Dementia Management
Quality Measurement Set Update

2018 Implementation Update

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AANI and APA acknowledge the AMA and PCPI's significant past efforts and contributions to the development and updating of the Measures. AANI and APA are solely responsible for the review and enhancement of the Measures as of August 13, 2014, and AMA and PCPI acknowledge the significant efforts and contributions AANI and APA have made, and will continue to make, in undertaking such responsibilities.

AANI and APA encourage use of the Measures by other health care professionals, where appropriate.

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- Palliative Care Counseling and Advance Care Planning
    - 2015 Title: Advance Care Planning and Palliative Care Counseling for Patients with Dementia
- Caregiver Education and Support
    - 2015 Title: Education and Support of Caregivers for Patients with Dementia
- Counseling Regarding Risks of Driving
    - 2015 Title: Driving Screening and Follow-Up for Patients with Dementia
- Functional Status Assessment
    - 2015 Title: Functional Status Assessment for Patients with Dementia
- Management of Neuropsychiatric Symptoms (Retired in 2016)
- Neuropsychiatric Symptom Assessment
    - 2015 Title: Screening and Management of Behavioral and Psychiatric Symptoms Associated with Dementia
- Screening for Depressive Symptoms (Retired in 2016)
- Staging of Dementia (Retired in 2016)

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- Disclosure of Dementia Diagnosis
- Safety Concern Screening and Follow-Up for Patients with Dementia
- Pain Assessment and Follow-up for Patients with Dementia
- Pharmacological Treatment of Dementia

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Invited Organizations

The AAN and APA deeply regret that due to limitations on the size of the work group nominations from the American College of Radiology/American Society of Neuroradiology, the American Heart Association/American Stroke Association, and the National Gerontological Nursing Association could not be accommodated

The following organizations were invited to participate, but declined: Alzheimer's Advisory Council, American Academy of Physician Assistants, American Association of Neuromuscular & Electrodiagnostic Medicine, American Association of Nurse Practitioners, American Board of Internal Medicine, American Clinical Neurophysiology Society, American College of Emergency Physicians, American Neurological Association, American Osteopathic Association, American Society of Neurorehabilitation, American Telemedicine Association, Association for Frontotemporal Degeneration, Movement Disorders Society, National Alliance for Caregiving, National Center on Elder Abuse, National Hospice and Palliative Care Organization, Society for Neuroscience, Society of Nuclear Medicine and Molecular Imaging, and The American Association for Geriatric Psychiatry, as well as additional payer organizations.

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Improving Outcomes for Patients with Dementia

Purpose of Measures

In 2015, the American Academy of Neurology (AAN) and American Psychiatric Association (APA) formed a Dementia Measurement Set Update Work Group (Work Group) to review the Dementia Management Measurement Set developed in 2009.[i] The Work Group evaluated[ii] whether 1) evidence continues to support the measures, 2) a gap in care still exists, and 3) links to desired outcomes exist.

In 2009, under the American Medical Association (AMA) Physician Consortium for Performance Improvement® (PCPI®) performance measure development model, a dementia management measurement set was developed and released in 2013.[iii] In 2014, the AAN and APA assumed stewardship of the dementia management measurement set with the exception of the Cognitive Assessment measure, which was retained by the PCPI®. The AAN and APA developed the following updated quality measures based on the conviction that specialists should play a major role in selecting and creating quality measures that will drive performance improvement and will be used in accountability programs. The goal of this measurement set is to provide health care professionals with a practical means to evaluate their practice's alignment with best practices as identified in the recent literature and in guidelines created by other expert groups. In this respect, the work group hopes that the measurement set will help health care providers succeed in their quest to improve the quality of the care they provide. This is the most important reason that this updated measurement set was developed

The AAN and APA formed the Work Group with representatives from professional associations, patient advocacy organizations, and payers to ensure measures developed included input from all members of the healthcare team and other relevant stakeholders. All members of the Work Group were required to disclose relationships with industry and other entities to avoid actual, potential, or perceived conflicts of interest.

A single measurement set cannot possibly capture all aspects of providing care for patients with dementia and their caregivers. The measurement set focuses on key thematic elements in caring for patients with dementia, irrespective of the underlying dementing disease. In addition, this measurement set focuses on measuring the quality of care provided in the management of dementia, and does not address issues related to making an initial diagnosis of dementia.

Topic Importance

Dementia is a syndrome rather than a disease. "Dementia" is a term used to describe a group of symptoms related to cognitive and functional decline, usually with a neurodegenerative basis. For the purposes of this document, the term 'dementia' is used as a catchall phrase for the diseases and disorders that cause dementia symptoms. It is estimated that 14.7% of people older than 70 in the United States have dementia.[iv] Further, the cost of dementia ranges from $159-215 billion annually, making it more costly to the United States than heart disease or cancer. [v] One third of all seniors who die in a given year have been diagnosed with Alzheimer's disease or another dementia.[vi]

The most common cause of dementia symptoms is Alzheimer's disease (AD). AD is the sixth most common cause of death in the United States, and is becoming more common.[vii] Alzheimer's disease usually occurs in individuals who are 60 years old and older.[viii] By 85 years of age and older, between 25 and 50 percent of people will exhibit signs of Alzheimer's disease. [ix] Up to 5.3 million Americans currently have Alzheimer's disease.[x] By 2050, the number is expected to more than double. [xi]

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Clinical Evidence Base

The co-chairs and facilitators, guided by a medical librarian, conducted a comprehensive literature search to identify published guidelines, existing performance measures, and consensus recommendations in the National Guidelines Clearinghouse, the National Quality Measures Clearinghouse, PubMed, MEDLINE, EMBASE, and the Cochrane Library. The Work Group identified over 50 guidelines relevant to the topic. The following guideline and consensus documents served as the evidence base for one or more measures:

- 2016 American Geriatrics Society Clinician's guide to assessing and counseling older drivers, 3rd edition [xii]
- 2014 American Psychiatric Association (APA). Guideline Watch: Practice Guideline For The Treatment Of Patients With Alzheimer's Disease And Other Dementias.[xiii]
- 2014 American Geriatrics Society (AGS) Ethics Committee and Clinical Practice and Models of Care Committee. American Geriatrics Society Feeding Tubes in Advanced Dementia Position Statement[xiv]
- 2012 Geriatric Nursing Protocol: Recognition and Management of Dementia. Springer Publishing Company. Evidence-Based Geriatric Nursing Protocols for Best Practice[xv]
- 2012 American Psychological Association. Guidelines for Evaluation of Dementia and Age-Related Cognitive Change[xvi]
- 2012 American Board of Family Medicine Guidelines for the Management of Cognitive and Behavioral Problems in Dementia.[xvii]
- 2012 American Psychiatric Association (APA) Guidelines for Evaluation of Dementia and Age-Related Cognitive Change [xviii]
- 2012 Pharmacological recommendations for the symptomatic treatment of dementia: The Canadian Consensus Conference on the Diagnosis and Treatment of Dementia[xix]
- 2012 European Federation of Neurological Societies (EFNS)-European Neurological Society (ENS) guidelines on the diagnosis and management of disorders associated with dementia.[xx]
- 2011 World Federation of Societies of Biological Psychiatry (WFSBP) guidelines for the biological treatment of Alzheimer's disease and other dementias[xxi]
- 2011 Pain Assessment in the Patient Unable to Self-Report: Position Statement with Clinical Practice Recommendations[xxii]
- 2010 AAN Practice parameter update: evaluation and management of driving risk in dementia[xxiii]
- 2010 EFNS guidelines for the diagnosis and management of Alzheimer's disease[xxiv]
- 2010 American Occupational Therapy Association (AOTA) Occupational therapy practice guidelines for adults with Alzheimer's disease and related disorders[xxv]
- 2010 AGS Geriatrics at your fingertips: Palliative and end-of-life care[xxvi]
- 2010 Practice guidelines for assessing pain in older persons with dementia residing in long-term care facilities[xxvii]
- 2010 British Association for Psychopharmacology (BAP) Dementia Consensus Group. Clinical practice with anti-dementia drugs: a revised (second) consensus statement from the British Association for Psychopharmacology.[xxviii]
- 2009 Nuffield Council on Bioethics. Dementia: ethical issues.[xxix]
- 2009 Ministry of Health Malaysia. Management of Dementia Clinical Practice Guidelines[xxx]
- 2008 Third Canadian Consensus Conference on the Diagnosis and Treatment of Dementia. Diagnosis and treatment of dementia: introduction[xxxi]
- 2008 California Workgroup on Guidelines for Alzheimer's Disease Management. Guidelines for Alzheimer's disease management[xxxii]
- 2007 APA Practice guideline for the treatment of patients with Alzheimer's disease and other dementias[xxxiii]
- 2006 NICE Dementia: Supporting people with dementia and their carers in health and social care. [xxxiv]

