

We designed an emergency department (ED) quality improvement (QI) initiative to reduce time to administration of intravenous antibiotics in febrile children with IF on PN” Hudgins et al (2017).

Abstract:

BACKGROUND: Children with intestinal failure (IF) on parenteral nutrition (PN) are at high risk for bacteremia, and delays in antibiotic administration have been associated with increased morbidity and mortality. We designed an emergency department (ED) quality improvement (QI) initiative to reduce time to administration of intravenous antibiotics in febrile children with IF on PN.

METHODS: Our aim was to decrease the mean time for febrile children with IF on PN to receive intravenous antibiotics by 50% to <60 minutes over a 12-month period. Secondary outcome measures were ED, hospital, and ICU length of stay (LOS). Our process measure was the rate of ordering recommended antibiotics, and our balancing measure was the rate of hypoglycemia. Interventions included increasing provider knowledge of IF, streamlining order entry, providing individualized feedback, and standardizing the triage process. Results were analyzed by using statistical process control methodology and time series analysis.

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RESULTS: We identified 149 eligible ED patients, of which 62 (41.6%) had bacteremia. The mean time to antibiotics decreased after the onset of the QI initiative from 112 to 39 minutes, and the ED LOS decreased from 286 to 247 minutes, but the total length of hospital and ICU stays were unchanged. The rate of hypoglycemia was also unchanged.

CONCLUSIONS: Our QI intervention for febrile children with IF on PN shortened the time to receive antibiotics. Larger studies are needed to demonstrate the impact on overall LOS and mortality.



Reference:

Hudgins, J.D., Goldberg, V., Fell, G.L., Puder, M. and Eisenberg, M.A. (2017) Reducing Time to Antibiotics in Children With Intestinal Failure, Central Venous Line, and Fever. October 24th. .

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