PRIORITIES & APPROACHES FOR IMPROVING PRESCRIPTION MEDICINE USE BY OLDER AMERICANS

A Report of the National Council on Patient Information and Education

Prepared under a grant from

The Commonwealth Fund
New York, New York

October, 1987

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National Council on Patient Information and Education (NCPIE)

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prepared under a grant from
The Commonwealth Fund
New York, N.Y.

1st printing, October, 1987
2nd printing, April, 1988

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Grant Task Force Members

"This publication was supported by a grant from The Commonwealth Fund. In all cases, the statements made and the views expressed are those of the National Council on Patient Information and Education and do not reflect those of The Commonwealth Fund."

FOREWORD

This report is offered as a resource for organizations with an interest in issues related to medication use and/or a mandate to serve or represent the older population. The National Council on Patient Information and Education (NCPIE), with the help of two interdisciplinary advisory panels,* developed these ideas in the process of planning an education campaign to improve prescription drug use among older people. The Council and the projects' funding source, The Commonwealth Fund, want to share the results of this planning process because the issues and opportunities identified deserve and require broad attention.

This report has three objectives.

1. <u>To summarize the problem of improper medication use among older people, its consequences, and factors contributing to the problem.</u>

   The background material in Section I presents a referenced review of key issues, designed to raise awareness and provide the basis for additional attention. It is not intended as a comprehensive study of this complex problem.

2. <u>To identify priorities for resolving factors leading to medication misuse.</u>

   Section II outlines priorities identified by NCPIE's project advisors for encouraging behaviors and practices among older patients and their caregivers, health professionals, and the health care system. These priorities may serve as a starting point for organizations that are establishing their own program directions.

3. <u>To suggest practical approaches to program developers for taking action in some of the priority areas.</u>

   Section III presents the ideas of more than 80 advisors -- representing the fields of gerontology, medicine, public health, and drug education -- for program activities that address 17 of the 71 identified priorities (selected for relevance to a media campaign). These are not the only kinds of activities possible, and they come with no documented guarantees. The activities represent creative problem-solving for a complex issue with many unknowns.

* Appendix A contains a list of the advisory group members.

While this report discusses older people as a group, it is important to emphasize that they are in fact a heterogeneous population. Gerontologists recognize the different functional stages of old age by stratifying groups of older people using such terms as young-old (ages 65 to 74), middle-old (ages 75 to 84), and old-old (age 85 and older). Subgroups among the elderly, such as institutionalized patients, require different health care services and are growing at different rates. Projections suggest that the number of people over age 85, who are more likely to live in institutional settings than are other older groups, will double between 1980 and 1999. The number of those age 65 and older will increase by only 39 percent.(1) Potential subgroup differences must be recognized when designing program initiatives.

* * *

The National Council on Patient Information and Education (NCPIE), organized in October, 1982, is a non-profit organization concerned with improving communication between patients and health care professionals. NCPIE focuses on a single goal--to promote the safe and effective use of prescription medicines. Our 247 member organizations represent consumers, health care professionals, voluntary health agencies, government, pharmaceutical manufacturers, and other health-related groups.

Membership in NCPIE is open to national, state and local organizations interested in patient education issues about prescription medicines. Annual membership dues are $100 a year.

SECTION I

INAPPROPRIATE USE OF MEDICINES: EXTENT, CONSEQUENCES, AND "CAUSES"

Today, medications prolong life for millions of older Americans. The elderly benefit significantly from the increasing availability of new and better prescription drugs. But improper drug use may pose substantial risks.

Older Americans make up about 12 percent of the U.S. population. Yet they purchase about 25 percent of the 1.5 billion prescriptions written annually.(2) The average older person fills more than twice as many prescriptions as those under age 65.(3) In a study comparing different age groups, older patients were more likely to report taking four or more medications at the same time than younger patients.(4) Medication purchases by older people represent a sizeable proportion of the $25 billion spent annually on prescription medicines.(5) And it is estimated that by the year 2000 there will be 35 million older people, who will consume 50 percent of all prescription drugs. The magnitude of medication use by the elderly suggests that unsafe or ineffective prescription drug use can have a significant effect on individual health and health care costs.