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- 2005 Alzheimer's Association End-of-life Care for People with Dementia in Residential Care Settings. [xxxv]
- 2001 AAN Practice parameter: Management of dementia (an evidence based review)[xxxvi]

Measures Recommended by Work Group

2015 Dementia Measurement Set Update
Disclosure of Dementia Diagnosis *(New 2015 Measure)*
Education and Support of Caregivers for Patients with Dementia
Functional Status Assessment for Patients with Dementia
Screening and Management of Behavioral and Psychiatric Symptoms Associated with Dementia
Safety Concern Screening and Follow-up for Patients with Dementia
Driving Screening and Follow-up for Patients with Dementia
Advance Care Planning and Palliative Care Counseling for Patients with Dementia
Pain Assessment and Follow-up for Patients with Dementia *(New 2015 Measure)*
Pharmacological Treatment of Dementia *(New 2015 Measure)*

The Work Group did not assess the previously developed Cognitive Assessment measure as PCPI® maintained stewardship of this measure, thereby placing it outside the Work Group's scope. The Work Group recommended that the previously developed measures on Staging of Dementia, Management of Neuropsychiatric Symptoms, and Screening for Depressive Symptoms be retired. An explanation for these recommendations is provided in further detail below (Retired Measures Section.)

Definitions and Abbreviations

The Work Group utilized the following definitions and abbreviations in the measurement set:

- As noted previously, dementia is a syndrome rather than a disease. Herein, the term 'dementia' is used as an all-inclusive descriptor for the myriad diseases that can produce the syndrome. Please review individual measure specifications to identify whether the measure applies generally or has aspects that restrict its applicability to a particular disease or subset of diseases that produce dementia. See Appendix A for a list of diagnostic codes captured by the measurement set.
- "Caregiver" is broadly defined and the Work Group adopted the definition utilized by the National Quality Forum and Feinberg.[xxxvii] Caregiver refers to any relative, partner, friend, or neighbor who has a significant relationship with, and who provides a broad range of assistance for, an older adult or an adult with chronic or disabling conditions.[xxxviii] The Work Group recognizes the essential role caregivers play in the care of patients with dementia insofar as the term 'patient' is often the patient-caregiver dyad rather than an individual The Work Group endeavored to take this aspect of dementia management into account whenever and to the greatest extent possible.

Below is a list of acronyms utilized in this document. The AAN has a Quality Improvement Glossary, which provides more in depth explanations and is available at aan.com/practice/quality-measures/quality-resources.

- AD: Alzheimer's Disease
- ADL: Activities of Daily Living

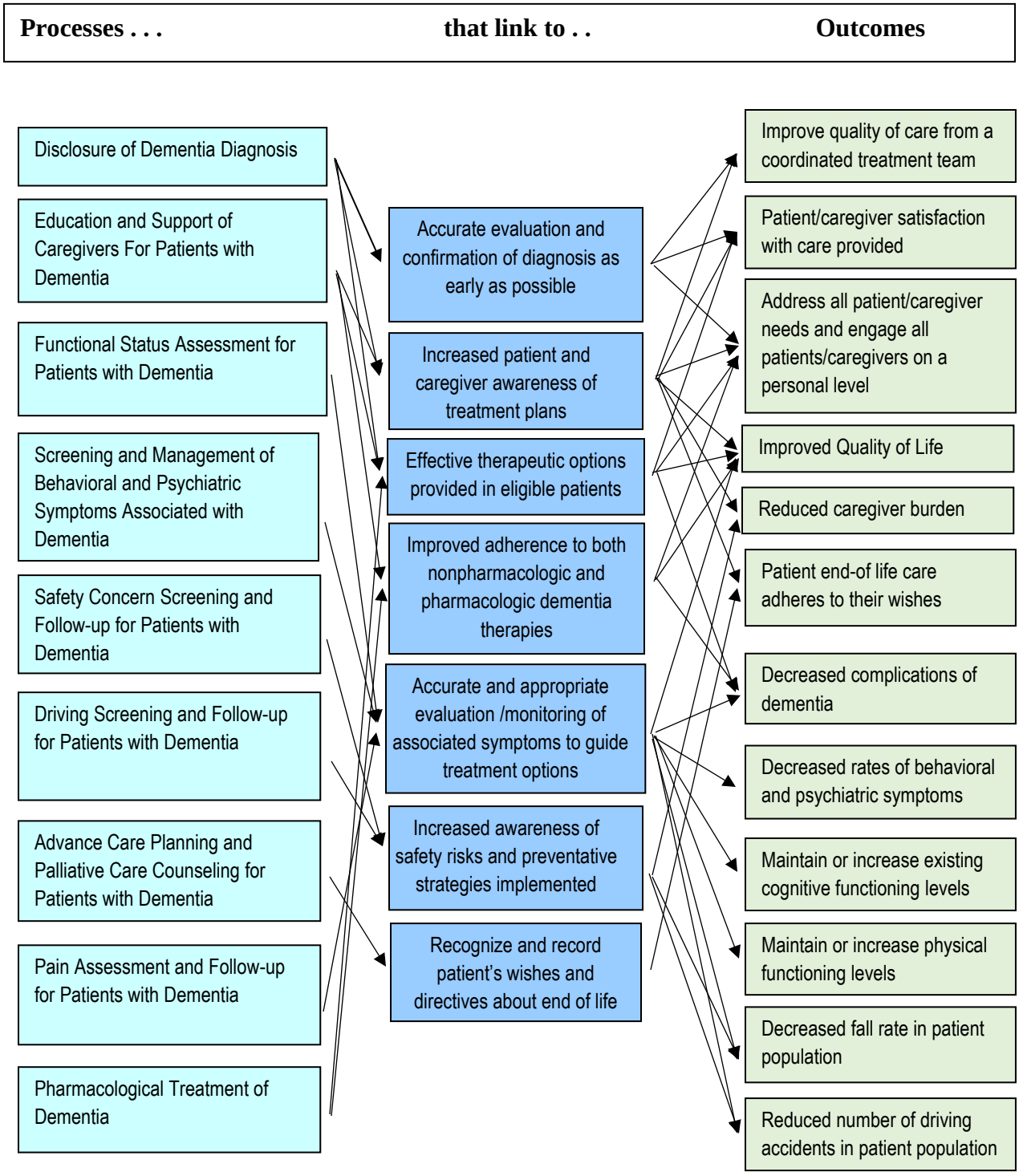
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- APA: American Psychiatric Association
- CMS: Centers for Medicare & Medicaid Services
- NQF: National Quality Forum
- PQRS: Physician Quality Reporting System

Desired Outcomes

This diagram is intended to demonstrate the potential links from process measures to patient outcomes, and it represents one possible set of optimal outcomes for individuals with dementia. Achieving all of these outcomes would require resources beyond the scope of a single healthcare provider. The measurement set links process measures to potential desired outcomes.

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Intended Care Audience, Settings, and Patient Populations

The AAN and APA encourage use of these measures by physicians and other health care professionals, practices, and health care systems, where appropriate, to help drive improved performance. These measures are intended to assess the processes that providers take to optimize clinical outcomes for patients with dementia and their caregivers.

As noted above, this measurement set focuses on the management of dementia care. As a result, the measurement set does not apply to those diagnosed with mild cognitive impairment, delirium, amnestic disorders, alcohol-induced persisting amnestic disorders, post-concussion syndrome, encephalopathy, memory loss, and alteration of consciousness, and other unspecified persistent mental disorders. The measurement set does apply to Alzheimer's disease, vascular dementias, dementia with Lewy bodies, dementia in Parkinson's disease, corticobasal degeneration, progressive supranuclear palsy, Pick's disease, behavioral variant frontotemporal dementia, semantic dementia, primary nonfluent aphasia, Human Immunodeficiency Virus (HIV) disease dementia, neurosyphilis, alcohol-induced persisting dementia (Wernicke-Korsakoff syndrome), variant Creutzfeldt-Jacob disease, dementias in conditions classified elsewhere, unspecified dementias, senile dementias, and presenile dementias. (See Appendix A.)

The Work Group has designated all measures as appropriate for accountability programs. For purposes of this document, accountability programs refer to pay for reporting, value-based payments, pay for performance, and public reporting programs.

