

Medications: A Double-Edged Sword

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“Any symptom in an elderly patient should be considered a drug side effect until proved otherwise.”

Brown University Long-term Care Quality Letter, 1995.

Modern medicines have contributed to longer life spans, improved health and better quality of life. Medications are the most common treatment for many diseases and conditions seen in older people and persons with disabilities. Medicines now not only treat and cure diseases that were untreatable just a few years ago, they aid in the early diagnosis of disease; prevent life-threatening illnesses; relieve pain and suffering; and allow people with terminal illnesses to live more comfortably during their last days.

However, for older adults and people with disabilities, medications—prescription, over-the-counter, social drugs such as alcohol, and herbal remedies/alternative medicines—can be a double-edged sword.

When not used appropriately, effectively and safely, medications can have devastating consequences.

The changes that occur with aging and disability make people more likely to suffer *medication-related problems (MRPs)*. Nevertheless, research has shown that medication-related problems are often preventable. Caregivers can play a key role in helping to identify when an actual or potential MRP is occurring. This assistance can help prevent the costly and unwanted negative consequences of medication use, such as admission to acute care hospitals, assisted living facilities or nursing homes.

About one quarter of all nursing home (hospital) admissions are due at least in part to the inability to take medication correctly.

Research has shown that a high percentage of caregivers help their friends or relatives manage medications. Caregivers for people with Alzheimer’s disease and other memory impairments commonly report problems with getting their relative or friend to take medications on time, in the right amount, and as directed. In surveys, caregivers often report that *their* knowledge of their loved one’s medications—intended uses, directions for use, side effects, possible interactions—is greater than that of the care recipients themselves.

When patients, caregivers, doctors and pharmacists function as a team, medication-related problems can be avoided, contributing to better outcomes and improved daily functioning. This Fact Sheet serves as a caregiver’s guide to medication use and provides tips on what to do about the challenges of that use.

How a Pharmacist Can Help You?

Older adults, people with disabilities and caregivers may encounter challenges when taking medications. Resolving these problems can lead to much better results from medicines. Consumers and caregivers must alert their doctors and pharmacists to any difficulties they have taking medications, including the following:

- **Memory: Difficulty remembering to take medications.** The pharmacist can provide a variety of special pillboxes or other aids that re-mind a caregiver and senior to take medications. The devices range from low-tech, such as simple containers with compartments labelled for meals and bedtime, to high-tech, such as containers that

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beep when it's time for a dose, or a special bottle cap that counts openings of a prescription bottle to tell if the day's doses have been taken. For those with severe memory impairments, caregivers are key to the proper administration of all medicines. In addition, some aging-related service organisations offer medication reminder telephone calls for older persons with memory problems.

- **Vision: Difficulty reading labels on prescription labels and over-the-counter products.** Pharmacists may be able to provide prescription labels in large print. Health care providers and caregivers can read the information on over-the-counter products for consumers with vision impairment. Magnifying glasses may also be helpful.
- **Hearing: Difficulty hearing instructions from health care professionals.** Ask doctors, nurses, and pharmacists to speak louder and/or write down important information relevant to the safe use of medications. Caregivers can also be “the ears” for seniors with hearing impairments.
- **Dexterity: Difficulty opening bottles, inability to break tablets, problems handling medicines** such as eye drops, inhalers for asthma and other lung disease, and insulin injections. These problems are common for people with arthritis and certain types of disabilities. Large, easy-open bottle tops are available for prescription medicines. If a prescription dose is one-half tablet, the pharmacist can split the tablets for you. Caregivers are key to assisting with the administration of eye drops, inhaled medications, injections, and other dosage forms that require fine motor skills. Again, pharmacies can provide instruction sheets on administration of medicines.
- **Swallowing: Difficulty swallowing tablets or capsules.** Many prescription and over-the-counter products are available in a variety of dosage forms such as a liquid, skin patch, or suppository, greatly reducing difficulties associated with swallowing. Ask your pharmacist about alternative dosage forms.
- **Scheduling logistics: Scheduling many different medications throughout the day.** One of the greatest challenges for older persons and caregivers is working medication schedules into daily routines. Special pillboxes and other aids, described above, can help. It's essential that older people and caregivers devise a plan for medication administration that fits their daily schedule. For example, meal times or bedtimes can be used as cues for scheduling medication if mealtimes and bedtimes are regularly scheduled. Doctors and pharmacists can assist in developing a plan to best suit your daily schedule.