For example, noncompliance with medication regimens, which is a significant problem for patients of all age groups, is an even greater concern with the elderly. While evidence does not consistently show a greater incidence of noncompliance among older people as a whole, (6) it indicates that more than half do not take their medications as prescribed.(7) In addition, studies of all age groups demonstrate that noncompliance is higher than 50 percent with medicines that treat chronic conditions and increases dramatically over time.(8) Estimates show that more than 80 percent of those over age 65 have at least one chronic disease.(9)

A variety of studies demonstrate the potential adverse results of noncompliance. Undermedication can lead to inadequate treatment and consequent increase of disease severity, such as severely elevated blood pressure that requires emergency treatment.(10) The insidious results of inadequately controlled disease are equally serious, if more difficult to quantify. Overmedication has also been shown to lead to increased hospital admissions for older people.(11)

Not all medication-related problems are associated with noncompliance. Older people are also more prone to drug-drug interactions and adverse drug effects.(12) The U.S. General Accounting Office reports that 40 percent of those suffering adverse

drug reactions are over 60 years old. One-sixth of all U.S. hospital admissions of patients over age 70 have been attributed to adverse drug reactions. By comparison, adverse drug reactions account for only one in 35 admissions in the rest of the population. Health care costs for such admissions among elder people are estimated at $21 billion annually.(13)

In a Boston study, 36 percent of 815 consecutive admissions had one or more iatrogenic illnesses, and in 2 percent of cases these contributed to the patient's death; the majority of patients were elderly.(14) A study by a Royal Liverpool Hospital found that prescribing errors sometimes accounted for adverse reactions. General practitioners were most likely to make errors, which included prescribing drugs that had caused previous toxic effects in the patient, contraindicated drugs, or drugs known to interact with other medications the patient was taking.(15)

The Boston Collaborative Drug Project reported that the most common drug interaction problem is excessive central nervous system (CNS) depression, resulting from administration of two or more CNS depressants.(16) Medicare statistics show that 39.4 percent of all beneficiaries' prescriptions are for cardiovascular and renal agents, the medications older people take more frequently than any other.(17) Many of these agents are CNS depressants. Patients 65 and older also have twice the incidence of adverse side effects and drug interactions due to psychotropic medications than younger people do.(18) Common adverse effects include confusion, depression, weakness, falls, dizziness, and skin rashes.(19)

Noncompliance, poor health outcomes, and adverse drug reactions are the consequences of improper use of prescription medicines by the elderly and can be attributed to a variety of "causes." The following factors are thought to be central to these problems and can serve as the framework for discussion.

1. Poor Communication Between Older Patients And Health Professionals.

Studies show that communication about medications between physicians or pharmacists and the population as a whole is inadequate. Most patients say they receive no information about important issues such as side effects and contraindications from either health professional. They also report asking no questions.(20)

This lack of effective interaction about medications is a special concern with older people for several reasons. Although it

is difficult to generalize, some studies show that professionals have negative attitudes about older patients, viewing them stereotypically as hypochondriacal, cantankerous, senile, or childlike.(21, 22) Such "ageist" attitudes can lead to an avoidance of communication. It is not surprising that many health professionals have this negative attitude since educational programs often do not require training in geriatrics.

Hearing loss in some older people may mean that they miss instructions or counseling that professionals do provide.(23)

Some studies indicate that older patients do not comply with medication regimens because they do not understand the instructions.(24) Yet, seeing the physician as an intimidating authority figure and being hesitant to "bother" him or her, older patients may be even less likely than the overall population to ask questions.

2. Use Of Multiple Drugs

Elderly patients often take more than one prescription medicine at the same time to control the chronic conditions common to old age. One study showed that the elderly women sampled took an average of 5.7 prescription drugs and 3.2 over-the-counter drugs at the same time.(25) An investigation of patients recently discharged from the hospital showed that 25 percent received six or more drug prescriptions.(26) Those in the oldest age subgroups take an average of 12 prescribed drugs.(27)

This prescription drug use pattern creates two kinds of problems. First, the complexity of a multiple drug regimen creates compliance problems. Different dosage schedules can be confusing, easy to forget, and inconvenient.(28)

Second, most of the drugs used today have multiple pharmacologic effects. Combining several medications increases the potential for adverse drug reactions. In some cases, synergistic effects are known, and adjustments can be made to minimize them. In other cases, the focus is on avoiding interactions among the primary effects of medications, while the combination of secondary effects on other physiologic systems are overlooked. For example, it is common for older people to receive simultaneously an antipsychotic, an antiparkinsonian agent, and a tricyclic antidepressant. Each drug has a different primary effect. All three, however, increase dry mouth and blurred vision and their additive anticholinergic effect may be substantial.(29)

This potential for multiple drug effects is exacerbated by older patients' frequent concomitant use of over-the-counter medications. One recent study of an ambulatory geriatric population showed that 70 percent of women and 58 percent of men took at least one nonprescription drug.(30)

A British study confirms the increased likelihood of adverse reactions with multiple drug use. Among elderly subjects taking one medication, 10.8 percent were admitted with a drug reaction; nearly 30 percent of the group taking six drugs had such reactions.(31) Several studies show that the frequency of adverse reactions increases as the number of drugs prescribed increases, for older and younger patients.

