



Medication-Related Problems (MRPs) in Older Adults: A Hidden and Costly Epidemic

Submitted to the Transition Team
of President-Elect Barack Obama
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Introduction – Defining the Problem

While medications are a critical intervention for the treatment and prevention of disease, disability and death, they also can cause problems on a broad scale. Today, **problems caused by medications cost over \$200 billion in direct health care costs.**¹ The costs of medication-related problems (MRPs) rival the costs of cardiovascular disease and are more than the direct health care costs of diabetes and Alzheimer's disease combined. For every dollar spent on prescription medications, we spend approximately the same amount treating MRPs associated with those medications.

Older adults, who take more medications per capita than any other age cohort, are at highest risk for MRPs. Although people over age 65 make up only about 12% of the population, they account for over 36 percent of all reported adverse drug reactions.² **Adverse drug reactions and noncompliance are responsible for 28% of hospitalizations in the elderly³ and 23 percent of nursing home admissions.⁴** Researchers estimate that about 25 to 30% of all MRPs in older adults are preventable. Of fatal, life-threatening and serious MRPs, it is estimated that 42 percent are preventable. With respect to falls, a leading cause of fatal and nonfatal injuries for persons aged 65 years or older, “no risk factor . . . is potentially more preventable or reversible as medication use.”⁵

According to the Institute of Medicine, the two most common groups of factors associated with MRPs were those related to knowledge regarding drug therapy (30%) and patient factors that affect drug therapy (29.2%).⁶ **Other research establishes that physicians prescribe potentially inappropriate medications for a nearly a quarter (25%) of all older people living in the community** and do not routinely screen for potential drug interactions even when medication history information is readily available. While computerized alerts and clinical decision support tools are helpful, research has shown they have limited impact on reducing MRPs due to “alert fatigue” and other factors.⁷ Further, most clinical decision support tools are not geriatric focused and are never a substitute for the clinical judgment of a healthcare professional.

Other major factors leading to MRPs are persistence and adherence. Numerous studies document that patients often stop taking their medications or take them incorrectly. **Non-adherence in the older adult is responsible for 11% of all hospital admissions.**

In 2011, the first baby boomers become eligible for Medicare. Within the next 20 years, the Medicare population will more than double increasing exponentially drug utilization,



drug costs and the health care costs associated with inappropriate medication use. We must act **NOW** to reduce the prevalence of MRPs in older persons or we will pay dearly in lives, dollars and lost productivity as the baby boom generation ages.

Health Care Reform and Medication Issues

When it comes to medications, the discussion of health care reform has focused almost exclusively on reducing the cost of medications. However, focusing on reducing medications costs alone will not reduce the rate of medication-related problems in older adults, and may actually increase the incidence of MRPs and overall healthcare costs. Rather, we must shift our focus to medication assessment, selection, management and adherence. Pharmacists play a vital role in optimizing medication management in older adults. According to the Institute of Medicine,

Because of the immense variety and complexity of medications now available, it is impossible for nurses and doctors to keep up with all of the information required for safe medication use. The pharmacist has become an essential resource . . . And thus access to his/her expertise must be possible at all times.⁸

A multitude of studies document that when pharmacists provide medication therapy management (MTM) services and are included in the clinical management of patients with chronic illness and complex medication regimens, they save lives and money.⁹ According to Bussey, on average, the return on investment in clinical pharmacist services is \$16.70 for every \$1 invested.¹⁰ In Missouri's Medicaid program, pharmacists and primary care providers working collaboratively reduced per capita annual program expenditures by \$6,804 for a total savings of \$2.4 million annually. In Minnesota, a private sector MTM reduced total per person health care expenditures from \$11,965 to \$8,197.¹¹

In 2002, the Medicare Payment Advisory Commission (MedPAC) found “mounting evidence . . . that involving clinical pharmacists in managing drug treatment may reduce costs and improve the quality of care.” At that time, MedPAC unanimously recommended that “[t]he Secretary should assess models for collaborative drug therapy management services in outpatient settings.”¹² However, little was done to implement MedPAC's recommendations. Today, pharmacists are providing clinical services to Medicaid recipients and to individuals with private insurance or who pay out of pocket, but pharmacists are not recognized as providers under Medicare. Polypharmacy and other problems associated with medication misuse in the elderly are epidemic. With the baby boomers poised on the edge of a demographic tidal wave, we can no longer afford to ignore the need to develop a systemic, national response.

