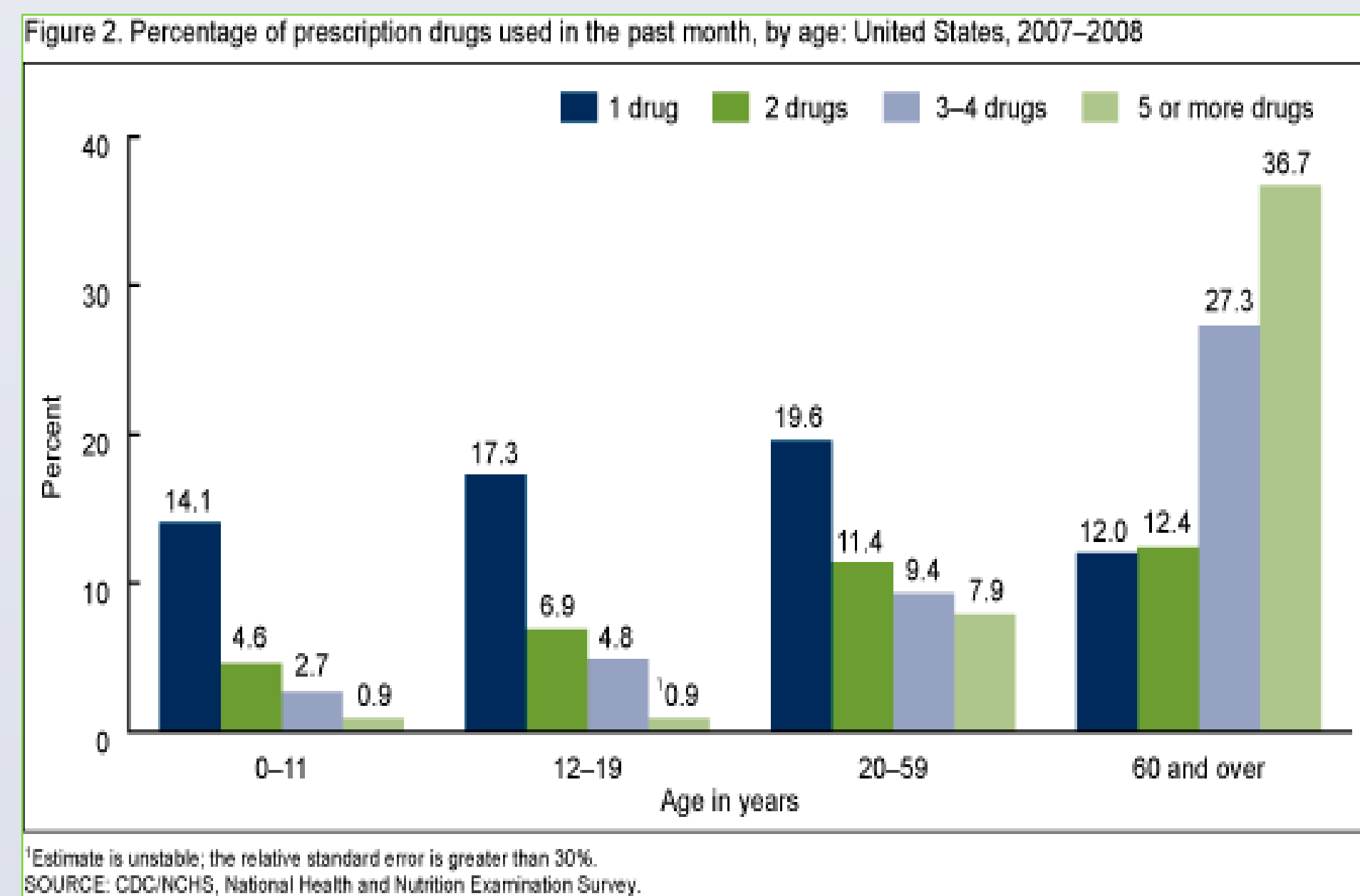# Frequent Patient-Provider Communication Enhances Medication Management Strategies in the Home-Bound Elderly

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Background and Significance

➢ As patients age and have to manage more complex chronic and acute medical conditions, the risk of medication errors and mismanagement increases.

