
'Code blue' most deadly at night

More patients die if they go into cardiac arrest after 11 p.m., study finds

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CHICAGO - Many hospitals call it "code blue," a signal given over the intercom when a patient's heart has stopped. When code blue works well, a team speeds to the bedside and revives the patient.

The graveyard shift is the worst time to call code blue, a new study finds. Patients who go into cardiac arrest while in the hospital are more likely to die if it happens after 11 p.m., when staffing may be lower or patients watched less closely.

"Our findings should be a pretty big wakeup call to urge hospitals to critically evaluate how they are performing resuscitation," said the study's lead author, Dr. Mary Ann Peberdy of the Virginia Commonwealth University Health System in Richmond. "It may well be possible that there is a less effective and less efficient response at night."

The study, appearing in Wednesday's Journal of the American Medical Association, didn't examine why days and overnights differed. But researchers found among the late night cases a higher portion of instances where patients were discovered with no heart electrical activity, that is, too late to deliver a lifesaving shock.

Weekends also have lower survival rates

Staff who are fatigued, less experienced or too few in number could be to blame, researchers speculated. Weekends had lower survival rates than weekdays, but the difference wasn't as pronounced as between late night and daytime hours.

Only in the emergency room was there no night-or-day difference in survival.

The study was based on an analysis of more than 86,000 cardiac arrests in more than 500 hospitals over seven years.

There were 58,593 cardiac arrests during the day or evening. Of those, 11,604, almost 20 percent, survived to leave the hospital. There were 28,155 cardiac arrests during the shift that began at 11 p.m. Of those, 4,139, fewer than 15 percent, survived for discharge.

(Past studies have found that, overall, 80 to 85 percent of patients who suffer a cardiac arrest in the hospital die in the hospital.)

"Everyone who works in a hospital is going to look at this and say, 'Are we doing everything we should be?'" said Dr. Charles Porter, a cardiologist at the University of Kansas Hospital in Kansas City, Kansas. There, automated external defibrillators, or AEDs, are readily available and any staff member, even a custodian, can summon a rapid response team if a patient doesn't look good.

A study last month found that being in the hospital was [no guarantee of getting prompt treatment for cardiac arrest](#). In that study, published in the New England Journal of Medicine, researchers found that one-third of patients don't get a potentially live-saving shock within the recommended two minutes.

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