

Interdisciplinary communication helps Barnes-Jewish achieve lower sepsis mortality

Putting the lessons learned from the Early Sepsis Recognition Collaborative to work

Barnes-Jewish Hospital

Barnes-Jewish Hospital at Washington University Medical Center is the largest hospital in Missouri with more than 1,200 staffed beds and the largest private employer in the St. Louis region. In 2019 it had more than 55,000 inpatient admissions and nearly 82,000 emergency department visits. Barnes-Jewish is a teaching hospital for the Washington University School of Medicine and was the first adult hospital in Missouri to be designated a Magnet Hospital by the American Nurses Credentialing Center.

Barnes-Jewish Hospital found that 50% of patients with a discharge diagnosis of sepsis, severe sepsis or septic shock were being admitted through the emergency department (ED). This meant that early screening, diagnosis and treatment of possible sepsis patients in the ED were critical to improving these patients' outcomes.

The sepsis core measure bundle established by the Centers for Medicare & Medicaid Services, SEP-1, outlines the critical activities associated with early sepsis identification and management. While Barnes-Jewish had SEP-1 bundle policies in place, compliance with the bundle was found to be less than 50%. The hospital set a goal of decreasing sepsis mortality by increasing compliance with the SEP-1 bundle in the ED.

Collaboration with peers helps form strategy

In pursuit of this goal, Barnes-Jewish joined the Vizient® Early Sepsis Recognition Collaborative project. The project's focus was to identify opportunities to increase recognition of sepsis in the ED and to explore options for standardizing ED triage, screening and diagnostic testing, sepsis definition and identification of time zero.

The hospital's goals for the collaborative were to decrease the time to obtain an initial blood lactate level and to improve sepsis order sets, with the expectation that improving these two processes would lead to quicker diagnosis and faster treatment.

The team determined that shortening the time between the patient's arrival at the ED and the first lactate level result could speed diagnosis. They set a goal of



Results*

6%

increase in patient volume

10%

increase in bundle compliance

86%

increase in compliance with obtaining initial lactate levels within three hours of patient presentation

15%

decrease in the mortality index for sepsis patients

** Remeasure data for August 2019 through January 2020 compared to baseline data from October 2018 through March 2019*

obtaining an initial lactate level test result within three hours or less of the patient's presentation. In addition, the hospital's standard ED sepsis order set was made more concise about activities that would translate into increased compliance with the SEP-1 bundle.

Interdisciplinary teamwork was vital to the success of the initiative. Connectivity between staff and providers was fostered through education and multiple channels of communication. Also, a process was created for celebrating wins and rewarding staff when bundle compliance improved, which served as a continual motivator.

Results

Precollaborative baseline data for October 2018 through March 2019 compared with remeasure data for August 2019 through January 2020 collected at the end of the collaborative showed that patient volume increased by 6% over the two time periods, while resources and staffing did not change. However, the remeasure data also showed that bundle compliance increased by 10% and compliance with obtaining initial lactate levels within three hours of patient presentation climbed to 86%. Most importantly, the underlying goal of reducing mortality for sepsis patients was achieved: **The mortality index for these patients decreased by 15%.**

Next steps

Building on the success of this initiative, Barnes-Jewish Hospital plans to continue rapid-cycle improvements to address additional process issues among its sepsis patient populations.



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