	Applicable Care Settings			
2015 Dementia Measurement Set Update	Outpatient	Inpatient	Post-Acute Care	Emergency Department
Disclosure of Dementia Diagnosis	√	√	√	
Education and Support of Caregivers for Patients with Dementia	√		√	
Functional Status Assessment for Patients with Dementia	√	√	√	
Screening and Management of Behavioral and Psychiatric Symptoms Associated with Dementia	√	√	√	√
Safety Concern Screening and Follow-up for Patients with Dementia	√	√	√	√
Driving Screening and Follow-up for Patients with Dementia	√		√	
Advance Care Planning and Palliative Care Counseling for Patients with Dementia	√	√	√	√
Pain Assessment and Follow-up for Patients with Dementia	√	√	√	√
Pharmacological Treatment of Dementia	√		√	

Other Potential Measures

The measures were developed through a consensus process. Work Group members were given an opportunity to submit new measures in advance of an in-person meeting. All measures were individually reviewed and edited prior to a vote to approve, not approve, or abstain. The Work Group discussed potential outcome measures for development. The Work Group agreed to revise driving assessment measure rather than include an intermediate outcome measure assessing patients who were identified as a

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driving risk and who ceased driving. Ultimately, the Work Group concluded no rigorous outcome measures could be developed for the management of dementia care at this time.

Measures Retired

The Work Group reviewed the 2009 Dementia measurement set, evaluating whether current evidence continues to support the measures, a gap in care still exists, and if links to desired outcomes exist. The 2009 Measurement Set included ten measures:

2009 Dementia Management Quality Measures
Measure #1: Staging of Dementia
Measure #2: Cognitive Assessment *(PCPI® maintains stewardship of this measure)*
Measure #3: Functional Status Assessment
Measure #4: Neuropsychiatric Symptom Assessment
Measure #5: Management of Neuropsychiatric Symptoms
Measure #6: Screening for Depressive Symptoms
Measures addressing safety
Measure #7: Counseling regarding Safety Concerns
Measure #8: Counseling regarding Risks of Driving
Measures addressing underuse of patient-centered care strategies
Measure #9: Palliative Care Counseling and Advance Care Planning
Measure #10: Caregiver Education and Support

The Work Group recommended retirement of the following measures from 2009:

> Measure 1. Staging of Dementia. Consensus supported retirement following a discussion of the artificial constructs created by using and providing patients and caregivers with a dementia stage. While there is value in continued assessment of disease progression, patients and caregivers may be better aided by receiving information about whether dementia is mild, moderate, or severe.
>
> Measure 5 and Measure 6. Management of Neuropsychiatric Symptoms and Screening for Depressive Symptoms. The previous Measure 4 Assessment of Neuropsychiatric Symptoms was modified to include depression, making a separate depression screening measure unnecessary. The updated measure also documentation of an intervention following a positive screening assessment, making the Management of Neuropsychiatric Symptoms measure unnecessary.

Measure Harmonization

The Work Group reviewed existing measures with a denominator of patient with dementia, patients over the age of 65, and other relevant denominator populations. Efforts were made to reduce duplicative measures when possible. Multiple measures exist that potentially apply to patients with dementia such as functional status, depression assessment and outcomes, pain screening, advance care planning, etc. Details on how these existing measures were harmonized are included in measure specifications that follow. Efforts were made to harmonize data elements when possible.

The Work Group discussed additional abuse and violence screening as a component of the Safety Measure, but ultimately determined the concern warrants a separate measure. As a result, the Work

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Group encourages providers and practices to utilize the existing Elder Maltreatment Screen and Follow-up Measure (PQRS Measure #181).

The Work Group did not develop a measure addressing falls, gait or mobility. The Work Group encourages individuals interested in monitoring performance on these concerns to consider use of the NQF endorsed measure #0101 Falls: Screening, Risk-Assessment, and Plan of Care to Prevent Future Falls.

Technical Specifications Overview

The Work Group developed technical specifications for measures that may include data from:

- Electronic Health Record (EHR) Data
- Electronic Administrative Data (Claims)
- Chart Review (for select measures where EHR data cannot be gathered)
- Registry

Administrative claims specifications are provided for measures when applicable. The AAN and APA are in the process of creating code value sets and the logic required for electronic capture of the quality measures with EHRs, when possible. A listing of the quality data model elements, code value sets, and measure logic (through the CMS Measure Authoring Tool) for each of the measures will be made available later. These technical specifications will be updated as warranted.

The measurement set includes measures that require the use of validated screening or other assessment tools. The Work Group determined that multiple tools should be offered to allow providers to determine which tool best meets their individual practice needs. In some cases, tools may be subject to copyright and require licensing fees. The Work Group determined that measurement should occur once in a twelve-month period unless otherwise specified to reduce provider burden.

Measure Exclusions Versus Exceptions

A **denominator exclusion** is a factor supported by the clinical evidence that removes a patient from inclusion *in the measure's denominator population*. For example, if the denominator indicates an age range from 0 to 18 years of age, a patient who is 19 years of age would be excluded.

A **denominator exception** is a condition that should remove the patient from the denominator *only if the numerator criteria are not met*. The AAN includes three classes of possible exceptions: medical (e.g., contraindication), patient (e.g., refusal, religious belief), or system (e.g., resource limitation) reasons. For each measure, the rationale justifying an exception for a medical, patient, or system reason must be clear. The Work Group provided explicit exceptions when applicable, for ease of use in eMeasure development.

Testing and Implementation of the Measurement Set

The measures in this set are being made available without any prior testing. The AAN and APA encourage testing of this measurement set for feasibility and reliability by organizations or individuals positioned to do so. Select measures will be beta tested once the set has been released, prior to submission to the National Quality Forum for possible endorsement.

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Dementia Measures

Disclosure of the Cause of Dementia

Measure Description	
Percentage of patients with a diagnosis* of a qualifying dementing disorder or disease whose diagnosis has been disclosed to them and, if available, their primary caregiver.	
Measure Components	
Numerator Statement	Patients and patient/caregiver dyads with a diagnosis* of a qualifying dementing disorder or disease who have been told (1) that they have dementia and (2) what disease is responsible. *Diagnosis is defined as the provider's best current opinion about dementia etiology, which may include a disclosure that diagnosis remains unknown or that a previous diagnosis must be revised.
Denominator Statement	All patients with a diagnosis of a qualifying dementing disorder or disease. Diagnostic codes listed in Appendix A
Denominator Exceptions	• Diagnosis previously disclosed (i.e., patient or caregiver provides diagnosis to provider, previous disclosure documented in medical record, or patient or caregiver states they were previously informed.) • Disclosure offered, but patient declines information on their diagnosis. • Patient does not have caregiver.
Exception Justification	• An exception was created to address situations where patients and their caregiver were previously informed of their diagnosis and the provider has documentation of this disclosure. • A patient may also decline information on their diagnosis, and a provider should not force this information if it is detrimental to patient care. • An exception is needed, if a patient does not have a caregiver and lacks capacity to understand their diagnosis as disclosure could be a detriment to care.
Supporting Guideline & Other References	**The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:** • "Individuals concerned about cognitive and behavioral changes associated with aging generally come to the evaluation process seeking information as well as emotional support. This often is a severely distressing situation for the individual, who may or may not have been the key individual in making the decision to have an assessment conducted (ABA & APA, 2008; APA Presidential Task Force on the Assessment of Age-Consistent Memory Decline and Dementia, 1998). Provision of both information and support while maintaining a sense of respect and dignity for the individual, regardless of level of cognitive

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	impairment, reflect both professional ethics and sound clinical practice (APA, 2002)." (1) • "Diagnosis of AD should be disclosed to patient (and caregivers as appropriate) **(**Level B**).** Disclosure of diagnosis should be individually tailored. It should be accompanied by information and counseling, as well as useful contacts such as Alzheimer's patient organizations. Patients and caregivers should be provided with education and support **(**Level A)." (2) • The experience of the diagnosis of dementia is challenging both for people with dementia and family members and for healthcare professionals, so healthcare professionals should make time available to discuss the diagnosis and its implications with the person with dementia and also with family members (usually only with the consent of the person with dementia). Healthcare professional should be aware that people with dementia and family members may need ongoing support to cope with the difficulties presented by the diagnosis. (3) • "Unless a patient suffering from dementia explicitly declines to know the diagnosis, the default mode should be to inform truthfully as it will enable the patient to: a. Plan for optimal life experiences in remaining years of intact capacities b. Designate and appoint a surrogate decision maker to take over the making of treatment decision upon eventual incompetence c. Settle personal financial and legal matters d. Participate in treatment decisions e. Consider possible enrolment in research programmes and f. Participate in informed consent process" (4)
Relationship to Desired Outcome	Patient/caregiver dyads who understand their diagnosis are better able to seek a second opinion, are more likely to be involved in decision-making for their care, receive better medical care, and are better able to cope with their symptoms and access services for ongoing care, support, and safety. (5)
Opportunity for Improvement	Only 45% of people with Alzheimer's disease or their caregivers report being told of their diagnosis. (6) Diagnosis is an unmet need for patients and patient/caregiver dyads. Many community-residing individuals with dementia and their caregivers have unmet dementia-related needs for care, services and support. In one recent study, almost one-third of individuals with dementia had not received a prior evaluation or diagnosis.(7) Providers should be aware that unmet needs may be higher among minority and low-income community residents, caregivers with lower education, and individuals with early-stage dementia. Disclosure of diagnosis to a patient should occur, if possible, while the patient has capacity to understand and engage in a discussion on desired treatment. Patients and their caregivers should receive education and support following disclosure. It is suggested that providers pair this measure with the Caregiver Education and Support Measure to ensure patient and caregiver needs are fully met.
National Quality Strategy Domains	☒ Patient and Family Engagement ☐ Patient Safety ☐ Communication and Care Coordination