Some authors believe that multiple, heavy drug use by older people is in part a product of a tendency by physicians to overprescribe for this population.(32) Studies have shown that institutionalized older people receive more doses of prescription drugs per capita than does the non-institutionalized older population.(33) Other concerns include the continuance of therapy that is no longer needed (34) and the poor nature of the patient-provider relationship.(35)

3. Multiple Providers

Multiple, chronic illnesses are common among older people, (36) and like any other population the elderly will have occasional acute problems as well. In many cases, it is necessary to see a variety of specialists to obtain needed treatment. The neurologist, dermatologist, orthopedist, cardiologist, internist, and geriatrician may all contribute to the health plan of one patient. The health care system, even within a single hospital, can be fragmented, with little or no coordination among treatment providers.

Thus, individual physicians unknowingly may prescribe a drug that counteracts the benefits of a medication ordered by another doctor or that interacts adversely with a third prescription medicine. For example, some eyedrops taken for glaucoma interfere with theophylline and oral insulin antidiabetic medicine, thus destabilizing asthma and diabetes.

Patients also may purchase prescriptions and over-the-counter medicines from different pharmacies and retail stores. Lack of coordination may be compounded by automatic refills of medication without a physician's recent consultation.

4. Altered Drug Action And Response With Advancing Age

Research in geriatrics suggests that, for many older people, kidney and liver function decrease with age.(37) Combined with decreased cardiac output, these changes can reduce the capacity for drug metabolism and elimination. This can result in increased concentrations of drugs at their site of action.(38)

In addition, the relative proportion of muscle to fat in the body changes with age, causing alterations in the way drugs are distributed throughout the body.(39) In addition, a variety of other changes may affect the quality and quantity of drug receptor sites in older people.(40)

All of the above mechanisms can lead to greater drug sensitivity and exaggerated drug effects, even at reduced dosages. Altered pharmacokinetics and pharmacodynamics have the potential for creating undue side effects, drug-induced illness, and adverse drug interactions.

Although one solution to this problem is to reduce the doses of affected medications, there are two barriers to such action.

First, drug action varies widely in different older people with different combinations of diseases and treatments, and some older people have metabolic functions similar to those of younger people. Those over 80 often have greater metabolic changes than those between 65 and 80. These individual variations make it difficult for a physician to predict response in older patients. Currently, there is very little good information on which to base dosage decisions for the elderly, although the Food and Drug Administration is addressing this issue. Most drugs are not tested in older populations, and the groups in which medications are tested are usually not representative or characteristic of older populations.(41) In addition, most drug prescribing information to date delineates only a pediatric or an adult dose, with no special indications for use by older people. Approximately two dozen prescription drugs specify geriatric drug doses.

Second, many physicians have not received much, if any, training in geriatric medicine. In 1983, congressional testimony stated that more than 50 percent of universities offer no geriatric training,(42) and fewer than 20 U.S. medical schools (out of more than 125) require geriatric course work.(43) Similar figures were available for U.S. pharmacy schools.

Lack of information is compounded by the tendency of both physicians and older patients to mistake undesirable medication effects for the "natural" effects of aging. Disturbed mental status, fatigue, depression, and syncope are examples of symptoms that are often caused by drug therapy but attributed to old age.(44)

5. Inability To Take The Medication As Prescribed

A number of factors may prevent older people from correctly following their drug regimens. These include:

- o confusion over similarly shaped and colored medications in a multiple regimen or hard-to-read instructions on a medication container, exacerbated by vision impairment;(45)
- o memory loss;(46)
- o medication cost;(47)
- o difficulty in opening childproof containers;(48)
- o lack of a social support system among isolated older people;(49) and
- o inadequate understanding of the regimen by the caregiver.*

6. Deliberate Noncompliance

Older patients exhibit a number of forms of deliberate noncompliance that result in undermedication, overmedication, or inappropriate medication.

For example, 25 percent of the older patients in one study were not taking their drug as directed because they felt they did not need as many tablets or as many doses as prescribed.(50) Others cite a lack of perceived benefit of a drug as a reason for premature discontinuance.(51) Adverse drug effects also can cause an independent decision to stop a medication.(52)

The converse case has also been documented. Elderly patients prescribed symptomatic drugs such as analgesics appear to overcomply, taking more medication to obtain greater pain relief.(53)

Two other types of intentional noncompliance are also a problem with older patients: saving unused portions of prescriptions and self-administering them (often after the drug is outdated);(54) and swapping medications.(55)

These facts suggest the complexity of the issues surrounding improper medication use and the multiplicity of factors that need to be addressed in improving the outlook.

* In this report, "caregiver" refers to family, friends, and other sources of support other than health professionals.

SECTION II

SUGGESTED PRIORITIES FOR ADDRESSING THE FACTORS THAT CONTRIBUTE TO MEDICATION MISUSE AMONG OLDER AMERICANS

Section I addressed many factors that contribute to medication misuse among older people. Meeting the needs posed by these problem factors could involve interventions that provide public or professional education, change the health care system, or improve supports for older patients.

