Antipsychotic Use in Persons with Dementia

Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF’s measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to subcriterion 1b).

<table>
<thead>
<tr>
<th>Brief Measure Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NQF #:</strong> 2111</td>
</tr>
<tr>
<td><strong>De.2. Measure Title:</strong> Antipsychotic Use in Persons with Dementia</td>
</tr>
<tr>
<td><strong>Co.1.1. Measure Steward:</strong> Pharmacy Quality Alliance</td>
</tr>
<tr>
<td><strong>De.3. Brief Description of Measure:</strong> The percentage of individuals 65 years of age and older with dementia who are receiving an antipsychotic medication without evidence of a psychotic disorder or related condition.</td>
</tr>
<tr>
<td><strong>1b.1. Developer Rationale:</strong> There is increasing concern about the overutilization of antipsychotics in older adults. Evidence shows that antipsychotic medications increase the risk of death and cerebrovascular events in people with dementia. This performance measure may help improve medication use and outcomes for older persons with dementia by reducing their exposure to potentially inappropriate medications through education of clinicians and patients on proper drug selection and usage. “Avoiding the use of inappropriate drugs is an important, simple, and effective strategy in reducing medication-related problems and adverse drug events in older adults.” (1) Improvement in performance on this measure (reduction of non-indicated antipsychotic use in patients with dementia) may lessen the amount of cerebrovascular events and reduce the risk of death in elderly patients with dementia.</td>
</tr>
<tr>
<td><strong>S.4. Numerator Statement:</strong> The number of patients in the denominator who had at least one prescription and &gt; 30 days supply for any antipsychotic medication during the measurement period and do not have a diagnosis of schizophrenia, bipolar disorder, Huntington’s disease or Tourette’s Syndrome.</td>
</tr>
<tr>
<td><strong>S.7. Denominator Statement:</strong> All patients 65 years of age and older continuously enrolled during the measurement period with a diagnosis of dementia and/or two or more prescription claims within the measurement year for a cholinesterase inhibitor or an NMDA receptor antagonist within the measurement year where the sum of days supply is &gt;60.</td>
</tr>
<tr>
<td><strong>S.10. Denominator Exclusions:</strong> N/A</td>
</tr>
<tr>
<td><strong>De.1. Measure Type:</strong> Process</td>
</tr>
<tr>
<td><strong>S.23. Data Source:</strong> Administrative claims</td>
</tr>
<tr>
<td><strong>S.26. Level of Analysis:</strong> Health Plan, Population : National</td>
</tr>
<tr>
<td><strong>IF Endorsement Maintenance – Original Endorsement Date:</strong> Mar 06, 2013 Most Recent Endorsement Date: Mar 06, 2013</td>
</tr>
<tr>
<td><strong>IF this measure is included in a composite, NQF Composite#/title:</strong></td>
</tr>
<tr>
<td><strong>IF this measure is paired/grouped, NQF#/title:</strong></td>
</tr>
<tr>
<td><strong>De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?</strong> N/A</td>
</tr>
</tbody>
</table>


Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. *Measures must be judged to meet all subcriteria to pass this criterion and be evaluated against the remaining criteria.*
1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form
2111_Evidence.docx

1b. Performance Gap
Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:
- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., the benefits or improvements in quality envisioned by use of this measure)
There is increasing concern about the overutilization of antipsychotics in older adults. Evidence shows that antipsychotic medications increase the risk of death and cerebrovascular events in people with dementia. This performance measure may help improve medication use and outcomes for older persons with dementia by reducing their exposure to potentially inappropriate medications through education of clinicians and patients on proper drug selection and usage. “Avoiding the use of inappropriate drugs is an important, simple, and effective strategy in reducing medication-related problems and adverse drug events in older adults.” (1) Improvement in performance on this measure (reduction of non-indicated antipsychotic use in patients with dementia) may lessen the amount of cerebrovascular events and reduce the risk of death in elderly patients with dementia.


1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. (This is required for endorsement maintenance. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included). This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use.

