

## Emergency Department Visits for Adverse Drug Events in Older Adults

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The full report is titled “Medication Use Leading to Emergency Department Visits for Adverse Drug Events in Older Adults.” It is in the 4 December 2007 issue of *Annals of Internal Medicine* (volume 147, pages 755-765). The authors are D.S. Budnitz, N. Shehab, S.R. Kegler, and C.L. Richards.

### What is the problem and what is known about it so far?

Adverse drug events are unwanted conditions related to the side effects of drugs. Older people are at a higher risk for adverse drug events than younger people. This is partly because people tend to need to take more drugs as they get older, and older people are more susceptible to side effects than younger people. Adverse drug events are a common cause of emergency department visits among older adults. Some drugs are thought to be inappropriate for use in older people. A panel of investigators developed a list of drugs that were considered inappropriate to use in older people. Drugs on this list are sometimes called “Beers criteria drugs,” named for the investigator who convened the panel.

### Why did the researchers do this particular study?

To see how many emergency department visits for adverse drug events occur in older adults and which drugs were responsible for these visits. They also wanted to see whether Beers criteria drugs resulted in more emergency department visits than other drugs.

### Who was studied?

The researchers used information for people 65 years of age and older in 2 databases to estimate the frequency of prescriptions for specific drugs and the frequency of emergency visits for adverse events related to specific drugs: a national survey of visits to doctors’ offices and a national database of adverse drug events in 2004 and 2005.

### How was the study done?

The researchers used the data to estimate the number of emergency department visits related to adverse events due to specific drugs that occur for older people in the United States each year. They looked at Beers criteria drugs and other drugs separately.

### What did the researchers find?

The researchers estimated that U.S. persons 65 years of age or older have more than 175,000 emergency department visits related to adverse drug events each year. Only about 3.6 of every 100 of these visits are due to a Beers criteria drug. Three commonly used drugs (insulin, warfarin, and digoxin) accounted for one third of the visits.

### What were the limitations of the study?

The researchers looked only at adverse drug events that led to emergency department visits. Many adverse drug events do not result in an emergency department visit. The researchers also did not have detailed information on how the drugs were being prescribed or used.

### What are the implications of the study?

A very small percentage of emergency department visits for adverse drug events in older people are related to Beers criteria drugs. Strategies to prevent adverse drug events in older people should focus on warfarin, insulin, and digoxin, which are drugs that patients often need. There may be better ways to use or to monitor them to decrease side effects.

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