**NATIONAL QUALITY FORUM**

**Measure Testing Evidence Attachment**

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| **NQF #:** 2111 **NQF Project:** Neurology Project |

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| **1. IMPACT, OPPORTUITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT** |
| Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All three subcriteria must be met to pass this criterion. See [guidance](http://www.qualityforum.org/Measuring_Performance/Improving_NQF_Process/Evidence_Task_Force.aspx) [on](http://www.qualityforum.org/Measuring_Performance/Improving_NQF_Process/Evidence_Task_Force.aspx)  [evidence.](http://www.qualityforum.org/Measuring_Performance/Improving_NQF_Process/Evidence_Task_Force.aspx)  ***Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.* (**[**evaluation**](http://www.qualityforum.org/docs/measure_evaluation_criteria.aspx)[**criteria**](http://www.qualityforum.org/docs/measure_evaluation_criteria.aspx)**)** |
| **a.1 Demonstrated High Impact Aspect of Healthcare:** Affects large numbers, High resource use, Patient/societal consequences of poor quality  **1a.2 If “Other,” please describe:**  **1a.3 Summary of Evidence of High Impact** *(Provide epidemiologic or resource use data)***:**  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.(1,2,3) Even more striking is that nearly half of people age 85 years and older are estimated to have this condition. (1,2,3) 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.(2)  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.(4) 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.(5) 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. (6,7) Total healthcare expenditures related to the use of potentially inappropriate medications has been estimated at $7.2 billion.(8)  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.(9) In 2005, Medicaid spent more on atypical antipsychotic medications than on any other class of  drugs, about $5.4billion. (10) 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.11 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. (12)  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)  **1a.4 Citations for Evidence of High Impact cited in 1a.3:** 1.Hebert LE, Scherr PA, Bienias JL, Bennett DA, Evans DA. Alzheimer’s disease in the U.S. population: Prevalence estimates using the 2000 Census. Archives of Neurology 2003;60:1119–22.  2.Alzheimer’s Association, 2012 Alzheimer’s Disease Facts and Figures, Alzheimer’s & [http://www.alz.org/downloads/facts\_figures\_2012.pdf,](http://www.alz.org/downloads/facts_figures_2012.pdf) accessed August 7, 2012.  3B.L. Plassman et al. Prevalence of Dementia in the United States: The Aging, Demographics, and Memory Study Neuroepidemiology 2007;29:125-132   1. Committee on Quality Health Care in America. Institute of Medicine. 2002. To err is human: building a safer health system. Washington, D.C: National Academy Press. 2. The American Geriatrics Society 2012 Beers Criteria Update Expert Panel. American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. J Am Geriatr Soc. 2012 Feb 29 3. Gurwitz JH, Field TS, Harrold LR et al. Incidence and preventability of adverse drug events among older persons in the ambulatory setting. JAMA 2003;289:1107–1116. 4. Gurwitz JH, Field TS, Judge J et al. The incidence of adverse drug events in two large academic long- term care facilities. Am J Med 2005;118:251– 258. 5. Fu AZ, Jiang JZ, Reeves JH et al. Potentially inappropriate medication use and healthcare expenditures in the US community-dwelling elderly. Med Care 2007;45:472–476.   9 CMS, Data Analysis Brief: Medicare Part D Utilization Trends for Atypical Antipsychotics: 2006–2008, June 2009. Accessed at [http://www.cms.hhs.gov](http://www.cms.hhs.gov/) on August 8, 2012.   1. Lagnado L. Nursing Homes Struggle To Kick Drug Habit. 2007. December 2007] [http://online.wsj.com/article/SB119811286789841083.html.](http://online.wsj.com/article/SB119811286789841083.html) Accessed August 8, 2012. 2. Chen Y, Briesacher B, Field T, Unexplained Variation across U.S. Nursing Homes in Antipsychotic Prescribing Rates. Arch Intern Med. 2010 January 11; 170(1): 89–95 3. DHHS. Office of Inspector General, Medicare Atypical Antipsychotic Drug Claims for Elderly Nursing Home Residents. 2011. <http://oig.hhs.gov/oei/reports/oei-07-08-00150.pdf> Accessed August 7, 2012 4. Public Health Advisory: Deaths With Antipsychotics in Elderly Patients With Behavioral Disturbances, April 2005. Accessed at <http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/DrugSafety> InformationforHeathcareProfessionals/PublicHealthAdvisories/ucm053171.htm on August 8, 2012. 5. AHRQ, Efficacy and Comparative Effectiveness of Off-Label Use of Atypical Antipsychotics (07- EHCOO3-EF), January 2007. |