[2016 Entry]
The mean measure rate was calculated using all Centers for Medicaid & Medicare (CMS) 2013 Part D contract data. The number of measured entities is 731 contracts including 652 Medicare Advantage Prescription Drug Plan (MA-PD) contracts and 79 Medicare Prescription Drug Plans (PDP). Over 35 million Medicare beneficiaries were enrolled in prescription drug plans in 2013. This includes 22.5 million in Medicare Prescription Drug Plans and 12.8 million in Medicare Advantage Prescription Drug Plans.

Antipsychotic Use in Persons with Dementia Mean Measure Rate
All Contracts (N=731); Rate 12.8%
MA-PD (n= 652); Rate 12.8%
PDP (n=79); Rate13.1%

Minimum 0%
Maximum 48.0%
Mean 12.8%
Median 12.1%
Standard Deviation 5.8%
Interquartile Range 4.9%
Total Range 47.9%

Scores by deciles:
<table>
<thead>
<tr>
<th>Decile</th>
<th>10th</th>
<th>20th</th>
<th>30th</th>
<th>40th</th>
<th>50th</th>
<th>60th</th>
<th>70th</th>
<th>80th</th>
<th>90th</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>7.7%</td>
<td>9.3%</td>
<td>10.3%</td>
<td>11.3%</td>
<td>12.1%</td>
<td>13.0%</td>
<td>14.0%</td>
<td>15.4%</td>
<td>19.4%</td>
</tr>
</tbody>
</table>

The rates reported in 1b.2 are the most recent scores. Since the measure has not been used prior to 2015, there is no data to compare rates over time. CMS intends to start reporting this measure to prescription drug plans in the 2018 Part D display measure set (using 2016 data). The original testing information (2011 data) will be used to address improvement in section 4b.1.

[2012 Entry]
In general, problems related to medication use are widespread. They bare significant costs in terms of both dollars and poor outcomes but are often preventable. In particular, research has shown usage of drugs for indications other than what the FDA approved the drug for (off-label use) is not untypical. For example one study published in 2006 showed off-label use accounted for just over 20 percent of prescriptions written in 2001. (1)

In relation to atypical antipsychotic drugs, a 2009 Department of Veterans Affairs study showed about 60 percent of individuals received antipsychotic drugs for off-label conditions.(2) An AHRQ report which looked at the drugs’ efficacy and comparative effectiveness, listed the most common off-label uses as treatment of agitation in dementia, depression, OCD, PTSD, personality disorders, Tourette’s syndrome, and autism.(3)

In the nursing home setting, a 2010 study published in the Archives of Internal Medicine showed that over 30% of nursing home residents received at least one antipsychotic medication in 2006 and 43% of patients with dementia and no psychosis received the medication.(4)

A review by the Office of Inspector General of atypical antipsychotic Medicare drug claims for elderly residents showed 14 percent of residents with Medicare claims for atypical antipsychotic drugs, 83 percent of the claims were associated with prescribing for off-label conditions and 88 percent of the claims were associated with patients who had a diagnosis of dementia (a condition for which there is a black-box warning). (5) In addition, a separate review was conducted by the Office of the Inspector General to understand how well nursing homes comply with extra protections set forth for nursing facility residents receiving antipsychotic drugs.(6) The study looked for evidence of compliance with Federal requirements for resident assessments, documentation of decision making, care plan development and implementation. Strikingly, almost all records studied did not meet one or more Federal requirements for resident assessments and/or care plans.(6)

Finally, third quarter 2010 results from the Minimum Data Set (MDS) 2.0, which includes measures to facilitate nursing home resident assessment and care screening, showed the national average prevalence of antipsychotic use, in the absence of psychotic or related conditions to be 18.5%.(7) In addition, the national average prevalence of antipsychotic use, in the absence of psychotic or related conditions for those considered high risk was 39.4%. High risk is defined as those residents who exhibit both cognitive impairment and behavior problems on the most recent assessment. The national average prevalence of antipsychotic use, in the absence of psychotic or related conditions for those considered low risk was 15.6%. Low risk is defined as all other residents who are not high risk (i.e., did not exhibit both cognitive impairment and behavior problems on the most recent assessment.)