This section outlines 71 priorities for addressing objectives related to the problem areas defined in Section I. Objectives include: improving communication between older patients or their caregivers and health care providers; resolving problems related to multiple drug use by older patients; overcoming problems associated with multiple providers of care for older people; reducing medication problems related to altered drug action in older people; improving the ability of older patients to follow prescribed regimens; and overcoming deliberate noncompliance.

Priorities are presented for the following target audiences: older consumers and their caregivers; health professionals; and the health care system.

For health professionals and consumers, priorities are aimed at changing knowledge, attitudes, and skills for prescribing medications, medication counseling, and taking medications. Interventions for health care delivery systems focus on improving systems, models, products, and the knowledge base related to the use of drugs among older people.

The Advisory Committees for the NCPIE project selected these priorities from a list prepared by staff as important ways to address improving drug use by older Americans. They are not the only priorities for resolving this complex problem, and individual organizations will find some interventions to be more relevant and feasible to address programmatically than others. This list suggests the range of possible actions that could promote appropriate drug use.

A. Priorities for Improving Communication Between Older Patients or Their Caregivers and Health Care Providers

Target Audience: Older Consumers And Their Caregivers

(1) Develop media materials that promote knowledge and enable communication with health care providers about prescription medicines.

(2) Encourage older persons and their caregivers to ask for written instructions, in addition to verbal instructions, on the proper use of prescribed medications. Evidence shows that a combination of verbal provider messages and written reinforcement is very effective.(56)

(3) Urge older persons to ask providers more questions about their prescription medicines.

(4) Provide or advocate reimbursement for medication counseling.

Target Audience: Health Professionals

(1) Raise awareness about the demonstrated value of communication between providers and patients in promoting compliance and providing high-quality medical care.(57)

(2) Encourage health professionals to provide written and audiovisual information about drug use in addition to verbal counseling.

(3) Develop programs to improve the elderly-specific interpersonal and adherence-promotion skills of practitioners.

(4) Promote professional self-assessment of attitudes about older patients.

(5) Raise awareness about the documented reluctance of lower-middle-class and lower-class patients to ask questions and the need for health professionals to provide more information spontaneously.(58)

(6) Educate health professionals in nonverbal communication skills, which evidence shows are important and can be taught.(59)

Target Audience: Health Care System

(1) Develop communication aids that make it easier for older people to discuss medication questions and instructions with their health care providers.

(2) Include positive experiences with older people in the education and training of health professionals.

(3) Conduct or stimulate research about communication practices between providers and older patients regarding medication.

(4) Improve the geriatric education of health professionals.

(5) Enhance the image of geriatrics as a medical specialty.

(6) Conduct or stimulate research about patient-provider communication in the long-term health care setting.

(7) Advocate policies among the aging network organizations that promote improved patient-provider communication.

(8) Develop and promote group education and support programs to supplement patient-provider communication about medications and compliance.

(9) Encourage local organizations representing older people to develop a resource list of practitioners who communicate and interact well with older people.

B. Priorities for Dealing With Multiple Drug Use by Older Patients

Target Audience: Older Consumers And Their Caregivers

(1) Urge older patients to report all drugs being taken to providers. Include alcohol use and over-the-counter drugs.

(2) Target programs to educate and support the caregiver in understanding the older patient's medication regimen and watching for adverse side effects.

(3) Educate older patients and caregivers about common symptoms that may be a result of common drug interactions, and adverse reactions.

(4) Provide complete medication instructions with a focus on scheduling doses to avoid drug interactions (e.g., taking medications that interfere with each other at staggered times).

(5) Encourage consumers to ask physicians and pharmacists about nondrug treatment options.

Target Audience: Health Professionals

(1) Promote awareness of the extent of multiple drug use by older persons.

(2) Educate physicians about the benefits of simplified drug regimens. This strategy would focus on beginning therapy at low doses, using the fewest number of medications possible, using combination medicines as appropriate, and looking for medications that older people can take once or twice a day rather than on a multiple dose schedule. This strategy has been shown to enhance compliance.(60)

(3) Change physicians' attitudes about their prescribing practices. The objective of this strategy would be to reverse the alleged tendency to overmedicate older people. The desired physician attitude would be a willingness to consider nondrug approaches to a problem and a recognition of the need for careful diagnosis because of the common misinterpretation of symptoms. This strategy succeeded in changing prescribing patterns in a recent study.(61)

(4) Educate physicians, nurses, pharmacists, and physician assistants about common symptoms produced by interactions of drugs that older people most frequently take.

(5) Educate physicians and pharmacists about drugs that are in common use but that have been shown to be ineffective for treating problems of older people (e.g., raising

awareness that cerebrovascular dilators are not an effective treatment for senility).

Target Audience: Health Care System

(1) Promote the recording of complete medication histories as a part of all health care for older people.

(2) Develop or promote systems for monitoring drug-taking to ensure up-to-date knowledge about current medication use (including over-the-counter drugs) and past drug-drug or drug-food interactions.

