

Form 9.1: Measure Information Form

Measure ID	1.2
Measure Set:	Medication Measures
Measure Name <i>(should be brief, concise):</i>	Potentially Inappropriate Medications (PIM)
Measure Description:	This measure describes the percentage of Part D enrollees ≥ 65 years old with ≥ 1 potentially inappropriate medication (PIM).
Version Effective Date:	01/01/2007
Effective date basis:	Date of Service
CMS GTL/PO:	Noni Bodkin / Malini Krishnan
CMS Back-up:	Shaheen Halim
CMS Division Director:	Shaheen Halim
Measure Contractor:	FMQAI
Measure contractor contact:	Kyle Campbell
Measure custodian:	CMS

Version Changes

What has changed in this version?

The measure specifications represent the version of the measure used in the 9th SOW for the Patient Safety Theme. This version of the measure was adapted from the measure originally developed by BearingPoint and includes the original measure justification. The drug list has been harmonized with the National Committee for Quality Assurance (NCQA) Healthcare Effectiveness Data and Information Set (HEDIS) 2008 measure, "Use of High Risk Medications in the Elderly," which is endorsed by the National Quality Forum (NQF) (#0022). The National Drug Codes (NDCs) were provided by NCQA and are current as of 11/15/2007. CMS is not planning updates to the measure specifications for the 9th SOW.

Technical Specifications

Age

Lower Age Limit: ≥ 65 years of age as of the beginning of the measurement period

Upper Age Limit: None

Gender

- ◆ Males and females

Continuous Enrollment

- ◆ Yes; during the measurement period, the beneficiary may not have more than a one-month gap in Part D coverage.

Index Event

N/A

Method of Data collection

- ◆ Electronic only

Scoring

- ◆ Rate

Interpretation of Score:

- ◆ Better quality is associated with a lower score

Payer Source

- ◆ Medicare Advantage plans (MA-PDs)
- ◆ Prescription Drug Plans (PDPs)

Data source

- ◆ Pharmacy data
- ◆ Enrollment data

Denominator

Denominator Statement: Part D beneficiaries ≥ 65 years of age at the start of the measurement period with at least one Part D claim during the measurement period.

Denominator inclusions/exclusions

Exclude the following enrollees from the denominator:

- Enrollees who are actively enrolled in more than one Part D coverage plan concurrently on the last day of the measurement period
- Enrollees who expired during the measurement period
- Enrollees < 65 years of age
- Enrollees with missing DOB in the enrollment file
- Enrollees with no Part D claims during the measurement period

Exclude the following claims from the denominator:

- Claims that have a prescription service date outside the measurement period
- Claims with a status code that indicates it is not a covered drug
- Claims that are not in “final action” status
- Claims that are deleted by an Adjustment/Deletion record
- Claims with a process date $>$ the last day of the measurement period + 3 months

Denominator Time Window: 6-month measurement period

Numerator

Numerator Statement: The number of Part D enrollees in the denominator with ≥ 1 PIM (Attachment A: Table 1) during the measurement period.

Numerator inclusions/exclusions

N/A

Numerator Time Window: 6-month measurement period

Risk Adjustment

Status

- ◆ None, no risk adjustment necessary.

Methodology

- ◆ N/A

Resources

Algorithm attached?

Yes (Attachment C)

Sampling methodology attached?

No

Instruction manual attached?

No

Copyright

Intellectual property status

Public Domain

Copyright Statement:

N/A

Code Set Copyright Statement:

N/A

Measure Justification

Rationale:

I. Importance/Relevance

Epidemiological relevance, financial relevance, policy relevance:

The elderly (65 years of age and older) are the largest group of drug consumers in the United States. Hanlon et al found in their study “Inappropriate Drug Use Among Community-Dwelling Elderly” that 27% of the population (N=3314) took one or more inappropriate drugs based on Beers criteria and that incidence declined to 22.6% 3 years later.¹