Pilot testing of the measure under NQF endorsement consideration, Antipsychotic Use in Persons with Dementia, by two large Medicare Advantage plans using 2011 data also showed room for improvement in performance. Data across the 2 plans found 13.7-15.9% of patients with dementia were receiving an antipsychotic medication, without evidence of a psychotic disorder or related condition.(8) An additional analysis was conducted for a retiree population within an employer-sponsored health plan which found a rate of 18.5%.(8)

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.


6. DHHS. Office of Inspector General, Nursing Facility Assessments and Care Plans for Residents Receiving Atypical Antipsychotic
1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. (This is required for endorsement maintenance. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the subcriterion on improvement (4b.1) under Usability and Use.

[2016 Entry]

Low Income Subsidy
The measure was calculated at the contract level, and was grouped by low-income subsidy (LIS) status, which is a proxy for socioeconomic status. Medicare LIS is a subsidy paid by the Federal government to the drug plan for Medicare beneficiaries who need extra help with their prescription drug costs due to limited income and resources.

The same data source was used for this calculation as in 1b.2.

Antipsychotic Use in Persons with Dementia (N= number of contracts)
Measure Rate Statistics*

<table>
<thead>
<tr>
<th></th>
<th>All Contracts (N=731)</th>
<th>Low Income Subsidy (n= 726)</th>
<th>Non-LIS (n=630)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>12.8%</td>
<td>15.8%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Std Dev.</td>
<td>5.8%</td>
<td>7.4%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Min</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Max</td>
<td>47.9%</td>
<td>71.4%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Scores by deciles:

<table>
<thead>
<tr>
<th></th>
<th>10th</th>
<th>20th</th>
<th>30th</th>
<th>40th</th>
<th>50th</th>
<th>60th</th>
<th>70th</th>
<th>80th</th>
<th>90th</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIS</td>
<td>7.8%</td>
<td>10.6%</td>
<td>12.6%</td>
<td>14.3%</td>
<td>15.6%</td>
<td>17.2%</td>
<td>18.7%</td>
<td>20.6%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Non LIS</td>
<td>0.0%</td>
<td>6.9%</td>
<td>8.1%</td>
<td>8.9%</td>
<td>9.7%</td>
<td>10.4%</td>
<td>11.4%</td>
<td>12.6%</td>
<td>15.0%</td>
</tr>
</tbody>
</table>

*Rates include outliers, which are often due to contracts with very small denominators.

Long-term Nursing Home Stay vs. Community Residence
The measure was calculated at the contract level, and was grouped by whether the patient resided in a nursing home for longer than 100 days at any time during the measure year versus whether they resided in the community during the year. The measure results show an increased use of antipsychotics in persons with dementia who reside in a nursing home facility longer than 100 days.

The same data source was used for this calculation as in 1b.2.

Antipsychotic Use in Persons with Dementia (N= number of contracts)
Measure Rate Statistics*

<table>
<thead>
<tr>
<th></th>
<th>All Contracts (N=731)</th>
<th>Community Only (N=731)</th>
<th>Long-Term Nursing Home Stay (N=678)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>12.8%</td>
<td>10.8%</td>
<td>23.9%</td>
</tr>
<tr>
<td>Std Dev.</td>
<td>5.8%</td>
<td>6.2%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Min</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Max</td>
<td>47.9%</td>
<td>49.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*Rates include outliers, which are often due to contracts with very small denominators.
Data is available to show disparities in antipsychotic prescribing relative to nursing home residence. A 2010 study published in the Archives of Internal Medicine reported evidence of facility-level variation in the prescribing of antipsychotics. The study also found newly-admitted nursing home residents were more likely to receive an antipsychotic if they were in a facility with a higher antipsychotic prescribing rate. This seems to signal that risky prescribing of antipsychotics seems to be a practice norm in some nursing homes and may be due to a nursing home antipsychotic prescribing culture.

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations.