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| **1b.1 Briefly explain the benefits (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.  1.The American Geriatrics Society 2012 Beers Criteria Update Expert Panel. American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. J Am Geriatr Soc. 2012 Feb 29  **1b.2 Summary of Data Demonstrating Performance Gap** *(Variation or overall less than optimal performance across providers)***: [*For Maintenance –*** *Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.***]** 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%.7 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%.(7) 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 Citations for Data on Performance Gap: [*For Maintenance –*** *Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included***]**  1. D.C. Radley, S.N. Finkelstein, and R.S. Stafford, “Off-Label Prescribing Among Office-Based Physicians,” Archives of Internal Medicine, Vol. 166, 2006, pp. 1021–1026.  2.D.L. Leslie, S. Mohamed, and R.A. Rosenheck, “Off-Label Use of Antipsychotic Medications in the Department of Veterans Affairs Health Care System,” Psychiatric Services, Vol. 60, No. 9, 2009, pp. 1175– 1181.   1. AHRQ, Efficacy and Comparative Effectiveness of Off-Label Use of Atypical Antipsychotics (07-EHCOO3- EF), January 2007. 2. Chen Y, Briesacher B, Field T, Unexplained Variation across U.S. Nursing Homes in Antipsychotic Prescribing Rates. Arch Intern Med. 2010 January 11; 170(1): 89–95. 3. DHHS. Office of Inspector General, Medicare Atypical Antipsychotic Drug Claims for Elderly Nursing Home Residents. 2011. <http://oig.hhs.gov/oei/reports/oei-07-08-00150.pdf> Accessed August 7, 2012. 4. DHHS. Office of Inspector General, Nursing Facility Assessments and Care Plans for Residents Receiving Atypical Antipsychotic Drugs. 2012. [http://oig.hhs.gov/oei/reports/oei-07-08-00151.pdf.](http://oig.hhs.gov/oei/reports/oei-07-08-00151.pdf) Accessed August 7, 2012. 5. CMS. MDS Quality Measure/Indicator Report.Psychotropic Drug Use- July/September 2010.<http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-> Systems/MDSPubQIandResRep/qmreport.html Accessed August 14, 2012. 6. Pharmacy Quality Alliance Field Test Results, using 2011 data. [www.pqaalliance.org](http://www.pqaalliance.org/)   **1b.4 Summary of Data on Disparities by Population Group: [*For Maintenance –****Descriptive statistics for performance results for this measure by population group***]**  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.1 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.(1)  **1b.5 Citations for Data on Disparities Cited in 1b.4: [*For Maintenance –*** *Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included***]**  1. Chen Y, Briesacher B, Field T, Unexplained Variation across U.S. Nursing Homes in Antipsychotic Prescribing Rates. Arch Intern Med. 2010 January 11; 170(1): 89–95 |

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| **1c.1 Structure-Process-Outcome Relationship** *(Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process- health outcome; process- health outcome; intermediate clinical outcome-health outcome)***:**  The measure’s focus is a process; the prescription and receipt of antipsychotic medications in patients with dementia. The link is to a health outcome; patients with dementia who receive an antipsychotic medication have been shown to be at increased risk for cardiovascular events and death.  **1c.2-3 Type of Evidence** *(Check all that apply)***:**  Clinical Practice Guideline, Selected individual studies (rather than entire body of evidence), Systematic review of body of evidence (other than within guideline development)  **1c.4 Directness of Evidence to the Specified Measure** *(State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population)***:**  The body of evidence generally focuses on the efficacy and comparative effectiveness of antipsychotic medications for off-label uses in adults, and more specifically the efficacy, effectiveness and adverse effects (e.g., increased risk of death) of antipsychotics in patients with dementia. The body of evidence includes individual studies, several systematic evidence reviews & meta-analyses and evidence based guidelines.  There was a 2005 systematic evidence review by the FDA based upon the results of 17 placebo-controlled trials which led to the addition of the black box warning on atypical antipsychotic medications (to warn of the associated increased mortality risks for people with dementia). Since issuing that notification, the FDA has reviewed additional information that indicates the risk is also associated with conventional antipsychotics.  