Curtis et al conducted a retrospective study using the outpatient prescription claims database of a large, national pharmaceutical benefit manager. The study included 765,423 subjects 65 years or older, who filed 1 or more prescription drug claims over 12 months. The Beers list was used as the reference in the study. Results showed a total of 162,370 subjects (21%) filled a prescription for 1 or more drugs of concern, and 51% of those claims were for drugs with the potential for severe adverse effects. More than 15% of subjects filled prescriptions for 2 drugs of concern, and 4% filled prescriptions for 3 or more of the drugs within the same year. The most commonly prescribed classes were psychotropic drugs and neuromuscular agents.²

Simon et al conducted a cross-sectional study of medications dispensed to elderly members (≥65 and older) of 10 HMOs in geographically diverse locations across the United States from January 1, 2000, through June 30, 2001 (18-month study period). Of the 157,517 members in the sample, 134,156 (85%) had at least one medication dispensed through their HMO drug coverage plan during the 18-month study period. The overall rate of use of at least one of the 33 potentially inappropriate medications within each HMO ranged from 23.0% to 36.5% across the 10 HMOs. Of the four HMOs with a low cap on prescription medication coverage, the overall rate of potentially inappropriate dispensing was 24.8%. This rate was considerably lower than the overall rate, 31.6%, in the HMOs with a medium cap or with a high cap or no cap at all (30.2%).³

An adaptation of the Beers list is used for this measure. Beers criteria have been used for monitoring drugs prescribed for the elderly for over a decade and were used in the CMS surveyor guidance for Federal Tags F329 and 429.⁴ The criteria were updated in 2003 and additions to drugs to avoid in the elderly have been used by other researchers.⁵ Beginning in 2006, NCQA (National Committee on Quality Assurance) will implement Drugs to Avoid in the Elderly as one of the Health Plan Employer Data and Information Set (HEDIS®) measures for quality.

Medicare provided prescription drug benefits to eligible beneficiaries for the first time in 2006. The exposure of an elderly beneficiary to potentially inappropriate medications could be on the rise. This measure will help to focus on this timely and relevant public health issue.

¹ http://www.medscape.com/viewarticle/409550_4

² Curtis LH et al. Inappropriate prescribing for elderly Americans in a large outpatient population. *Arch Intern Med.* 2004 Aug 9-23;164(15):1621-5.

³ Simon SR et al. Potentially Inappropriate Medication Use by Elderly Persons in U.S. Health Maintenance Organizations, 2000-2001. *J Am Geriatr Soc.* 2005;53(2): 227-232.

⁴ Joint Statement on the Beers List of Potentially Inappropriate Medication Use in Older Adults by AMDA and ASCP, 10/5/04.

⁵ Zhan Chunliu et al. Potentially inappropriate medication use in the community dwelling elderly. *JAMA.* 2001; 286(22).

Selection of Candidate PIMs: The list of drugs for this measure is harmonized with those used in the NCQA HEDIS 2008 measure “Use of High Risk Medications in the Elderly.” Refer to Attachment A: Table 1.

II. Scientific Soundness

Explicit evidence base:

Complete one literature citation for each guideline or study on which the measure is based, stating level of evidence and rating scheme used. A suggested format is below; another format may be used.

Literature citation for clinical guideline:	
Author Last Name/Organization:	Simon
Author First Name:	Steve R.
Title of Chapter or Article:	Potentially Inappropriate Medication Use by Elderly Persons in U.S. Health Maintenance Organizations, 2000-2001
Title of Book or Journal:	Journal of American Geriatric Society
Publication Date:	2005
Journal Volume and Number:	53(2)
Pages:	227-232
Web link:	http://www.medscape.com/viewarticle/499905_1
Level of Evidence and Rating Scheme:	A

Literature citation for supporting evidence/study:	
Author Last Name/Organization:	Zhan (et al)
Author First Name:	Chunliu
Title of Chapter or Article:	Potentially Inappropriate Medication Use in the Community-Dwelling Elderly: Findings from the 1996 Medical Expenditure Panel Survey
Title of Book or Journal:	Journal of the American Medical Association
Publication Date:	December 12, 2001
Journal Volume and Number:	286(22)
Pages:	2823-2829
Web link:	http://www.medscape.com/viewarticle/412574_3
Level of Evidence and Rating Scheme:	A

Other aspects of scientific soundness:

Reliability, validity, and adequacy of risk adjustment:

Despite some controversy over the list of selected drugs, the Beers list has been used since 1991 as a national guideline and reference guide for pharmacists and physicians to improve the use of medication in the elderly by identifying potentially inappropriate medications for those 65 and

older. The list has been updated and reviewed by technical experts⁶ and is widely used as the standard to identify potentially inappropriate medications (PIMs) for the elderly.