1c. High Priority (previously referred to as High Impact)
The measure addresses:
- a specific national health goal/priority identified by DHHS or the National Priorities Partnership convened by NQF;

OR
- a demonstrated high-priority (high-impact) aspect of healthcare (e.g., affects large numbers of patients and/or has a substantial impact for a smaller population; leading cause of morbidity/mortality; high resource use (current and/or future); severity of illness; and severity of patient/societal consequences of poor quality).

1c.1. Demonstrated high priority aspect of healthcare
Affects large numbers, High resource use, Patient/societal consequences of poor quality

1c.2. If Other:

1c.3. Provide epidemiologic or resource use data that demonstrates the measure addresses a high priority aspect of healthcare. List citations in 1c.4.
The scope of this measure is related to multiple high impact aspects of healthcare including affecting large numbers of patients and producing both high resource use and consequences of poor quality for patients.

Related to affecting large numbers of patients, the denominator focuses on patients 65 years of age and older with dementia. Current estimates describe dementia prevalence as affecting one in eight people age 65 and older, which equals about 13 percent or 5.2 million people. Even more striking is that nearly half of people age 85 years and older are estimated to have this condition. As the proportion of the U.S. population over age 65 continues to increase (especially with aging if the baby boom generation), the number of Americans with Alzheimer’s disease and other dementias will increase as well.

In addition, this measure focuses on medication safety or more specifically, the reduction of inappropriate medication use. Data has shown that about 90 percent of people 65 years of age and older take at least one medication, which is significantly more than any other age group. Patient safety is a key aspect of quality related to medication use in the elderly, given their propensity to adverse drug events due to comorbid conditions and polypharmacy issues. Despite evidence of poor outcomes in older adults, inappropriate medications are prescribed and used as treatment. Studies have shown that almost 30% of adverse drug events in primary care and 40% of adverse events in long-term care are preventable with problems mostly occurring at the initial ordering stage. Total healthcare expenditures related to the use of potentially inappropriate medications has been estimated at $7.2 billion.

Related to specifically to anti-psychotic drugs, their use is common in the elderly. A report by CMS in 2009 indicated that of the top 10 drugs paid for by Medicare Part D in 2006, 3 were atypical antipsychotic drugs. In 2005, Medicaid spent more on atypical antipsychotic medications than on any other class of drugs, about $5.4 billion. In addition, a 2010 study published in the Archives of Internal Medicine showed that over 30% of nursing home residents received at least one antipsychotic medication in 2006, and for over 30% of these patients there was no clinical indication for the medication. Related to financial consequences, a review of Medicare atypical antipsychotic drug claims for elderly nursing home residents showed fifty-one percent of the antipsychotic drug claims were erroneous (including not being used for medically accepted indications) amounting to $116 million.

Finally, serious safety concerns related to anti-psychotic use in the elderly are increasing. In particular, the health consequences of prescribing antipsychotic drugs for elderly patients with dementia are quite large, with side effects related to both increased
morbidity (cardiovascular events such as heart attack and stroke) and risk of death. In 2005, the FDA issued an advisory requiring manufactures of atypical antipsychotic drugs to include a black-box warning. (13) The intent was to warn prescribers and consumers that the use of these drugs is not indicated in patients with dementia given the increased risk of mortality. A follow-up 2007 Agency for Healthcare Research and Quality (AHRQ) report which assessed off-label use of atypical antipsychotic drugs also found that all atypical antipsychotic drugs increase risk of death for elderly persons with dementia. (14)

1c.4. Citations for data demonstrating high priority provided in 1a.3
1c.5. If a PRO-PM (e.g. HRQoL/functional status, symptom/burden, experience with care, health-related behaviors), provide evidence that the target population values the measured PRO and finds it meaningful. (Describe how and from whom their input was obtained.)
### 2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the subcriteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

#### 2a. Specifications

The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

#### De.5. Subject/Topic Area (check all the areas that apply):

- Behavioral Health
- Behavioral Health : Serious Mental Illness
- Mental Health
- Mental Health : Serious Mental Illness
- Neurology
- Neurology : Cognitive Impairment/Dementia

#### De.6. Cross Cutting Areas (check all the areas that apply):

- Safety
- Safety : Medication Safety

#### S.1. Measure-specific Web Page

*Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.*

http://pqaalliance.org/measures/default.asp

#### S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

**This is not an eMeasure** Attachment:

#### S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

Attachment: Full_Listing_and_Conversion_Tables_ICD_9_to_10.xlsx

#### S.3. For endorsement maintenance, please briefly describe any changes to the measure specifications since last endorsement date and explain the reasons.

