

# MUST for Seniors™

## Fact Sheet: Medicine Use and Older Adults

October 2010 (updated)

### Key Highlights

- Medicines are important therapeutic tools for living well in later life, but there are also risks that increase with age.
- Older adults use more medicines than other age groups, and are at increased risk of serious adverse drug events for a number of reasons (e.g., age-related physiological changes, use of multiple medicines, drug interactions, inappropriate prescribing and monitoring of drug therapy).
- In addition, most older adults live with at least one chronic condition, take multiple medicines, have more than one prescribing healthcare provider and use at least one pharmacy.
- Studies show important gaps in patient-provider communication about medicines, which can contribute to improper medicine use.
- Older age must be taken into account when recommending specific medicines and initial dose.
- Strengthening efforts to educate older adults and their caregivers about medicine use and encouraging them to be active partners in their healthcare is essential to guard against medicine use related problems.

### Medicine Use, Growing Prevalence of Chronic Conditions and Shifting Demographics

- *Older adults use more medications—prescription, over-the-counter (OTC) and supplements—than any other age group in the U.S.<sup>1</sup> This group comprises 13% of the population, but account for 34% of all prescription medication use and 30% of all OTC drug use (those available without a prescription).<sup>1,2</sup> And the likelihood of receiving a prescription increases with age.<sup>1</sup>*
- *Many take multiple medications at the same time. A recent survey of 17,000 Medicare beneficiaries found that 2 out of 5 patients reported taking five or more prescription medications.<sup>3</sup>*
- *Most Medicare beneficiaries (90%) take prescription medications, and as many as 55% are non-adherent.<sup>4</sup>*
- *Older patients tend to have more than one prescribing physician and use at least one pharmacy, making it more difficult to track all of their medications and identify potential problems (e.g., drug interactions, harmful doses, unnecessary medications with no health benefits).<sup>3</sup>*
- *Most older adults—4 out of 5—live with one or more chronic conditions, such as diabetes, high blood pressure, arthritis or cancer.<sup>5</sup> Drug therapy, along with lifestyle changes (e.g., exercise, diet, smoking cessation), is often a key part of the management plan for these conditions.*

- *Demographic changes due to longer life expectancy and an aging baby boomer population warrant increased attention to medication issues among older adults.* By 2030, the number of Americans 65 years of age and older is expected to swell to 71 million—double current estimates.<sup>5</sup> Those 85 years of age and older represent the fastest growing segment of the population.

### **Older Adults More Susceptible to (Preventable) Medicine Use Problems**

Older adults are at increased risk of serious adverse drug events, including falls, depression, confusion, hallucinations and malnutrition, which are an important cause of illness, hospitalization and death among these patients.<sup>2,6,7</sup> Drug-related complications have been attributed to the use of multiple medications (also called polypharmacy) and associated drug interactions, age-related changes, human error and poor medical management (e.g., incorrect medication prescribed, inappropriate doses, lack of communication and monitoring).<sup>1,3</sup>

- *Drug interactions are especially common in older adults due to polypharmacy.* Medicines (prescription and OTCs), dietary supplements, herbal remedies and certain foods can interfere with one other and, in turn, heighten or reduce the intended effect/purpose of the drug(s).<sup>1,8</sup> For example, warfarin, a blood thinner to prevent blood clots, in combination with aspirin, ibuprofen or other NSAIDS greatly increases the risk of serious gastrointestinal problems. Supplements, such as iron and calcium, can interfere with thyroid medicine.
- *Age-related changes can impact how a drug works in the body and often necessitates dosage adjustments and careful monitoring (e.g., blood levels of the drug, patients' reactions).* These include:
  - Reductions in liver and kidney function, which can affect the way a drug is broken down and removed from the body.<sup>8,9</sup> This means medications may stay in the body longer and cause more severe side effects if doses are not properly adjusted. For example, diphenhydramine, commonly found in some OTC sleep aids and cold and allergy medicines, is typically well-tolerated in younger people, but can cause falls and confusion in older adults in whom the drug's sedative properties can circulate longer.<sup>8</sup>
  - Memory impairments, hearing and vision loss, which can make it very difficult to understand and remember medication instructions, especially for complicated regimens.<sup>11</sup>
  - Declines in body weight, loss of body fluid and more fatty tissue, which can alter the way drugs are distributed and concentrated in the body.<sup>8,11</sup>
  - Increased sensitivity to many drugs, especially those targeting the central nervous system.<sup>7</sup>
- *Inappropriate prescribing and lack of monitoring remain a problem within this patient population.* Several studies reveal that 1 in 5 older patients is prescribed what is considered to be a harmful medication in this population.<sup>10,12</sup> Another study suggests that roughly two-thirds of prescriptions are either 1) not needed, 2) unnecessarily unsafe (a safer alternative is available), or 3) the dose is too high.<sup>7</sup> There are a number of drugs that are best avoided in older patients as indicated by the Beers criteria.<sup>9,18</sup> For a complete listing of these medications, visit <http://www.dcri.duke.edu/ccge/curtis/beers.html>.

- *Older adults may not adhere to drug regimens (also called nonadherence) due to forgetfulness or decisions to limit a medication(s) due to bothersome side effects, perceived non-efficacy, or cost.*<sup>1</sup> Up to 40% of older patients who decided to skip doses or stop taking their medicine do not tell their provider.<sup>3</sup> Yet, talking with a provider about cost-related concerns was associated with being switched to a lower cost medication.
- *Such poor communication between older adults and providers about medication use can be harmful.*<sup>3</sup> One-third of patients, and many with three or more chronic conditions, have not talked with their provider about all of their medications within the last year.

### **Education, Dialogue and Research Needed to Improve Medicine Use**

- *Nearly half of all American adults – 90 million people – have difficulty understanding and acting on health information, and this is especially true among our nation’s seniors.*<sup>13</sup> Almost 40% of seniors are unable to read prescription label; 76% are unable to understand information given to them.<sup>14</sup>
- *Older adults should routinely talk to their health care providers, including their pharmacist, to learn about the medicines they use and ensure they understand how to take them appropriately. Those who cut back on prescribed medications because of cost are 76% more likely to have a significant decline in overall health than those who take their medications as prescribed.*<sup>15,16</sup> Older adults should also remember that age-related changes can result in greater drug sensitivity and exaggerated effects.<sup>11</sup>
- *Experts recommend a “Medication Check Up” at least once a year to review all of the patient’s medications, including supplements and herbal remedies, and determine whether all are needed, if there is the potential for drug interactions or dosage adjustments are needed.*<sup>8,9</sup> This review is especially important given the changing prescription drug plan formularies under the new Medicare Part D drug benefit.<sup>3</sup>
- *There remains an urgent need for more research to evaluate drug efficacy and side effects in this population.*<sup>5,17</sup> It wasn't until 1997 that the FDA published guidelines to encourage the enrollment of older adults in clinical trials of drugs to treat common diseases in this population; however, this is a voluntary guideline and older patients, especially those 70 years of age and older, tend to be excluded from drug trials.<sup>19</sup>

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