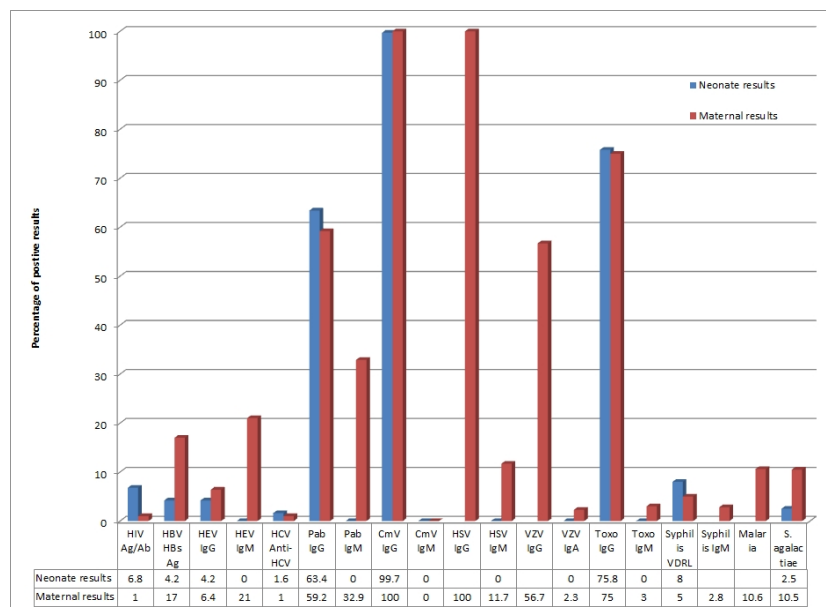


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**Poster Session VI**  
**Miscellaneous of community pathogens and infections**  
**BURDENS AND RISK FACTORS OF INFECTIOUS DISEASES IN RURAL SOUTHWEST GHANA IN PREGNANT WOMEN AND THE CORRELATIONS ON NEONATES – A CROSS-SECTIONAL PILOT STUDY**

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According to UN reports, Sub-Saharan Africa has the highest maternal and neonatal mortality rate and is among the regions showing the least progress. While infectious diseases play a major role, current knowledge on prevalence and impact outside urban communities is limited. In a pilot cross-sectional study 180 pregnant women and 319 neonates were screened at St. Martin de Porres Hospital in Eikwe/Western Region of Ghana to determine the frequency of bacterial, viral, and parasitic infections in rural settings.

The maternal screening was conducted over a 3 months period from October to December 2011, in which low vaginal swabs and blood samples were taken. Second, from April to August 2013 neonatal anal and mouth swabs and umbilical blood samples were collected.

Low vaginal swabs were cultured to detect group B streptococci (GBS), listeria and gonococci. All colonies isolated from neonates were differentiated, allowing a complete bacteriological screening; all results were confirmed by MALDI-TOF. Moreover, maternal and neonatal blood samples were tested for immune responses to HIV (Ag/Ab), HBV (HBsAg), HCV (Anti-HCV), HEV (IgM/IgG), VZV (IgA/IgG), HSV (IgM/IgG), CMV (IgM/IgG), Parvovirus B19 (IgM/IgG), Rubella virus (IgM/IgG) and Toxoplasma gondii (IgM/IgG). Treponema pallidum screening was based on TPPA test and the detection of IgM antibodies.

Results show a broad spectrum of maternal and neonatal infections. High maternal GBS (10.6%) carriage rates cause a significant contamination of the neonatal flora. In 7% of neonatal cases streptococci were found, of which 2.5% were GBS. Of these 8 neonates 3 died. Enterobacteria were the most common group found on neonates, totalling 44%, however occurrence of bacteria was 72% correlating with 71.5% of vaginal deliveries. Listeria and gonococci were not detected on any of the mothers or children. Plasmodia parasites were identified in 10.6% of the maternal study population and on two premature neonates that died. Syphilis VDRL results showed positive in 5% of the maternal and 8% of the neonatal sample.

Additionally, high maternal (17%) and neonatal (4.2%) seroprevalences for HBV were shown. Other hepatotropic viruses (HCV/HEV) were frequent with an increased incidence in the maternal samples. The mortality rate for the neonates was 8%, of which 56% died during the first day of life, followed by 32% antepartum/during labour, the remaining 12% died after 2-4 days.

Given the noteworthy prevalence of bacterial and viral infections, better screening and managing of pregnancies and neonatal care is advisable. In practice an antibiotic GBS prophylaxis during labour as well as a systematic HBV vaccination program and thorough screening for Syphilis need to be taken seriously. Risk assessment leading to proposals to local policy makers on managing the respective diseases should be considered.