



## Complete Summary

### TITLE

Annual monitoring for patients on persistent medications: percentage of members 18 years of age and older who received at least a 180-days supply of ambulatory medication therapy for anticonvulsants during the measurement year and at least one drug serum concentration level monitoring test for the prescribed drug in the measurement year.

### SOURCE(S)

National Committee for Quality Assurance (NCQA). HEDIS 2008: Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2007 Jul. various p.

### Measure Domain

#### PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

#### SECONDARY MEASURE DOMAIN

Does not apply to this measure

### Brief Abstract

#### DESCRIPTION

This measure is used to assess the percentage of members 18 years of age and older who received at least a 180-days supply of ambulatory medication therapy for anticonvulsants (phenobarbital, carbamazepine, phenytoin, divalproex sodium, valproic acid) during the measurement year and at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year.

This measure is a component of a composite measure. For each product line, four separate rates and a combined rate are reported. The other three rates pertain to:

- annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs) (see the related National Quality Measures Clearinghouse [NQMC] summary of the National Committee for Quality Assurance [NCQA] measure [Annual monitoring for patients on persistent medications: percentage of members 18 years of age and older who received at least a 180-days supply of ambulatory medication therapy for ACEIs or ARBs during the measurement year and at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year](#))
- annual monitoring for members on digoxin (see the related National Quality Measures Clearinghouse [NQMC] summary of the National Committee for Quality Assurance [NCQA] measure [Annual monitoring for patients on persistent medications: percentage of members 18 years of age and older who received at least a 180-days supply of ambulatory medication therapy for digoxin during the measurement year and at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year](#))
- annual monitoring for members on diuretics (see the related NQMC summary of the NCQA measure [Annual monitoring for patients on persistent medications: percentage of members 18 years of age and older who received at least a 180-days supply of ambulatory medication therapy for diuretics during the measurement year and at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year](#))

## **RATIONALE**

Patient safety is highly important, especially for patients at increased risk of adverse drug events from long-term medication use. Persistent use of these drugs warrants monitoring and follow-up by the prescribing physician to assess for side-effects and adjust drug dosage/therapeutic decisions accordingly. The drugs included in this measure also have more deleterious effects in the elderly.

The costs of annual monitoring are offset by the reduction in health care costs associated with complications arising from lack of monitoring and follow-up of patients on long-term medications. The cost of annual monitoring is more than offset by savings in the treatment of avoidable drug reactions; over \$85 billion is spent per year to treat drug-related problems caused by misuse in the ambulatory setting.

Appropriate monitoring of drug therapy remains a significant issue to guide therapeutic decision making and provides largely unmet opportunities for improvement in care for patients on persistent medications.

## **PRIMARY CLINICAL COMPONENT**

Persistent medication therapy; anticonvulsants (phenobarbital, carbamazepine, phenytoin, divalproex sodium, valproic acid); annual monitoring

## **DENOMINATOR DESCRIPTION**

Members 18 years of age and older as of December 31 of the measurement year on anticonvulsants (phenobarbital, carbamazepine, phenytoin, divalproex sodium, valproic acid) -- defined as members who received at least a 180-days supply of ambulatory medication in the measurement year (see the "Description of Case Finding" and "Denominator Inclusions/Exclusions" fields in the Complete Summary)

## **NUMERATOR DESCRIPTION**

Members from the denominator with at least one drug serum concentration level monitoring test for the prescribed drug in the measurement year (refer to Table MPM-E in the original measure documentation for codes to identify drug serum concentration monitoring tests). If a member received only one type of anticonvulsant, the drug serum concentration level test must be for the specific drug taken as a persistent medication (i.e., a member on phenytoin received a drug serum test for phenytoin).

If a member persistently received multiple types of anticonvulsants, each anticonvulsant medication and drug monitoring test combination is counted as a unique event (i.e., a member on both phenytoin and valproic acid with at least a 180-days supply for each drug in the measurement year must separately show evidence of receiving drug serum concentration tests for each drug [Table MPM-E] to be considered numerator-compliant for each drug).

## **Evidence Supporting the Measure**

### **EVIDENCE SUPPORTING THE CRITERION OF QUALITY**

- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

## **Evidence Supporting Need for the Measure**

### **NEED FOR THE MEASURE**

Use of this measure to improve performance

### **EVIDENCE SUPPORTING NEED FOR THE MEASURE**

National Committee for Quality Assurance (NCQA). The state of health care quality 2007: industry trends and analysis. Washington (DC): National Committee for Quality Assurance (NCQA); 2007. 93 p.