Too Many Medicines

One very common problem associated with medication use among older adults and many people with disabilities is the use of multiple medications at one time. Research has shown that the more medications a person takes, the greater the risk of experiencing a medication-related problem. For most older persons, multiple medication use is the norm. Many chronic conditions or diseases—diabetes, heart disease, Parkinson's disease, arthritis, incontinence, high blood pressure, pulmonary disease, osteoporosis, Alzheimer's disease—often require the use of multiple medications. The focus must be the appropriateness, effectiveness, and safety of all prescription and over-the-counter medications. Caregivers must ask questions about each medication, such as:

- Is this medication really needed?
- Is the medication the most appropriate for the medical condition being treated?
- Will the medication be a problem with other medical conditions that are occurring at

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- the same time?
- Is the medication being prescribed at the right dose?
- Does the medication interact with other medications?
- Can the medication be taken correctly based on specific patient circumstances?
- Some of the challenges faced by caregivers who must juggle multiple medications for their loved ones include keeping all the prescriptions filled, especially during weekends and holidays, and managing medications prescribed by multiple doctors. Planning ahead to refill prescriptions on time is essential; keeping an up-to-date medication record can inform doctors of all medicines prescribed by others. A “*Caregiver’s Notebook*”—a loose-leaf binder maintained by a caregiver—is an ideal way to com-pile information on medical diagnoses, doctors’ appointments, questions, and medication history.

Preventing Medication-Related Problems

An important step to preventing problems is for health care professionals, consumers and caregivers to understand what medication-related problems are, to recognise the signs and symptoms of actual and potential MRPs, and to identify appropriate steps that can be taken to reduce the incidence of these common and costly problems.

It’s important to keep in mind that medication effects can directly impact the daily functioning of older and disabled persons. These effects or “symptoms” of MRPs may include:

- Excessive drowsiness
- Confusion
- Depression
- Delirium
- Insomnia
- Parkinson’s-like symptoms
- Incontinence
- Muscle weakness
- Loss of appetite
- Falls and fractures
- Changes in speech and memory.

When these symptoms appear, they should be considered “red flags” to caregivers that an MRP may be happening.

Need for New Medication

This medication-related problem occurs when a person has a medical condition that requires a new or additional medication, but none has been provided. Examples among the older and disabled population include pain and depression, which often go undiagnosed, undertreated or untreated. These conditions are frequently assumed by some health care professionals to be a “normal part of aging.” Inadequate treatment for pain and depression can lead to declines in functioning and participation in social activities.

Seniors often do not discuss all their symptoms with their health care professionals; many health care professionals do not adequately assess for all possible diseases and conditions. Proper assessment by health care professionals is essential so that symptoms can be identified and proper treatment initiated. Seniors and their caregivers must also feel comfortable discussing their symptoms—no matter how sensitive—with health care professionals.

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Unnecessary Medication

This medication-related problem occurs when a patient is taking a medication that is unnecessary given the patient's current medical problems—i.e., there is no longer a valid medical reason to use the medication. In addition, if a patient receives combination therapy when a single drug would be equally effective, then the patient would be receiving unnecessary medication. Patients who are exposed to unnecessary medications may experience toxic effects. The cost of unnecessary medications is also a consideration, especially for many seniors who have limited incomes.

Wrong Medication

This medication-related problem occurs when a person has a medical condition for which the wrong medication is being taken. When a patient is not experiencing the intended positive outcomes from a certain medication, then the wrong medication may have been prescribed. Examples include inappropriate dosage form; the condition is nonresponsive to the medication; medication is not indicated for the condition being treated; or a more effective medication is available. Patients and their caregivers must have a clear understanding of what to expect—and when to expect it—when taking medications. When the result is different, the doctor should be contacted to make him or her aware of the situation.