**Addition of ICD-10 codes:**

A description of the process used to identify ICD-10 codes is included in data field 2b2.2 in the Measure Testing Submission Form. The goal was to take advantage of the more specific code set to form a new version of the measure, but fully consistent with the original intent. The ICD-9 and ICD-10 codes (full listing and conversion is included in S.2b).

**Numerator:** ICD-10 codes were added to Table Dementia D: Codes for Specific Psychotic Disorders or Related Conditions (Disease Codes to Identify Accepted Indications for Antipsychotic Medications).

**Denominator:** ICD-10 codes were added to Dementia Table A: Codes to Identify Dementia

**Clarifying Language added to the Denominator:**

Denominator: Clarifying language added to note that the prescription claims for a cholinesterase inhibitor or an NMDA receptor antagonist must be within the measurement year.

#### S.4. Numerator Statement

*Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome*

*IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm.*

The number of patients in the denominator who had at least one prescription and > 30 days supply for any antipsychotic medication during the measurement period and do not have a diagnosis of schizophrenia, bipolar disorder, Huntington’s disease or Tourette’s Syndrome.

#### S.5. Time Period for Data

*What is the time period in which data will be aggregated for the measure, e.g., 12 mo, 3 years, look back to August for flu vaccination? Note if there are different time periods for the numerator and denominator.*

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**NATIONAL QUALITY FORUM Form version 6.5**

7
The measurement year.

S.6. Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm.

The number of patients in the denominator who had at least one prescription and >30 days supply for any antipsychotic medication during the measurement period (See Table Dementia C) and do not have a diagnosis for schizophrenia, bipolar disorder, Huntington’s disease or Tourette’s Syndrome (See Table Dementia D)

Table Dementia C: Antipsychotic Medications
Aripiprazole
Asenapine
Chlorpromazine
Clozapine
Fluphenazine
Haloperidol
Iloperidone
Loxapine
Lurasidone
Olanzapine
Paliperidone
Perphenazine
Pimozide
Quetiapine
Risperidone
Thioridazine
Thiothixene
Trifluoperazine
Ziprasidone

Note: The active ingredients are limited to oral, sublingual, injectable and intramuscular formulations only. Includes combination products.

Table Dementia D: Disease Codes for Specific Disorders for Exclusion

ICD-9
Schizophrenia:
295.0x to 295.9x
Bipolar/Manic Disorder:
296.0x
296.1x
296.4x to 296.9x
Huntington’s disease
333.4
Tourette’s Syndrome
307.23

ICD-10
Schizophrenia/schizophreniform
F20.0 F20.1 F20.2 F20.3
F20.5 F20.81
F20.89 F20.9 F25.9
Mania
F30.10 F30.11 F30.12 F30.13 F30.2 F30.3 F30.4 F30.8 F30.9
### S.7. Denominator Statement

(Brief, narrative description of the target population being measured)

All patients 65 years of age and older continuously enrolled during the measurement period with a diagnosis of dementia and/or two or more prescription claims within the measurement year for a cholinesterase inhibitor or an NMDA receptor antagonist within the measurement year where the sum of days supply is >60.

### S.8. Target Population Category

(Check all the populations for which the measure is specified and tested if any):

Senior Care

### S.9. Denominator Details

(All information required to identify and calculate the target population/denominator such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

All patients 66 years of age and older as of the last day of the measurement year who were continuously enrolled (i.e., had not disenrolled or died) during the measurement year with both pharmacy and medical benefits and had a diagnosis of dementia (Table Dementia A) and/or two or more prescription claims for a cholinesterase inhibitor or an NMDA receptor antagonist (Dementia Table B) within the measurement year where the sum of days supply is >60.

