



fastfacts

Resources for Nursing Home Professionals

Effective Strategies for Medication Safety

Inappropriate medications are a serious problem for the elderly, increasing the risk of adverse effects and costs and causing dramatic medical, safety, and economic consequences. A 2000 study funded by the National Institute on Aging suggests that the average nursing home (106 beds) will have at least 24 adverse drug events and 8 “near misses” per year. If the findings are extrapolated to the 1.5 million U.S. nursing home residents, then at least 350,000 adverse drug events occur every year and more than half are preventable. This FastFacts focuses on developing effective strategies for reducing the use of potentially inappropriate medications in nursing homes.

Understand Unsafe Medication Use

- **Injuries are common.** About one in ten nursing home residents suffers a medication-related injury each month. A national study found that half of all residents received at least one potentially inappropriate medication in one year.
- **Increased costs.** Inappropriate medication use in the elderly is associated with adverse drug reactions, excess health care utilization, and negative physical and cognitive functioning. For every dollar spent on drugs in nursing facilities, about \$1.33 is spent to treat drug-related problems.
- **Higher risk of hospitalization or death.** Medication errors are among the most common causes of injuries to residents. A 2000 study found that any potentially inappropriate medication use doubled a resident’s risk of hospitalization, death, or other adverse health outcome.
- **Adverse drug events are often preventable.** One study found that 51 percent of adverse drug events in nursing homes were preventable, including 72 percent of fatal, life-threatening, or serious events, and 34 percent of significant events.

Avoid Dangerous Medications

- **Use the Beers List.** The Beers List, created by Dr. Mark Beers, is one of the best-recognized and most respected consensus criteria for determining potentially inappropriate medications in older adults. It lists medications that are ineffective, are potentially harmful for specific medical conditions, or pose unnecessarily high risks.

Promote Effective Medication Safety Strategies

- **Monitor residents taking multiple medications.** The more medications taken by a patient, the greater the chance of inappropriate medication use. In one study of residents at high risk of polypharmacy, 46.5 percent received at least one inappropriate medication and 12.8 percent experienced at least one adverse health outcome.
- **Focus on care transitions.** Adverse medication events often occur during transitions to and from nursing homes due to transcription and prescribing errors. In a study of hospitalized patients transferred to nursing homes, medication documentation was illegible 28 percent of the time.
- **Review medications at admission and discharge.** An effective way to avoid errors is medication review: comparing what the resident is taking upon admission with what the nursing home provides. When a resident is admitted, send all medication orders to the pharmacy for approval. The Joint Commission mandates reconciliation of all prescription and non-prescription medications across the continuum of care.
- **Use technology.** Use e-prescribing, bar codes, decision support systems, and computerized administration records to improve medication quality and safety. Physicians and pharmacists can use drug management software to access medication information, order and track medications, and intercept unsafe medications.

Effective Strategies for Medication Safety

■ Focus on medication ordering and monitoring.

Although errors can occur at all stages of the medication process, they usually happen during ordering and monitoring. In one study, 80 percent of preventable adverse drug events occurred at the monitoring stage, when medication effects are assessed. Poor nurse staffing levels affect the quality of monitoring. Licensed nurses must conduct medication assessments according to federal guidelines.

■ Measure the prevalence of inappropriate medication.

Monitor the use of inappropriate medications to begin quality improvement efforts and lower the risk of adverse reactions.

Use a Patient-Centered, Team Approach

■ **Foster a patient-centered care process.** Consider the patient's entire clinical history when making medication decisions. Decisions must be clinically based and made in the context of the patient's medical and psychological conditions. Use the Beers List when planning, reviewing, or changing medication regimens.

■ **Simplify medication regimens.** Review medication regimens about every month to eliminate unnecessary medications. Use the fewest medications and the simplest dosing regimen possible; older adults who take nine or more medications are at higher risk of medication-related problems. If possible, once-a-day dosing is preferred.

■ **Use an interdisciplinary team approach.** Inappropriate use of medications is associated with having multiple prescribers. Physicians, nurses, pharmacists, caregivers, family, and residents should work as a team to optimize individual medication regimens.

Educate Physicians, Nurses, and Staff

■ **Involve pharmacists in educating staff.** Pharmacists are key to medication education. In one study, medication administration error rates decreased from 10.56 percent to 2.87 percent after nurses received educational materials prepared by a pharmacist.

More *FastFacts* available at www.chcf.org/fastfacts.

References

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Web Resources

- American Society of Consultant Pharmacists www.ascp.com/resources/
- Beers List www.dcri.duke.edu/ccge/curtis/beers.html
- Institute for Safe Medication Practices www.ismp.org
- National Patient Safety Foundation www.npsf.org

■ Conduct continuous medical education and in-services.

Focus on drug-to-drug and drug-condition interactions. Conduct hands-on demonstrations on how to recognize adverse reactions. Ensure licensed nurses pass a medication competency test every year.

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