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Physician Consortium for Performance Improvement® (PCPI®)**

**Dementia  
Performance Measurement Sets**

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**(\*Introductory content is listed as originally drafted in 2011  
and may not be up to date)**

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Table of Contents	
<b>Dementia</b>	
Executive Summary	6
Purpose of Measurement Set	11
Importance of Topic	11
Opportunity for Improvement	13
Clinical Evidence Base	14
Dementia Outcomes	15
Dementia Work Group Recommendations	15
Intended Audience, Care Setting, and Patient Population	16
Other Potential Measures	17
Measure Harmonization	18
Technical Specifications Overview	19
Dementia Measure Testing	21
<b>Dementia Measure:</b>	
<b>Measure #1: Staging of Dementia</b> <i>This measure is stewarded by the American Academy of Neurology. It has been removed from this document.</i>	23
<b>Measure #2: Cognitive Assessment</b>	24
<b>Measure #3: Functional Status Assessment</b> <i>This measure is stewarded by the American Academy of Neurology. It has been removed from this document.</i>	26
<b>Measure #4: Neuropsychiatric Symptom Assessment</b> <i>This measure is stewarded by the American Academy of Neurology. It has been removed from this document.</i>	26
<b>Measure #5: Management of Neuropsychiatric Symptoms</b> <i>This measure is stewarded by the American Academy of Neurology. It has been removed from this document.</i>	26
<b>Measure #6: Screening for Depressive Symptoms</b> <i>This measure is stewarded by the American Academy of Neurology. It has been removed from this document.</i>	26

<b>Measure #7:</b> Counseling Regarding Safety Concerns <i>This measure is stewarded by the American Academy of Neurology. It has been removed from this document.</i>	26
<b>Measure #8:</b> Counseling regarding Risks of Driving <i>This measure is stewarded by the American Academy of Neurology. It has been removed from this document.</i>	26
<b>Measure #9:</b> Palliative Care Counseling and Advance Care Planning <i>This measure is stewarded by the American Academy of Neurology. It has been removed from this document.</i>	26
<b>Measure #10:</b> Caregiver Education and Support <i>This measure is stewarded by the American Academy of Neurology. It has been removed from this document.</i>	26
Evidence Classification/Rating Schemes	27
Summary of Non-Material Interest Disclosures	30
References	31
Dementia: Administrative Claims Specifications	34

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## Executive Summary: Toward Improving Outcomes for Patients with Dementia

The American Academy of Neurology (AAN), American Geriatrics Society (AGS), American Medical Directors Association (AMDA), American Psychiatric Association (APA), and Physician Consortium for Performance Improvement® (PCPI™) formed a Dementia Work Group to identify and define quality measures toward improving outcomes for patients with dementia (see diagram at the end of this section).

The Work Group focused on measures that would be applicable to patients with an established diagnosis of dementia. As a result, the measures primarily target underemphasized aspects of the evaluation and management of dementia patients.

### Reasons for Prioritizing Improvement in Dementia

#### *High Impact Topic Area*

Dementia is a chronic condition that poses a major and growing threat to the public's health. Improving the effectiveness of care and optimizing patient outcomes will become increasingly important as the population of the United States ages.

- Dementia affects approximately 5%–8% of individuals over age 65 years, 15%–20% of individuals over age 75 years, and 25%–50% of individuals over age 85 years.<sup>1</sup>
- Currently, an estimated 5.3 million Americans of all ages have Alzheimer's disease – the most common form of dementia.<sup>2</sup>
- More than 20 percent of women and approximately 17 percent of men reaching the age of 65 would ultimately develop dementia (estimated lifetime risk).<sup>2</sup>
- Alzheimer's disease was the sixth-leading cause of death across all ages in the United States in 2007.<sup>3</sup> It was the fifth-leading cause of death for those aged 65 and older in 2006.<sup>2</sup>
- People with Alzheimer's disease and other dementias have more than three times as many hospital stays as other older people.<sup>2</sup>
- At any one time, about one-quarter of all hospital patients aged 65 and older are people with Alzheimer's and other dementias.<sup>1</sup>
- In 2009, almost 11 million family members, friends and neighbors provided 12.5 billion hours of unpaid care for a person with Alzheimer's disease or other dementias. This number represents an average of 21.9 hours of care per caregiver per week, or 1,139 hours of care per caregiver per year.<sup>2</sup>
- The total estimated worldwide costs of dementia are \$604 billion in 2010, accounting for around 1% of the world's gross domestic product.<sup>4</sup>
- In 2005, the direct costs to Medicare and Medicaid for care for people with Alzheimer's and other dementias and the estimated indirect costs to businesses for employees who were caregivers of people with Alzheimer's and other dementias amounted to more than \$148 billion.<sup>1</sup>

#### *Demonstrated Opportunity for Improvement*

- According to a study analyzing the quality of medical care provided to vulnerable community-dwelling older patients, quality of care for geriatric conditions (eg, dementia, urinary incontinence) was found to be poorer than care for general medical conditions (eg, diabetes, heart failure). On average, patients with dementia received the recommended quality of care only about 35 percent of the time.<sup>5</sup>

- Chodosh and colleagues found that current practice patterns indicate a significant opportunity for improvement in the quality of dementia care with a majority (11 of 18) of guideline-recommended dementia care processes having less than 40% adherence.<sup>6</sup>
- Another study identified considerable variability across sites in the routine implementation of recommended practices for the assessment, management and treatment of patients with dementia.<sup>7</sup>

### *Disparities*

- A recent systematic review and meta-analysis of the use of dementia treatment, care, and research identified significant racial and ethnic disparities in western countries, particularly the United States. Overall, the authors found “consistent evidence, mostly from the United States, that [minority ethnic] people accessed diagnostic services later in their illness, and once they received a diagnosis, were less likely to access antidementia medication, research trials, and 24-hour care.”<sup>8</sup>

### *Rigorous Clinical Evidence Base*

Evidence-based clinical practice guidelines are available for the management of dementia. This measurement set is based on guidelines from:

- American Academy of Neurology
- American Medical Directors Association
- American Psychiatric Association
- California Workgroup on Guidelines for Alzheimer’s Disease Management
- Third Canadian Consensus Conference on the Diagnosis and Treatment of Dementia

### Dementia Outcomes

Ideally, a set of performance measures would include both measures of outcomes as well as measures of processes that are known to positively influence desirable outcomes. The development of outcome measures for dementia proved particularly challenging given the frequently progressive nature of the syndrome and the paucity of interventions available to change its course. In light of these difficulties, the Work Group set out to develop performance measures based on processes that are associated with desired outcomes and reflect high quality care. Desired outcomes for dementia include:

1. Delay cognitive decline
2. Attain and maintain the highest practicable level of personal functioning
3. Decrease the severity and frequency of neuropsychiatric symptoms
4. Delay institutionalization of the patient
5. Promote caregiver and patient-centered decision-making
6. Reduce caregiver stress and burden
7. Enhance caregiver knowledge of and comfort with dementia care

### Dementia Work Group Recommendations

**Process measures:** Several processes of care, demonstrated to improve outcomes for dementia patients, are recommended:

<b>Measures addressing underuse of effective services (evaluation and treatment strategies)</b>
Measure #1: Staging of Dementia
Measure #2: Cognitive Assessment
Measure #3: Functional Status Assessment
Measure #4: Neuropsychiatric Symptom Assessment
Measure #5: Management of Neuropsychiatric Symptoms
Measure #6: Screening for Depressive Symptoms
<b>Measures addressing safety</b>
Measure #7: Counseling regarding Safety Concerns
Measure #8: Counseling regarding Risks of Driving
<b>Measures addressing underuse of patient-centered care strategies</b>
Measure #9: Palliative Care Counseling and Advance Care Planning
Measure #10: Caregiver Education and Support

These clinical performance measures are designed for practitioner level quality improvement to achieve better outcomes for patients with dementia. Unless otherwise indicated, the measures are also appropriate for accountability if the appropriate methodological, statistical, and implementation rules are achieved.

