**Introduction**

- Sepsis is the leading cause of death in hospitalized children - almost 5,000/year and 80,000 pediatric sepsis hospitalizations annually.
- Sepsis is treatable, deaths are preventable, and high costs of advanced treatment are avoidable.
- Improving Pediatric Sepsis Outcomes (IPSO) collaborative is a QI program striving to prevent hospital-onset severe sepsis and sepsis deaths through timely and reliable implementation of evidence-based diagnostic and care processes.
- This project is creating sustainable processes using QI principles to improve sepsis recognition, implement evidence-based sepsis management, and deliver sepsis education to all staff.

**Goals**

- Reviewing Levine Children’s 2016 pediatric sepsis mortalities revealed 30% were due to sepsis.
- As part of IPSO our goal is to decrease mortality from severe sepsis by 75% from a baseline of ~10% to 2.5% by December 2020.
- In addition, we aim to decrease the incidence of hospital-onset severe sepsis by 75% from ~2% to 0.5% by December 2020.

**Methods/Process**

- The Model for Improvement provides the framework for this work. PDSA is used to test and evaluate tools/actions put into place.
- The key drivers for this work are:
  I. Prevention
  II. Recognition
  III. Diagnostic Evaluation
  IV. Resuscitation/Stabilization
  V. De-escalation
  VI. Patient and Family Engagement
  VII. Optimize Performance
- 52 data elements are submitted for each severe sepsis case for analysis.

**Discussion**

- Sepsis is expensive: costs to treat severe sepsis range from $65,000-$85,000 per episode. It accounts for ~16% of all pediatric healthcare spending – around $5 billion. All aspects of this project work to decrease pediatric sepsis mortality and morbidity which directly translates to saving money and lives.
- How are we accomplishing this?
  - **Education:** provider/nurse lectures, in-situ simulations.
  - **Staff Engagement:** subgroups for provider specialties, nursing champions, smaller QI projects.
  - **Sustainable Process Implementation:** development and implementation of sepsis screens, order sets, collaborative with key stakeholders.
  - **Data Analysis:** monitor monthly sepsis data metrics, reviewing/analyzing cases to make additional changes to practice.
  - **Sustainability:** developing a sepsis screen integrated in EHR. Incorporating sepsis education for nurse onboarding, yearly competencies for nurses and education for residents. Routine sepsis champion and subgroup meetings to discuss process and cases. Continuing to monitor data and adjust process to maintain and exceed goals.

**Team Members**

Amanda Sebring MD - Clinical Lead
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Nora Raynor MSN, RN, CNS, CPN - Nursing Lead
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Key members for subprojects: Talia Buitrago MAH, CPHQ, John Licata MD, Lizzy Gunn MD. Many thanks to the multiple team members and providers essential to IPSO success throughout Levine Children’s.

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**References**