

Background

In 2015, the University of North Carolina Health Care System launched a system-wide sepsis collaborative to improve the timely and appropriate screening and management of patients with sepsis. Subsequently, the Pediatric Emergency Department Code Sepsis Quality Improvement Initiative team was established. The overall aim was to improve bundle compliance, defined as the following four metrics occurring within one hour of presentation: Blood cultures drawn before antibiotics; serum lactate levels determined; appropriate antibiotics initiated; and first fluid bolus initiated.

Methods

A fourth year medical student was assigned the role of developing a fishbone diagram of factors leading to non-compliance by observing workflow and interviewing stakeholders. Based on the diagram the medical student was tasked with identifying potential areas for improvement and developing a key driver diagram for improving compliance.

Results

Through interviews conducted by the medical student, it was identified that ordering lactate levels was a significant barrier. The PED sepsis EPIC order set was built to standardize ordering practices for both inpatients and the ED and thus contained four different options for lactate orders. Interviews confirmed ongoing confusion about which lab to order, where to send the samples, and whether or not samples should be placed on ice.

Conclusions

Medical students can play an important and unique role in hospital quality improvement initiatives since they can take a high-level view of processes and initiatives while simultaneously being an informed member of the team. This dynamic allows medical students to objectively assess a situation, identify areas for change, and develop appropriate plans of action.