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# PRESCRIPTION DRUGS AND THE ELDERLY

## Many Still Receive Potentially Harmful Drugs Despite Recent Improvements

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Mr. Chairman and Members of the Committee:

We are pleased to be here today to discuss a significant problem that affects the health of millions of elderly Americans—the inappropriate use of prescription drugs. According to gerontology experts, the inappropriate use of prescription drugs may cause adverse drug reactions that may lead to subtle deterioration of function or precipitate medical crises, resulting in hospitalization or death. These problems also contribute to the expenditure of billions of dollars in higher medical costs borne in part by either Medicare or Medicaid.

Last July, we issued a report on the extent of this problem, its causes, and emerging trends in health care delivery that may affect drug prescribing for the elderly.<sup>1</sup> Our study was based on a literature review and documents obtained from leading researchers in the fields of gerontology and elderly clinical pharmacology. We interviewed these individuals and representatives of the Food and Drug Administration (FDA), the Health Care Financing Administration (HCFA), state Medicaid programs, industry trade associations, senior citizen and consumer advocacy groups, and medical associations who are knowledgeable in the use of prescription drugs for the elderly. We also analyzed data on prescription drug use from HCFA's 1992 Medicare Current Beneficiary Survey.

Today I would like to focus my remarks on the factors that contribute to inappropriate use of prescription drugs among the elderly and their potential health and economic consequences. I also would like to highlight practices used and the health care industry's role in reducing inappropriate drug use among the elderly.

In summary, our analysis of 1992 data found that about 17.5 percent of almost 30 million Medicare recipients were still prescribed drugs that were generally unsuitable for their age group. While this is an improvement over the almost 25 percent reported for 1987 data, the inappropriate use of prescription drugs remains a significant health problem for the elderly. Insufficient coordination of patient drug therapies and weaknesses in communication among providers, pharmacists, and patients have compounded this problem. Inappropriate prescribing practices and the ensuing drug use have caused many elderly persons to suffer adverse effects that, according to FDA, have resulted in \$20 billion in hospitalizations each year. These costs are covered in part by Medicare

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<sup>1</sup>Prescription Drugs and the Elderly: Many Still Receive Potentially Harmful Drugs Despite Recent Improvements (GAO-HEHS-95-152, July 24, 1995).

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and Medicaid. States, advocacy groups, and physician and pharmacy organizations have, however, taken a number of measures to reduce the incidence of inappropriate drug use. In addition, managed care, pharmacy benefit management, and other coordinated health care systems have features that have the potential to reduce inappropriate use of prescription drugs among the elderly.

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## Several Factors Contribute to the Inappropriate Use of Drugs

The factors leading to the inappropriate use of prescription drugs are multifaceted and interconnected. They can reflect the behavior of the physician, pharmacist, and patient, either collectively or individually. From the time a drug is prescribed to the time when the drug is taken, many possible interrelated events can result in an adverse drug reaction or other serious effects.

The inappropriate use of prescription drugs can take several different forms. These range from potentially life-threatening drug-drug interactions to unnecessary therapeutic duplication—that is, using two or more similar drugs to treat the same problem. These inappropriate uses yield few benefits at increased costs. For example, an elderly woman who was taking hypertension medication visited her doctor after she began experiencing chest pain and tingling in the hands. The doctor prescribed four additional medications to treat these symptoms. When she took the prescriptions to be filled, her pharmacist identified the symptoms as side effects of the hypertension medication she was taking. The pharmacist contacted the physician, who prescribed a different hypertension medication.

Compounding the problem of insufficient coordination are incomplete physician and pharmacy records of patient conditions, allergies, and current therapeutic regimens. In addition, physicians may prescribe incorrect dosages, pharmacists may not recognize possible drug-drug or allergic reactions, and patients may not take medications as prescribed.

Another complicating factor may be a lack of relevant guidelines for prescribing drugs to the elderly. The elderly generally cannot tolerate adult dosages because they are more sensitive to the effects of drugs and less capable of systemically eliminating them. In 1989, FDA issued voluntary guidelines for testing new drugs for elderly patients; however, several experts believe that clinical trials performed under these guidelines are not representative of the elderly as a whole.

