Blue Cross and Blue Shield of New Mexico

Use of High-Risk Medications in the Elderly

Introduction

Adverse effects of medications and drug related problems can have profound medical and safety consequences for older adults, as well as economic consequences, through increased utilization of medical services. Thirty percent of hospital admissions in the elderly population are reported to be linked to drug related problems (DRP) or adverse drug events (ADE). In a 1997 study of ADEs, 35% of ambulatory older adults reported an ADE and 29% required some follow-up in the healthcare system. Preventable problems associated with ADEs in this patient population include: depression, constipation, falls, immobility, confusion, and hip fractures. Given the impact of drug-related problems, researchers have tried to identify mechanisms to decrease the use of medications which may be inappropriate for older adults.

Background of Lists Developed for Medications to Avoid in the Elderly

Lists of drugs to avoid in the elderly have been developed utilizing consensus methods and are intended for use by health care professionals to improve the use of medications in older adults. The most well-known of these lists is commonly referred to as the **Beers List**. While the original Beers List was targeted at the long-term care population, the most recent version, published in 2003, applies to any person 65 years of age and older (not just those in nursing homes). In July 1999, the Centers for Medicare & Medicaid Services adopted the Beers criteria for use in developing long term care industry regulations and for auditing purposes.

While the Beers List is one of the more widely recognized lists, other groups have developed and published similar criteria. In 2001, an expert panel convened by Zahn et al evaluated a subset of drugs on the Beers List and further categorized 33 of these as drugs: a) that should always be avoided in the elderly, b) that are rarely appropriate, and c) that have some clear-cut indications for use in the elderly but are often misused in clinical practice.

The drug list utilized in a recent (Fall 2007) HISC Medicare Part D Retrospective Drug Utilization Review (DUR) mailing is based on a combination of criteria by both Beers and Zahn and was developed by the **National Committee for Quality Assurance (NCQA)** as a 2007 HEDIS measure. The NCQA list of drugs to avoid in the elderly includes medications categorized by Zahn as **"never or rarely appropriate"** as well as medications only included on the Beers List. However, some **notable omissions from the Beers List include: antidepressants** (amitriptyline, doxepin and fluoxetine), **short-acting benzodiazepines** (alprazolam, lorazepam, oxazepam, temazepam and triazolam) and **NSAIDs** (indomethacin, naproxen and piroxicam). Please refer to the accompanying table below for further details on which medications are included on the NCQA list of medications to avoid in the elderly.

Summary

In summary, lists of drugs to avoid in the elderly have been used extensively for evaluating the use of medications in older adults over the past decade. These criteria, as with all guidelines, cannot substitute for the professional judgment necessary to determine the individualized needs of your older patients. We understand that evaluating medication use in older adults is dependent on many factors (e.g. medication history, chronic diseases, functional status, and prognosis, etc.). In some patients, the benefit of therapy may outweigh the risk of potential harm for any of the medications included on the list of drugs to avoid.

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National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS) 2007 Drugs to Avoid in the Elderly	
Therapeutic Class	**Drug names**
Androgens	• methyltestosterone
Anorexic agents	• benzphetamine • diethylpropion • phendimetrazine • phentermine
Antianxiety	• meprobamate
Antiemetic	• trimethobenzamide
Antihistamines	• cyproheptadine • dexchlorpheniramine • diphenhydramine • hydroxyzine • promethazine • tripelennamine
Antipsychotics	• mesoridazine • thioridazine
Barbiturates	• amytal • butabarbital • mephobarbital • pentobarbital • phenobarbital • secobarbital
Belladonna alkaloids	• atropine • belladonna • hyoscyamine • scopolamine
Benzodiazepines (long-acting)	• chlordiazepoxide • diazepam • flurazepam
Calcium channel blockers	• nifedipine (short-acting only)
Estrogens oral (hormone replacement)	• conjugated • esterified • estradiol • estropipate • ethinyl estradiol
Gastrointestinal antispasmodics	• dicyclomine • propantheline
Narcotics	• meperidine • pentazocine • propoxyphene
Nonsteroidal anti-inflammatory	• ketorolac
Oral hypoglycemics	• chlorpropamide
Platelet aggregation-inhibitors	• dipyridamole (short-acting only)
Skeletal muscle relaxants	• carisoprodol • chlorzoxazone • cyclobenzaprine • metaxalone • methocarbamol • orphenadrine
Stimulants	• amphetamine salts • dextroamphetamine • dexmethylphenidate • methamphetamine • methylphenidate • pemoline
Thyroid hormones	• desiccated thyroid
Urinary anti-infectives	• nitrofurantoin
Vasodilators	• isoxuprine

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REFERENCES

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2. Fick DM, Cooper JW, Wade WE, et al. Updating the Beers criteria for potentially inappropriate medication use in older adults. Arch Intern Med. 2003; 163:2716-24.
3. Zahn C, Sangl J, Bierman AS, et al. Potentially inappropriate medication use in the community-dwelling elderly. JAMA. 2001; 286:2823-29.