

Introduction: Why It Occurs

Polypharmacy is very common. Often, seniors or people with many health problems need to take several medications to control multiple medical conditions. While these medications, individually, may be warranted, there are times when the number of drugs prescribed for a given issue is more than is necessary. There are a variety of other reasons polypharmacy can occur as well, including:

- **Prescribing cascades:** Having several health conditions, you may experience what is described as a "prescribing cascade," where you are given a prescription to counteract side effects of another medication or to counteract an interaction between two or more other prescribed medications.
- **Disconnected medical care:** This is more likely to occur if you or your loved one is cared for by several doctors, including specialists or physicians who may only see you for a short period of time, such as during an urgent hospitalization. One doctor may give you a prescription that compounds or counteracts the effect of a medication you already take, particularly if you are getting care at a different healthcare center than usual.
- **Pharmacy changes:** If you fill your prescriptions at multiple pharmacies, none are likely to have a complete list of your medication regimen (unless you have visited multiple locations of a pharmacy chain). Interactions between medications may go unnoticed when the combination would have raised a red flag if you were getting all of your prescriptions from the same place.

Challenges

1. Comorbidities;
2. Use of more than one prescribing physician and pharmacy;
3. Utilization of OTC medications, such as dietary supplements and herbal remedies that are often not reported to a physician;
4. Difficulty reading and understanding medication instructions;
5. Age-related, physiological changes;
6. Over- and under prescribing; and
7. Improper dosing.

The latter two are two of the most critical challenges for polypharmacy. A 2004 study in the *Annals of Internal Medicine* showed that the prevalence of omissions of appropriate medicines was 50%, while the prevalence of administering inappropriate medication was only 3%.

Polypharmacy



Reference: Preventing Dangerous Effect of Polypharmacy
https://ceufast.com/imgs/ceufast_polypharmacy.pdf

Dosage Problems

Regarding dosage problems, dosing might be appropriate at the onset of a condition and change as a patient's status improves or worsens, or it might be based on inaccurate patient weight. Appropriate doses for warfarin, for example, could change more than once a week based on a patient's target INR, a standard for evaluating blood coagulation.

Effects

While a drug may be recommended to you because of a specific intended purpose, drugs do not act in isolation in your system. As such, everything you are taking must be considered when making treatment choices.

Polypharmacy poses several concerns:

- Excessive known side effects, particularly for the elderly, as sensitivities to medication increase with age
- Additive side effects when several medications induce similar physical responses
- Dangerous drug interactions, which may produce new side effects not typically associated with either medication
- Diminished effectiveness of one medication due to the metabolic action another medication
- Confusion with regard to medication use, resulting in missed doses, extra doses, or other errors