%) of women had a diagnosis of chorioamnionitis, and 35,934 (18.7%) were colonized with GBS. The frequency of chorioamnionitis was lower among women colonized with GBS compared to those without (3.1% vs. 3.4%, p<0.001). In multivariable analysis, GBS colonization was associated with lower odds of chorioamnionitis (adjusted odds ratio, AOR: 0.90; 95% CI: 0.84 − 0.96). For secondary outcomes, the odds of antepartum urinary tract infection was higher with GBS colonization (AOR: 1.44; 95% CI: 1.36 − 1.53). GBS

colonization was not associated with endometritis or wound infection among women who delivered by cesarean..

**CONCLUSION:** In contrast to earlier data prior to routine intrapartum antibiotic prophylaxis, colonization with GBS was associated with slightly lower odds of chorioamnionitis, but was not associated with postpartum wound infection or endometritis.

**LEARNING OBJECTIVES:** To understand the implications of intrapartum antibiotic prophylaxis for GBS on maternal infectious morbidity in pregnancy and the postpartum period.

## 29 Management of fever in labor after institution of a standardized order set at a maternity quaternary care center

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**OBJECTIVES:** Maternal fever in labour (FIL) is common, and can be the first sign of chorioamnionitis and sepsis. Our institution initiated a standardized order set for the management of FIL. This study evaluated maternal and fetal parameters in women with FIL in order to determine trends in antibiotic use, the applicability of obstetrical scoring system for sepsis and outcomes for women.

**METHODS:** An interim analysis of the retrospective chart review on 510 patients between 2011-2016 for which the FIL protocol was initiated was performed. 403 charts were reviewed due to clinical concerns of increasing gram negative bacteremia with antimicrobial resistance and poor compliance with blood cultures being drawn. Antenatal history, intrapartum parameters and maternal/fetal outcomes were evaluated.Categorical variables were compared using Fisher's exact tests and continuous variables with Wilcoxon rank sum tests.

**RESULTS:** The median maternal age was 31.5 years (SD4.6 years), median gestational age 39.9 weeks (IQR39-40.6), and a majority of women were nulliparous (81.9%). The median maternal temperature at the time of first fever was 38.1°C (IQR38.0-38.3), and 90.8% report epidural use. Antibiotics were administered 74% of the time when the order set was initiated, with 95% of antibiotic administration being a combination of metronidazole and cefazolin. At time of first fever, 31.8% reported concurrent fetal tachycardia, and a larger proportion of those women were subsequently given antibiotics (88vs72%, p=0.0007). Conversely, a larger proportion of those without fetal tachycardia were given acetaminophen vs those without (82vs72% p=0.032). Only 16.7% of women has blood cultures drawn, however women with blood cultures had a slightly higher first temperature; 38.2°C (IQR 38.0-38.4) vs 38.1°C (IQR 38.0-38.2) in those without blood cultures (p=0.0004). Histologically diagnosed chorioamnionitis was associated with higher initial temperature, 38.2°C vs 38.1°C without chorioamnionitis (p=0.002). There was one maternal transfer to ICU and 3 fetal deaths.

**CONCLUSION:** Our preliminary results identified only 16.7% of women having blood cultures drawn with initiation of antibiotic therapy for FIL with higher initial maternal temperature correlating with an increased likelihood of them being drawn. We found that fetal tachycardia was associated with antibiotic use and less acetaminophen use. This interim analysis demonstrated that between 2011-2016 few women were routinely having blood cultures drawn with initiation of antibiotic therapy.

**LEARNING OBJECTIVES:** Evaluate standardized change in practice and management of maternal FIL at an institutional level and identify areas of improvement.

## 30 Simple and effective screening for Chagas disease at the prenatal intake visit

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**OBJECTIVES:** An estimated 300,000 individuals have Chagas disease in the United States and Chagas is passed vertically at rates higher than syphilis, there is still not routine perinatal Chagas screening. We sought to evaluate the success of a simple screening program to identify maternal Chagas disease during prenatal care.

**METHODS:** This was a screening program of a cohort of women who had prenatal care at a community health center that serves a large Latinx population, all of whom delivered at a central hospital. Prenatal screening was done by asking all women at the prenatal intake where they were born, and if not born in a high risk area, whether they had ever spent 6 or more months continuously in Mexico, Central or South America. A positive answer to either or both questions prompted IgG screening. The practice of implementing routine screening for Chagas began mid-2017. We identified the women who delivered from February 2018 to March 2019, assuming initiation of prenatal care at twelve weeks and expecting a six month ramp up in universal screening. We evaluated the rate of identification of preliminary and confirmed positives in this cohort. Further, we evaluated connections with infectious disease and cardiology for the mother as well as CDC standard of care for evaluation of the newborn, when available.

**RESULTS:** A total of 619 women that delivered were screened for Chagas disease; IgG testing yielded 21 preliminary positive but confirmed negative results, 3 preliminary indeterminate results with subsequent negative confirmatory testing, and 3 confirmed positive results from the CDC. The prevalence of confirmed Chagas in the entire population was 0.5%. All three confirmed positive women have had normal cardiac evaluation. Of the three confirmed cases, one has delivered and both mother and infant have had follow up care in Infectious Disease.

**CONCLUSION:** A two question screen for Chagas disease risk at the initial prenatal visit is effective, and in select populations is high yield. Capitalizing on a time of insurance coverage and healthcare engagement, identification of Chagas in pregnancy can not only identify infants at risk of vertical transmission but may mitigate the complications of long term infection.

**LEARNING OBJECTIVES:** Learners will be able to describe a simple work flow that increases identification of Chagas in mothers as well as infants at risk of vertical transmission. Learners will be able to motivate their prenatal intake providers to add a single question to the new visit by empowering them with a realistic expectation of capturing women at risk and improving the health of both mother and child.

## 31 Successful linkage to Chagas care via screening at prenatal intake

C. D. Yarrington, M. Poorvu, C. S. Hochberg, D. W. Hamer

**OBJECTIVES:** While congenital Chagas occurs at rates higher than congenital syphilis, and prenatal care is a known time to capture chronic conditions while a woman is insured and engaged in care, there is still not routine perinatal screening. We sought to evaluate