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	☐ Population/Public Health ☐ Efficient Use of Healthcare Resources ☐ Clinical Process/Effectiveness
Harmonization with Existing Measures	No known measures addressing disclosure of diagnosis.
Measure Purpose (Check all that apply)	☒ Quality improvement ☒ Accountability
Type of Measure (Check all that apply)	☒Process ☐ Outcome ☐ Structure
Level of Measurement (Check all that apply)	☒ Individual Provider ☒ Practice ☒ System
Care Setting (Check all that apply)	☒ Outpatient ☒ Inpatient ☐ Emergency Departments and Urgent Care ☒ Post-Acute Care (i.e., Long Term Care Hospitals, Skilled Nursing Facilities, Inpatient Rehabilitation Facilities, and Home Health Agencies)
Data Source (Check all that apply)	☒ Electronic health record (EHR) data ☐ Administrative Data/Claims ☐ Chart Review ☒ Registry

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Education and Support of Caregivers for Patients with Dementia

Measure Description	
Percentage of patients with dementia whose caregiver(s)* were provided with education** on dementia disease management and health behavior changes AND were referred to additional resources*** for support in the last 12 months.	
Measure Components	
Numerator Statement	Patients with dementia whose caregiver(s) were provided with education on dementia disease management and health behavior changes AND were referred to additional resources** for support in the last 12 months. * "Caregiver" is broadly defined and the Work Group adopted the definition utilized by the National Quality Forum and Feinberg.(1) Caregiver refers to any relative, partner, friend, or neighbor who has a significant relationship with, and who provides a broad range of assistance for, an older adult or an adult with chronic or disabling conditions.(1) ** "Education" requires learning and processing information about disease management and health behavior changes. This should also include advising the caregiver that, *as a caregiver*, he or she is at "increased risk of serious illness (including circulatory and heart conditions and respiratory disease and hypertension), increased physician visits and use of prescription medications, emotional strain, anxiety, and depression."(2) Providers are encouraged to review state specific guidelines to ensure education is being provided as required. *** "Additional Resources" are defined as situation-specific, tailored programs to assist the caregiver; these included national organizations such as the Alzheimer's Association, but also include local resources, such as community, senior center and religion-based support groups.
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.
Denominator Exceptions	• Patient does not have a caregiver. • Caregiver is trained and certified in dementia care. • Patient/caregiver dyad has been referred to appropriate resources and connection to those resources confirmed.
Exception Justification	• Exception created for patients who do not have caregivers, as it would be impossible to provide in this situation. • An exception was also created for trained and certified caregivers, as education would be redundant. • An exception was created for patient/caregiver dyads that are known to be connected with existing supports as education would be redundant.
Supporting Guideline & Other References	**The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:** • "Important aspects of psychiatric management include educating patients and families about the illness, its treatment, and sources of additional care and support (e.g., support groups, respite care, nursing homes, and other

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	long-term-care facilities) and advising patients and their families of the need for financial and legal planning due to the patient's eventual incapacity (e.g., power of attorney for medical and financial decisions, an up-to-date will, and the cost of long-term care) (Category I)… The family should be educated regarding basic principles of care, including 1. recognizing declines in capacity and adjusting expectations appropriately, 2. bringing sudden declines in function and the emergence of new symptoms to professional attention, 3. keeping requests and demands relatively simple, 4. deferring requests if the patient becomes overly upset or angered, 5. avoiding overly complex tasks that may lead to frustration, 6. not confronting patients about their deficits, 7. remaining calm, firm, and supportive and providing redirection if the patient becomes upset, 8. being consistent and avoiding unnecessary change, and 9. providing frequent reminders, explanations, and orientation cues… In addition to providing families with information on support groups, there are a number of benefits of referral to the local chapter or national office of the Alzheimer's Association (1-800-272-3900; http://www.alz.org), the Alzheimer's Disease Education and Referral Center (ADEAR) (1-800-438-4380; http://www.nia.nih.gov/Alzheimers/), and other support organizations."(3) • "Short-term programs directed toward educating family caregivers about AD should be offered to improve caregiver satisfaction" (4). • "Intensive long-term education and support services (when available) should be offered to caregivers of patients with AD to delay time to nursing home placement" (4). • "Staff of long-term care facilities should receive education about AD to reduce the use of unnecessary antipsychotics" (4) • "Support programs for caregivers and patients with dementia significantly decreased the odds of institutionalization and improved caregiver well-being." (5) • "A dementia diagnosis mandates an inquiry to the community for available public health care support programmes (Good Practice Point). Counselling and case/care management amongst caring family members have positive effects on burden and satisfaction for caregivers of people with dementia (Good Practice Point)." (6) • "Following a diagnosis of dementia, health and social care professionals should, unless the person with dementia clearly indicates to the contrary, provide, them and their family with written information about 1. The signs and symptoms of dementia 2. The course and prognosis of the condition 3. Treatments 4. Local care and support services

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	5. Support groups 6. Sources of financial and legal advice, and advocacy 7. Medico-legal issues, including driving 8. Local information sources, including libraries and voluntary organisations." (7) • "…emphasise that professional support should have a wide focus that includes helping family and friends to support the person with dementia, rather than being limited to an exclusive and direct focus on the person with dementia."(8)
Relationship to Desired Outcome	By providing education as well as resources to caregivers it is anticipated that caregiver will act on information received connecting to support networks and gain a greater understanding of dementia. As a result, caregiver burden will decrease, caregiver and patient Quality of Life will improve, and caregiver and patient physical health will improve.
Opportunity for Improvement	There is evidence that dementia-related needs for care, services and support for patients with dementia in the community and their caregivers are unmet.(9) Caregiver stress is the unequal exchange of assistance among people who stand in close relationship to one another, often resulting in physical and emotional distress in the caregiver.(10) The patient and the caregiver will inevitably face challenges related to cognitive and behavioral decline. All healthcare providers have a wealth of expertise that can be shared with caregivers of patient with dementia who often lack the time and resources to identify appropriate referrals for their needs. Helping to guide the patient and the caregiver through these challenges is an essential aspect of providing good clinical care.
National Quality Strategy Domains	☒ Patient and Family Engagement ☐ Patient Safety ☐ Care Coordination ☐ Population/Public Health ☐ Efficient Use of Healthcare Resources ☐ Clinical Process/Effectiveness
Harmonization with Existing Measures	Harmonization with existing measures was not applicable to this measure.
Measure Purpose (Check all that apply)	☒ Quality improvement ☒ Accountability
Type of Measure (Check all that apply)	☒Process ☐ Outcome ☐ Structure
Level of Measurement (Check all that apply)	☒ Individual Provider ☒ Practice ☒ System

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Care Setting (Check all that apply)	☒ Outpatient ☐ Inpatient ☐ Emergency Departments and Urgent Care ☒ Post-Acute Care (i.e., Long Term Care Hospitals, Skilled Nursing Facilities, Inpatient Rehabilitation Facilities, and Home Health Agencies)
Data Source (Check all that apply)	☒ Electronic health record (EHR) data ☐Administrative Data/Claims ☐ Chart Review ☒ Registry

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Functional Status Assessment for Patients with Dementia