#### Other Potential Measures

The Work Group considered several other potential measures, though ultimately determined that they were not appropriate for inclusion in the measure set.

#### Measure Harmonization

When existing hospital-level or plan-level measures are available for the same measurement topics, the PCPI attempts to harmonize the measures to the extent feasible.

#### Technical Specifications Overview

There are several data sources available for collecting performance measures; generally different data sources require different sets of measure specifications, due to the structure of the systems storing the data. The PCPI recognizes that Electronic Health Records (EHRs) are the state of the art for clinical encounters and is focusing significant resources and expertise toward specifying and testing measures within EHRs, as they hold the promise of providing the relevant clinical data for measures and for providing feedback to physicians and other health care providers that is timely and actionable.

The PCPI develops technical specifications for multiple data sources, including:

- EHR Data
- Electronic Administrative Data (Claims)
  - Prospective Claims-based reporting (using CPT Category II codes)
  - Retrospective Claims Analysis
- Expanded (multiple-source) Administrative Data
- Paper Medical Record/Retrospective Data Collection Flow Sheet

Because administrative claims are currently available sources of data, specifications to collect and report on the Dementia measures for administrative claims are included in this document. In light of recent national initiatives to encourage physicians and other health care professionals to adopt EHRs in their practices, the PCPI advocates that performance measures be integrated into EHR systems so that data for measurement and improvement are part of the fabric of care. EHRs also may be the source for external reporting. One venue for advancing this work is the AMA/National Committee for Quality Assurance (NCQA)/Healthcare Information and Management Systems Society (HIMSS) Electronic Health Record Association (EHRA) Collaborative (see [www.ama-assn.org/go/collaborative](http://www.ama-assn.org/go/collaborative)).

Additional detailed information regarding PCPI Specifications Methodology, including measure exceptions, is included in the Technical Specifications section of this document.

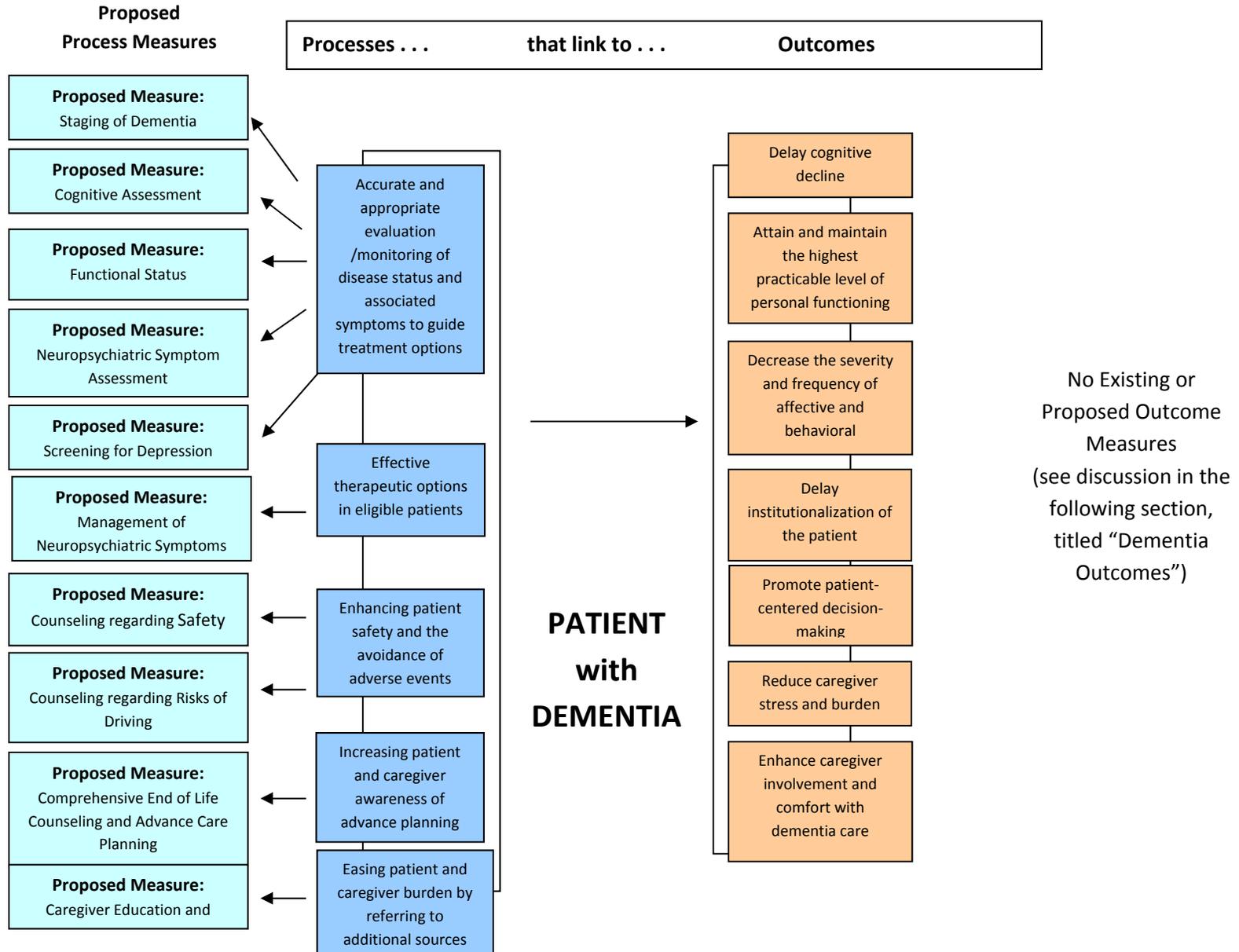
#### Dementia Measure Testing

The measures in the set are being made available without any prior testing. The PCPI will welcome the opportunity to promote the initial testing of these measures and to ensure that any results available from testing are used to refine the measures before implementation.

## Link to Outcomes

The proposed measures focus on accurate and appropriate evaluation and monitoring of disease status and associated symptoms to guide treatment, effective therapeutic options in eligible patients, enhancing patient safety and the avoidance of adverse events, increasing patient and caregiver awareness of advance planning, and easing patient and caregiver burden by referring them to additional sources for support.

