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Emergency hospitalizations for adverse drug events in older Americans

Daniel S Budnitz¹, Maribeth C Lovegrove, Nadine Shehab, Chesley L Richards

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Abstract

Background: Adverse drug events are important preventable causes of hospitalization in older adults. However, nationally representative data on adverse drug events that result in hospitalization in this population have been limited.

Methods: We used adverse-event data from the National Electronic Injury Surveillance System-Cooperative Adverse Drug Event Surveillance project (2007 through 2009) to estimate the frequency and rates of hospitalization after emergency department visits for adverse drug events in older adults and to assess the contribution of specific medications, including those identified as high-risk or potentially inappropriate by national quality measures.

Results: On the basis of 5077 cases identified in our sample, there were an estimated 99,628 emergency hospitalizations (95% confidence interval [CI], 55,531 to 143,724) for adverse drug events in U.S. adults 65 years of age or older each year from 2007 through 2009. Nearly half of these hospitalizations were among adults 80 years of age or older (48.1%; 95% CI, 44.6 to 51.6). Nearly two thirds of hospitalizations were due to unintentional overdoses (65.7%; 95% CI, 60.1 to 71.3). Four medications or medication classes were implicated alone or in combination in 67.0% (95% CI, 60.0 to 74.1) of hospitalizations: warfarin (33.3%), insulins (13.9%), oral antiplatelet agents (13.3%), and oral hypoglycemic agents (10.7%). High-risk medications were implicated in only 1.2% (95% CI, 0.7 to 1.7) of hospitalizations.

Conclusions: Most emergency hospitalizations for recognized adverse drug events in older adults resulted from a few commonly used medications, and relatively few resulted from medications typically designated as high-risk or inappropriate. Improved management of antithrombotic and antidiabetic drugs has the potential to reduce hospitalizations for adverse drug events in older adults.

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