

Improving Time to Appropriate Antibiotics in Septic Patients Using Interdisciplinary Care and Artificial Intelligence

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Background

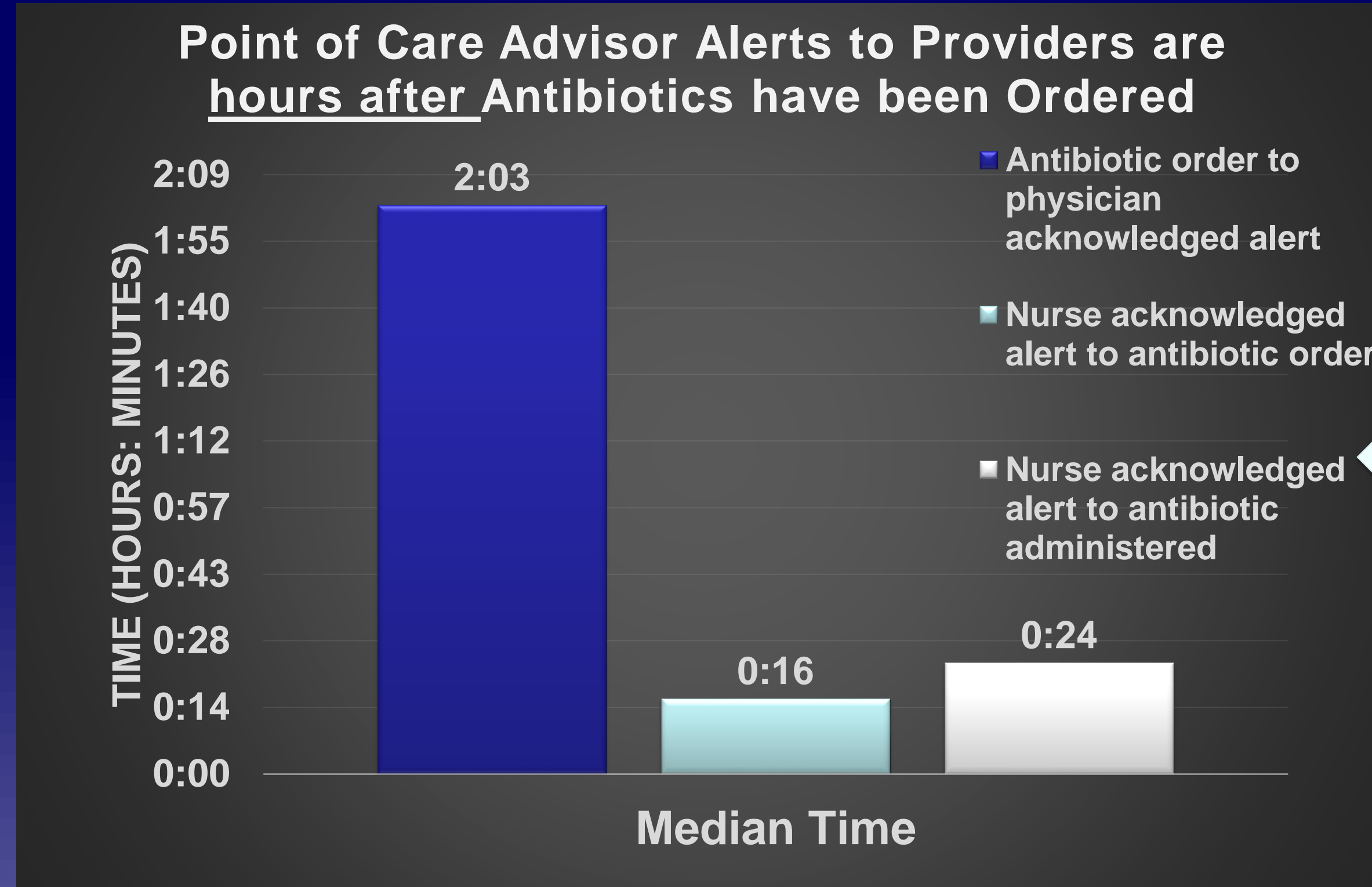
- Sepsis is a response to infection that can result in impairment of an organ system or systems. If not identified quickly, this can be life-threatening. Delay in appropriate antibiotic therapy results in an increase in mortality. Rapid identification of septic patients can help decrease the time to appropriate treatment.
- Wolters Kluwer Point of Care Advisor provides a unique notification system to help determine if the patient is septic. By taking information from the patient's chart, it reduces alert fatigue by identifying truly septic patients.

Citations:
Sepsis: Clinical Information [Internet]. Centers of Disease Control and Prevention. 2020 [cited 2020 Nov 15]. Available from: <https://www.cdc.gov/sepsis/clinicaltools/index.html>.
Rhodes, Andrew MB BS, MD; Evans, Laura E. MD, MSc, FCCM; Alhazzani, Waleed MD, MSc, FRCPC, et al. Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016. Crit Care Med. 2017 Mar;45(3):486-552.doi: 10.1097/CCM.0000000000002255.
Wolters Kluwer Point of Care Advisor: How we help. 2020 Wolters Kluwer N.V. [cited 2020 Nov 15]. Available from: <https://www.wolterskluwer.com/en/solutions/solesource/poc-advisor/how-we-help>.