Setting: Ambulatory and residential care (nursing facility, domiciliary, home care)



## Purpose of Measurement Set

The American Academy of Neurology (AAN), American Geriatrics Society (AGS), American Medical Directors Association (AMDA), American Psychiatric Association (APA), and Physician Consortium for Performance Improvement® (PCPI) formed a Dementia Work Group to identify and define quality measures toward improving outcomes for patients with dementia. The Work Group aimed to develop a comprehensive set of measures that support the efficient delivery of high quality health care in each of the Institute of Medicine's (IOM) six aims for quality improvement (safe, effective, patient centered, timely, efficient, and equitable).<sup>9</sup>

The Work Group was tasked with developing measures that reflect the most rigorous clinical evidence and address areas most in need of performance improvement. The Work Group considered opportunities for outcome, process and structural measures as well as composite, bundled and group or system-level measures.

The Work Group focused on measures that would be applicable to patients with an established diagnosis of dementia. As a result, the measures primarily target underemphasized aspects of the evaluation and management of dementia patients. Although the Work Group recognizes that diagnostic accuracy is the prerequisite for optimal therapy<sup>10</sup>, it is beyond the scope of the measure set and difficult to operationalize in performance measurement. The measures are developed and to be implemented based on the assumption that diagnosis of dementia is accurate and was established in accordance with evidence-based diagnostic criteria.

## Importance of Topic

### ***Prevalence and Incidence:***

- Dementia affects approximately 5%–8% of individuals over age 65 years, 15%–20% of individuals over age 75 years, and 25%–50% of individuals over age 85 years.<sup>1</sup>
- Alzheimer's disease is the most common form of dementia, accounting for 60 to 80 percent of cases.<sup>1</sup>
- One in eight persons aged 65 and older (13%) have Alzheimer's disease.<sup>2</sup>
- Currently, an estimated 5.3 million Americans of all ages have Alzheimer's disease.<sup>2</sup>
- The number of people aged 65 and older with Alzheimer's disease is estimated to reach 7.7 million in 2030, more than a 50 percent increase from current estimates. By 2050, the number of individuals aged 65 and older with Alzheimer's is projected to number between 11 million and 16 million.<sup>1</sup>
- In 2000, there were an estimated 411,000 incident cases of Alzheimer's disease. By 2010, that number is expected to increase to 454,000 new cases per year; and by 2050, to 959,000.<sup>2</sup>

- Every 70 seconds, someone in America develops Alzheimer's disease. By mid-century, someone will develop Alzheimer's every 33 seconds.<sup>2</sup>
- More than 20 percent of women reaching the age of 65 would ultimately develop dementia (estimated lifetime risk), compared to approximately 17 percent of men.<sup>1</sup>
- For women, at age 65, the short-term risk for developing dementia over the next 10 years is approximately 1 percent. However, at age 75, for women, the risk of developing dementia over the next 10 years jumps more than sevenfold, and at 85, the risk skyrockets to 20-fold. The risk scenario for men follows a similar trajectory.<sup>1</sup>

***Mortality:***

- Alzheimer's disease was the sixth-leading cause of death across all ages in the United States in 2007.<sup>3</sup> It was the fifth-leading cause of death for those aged 65 and older in 2006.<sup>2</sup>
- While the total number of deaths attributed to other major causes of deaths has been decreasing, those due to Alzheimer's have continued to increase. Comparing changes in selected causes of death between 2000 and 2006, deaths attributed to Alzheimer's disease increased 47.1 percent, while those attributed to the number one cause of death, heart disease, decreased 11.5 percent.<sup>1</sup>
- A study of national death certificates for 2001 found that 66.9 percent of people aged 65 and older who died of dementia did so in nursing homes. In contrast, 20.6 percent of patients dying from cancer died in nursing homes. Among those dying of other conditions, 28 percent died in nursing homes.<sup>1</sup>
- Median survival time for outpatients with Alzheimer's disease has been found to be largely dependent on age of onset with estimates ranging from 3.3 to 9.3 years.<sup>1</sup>

***Use of Health Care Resources:***

- People with Alzheimer's disease and other dementias have more than three times as many hospital stays as other older people.<sup>2</sup>
- At any one time, about one-quarter of all hospital patients aged 65 and older are people with Alzheimer's and other dementias.<sup>1</sup>
- In 2004, Medicare beneficiaries aged 65 and older with Alzheimer's and other dementias were eight times more likely than other Medicare beneficiaries in the same age group to have a Medicare-covered stay in a skilled nursing facility (SNF).<sup>12</sup>
- In 2004, one-quarter of Medicare beneficiaries aged 65 and older who received Medicare-covered home health care services were people with Alzheimer's and other dementias, about twice as many as one would expect given the proportion of Medicare beneficiaries with Alzheimer's and other dementias among all Medicare beneficiaries.<sup>12</sup>

### **Family Caregiving:**

- The vast majority (87%) of individuals with Alzheimer's disease are cared for at home by family members.<sup>1</sup>
- In 2009, almost 11 million family members, friends and neighbors provided 12.5 billion hours of unpaid care for a person with Alzheimer's disease or other dementias. This number represents an average of 21.9 hours of care per caregiver per week, or 1,139 hours of care per caregiver per year.<sup>2</sup>

### **Cost:**

- The total estimated worldwide costs of dementia are \$604 billion in 2010, accounting for around 1% of the world's gross domestic product.<sup>4</sup>
  - About 70% of the worldwide costs occur in Western Europe and North America.<sup>4</sup>
  - Researchers tentatively estimated an 85% increase in worldwide costs by 2030 (exceeding \$1 trillion), based only on predicted increases in the numbers of people with dementia.<sup>4</sup>
- In 2005, the direct costs to Medicare and Medicaid for care for people with Alzheimer's and other dementias and the estimated indirect costs to businesses for employees who were caregivers of people with Alzheimer's and other dementias amounted to more than \$148 billion, including:
  - \$91 billion in Medicare costs for care of beneficiaries with Alzheimer's and other dementias.<sup>1</sup>
  - \$21 billion in state and federal Medicaid costs for nursing home care for people with Alzheimer's and other dementias.<sup>1</sup>
  - \$36.5 billion in indirect costs to business for employees who are caregivers of people with Alzheimer's and other dementias, calculated for 2002 and projected to 2005.<sup>1</sup>
- In 2009, the economic value of the care provided by family and other unpaid caregivers of people with Alzheimer's and other dementias was \$144 billion.<sup>2</sup>

