INTRODUCTION

Sepsis is a medical condition associated with high morbidity and mortality if not recognized and treated quickly[1-3]. Over one-third of patients treated for sepsis in the emergency department are brought in by EMS[4]. Studies have shown early recognition and treatment of septic patients shortens time to initiation of intravenous fluids[5] and antibiotics[6]. While this is encouraging, survey data shows paramedic knowledge and awareness of sepsis is widely variable[6]. Due to this variation in knowledge, prehospital sepsis may be missed if there is not a robust prehospital sepsis protocol in place.

OBJECTIVE: To evaluate the effectiveness of University of Missouri Health Care’s protocol on the management of prehospital sepsis.

METHODS

- Retrospective identification of patients transported by University of Missouri Health Care EMS for presumed sepsis from June 2017 through July 2018.
- Patients were screened for sepsis according to Boone County EMS Sepsis Pathway (Figure 1).
- Patients transported to University of Missouri Hospital were included.
- Patients with suspected sepsis, a complete set of EMS and ED vitals, and prehospital sepsis labs (serum lactate, aerobic/anaerobic cultures, and activating a sepsis alert at the receiving hospital). Time to treatment endpoints for patients with severe sepsis or septic shock.

RESULTS

- Average body temperature decreased from 38.2°C to 37.5°C.
- Average heart rate decreased from 109.9 bpm to 106.4 bpm.
- Average respiratory rate decreased from 21.8 breaths/min to 20.2 breaths/min.
- Average blood pressure increased from 116.8 mmHg to 125.2 mmHg.
- Average SpO2 increased from 93.0% to 94.6%.

CONCLUSION

- Implementation of a robust prehospital sepsis protocol lead to hemodynamic improvement in patients with suspected sepsis.
- The significant improvement in vital signs suggests prehospital management temporized sepsis pathophysiology until definitive care was reached.
- Prehospital providers improved aspects of downstream care by establishing IV access, drawing labs, obtaining blood cultures, and activating a sepsis alert at the receiving hospital.

REFERENCES