Measure Description	
Percentage of patients with dementia for whom an assessment of functional status* was performed at least once in the last 12 months.	
Measure Components	
Numerator Statement	Patients with dementia for whom an assessment of functional status* was performed at least once in the last 12 months. *Functional status is assessed by use of a validated tool, direct assessment of the patient, or by querying a knowledgeable informant. A direct assessment of functional status includes an evaluation of the patient's ability to perform instrumental activities of daily living (IADL) (i.e., cleaning, money management, medication management, transportation, and cooking) and basic activities of daily living (ADL) (i.e., grooming, bathing, dressing, eating, toileting, gait, and transferring). Documentation why an assessment could not be completed due to advanced stage of dementia in combination with a lack of a knowledgeable informant would meet the measure criteria. Functional status assessment tools suggested for use in this measure include, but are not limited to: • Lawton Instrumental Activities of Daily Living Scale (1) • Barthel ADL Index (2) • Katz Index of Independence in Activities of Daily Living (3) • Functional Activities Questionnaire (4)
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.
Denominator Exceptions	None.
Exception Justification	There are no exceptions to this measure.
Supporting Guideline & Other References	**The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:** • "A detailed assessment of functional status may also aid the clinician in documenting and tracking changes over time as well as providing guidance to the patient and caregivers. Functional status is typically described in terms of the patient's ability to perform instrumental activities of daily living such as shopping, writing checks, basic housework, and activities of daily living such as dressing, bathing, feeding, transferring, and maintaining continence. These regular assessments of recent cognitive and functional status provide a baseline for assessing the effect of any intervention, and they improve the recognition and treatment of acute problems, such as delirium." (5) • "Behavior modification, scheduled toileting, and prompted voiding should be used to reduce urinary incontinence." (6) • "Graded assistance, practice, and positive reinforcement should be used to increase functional independence." (6)

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	• "Low lighting levels, music, and simulated nature sounds may improve eating behaviors for persons with dementia, and intensive multimodality group training may improve activities of daily living, but these approaches lack conclusive supporting data." (6)
Relationship to Desired Outcome	Maintaining or increasing physical functioning levels is a desired outcome. This is key to maintaining quality of life and reducing caregiver burden. This requires regular assessment of function in multiple domains.
Opportunity for Improvement	In routine practice, persons with dementia may not be assessed regularly for changes in their ability to perform both basic and instrumental activities of daily living. (7) Frequent and comprehensive assessments will allow health care providers to track these changes and to make timely interventions aimed at preserving function or mitigating disability. When planning interventions to improve or maintain function, it is important to consider a broad range of causes of functional impairment, including impaired cognition.
National Quality Strategy Domains	☐ Patient and Family Engagement ☐ Patient Safety ☐Care Coordination ☐ Population/Public Health ☐ Efficient Use of Healthcare Resources ☒ Clinical Process/Effectiveness
Harmonization with Existing Measures	Efforts were made to harmonize the measure with PQRS Functional Outcome Assessment (#182). The Work Group determined that providers need additional assessment options for the unique needs of patients with dementia beyond the use of standardized functional outcome assessment tools.
Measure Purpose (Check all that apply)	☒ Quality improvement ☒ Accountability
Type of Measure (Check all that apply)	☒Process ☐ Outcome ☐ Structure
Level of Measurement (Check all that apply)	☒ Individual Provider ☒ Practice ☒ System
Care Setting (Check all that apply)	☒ Outpatient ☒ Inpatient ☐ Emergency Departments and Urgent Care ☒ Post-Acute Care (i.e., Long Term Care Hospitals, Skilled Nursing Facilities, Inpatient Rehabilitation Facilities, and Home Health Agencies)
Data Source (Check all that apply)	☒ Electronic health record (EHR) data ☒Administrative Data/Claims ☐ Chart Review

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	☒ Registry
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Technical Specifications: Administrative Data (Claims)	
Denominator (Eligible Population)	See Appendix A for Diagnosis Codes AND CPT® Code: • 99201, 99202, 99203, 99204, 99205 (Office or other outpatient visit-New Patient); • 99211, 99212, 99213, 99214, 99215 (Office or other outpatient visit-Established Patient); • 99241, 99242, 99243, 99244, 99245 (Office or Other Outpatient Consultation-New or Established Patient); • 99201, 99202, 99203, 99204, 99205 (E/M Codes); • 99211, 99212, 99213, 99214, 99215 (E/M Codes); • 90791, 90792, 90832, 90833, 90834, 90836, 90837, 90838 (Psychiatric Diagnostic Evaluation and psychotherapy); • 96116, 96118, 96119, 96120 (Neurobehavior status exam and neuropsychological testing); • 96150, 96151, 96152, 96153, 96154, 96155 (Health and behavior assessment and interventions); • 99490, 99487, 99489 (Complex Chronic Care Management); • 99497, 99498 (Advance care planning); • 97003, 97004 (Occupational therapy evaluation and re-evaluation); • 97001, 97002 (Physical therapy evaluation and re-evaluation); • 99221-99223 (Initial Hospital Care); • 99231-99233 (Subsequent Hospital Care); • 99238-99239 (Hospital Discharge); • 99251-99255 (Initial Inpatient Consultation); • 99304, 99305, 99306, 99307, 99308, 99309, 99310 (Nursing Home Consultation); • 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337 (Domiciliary, Rest Home Care Services); • 99339, 99340 (Domiciliary, Rest Home Care Services Care Plan Oversight);

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	• 99341, 99342, 99343, 99344, 99345 (Home Care); • 99347, 99348, 99349, 99350 (Home Care).

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Screening and Management of Behavioral and Psychiatric Symptoms Associated with Dementia

Measure Description	
Percentage of patients with dementia for whom there was a documented screening* for behavioral and psychiatric symptoms, including depression, and for whom, if screening was positive, there was also documentation of recommendations for management in the last 12 months.	
Measure Components	
Numerator Statement	Patients with dementia for whom there was a documented screening* for behavioral and psychiatric symptoms, including depression in the last 12 months and for whom, if screening was positive, there was also documentation of recommendations for management in the last 12 months. *Screening is defined as using a validated instrument or directly examining the patient or knowledgeable informant to determine the presence or absence of symptoms from three domains: activity disturbances, mood disturbances (including depression), and thought and perceptional disturbances. The following is a non-exhaustive list of symptoms falling into each of the three domains pertinent to this measure: *Activity disturbances (To meet measure, patient or knowledgeable informant must be screened for at least one symptom from this list):* • Agitation • Wandering • Purposeless hyperactivity • Verbal or physical aggressiveness • Resisting care • Apathy • Impulsiveness • Socially inappropriate behaviors • Eating disturbances • Sleep problems • Diurnal/sleep-wake cycle disturbances • Repetitive behavior *Mood disturbances (To meet measure, patient or knowledgeable informant must be screened for depression and at least one more symptom from this list):* • Anxiety • Elation • Irritability • Mood lability/fluctuations *Thought and perceptual disturbances (To meet measure, patient or knowledgeable informant must be screened for at least one symptom from this list):* • Having fixed false beliefs (delusions) • Hearing or seeing non-present entities (hallucinations) • Paranoia Examples of reliable and valid instruments that are commonly used in research settings and that can be used to assess behavior include, but are not limited to:

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	Dementia Signs and Symptoms (DSS) Scale (1) or Neuropsychiatric Inventory (NPI) (2). The assessment of behavioral status may include the assessment of Behavioral and Psychological Symptoms of Dementia (BPSD) (3). For patients residing in nursing homes, it may include an assessment of the behavioral symptom items from the Minimum Data Set (MDS) (4).
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.
Denominator Exceptions	None.
Exception Justification	This measure has no exceptions.
Supporting Guideline & Other References	**The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:** • "It is important for the [clinician] treating a patient with dementia to regularly assess cognitive deficits or behavioral difficulties that potentially pose a danger to the patient or others." (5) • "Traditionally cognitive function has been the main focus of interest in treatment and research of people with dementia. It is becoming increasingly recognized, however, that noncognitive symptoms are those that are most disturbing to families and caregivers and may seriously impact not only the patient's well-being, but also the family's, caregiver' and providers' approaches to managing the patient"(6) • "Assess and monitor for behavioral changes; in particular, the presence of agitation, aggression, anxiety, disinhibitions, delusions, and hallucinations" (7) • "Identification of neuropsychiatric symptoms is essential for both the diagnosis and treatment, as some BPSD constitute the core or supportive diagnostic features of some non-AD dementias, such as DLB, PDD or FTLD" (8) "In summary, new trials and studies better define adverse effects, but they do not strengthen the evidence for efficacy of antipsychotic drugs in treating psychosis or agitation. Rather, they demonstrate minimal or no efficacy with strong placebo effects as well as variations in response with trial duration. These findings strengthen the support for using nonpharmacological interventions and environmental measures to attempt to reduce psychosis and agitation prior to initiation of medications."(9)
Relationship to Desired Outcome	Decreasing the rate of behavioral and psychiatric symptoms of dementia is a desired outcome. These symptoms, including depression, have serious adverse impact on quality of life for patients and caregivers and increase the risk of institutionalization. They may go unrecognized and untreated by health care providers if they are not actively screened for with specific attention to discrete symptom domains.
Opportunity for Improvement	Behavioral and psychiatric symptoms, including depression, are very common in dementia, are major sources of disability and distress, and are frequently not detected or appropriately treated (10,11). Regular screening for and treatment of these symptoms will improve the quality of life for patients and reduce caregiver burden.
National Quality Strategy Domains	☐ Patient and Family Engagement

