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## Adverse Drug Events Post-Hospital Discharge in Older Patients: Types, Severity, and Involvement of Beers Criteria Medications


Abir O. Kanaan

*University of Massachusetts Medical School*

*Et al.*

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4<sup>th</sup> Annual University of Massachusetts Center for Clinical and Translational Science Research Retreat – abstract submission

March 21, 2013

Title: Adverse Drug Events Post-Hospital Discharge in Older Patients: Types, Severity, and Involvement of Beers Criteria Medications

Authors: Abir O. Kanaan<sup>1-3</sup>; Jennifer L. Donovan<sup>1-3</sup>; Nerissa P. Duchin<sup>2-3</sup>; Terry S. Field<sup>2-3</sup>; Jennifer Tjia<sup>2-3</sup>; Sarah L. Cutrona,<sup>2-3</sup>; Shawn J. Gagne<sup>2</sup>; Lawrence Garber<sup>2</sup>; Peggy Preusse<sup>2</sup>; Leslie R. Harrold<sup>2-3</sup>; Jerry H. Gurwitz<sup>2-3</sup>

Institutional affiliations: (1) MCPHS University, Worcester, MA; (2) Meyers Primary Care Institute, Worcester, MA; (3) University of Massachusetts Medical School, Worcester, MA

Contact information: Shawn Gagne, Meyers Primary Care Institute, 630 Plantation Street, Worcester, MA; Telephone, 508-791-739; Fax, 508-595-2200; shawn.gagne@meyersprimary.org

Abstract:

Objective: To characterize adverse drug events (ADEs) occurring within the high-risk 45-day period post-hospitalization in older adults.

Design: Clinical pharmacists reviewed the ambulatory records of 1000 consecutive discharges.

Setting: A large multispecialty group practice closely aligned with a Massachusetts-based health plan.

Participants: Hospitalized patients aged 65 years and older who were discharged to home.

Measurements: Possible drug-related incidents occurring during the 45-day period post-hospitalization were identified and presented to a pair of physician-reviewers who classified incidents as to whether an ADE was present, whether the event was preventable, and the severity of the event. Medications implicated in ADEs were further characterized according to their inclusion in the 2012 Beers Criteria for Potentially Inappropriate Medication Use in Older Adults.

Results: At least one ADE was identified during the 45-day period in 18.7% (187) of the 1000 discharges. Of the 242 ADEs identified, 35% (n=84) were deemed preventable, of which 32% (n=27) were characterized as serious, and 5% (n=4) as life threatening. Over half of all ADEs occurred within the first 14 days post-hospitalization. The percentage of ADEs in which Beers Criteria medications were implicated was 16.5% (n=40). Beers Criteria medications with both a high quality of evidence and strong strength of recommendation were implicated in 6.6% (n=16) of the ADEs.

Conclusion: ADEs are common and often preventable among older adults following hospital discharge, underscoring the need to address medication safety during this high-risk period in this vulnerable population. Beers Criteria medications played a small role in these events suggesting that efforts to improve the quality and safety of medication use during this critical transition period must extend beyond a singular focus on Beers criteria medications.