Defining Medication Therapy Management (MTM) Services

Eleven national pharmacists' associations, including ASCP, have developed a consensus definition of MTM services.¹³ In addition, the American Medical Association's 2008 Current Procedural Terminology (CPT) defines MTM as:



Face-to-face patient assessment and intervention as appropriate, by a pharmacist. MTMS is provided to optimize the response to medications or to manage treatment-related medication interactions or complications.

Components of MTM services include: patient assessment (including review of pertinent laboratory data), calculation of liver and kidney function, comprehensive medication review, formulation of a medication treatment plan, making recommendations for additions and modifications to medication therapy, monitoring drug therapy outcomes, detection of adverse drug events, patient education and empowerment, documenting treatment plans and communicating treatment plans to other providers.

The Experience in Medicare Part D

Although Part D plans are required to provide MTM services to certain Medicare part D enrollees, many patients in dire need of MTM services are either underserved or not served at all. According to CMS, less than seven percent of Medicare Part D beneficiaries are eligible to receive MTM services under the eligibility requirements of existing Part D MTM programs, and only a small percentage of eligible beneficiaries are actually served. Part of the problem is that the Centers for Medicare and Medicaid Services (CMS) has failed to establish performance criteria. As a result, there is great variation in the intensity of Part D MTM programs. Some programs have very restrictive inclusion criteria, limiting their services to a very small segment of the eligible population; others merely provide mailed reminders or educational materials. Another problem is the misalignment of financial incentives. For “stand-alone” prescription drug plans (PDPS) that have no financial risk for downstream medical costs, investment in MTM programs may be antithetical to a business model that focuses on strict control of drug and administration costs without regard to patient outcomes. According to MedPAC, after three years, we still know nothing about the effectiveness of these programs.¹⁴

Recommendations

The Obama administration must take seriously the need to reduce the prevalence of medication-related problems in older adults. Specifically:

1. Ensure that pharmacist-provided, medication therapy management services are included and are well defined in any new payment/delivery model such as patient-centered medical homes.
2. Using Executive authority or through legislation, develop a pilot program in Medicare Part B to identify the most cost-effective ways to provide payment to pharmacists for MTM services.
3. Provide funding for patient education on safe medication use (possibly through Administration on Aging grants or other similar programs).



4. Address the shortage of pharmacists and other health care providers who are trained within their discipline to provide care to older adults.

About ASCP

ASCP is the international professional association of pharmacists who specialize in safe medication use in older adults. For more information, please visit www.ascp.com.

References

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⁴ Strandberg LR. Drugs as a reasons for nursing home admissions. *J Am Health Care Assoc* 1984;10:20-3

⁵ Leipzig, Gumming and Tinetti, *JAGS* 1999; 47:30-39.

⁶ Lesser et al., Factors Related to Errors In Medication Prescribing, *JAMA* 1997; 277(4):312-317 (from "To Err is Human").

⁷ Gurwitz, G. Field, T. et al., Effect of Computerized Order Entry with Clinical Decision Support on Adverse Drug Events in the Long-Term Care Setting, *JAGS* 2008; 56:2225-2233.

⁸ Institute of Medicine, "To Err is Human – Building a Safer Health System" 2000.

⁹ Schumock et al., Evidence of the Economic Benefit of Clinical Pharmacy Services: 1996-2000 (attached);

¹⁰ Bussey, H., Blood, Sweat and Tears; Wasted by Medicare's Missed Opportunity, *Pharmacotherapy* 2004; 24(12):1655-1658(attached).

¹¹ In the Minnesota Collaborative, drug expenditures increased by 19.7 percent, yet return on investment was 12:1 (\$12 saved for every \$1 invested). MTM programs may increase drug expenditures because the intervention often identifies patients who have chronic conditions for which they are receiving no treatment. MTM services also improve persistence and adherence. These factors can increase the overall drug spend, yet significant savings on overall health care costs are still realized.

¹² MedPAC, Report to the Congress, Medicare Coverage of Nonphysician Practitioners, June 2002.

¹³ Approved July 27, 2004 by: AMCP, AACP, ACA, ACCP, ASHP, APhA, ASCP, NABP, NACDS, NCPA, NCSPAE. Blum BJ., Definition of medication therapy management: development of profession-wide consensus. *J. Am. Pharm. Assoc.* 2005; 45:566-72.

¹⁴ Report to MedPAC, Medication Therapy Management, November 6, 2008, available at http://medpac.gov/meeting_search.cfm?SelectedDate=2008-11-06%2000:00:00.0.