

**Title:** Adherence to Mood Stabilizers for Individuals with Bipolar I Disorder

**CMS ID:** CUHSM6

**NQF #:** 1880

## Source(s)

The Centers for Medicare & Medicaid Services (CMS) has contracted with Florida Medical Assurance Inc. (FMQAI), currently merged with and known as the Health Services Advisory Group (HSAG) to develop, maintain, reevaluate, and support the implementation of quality outcome and process measures for the CMS Inpatient Psychiatric Facility Quality Reporting (IPFQR) Program, and provide services for the Medication Measures Special Innovation Project. The contract name is Inpatient Psychiatric Facility Outcome and Process Measure Development and Maintenance. The contract number is HHSM-500-2013-13007I; HHSM-500-T0004.

## NQS Measure Domain

Patient Safety

## Meaningful Measure Area

Medication Management

## High Priority Status

Outcome

## Type of Measure

Traditional Measure

Proportional Measure

## Brief Abstract

### Description

Percentage of individuals at least 18 years of age as of the beginning of the measurement period with bipolar I disorder who had at least two prescription drug claims for mood stabilizer medications and had a Proportion of Days Covered (PDC) of at least 0.8 for mood stabilizer medications during the measurement period (12 consecutive months).

### Rationale

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The Centers for Medicare & Medicaid Services (CMS) has contracted with Florida Medical Assurance Inc. (FMQAI) to provide services for the Medication Measures Special Innovation Project. The purpose of the project is to develop measures that can be used to support quality healthcare delivery to Medicare beneficiaries.

Number of studies have demonstrated low rates of adherence among individuals with bipolar I disorder who are prescribed mood stabilizer medications. These low adherence rates were corroborated by the results of measure testing conducted by HSAG of Medicare data, which also showed considerable variation among providers. Reported rates of adherence to mood stabilizer medications (defined as a PDC or MPR of 0.8 or greater) among persons with bipolar I disorder range from 16% to 76% in these studies.

Improved medication adherence among individuals with bipolar I disorder would be expected to result in better control of the initial episode, the prevention of relapse to the initial episode, and the recurrence of new manic or depressive episodes, and as a result, lower mental health-related hospitalization rates and lower suicide rates. Adoption of this performance measure has the potential to improve the quality of care for individuals with bipolar I disorder. This measure will help providers identify patients with bipolar I disorder who are not adherent (at a critical threshold of 0.8 or greater) with long-term treatment with mood stabilizer medications. Furthermore, this measure will encourage providers to develop interventions to improve adherence for this high-risk population.

## Evidence for Rationale

[https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/index.html?redirect=/qualitymeasures/05\\_ehrincentiveprogramappeals.asp](https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/index.html?redirect=/qualitymeasures/05_ehrincentiveprogramappeals.asp)

Bagalman, E., Yu-Isenberg, K. S., Durden, E., Crivera, C., Dirani, R., Bunn, W. B. 3rd. (2010). Indirect costs associated with nonadherence to treatment for bipolar disorder. *J Occup Environ Med*, 52(5), 478-85.

Berger, A., Edelsberg, J., et al. (2012). Medication adherence and utilization in patients with schizophrenia or bipolar disorder receiving aripiprazole, quetiapine, or xiprasidone at hospital discharge: A retrospective cohort study. *BMC Psychiatry*, 12, 99.

Hong, J., Reed, C., Novick, D., Haro, J. M., & Aguado, J. (2011). Clinical and economic consequences of medication non-adherence in the treatment of patients with a manic/mixed episode of bipolar disorder: Results from the European Mania in Bipolar Longitudinal Evaluation of Medication (EMBLEM) study. *Psychiatry Res*, 190(1), 110-4. Epub 2011 May 14.

Lage, M. & Hassan, M. (2009). The relationship between antipsychotic medication adherence and patient outcomes among individuals diagnosed with bipolar disorder: a retrospective study. *Ann Gen Psychiatry*, 8, 7.

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Lang, K., Korn, J., Muser, E., Choi, J. C., Abouzaid, S., & Menzin, J. (2011). Predictors of medication nonadherence and hospitalization in Medicaid patients with bipolar I disorder given long-acting or oral antipsychotics. *J Med Econ*, 14(2), 217-26. Epub 2011 Mar 4.

Lew, K. H., Chang, E. Y., et al. (2006). The effect of medication adherence on health care utilization in bipolar disorder. *Managed Care Interface*, 19(9), 41-46.

Rascati, K., Richards, K., et al. (2011). Adherence, persistence of use, and costs associated with second-generation antipsychotics for bipolar disorder. *Psychiatric Services*, 62(9), 1032-1040.

## Primary Health Components

Mood Stabilizers; Bipolar I Disorder; mood disorders

## Denominator Description

Individuals at least 18 years of age as of the beginning of the measurement period with bipolar I disorder and at least two prescription drug claims for mood stabilizer medications during the measurement period (12 consecutive months).

See the related "Denominator Inclusions/Exclusions" field.

## Numerator Description

Individuals with bipolar I disorder who had at least two prescription drug claims for mood stabilizer medications and have a PDC of at least 0.8 for mood stabilizer medications.

See the related "Numerator Inclusions/Exclusions" field.