(3) Develop innovative compliance aids for older people, such as the new, inexpensive silicon "timer" chip. Programmed easily and inserted in a medication bottle cap, the chip beeps when it is time to take the medication.

(4) Make new and existing compliance aids widely available to older people and their physicians, and advocate physician use of the products, which have been shown to enhance compliance.

(5) Perform or promote research on the drug-taking and compliance behavior of older Americans and on behavior modification techniques specific for this population.(62)

(6) Conduct age-specific studies or surveys about the nature, causes, outcomes, and prevalence of adverse drug reactions and interactions.

(7) Develop and disseminate a risk profile to aid in predicting which older individuals are at highest risk of having adverse drug reactions or drug-induced illness.

(8) Develop more single-dose and combination medicines for conditions common to older people. Simplified regimens have been shown to increase compliance.

C. Dealing With Problems Associated With Multiple Providers Of Care For Older People

Target Audience: Older Consumers And Their Caregivers

(1) Raise awareness of the ways in which having multiple providers of health care can affect medication-taking outcomes.

(2) Training older people or their caregivers to become the "coordinator" of their own care.

Target Audience: Health Professionals

(1) Communicate the need for providers to coordinate their medication therapies with other providers that see the same patient.

(2) Promote the use of a thorough drug history and medication profile in caring for older people.

(3) Promote a coordinated, interdisciplinary team approach within a single care facility or the community as a whole. Interaction among pharmacists, nurses, and physicians who are counseling and monitoring patients on multiple drug regimens has been shown to enhance compliance.

Target Audience: Health Care System

(1) Improve de-institutionalization procedures that often leave older people confused about additional or different medicines and providers.

(2) Develop and stimulate community-wide or institutional coordination mechanisms among primary care physicians and the specialists to whom they refer older patients.

(3) Develop products, such as a portable medication "passport," that aid and support coordination.

(4) Develop a system in clinic situations that allows the patient a "regular" physician or care coordinator. This has been shown to enhance compliance. (63)

D. Priorities for Coping With Altered Drug Action in Older People

Target Audience: Older Consumers And Their Caregivers

(1) Inform older persons that they are more susceptible to altered drug actions and that they need to report physical or mental changes that might be side effects of medications.

(2) Educate consumers about which drugs are most likely to cause problems and about the symptoms that may result.

(3) Encourage consumers to ask professionals about tailoring dosage to their age.

Target Audience: Health Professionals

(1) Inform providers of the increased susceptibility of older people to altered drug actions.

(2) Encourage physicians to consider individualizing drug therapy for older people, including altering dosage levels to reflect known increased or decreased action.

(3) Promote careful monitoring of drug therapy for older patients (e.g., no automatic refills).

(4) Educate physicians and pharmacists about changes in pharmacodynamics and pharmacokinetics of drugs and the related physiologic mechanisms. Focus on specific drugs known to be a problem.

Target Audience: Health Care System

(1) Improve and disseminate the base of scientific information regarding the specific mechanisms and outcomes of drug action in the elderly.

(2) Develop prescribing aids and guidelines for physicians to use in individualizing therapy, such as creating an "elderly dose" that differentiates from "normal" doses, and develop better procedures for measuring drug action in individuals.(64)

(3) Improve the applicability of new drug testing procedures to the needs of older patients.

(4) Include knowledge about the medication needs of older Americans in certifying examinations for health professionals.

E. Priorities for Improving the Ability of Older Patients to Follow Prescribed Regimens

Target Audience: Older Consumers And Their Caregivers

(1) Encourage patients to ask for written information that they can understand.

(2) Encourage patients to seek out nonverbal adherence aids (e.g., medication calendars, multiday pillboxes, etc.)

Target Audience: Health Professionals

(1) Train professionals to counsel older people about overcoming physical barriers to compliance.

(2) Raise awareness and promote the use of nonverbal aids to compliance.

Target Audience: Health Care System

(1) Develop and promote compliance aids for older people.

(2) Develop support systems for medication-taking for older people with physical disabilities or memory loss.

F. Priorities for Overcoming Deliberate Noncompliance

Target Audience: Older Consumers And Their Caregivers

(1) Encourage patients and caregivers to work with their health professionals and to see themselves as partners in improving their health.

(2) Educate patients and caregivers about the need to follow a prescribed regimen, highlighting common forms of deliberate noncompliance and their results.

Target Audience: Health Professionals

(1) Encourage providers to promote a shared level of responsibility with their older patients for maintaining their health. This approach has been shown to reduce deliberate noncompliance.(65)

(2) Develop programs to improve elderly-specific drug counseling skills.

(3) Raise awareness about common forms of deliberate noncompliance, such as self-medicating or taking less of a medicine than prescribed. Professional counseling could then focus on avoiding these problems.