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	☐ Patient Safety ☐ Care Coordination ☐ Population/Public Health ☐ Efficient Use of Healthcare Resources ☒ Clinical Process/Effectiveness
Harmonization with Existing Measures	Depression assessment measures endorsed by NQF and incorporated into PQRS exist: process measure (Preventive Care and Screening NQF #0418; PQRS #134) and intermediate outcome measure (NQF #0710; PQRS #370). A separate measure is needed and created to address all of the behavioral and psychiatric symptoms specific to patients with dementia. The treatment plan for a patient with dementia will differ significantly.
Measure Purpose (Check all that apply)	☒ Quality improvement ☒ Accountability
Type of Measure (Check all that apply)	☒Process ☐ Outcome ☐ Structure
Level of Measurement (Check all that apply)	☒ Individual Provider ☒ Practice ☒ System
Care Setting (Check all that apply)	☒ Outpatient ☒ Inpatient ☒ Emergency Departments and Urgent Care ☒ Post-Acute Care (i.e., Long Term Care Hospitals, Skilled Nursing Facilities, Inpatient Rehabilitation Facilities, and Home Health Agencies)
Data Source (Check all that apply)	☒ Electronic health record (EHR) data ☒Administrative Data/Claims ☐ Chart Review ☒ Registry

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Technical Specifications: Administrative Data (Claims)

Denominator (Eligible Population)	See Appendix A for Diagnosis Codes AND CPT® Code: • 99201, 99202, 99203, 99204, 99205 (Office or other outpatient visit-New Patient); • 99211, 99212, 99213, 99214, 99215 (Office or other outpatient visit-Established Patient); • 99241, 99242, 99243, 99244, 99245 (Office or Other Outpatient Consultation-New or Established Patient); • 99201, 99202, 99203, 99204, 99205 (E/M Codes); • 99211, 99212, 99213, 99214, 99215 (E/M Codes); • 90791, 90792, 90832, 90833, 90834, 90836, 90837, 90838 (Psychiatric Diagnostic Evaluation and psychotherapy); • 96116, 96118, 96119, 96120,96127 (Neurobehavior status exam and neuropsychological testing); • 96150, 96151, 96152, 96153, 96154, 96155 (Health and behavior assessment and interventions); • 99490, 99487, 99489 (Complex Chronic Care Management); • 99497, 99498 (Advance care planning); • 97003, 97004 (Occupational therapy evaluation and re-evaluation);97001, 97002 (Physical therapy evaluation and re-evaluation); • 99221-99223 (Initial Hospital Care); • 99231-99233 (Subsequent Hospital Care); • 99238-99239 (Hospital Discharge); • 99251-99255 (Initial Inpatient Consultation); • 99304, 99305, 99306, 99307, 99308, 99309, 99310 (Nursing Home Consultation); • 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337 (Domiciliary, Rest Home Care Services); • 99339, 99340 (Domiciliary, Rest Home Care Services Care Plan Oversight); • 99341, 99342, 99343, 99344, 99345 (Home Care); • 99347, 99348, 99349, 99350 (Home Care); • 99281-99285(Emergency Department); • 99201-99205 or 99211-99215 (Urgent Care).

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Safety Concern Screening and Follow-up for Patients with Dementia

Measure Description	
Percentage of patients with dementia or their caregiver(s) for whom there was a documented safety screening * in two domains of risk: 1) dangerousness to self or others and 2)environmental risks; and if screening was positive in the last 12 months, there was documentation of mitigation recommendations, including but not limited to referral to other resources.	
Measure Components	
Numerator Statement	Patients with dementia or their caregiver(s) for whom there was a documented safety screening * in two domains of risk: 1) dangerousness to self or others and 2) environmental risks; and if screening was positive in the last 12 months, there was documentation of mitigation recommendations, including but not limited to referral to other resources. The following is a non-exhaustive list of safety concerns in the two domains pertinent to this measure. To meet measure requirements a patient's medical record must have documentation of being screened on at least one concern from each of the two domains. *Dangerousness to self (patient) or others (caregivers and other individuals)* • Medication misuse • Physical aggressiveness • Wandering, including addressing precautions that may include physical measures (e.g., locks, fences or hedges), video surveillance, GPS monitoring and Safe Return programs, personal companions, schedule modifications (e.g., adult day care and day programs), rehabilitative measures, and risk mitigation strategies • Inability to respond rapidly to crisis/household emergencies • Financial mismanagement, including being involved in "scams" • Other concerns raised by patient or their caregiver *Environmental risks* • Home safety risks that could arise from cooking or smoking • Access to firearms or other weapons • Access to potentially dangerous chemicals and other materials • Access to and operation of tools and equipment • Trip hazards in the home increasing the risk of falling • Other concerns raised by patient or their caregiver
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.
Denominator Exceptions	Patient unable to communicate and informant not available.
Exception Justification	Patient or informant must be able to provide information for counseling on this issue to be valid.
Supporting Guideline & Other References	**The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:**

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	• "Recommended assessments include evaluation of suicidality, dangerousness to self and others, and the potential for aggression, as well as evaluation of living conditions, safety of the environment, adequacy of supervision, and evidence of neglect or abuse (Category I). [I]mportant safety issues in the management of patients with dementia include interventions to decrease the hazards of wandering and recommendations concerning activities such as cooking, driving, hunting, and the operation of hazardous equipment. Caregivers should be referred to available books [and other materials] that provide advice and guidance about maximizing the safety of the environment for patients with dementia…As patients become more impaired, they are likely to require more supervision to remain safe, and safety issues should be addressed as part of every evaluation. Families should be advised about the possibility of accidents due to forgetfulness (e.g., fires while cooking), of difficulties coping with household emergencies, and of the possibility of wandering. Family members should also be advised to determine whether the patient is handling finances appropriately and to consider taking over the paying of bills and other responsibilities. At this stage of the disease [i.e., moderately impaired patients], nearly all patients should not drive." (1) **For mild to moderate Alzheimer's disease** • "Assess for safety risks (e.g., driving, financial management, medication management, home safety risks that could arise from cooking or smoking, potentially dangerous behaviours such as wandering)" (2)
Relationship to Desired Outcome	Reducing injuries, including those associated with falls, accidents, and aggression are desired outcomes. These are devastating complications of dementia that have serious adverse impact on the quality of life of patients and caregivers. It is possible to reduce the risk of these outcomes by means of simple preventive measures. Opportunities for these preventive measures may be overlooked by health care providers if they don't screen for safety risks with specific attention to discrete domains of risk.
Opportunity for Improvement	Screening for safety concerns has been identified as a major unmet need of persons with dementia (3). Caregivers may be caught unprepared and unaware of the unpredictability of patients with dementia. Numerous Internet resources are available to help guide and support family and other informal caregivers. Local organizations, such as senior centers, may have adult day care programs that offer socialization opportunities for the patient and a chance to participate in planned and supervised activities designed to promote well-being, such as music and exercise. Support groups for caregivers and patients alike may be offered at senior centers, providing opportunities for each to develop a mutual support system. Some respite for caregivers may be found through these resources; longer term respite services may be available at local nursing homes to provide caregivers with a temporary rest from caregiving, while the person with dementia continues to receive care in a safe environment. A health care provider who is familiar with the scope of challenges that can confront patients and caregivers and is able to provide guidance to supportive resources that reinforce safety is a valuable resource.
National Quality Strategy Domains	☐ Patient and Family Engagement ☒ Patient Safety

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	☐Care Coordination ☐ Population/Public Health ☐ Efficient Use of Healthcare Resources ☐ Clinical Process/Effectiveness
Harmonization with Existing Measures	The work group recommends that all individuals with dementia be screened for abuse and violence, but recognized that previously developed measures exist to address this need. The work group recommends that providers, practices, and systems consider implementing the previously developed Elder Maltreatment Screen and Follow-up Plan Measure (PQRS Measure #181.)
Measure Purpose (Check all that apply)	☒ Quality improvement ☒ Accountability
Type of Measure (Check all that apply)	☒Process ☐ Outcome ☐ Structure
Level of Measurement (Check all that apply)	☒ Individual Provider ☒ Practice ☒ System
Care Setting (Check all that apply)	☒ Outpatient ☒ Inpatient ☒ Emergency Departments and Urgent Care ☒ Post-Acute Care (i.e., Long Term Care Hospitals, Skilled Nursing Facilities, Inpatient Rehabilitation Facilities, and Home Health Agencies)
Data Source (Check all that apply)	☒ Electronic health record (EHR) data ☐Administrative Data/Claims ☐ Chart Review ☒ Registry