## Data Collection for the Measure

### Case Finding Period

The measurement year

### Denominator Sampling Frame

Patients associated with provider

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## Denominator (Index) Event or Characteristic

Patient/Individual (Consumer) Characteristic

Therapeutic Intervention

## Denominator Inclusions/Exclusions/Exceptions

Inclusions

Individuals at least 18 years of age as of the beginning of the measurement period with:

1. bipolar I disorder; and
2. at least two prescription drug claims for mood stabilizer medications during the measurement period (12 consecutive months).

Exclusions

Unspecified

Exceptions

N/A

## Numerator Inclusions/Exclusions

Inclusions

Individuals with bipolar I disorder who had;

1. at least two prescription drug claims for mood stabilizer medications; and
2. have a PDC of at least 0.8 for mood stabilizer medications.

The PDC is calculated as follows:

PDC NUMERATOR

The PDC numerator is the sum of the days covered by the days' supply of all prescription drug claims for all mood stabilizer medications. The period covered by the PDC starts on the day the first prescription is filled (index date) and lasts through the end of the measurement period, or death, whichever comes first. For prescriptions drug claims with a days' supply that extends beyond the end of the measurement period, count only the days for which the drug was available to the individual during the measurement period. If there are claims for the same drug (generic name) on the same date of service, keep the claim with the largest days' supply. If claims for the same drug (generic name) overlap, then adjust the prescription start date to be the day after the previous fill has ended.

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Exclusions  
Unspecified

## Computation of the Measure

### Scoring

Rate/Proportion

### Interpretation of Score

Desired value is a higher score

### Risk Adjustment

No

### Coding

Table 1. Codes Used to Identify Bipolar I Disorder Diagnosis

ICD-9-CM: 296.0x, 296.1x, 296.4x, 296.5x, 296.6x, 296.7  
ICD-10-CM: F30.10, F30.11, F30.12, F30.13, F30.2, F30.3, F30.4, F30.9, F31.0, F31.10, F31.11, F31.12, F31.13, F31.2, F31.30, F31.31, F31.32, F31.4, F31.5, F31.60, F31.61, F31.62, F31.63, F31.64, F31.70, F31.71, F31.72, F31.73, F31.74, F31.75, F31.76, F31.77, F31.78, F31.89, F31.9

Table 2. CODES USED TO IDENTIFY ENCOUNTER TYPE in Outpatient Setting

Current Procedural Terminology (CPT): 98960-98962, 99078, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99341-99345, 99347-99350, 99385-99387, 99395-99397, 99401-99404, 99411, 99412, 99429, 99510

HCPCS: G0155, G0176, G0177, G0409-G0411, G0463, H0002, H0004, H0031, H0034-H0037, H0039, H0040, H2000, H2001, H2010-H2020, M0064, S0201, S9480, S9484, S9485, T1015

UB-92 revenue: 0510, 0511, 0513, 0516-0517, 0519-0523, 0526-0529, 0770, 0771, 0779, 0900-0905, 0907, 0911-0917, 0919, 0982, 0983

OR

CPT: 90791, 90792, 90832-90834, 90836-90840, 90845, 90847, 90849, 90853, 90863, 90867-90870, 90875, 90876, 90880, 99221-99223, 99231-99233, 99238, 99239, 99251-99255, 99291

WITH

Place of Service (POS): 03, 05, 07, 09, 11, 12, 13, 14, 15, 20, 22, 24, 33, 49, 50, 52, 53, 71, 72

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Table 3. Mood Stabilizer Medications

Anticonvulsants:

- carbamazepine
- divalproex sodium
- lamotrigine
- valproic acid

Atypical Antipsychotics:

- aripiprazole
- asenapine
- clozapine
- iloperidone
- lurasidone
- olanzapine
- paliperidone
- quetiapine
- risperidone
- ziprasidone

Phenothiazine/Related Antipsychotics:

- chlorpromazine
- fluphenazine
- haloperidol
- loxapine succinate
- molindone
- perphenazine
- pimozide
- prochlorperazine
- thioridazine
- thiothixene
- trifluoperazine

Other Antipsychotics:

- olanzapine-fluoxetine

Lithium Salts:

- lithium carbonate
- lithium citrate

Note: Active ingredients listed above are limited to oral, buccal, sublingual, and translingual formulations only. Obsolete drug products are excluded from National Drug Codes (NDCs) with an inactive date more than three years prior to the beginning of the measurement period or look-back period, if applicable.

The following are the long-acting (depot) injectable antipsychotic medications by class for the denominator. The route of administration includes all injectable and intramuscular formulations of the medications listed below.

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Table 4: Long-Acting Injectable Antipsychotic Medications

Typical Antipsychotic Medications:

fluphenazine decanoate (J2680)  
haloperidol decanoate (J1631)

Atypical Antipsychotic Medications:

aripiprazole (J0401)  
olanzapine pamoate (J2358)  
paliperidone palmitate (J2426)  
risperidone microspheres (J2794)

Note: Since the days' supply variable is not reliable for long-acting injections in administrative data, the days' supply is imputed as listed below for the long-acting (depot) injectable antipsychotic medications billed under Part D and Part B:

- fluphenazine decanoate (J2680) – 28 days' supply
- haloperidol decanoate (J1631) – 28 days' supply
- aripiprazole (J0401) – 28 days' supply
- olanzapine pamoate (J2358) – 28 days' supply
- paliperidone palmitate (J2426) – 28 days' supply
- risperidone microspheres (J2794) – 14 days' supply