

Pico Question	Background	Purpose
In pediatric Oncology, Sickle Cell, and Neutropenia patients with fever presenting to the emergency room, will creating a new process decreases antibiotic administration time from arrival to the Emergency Department?	Bacterial sepsis in patients with SC, neutropenia, and/or oncologic disease with fever is a life-threatening concern in pediatric patients presenting to the ED (McKinney et al., 2020). Delayed antibiotic administration in children with bacteremia is associated with increased morbidity, mortality, and length of stay (Bruce, 2021). Prompt administration of antibiotics within 60 min is a national quality indicator for this population that is shown to improve outcomes for these patients (McKinney et al., 2020).	The initiative's purpose was to sustain the QI process started the previous year in the ED for patients with chief complaints of oncology, SC, and neutropenia with fever and to maintain >80% of antibiotic administration within < 60 min of arrival time to the ED.

Implementation

A new collaborative ED process was implemented in March 2022 that consisted of direct rooming our target population upon arrival to the ED into an infusion room, followed by initiating standard delegation orders and antibiotics. An IVAD/IV access algorithm was used to decrease any delays in venous access. To maintain the process's success, monthly audits were done on the cohort with coaching follow-ups for staff by the QI group. The QI group held continued sepsis and process education in the unit. A change was incorporated by adding Child Life presence before rooming the patient to help with comfort and stress from the beginning of the visit. During the ED stay, surveys were also done with the families to obtain feedback for continued improvement. Sono-trained staff continued to be added to have immediate IV access when needed. Staff engagement activities were held during the year with a "Sepsis Heroes" board, lighting bolt charms given monthly, recognition e-mails, and the creation of a Sepsis Escape Room for sepsis month.

Outcomes

Twenty-two months of data were collected from the analytics dashboard to evaluate the impact of our interventions. Significant improvement was noticed in the percentage of antibiotics in <60 minutes. Oncology patients' antibiotic administration improved from 42% in March 2022 to 100% in Dec 2023; hematology patients from 0% in March 2022 to 100% in Dec 2023; and SC patients from 42% in March 2022 to 92% in Dec 2023. The antibiotic cohort group improved from 41% in March 2022 to 97% in Dec 2023. Maintaining an average of 82% for the last 22 months.

Conclusion

The new initiative led to a significant improvement in antibiotic prioritization and administration. It demonstrated that improvement in antibiotic administration time is attainable and maintainable. This initiative cultivated proactive and assertive nursing participation that promotes and improves patient care and safety.

