Decreasing Time to Broad Spectrum Antibiotics for Septic Patients in the Emergency Department

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Background
- Infection
- Dysregulated host response
- Sepsis
- Severe Sepsis
- Septic Shock
- Infection resolves

Methods
- Create tool to identify potentially septic patients
- Implement electronic medical record (EMR) pharmacist alert
- Educate physicians, nurses, and pharmacists

Conclusions
- Electronic alerts sent to the pharmacist decreased the median time to antibiotic administration for septic patients in the ED
- Electronic alerts sent to the pharmacist increased the percentage of septic patients that received antibiotics within one hour
- Electronic alerts sent to the pharmacist increased the percentage of septic patients that received antibiotics within three hours
- None of the findings were statistically significant

Future Direction
- Evaluate alert criteria to improve positive predictive value
- Consider creation of EMR workflow to easily track care of septic patients
- Evaluate mortality benefit of implementing this intervention
- Consider creation of similar alerts for other goal driven disease states with recommended treatment algorithms

Limitations
- Small sample size may have limited ability to find statistical significance
- Alert fired frequently on patients that were not determined to have severe sepsis or septic shock
- CMS criteria for determining severe sepsis and septic shock are based on the definitions prior to 2016

Results
- Median Time from ED admission to antibiotics
- Antibiotics Within One and Three Hours of Admission

References