For a beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (i.e., a member whose coverage lapses for 2 months [60 consecutive days] is not considered continuously enrolled).

Table Dementia B: Cholinesterase Inhibitors and NMDA Receptor Antagonists

donepezil
rivastigmine
galantamine
memantine

Note: The active ingredients are limited to oral and transdermal formulations only.

Table Dementia A: Codes to Identify Dementia

ICD-9
290.0
290.1x
290.2x
290.3
290.4x
294.10
294.20
331.0
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331.82
ICD-10
F01.51  F02.80  F03.90
F05
G30.9
G31.83
A81.00  A81.01  A81.09
F01.50  F02.81  F03.91
F10.27  F10.96  F10.97
F13.27  F13.97
F18.97  F19.17  F19.27  F19.97
G30.0  G30.1  G30.8
G31.01  G31.09  G31.1

S.10. Denominator Exclusions (Brief narrative description of exclusions from the target population)
N/A

S.11. Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)
N/A

S.12. Stratification Details/Variables (All information required to stratify the measure results including the stratification variables, definitions, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)
N/A

S.13. Risk Adjustment Type (Select type. Provide specifications for risk stratification in S.12 and for statistical model in S.14-15)
No risk adjustment or risk stratification
If other:

S.14. Identify the statistical risk model method and variables (Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development and testing should be addressed with measure testing under Scientific Acceptability)
N/A

S.15. Detailed risk model specifications (must be in attached data dictionary/code list Excel or csv file. Also indicate if available at measure-specific URL identified in S.1.)
Note: Risk model details (including coefficients, equations, codes with descriptors, definitions), should be provided on a separate worksheet in the suggested format in the Excel or csv file with data dictionary/code lists at S.2b.

S.15a. Detailed risk model specifications (if not provided in excel or csv file at S.2b)

S.16. Type of score:
Rate/proportion
If other:

S.17. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)
Better quality = Lower score

S.18. Calculation Algorithm/Measure Logic (Describe the calculation of the measure score as an ordered sequence of steps including
#2111 Antipsychotic Use in Persons with Dementia, Last Updated: Apr 08, 2016

**Identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.**

**Step One:**
Calculate the denominator by identifying the number of all eligible patients with either:
1) A diagnosis of dementia (Table Dementia A) and/or
2) Individuals with two or more prescription claims (within the measurement year) for a cholinesterase inhibitor or an NMDA receptor antagonist (Table Dementia B) where the sum of days supply is >60

**Step Two:**
Calculate the numerator by identifying the number of persons in the denominator who have greater than 30 days supply for any antipsychotic medication during the measurement period (Table Dementia C) and do not have a diagnosis for schizophrenia, bipolar disorder, Huntington’s Disease or Tourette’s Syndrome (Table Dementia D).

**Step Three:**
Divide the numerator (step two) by the denominator (step one) and multiply times 100 to calculate the rate as a percentage.

**S.19. Calculation Algorithm/Measure Logic Diagram URL or Attachment** *(You also may provide a diagram of the Calculation Algorithm/Measure Logic described above at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)*

**S.20. Sampling** *(If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)*
If a PRO-PM, identify whether (and how) proxy responses are allowed.
N/A

**S.21. Survey/Patient-reported data** *(If measure is based on a survey, provide instructions for conducting the survey and guidance on minimum response rate.)*
If a PRO-PM, specify calculation of response rates to be reported with performance measure results.

**S.22. Missing data** *(specify how missing data are handled, e.g., imputation, delete case.)*
Required for Composites and PRO-PMs.

**S.23. Data Source** *(Check ONLY the sources for which the measure is SPECIFIED AND TESTED). If other, please describe in S.24.*
Administrative claims

**S.24. Data Source or Collection Instrument** *(Identify the specific data source/data collection instrument e.g. name of database, clinical registry, collection instrument, etc.)*
If a PRO-PM, identify the specific PROM(s); and standard methods, modes, and languages of administration.
Health Plan Medical and Pharmacy Claims. Health Plan member enrollment information.

