**Team Members**
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**Initiative Specific Aims**

**Global aim:** Reduce use of empiric acyclovir in low-risk infants within a six-month period.

**Specific aims:**
1. Reduce the overall use of empiric acyclovir in low-risk febrile or hypothermic infants who present to the Pediatric Emergency Department for a rule-out sepsis evaluation by 50%. Low-risk infants are categorized as those who do not exhibit any of the following: seizure-like activity, vesicular skin lesions, septic appearance, CSF abnormalities or elevated serum ALT.
2. Decrease the use of acyclovir in infants older than 42 days of age without clinical indications for testing/treatment by 90%.
3. Improve the rate of complete diagnostic testing (serum ALT and HSV PCR of the serum, CSF, and surface sites) to 50% of all infants treated with empiric acyclovir.

**Results**

**Physician Survey** (Administered November 2015 and April 2016)
- Physicians were able to identify infants at high risk for neonatal HSV. Ability to recognize low-risk infants did not improve significantly from pre-survey to post-survey. Knowledge of laboratory tests for neonatal HSV did show improvement from pre- to post-survey.

**Key Measures**
- Overall use of empiric acyclovir decreased by 50%
- Acyclovir use in infants > 42 days decreased from 5 to 1 after the interventions
- Rate of complete diagnostic testing increased to 50%
Key Improvement Steps
1. Best care recommendations for testing and treatment developed
2. Evaluate current knowledge gaps
3. Design interventions and training based on knowledge gaps
4. Revise ED order set for febrile neonates
5. Training and coaching strategy developed and implemented

Empiric Acyclovir Utilization
Definition: Number of infants treated with empiric Acyclovir with complete diagnostic testing (ALT and HSV PCR of CSF, serum and surface sites)/Total number of infants treated with Acyclovir monthly
Data Source: Epic

Complete Diagnostic Testing Rate
Definition: Number of infants treated with empiric Acyclovir with complete diagnostic testing (ALT and serum, CSF and surface site HSV PCR)/Total number of infants treated with empiric Acyclovir
Data Source: Epic