### **Opportunity for Improvement**

- According to a study analyzing the quality of medical care provided to vulnerable community-dwelling older patients, quality of care for geriatric conditions (eg, dementia, urinary incontinence) was found to be poorer than care for general medical conditions (eg, diabetes, heart failure). On average, patients with dementia received the recommended quality of care only about 35 percent of the time. Vulnerable elders, identified by a 13-item function-based screening survey, are community-dwelling persons 65 years of age and older who have 4 times the risk for functional decline or death over the next 2 years compared with individuals not identified as vulnerable. Quality of care was assessed by clinician performance on nine dementia quality indicators. Quality of care varied significantly by indicator with average rates of adherence ranging from 18% for an assessment of functional status upon admission to a hospital or a new visit to a physician practice (n=130) to 100% for the offering of appropriate stroke prophylaxis for a dementia patient who also has cerebrovascular disease (n=2).<sup>5</sup>
- Chodosh and colleagues aimed to characterize contemporary care patterns for dementia within one U.S. metropolitan area by analyzing medical records and caregiver surveys for 378 patients. To quantify quality of care, 18 dementia care processes drawn from existing guidelines were assessed. These care processes were aggregated within four care dimensions: assessment (6 processes), treatment (6 processes), education and support (3 processes), and safety (3 processes). Adherence

to the 18 individual care processes ranged from 9% to 79%; notably 11 of 18 care processes had less than 40% adherence.<sup>6</sup>

- A study surveying clinicians practicing in 6 VA medical centers aimed to assess the extent to which providers are following dementia practice guidelines. The investigators identified considerable variability across sites in the routine implementation of recommended practices for the assessment, management and treatment of patients with dementia. Practices for which adherence to clinical practice guidelines was moderate to low included cognitive and depression screening, reporting of elder abuse, discussing care needs and decision-making issues with patients' family and implementing caregiver support practices.<sup>7</sup>

### Disparities

A recent systematic review and meta-analysis of the use of dementia treatment, care, and research identified significant racial and ethnic disparities in western countries, particularly the United States. Overall, the authors found "consistent evidence, mostly from the United States, that [minority ethnic] people accessed diagnostic services later in their illness, and once they received a diagnosis, were less likely to access antidementia medication, research trials, and 24-hour care."<sup>8</sup>

- Non-Hispanic Blacks with dementia are more likely to be undiagnosed or misdiagnosed relative to non-Hispanic Whites.<sup>11,12</sup>
- Anti-dementia medication use was approximately 30% higher among non-Hispanic Whites compared to other racial/ethnic groups, after adjusting for demographics, socioeconomic, health care access and utilization, comorbidities, and service year.<sup>13</sup>
- "Both non-Hispanic Blacks and Latinos transition to long-term care at more advanced stages of dementia."<sup>14,15</sup>
- Minority ethnic people with dementia were found to be 40% less likely to enter 24-hour care. This may be due to choice, cultural preferences or barriers to access<sup>8</sup>

The PCPI believes that performance measure data should be stratified by race, ethnicity, and primary written and spoken language to assess disparities and initiate subsequent quality improvement activities addressing identified disparities. These categories are consistent with recent national efforts to standardize the collection of race and ethnicity data. A 2008 National Quality Forum (NQF) report endorsed 45 practices including stratification by the aforementioned variables.<sup>16</sup> A 2009 Institute of Medicine (IOM) report "recommends collection of the existing Office of Management and Budget (OMB) race and Hispanic ethnicity categories as well as more fine-grained categories of ethnicity (referred to as granular ethnicity and based on one's ancestry) and language need (a rating of spoken English language proficiency of less than very well and one's preferred language for health-related encounters)."<sup>17</sup>

### **Clinical Evidence Base**

Clinical practice guidelines serve as the foundation for the development of performance measures. A number of clinical practice guidelines have been developed for dementia and Alzheimer's disease, offering a robust evidence base to guide clinical decision-making and performance measure development. Guidelines from the American Academy of Neurology<sup>18,19,20</sup>, American Psychiatric

Association<sup>21</sup>, American Medical Directors Association<sup>22</sup>, Third Canadian Consensus Conference on the Diagnosis and Treatment of Dementia<sup>23</sup>, and a work group that included the Los Angeles chapter of the Alzheimer's Association<sup>24</sup> were reviewed during the measure development process. Additional recommendations from the American Geriatrics Society, American College of Physicians and other groups that focused on specific dimensions in the care of patients with dementia were also considered.

Relevant guidelines met all of the required elements and many, if not all, of the preferred elements outlined in a PCPI position statement establishing a framework for consistent and objective selection of clinical practice guidelines from which PCPI Work Groups may derive clinical performance measures.<sup>25</sup>

Performance measures, however, are not clinical practice guidelines and cannot capture the full spectrum of care for all patients with dementia. The guideline principles with the strongest recommendations and often the highest level of evidence (well-designed randomized-controlled trials) served as the basis for measures in this set.

## **Dementia Outcomes**

Ideally, a set of performance measures would include both measures of outcomes as well as measures of processes that are known to positively influence desirable outcomes. The development of outcome measures for dementia proved particularly challenging given the frequently progressive nature of the syndrome. Additionally, there are no existing interventions to halt progression with current pharmacologic and non-pharmacologic interventions showing only modest improvements, or a slower decline, in cognition and function in a substantial minority of patients.<sup>21</sup> The goals of management, particularly for those patients with advanced cognitive impairment, are often focused on improving the quality of life for patients and caregivers, maintaining optimal function and providing maximum comfort.<sup>26</sup> In light of these difficulties, the Work Group set out to identify the desired outcomes for dementia with a goal of developing performance measures based on processes that are associated with desired outcomes and reflect high quality care. Desired outcomes for dementia include:

1. Delay cognitive decline
2. Attain and maintain the highest practicable level of personal functioning
3. Decrease the severity and frequency of neuropsychiatric symptoms
4. Delay institutionalization of the patient
5. Promote caregiver and patient-centered decision-making
6. Reduce caregiver stress and burden
7. Enhance caregiver involvement and comfort with dementia care

## **Intended Audience, Care Setting, and Patient Population**

The PCPI encourages use of these measures by physicians and other health care professionals, where appropriate, to manage the care for all patients with dementia, regardless of age.

These clinical performance measures are designed for individual quality improvement. All of the measures may also be appropriate for accountability if appropriate sample sizes and implementation rules are achieved.

## Dementia Work Group Recommendations

The measurement set includes measures that focus on accurate and appropriate evaluation and monitoring of disease status and associated symptoms to guide treatment, effective therapeutic options in eligible patients, enhancing patient safety and the avoidance of adverse events, increasing patient and caregiver awareness of advance planning, and easing patient and caregiver burden by referring them to additional sources for support.

The Dementia Work Group identified several desired outcomes for patients with dementia (see “Link to Outcomes” diagram in preceding section). Current quality gaps in dementia care emphasize the need to improve specific processes that have been demonstrated to improve dementia outcomes (ie, the assessment and monitoring of patients throughout the disease course, safety interventions, and the provision/referral of education and support for caregivers). As a result, many of the measures in the dementia set focus on the provision of effective and patient-centered care.

These clinical performance measures are designed for practitioner level quality improvement to achieve better outcomes for patients with dementia. Unless otherwise indicated, the measures are also appropriate for accountability if the appropriate methodological, statistical, and implementation rules are achieved.

The measures listed below may be used for quality improvement and accountability.