Disclosure

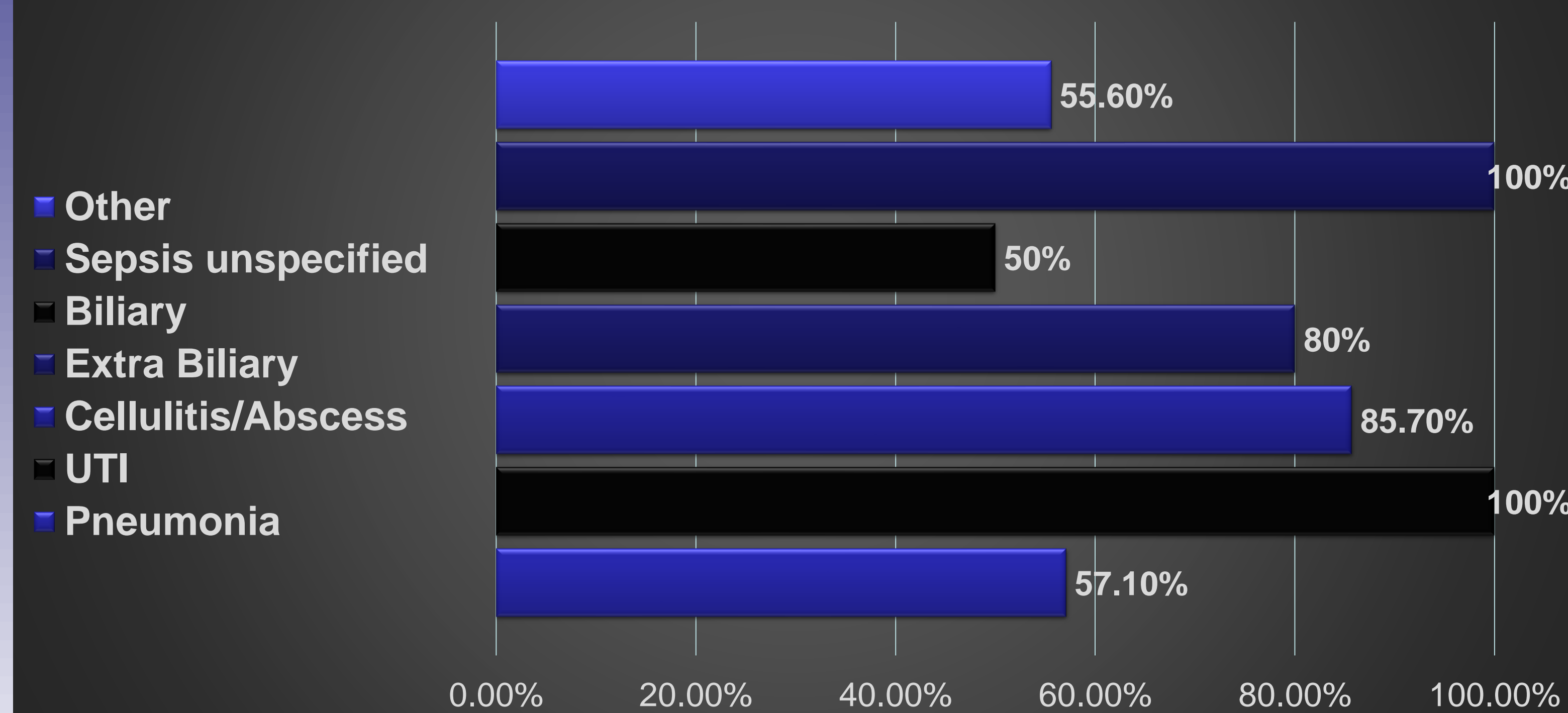
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Phase I (June-July 2020) Results



Point of Care Advisor alerts to Nurses ask for vitals to be verified before the Provider is notified. If the vitals are not verified the alert does not go to the Provider.

Appropriateness of Antibiotics by Indication Ranged from 50-100% in Phase I



Methods

Baseline data was collected prior to Wolters Kluwer Point of Care Advisor implementation. Point of Care Advisor was implemented in June 2020 in the Guthrie Robert Packer Emergency Department.

Phase I:

- Through a chart review, all the patients that had an alert from Point of Care Advisor from June 23rd to July 28th, 2020 were assessed on the appropriateness of antibiotics. Appropriateness was determined by using the revised sepsis order set.
- The Point of Care Advisor alerts to Nurses and Providers were assessed with respect to time of antibiotic order and administration.

Phase II:

- A Pharmacist will receive all Point of Care Advisor alerts through a Vocera.
- The Pharmacist will respond immediately to the alert.
- After assessing the patient's history, the sepsis order set will be used based on the patient's diagnosis to help determine appropriate therapy.
- The Pharmacist will also facilitate faster arrival of antibiotics from the pharmacy.

Conclusion

- Point of Care Advisor Alerts acknowledged by Nurses were most often before antibiotics were ordered and administered.
- Point of Care Advisor Alerts were sent to the Provider hours after antibiotics were ordered.
- Changes in workflow in the emergency department should prioritize Point of Care Advisor to allow for faster notification to Providers.
- Appropriateness of antibiotics changed based on indication.