

ER Overcrowding Delays Sepsis Treatment



Prompt antibiotic initiation is associated with improved mortality in sepsis and septic shock. However, new research shows that patients with sepsis, a life-threatening complication of an infection, had delays approaching one hour in being given antibiotics when seen in emergency rooms that were overcrowded. The findings were presented at the 2017 American Thoracic Society International Conference.

See Also: [Sepsis Survivors Experience Lingering Effects](#)

Each one-hour delay in initiation of appropriate antibiotics is associated with a 7-10 percent increase in the odds of dying from sepsis, according to lead author Ithan Peltan, MD, MSc, from Intermountain Medical Center and the University of Utah School of Medicine, Salt Lake City. Dr. Peltan and colleagues examined how strains on hospital resources influence timely antibiotics.

The research team reviewed the medical records of sepsis patients admitted to an ICU after being seen in the emergency departments of two community hospitals and two tertiary referral centres in Utah between July 2013 and December 2015. Emergency department workload was measured based on the ratio of registered patients to available beds. Overcrowding was defined as the presence of more registered ER patients than available beds. The team conducted statistical analyses that examined the association between emergency dept. crowding and door-to-antibiotic time after adjusting for a number of variables including (but not limited to) nighttime ER arrival and indicators of illness severity.

Of 945 patients studied, 128 (14 percent) arrived when registered emergency department patients already exceeded the ERs' licensed beds. Patients received antibiotics within three hours in 83 percent of all cases in uncrowded ERs, but 72 percent of the time when the ER was crowded. In the adjusted analysis, patients who presented to a crowded ER rather than an empty ER waited an extra 47 minutes for antibiotics and were three times less likely to start antibiotics within three hours, the initiation window recommended by Medicare and international guidelines.

"Our findings suggest adequate staff and diagnostic resources are critical to effective sepsis care," explained Dr. Peltan. "Hospitals should also consider sepsis care reorganisation to bypass competing demands on clinicians and diagnostic resources."

The doctor notes that many emergency departments have protocols coupling pre-hospital notification and a multidisciplinary rapid response team to help ensure prompt treatment of stroke, heart attack and trauma patients. "I suspect similar protocols could improve timely care for sepsis," he said.

Source: [American Thoracic Society](#)

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