

Evaluation of Emergency Department Culture Report Interventions Among Clinical Pharmacy Specialists

Authors: Lutheran C, Perez E, Sinclair E, Turner M

Practice Site: Moses H. Cone Memorial Hospital, Greensboro, NC

Background:

It is well-established that clinical pharmacists have a key role in Emergency Department (ED) culture review. Pharmacist evaluation of positive cultures results in less time to appropriate therapy with higher rates of accurate antimicrobial choices compared to ED providers. At Cone Health, a pharmacy resident reviews the ED culture report for two weeks of the month along with an infectious diseases (ID) pharmacist as part of a rotation learning experience. For the remainder of the month, cultures are reviewed by ED clinical pharmacists. There has not been a direct evaluation of the quality of this work.

Objective:

The objective of this study was to evaluate the quality of the two clinical pharmacy specialties reviewing ED culture reports at Cone Health.

Methods:

This was a single-center, IRB-approved, retrospective chart review that included patients with a positive culture discharged from select EDs across the system. Patients were excluded if their culture did not require intervention or if they were transferred to another facility.

Appropriateness of antibiotic selection was determined with a scoring system that included bug-drug match, expected penetration of antibiotic to site of infection, selection based on allergies, and correct dosing with renal adjustment if necessary. Secondary objectives included antibiotic recommended, duration of therapy, and accurate documentation in the chart.

Results:

A total of 138 charts were reviewed from February – April 2021 of which 56 patients met inclusion criteria. ID pharmacists chose an appropriate antibiotic for 100% (n=20) of cultures, compared to 84% (n=31) of cultures with ED pharmacists. Bug-drug mismatch was the most common reason for inappropriate selection (10%, n=3). The most common antibiotic selected by ED pharmacists was trimethoprim-sulfamethoxazole, compared to a preference of cephalexin by the ID pharmacists.

Conclusion:

There were minor differences between the two pharmacy specialties. The results of this study identify areas of improvement across both specialties, including antibiotic appropriateness, duration of therapy, and standardization of workflow.