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1. American Psychiatric Association (APA). Practice guideline for the treatment of patients with Alzheimer's disease and other dementias. Arlington (VA): American Psychiatric Association (APA). October 2007 85 p.
2. Chertkow H. Diagnosis and treatment of dementia: introduction. Introducing a series based on the Third Canadian Consensus Conference on the Diagnosis and Treatment of Dementia. CMAJ. 2008;178:316-321.
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Driving Screening and Follow-up for Patients with Dementia

Measure Description	
Percentage of patients with dementia for whom there was a documented screening for driving risks and for whom, if screening positive, there was also documentation they were informed of alternatives to driving in the last 12 months.	
Measure Components	
Numerator Statement	Patients with dementia for whom there was a documented screening for driving risks and for whom, if screening positive, there was also documentation they were informed of alternatives to driving in the last 12 months.
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.
Denominator Exceptions	None.
Exception Justification	This measure has no exceptions.
Supporting Guideline & Other References	**The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:** • "For patients with dementia, consider the following characteristics useful for identifying patients at increased risk for unsafe driving: the Clinical Dementia Rating scale (Level A), a caregiver's rating of a patient's driving ability as marginal or unsafe (Level B), a history of crashes or traffic citations (Level C), reduced driving mileage or self-reported situational avoidance (Level C), Mini-Mental State Examination scores of 24 or less (Level C), and aggressive or impulsive personality characteristics (Level C). Consider the following characteristics not useful for identifying patients at increased risk for unsafe driving: a patient's self-rating of safe driving ability (Level A) and lack of situational avoidance (Level C). There is insufficient evidence to support or refute the benefit of neuropsychological testing, after controlling for the presence and severity of dementia, or interventional strategies for drivers with dementia (Level U). Clinicians may present patients and their caregivers with the data showing that, as a group, patients with mild dementia (CDR of 1) are at a substantially higher risk for unsafe driving and thus should strongly consider discontinuing driving. At the very least, patients and their caregivers should prepare for the eventuality of driving cessation as dementia severity increases." (1) • "Assessment of driving ability should be made after diagnosis with particular attention paid to visuospatial, visuo-perceptual and executive abilities (Good Practice Point). Advice either to allow driving but to review after an interval, to cease driving, or to refer for retesting should be given (Good Practice Point) EFNS-ENS Guidelines on the diagnosis and management of disorders associated with dementia."(2) • "No single assessment can accurately predict fitness to drive; an array of assessment tools should be used to determine risk in older adults."(3)

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	• "Self-report or self-assessment has not been shown to be an adequate measure of fitness-to-drive largely because of the overlearned skill set of driving combined with the intense desire to remain driving independently." (3)
Relationship to Desired Outcome	Reducing the number of driving accidents in persons with dementia is a desired outcome. As dementia progresses driving skills will deteriorate.(1) Screening at a regular interval will identify potential deficits and should lead to a conversation with patient exploring all reasonable options for remaining mobile in their community. As deficits are addressed and alternate transportation methods instituted for those found to have deficits the number of patients experiencing driving accidents should be reduced.
Opportunity for Improvement	Health care providers are often reluctant to raise the issue of driving safety with their patients because they don't feel competent to assess driving safety and because patients frequently resist discussing it.(3) Providers may consider referring patients to a driving center to conduct a driving assessment. "…except for on-road assessment, there is no single tool at present that should be used to determine fitness to drive."(3) An impartial third party expert in driving assessments may be able to address patient concerns beyond the capability of a healthcare provider and minimize potential for an adversarial relationship developing between the healthcare team and patient. Providers are encouraged to review their state specific requirements to ensure screening and notification practices are compliant. The work group removed the prior exception for those no longer driving based on feedback from those who had implemented the measure in practice. It is not the intent of the work group to require unnecessary screening for individuals who are no longer driving due to advanced dementia and other health co-morbidities (i.e., bed bound) for which screening is completed via a visual review of patient's physical status and documentation that patient is not driving.
National Quality Strategy Domains	☐ Patient and Family Engagement ☒ Patient Safety ☐Care Coordination ☐ Population/Public Health ☐ Efficient Use of Healthcare Resources ☐ Clinical Process/Effectiveness
Harmonization with Existing Measures	Harmonization with existing measures was not applicable to this measure.
Measure Purpose (Check all that apply)	☒ Quality improvement ☒ Accountability
Type of Measure (Check all that apply)	☒Process ☐ Outcome ☐ Structure
Level of Measurement (Check all that apply)	☒ Individual Provider ☒ Practice

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	☒ System
Care Setting (Check all that apply)	☒ Outpatient ☐ Inpatient ☐ Emergency Departments and Urgent Care ☒ Post-Acute Care (i.e., Long Term Care Hospitals, Skilled Nursing Facilities, Inpatient Rehabilitation Facilities, and Home Health Agencies)
Data Source (Check all that apply)	☒ Electronic health record (EHR) data ☒Administrative Data/Claims ☐ Chart Review ☒ Registry

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1. Iverson DJ, Gronseth GS, Reger MA, et al. Practice Parameter update: Evaluation and management of driving risk in dementia. Report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2010;74(16):1316-1324.
2. Sorbi S, Hort J, Erkinjuntti T, et al. EFNS-ENS Guidelines on the diagnosis and management of disorders associated with dementia. Eur J Neurol 2012;19(9):1159-1179.
3. American Geriatrics Society & A. Pomidor, Ed. (2016, January). Clinician's guide to assessing and counseling older drivers, 3rd edition. (Report No. DOT HS 812 228). Washington, DC: National Highway Traffic Safety Administration.

Technical Specifications: Administrative Data (Claims)

Denominator (Eligible Population)	See Appendix A for Diagnosis Codes AND CPT® Code: • 99201, 99202, 99203, 99204, 99205 (Office or other outpatient visit-New Patient); • 99211, 99212, 99213, 99214, 99215 (Office or other outpatient visit-Established Patient); • 99241, 99242, 99243, 99244, 99245 (Office or Other Outpatient Consultation-New or Established Patient); • 99201, 99202, 99203, 99204, 99205 (E/M Codes); • 99211, 99212, 99213, 99214, 99215 (E/M Codes); • 90791, 90792, 90832, 90833, 90834, 90836, 90837, 90838 (Psychiatric Diagnostic Evaluation and psychotherapy); • 96116, 96118, 96119, 96120 (Neurobehavior status exam and neuropsychological testing); • 96150, 96151, 96152, 96153, 96154, 96155 (Health and behavior assessment and interventions); • 99490, 99487, 99489 (Complex Chronic Care Management); • 99497, 99498 (Advance care planning); • 97003, 97004 (Occupational therapy evaluation and re-evaluation); • 97001, 97002 (Physical therapy evaluation and re-evaluation);99304, 99305, 99306, 99307, 99308, 99309, 99310 (Nursing Home Consultation); • 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337 (Domiciliary, Rest Home Care Services); • 99339, 99340 (Domiciliary, Rest Home Care Services Care Plan Oversight); • 99341, 99342, 99343, 99344, 99345 (Home Care);

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	• 99347, 99348, 99349, 99350 (Home Care).

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Advance Care Planning and Palliative Care Counseling for Patients with Dementia

Measure Description	
Percentage of patients with dementia who 1) have an advance care plan or surrogate decisions maker documented in the medical record or documentation in the medical record that an advance care plan was discussed but the patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan AND Patients with dementia or their surrogate decision maker who 2) received comprehensive counseling regarding ongoing palliation and symptom management, and end of life decisions within two years of initial diagnosis or assumption of care.	
Measure Components	
Numerator Statement	Patients with dementia who 1) have an advance care plan or surrogate decisions maker documented in the medical record or documentation in the medical record that an advance care plan was discussed but the patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan AND Patients with dementia or their surrogate decision maker who 2) received comprehensive counseling* regarding ongoing palliation and symptom management, and end of life decisions within two years of initial diagnosis or assumption of care. *Comprehensive counseling regarding end of life decisions (recognition of end-stage dementia, goals of care, comfort care and hospice referral) is defined as a discussion of the risks and benefits of the following medical interventions to address the major clinical issues associated with advanced dementia: • Hospitalization • Treatment for infections • Surgery • Artificial nutrition and hydration • Cardiopulmonary resuscitation • Mechanical ventilation
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.
Denominator Exceptions	Patients who at time of intake had advanced dementia for whom there was no record of advance care planning or surrogate decision-maker prior to their admission.
Exception Justification	An exception was made for patients who at time of intake had advanced dementia for whom there was no record of advance care planning or surrogate decision-maker prior to their admission as this population would be unable to engage in meaningful conversations on advanced care planning and surrogate decision-making.
Supporting Guideline &	**The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:**

