Common Medication Management Approaches for Older Adults in the Emergency Department

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KEYWORDS

• Geriatric • Emergency department • Potentially inappropriate medications
• Adverse drug events

KEY POINTS

- Adverse drug events (ADEs) are common and problematic for older adults. They may be reduced by more accurate medication lists, better patient-clinician communication, and better understanding of potentially inappropriate medications.
- Polypharmacy, generally defined as taking 6 or more medications, is common among older adults and is associated with adverse health outcomes.
- The American Geriatrics Society Beers Criteria is a beneficial resource for identifying potentially inappropriate medications.
- Physiologic, pharmacodynamic, and pharmacokinetic changes with age have an impact on the therapeutic window for medications for older adults and should be considered when prescribing.
- Common potentially inappropriate medications used in emergency departments include anticholinergics, anticoagulants, benzodiazepines, and nonsteroidal anti-inflammatory drugs.

INTRODUCTION

Adverse drug events (ADEs) are a serious problem for older adults. In the United States, ADEs lead to emergency department (ED) visits at a rate of 9.7 per 1000 persons age 65 and older.[1] From 2004 to 2014, ED visits for ADEs in this population

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increased from approximately 200,000 to approximately 450,000 ED visits annually.[1,2] Recent interventions to improve medication safety have focused on the inpatient setting and the transition from outpatient to inpatient.[3] Approximately 90% of medication expenditures in the United States, however, are from the outpatient setting.[4] Outside the hospital, older adults may have medications prescribed by multiple different clinicians and they have less oversight over how they take the prescribed medications than when in a hospital. This combination of complex medication regimens, multiple clinicians, and low oversight in the outpatient setting may contribute to ADEs in the community. With the increasing fragmentation of US health care and the increasing aging population,[5,6] slowing or reversing the increase in ED visits for ADEs seen in the previous decade will be challenging. The ED sits at the crossroads between outpatient and inpatient care[7]; because of its location, it is uniquely affected by and can have significant impact on adverse drug reactions. For clinicians in the ED, awareness of the causes and effects of ADEs in older adults is essential to make an impact on improving medication safety for older adults beyond the ED.

PRE–EMERGENCY DEPARTMENT MEDICATION PROBLEMS LEADING TO EMERGENCY DEPARTMENT USE

Potential Causes of Adverse Drug Events in the Community

ADEs are common, although estimates of ADE rates in the outpatient setting are difficult to determine because most ADEs do not lead patients to seek medical care. Only 18% of all health care visits for ADEs are in an ED.[8] This seemingly small percentage of all ADEs, however, accounts for approximately 450,000 ED visits annually by older adults in the United States.[1] Many outpatient ADEs are preventable.[9] Common preventable causes of ADEs are use of inappropriate drugs, ignoring clinical or laboratory results, inadequate monitoring, inappropriate dose or frequency, inadequate patient education, and patient noncompliance.[10] ADEs caused by use of inappropriate drugs, ignoring clinical or laboratory results, inadequate monitoring, and inappropriate dose or frequency are errors that can be prevented by clinician education or electronic medical record decision support. Errors because of inadequate patient education and patient noncompliance may be prevented with better documentation and communication between clinicians and patients.

Often, errors in prescribing can be traced back to medication discrepancies, which occur when medications patients think they should be taking differs from the medication list that is documented in the patient chart. Medications discrepancies are common; studies have shown prevalence up to 67% at time of admission, and older adults are at higher risk of having medication discrepancies.[11,12] In the ED, obtaining accurate medication lists in a time-sensitive manner can be difficult because fewer than half of patients are familiar with their medications or have a medication list with them.[13] Patients sent to the ED from skilled nursing facilities also frequently have medication discrepancies. In 1 study, 71% of patients transferred to a skilled nursing facility had a medication discrepancy.[14] Medication discrepancies can lead to inappropriate prescribing because clinicians are working with incomplete or inaccurate information. This information gap puts patients at risk for ADEs, such as medication interactions. Medication reconciliation is a commonly used solution to decrease medication discrepancies as an inpatient. Not only does medication reconciliation improve safety in the hospital but also it can decrease ED visits and rehospitalizations for patients by up to 37%.[15] Outpatient medication reconciliation efforts can be effective in reducing discrepancy as well, which may improve information available to ED