The Beers list used for this measure is based on the 2003 updated list.⁷ The list of drugs selected for measurement as PIMs was harmonized with the HEDIS 2008 measure “Use of High Risk Medications in the Elderly.” There is no risk adjustment for this measure.

III. Usability/Actionability

Provides actionable decision support, message is clear to recipient, operational relevance

Actionable decision support: QIOs may use the measure results to identify the need for and type of clinical interventions to improve care.

Message is clear to recipient: Measure results should enable QIOs to draw conclusions on whether clinical intervention is warranted.

Operational Relevance: QIOs can work with provider or health system to recommend clinical interventions such as prospective drug utilization review (DUR) and retrospective DUR to monitor potential PIMs. Both are being conducted at the pharmacy level and PBM (pharmacy benefits manager) level on behalf of health plans. Potentially, results can be shared and compared at the QIO level to evaluate if clinical interventions are warranted. This is especially relevant due to the many variables that may affect PIMs and their outcomes.

IV. Feasibility

Specifications are well-defined, reasonable burden of data collection, minimum distortion

Specifications well defined: Explicit and detailed specifications for the numerator and denominator are included; statements of the requirements for data collection are included and have the potential for implementation.

Reasonable burden of data collection: The data source [Prescription Drug Events (PDEs)] needed to calculate the measure is readily available, accessible, and timely. Measurement would require identifying potential PIMs documented in a compendium or compendia and data extraction for drug utilization review to identify potential PIMs.

Minimum distortion: PDE data are part of the reporting requirements for Part D sponsors. The claims are processed at the point-of-care and adjudicated by pharmacy benefit managers (PBM) and have limited potential for distortion except for duplication of claims or misclassification of plan eligibility.

⁶ Fick DM, Cooper JW, Wade WE, et al. Updating the Beers criteria for potentially inappropriate medication use in older adults: results of a US consensus panel of experts. *Arch Intern Med.* 2003;163:2716-2724.

⁷ Ibid

History

CMS Approval Date

(12/20/2006)

Current Measure Status

In Use 9th SOW QIO Program

Upcoming Reviews

Frequency of Measure Update

N/A

Next Measure Update:

N/A

Next Comprehensive Reevaluation:

NQF Endorsement

Initial Endorsement

- ◆ Planned Submission (Y/N) N
 - Related NCQA measure is NQF endorsed (#0022).

CMS Program Use	Date Measure implemented in Program	Status of Measure in Program	Date of Current Status in Program
QIO Program	August 1, 2008	In Use	August 1, 2008

CMS measure purpose

- ◆ Internal quality improvement

Measure Source

- ◆ New

Measure Developer

- ◆ Centers for Medicare & Medicaid Services (CMS)
 - Contractor: BearingPoint Inc.

Effective Date of Original Measure Contract

09/29/2005

End Date of Original Measure Contract

3/15/2007

End Date of Any Extensions to the Original Measure Contract

N/A

Indexing

Primary topic: Clinical conditions

- ◆ N/A

Primary topic: Components other than clinical conditions

- ◆ Other (Patient Safety: Management;
Drug Safety, Medication Gerontology)

Consumer Care Need

- ◆ Living With Illness

Measure Care Setting

- Health Plan
- Prescription Drug Plan

Quality Domain

- ◆ Safety

Type of Measure

- ◆ Process

Unit of Measurement

- Health Plan (MA-PD)
- Prescription Drug Plan (PDP)
- State

Attachments

Attachment A: Tables

Attachment B: National Drug Codes (NDCs)

Attachment C: Algorithm

Notes