➢ Medication errors in adults are caused by:[5]
- Improper dose administration
- Time
- Limited clinical advice regarding medication use
- Complex medication regimens

➢ Medication mismanagement:
- Increases morbidity and mortality risk
- Causes loss of independence as a result of injury
- Raises the risk for adverse drug events

Figure 2. Percentage of prescription drugs used in the past month, by age: United States, 2007–2008

(Legend: 1 drug, 2 drugs, 3–4 drugs, 5 or more drugs)

Age in years	1 drug	2 drugs	3–4 drugs	5 or more drugs
0–11	14.1	4.6	2.7	0.9
12–19	17.3	6.9	4.8	0.9
20–59	19.6	11.4	9.4	7.9
60 and over	12.0	12.4	27.3	36.7

¹Estimate is unstable; the relative standard error is greater than 30%.
SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.

Purpose

The aim of this project was to review the literature in order to identify strategies that could be used to improve medication management in the home–bound elderly.

Method

➢ A systematic literature review

➢ Articles were included if they were original research within the U.S., peer-reviewed, written in English, published within 10 years (2006-2016)

➢ A total of 7 scholarly articles were chosen for this review

Synthesis of Findings

❖ Advanced technologies alone were not superior in improving medication management.

❖ Nurse care coordination, brown bagging medication reviews, and pharmacist programs were best at improving medication management behaviors.

❖ The literature suggests that frequent patient-provider communication may improve medication management.

Authors	Strategy/Intervention	Results	Implications
Roth, M.T., Ivey, J.L., Esserman, D.A., Crisp, G., Kurz, J. & Weinberger, M. (2013)	• Pharmacist program	• Medication management improved by 48% • Suboptimal dosing reduced by 52% • Nonadherence declined by 20% • Suboptimal drug use decreased by 45% • ADEs were unchanged	• Integrating a pharmacist into the primary care team may improve medication management.
Reeder,B., Demiris,G., & Marek, K.D. (2013)	Strategy intervention utilized all of the following: • Telehealth • Nurse care coordination • MD.2 medication device	• 95% of participants found the strategy reliable • 94% found it easy to use • 99% found it useful in the coordination of personal medication management	• Nurse care coordination can enhance the efficacy of medication management tools.
O'Connell, M., Chang, F., Tocco, A., Mills, M.E., Hwang, J.M., Garwood, … & Gupta, N.S. (2015)	• Brown bagging medication review	• 94% of participants reported satisfaction with the program • 95% knew more about their medications • 63% implemented the recommendations	• Pharmacist driven medication reviews and education can improve medication behaviors.
Marek, K.D., Stetzer, F., Ryan, P.A., Bub, L.D., Adams, S.J., Schlidt, A., … O'Brien, A. (2013)	Intervention utilized: ▪ Nurse care coordination and used either of the following: ▪ MD.2 medication device ▪ Medication pre-filled planner	• The MD.2 improved correct medication dosages by 98% • The medication planner improved medication dosages by 97%	• As long as nurse care coordination is utilized there's a limited benefit for using more expensive technologies.
Shillam, C.R., Orton, V.J., Waring, D., & Madsen, S. (2013)	• Brown bagging medication review	• Taking medications as directed increased by 3% • Knowledge about medications increased by 25% • Use of more than 1 pharmacy decreased by 12% • Missed doses decreased by 10%, • Extra dose administration decreased by 4%	• Medication management can be enhanced through established relationships between nurses and patients in the community.
Chrischilles, E.A., (2014)	• Personal health record (PHR)	• Multiple NSAID use decreased by 5% • Keeping current medication lists increased by 7% • Patient understanding for each medication improved by 11%.	• Use of PHR may slightly improve patient knowledge of medication risks.
Lakely, S.L., Gray.S.L., & Borson, S. (2009)	Compared the following Interventions: • Medication planner medi-sets • Easy-open vials • Pharmacy pre-filled medi–sets • Automatic pill dispenser • Pill box with alerts/timer • Calendar/watch	• 8.3% of participants reported difficulty taking medication. • 18.3% of participants scored less than 85% accuracy on DRUGS screening tool.	• Education regarding proper use of a medication tool is necessary for accurate medication management regardless of the type of tool utilized.

Implications

Practice

➢ Medication management technologies and devices should not be used as a substitute for frequent patient-provider communication, but as a tool to enhance medication management.

Education

➢ Patients require ongoing support for their medication regimens and management strategies.

➢ The encounter with the healthcare provider is the most important variable for enhancing medication management.

Research

➢ Further research is necessary to identify the different patient -provider communication techniques that can improve medication management.

Healthcare Policy

➢ Focus on the development of best practice guidelines to implement medication management strategies within the elderly population.

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