(4) Raise awareness about the positive effects that spending adequate time in counseling can have on compliance. Sufficient counseling enhances patient satisfaction with care.(66)

Target Audience: Health Care System

(1) Develop workable compliance-monitoring systems that alert practitioners to nonadherence. These may involve testing for levels of a drug in the body or interactive recordkeeping with patients. Research shows that physicians overestimate the extent of compliance in their own practices and have little success in predicting which patients will not comply.(67, 68)

(2) Develop and publicize profiles of deliberate noncompliance by the elderly that will help practitioners identify such behaviors among their patients.

SECTION III

SUGGESTED PROGRAMMATIC APPROACHES FOR ADDRESSING SELECTED PRIORITIES

Once priorities had been defined for each of the six objectives for improving prescription medicine use by older people, advisors of the National Council on Patient Information and Education (NCPIE) selected 17 priorities believed to be most important and most relevant. Interdisciplinary task force sessions then produced ideas for specific initiatives designed to promote needed improvements in each priority area.

The NCPIE education campaign to improve medication use by older Americans encompasses only a portion of the suggested approaches. However, all of the ideas developed are presented in the hope that other organizations may find the ideas appropriate for their program plans. These approaches also may help to spark additional creative thinking and lead to other kinds of initiatives that could profitably address medication misuse issues.

In developing the approaches presented in this section, the advisory group focused on the same three target audiences that the priorities had addressed: older consumers and their caregivers, health professionals, and the health care system. The group considered whether and how to segment the broad audiences and the channels that the NCPIE effort might use to reach each audience.

For these approaches, the target audience of older consumers and their caregivers is defined as all segments of these populations. The channels recommended for reaching this audience include television, radio, and print media; point-of-purchase or service displays and handouts; and direct mail.

For health professionals, the target audience selected includes physicians (with special emphasis on family practitioners and internists), pharmacists, nurses, dentists, physician assistants, nursing home administrators, social workers, and home health care professionals. The recommended channels for reaching these audiences include direct mail to home or office, medical media, professional organizations, insurance companies, pharmaceutical companies, health professionals schools, advocacy organizations, and voluntary health organizations.

The health care system encompasses government health agencies, pharmaceutical manufacturers, health professional schools, health

care administrators, health insurers, research organizations, public health schools, private industry, voluntary health agencies, social service agencies, and home health agencies. The recommended channels for reaching these audiences include the health professional media, professional and trade associations, health professional societies, and industry conferences.

While these audience segments and communication channels provide a useful focus for NCPIE efforts, they are not the only promising alternatives. Other organizations may want to target more specific audiences or choose different communication channels.

For clarity, suggested approaches are grouped by objective, target audience, and priority. However, some of the suggested activities could have an impact on more than one element of medication misuse.

I. OBJECTIVE: IMPROVING COMMUNICATION BETWEEN OLDER PATIENTS OR THEIR CAREGIVERS AND HEALTH CARE PROVIDERS

Target Audience: Older Consumers And Their Caregivers

Priority: Develop media materials that promote knowledge and enable communication with health care providers about prescription medicines.

Specific Approaches:

- o Use the media to create an awareness of why it is important for older people to communicate with health professionals about medicines, and the possible consequences that inadequate information can have on their health. Emphasize the consumers' right to know and their right to consider changing health care providers if they do not give adequate information.

- o Develop a variety of educational tools that work together to reinforce messages about patient-provider communication, including television and radio public service announcements (PSAs); envelope "stuffers" to accompany paychecks or social security payments; activity guidebooks for organizations sponsoring educational activities; consumer materials

written at an easy reading level; and individual and group educational programs that develop consumer communication skills.

- Target materials and messages specifically to the older population. Many older people experience impaired vision or hearing loss. Written materials should feature large, bold print and "easy" colors. Television PSAs should include captions. Themes of materials should appeal to older audiences (e.g., use an older celebrity or spokesperson). Provide materials in foreign languages, especially Spanish.

Priority: Encourage older persons and their caregivers to ask for complete written instructions, in addition to verbal instructions, on the proper use of prescribed medications.

Specific Approaches:

- Develop consumer print ads and television and radio PSAs and talk show modules that emphasize written information as a valuable part of the medical service paid for by consumers.

- Develop media messages that convey the uses, importance, and availability of written information.

- Include an "action step" in all materials and messages, urging consumers to contact an identified source to obtain written information about their medicines.

Priority: Urge older persons to ask providers more questions about their prescription medicines.

Specific Approaches:

- Develop and publicize questions that older patients should ask their health professionals about their medicines, or adopt existing lists of questions provided by groups such as the American Association of Retired Persons, the Pharmaceutical Manufacturers Association, Parke-Davis's Elder-Care Program, the University of Maryland School of Pharmacy's Elder-Ed program, and NCPIE.

- Develop a consumer brochure focusing on critical questions to ask, and advertise its availability through print ads in consumer magazines.

