Measure 238: Use of High-Risk Medications in the Elderly

Reporting Options: Registry, EHR

Quality Domain: Patient Safety

Description: Percentage of patients aged 66 years and older who were ordered high-risk medications. Two rates are reported:
1. Percentage of patients who were ordered at least one high-risk medication.

2. Percentage of patients who were ordered at least two different high-risk medications.

Instructions: This measure is to be reported a minimum of once per reporting period for patients seen during the reporting period.

Definition:
Cumulative Medication Duration - an individual's total number of medication days over a specific period; the period counts multiple prescriptions with gaps in between, but does not count the gaps during which a medication was not dispensed.
To determine the cumulative medication duration, determine first the number of the Medication Days for each prescription in the period: the number of doses divided by the dose frequency per day. Then add the Medication Days for each prescription without counting any days between the prescriptions.

High risk medication –A high-risk medication is identified by either of the following:
- A prescription for medications classified as high risk at any dose and for any duration listed in Table 1

- Prescriptions for medications classified as high risk at any dose with greater than a 90 day cumulative medication duration listed in Table 2

See Tables Below:

Table A: High-Risk Medications at any dose or duration

Description	Prescription	
Anticholinergics (excludes TCAs), first-generation antihistamines	Brompheniramine Carbinoxamine Chlorpheniramine Cyproheptadine Dexbrompheniramine Dexchlorpheniramine Diphenhydramine (oral) Hydroxyzine Promethazine	Clemastine Doxylamine Triprolidine

Anticholinergics (excludes TCAs), anti-Parkinson agents	• Benztropine (oral) • Trihexyphenidyl	
Antithrombotics	• Dipyridamole, oral short-acting (does not apply to the extended-release combination with aspirin) • Ticlopidine	
Cardiovascular, alpha agonists, central	• Guanabenz • Guanfacine	• Methyldopa
Cardiovascular, other	• Disopyramide	• Nifedipine, immediate release
Central nervous system, tertiary TCAs	• Amitriptyline • Clomipramine	• Imipramine • Trimipramine
Central nervous system, barbiturates	• Amobarbital • Butabarbital • Butalbital • Mephobarbital	• Pentobarbital • Phenobarbital • Secobarbital
Central nervous system,	• Ergot mesylates	• Isoxsuprine

vasodilators		
Central nervous system, other	• Thioridazine • Chloral Hydrate	• Meprobamate
Endocrine system, estrogens with or without progestins; include only oral and topical patch products	• Conjugated estrogen • Esterified estrogen	• Estradiol • Estropipate
Endocrine system, sulfonylureas, long-duration	• Chlorpropamide	• Glyburide
Endocrine system, other	• Desiccated thyroid	• Megestrol
Gastrointestinal system, other	• Trimethobenzamide	
Pain medications, skeletal muscle relaxants	• Carisoprodol • Chlorzoxazone • Cyclobenzaprine	• Metaxalone • Methocarbamol • Orphenadrine
Pain medications, other	• Indomethacin • Ketorolac, includes parenteral	• Meperidine • Pentazocine

Table B: High-Risk Medications with Days Supply Criteria

Description	Prescription		Days Supply Criteria
Anti-Infectives, other	• Nitrofurantoin • Nitrofurantoin macrocrystals	• Nitrofurantoin macrocrystals-monohydrate	>90 days
Nonbenzodiazepine hypnotics	• Eszopiclone • Zaleplon	• Zolpidem	>90 days

Some high-risk medications are not included in this specific measure but should be avoided above a specified average daily dose. These medications are listed in table C. To calculate an average daily dose multiply the quantity of pills ordered by the dose of each pill and divide by the days supply. For example, a prescription for a 30-day supply of digoxin containing 15 pills, 0.250 mg each pill, has an average daily dose of 0.125 mg

Table C: High-Risk Medications with Average Daily Dose Criteria

Description	Prescription	Avg. Daily Dose Criteria
Alpha agonists, central	• Reserpine	>0.1 mg/day
Cardiovascular, other	• Digoxin	>0.125 mg/day
Tertiary TCAs (as single agent or as part of combination products)	• Doxepin	>6 mg/day

Category II Codes:

G9365 One high-risk medication ordered

Or

G9366 One high-risk medication not ordered

Or

G9367 At least two different high-risk medications ordered

Or

G9368 At least two different high-risk medications not ordered

CPT Codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350, G0438, G0439

Note: The Eye codes 92002, 92004, 92012 and 92014 are not included in this measure

Diagnosis Codes
None required for this measure. If your computer system requires a diagnosis, it is appropriate to append the associated exam diagnosis.

Clinical Recommendation Statements: The measure is based on the literature and key clinical expert consensus processes by Beers in 1997, Zahn in 2001 and an updated process by Fick in 2003, which identified drugs of concern in the elderly based on various high-risk criteria. NCQA's Medication Management expert panel selected a subset of drugs that should be used with caution in the elderly for inclusion in the proposed measure based upon these two lists. NCQA analyzed the prevalence of drugs prescribed according to the Beers and Zhan classifications and determined that drugs identified by Zhan that are classified as never or rarely appropriate would form the basis for the list (Fick 2003).
Certain medications (MacKinnon 2003) are associated with increased risk of harms from drug side-effects and drug toxicity and pose a concern for patient safety. There is clinical consensus that these drugs pose increased risks in the elderly (Kaufman 2005). Studies link prescription drug use by the elderly with adverse drug events that contribute to hospitalization, increased length of hospital stay, increased duration of illness, nursing home placement and falls and fractures that are further associated with physical, functional and social decline in the elderly (AHRQ 2009).