Dose Too Low

This type of MRP occurs when a patient has a medical condition for which too little of the correct medication has been prescribed or too little is taken. Medication dosages are considered too low if a patient has an appropriate indication for a medication, is not experiencing any side effects from the medication, yet is not realizing the desired benefit. When the correct medication is prescribed and the dose is too low, the benefits of the medication can be minimal or none at all, and may result in serious unpleasant effects through poor treatment. Simply adjusting the dosage and/or dosage interval can improve the clinical outcomes. Again, patients and their caregivers must have a clear understanding of what to expect from their medications.

Dose Too High

Perhaps the most common medication-related problem among older persons is when the correct medication is prescribed, but the dose is too high. This MRP frequently occurs in older people because the physical changes of aging can alter the way our bodies process and react to medications. For example, in the aging body, the liver and kidneys may not as easily remove medications. In addition, changes in the distribution of fat and muscle can make seniors more susceptible to adverse drug events.

These changes increase an older person's sensitivity to a potential adverse effect. A "normal dose" of a medication can be an overdose for many older persons. Some medications, however, are used in the same doses for both older and younger adults. Medications that act on the central nervous system (CNS) are particularly problematic because older persons are extra sensitive to the adverse effects of these medications. Examples include antidepressants, sedatives, antipsychotics, and some blood pressure medications. Signs that a dose may be too high include dizziness, confusion, delirium, insomnia, Parkinson's-like symptoms, loss of appetite, falls, and changes in memory.

Adverse Drug Reactions (ADRs)

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ADRs can occur when a patient is receiving a medication considered to be unsafe based on:

- The characteristics of the patient;
- An allergic reaction to the medication;
- An interaction with another medication or food;
- The incorrect administration of the medication; or
- A medication dosage increased or decreased too rapidly.

Drug interactions can produce uncomfortable or dangerous adverse effects. A very common drug interaction involves blood-thinning medications that can thin the blood even more when combined with aspirin and some other pain relievers. Before prescribing any new drug, the doctor should be aware of all the other drugs the patient may be taking.

Failure to Receive Drugs

For medications to be safe and effective, they must be taken at a particular dosage, at specified times, and for a specific period of time. There are many reasons why patients don't receive medications as prescribed. A patient, for example, may perceive that the medication has caused or will cause some adverse event, is confused about why and how to take the medication, or finds it inconvenient to take the medication.

The high cost of medications and the limited coverage for prescription drugs by Medicare are major causes people don't take their medicines. The use of generic medications, if available, helps reduce out-of-pocket expenses. Many pharmaceutical companies provide free medications or special discounts to persons with low incomes. Call around for the lowest price; many pharmacies will match the prices of their competitors. Ask your doctor for samples.

“Natural” Does Not Necessarily Mean Safe and Effective

The sale of herbal products in the Australia is largely unregulated. Companies that sell these products are not required to demonstrate their safety and effectiveness. Some herbal ingredients are not listed on the packaging or the listing may be incomplete or inaccurate, so you may not know what you are taking. Although some herbal and other natural products may be beneficial in some instances, they can have significant and sometimes unpredictable side effects. Many herbals also interact with prescription and over-the-counter medicines. For example, ginkgo biloba, frequently used for memory loss, may interact with blood thinners, high blood pressure medications, and certain pain relievers such as ibuprofen and naproxen. To avoid problems with herbal medicines, talk to your doctor or pharmacist about any herbals you use or are considering using.