<b>Measures addressing underuse of effective services (evaluation and treatment strategies)</b>
Measure #1: Staging of Dementia
Measure #2: Cognitive Assessment
Measure #3: Functional Status Assessment
Measure #4: Neuropsychiatric Symptom Assessment
Measure #5: Management of Neuropsychiatric Symptoms
Measure #6: Screening for Depressive Symptoms
<b>Measures addressing safety</b>
Measure #7: Counseling regarding Safety Concerns
Measure #8: Counseling regarding Risks of Driving
<b>Measures addressing underuse of patient-centered care strategies</b>
Measure #9: Palliative Care Counseling and Advance Care Planning
Measure #10: Caregiver Education and Support

Given the continued and progressive impairment in cognition and function over time for dementia patients, family members and other individuals play a pivotal role in care management. We have used the following terms and corresponding definitions throughout the document to describe these individuals. The terms are not mutually exclusive.

**Caregivers:** “Persons who provide care to those who need supervision or assistance in illness or disability. They may provide the care in the home, in a hospital, or in an institution. Although caregivers include trained medical, nursing, and other health personnel, the concept also refers to parents,

spouses, or other family members, friends, members of the clergy, teachers, social workers, fellow patients.”<sup>27</sup>

**Knowledgeable Informants:** Knowledgeable informants know and have frequent contact with the patient.<sup>28</sup>

These measures support the efficient delivery of high quality health care in many of the IOM’s six aims for quality improvement<sup>9</sup> as described in the following table:

IOM Domains of Health Care Quality		Safe	Effective Underuse      Overuse	Patient- centered	Timely	Efficient	Equitable
<b>Measures</b>							
1	Staging of Dementia		✓	✓			✓
2	Cognitive Assessment		✓	✓			✓
3	Functional Status Assessment		✓	✓			✓
4	Neuropsychiatric Symptom Assessment		✓				✓
5	Management of Neuropsychiatric Symptoms		✓				✓
6	Screening for Depressive Symptoms		✓				✓
7	Counseling Regarding Safety Concerns	✓		✓			✓
8	Counseling regarding Risks of Driving	✓		✓			✓
9	Palliative Care Counseling and Advance Care Planning	✓	✓	✓			✓
10	Caregiver Education and Support		✓	✓			✓

### Other Potential Measures

The Work Group considered several other important constructs in dementia care, though ultimately determined that they were not appropriate as the subject of performance measures. In particular, there was universal agreement among Work Group members that one of the largest problems in dementia care is the inadequate recognition of dementia in clinical practice. Research has shown that a small minority (anywhere between 12-35%) of patients with dementia, Alzheimer’s disease, or cognitive impairment had a diagnosis of the condition in their medical record.<sup>29,30,31,32,33</sup> Another study concluded that only 41% of the subjects determined to have dementia by the researchers were recognized as

having cognitive impairment by their primary care physician based on a notation in their medical record of any of three things (any cognitive diagnosis, prescription of an anti-dementia medication, and/or a notation that the physician had administered a mental status test and stated that the person's score was abnormal).<sup>34</sup> The identification and detection of dementia clearly represents a significant opportunity for improvement and is vital as the gateway to initiation and engagement in treatment.

Despite its importance and the availability of several reliable and valid case detection tools, a number of national and international organizations have stopped short of recommending routine screening for dementia in older adults. However, many of these organizations "did recommend a diagnostic evaluation when memory problems or dementia were suspected."<sup>35</sup> Given the lack of evidence to support routine screening and the inherent difficulty in identifying the population of patients for whom dementia screening is recommended, the Work Group felt that it was premature to move forward with the development of a measure that could address this well documented gap in care.

The Work Group considered including the use of cholinesterase inhibitors (CEIs) as a treatment-related performance measure for patients with Alzheimer's disease or other dementias. While the use of these agents has demonstrated modest improvements in cognition and global assessments in a substantial minority of patients, "uncertainty persists about the clinical relevance of these outcomes (which are not used in routine clinical practice) and the duration of the apparent benefit (the randomized controlled trials reviewed were 12 to 52 weeks in duration, and all but one was 26 weeks or less)."<sup>36</sup> Although clinical practice guidelines have appropriately recommended that cholinesterase inhibitors be *considered* for all patients with mild to moderate Alzheimer's disease, they have also emphasized the need to base the decision to *initiate* pharmacotherapy with these agents on individualized assessment after a thorough discussion of their benefits and risks. As a result, the Work Group felt that it would be premature to establish the use of CEIs as a performance measure at this time.

While each performance measure is intended to support quality improvement in one or more of the IOM domains (safe, effective, patient centered, timely, efficient, and equitable), the development of measures specifically designed to eliminate overuse of ineffective care and promote efficiency proved more challenging.

One significant area of overuse in dementia care includes the use of aggressive and ineffective treatment at the end of life. Given the complexity of these issues and the importance of eliciting and adhering to patient preference, there is no generalizable way to identify patients who may be subject to this overuse. As a result, the direct assessment of these care processes was not feasible within the constructs of performance measurement. Nevertheless, measure #9 in this set may indirectly address these significant concerns in the care of patients with dementia.

## **Measure Harmonization**

When existing hospital-level or plan-level measures are available for the same measurement topics, the PCPI attempts to harmonize the measures to the extent feasible. Apart from the 2001 work of RAND to identify quality indicators for dementia as part of the Assessing Care of Vulnerable Elderly (ACOVE)

project<sup>37</sup>, there remains a paucity of measures to address the quality of dementia care. The ACOVE indicators were reviewed during the measure development process and harmonization was considered, where appropriate.

## Technical Specifications Overview

There are several data sources available for collecting performance measures; generally different data sources require different sets of measure specifications, due to the structure of the systems storing the data. The PCPI recognizes that EHRs are the state of the art for clinical encounters and is focusing significant resources and expertise toward specifying and testing measures within EHRs, as they hold the promise of providing the relevant clinical data for measures and for providing feedback to physicians and other health care providers that is timely and actionable.

The PCPI develops technical specifications for multiple data sources, including:

- EHR Data
- Electronic Administrative Data (Claims)
  - Prospective Claims-based reporting (using CPT Category II codes)
  - Retrospective Claims Analysis
- Expanded (multiple-source) Administrative Data
- Paper Medical Record/Retrospective Data Collection Flow Sheet

Because administrative claims are currently available sources of data, specifications to collect and report on the Dementia measures for administrative claims are included in this document. In light of recent national initiatives to encourage physicians and other health care professionals to adopt EHRs in their practices, the PCPI advocates that performance measures be integrated into EHR systems so that data for measurement and improvement are part of the fabric of care. EHRs also may be the source for external reporting. One venue for advancing this work is the AMA/NCQA/HIMSS Electronic Health Record Association (EHRA) Collaborative (see [www.ama-assn.org/go/collaborative](http://www.ama-assn.org/go/collaborative)).

Additional detailed information regarding PCPI Specifications Methodology, including measure exceptions, is included in the Technical Specifications section of this document.

## Measure Exclusions and Exceptions

### Measure Exclusions

The PCPI distinguishes between measure exceptions and measure exclusions. Exclusions arise when the intervention required by the numerator is not appropriate for a group of patients who are otherwise included in the initial patient or eligible population of a measure (ie, the denominator). Exclusions are absolute and are to be removed from the denominator of a measure and therefore clinical judgment does not enter the decision.

