IMPLEMENTATION OF AN AUTOMATED ELECTRONIC MEDICAL RECORD TOOL TO IDENTIFY PATIENTS WITH SEPSIS
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Purpose: (1) To validate our ability to capture data from the EMR, (2) to describe implementation of an automated early warning system that notifies nurses when patients meet severe sepsis criteria, and (3) to identify Sepsis Alert patterns among patients admitted directly to the Medical Critical Care (MCC) with and without sepsis.

Hypothesis: Patients admitted with sepsis will trigger a higher number of early warning alerts.

Methods
- Retrospective IRB approved pilot study
- Electronic MCC data captured for 2 months
- Data pulled from Health Level Seven International interfaces between EMR systems and retained on the UTMC protected server.
- Groups divided electronically:
  - Group 1 (transfers in or LOS < 48h)
  - Group 2 (direct admission, known or suspected sepsis)
- Manual review to confirm & correct classifications.

Results
Alerts Per Day of ICU Stay (Figure 4)

Alerts Per Day During Project Period (Figure 3)

SIRS
- 34 (97.4%)
- 38 (100%)

Organ Failure
- 26 (70.3%)
- 22 (60.5%)

Conclusion
- Abstracting data from the EMR is a feasible method for collecting research data, and challenges identified during this project will strengthen future projects.
- Our preliminary descriptive findings were limited to a subset of patients, and future studies should include sensitivity and specificity of this innovative tool.
- Improving sepsis outcomes requires a dedicated team of professionals (from IT to all clinicians) applying best practices to meet patient centered needs.
- Nurses serve a vital role in early recognition.

References

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