Optimizing Sepsis Care: Implementation of a Prehospital EMS Sepsis Process (PRESP)

Wake Forest University School of Medicine

Robin Raynor, MSN, RN, PM DNP Scholar Wake Forest University School of Medicine, Department of Academic Nursing
Academic Advisor: Kathy Shaffer, DNP, APRN, AGCNS-BC, C-ONQS
Project Site Advisor: Amy Campbell, PhD, RN, CPHQ, LSSBB

Background & Significance

- Sepsis is a serious condition requiring prompt recognition and treatment. EMS teams transport 75%-80% of sepsis patients to hospitals, yet often no standardized sepsis care process is used.
- Early sepsis screening by EMS personnel and prehospital sepsis alerts improve timely clinical interventions and sepsis outcomes (Polito et al., 2022).
- **PICOT Question**: In adult patients with suspected sepsis does the implementation of a structured EMS sepsis process with a validated screening tool and prehospital sepsis alerts improve sepsis recognition compared to EMS sepsis care without a formal process over the span of 2 months?

Objective/Aim

- Implement a standardized Prehospital EMS Sepsis Process (PRESP) consisting of screening with the National Early Warning Score tool version 2 (NEWS 2) and prehospital sepsis alerts for NEWS 2 scores ≥5 by May 1, 2025.

Methods & Model

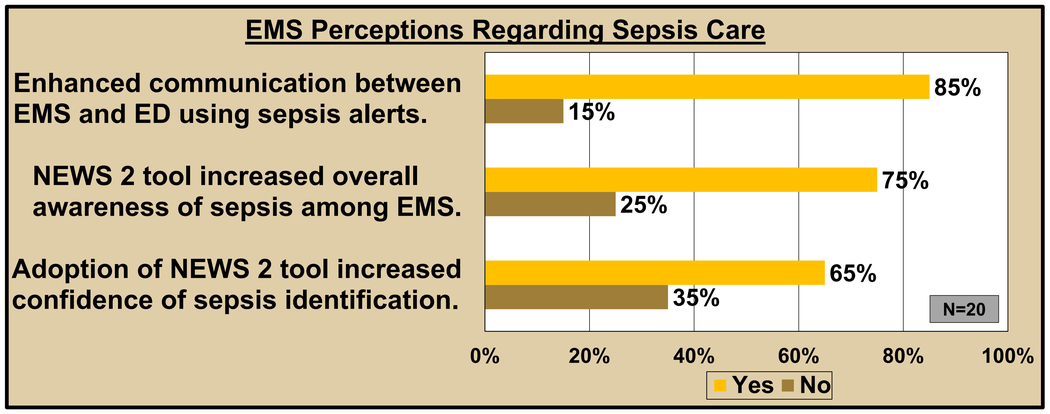
- Evidence-based quality improvement project to enhance EMS sepsis identification and initiate prehospital sepsis alerts prior to hospital arrival.
- Project model: EPIS Framework: Exploration, Preparation, Implementation, and Sustainment
- Mixed-methods approach to gather and analyze qualitative and quantitative data.

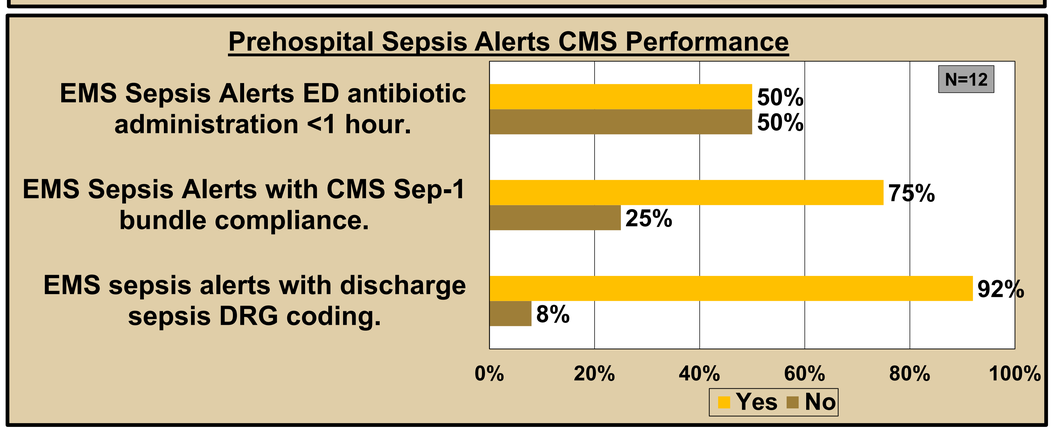
Interventions

Implementation of a Prehospital EMS Sepsis Process (PRESP)

- EMS teams were educated on sepsis and the utilization of the NEWS 2 screening tool via QR code when suspecting sepsis in the prehospital setting.
- Implementation of a prehospital sepsis alert for EMS teams.
- NEWS 2 scores ≥5 indicated the need for a prehospital sepsis alert.
- EMS safety attitudes were evaluated with the EMS-Safety Attitudes Questionnaire (EMS-SAQ) during pre- and post-intervention.

Outcomes/Results





Acknowledgements

This project would not have been possible without the dedication and participation of EMS leadership and EMS personnel servicing patients in the City of Washington, N.C. in addition to EMS leadership and teams servicing patients in rural communities in Beaufort, Martin, and Washington Counties.

Discussion & Conclusions

- Prior to project implementation prehospital sepsis alerts were not routinely used and sepsis screening tools varied with no numeric cumulative score parameters to correlate severity of sepsis risk.
- EMS attitudes toward safety remained constant with the additional workflow of NEWS 2 screenings and prehospital sepsis alerts.
- Standardized prehospital screenings and prehospital sepsis alerts enabled timely interventions, enhancing sepsis outcomes.
- EMS teams play a vital role in managing sepsis within the Golden Hour of treatment.

Recommendations/Sustainment

• **Expand Training**: Conduct additional training sessions for EMS personnel to ensure widespread adoption and proficiency in using the NEWS 2 tool and issuing prehospital sepsis alerts.

• **Standardize Protocols**: Develop and implement standardized sepsis clinical protocols across all EMS teams in neighboring counties to ensure consistency in sepsis care and improve patient outcomes.

• **Monitor and Evaluate**: Continuously monitor the effectiveness of the sepsis screening and alert system by collecting data to evaluate its impact on patient outcomes and making necessary adjustments to enhance the process.

References