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# Clinical Research, Pediatric Infectious Diseases, Newborn Care

**Impact of Biofire CSF Meningitis/Encephalitis Panel on the Care of Febrile Infants 0-90 days of age.** About 10% of young infants with fever have a serious bacterial infection. Although the incidence of meningitis is less than 1%, the morbidity and mortality from illness is substantial. Many febrile young infants undergo evaluation for meningitis with a lumbar puncture and cerebrospinal fluid (CSF) analysis. Biofire CSF Meningitis/Encephalitis panel is a polymerase chain reaction (PCR) test on CSF with capacity to identify 14 of the most common bacterial, viral, and fungal pathogens causing meningitis. The aim of this project is to identify the impact of this test on the clinical management of febrile young infants with primary outcomes being duration of antimicrobial and antiviral use and length of stay. This is an ongoing project and the student will be involved in data collection, performing chart reviews and database management. The student will have the opportunity to perform preliminary data analysis. At the end of this project, the student will be expected to complete an abstract and submit to local conference.

**Yield of Blood Culture in Well Appearing Newborns Exposed to Maternal Chorioamnionitis.** Infants born to mothers with chorioamnionitis bacterial infections are at higher risk of developing newborn sepsis. Traditionally, all babies exposed to maternal chorioamnionitis were evaluated for sepsis with a blood culture and were empirically treated with antibiotics until cultures were negative. Recently, robust research studies have made it possible to risk stratify newborns and safely avoid antibiotics in low risk infants. However, in many centers, infants exposed to maternal chorioamnionitis still undergo blood culture testing. The aim of this project is to identify the yield of blood culture in such low-risk infants and explore the possibility of safely observing them without laboratory testing. This is a new project and the student will be involved in literature review, formulating focused research questions, developing a research plan and a research database. At the end of this project, the student will be expected to assist the PI in completing a research protocol for Institutional Review Board (IRB) submission consideration.