Target Audience: Health Professionals

Priority: Raise awareness about the demonstrated value of communication between providers and patients in promoting compliance and providing high-quality medical care.

Specific Approaches:

- o Develop articles for professional journals, presentations for meetings of professional societies and hospital staffs, and direct-mail messages on this topic. Describe the consequences that poor patient-provider communication has on business and on health.
- o Conduct studies to determine the effect of good patient-provider communication on the incidence of adverse consequences of drug misuse and the incidence of malpractice suits.
- o Translate the impact of poor communication into real economic terms, and promote the benefits to medical practice of communicating well with patients. Use vehicles such as practice management courses and articles in appropriate health journals.

Priority: Encourage health professionals to provide written and audiovisual information about drug use in addition to verbal counseling.

Specific Approaches:

- o Emphasize the value to the provider of furnishing complete verbal and written or audiovisual instructions in attracting and retaining older patients.
- o Raise provider awareness of the kinds of information that may help older patients to take their medicines properly.
- o Provide or promote available resources for written drug information for older people.

Target Audience: Health Care System

Priority: Develop communication aids that make it easier for older people to discuss medication questions and instructions with their health care providers.

Specific Approaches:

- Produce and distribute a wallet card with medication-related questions for patients to ask their health professionals.

- Develop a checklist of relevant information that patients should tell their doctors (e.g., new symptoms that could be medication side effects, problems in following the medication regimen).

- Develop tools, such as patient education guidelines, to help health professionals communicate with patients about medications.

Priority: Include positive experiences with older people in the education and training of health professionals.

Specific Approaches:

- Develop rotations in geriatrics during health professional training. Feature community interaction with senior centers, senior nutrition programs, or senior residence facilities for health screenings or health education opportunities.

- Develop cooperative training arrangements for health professional students with geriatric clinics, retirement facility medical programs, and other elderly-specific medical institutions that treat the noninstitutionalized older population.

- Develop role playing situations or opportunities for videotaping interactions between health profession students and older patients, focusing on conveying appropriate communication skills and overcoming stereotypes.

Priority: Conduct or stimulate research about communication practices between providers and older patients regarding medication.

Specific Approaches:

- o Provide grants to universities to fund studies of this topic, particularly those studies that test the effectiveness of different communication skills or interventions and assess older patients' specific needs for medication information.
- o Identify and publicize related research needs and opportunities in health education and public health professional journals.

II. OBJECTIVE: RESOLVING PROBLEMS RELATED TO MULTIPLE DRUG USE BY OLDER PATIENTS

Target Audience: **Older Consumers And Their Caregivers**

Priority: Urge older patients to report all drugs being taken to providers. Include alcohol use and over-the-counter drugs.

Specific Approaches:

- o Develop television and radio PSAs, messages to stuff in grocery and pharmacy bags, and posters for health facilities and pharmacies that explain the possible consequences of multiple drug use and the importance of informing health providers of all medicines being taken.
- o Promote "brown-bag" sessions with pharmacists or physicians, in which older patients or their caregivers collect and bring in all currently prescribed medications and their containers.
- o Explain in consumer and caregiver messages that the term "drugs" includes alcohol and over-the-counter medications.

Priority: Target programs to educate and support the caregiver in understanding the older patient's medication regimen and watching for adverse side effects.

Specific Approaches:

- o Make consumer media messages relevant to both older patients and their caregivers.
- o Develop or present educational activities that specifically address the information and skills needed by caregivers.

Target Audience: **Health Professionals**

Priority: Promote awareness of the extent of multiple drug use by older persons.

Specific Approaches:

- o Develop an "Ask Your Patient" campaign to encourage health professionals, especially physicians, to question older patients about the medicines they take before prescribing any new drug.
- o Promote the use of medication passports or other recordkeeping forms that help keep professionals informed of all drugs taken by patients. A wide variety of organizations have developed such products that could be adapted for broader use.
- o Develop messages that explain the benefits to compliance of prescribing drugs with simple regimens (e.g., one pill once a day) whenever possible.
- o Develop messages that alert professionals to potential self-medication among older people (e.g., sharing drugs, using "leftover" pills, taking over-the-counter medications).
- o Emphasize to physicians the role that all health professionals can play in teaching older patients to keep medication records and perform other responsibilities. For example, suggest delegation of medication history-taking to nurses or physician assistants in the clinic or practice setting.

III. OBJECTIVE: OVERCOMING PROBLEMS ASSOCIATED WITH MULTIPLE PROVIDERS OF CARE FOR OLDER PEOPLE

Target Audience: **Health Professionals**

Priority: Communicate the need for providers to coordinate their medication therapies with other providers that see the same patient.

