Abstract

The purpose of this quality improvement project is to improve outcomes for patients presenting to the emergency department with sepsis, realizing that time is a key factor. The appraised evidence indicates that early recognition and prompt treatment improve outcomes and decrease mortality. The evidence further highlights that use of an early warning system, like the Modified Early Warning Score, can assist nurses and providers with recognizing deterioration more quickly and lead to a reduction in time to interventions. Between January 2016 and March 2017, the author conducted a retrospective chart review to compare time to antibiotic administration and lactate measurement and blood cultures before and after implementation of the MEWS in an urban emergency department. The author randomly selected a total of (n=130) patients to conduct a retrospective chart review. There were demographic differences between the pre-implementation group and post-implementation group in regards to patients with CHF, diabetes and hypertension with fewer patients having CHF, diabetes and hypertension. In the pre-implementation group 14.06% of patients had CHF, 73.44% had hypertension, and 43.75% had diabetes. In the post-implementation group only 1.52% had a history of CHF; 62.12% with hypertension; and 30.30% with diabetes. There were differences between the two groups in regards to disposition status. The pre-implementation group had more deaths (19.35%) compared with the post-implementation group (12.5%) and more patients were discharged home in the post-implementation group (41.94% vs. 64.06%), which was a statistically significant difference between the two groups. Lactate measurements were obtained in 81.25% of patients in the pre-implementation group compared with 87.88% in the post-implementation group. Blood
cultures were drawn in 81.25% of patients in the pre-implementation group compared with 71.21% in the post-implementation group. The mean age for the pre-implementation group was 61.68 with standard deviation of 17.11 (95% CI: 57.41, 65.96) and for post-implementation the mean age was 55.93 with standard deviation of 15.25 (95% CI 52.19, 59.68). There was no statistically significant difference in means in minutes between the two groups. The mean in minutes for antibiotic administration was 353.10 for the pre-implementation group and 363.20 for the post-implementation group. This project did not demonstrate statistically significant differences after implementation of the MEWS score as supported by the literature.