Reference:  Food and Drug Administration, Antipsychotics: conventional and atypical. [http://www.fda.gov/Safety/MedWatch/SafetyInformation/SafetyAlertsforHumanMedicalProducts/ucm110212.](http://www.fda.gov/Safety/MedWatch/SafetyInformation/SafetyAlertsforHumanMedicalProducts/ucm110212) htm. Accessed August 18, 2012  There was an AHRQ systematic evidence review of the efficacy and comparative effectiveness of off-label atypical antipsychotic use.  References:  Maher AL, et al. Efficacy and Comparative Effectiveness of Off-Label Use of Atypical Antipsychotics. JAMA. 2011;306:1359-69.  Maglione M, Ruelaz Maher A, Hu J, Wang Z, Shanman R, Shekelle PG,  Roth B, Hilton L, Suttorp MJ, Ewing BA, Motala A, Perry T. Off-Label Use of Atypical Antipsychotics: An Update. Comparative Effectiveness Review No. 43. (Prepared by the  Southern California Evidence-based Practice Center under Contract No. HHSA290-2007-10062-1.) Rockville, MD: Agency for Healthcare Research and Quality. September 2011. Available at: [www.effectivehealthcare.ahrq.gov/reports/final.cfm.](http://www.effectivehealthcare.ahrq.gov/reports/final.cfm)  There was also a 2012 systematic evidence review related to the AGS/Beers clinical practice guideline on potentially inappropriate medication use, of which antipsychotics in patients with dementia was included as one.  Reference:  The American Geriatrics Society 2012 Beers Criteria Update Expert Panel. American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. J Am Geriatr Soc. 2012 Feb 29  Article available online:<http://www.americangeriatrics.org/files/documents/beers/2012BeersCriteria_JAGS.pdf> Criteria and Evidence tables also available online: <http://www.americangeriatrics.org/files/documents/beers/2012AGSBeersCriteriaCitations.pdf>  Meta-Analyses:  Schneider LS, Dagerman KS and Insel P. Risk of death with atypical antipsychotic drug treatment for dementia: meta-analysis of randomized placebo-controlled trials. JAMA 2005;294:1934-1943  Schneider LS, Dagerman K, Insel PS. Efficacy and adverse effects of atypical antipsychotics for dementia: meta-analysis of randomized, placebo-controlled trials. Am J Geriatr Psychiatry. 2006;14:191-210.  In addition, guidelines put forth from the American Academy of Neurology, the Third Canadian Consensus Conference on the Diagnosis and Treatment of Dementia & the California Workgroup on Guidelines for Alzheimer’s disease Management all indicate that non-pharmacological strategies are the preferred first-line treatment approach for behavioral problems in patients with dementia.  **1c.5 Quantity of Studies in the Body of Evidence** *(Total number of studies, not articles*)**:** About 25-30 studies.  **1c.6 Quality of Body of Evidence (***Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events*)**:** The evidence base used to support this measure is directly related to the scope of the measure; that is, studies have shown poor outcomes associated with antipsychotic use in patients with dementia. The strength of the body of evidence related to the inappropriate use of antipsychotics in patients with dementia has been determined to be high in terms of quality and strong in terms of strength. Based upon the weight of the evidence, The FDA determined that there are increased risks of death in elderly patients with dementia-related psychosis observed with use of both conventional antipsychotics and atypical antipsychotics. Given this, the prescribing information for all antipsychotic drugs includes information about this risk in a Boxed Warning section of the medication. In addition, given the strength of the evidence, the American Geriatric Society has included antipsychotic medications for patients with dementia in its Beers list of Potentially Inappropriate Medications.  **1c.7 Consistency of Results across Studies** *(Summarize the consistency of the magnitude and direction of the effect):* There has been general consistency across studies in terms of magnitude and direction of effect.  **1c.8 Net Benefit** *(Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms)***:**  Studies have shown that the risk of harms is higher than the potential benefit in terms of receipt of anti- psychotic medication for people with dementia. As an example of this, the FDA’s analysis of 17 placebo- controlled trials that enrolled 5377 elderly patients with dementia-related behavioral disorders showed a risk of death of between 1.6 to 1.7 times that seen in placebo-treated patients.  **1c.9 Grading of Strength/Quality of the Body of Evidence.** Has the body of evidence been graded? Yes  **1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:** As indicated below the evidence was graded by AGS/Beers using the GRADE system and an interdisciplinary expert panel. The FDA and other guideline developers also graded the evidence associated with their reviews. 1c.11 System Used for Grading the Body of Evidence: GRADE **1c.12 If other, identify and describe the grading scale with definitions:**  **1c.13 Grade Assigned to the Body of Evidence:** For AGS/Beers Drug Disease Interactions: Quality of Evidence: High, Strength of Evidence: Strong  **1c.14 Summary of Controversy/Contradictory Evidence:** There are differing opinions regarding which comorbid conditions may warrant the use of antipsychotics in patients with dementia. The conditions which were selected as appropriate, and therefore included in the numerator of this measure were done so based on a review of the evidence, harmonization of this measure’s criteria with that of a similar (non NQF endorsed) CMS measure, and the advice of PQA’s expert panel.  In addition, there may be some instances in which behavioral disturbances or agitation in patients with dementia may be treated unsuccessfully with non-pharmacologic method; therefore, pharmacologic treatment including anti-psychotics may be chosen as the next line of treatment. The measure relies on medical and pharmacy claims data. Behavioral disturbances and agitation are not accurately captured with this type of data, and as such patients exhibiting these conditions could not be excluded from the measure. It should be noted though that the potential for improvement on the measure is large compared to the instances for which these exclusions might be necessary. In addition, this effect of this factor should not disproportionally impact one plan over another; rather the effect would likely be similar across health plans evaluated.  **1c.15 Citations for Evidence other than Guidelines*(Guidelines addressed below)*:**  Alexander GC, et al. Increasing off-label use of antipsychotic medications in the United States, 1995-2008. Pharmacoepidemiol Drug Saf. 2011;20(2):177-184  Briesacher BA, et al. The Quality of Antipsychotic Drug Prescribing in Nursing Homes. Arch Intern Med. 2005;165:1280-1285.  California Workgroup on Guidelines for Alzheimer’s Disease Management. Guidelines for Alzheimer’s disease management. Los Angeles, CA: Alzheimer’s Disease and Related Disorders Association, Inc., Los Angeles Chapter. 2008.  Doody RS, Stevens JC, Beck C, et al. Practice parameter: management of dementia (an evidence based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2001;56:1154–66.  Dore DD, Trivedi AN, Mor V, Friedman JH and Lapane KL. Atypical antipsychotic use and risk of fracture in persons with Parkinsonism. Mov Disord 2009;24:1941-1948.  Food and Drug Administration, Antipsychotics: conventional and atypical. [http://www.fda.gov/Safety/MedWatch/SafetyInformation/SafetyAlertsforHumanMedicalProducts/ucm110212.](http://www.fda.gov/Safety/MedWatch/SafetyInformation/SafetyAlertsforHumanMedicalProducts/ucm110212) htm. Accessed August 18, 2012  Gill SS, et al. Antipsychotic drug use and mortality in older adults with dementia. Ann Intern Med. 2007;146(11):775-786.  Herrmann N, Gauthier S. Diagnosis and treatment of dementia: 6. Management of severe Alzheimer disease. CMAJ. December 2, 2008; 179(12): 1279 - 1287.  Huybrechts KF, et al. Differential risk of death in older residents in nursing homes prescribed specific antipsychotic drugs: population based cohort study. BMJ. 2012;344:e977.  Jeste DV, Lacro JP, Nguyen HA, et al. Incidence of tardive dyskinesia with risperidone versus haloperidol. Journal of American Geriatric Society. 1999;47:716–719.  Jeste D, Meeks T. To prescribe or not to prescribe? Atypical antipsychotic drugs in patients with dementia. South Med J. 2007;100:961–963.  Kales HC, et al. Mortality risk in patients with dementia treated with antipsychotics versus other psychiatric medications. Am J Psychiatry. 2007;164(10):1568-1576.  Liperoti R, et al. All-cause mortality associated with atypical and conventional antipsychotics among nursing home residents with dementia: a retrospective cohort study. J Clin Psychiatry. 2009;70(10):1340-1347.  Maher AL, et al. Efficacy and Comparative Effectiveness of Off-Label Use of Atypical Antipsychotics. JAMA. 2011; 306:1359-69.  Meeks & Jeste. Beyond the Black Box: What is The Role for Antipsychotics in Dementia? Curr Psychiatr. 2008 June 1; 7(6): 50–65.  