## Measure Exceptions

Exceptions are used to remove a patient from the denominator of a performance measure when the patient does not receive a therapy or service AND that therapy or service would not be appropriate due to patient-specific reasons. The patient would otherwise meet the denominator criteria. Exceptions are not absolute, and are based on clinical judgment, individual patient characteristics, or patient preferences.

For **process measures**, the PCPI provides two categories of reasons for which a patient may be excluded from the denominator of an individual measure:

- **Medical reasons**

Include:

- Contraindicated in patient (potential allergy due to previous reported allergic history, potential adverse drug interaction, other)
- Already received/performed
- Intolerant (therapy was tried and the patient was intolerant)
- Other medical reason(s)

- **Patient or Non-medical reason(s)**

Include:

- Patient refused/declined
- Access issues or insurance coverage/payor-related limitations (patient not covered for treatment)
- Patient preference: Social reason(s) (eg, family or support system not supportive of intervention/treatment); Religious reason(s) (eg, religious beliefs regarding blood transfusion)
- Other patient or non-medical reason(s)

These measure exception categories are not available uniformly across all measures; for each measure, there must be a clear rationale to permit an exception for a medical or patient/non-medical reason. For some measures, examples have been provided in the measure exception language of instances that would constitute an exception. Examples are intended to guide clinicians and are not all-inclusive lists of all possible reasons why a patient could be excluded from a measure. There are different approaches for reporting measure exceptions, depending on whether the measure is being reported from an electronic clinical data source or an administrative data source.

Electronic Clinical Data Sources:

Value sets are included in the electronic clinical data source specifications for Medical Reason and Patient Reason. These have been specified in SNOMED-CT and include a broad list of reasons that pertain to each type of exception and cover various situations. The contents of these value sets are broad, and facilitate re-use of the Medical and Patient Reason value sets across measurement sets.

## Administrative Data Sources

Exceptions reported from administrative data sources can be reported using a Quality Data Code (QDC), which may be a CPT Category II code or a G-code.

Where CPT Category II codes are used, the exception of a patient may be reported by appending the appropriate modifier to the CPT Category II code designated for the measure:

- **Medical reasons**: modifier 1P
- **Patient reasons**: modifier 2P

Although this methodology does not require the external reporting of more detailed exception data, the PCPI recommends that physicians document the *specific* reasons for exception in patients' medical records for purposes of optimal patient management and audit-readiness. The PCPI also advocates the systematic review and analysis of each physician's exceptions data to identify practice patterns and opportunities for quality improvement. For example, it is possible for implementers to calculate the percentage of patients that physicians have identified as meeting the criteria for exception.

Please refer to documentation for each individual measure for information on the acceptable exception categories and the codes and modifiers to be used for reporting.

## Dementia Measure Testing

The measures in the set are being made available without any prior testing. The PCPI recognizes the importance of testing all of its measures and encourages testing of the Dementia measurement set for feasibility and reliability by organizations or individuals positioned to do so. The Measure Testing Protocol for PCPI Measures was approved by the PCPI in 2007 and is available on the PCPI web site (see Position Papers at [www.physicianconsortium.org](http://www.physicianconsortium.org)); interested parties are encouraged to review this document and to contact PCPI staff. The PCPI will welcome the opportunity to promote the initial testing of these measures and to ensure that any results available from testing are used to refine the measures before implementation.

### Dementia Measures

#### Measures addressing underuse of effective services (evaluation and treatment strategies)

Measure #1: Staging of Dementia

*This measure is stewarded by the American Academy of Neurology. It has been removed from this document.*

Measure #2: Cognitive Assessment

Measure #3: Functional Status Assessment

*This measure is stewarded by the American Academy of Neurology. It has been removed from this document.*

Measure #4: Neuropsychiatric Symptom Assessment

*This measure is stewarded by the American Academy of Neurology. It has been removed from this document.*

Measure #5: Management of Neuropsychiatric Symptoms

*This measure is stewarded by the American Academy of Neurology. It has been removed from this document.*

Measure #6: Screening for Depressive Symptoms

*This measure is stewarded by the American Academy of Neurology. It has been removed from this document.*

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**Measures addressing safety**

Measure #7: Counseling regarding Safety Concerns *This measure is stewarded by the American Academy of Neurology. It has been removed from this document.*

Measure #8: Counseling regarding Risks of Driving

*This measure is stewarded by the American Academy of Neurology. It has been removed from this document.*

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**Measures addressing underuse of patient-centered care strategies**

Measure #9: Palliative Care Counseling and Advance Care Planning

*This measure is stewarded by the American Academy of Neurology. It has been removed from this document.*

Measure #10: Caregiver Education and Support

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**Measure #1 has been removed from this document**

**Measure #1: Staging of Dementia**

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**Measures Transitioned to the American Academy of Neurology (AAN)**

The Dementia measures transitioned to AAN are available at:

[https://www.aan.com/uploadedFiles/Website\\_Library\\_Assets/Documents/3.Practice\\_Management/2.Quality\\_Improvement/1.Quality\\_Measures/1.All\\_Measures/Dementia%20measure%20set%202014%20transition.pdf](https://www.aan.com/uploadedFiles/Website_Library_Assets/Documents/3.Practice_Management/2.Quality_Improvement/1.Quality_Measures/1.All_Measures/Dementia%20measure%20set%202014%20transition.pdf)

All AAN measure inquiries may be sent to: [quality@aan.com](mailto:quality@aan.com)

## Measure #2: Cognitive Assessment

### Measure Description

Percentage of patients, regardless of age, with a diagnosis of dementia for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period.

### Measure Components

<b>Numerator Statement</b>	<p>Patients for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period</p> <p>Definition: Cognition can be assessed by the clinician during the patient's clinical history. Cognition can also be assessed by direct examination of the patient using one of a number of instruments, including several originally developed and validated for screening purposes. This can also include, where appropriate, administration to a knowledgeable informant. Examples include, but are not limited to:</p> <ul style="list-style-type: none"> <li>-Blessed Orientation-Memory-Concentration Test (BOMC)</li> <li>-Montreal Cognitive Assessment (MoCA)</li> <li>-St. Louis University Mental Status Examination (SLUMS)</li> <li>-Mini-Mental State Examination (MMSE) [Note: The MMSE has not been well validated for non-Alzheimer's dementias]</li> <li>-Short Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE)</li> <li>-Ascertain Dementia 8 (AD8) Questionnaire</li> <li>-Minimum Data Set (MDS) Brief Interview of Mental Status (BIMS) [Note: Validated for use with nursing home patients only]</li> <li>-Formal neuropsychological evaluation</li> <li>-Mini-Cog</li> </ul>
<b>Denominator Statement</b>	All patients, regardless of age, with a diagnosis of dementia
<b>Denominator Exclusions</b>	None
<b>Denominator Exceptions</b>	<p>Documentation of medical reason(s) for not assessing cognition (eg, patient with very advanced stage dementia, other medical reason)</p> <p>Documentation of patient reason(s) for not assessing cognition</p>
<b>Supporting Guidelines</b>	Ongoing assessment includes periodic monitoring of the development and evolution of cognitive and noncognitive psychiatric symptoms and their response to intervention (Category I). Both cognitive and noncognitive neuropsychiatric and behavioral symptoms of dementia tend to evolve over time, so regular monitoring allows detection of new symptoms and adaptation of treatment strategies to current needs... Cognitive symptoms that almost always require assessment include impairments in memory, executive function, language, judgment, and spatial abilities. It is often helpful to track cognitive status with a