**S.25. Data Source or Collection Instrument** *(available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)*
No data collection instrument provided

**S.26. Level of Analysis** *(Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)*
Health Plan, Population: National

**S.27. Care Setting** *(Check ONLY the settings for which the measure is SPECIFIED AND TESTED)*
Other, Pharmacy
If other: The level of analysis for this measure is the prescription drug health plan, but it contains claims data from multiple care settings, including ambulatory, skilled nursing facility, pharmacy, etc.

**S.28. COMPOSITE Performance Measure** - Additional Specifications *(Use this section as needed for aggregation and weighting rules,*
### 2. Reliability – See attached Measure Testing Submission Form

#### 2a. Reliability – See attached Measure Testing Submission Form

#### 2b. Validity – See attached Measure Testing Submission Form

#### 3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

**3a. Byproduct of Care Processes**

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

**3a.1. Data Elements Generated as Byproduct of Care Processes.**

Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Other

If other: Prescription claims data.

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**3b. Electronic Sources**

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

**3b.1. To what extent are the specified data elements available electronically in defined fields? (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields)**

ALL data elements are in defined fields in electronic claims

**3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources.**

**3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL.**

**Attachment:**

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**3c. Data Collection Strategy**

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

**3c.1. Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.**

**IF a PRO-PM, consider implications for both individuals providing PROM data (patients, service recipients, respondents) and those whose performance is being measured.**

Pilot test sites indicated the measure was feasible and results were able to be reported efficiently and accurately.

**2016 update: CMS calculates the measure for Part D plans. The data is readily available (prescription claims data and medical data).**

**3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).**

PQA develops and maintains numerous performance measures related to the medication use system. The Measures are the proprietary property of PQA, and it is in the interest of PQA to protect and promote the appropriate use of the Measures. PQA may approve an organization’s use of the Measures; however, no organization may use the Measures without first obtaining permission from PQA prior to using the Measures. Certain uses of the Measures are only approved with a licensing agreement from PQA that
specifies the terms of use an the licensing fee. PQA reserves the right to determine the conditions under which it will approve and/or license the Measures.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4a.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

<table>
<thead>
<tr>
<th>Planned</th>
<th>Current Use (for current use provide URL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Reporting</td>
<td>Quality Improvement with Benchmarking (external benchmarking to multiple organizations)</td>
</tr>
<tr>
<td>Regulatory and Accreditation Programs</td>
<td>CMS Medicare Part D- Patient Safety Reports <a href="http://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/index.html">http://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/index.html</a></td>
</tr>
<tr>
<td>Quality Improvement (Internal to the specific organization)</td>
<td></td>
</tr>
</tbody>
</table>

4a.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

CMS has been considering using this measure in the Medicare Part D prescription drug program. CMS’ further evaluation of the measure has now been completed and the measure will be used in the display measure set using 2016 data.

4a.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

Planned use includes CMS’ addition of the measure to the Medicare Part D patient safety reports, beginning with year of service 2016, and addition to the 2018 Part D display measure set (using 2016 data). From the Memo (Amy Larrick, Acting Director, Medicare Drug Benefit and C&D Data Group, Request for Comments: Enhancements to the Star Ratings for 2017 and Beyond:

CMS (Medicare Part D) will develop new patient safety APD (Antipsychotic Use in Persons with Dementia) measure reports to provide to Part D sponsors on a monthly basis through the Patient Safety Analysis website beginning with year of service 2016. CMS also recommends adding the overall APD measure plus breakout rates for community-only residents, short-term nursing home residents, and long-term nursing home stay residents to the 2018 Part D display measure set (using 2016 data) to continue to draw attention to the inappropriate use of antipsychotics in persons with dementia without an appropriate mental health diagnosis in...
both the community and nursing home settings. The APD measure will replace the Rate of Chronic Use of Atypical Antipsychotics by Elderly Beneficiaries in Nursing Homes display measure.