Specific Approaches:

- Develop and publish articles and case reports outlining the adverse effects on health outcomes, malpractice risk, and practice growth that can occur when health care providers fail to communicate among themselves about the different medicines they prescribe for the same patient. Report the positive results of innovative approaches to overcoming this barrier.
- Encourage practitioners to provide medication record forms to older patients, to add each new prescription to the record, and to counsel patients about the need to show the record to every physician and pharmacist they see.
- Promote the role of pharmacists in keeping records of patient prescriptions from multiple physicians and in helping patients to recognize and avoid potential adverse drug interactions.

IV. OBJECTIVE: REDUCING MEDICATION PROBLEMS RELATED TO ALTERED DRUG ACTION IN OLDER PEOPLE

Target Audience: **Older Consumers And Their Caregivers**

Priority: Inform older persons that they are more susceptible to altered drug actions and that they need to report physical or mental changes that might be side effects of medications.

Specific Approaches:

- Motivate consumers and caregivers to report possible medication side effects to health professionals, and develop educational activities that explain what to report and how to discuss side effects with providers.

- Develop in-depth communication tools -- such as television or radio "call-in" shows, articles and ads for consumer magazines, and patient brochures for distribution in pharmacies, physicians' offices, and clinics -- to explain issues related to altered drug action.

Target Audience: **Health Professionals**

Priority: Inform providers of the increased susceptibility of older people to altered drug actions.

Specific Approaches:

- Encourage physicians, pharmacists, nurses, and other health providers to monitor older patients especially closely to determine whether the dose prescribed is having the desired effect. Emphasize that individuals vary in their responses and that individualization of dosages is necessary.

- Identify medicines that are overprescribed or inappropriately prescribed for older people, and alert health professionals about these trends.

Target Audience: **Health Care System**

Priority: Improve the geriatric education of health professionals.

Specific Approaches:

- Develop continuing education programs to help physicians, nurses, and pharmacists keep up with new drugs and current prescribing practices related to older patients.

- Provide funding for expanded health professions school curricula in geriatrics, including altered drug action,

recommended prescribing and dispensing practices, and patient education.

- o Conduct and publicize research that identifies the kinds of geriatric health professional education available as well as the areas in need of improvement in existing programs.
- o Provide funding for geriatric chairs at health professional schools and other ways of attracting high quality faculty and enhancing the image of the specialty of geriatrics for health professional students.

V. OBJECTIVE: IMPROVING THE ABILITY OF OLDER PATIENTS TO FOLLOW PRESCRIBED REGIMENS

Target Audience: **Health Care System**

Priority: Develop and promote compliance aids for older people.

Specific Approaches:

- o Develop or promote aids that overcome physical barriers to compliance (e.g., labels with large print; easy-to-handle compartments for organizing a full day's multiple capsules in advance).
- o Apply new technologies to assist compliance, such as the new, inexpensive silicon "timer" chip that is inserted into the lid of the medication container and beeps when it is time to take a medication.
- o Develop social support systems that enhance compliance, such as telephone reminder programs, volunteer in-home assistance, or scheduling aids designed for supportive caregivers at home or for workers in adult day-care settings.

VI. OBJECTIVE: OVERCOMING DELIBERATE NONCOMPLIANCE

Target Audience: **Health Professionals**

Priority: Encourage providers to promote a shared level of responsibility with their older patients for maintaining their health.

Specific Approaches:

- o Raise awareness about the benefits that patient involvement in their own health care can have on compliance. For older patients, level of involvement may vary with the patient's physical and mental ability.
- o Develop "how-to" materials for professionals that can help them promote patient involvement (e.g., how to organize a patient advisory group).
- o Work with health professional students to promote this concept. Focus on specialties such as family medicine where shared responsibility is broadest.
- o Promote the use of patient-provider contracts and other potential mechanisms for enhancing patient responsibility for their health care.

SECTION IV

LOOKING AHEAD

The range of priorities identified by the National Council on Patient Information and Education (NCPIE) requires participation from many different kinds of groups to produce meaningful improvements. Groups can replicate outstanding programs that already exist. The Council recognizes that coordination among groups is important in order to avoid needlessly repeating each other's efforts while leaving important priorities unmet.

At a national level, the Council is working with its 240 member organizations, including many of the leading federal, consumer, voluntary health, industry and health care professional organizations that already are involved in older consumer medication issues. NCPIE is using its regular communication channels to inform its members about the efforts and approaches of other groups in reducing medication misuse among older Americans, and is encouraging networking among interested organizations.

The changes that the NCPIE education campaign -- and the other identified priority interventions -- seek to create are major innovations requiring long-term and, in some cases, radically different, approaches. Success will occur in increments and it will take time both to foster and to institutionalize new behaviors. NCPIE believes that the magnitude of the health and economic costs related to safe and effective medication use by older Americans justifies a major commitment of effort and resources.

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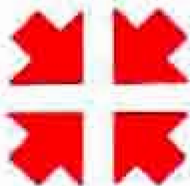

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at original press time:

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