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## Inappropriate Use of Prescription Drugs Has Major Health and Economic Implications

We found that many elderly persons have been prescribed drugs inappropriately, putting them at risk. In 1992, more than one in six noninstitutionalized Medicare recipients 65 or older were prescribed at least one drug that was potentially unsuitable for this age group. Additionally, because the elderly tend to suffer from multiple health problems, they are more vulnerable to other inappropriate uses of prescription drugs. This misuse can range from adverse drug combinations to prescribing several drugs to treat one condition. For example, a woman in her eighties with severe arthritis pain was prescribed a medication that caused stomach problems. To combat the stomach discomfort, she was prescribed a second medication, which triggered a urinary tract infection. When a third drug was added to treat the urinary infection, the woman began having terrifying hallucinations. Ultimately, the woman's therapy was switched to nonpharmaceutical treatment that controlled her arthritis pain.

Inappropriate uses of prescription drugs can have a number of health and economic consequences. One study we reviewed estimated that 17 percent of hospitalizations of persons 65 or older were directly related to adverse drug reactions.<sup>2</sup> According to FDA, these hospitalizations cost about \$20 billion annually. Other studies reported that less severe reactions—which can go unnoticed or be discounted as effects of aging—have indirectly resulted in numerous injuries. One study estimated that each year, 32,000 elderly persons suffer hip fractures in falls caused by adverse drug reactions, such as loss of coordination.<sup>3</sup> Another study concluded that about 16,000 car accidents that result in injury each year can be attributed to adverse drug reactions that elderly drivers experienced.<sup>4</sup>

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## Several Measures May Help Minimize Inappropriate Use of Prescription Drugs

A number of recent measures may help minimize the inappropriate use of prescription drugs that can cause adverse effects in the elderly, including monitoring drug use and educating physicians and patients on possible misuses. All states are required to monitor the use of Medicaid prescription drugs through prospective and retrospective reviews.<sup>5</sup>

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<sup>2</sup>Nananda Col and others, "The Role of Medication Noncompliance and Adverse Drug Reactions in Hospitalizations of the Elderly," *Archives of Internal Medicine*, Vol. 150, No. 4 (Apr. 1990), pp. 841-45.

<sup>3</sup>Wayne A. Ray and others, "Psychotropic Drug Use and the Risk of Hip Fractures," *The New England Journal of Medicine*, Vol. 316, No. 7 (Feb. 12, 1987), pp. 363-69.

<sup>4</sup>Wayne A. Ray and others, "Psychoactive Drugs and the Risk of Injurious Motor Vehicle Crashes in Elderly Drivers," *American Journal of Epidemiology*, Vol. 136, No. 7 (Oct. 1, 1992), pp. 873-83.

<sup>5</sup>This is a requirement of the Omnibus Budget Reconciliation Act of 1990 (P.L. 101-508).

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Prospective reviews are intended to detect problems before a pharmacist fills a prescription. Automated systems linked to statewide Medicaid data bases have shown promise in alerting pharmacists to possible drug utilization problems, such as adverse drug-drug interactions or a drug-disease contraindication.<sup>6</sup> Retrospective reviews are intended to detect prescribing patterns that indicate inappropriate or unnecessary medical treatment, as well as fraud or abuse. Retrospective drug utilization reviews can also be used to help ensure that patients follow their prescribed drug therapies.

Inappropriate use of prescription drugs also can be minimized through physician education in geriatrics and elderly clinical pharmacology. However, these areas of study have only recently been emphasized in medical school curricula, which means that many experienced, practicing doctors may have had little formal training in these areas. Several experts we interviewed stressed the need for improved continuing education to help ensure that doctors are knowledgeable about issues relating to prescription drugs and the elderly. They also believe that doctors should rely more on the expertise of pharmacists to decide the most appropriate drug therapy to prescribe.