## **State of Use of the Measure**

### **STATE OF USE**

Current routine use

## **CURRENT USE**

Accreditation  
Decision-making by businesses about health-plan purchasing  
Decision-making by consumers about health plan/provider choice  
External oversight/Medicaid  
External oversight/Medicare  
External oversight/State government program  
Internal quality improvement

## **Application of Measure in its Current Use**

## **CARE SETTING**

Managed Care Plans

## **PROFESSIONALS RESPONSIBLE FOR HEALTH CARE**

Measure is not provider specific

## **LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED**

Single Health Care Delivery Organizations

## **TARGET POPULATION AGE**

Age greater than or equal to 18 years

## **TARGET POPULATION GENDER**

Either male or female

## **STRATIFICATION BY VULNERABLE POPULATIONS**

Unspecified

## **Characteristics of the Primary Clinical Component**

## **INCIDENCE/PREVALENCE**

Unspecified

## **ASSOCIATION WITH VULNERABLE POPULATIONS**

Eighty-seven percent of all hospitalizations from unintentional drug overdoses among those 65 and older are due to drugs that commonly require outpatient monitoring.

## **EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS**

Budnitz DS, Pollock DA, Weidenbach KN, Mendelsohn AB, Schroeder TJ, Annest JL. National surveillance of emergency department visits for outpatient adverse drug events. JAMA2006 Oct 18;296(15):1858-66. [PubMed](#)

## **BURDEN OF ILLNESS**

Patients with long-term use of certain medications are at higher risk for experiencing harmful side effects and drug-related toxicities.

See also the "Utilization" field.

## **EVIDENCE FOR BURDEN OF ILLNESS**

National Committee for Quality Assurance (NCQA). The state of health care quality 2007: industry trends and analysis. Washington (DC): National Committee for Quality Assurance (NCQA); 2007. 93 p.

## **UTILIZATION**

Adverse drug events cause an estimated 1 in 400 Americans to visit an emergency room yearly; of those, 1 in 6 require hospitalization. Drugs that commonly require monitoring in outpatient settings account for over half of all unintentional drug overdoses resulting in an emergency room visit.

## **EVIDENCE FOR UTILIZATION**

Budnitz DS, Pollock DA, Weidenbach KN, Mendelsohn AB, Schroeder TJ, Annest JL. National surveillance of emergency department visits for outpatient adverse drug events. JAMA2006 Oct 18;296(15):1858-66. [PubMed](#)

## **COSTS**

See the "Rationale" and "Utilization" fields.

## **Institute of Medicine National Healthcare Quality Report Categories**

### **IOM CARE NEED**

Living with Illness

### **IOM DOMAIN**

Effectiveness  
Safety

## CASE FINDING

Users of care only

## DESCRIPTION OF CASE FINDING

Members 18 years of age and older as of December 31 of the measurement year on anticonvulsants (phenobarbital, carbamazepine, phenytoin, divalproex sodium, valproic acid) -- defined as members who received at least a 180-days supply of ambulatory medication in the measurement year. Include members who were enrolled as of December 31 of the measurement year with no more than one gap in enrollment of up to 45 days (commercial, Medicare) or not more than a one-month gap in coverage (Medicaid).

## DENOMINATOR SAMPLING FRAME

Patients associated with provider

## DENOMINATOR INCLUSIONS/EXCLUSIONS

### Inclusions

Members 18 years of age and older as of December 31 of the measurement year on anticonvulsants (phenobarbital, carbamazepine, phenytoin, divalproex sodium, valproic acid) -- defined as members who received at least a 180-days supply of ambulatory medication in the measurement year

### Note:

- To determine continuity of treatment during the 365-day period, sum the number of treatment days (days supply from all the scripts filled during the year) for a total of 180 days.
- Refer to Table MPM-D in the original measure documentation in order to identify anticonvulsants. Members who are on multiple anticonvulsant drugs count toward the denominator multiple times if they meet the persistent medications criteria for **each** drug taken during the measurement year (i.e., a member who received at least 180 days of phenytoin and 180 days of valproic acid will be counted twice in the denominator, once for each drug).

### Exclusions

Exclude members who had an inpatient stay (acute or nonacute) in the measurement year. Count any visit with an inpatient facility code or use DRGs or UB Type of Bill codes from Tables IPU-A, FUH-B, MPT-A and IAD-A in the original measure documentation to identify acute and nonacute inpatient care.

## RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

## DENOMINATOR (INDEX) EVENT

Therapeutic Intervention

## **DENOMINATOR TIME WINDOW**

Time window is a fixed period of time

## **NUMERATOR INCLUSIONS/EXCLUSIONS**

### **Inclusions**

Members from the denominator with at least one drug serum concentration level monitoring test for the prescribed drug in the measurement year (refer to Table MPM-E in the original measure documentation for codes to identify drug serum concentration monitoring tests). If a member received only one type of anticonvulsant, the drug serum concentration level test must be for the specific drug taken as a persistent medication (i.e., a member on phenytoin received a drug serum test for phenytoin).

If a member persistently received multiple types of anticonvulsants, each anticonvulsant medication and drug monitoring test combination is counted as a unique event (i.e., a member on both phenytoin and valproic acid with at least a 180-days supply for each drug in the measurement year must separately show evidence of receiving drug serum concentration tests for each drug [Table MPM-E] to be considered numerator-compliant for each drug).

### **Exclusions**

Unspecified

## **MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS**

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

## **NUMERATOR TIME WINDOW**

Fixed time period

## **DATA SOURCE**

Administrative data  
Laboratory data  
Pharmacy data

## **LEVEL OF DETERMINATION OF QUALITY**

Individual Case

## **PRE-EXISTING INSTRUMENT USED**

Unspecified

## Computation of the Measure

### SCORING

Rate

### INTERPRETATION OF SCORE

Better quality is associated with a higher score

### ALLOWANCE FOR PATIENT FACTORS

Analysis by subgroup (stratification on patient factors, geographic factors, etc.)

### DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS

This measure requires that separate rates be reported for commercial, Medicare, and Medicaid product lines.

### STANDARD OF COMPARISON

External comparison at a point in time  
External comparison of time trends  
Internal time comparison

## Evaluation of Measure Properties

### EXTENT OF MEASURE TESTING

Unspecified

## Identifying Information

### ORIGINAL TITLE

Annual monitoring for patients on persistent medications (MPM).

### MEASURE COLLECTION

[HEDIS® 2008: Healthcare Effectiveness Data and Information Set](#)

### MEASURE SET NAME

[Effectiveness of Care](#)

### MEASURE SUBSET NAME

[Medication Management](#)

**DEVELOPER**

National Committee for Quality Assurance

**FUNDING SOURCE(S)**

Unspecified

**COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE**

National Committee for Quality Assurance's (NCQA's) Measurement Advisory Panels (MAPs) are composed of clinical and research experts with an understanding of quality performance measurement in the particular clinical content areas.

**FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST**

In order to fulfill National Committee for Quality Assurance's (NCQA's) mission and vision of improving health care quality through measurement, transparency and accountability, all participants in NCQA's expert panels are required to disclose potential conflicts of interest prior to their participation. The goal of this Conflict Policy is to ensure that decisions which impact development of NCQA's products and services are made as objectively as possible, without improper bias or influence.

**ENDORSER**

National Quality Forum

**ADAPTATION**

Measure was not adapted from another source.

**RELEASE DATE**

2005 Jan

**REVISION DATE**

2007 Jul

**MEASURE STATUS**

**Please note:** This measure has been updated. The National Quality Measures Clearinghouse is working to update this summary.

**SOURCE(S)**

National Committee for Quality Assurance (NCQA). HEDIS 2008: Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2007 Jul. various p.

## **MEASURE AVAILABILITY**

The individual measure, "Annual Monitoring for Patients on Persistent Medications (MPM)," is published in "HEDIS® 2008. Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications."

For more information, contact the National Committee for Quality Assurance (NCQA) at 1100 13th Street, N.W., Suite 1000, Washington, DC 20005; Telephone: 202-955-3500; Fax: 202-955-3599; Web site: [web.ncqa.org](http://web.ncqa.org).

## **COMPANION DOCUMENTS**

The following is available:

- National Committee for Quality Assurance (NCQA). The state of health care quality 2007: industry trends and analysis. Washington (DC): National Committee for Quality Assurance (NCQA); 2007. 93 p.

For more information, contact the National Committee for Quality Assurance (NCQA) at 1100 13th Street, N.W., Suite 1000, Washington, DC 20005; Telephone: 202-955-3500; Fax: 202-955-3599; Web site: [web.ncqa.org](http://web.ncqa.org).

## **NQMC STATUS**

This NQMC summary was completed by ECRI on June 6, 2006. This NQMC summary was revised by ECRI on January 31, 2007. The updated information was not verified by the measure developer. This NQMC summary was updated again by ECRI Institute on April 18, 2008. The information was verified by the measure developer on May 30, 2008.

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