4b. Improvement
   Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

   4b.1. Progress on Improvement. (Not required for initial endorsement unless available.)
   Performance results on this measure (current and over time) should be provided in 1b.2 and 1b.4. Discuss:
   - Progress (trends in performance results, number and percentage of people receiving high-quality healthcare)
   - Geographic area and number and percentage of accountable entities and patients included
   N/A

   4b.2. If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.
   PQA is not aware of any programs adopting the measure since its initial endorsement, and therefore we do not currently have data demonstrating improvement. However, per the CMS memo dated November 12, 2015, “Medicare Drug Benefit and C&D Data Group, Request for Comments: Enhancements to the Star Ratings for 2017 and Beyond”, CMS will use this measure to monitor use of antipsychotics in persons with dementia covered by the Medicare drug benefit. CMS’ most recent analyses show that there has been little change in the measure rate since initial endorsement of the measure in 2012. This helps support the need for a heightened focus and opportunity to decrease the use of antipsychotics in person with dementia and supports CMS’ decision to adopt the measure into the Part D Star Ratings program.

4c. Unintended Consequences
   The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

   4c.1. Were any unintended negative consequences to individuals or populations identified during testing; OR has evidence of unintended negative consequences to individuals or populations been reported since implementation? If so, identify the negative unintended consequences and describe how benefits outweigh them or actions taken to mitigate them.
   2016 Update
   No unintended negative consequences were identified during the additional testing of the measure.

   2012 Entry
   As referenced previously, this measure is built on medical and pharmacy claims data. There have been several studies that validate the reliability & validity of prescription claims data.
   In addition, additional analyses were carried out during pilot testing (refer to results in sections 2a2.3, 2b2.3, 2b5.3, 2b6.3) to confirm the consistency and accuracy of the measure.

5. Comparison to Related or Competing Measures
   If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures
   Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.
   No

   5.1a. List of related or competing measures (selected from NQF-endorsed measures)
5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

5a. Harmonization
  The measure specifications are harmonized with related measures;
  OR
  The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):
  Are the measure specifications completely harmonized?

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

5b. Competing Measures
  The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);
  OR
  Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):
  Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): Pharmacy Quality Alliance
Co.2 Point of Contact: Julie, Kuhle, jkuhle@pqaalliance.org, 515-554-6685
Co.3 Measure Developer if different from Measure Steward: Pharmacy Quality Alliance
Co.4 Point of Contact: Julie, Kuhle, jkuhle@pqaalliance.org, 515-554-6685

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development
Provide a list of sponsoring organizations and workgroup/panel members’ names and organizations. Describe the members’ role in measure development.

PQA Quality Metrics Expert Panel:
Bimal Patel    MedImpact
Chris DuPaul    CVS pharmacy
Christopher Dezii   Bristol Myers Squibb
Christopher Powers    CMS
Darryl Roberts    Mirixa
Eric Culley    Highmark
Gary Young    Northeastern University
The members’ role in measure development was as follows: The PQA Overuse Workgroup initiated and developed the measure concept through a consensus based process. The Overuse Workgroup consisted of 20 individuals representing PQA member organizations. The workgroup discussed the measure concept during monthly meetings in 2011. In 2012, the Mental Health Workgroup reviewed the measure concept for clinical content. The measure concept was forwarded from the PQA Mental Health Workgroup to the PQA Quality Metric Expert Panel. The Panel reviewed the measure concept, provided input and recommended that technical specifications be added to the measure. The Mental Health Workgroup and the Quality Metric Expert Panel reviewed the measure with the technical specifications prior to testing and then again post-testing.

**Measure Developer/Steward Updates and Ongoing Maintenance**

- **Ad.2 Year the measure was first released:** 2012
- **Ad.3 Month and Year of most recent revision:** 12, 2015
- **Ad.4 What is your frequency for review/update of this measure?** Measures are reviewed annually, though NDC lists are updated bi-annually (January and June).
- **Ad.5 When is the next scheduled review/update for this measure?** 07, 2016

- **Ad.6 Copyright statement:** Rights Retained by PQA, Inc 2016.
- **Ad.7 Disclaimers:**

- **Ad.8 Additional Information/Comments:**