How are all those medications affecting your older patient?

Learn about the risks of polypharmacy and how you can minimize them.

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Roughly 12% of people in the United States are age 65 and older. These older adults take more medications than any other age-group, largely because of chronic illness.[1] Combined with the physiologic effects of aging, taking multiple medications increases an older patient's risk of adverse drug reactions, drug-drug interactions, poor adherence to medication regimens, and other problems affecting her health and quality of life. In this article, I'll discuss how to minimize your patient's risks.

Defining the problem

All these situations are considered polypharmacy:

- using two or more medications to treat the same condition
- using two or more medications in the same drug class or that have the same or similar pharmacologic action
- inappropriate use of multiple medications
- using medications that aren't clinically indicated.[1,2]

Polypharmacy increases the risk of medication errors, patient nonadherence to the prescribed medication regimen, increased morbidity and mortality, and adverse drug events (ADEs).[2] An ADE is any unexpected, unwanted, abnormal, dangerous, or harmful reaction to a medication.

Most ADEs are medication reactions. A *drug-drug* interaction occurs when medications interact unfavorably, possibly adding to the pharmacologic effects. A *drug-disease* interaction occurs when a medication causes an existing disease to worsen, as when anticholinergic medications worsen glaucoma.[3]

The most common reactions from ADEs are nausea, vomiting, diarrhea, constipation, and abdominal pain.[3] More severe reactions include confusion, drowsiness, weakness, and loss of coordination.

The updated Beers Criteria identifies medications that should generally be avoided in people over age 65 and medications to avoid in older patients with certain medical conditions.[4] You can find these criteria at http://archinte.ama-assn.org/cgi/content/full/163/22/2716.

Polypharmacy isn't always inappropriate. *Rational polypharmacy* means that using multiple medications is indicated and appropriate to achieve a greater therapeutic effect with minimal toxicity. For example, a patient with type 2 diabetes may maintain tighter glucose control by combining antihyperglycemic medications.[2]

In contrast, *irrational polypharmacy* refers to the use of multiple drugs when the risks outweigh the benefits. An example is prescribing medication to treat nausea caused by another medication instead of decreasing the first drug's dosage or switching to a drug that's better tolerated.

Contributing factors

Adding medications to the medication regimen increases the risk of adverse reactions, such as confusion, and medication errors. As older adults take more medications, the incidence of ADEs increases exponentially.[1]

Falls are common in older adults and polypharmacy is an important risk factor. Certain medications such as diuretics, antiarrhythmics, and psychotropics are especially risky, and more so when they're part of a multiple-drug regimen. Antidepressants are linked to falls in older adults even when they're prescribed appropriately.[2]

Various situations lend themselves to the development of irrational polypharmacy and ADEs. Several practitioners may prescribe multiple medications, each unaware of what others have prescribed. Patients may fill prescriptions at multiple pharmacies that lack a common database, preventing pharmacists from screening for potential interactions. And some older adults share medications, risking interactions with properly prescribed drugs.

Failing to adhere to the treatment regimen also invites problems. If the patient doesn't understand why a medication is prescribed, what it does, how to take it, and what can happen if she doesn't take it, she's less likely to adhere to treatment. Other common reasons include difficulty opening medication bottles, swallowing a medication, or reading and understanding the directions. A patient may be too embarrassed to admit these problems, especially reading difficulties.

When teaching your patient about her medication therapy, make sure she understands your instructions. If she wears glasses or a hearing aid, make sure she's

wearing them. Provide instructions in simple language and reinforce your teaching with printed teaching aids in an easy-to-read format. Assess her for cognitive impairment and enlist the help of family members if appropriate. If she doesn't speak English, supply information in her native language or enlist the help of a medical translator.

Herbs and supplements

Many older adults use herbal products and other complementary and alternative medicine, but they may not tell their practitioner about them. The FDA doesn't regulate these products, so their safety with relation to other medications is questionable or, in many cases, unknown. But some potential hazards are clear. If your patient is taking antiplatelet or anticoagulant medication, for example, teach her that garlic, ginkgo biloba, and ginseng can trigger bleeding.[5] If she's on warfarin or digoxin, explain that taking St. John's wort for mild depression decreases its effectiveness. Make sure she knows to inform her healthcare provider about all medications and supplements she takes, including over-the-counter (OTC) products.

Interpreting the signs and symptoms of an ADE as the onset of a new illness and prescribing more medication to manage them is known as a *prescribing cascade*.[3] One factor that may contribute to interpreting the new problem as a sign of illness is that the ADE may not appear until the patient has taken several doses of the initial medication.

Take steps to prevent problems

Collaborate with prescribers to protect older patients from the hazards of polypharmacy. Follow these guidelines.

- Obtain a complete patient history and perform medication reconciliation. The *brown bag approach* is a very effective way to review all the patient's medications and supplements. Ask her (or a family member) to place every container of pills, ointments, lotions, eyedrops, inhalers, elixirs, suppositories, herbal preparations, vitamins, minerals, meal replacement bars and drinks, and OTC medications in a bag and bring it to the hospital. She should also take the bag with her each time she visits a practitioner.
- When assessing your patient's medication use, seek answers to two questions: *Is this medication still appropriate?* and *When can it be discontinued?* To reevaluate whether a medication is still necessary, the patient may take a *medication vacation* under the practitioner's supervision.
- Look for prescribing cascades and notify the prescriber so medications that are causing ADEs can be discontinued or replaced.
- Give the patient oral and written information about any new medication prescribed: the name, the reason it's being ordered, how to take it, what may happen if she doesn't take it, possible adverse reactions, and problems to report to the practitioner. Encourage her to fill all prescriptions at one pharmacy and to discuss her medications with the pharmacist. Also advise her to write down all medications and OTC products she's taking, including the dose, the times to take them, and the reason she takes them; stress the importance of keeping this list up-to-date.
- Promote adherence to her medication regimen. With the patient's consent, have someone in her family oversee her medications. Teach her about tools and strategies that support adherence; for example, using a pill dispenser box or color-coded medication container or setting alarms when doses are due.
- Ask the practitioner to prescribe medications that require only once-a-day dosing whenever possible.
- Encourage lifestyle changes such as diet and exercise to help the patient manage problems without medication.
- Teach her not to share her medications with others or to take medications prescribed for others.

Advocating for safety

By being aware of the dangers of polypharmacy, you protect your patients from ADEs and help them get the full benefit from medication therapy. ✧

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