Increasing patient understanding of prescription drugs also can help minimize the incidence of inappropriate drug use. Particularly important is physician or pharmacist counseling on the correct use of a prescription drug and the drug's characteristics, such as subtle side effects that should not be ignored. However, a recent study found that about 26 percent of patients interviewed had not been counseled by a physician about their drug therapies.<sup>7</sup>

Public advocacy groups have encouraged the elderly to take an active role in learning about the drugs they are prescribed. In addition, state and local agencies have developed several initiatives that alert elderly consumers to the dangers of inappropriate drug use. For example, the Massachusetts Department of Public Health sponsors seminars where pharmacists inventory the prescription drugs of those who attend. At these seminars, expired and no longer used drugs are eliminated, and the remaining drugs are catalogued in a "Medicine Passport" that can be shown to doctors and pharmacists as new or additional drugs are prescribed.

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<sup>6</sup>See Prescription Drugs: Automated Prospective Review Systems Offer Potential Benefits for Medicaid (GAO/AIMD-94-130, Aug. 5, 1994).

<sup>7</sup>"How Is Your Doctor Treating You?" Consumer Reports, Feb. 1995, pp. 81-88.

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## Managed Care and Pharmacy Benefit Management Have the Potential to Reduce Inappropriate Use of Prescription Drugs

Managed care plans and pharmacy benefit management firms, known as PBMS, as well as other coordinated health care systems can play an important role in reducing the incidence of prescription drug misuse. Experts in gerontology and elderly clinical pharmacology believe that the most effective way to minimize inappropriate prescription drug use is to improve the coordination of care. Although plans vary, a basic tenet of managed care is to control utilization—often through one physician, or “gatekeeper,” who coordinates patient care, including overseeing various treatments and drug regimens.

The patient data that managed care plans collect also enable plans to monitor the drug therapies patients receive and the prescribing patterns of physicians. One health maintenance organization (HMO) that we visited periodically compared the drug-prescribing habits of its doctors to the HMO’s standards and provided its doctors with these analyses. In addition, the HMO used these analyses to identify doctors who may need additional training or counseling in prescribing drugs for their elderly patients.

PBMS manage prescription drug benefits on behalf of managed care plans and other health plan sponsors.<sup>8</sup> Typically the services provided by a PBM include drug utilization reviews that have the potential to identify and reduce inappropriate drug use. For example, PCS Health Systems conducted a drug utilization review in 1994 that generated almost 25 million alerts. Of these alerts, 25 percent involved drug-age contraindications and excessive daily dosages—two misuses that are prevalent among the elderly.

Through monitoring, PBMS can also detect lapses in prescription refills for persistent medical conditions, such as high blood pressure, and alert a patient’s doctor, if required. In addition, PBMS are developing data bases on patient characteristics, medical conditions, and drug therapies. With this information, PBMS are beginning to research the relative effectiveness of varying treatments from both a therapeutic and a cost perspective. Results of this research should enable doctors, patients, and payers to make more informed health care decisions.

It is too early to understand the full impact that managed care and PBMS may have on inappropriate drug use among the elderly. Several experts believe that these systems have the potential to improve coordination of patient care and thereby increase the detection of possible misuse.

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<sup>8</sup>For more information on PBMS, see *Pharmacy Benefit Managers: Early Results on Ventures With Drug Manufacturers* (GAO/HEHS-96-45, Nov. 9, 1995).

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However, they cautioned that improved coordination also depends on the quality of patient care, which has varied widely among managed care plans. One expert further cautioned that improved coordination of care could be compromised by pressures to contain costs or increase profits. Still, the health and financial costs associated with adverse effects create a strong incentive for managed care plans to seek and implement measures that could minimize the inappropriate use of prescription drugs among the elderly.

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## Conclusions

The results of our study indicate that the number of elderly patients receiving drugs identified as generally unsuitable for their use has declined somewhat in recent years. However, the inappropriate use of prescription drugs among the elderly and the resultant adverse effects remain significant health problems. Improving physician, pharmacist, and patient communication and understanding about inappropriate use can further reduce the incidence of prescription drug misuse among the elderly. Effective use of managed care and PBMs also holds the potential to reduce inappropriate prescription drug use and, thus, the impact drug misuse has on our nation's health care costs.

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Mr. Chairman, this concludes my prepared statement. I will be happy to answer any questions that you or other Members of the Committee may have.

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## GAO Contact

For more information on this testimony, please call John Hansen, Assistant Director, at (202) 512-7105.

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