Office of the Inspector General. Medicare atypical antipsychotic drug claims for elderly nursing home residents. 2011 (available at: [http://oig.hhs.gov/oei/reports/oei-07-08-00150.asp).](http://oig.hhs.gov/oei/reports/oei-07-08-00150.asp))  Pollock BG, et al. A double-blind comparison of citalopram and risperidone for the treatment of behavioral and psychotic symptoms associated with dementia. Am J Geriatr Psychiatry. 2007;15:942–952  Schneeweiss S, et al. Risk of death associated with the use of conventional versus atypical antipsychotic drugs among elderly patients. CMAJ. 2007;176(5):627-632  Schneider LS, Dagerman KS and Insel P. Risk of death with atypical antipsychotic drug treatment for dementia: meta-analysis of randomized placebo-controlled trials. JAMA 2005;294:1934-1943  Schneider LS, Dagerman K, Insel PS. Efficacy and adverse effects of atypical antipsychotics for dementia: meta-analysis of randomized, placebo-controlled trials. Am J Geriatr Psychiatry. 2006;14:191-210.  Schneider LS, Tariot PN, Dagerman KS, et al. Effectiveness of atypical antipsychotic drugs in patients with Alzheimer´s disease. N Engl J Med 2006b;355:1525-1538.  Trifirò G, et al. All-cause mortality associated with atypical and typical antipsychotics in demented outpatients. Pharmacoepidemiol Drug Saf. 2007;16:538–544.  Vigen CL, et al. Cognitive effects of atypical antipsychotic medications in patients with Alzheimer’s disease: outcomes from CATIE-AD. Am J Psychiatry. 2011;168(8):831-839.  Wang PS, et al. Risk of death in elderly users of conventional vs. atypical antipsychotic medications. N Engl J Med. 2005;353:2335–2341.  Wright RM, Roumani YF, Boudreau R, et al. Effect of central nervous system medication use on decline in cognition in community-dwelling older adults: findings from the Health, Aging And Body Composition Study. J Am Geriatr Soc 2009;57:243-250.  **1c.16 Quote verbatim, the specific guideline recommendation** *(Including guideline # and/or page #)***:**  Table 4, pg 5:  2012 American Geriatrics Society Beers Criteria for Potentially Inappropriate Medication Use in Older Adults  Organ System or Therapeutic Category or Drug: Antipsychotics, first (conventional) and second (atypical) generation  Rationale: Increased risk of cerebrovascular accident (stroke) and mortality in persons with dementia Recommendation: Avoid use for behavioral problems of dementia unless nonpharmacological options have failed and patient is threat to self or others  Quality of Evidence: Moderate Strength of Recommendation: Strong.  Table 3, pg 9:  2012 American Geriatrics Society Beers Criteria for Potentially Inappropriate Medication Use in Older Adults  Due to Drug–Disease or Drug–Syndrome Interactions That May Exacerbate the Disease or Syndrome  Disease: Dementia and cognitive impairment  Drug: Anticholinergics, Benzodiazepines, H2-receptor antagonists, Zolpidem, Antipsychotics, chronic and  as-needed use  Rationale: Avoid because of adverse CNS effects. Avoid antipsychotics for behavioral problems of dementia  unless nonpharmacological options have failed, and patient is a threat to themselves or others.  Antipsychotics are associated with an increased risk of cerebrovascular accident (stroke) and mortality in  persons with dementia  Recommendation: Avoid  Quality of Evidence: High  Strength of Evidence: Strong  **1c.17 Clinical Practice Guideline Citation:** The American Geriatrics Society 2012 Beers Criteria Update Expert Panel. American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. J Am Geriatr Soc. 2012 Feb 29  **1c.18 National Guideline Clearinghouse or other URL:**  <http://www.americangeriatrics.org/files/documents/beers/2012BeersCriteria_JAGS.pdf>  **1c.19 Grading of Strength of Guideline Recommendation.** Has the recommendation been graded? Yes  **1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:** The American Geriatric Society appointed an 11-member interdisciplinary expert panel; any conflicts were disclosed.  **1c.21 System Used for Grading the Strength of Guideline Recommendation:** GRADE  **1c.22 If other, identify and describe the grading scale with definitions:**  **1c.23 Grade Assigned to the Recommendation:** Quality of Evidence Drug Disease Interactions: High, Strength of Evidence: Strong  **1c.24 Rationale for Using this Guideline Over Others:** This guideline was developed in 2012 specifically to update the previous Beers Criteria (which identifies potentially inappropriate medications) using a comprehensive, systematic review and grading of the evidence on drug-related problems and adverse drug events in older adults. The relationship of antipsychotic use to dementia is specifically addressed. |