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Clinical pharmacists critical in ICU care, study finds

A Medicare patient with thromboembolic or infarction-related events (TIE) was more likely to die, have a longer hospital stay, and have higher medical costs if he or she was treated in an intensive care unit (ICU) without a critical care clinical pharmacist on staff, according to a study in the July 2009, *Pharmacotherapy*.¹

ICUs without critical care clinical pharmacists had 37% higher mortality and 14.8% longer ICU stays than ICUs that provide direct patient care services by pharmacists, the study found. "The lack of clinical pharmacy services was associated with 184 extra deaths, 59,429 extra hospital days, \$215,397,354 extra total Medicare charges, and \$26,363,674 extra drug charges," according to the study.

Among Medicare patients with TIE and a hemorrhage, the study found that there was a 49% higher hemorrhage rate for patients in ICUs without clinical pharmacy services. Further, ICUs that did not provide clinical pharmacy services had 31% higher mortality and 15.8% longer ICU stays, according to the study. "The absence of clinical pharmacy services was associated with six extra deaths, \$63,175,725 extra total Medicare charges, \$2,610,750 extra drug charges, and \$6,964,950 extra laboratory charges," the study found.

The study reviewed Medicare data from September 1, 2004, to August 31, 2005. Whether critical care clinical pharmacists were on a hospital's staff was determined through the review of national hospital survey data. Of 292 hospitals with 141,079 patients with TIE, 158 hospitals (54.1%) employed a critical care pharmacist. Critical care pharmacists potentially cared for 77,857 (55.2%) intensive care patients with TIE at these hospitals.

As a result of these findings, the study's authors recommend that hospitals promote pharmacists as direct patient care providers for ICU patients.

The study abstract is available at

<http://www.atypon-link.com/PPI/doi/abs/10.1592/phco.29.7.761>

1. MacLaren R and Bond CA. Effects of pharmacist participation in intensive care units on clinical and economic outcomes of critically ill patients with thromboembolic or infarction-related events. *Pharmacotherapy*. 2009; 29:761-8.

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