	<p>structured simple examination.<sup>21</sup></p> <p>Conduct and document an assessment and monitor changes in cognitive status using a reliable and valid instrument. Cognitive status should be reassessed periodically to identify sudden changes, as well as to monitor the potential beneficial or harmful effects of environmental changes, specific medications, or other interventions. Proper assessment requires the use of a standardized, objective instrument that is relatively easy to use, reliable (with less variability between different assessors), and valid (results that would be similar to gold-standard evaluations).<sup>24</sup></p>
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**Measure Importance**

<b>Relationship to desired outcome</b>	<p>Dementia is often characterized by the gradual onset and continuing cognitive decline in one or more domains including memory, executive function, language, judgment, and spatial abilities.<sup>21</sup> Cognitive deterioration represents a major source of morbidity and mortality and poses a significant burden on affected individuals and their caregivers.<sup>38</sup> Although cognitive deterioration follows a different course depending on the type of dementia, significant rates of decline have been reported. For example, one study found that the annual rate of decline for Alzheimer's disease patients was more than four times that of older adults with no cognitive impairment.<sup>39</sup> Nevertheless, measurable cognitive abilities remain throughout the course of dementia.<sup>21</sup> Initial and ongoing assessments of cognition are fundamental to the proper management of patients with dementia. These assessments serve as the basis for identifying treatment goals, developing a treatment plan, monitoring the effects of treatment, and modifying treatment as appropriate.</p>
<b>Opportunity for Improvement</b>	<p>A 2007 analysis of medical records and caregiver surveys for 378 patients with dementia found that only 50% of patients received an assessment of their cognitive status in the previous 12 months.<sup>6</sup> Another study surveying clinicians practicing in VA medical centers found that only two thirds of clinicians reported regularly performing a standardized assessment of cognitive functioning.<sup>7</sup></p>

**Measure Designation**

<b>Measure purpose</b>	<p>Accountability Quality Improvement</p>
<b>Type of measure</b>	<p>Process</p>
<b>Level of Measurement</b>	<p>Clinician: Individual</p>
<b>Care setting</b>	<p>Ambulatory Care: Clinician Office/Clinic Residential (ie, nursing facility, domiciliary, home care)</p>
<b>Data source</b>	<p>Electronic health record (EHR) data Administrative Data/Claims (outpatient claims) Administrative Data/Claims Expanded (multiple-source)</p>

	Paper medical record
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**Measure #3: Functional Status Assessment**

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**Measure #4: Neuropsychiatric Symptom Assessment**

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**Measure #5: Management of Neuropsychiatric Symptoms**

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**Measure #6: Screening for Depressive Symptoms**

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All AAN measure inquiries may be sent to: [quality@aan.com](mailto:quality@aan.com)

## Evidence Classification/Rating Schemes

APA practice guideline for the treatment of patients With Alzheimer’s Disease and Other Dementias Each recommendation is identified as falling into one of three categories of endorsement, indicated by a bracketed Roman numeral following the statement. The three categories represent varying levels of clinical confidence:

[Category I]: Recommended with substantial clinical confidence. [Category II]: Recommended with moderate clinical confidence.

[Category III]: May be recommended on the basis of individual circumstances.

### Third Canadian Consensus Conference on the Diagnosis and Treatment of Dementia

#### *Grades indicating the strength of recommendations*

- A) There is good evidence to support this manoeuvre.
- B) There is fair evidence to support this manoeuvre.
- C) There is insufficient evidence to recommend for or against this manoeuvre but recommendations may be made on other grounds.
- D) There is a fair evidence to recommend against this procedure.
- E) There is good evidence to recommend against this procedure.

#### *Levels of evidence*

- 1. Evidence obtained from at least 1 properly randomized controlled trial.
- 2.1 Evidence obtained from well-designed controlled trials without randomization, or
- 2.2 Evidence obtained from well-designed cohort or case–control analytic studies preferably from more than 1 centre or research group, or
- 2.3 Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments are included in this category.
- 3. Opinions of respected authorities based on clinical experience, descriptive studies or reports of expert committees.

### The American College of Physicians' Guideline: Evidence-based interventions to improve the palliative care of pain, dyspnea, and depression at the end of life

Quality of Evidence	Strength of Recommendation	
	Benefits Clearly Outweigh Risks and Burden OR Risks and Burden Clearly Outweigh Benefits	Benefits Finely Balanced with Risks and Burden
High	Strong	Weak
Moderate	Strong	Weak
Low	Strong	Weak
Insufficient evidence to determine benefits or risks	I - recommendation	

### AAN practice parameter for diagnosis of dementia

#### Class

#### Description

I

Evidence provided by a well designed prospective study in a broad spectrum of persons with the suspected condition, using a “gold standard” for case definition, in which test is applied in a blinded evaluation, and enabling the assessment of appropriate tests of diagnostic accuracy.

- II Evidence provided by a well designed prospective study of a narrow spectrum of persons with the suspected condition, or a well designed retrospective study of a broad spectrum of persons with an established condition (by “gold standard”) compared with a broad spectrum of controls, in which test is applied in blinded evaluation, and enabling the assessment of appropriate tests of diagnostic accuracy.
- III Evidence provided by a retrospective study in which either persons with the established condition or controls are of a narrow spectrum, and in which test is applied in a blinded evaluation.
- IV Any design in which test is not applied in blinded evaluation OR evidence provided by expert opinion alone or in descriptive case series (without controls).

Definitions for practice recommendations based on classification of evidence

39

Recommendation	Description
Standard	Principle for patient management that reflects a high degree of clinical certainty (usually this requires Class I evidence that directly addresses the clinical question, or overwhelming Class II evidence when circumstances preclude randomized clinical trials).
Guideline	Recommendation for patient management that reflects moderate clinical certainty (usually this requires Class II evidence or a strong consensus of Class III evidence).
Practice Option	Strategy for patient management for which the clinical utility is uncertain (inconclusive or conflicting evidence or opinion).
Practice Advisory	Practice recommendation for emerging and/or newly approved therapies or technologies based on evidence from at least one Class I study. The evidence may demonstrate only a modest statistical effect or limited (partial) clinical response, or significant cost-benefit questions may exist. Substantial (or potential) disagreement among practitioners or between payers and practitioners may exist.

