University of Pittsburgh Medical Center: Spotlight on Sepsis

In 2015, UPMC a global multi-hospital system that has over 40 hospitals and 85,000 employees, began a new sepsis initiative to increase the speed of identification and treatment of sepsis patients.

According to the CDC, sepsis is a major cause of preventable patient deaths in hospitals. It's estimated one in three patients who die in hospitals have sepsis and nearly 270,000 Americans die from sepsis each year.[1] And, even more alarming, one in eight sepsis deaths are potentially preventable with better hospital-based care.[2] The Patient Safety Movement sat down with Judy Shovel, RN, Improvement Specialist at the Wolff Center at UPMC, to discuss the hospital system's initiative to treat patients with sepsis earlier and the results they have achieved.

"We began by looking at what we had in place and what we didn't. As a multiple hospital system, we didn't have standardized tools that were used across all hospitals," explained Shovel.

The hospital partnered with their IT department to build tools into their electronic health record. Among those tools were standardized power plans (order sets) with the evidence-based elements and alerts to prompt physician reassessments and proper documentation.

One of the changes they made related to their lactate ordering process. "Now a pre-checked repeat lactate always gets ordered, which helps track the patient's clinical progression, or lack of it, along the sepsis continuum. We also recently added a pharmacy alert to expedite antibiotic order verification. For example, when our pharmacy comes across an antibiotic order, it is now tagged to the sepsis bundle so that the pharmacist gives it priority as they verify drug orders."

Shovel explains that "'STAT' orders on the pharmacy order queue are coded in red but the pharmacist does not understand why the patient is receiving the order until they read the chart. They had no way of knowing one of the many red STAT orders was for a sepsis patient and time is critical."

To solve this issue, one of UPMC's pharmacists suggested that all orders tied to sepsis be formatted to display "SEPSIS POWERPLAN ACTIVE" in capital letters on the pharmacist's queue screen. This simple improvement helps the pharmacist notice the order and give it priority. And the results, according to Shovel, have been significant.

"We piloted this process improvement at UPMC Mercy Hospital. When we began, the baseline from order to administration took 103 minutes at our pilot site. After the change, it dropped down to 42 minutes. We have managed to sustain the improvements for the last 4 months, hitting a low of 35 minutes in August," said Shovel. Due to these gains, UPMC recently rolled out the pharmacy sepsis alert across the system.

She added, "in the hospital, every hour counts. The latest research in sepsis care says that for every hour an antibiotic is delayed, mortality rises."

UPMC is hopeful that spreading this and other improvement initiatives across its hospitals will benefit all septic patients under their care, and help other hospital systems make similar changes.

Published on : Sun, 30 Dec 2018

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