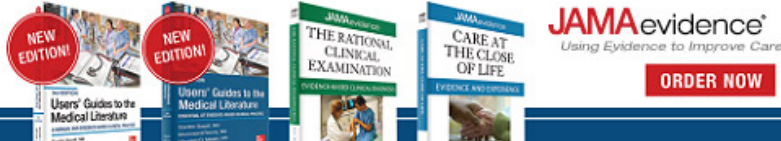


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Changes in Prescription and Over-the-Counter Medication and Dietary Supplement Use Among Older Adults in the United States, 2005 vs 2011

ONLINE FIRST

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ABSTRACT

ABSTRACT | INTRODUCTION | METHODS | RESULTS | DISCUSSION | CONCLUSIONS | ARTICLE INFORMATION | REFERENCES

Importance Prescription and over-the-counter medicines and dietary supplements are commonly used, alone and together, among older adults. However, the effect of recent regulatory and market forces on these patterns is not known.

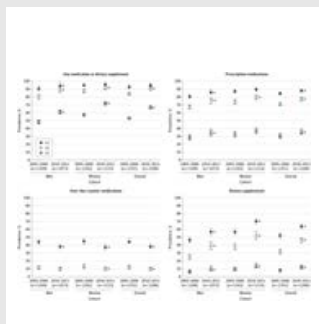
Objectives To characterize changes in the prevalence of medication use, including concurrent use of prescription and over-the-counter medications and dietary supplements, and to quantify the frequency and types of potential major drug-drug interactions.

Design, Setting, and Participants Descriptive analyses of a longitudinal, nationally representative sample of community-dwelling older adults 62 to 85 years old. In-home interviews with direct medication inspection were conducted in 2005-2006 and again in 2010-2011. The dates of the analysis were March to November 2015. We defined medication use as the use of at least 1 prescription or over-the-counter medication or dietary supplement at least daily or weekly and defined concurrent use as the regular use of at least 2 medications. We used Micromedex to identify potential major drug-drug interactions.

Main Outcomes and Measures Population estimates of the prevalence of medication use (in aggregate and by therapeutic class), concurrent use, and major drug-drug interactions.

Results The study cohort comprised 2351 participants in 2005-2006 and 2206 in 2010-2011. Their mean age was 70.9 years in 2005-2006 and 71.4 years in 2010-2011. Fifty-three percent of participants were female in 2005-2006, and 51.6% were female in 2010-2011. The use of at least 1 prescription medication slightly increased from 84.1% in 2005-2006 to 87.7% in 2010-2011 ($P = .003$). Concurrent use of at least 5 prescription medications increased from 30.6% to 35.8% ($P = .02$). While the use of over-the-counter medications declined from 44.4% to 37.9%, the use of dietary supplements increased from 51.8% to 63.7% ($P < .001$ for both). There were clinically significant increases in the use of statins (33.8% to 46.2%), antiplatelets (32.8% to 43.0%), and omega-3 fish oils (4.7% to 18.6%) ($P < .05$ for all). In 2010-2011, approximately 15.1% of older adults were at risk for a potential major drug-drug interaction compared with an estimated 8.4% in 2005-2006 ($P < .001$). Most of these interacting regimens involved medications and dietary supplements increasingly used in 2010-2011.

Conclusions and Relevance In this study, the use of prescription medications and dietary supplements, and concurrent use of interacting medications, has increased since 2005, with 15% of older adults potentially at risk for a major drug-drug interaction. Improving safety with the use of multiple medications has the potential to reduce preventable adverse drug events associated with medications commonly used among older adults.



Figures in this Article

Topics

antiplatelet agents ; aspirin ; warfarin ; amlodipine ; simvastatin ; clopidogrel ; statins ; omega-3 fatty acids ; anti-inflammatory agents, non-steroidal ; dietary supplements

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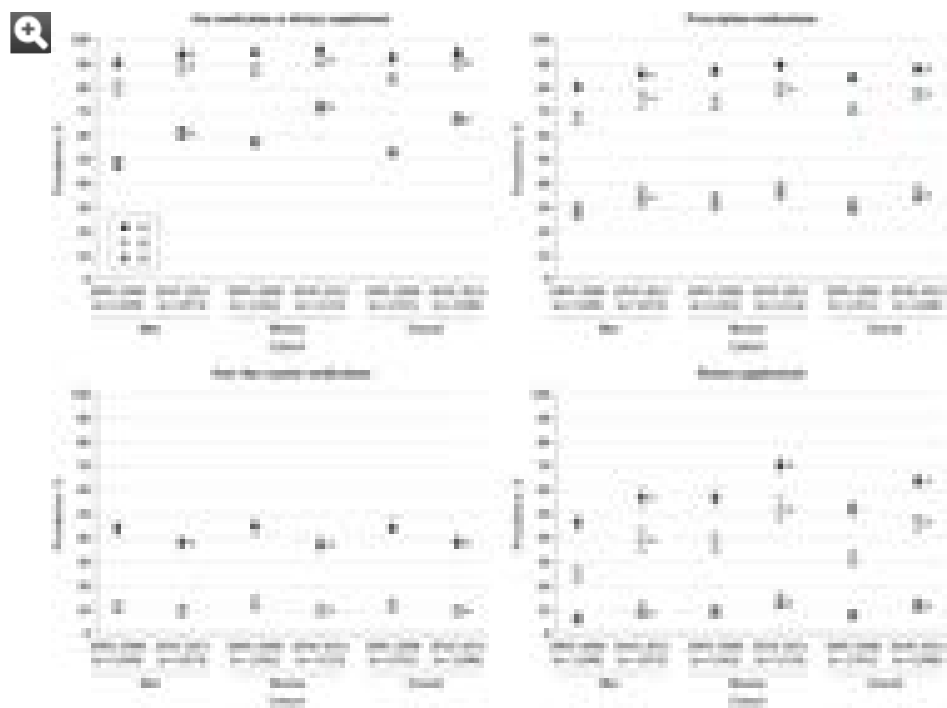
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Figures

Figure.
Weighted Prevalence Estimates of Prescription and Over-the-Counter Medication and Dietary Supplement Use Among Older Adults in the United States

Error bars indicate 95% CIs. *P* values are based on a Wald test of the predictive margin calculated by averaging the age-specific differences in predicted prevalence (on the logit scale) between waves over the observed ages in the sample and by using a design-based estimate of variance.

^a*P* < .05.



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