AAN practice parameter for evaluation and management of driving risk in dementia

*Classification of recommendations*

- A = Established as effective, ineffective or harmful (or established as useful/predictive or not useful/predictive) for the given condition in the specified population. (Level A rating requires at least two consistent Class I studies.)
- B = Probably effective, ineffective or harmful (or probably useful/predictive or not useful/predictive) for the given condition in the specified population. (Level B rating requires at least one Class I study or two consistent Class II studies.)
- C = Possibly effective, ineffective or harmful (or possibly useful/predictive or not useful/predictive) for the given condition in the specified population. (Level C rating requires at least one Class II study or two consistent Class III studies.)
- U = Data inadequate or conflicting; given current knowledge, treatment (test, predictor) is unproven.

*Classification of evidence for the rating of a diagnostic article*

- *Class I:* A cohort study with prospective data collection of a broad spectrum of persons with the suspected condition, using an acceptable reference standard for case definition. The diagnostic test is objective or performed and interpreted without knowledge of the patient's clinical status. Study results allow calculation of measures of diagnostic accuracy.
- *Class II:* A case control study of a broad spectrum of persons with the condition established by an acceptable reference standard compared to a broad spectrum of controls or a cohort study where a broad spectrum of persons with the suspected condition where the data was collected retrospectively. The diagnostic test is objective or performed and interpreted without knowledge of disease status. Study results allow calculation of measures of diagnostic accuracy.
- *Class III:* A case control study or cohort study where either persons with the condition or controls are of a narrow spectrum. The condition is established by an acceptable reference standard. The reference standard and diagnostic test are objective or performed and interpreted by different observers. Study results allow calculation of measures of diagnostic accuracy.
- *Class IV:* Studies not meeting Class I, II or III criteria including consensus, expert opinion or a case report.

## Summary of Non-Material Interest Disclosures

### *Dementia*

None of the members of the Dementia Work Group had any disqualifying material interests under the PCPI Conflict of Interest Policy. The following is a summary of non-disqualifying interests disclosed on Work Group members' Material Interest Disclosure Statements. Completed Material Interest Disclosure Statements are available upon request.

<b><u>Work Group Member</u></b>	<b><u>Disclosures</u></b>
_Jerry C. Johnson____ (Co-Chair)	None
_Germaine Odenheimer (Co-Chair)	None
_Francois Boller_____	None
_Soo Borson_____	None
_Charles A. Cefalu_____	None
_Mirean Coleman____	None
_Patricia C. Davis_____	None
_Mary Ann Forcica_____	None
_Elizabeth M. Galik_____	Payment for Consulting Services: Novartis – Development of nurse practitioner education material on Dementia
_Laura N. Gitlin_____	None
_Helen H. Kyomen_____	None
Katie Maslow	None
Haydee Muse	None
Bruce E. Robinson	None
Robert Paul Roca	None
Amy E. Sanders	None
Jason E. Schillerstrom	None
Joseph W. Shega	None
Eric G. Tangalos	Stock Ownership: Johnson & Johnson ( <i>family member</i> )  Research or Other Grant Support: Baxter  Payment for Consulting Services: Novartis  Other Payments: Lilly – Participation on a data safety monitoring board
Joan M. Teno	None
Brian K. Unwin	None

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Physician Consortium for Performance Improvement® (PCPI®)**

**Appendix A  
Dementia Performance Measurement Specifications**

**Coding Reviewed and Updated: August 2015**

Physician Performance Measures (Measures) and related data specifications have been developed by the American Medical Association (AMA)-convened Physician Consortium for Performance Improvement® (PCPI®). These Measures are not clinical guidelines and do not establish a standard of medical care, and have not been tested for all potential applications.

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## Dementia

### Measure #2: Cognitive Assessment

#### A. Specifications for Administrative Data Sources

<b>Denominator (Eligible Population)</b>	<p>All patients, regardless of age, with a diagnosis of dementia</p> <p>All patients, regardless of age</p> <p><b>AND</b></p> <p>CPT® Code for Encounter: 90791, 90792, 90832, 90834, 90837, 96116, 96118, 96119, 96120, 97003, 97004, 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350</p> <p><b>AND</b></p> <p><b>Diagnosis for dementia (ICD-9-CM) [for use through 9/30/2015]:</b> 094.1, 290.0, 290.10, 290.11, 290.12, 290.13, 290.20, 290.21, 290.3, 290.40, 290.41, 290.42, 290.43, 290.8, 290.9, 294.10, 294.11, 294.20, 294.21, 294.8, 331.0, 331.11, 331.19, 331.82</p> <p><b>Diagnosis for dementia (ICD-10-CM) [for use beginning 10/1/2015]:</b> A52.17, F01.50, F01.51, F02.80, F02.81, F03.90, F03.91, F05, F06.8, G30.0, G30.1, G30.8, G30.9, G31.01, G31.09, G31.83</p>
<b>Denominator Exclusions</b>	<p>None</p>
<b>Numerator</b>	<p>Patients for whom an assessment of cognition is performed and the results reviewed at least once within a 12 month period</p> <p><b>Numerator Instructions:</b></p> <p>Cognition can be assessed by the clinician during the patient’s clinical history. Cognition can also be assessed by direct examination of the patient using one of a number of instruments, including several originally developed and validated for screening purposes. This can also include, where appropriate, administration to a knowledgeable informant. Examples include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Blessed Orientation-Memory-Concentration Test (BOMC)</li> <li>• Mini-Cog</li> <li>• Montreal Cognitive Assessment (MoCA)</li> <li>• St. Louis University Mental Status Examination (SLUMS)</li> <li>• Mini-Mental State Examination (MMSE) <i>[Note: The MMSE has not been well validated for non-Alzheimer’s dementias.]</i></li> </ul>

	<ul style="list-style-type: none"> <li>• Short Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE)</li> <li>• Ascertain Dementia 8 (AD8) Questionnaire</li> <li>• Minimum Data Set (MDS) Brief Interview for Mental Status (BIMS) <i>[Note: Validated for use with nursing home patients only]</i></li> <li>• Formal neuropsychological evaluation</li> </ul> <p><b>Report CPT Category II code:</b> 1494F: Cognition assessed and reviewed</p>
<b>Denominator Exceptions</b>	<p>Documentation of medical reason(s) for not assessing cognition (eg, patient with very advanced stage dementia, other medical reason)</p> <p><b>Append modifier to CPT Category II code:</b> 1494F-1P: Documentation of medical reason(s) for not assessing cognition (eg, patient with very advanced stage dementia, other medical reason)</p> <p>Documentation of patient reason(s) for not assessing cognition</p> <p><b>Append modifier to CPT Category II code:</b> 1494F with 2P: Documentation of patient reason(s) for not assessing cognition</p>

**B. Specifications for Electronic Clinical Data Sources**

As of the date of the posting of this document, this measure is currently in use in CMS’ EHR Incentive Program (Meaningful Use). The specifications are updated on a regular basis and published on the CMS website. To download the electronic specifications for this measure, visit CMS’ eCQM Library and view the most recent publishing:

[http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/eCQM\\_Library.html](http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/eCQM_Library.html)

Additional resources for eCQM implementation can also be found at the eCQI Resource Center webpage: <https://ecqi.healthit.gov/>

Accompanying value sets are available in the Value Set Authority Center (VSAC) found at the following webpage: <https://vsac.nlm.nih.gov/>