The Basics of Safe Medication Use

- Keep updated lists of all medicines, both for yourself and for the person you are caring for. Keep the lists with you at all times. Include prescription drugs, over-the-counter medicines, vitamins, other nutritional products, and herbal remedies on the list. Share the lists with your doctors or the doctors of the person you are caring for.
- Some caregivers have to prepare and administer injectable medicines, such as insulin. Injections involve the use of a syringe and needle, which may be inserted under the skin or into a vein or muscle. Be certain that you understand and are comfortable with preparing the proper dosage and administering the injection. Nurses in doctor's offices and pharmacists can and should instruct you on the proper techniques for injectable medicines.
- Store all of your medications in a designated location in your home. Keep all medications stored together in one place unless they require refrigeration or are

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labelled “store in a cool place.” This will help if an emergency situation occurs and your doctor needs to review all your medications.

- Be sure that your medications are stored out of reach of any children that may visit, especially if you have non-child proof containers. If you are caring for someone with cognitive or memory problems, be sure all medications are safely stored away.
- Do not mix different medications together in one container; this will make it difficult if not impossible to identify your medications in an emergency.
- Medicines should be stored in a cool, dry area. Do not store your medications in the medicine cabinet in the bathroom or in the kitchen because heat and moisture cause deterioration. Instead, store your medications in a designated area in your bedroom, dining room or living room.
- Medications stored in the refrigerator should be separated from other items in the refrigerator. Consider keeping refrigerated medications in a plastic box or container in one consistent location in the refrigerator.
- Medications taken by mouth should be kept separate from other items that are for external use only, such as creams and ointments.
- Expired medications (there are expiration dates on all of your medications) and any medication that your doctor has discontinued should be discarded.
- Never share or give your medications to another person.

Questions about Medications for Physicians and Pharmacists

One responsibility of patients and their caregivers is to fully prepare for medical appointments. Before visits, write down everything you want to talk about, including important questions related to medications. Take notes during appointments, and review the notes after the appointment. You may have additional questions to ask of doctors and pharmacists, such as:

- Why is this medicine prescribed?
- How does the medicine work in my body?
- How can I expect to feel once I start taking this medicine?
- How will I know that the medicine is working? Is there a typical time period after which my symptoms should improve?
- How long will I have to take the medicine? Will I need a refill when I finish this prescription?
- Will this medicine interact with other medications—prescription and non-prescription—that I am taking now?
- Should I take this medicine with food? Are there any foods or beverages I should avoid? (Grapefruit, for example, may interfere with the action of certain medications.) Is it safe to drink alcohol while on this medicine?
- Are there any activities I should avoid while taking this medicine?
- Can this medicine be chewed, crushed, dissolved, or mixed with other medicines?
- What possible problems might I experience with the medicine? How can I prevent these problems from occurring? At what point should I report problems with the medicine?
- What should I do if I miss a dose of this medicine, or take too much?
- What is the cost of the medicine prescribed? Is there a less expensive alternative prescription?
- Is a generic version of this medicine available? If so, should I purchase the generic instead of the brand name medicine?
- Do you have written information about the medicine that I can take home with me?
- Does the pharmacy provide special services such as home delivery or comprehensive medication review and counselling?

Sharing the Responsibility

The scope and severity of problems that can occur with medication therapy are tremendous.

To prevent these problems from occurring, consumers and caregivers, as well as their health care professionals, have a responsibility to ensure appropriate, safe and effective medication use. All professionals involved in prescribing and dispensing—as well as the consumer and caregiver—should consider themselves essential members of the health care team. The consumer or caregiver who alerts their doctor or nurse to the need for changes to medication therapy plays a vital role in getting the best treatment.

Consumer and caregiver responsibilities centre on effective communication with the health care team. This includes presenting actual or potential medication-related problems in a timely manner to health care professionals, and participating in resolution of the problems. Before this can happen, consumers and caregivers must be able to recognise the possible signs and symptoms of a medication-related problem. *For older adults, any symptom should be considered a medication-related problem until proved otherwise.* When symptoms interfere with daily functioning and when the time sequence of the symptom indicates that it was caused by a medication, then a health care professional should be informed immediately.

For seniors with cognitive impairments, caregivers play a vital role in recognising changes in health conditions and effectively describing problems to health care professionals.