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Other References	• "At this stage [i.e., severely and profoundly impaired patients]…the treatment team should help the family prepare for the patient's death. Ideally, discussions about feeding tube placement, treatment of infection, cardiopulmonary resuscitation, and intubation will have taken place when the patient could participate, but if they have not, it is important to raise these issues with the family before a decision about one of these options is urgently required."(1) • "A crucial component of [care for nursing home residents] is providing information about the benefits and burdens of [medical] interventions to the resident's surrogate decision maker, supporting development of a care plan that takes into consideration previous wishes of the resident, if any, and his or her best interest as interpreted by the decision maker. The care plan should consider the goals of care and priority order of the three possible goals – survival, maintenance of function, and comfort."(2) • "[Advance directives are d]esigned to respect patient's autonomy and determine his/her wishes about future life-sustaining medical treatment if unable to indicate wishes… Key interventions, treatment decisions to include in advance directives [are]: resuscitation procedures, mechanical respiration, chemotherapy, radiation therapy, dialysis, simple diagnostic tests, pain control, blood products, transfusions, intentional deep sedation."(3) • "When eating difficulties arise, feeding tubes are not recommended for older adults with advanced dementia. Careful hand feeding should be offered because hand feeding has been shown to be as good as tube feeding for the outcomes of death, aspiration pneumonia, functional status, and comfort. Moreover, tube feeding is associated with agitation, greater use of physical and chemical restraints, healthcare use due to tube-related complications, and development of new pressure ulcers."(4)
Relationship to Desired Outcome	Dementia is under-recognized as a terminal disease.(5) Individuals with advanced cognitive impairment who did not have an advanced directive had a 15% greater chance of a burdensome transition at the end of life.(6)
Opportunity for Improvement	Growing evidence indicates that patients want to engage in advance care plan discussions to ensure their wishes are met(7), but few patients with dementia are engaged in these discussions.(2) All providers have a responsibility to review existing care plans to identify if patient choices have changed as the disease progresses.(8) The work group encourages engagement of patients in this decision making process early in the course of the disease and for providers to assure patients decisions made will be adhered to without interference from caregivers or treatment team members when clinically appropriate. There is also evidence indicating that patients and surrogate decision makers are not being engaged in ongoing palliation and symptom management. (2) It is anticipated that through measurement providers will increasingly provide patients with, and their surrogate decisions makers will engage in, counseling on these important topics.
National Quality Strategy Domains	☐ Patient and Family Engagement ☐ Patient Safety ☐Care Coordination

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	☐ Population/Public Health ☐ Efficient Use of Healthcare Resources ☒ Clinical Process/Effectiveness
Harmonization with Existing Measures	NQF has endorsed an Advance Care Plan measure developed by National Committee for Quality Assurance (NCQA) #0326 that measures: Percentage patients 65 years of age and older who have an advance care plan or surrogate decision maker documented in the medical record or documentation in the medical record that an advance care plan was discussed but the patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan. The work group harmonized with the NCQA measure removing the age restriction and applying specifically to the population with dementia as many individuals with early onset dementia will benefit from these discussions as well. Additionally, a second component addressing ongoing palliation and symptom management is needed for this population.
Measure Purpose (Check all that apply)	☒ Quality improvement ☒ Accountability
Type of Measure (Check all that apply)	☒Process ☐ Outcome ☐ Structure
Level of Measurement (Check all that apply)	☒ Individual Provider ☒ Practice ☒ System
Care Setting (Check all that apply)	☒ Outpatient ☒ Inpatient ☒ Emergency Departments and Urgent Care ☒ Post-Acute Care (i.e., Long Term Care Hospitals, Skilled Nursing Facilities, Inpatient Rehabilitation Facilities, and Home Health Agencies)
Data Source (Check all that apply)	☒ Electronic health record (EHR) data ☒Administrative Data/Claims ☐ Chart Review ☒ Registry
References	

1. American Psychiatric Association (APA). Practice guideline for the treatment of patients with Alzheimer's disease and other dementias. Arlington (VA): American Psychiatric Association (APA). October 2007 85 p.
2. Volicer L. for Alzheimer's Association. End-of-life Care for People with Dementia in Residential Care Settings. 2005. 35p. Available at: http://www.alz.org/documents/national/endoflifelitreview.pdf. Accessed on September 3, 2015.
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4. American Geriatrics Society Ethics Committee and Clinical Practice and Models of Care Committee. American Geriatrics Society Feeding Tubes in Advanced Dementia Position Statement. J Am Geriatr Soc.2014;62(8):1590-1593.

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Technical Specifications: Administrative Data (Claims)	
Denominator (Eligible Population)	See Appendix A for Diagnosis Codes AND CPT® Code: • 99201, 99202, 99203, 99204, 99205 (Office or other outpatient visit-New Patient); • 99211, 99212, 99213, 99214, 99215 (Office or other outpatient visit-Established Patient); • 99241, 99242, 99243, 99244, 99245 (Office or Other Outpatient Consultation-New or Established Patient); • 99201, 99202, 99203, 99204, 99205 (E/M Codes); • 99211, 99212, 99213, 99214, 99215 (E/M Codes); • 90791, 90792, 90832, 90833, 90834, 90836, 90837, 90838 (Psychiatric Diagnostic Evaluation and psychotherapy); • 96116, 96118, 96119, 96120 (Neurobehavior status exam and neuropsychological testing); • 96150, 96151, 96152, 96153, 96154, 96155 (Health and behavior assessment and interventions); • 99490, 99487, 99489 (Complex Chronic Care Management); • **99497, 99498 (Advance care planning)** [new codes as of January 1, 2016 allowing services to be provided in non-traditional format]; • 97003, 97004 (Occupational therapy evaluation and re-evaluation); • 97001, 97002 (Physical therapy evaluation and re-evaluation);99221-99223 (Initial Hospital Care); • 99231-99233 (Subsequent Hospital Care); • 99238-99239 (Hospital Discharge); • 99251-99255 (Initial Inpatient Consultation); • 99304, 99305, 99306, 99307, 99308, 99309, 99310 (Nursing Home Consultation); • 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337 (Domiciliary, Rest Home Care Services); • 99339, 99340 (Domiciliary, Rest Home Care Services Care Plan Oversight); • 99341, 99342, 99343, 99344, 99345 (Home Care); • 99347, 99348, 99349, 99350 (Home Care); • 99281-99285(Emergency Department); • 99201-99205 or 99211-99215 (Urgent Care).

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Pain Assessment and Follow-up for Patients with Dementia

Measure Description	
Percentage of patients with dementia who underwent documented screening * for pain symptoms at every visit and if screening was positive also had documentation of a follow-up plan.	
Measure Components	
Numerator Statement	Patients with dementia who underwent documented screening * for pain symptoms at every visit and if screening was positive also had documentation of a follow-up plan**. *Screening is defined as use of a validated screening tools approved for use in this measure include, but are not limited to: • Pain Assessment in Advanced Dementia (PAINAD) (1) • Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC or PACSLAC-II) (2,3) • Visual Analog Scale and Verbal Pain Intensity Scale (4) • Pain Assessment for the Dementing Elderly (PADE) (5) • Likert Pain Scale • Minimum data set (MDS)–version 3.0, Section J (6) OR evaluation of verbal and non-verbal expressions of pain behaviors (i.e., changes in breathing quality, negative types of verbalization separate from breathing, facial expression, body language) medication usage. **Follow-up plan must include documentation and rationale for treatment considerations. Health care providers may consider analgesic, NSAID, long acting agents, liniments, massage, lidocaine patches, physical therapy, or orthopedic evaluation.
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.
Denominator Exceptions	None.
Exception Justification	This measure has no exceptions.
Supporting Guideline & Other References	**The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:** • "Pain-assessment results should be used to evaluate the efficacy of pain management interventions" (7) • "Recommendations Specific to Self-Report Measures 1 Use of synonyms when asking about the pain experience (e.g., hurt, aching) will facilitate the self-report of some patients who have limitations in ability to communicate verbally. 2 Self-report scales should be modified to account for any sensory deficits that occur with aging (e.g., poor vision, hearing difficulties).

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	3 Use self-report tools that have been found to be most valid among seniors (e.g., the Coloured Analogue Scale, Numeric Rating Scales, Behavioural Rating Scales, the 21 Point Box Scale). 4 Use of horizontal visual analogue scales should be avoided, as some investigators have found unusually high numbers of unscorable responses among seniors." (7) • "Recommendations Specific to Observational Measures 1 Observational tools that have been shown to be reliable and valid for use in this population include the PACSLAC and DOLOPLUS-2. The PACSLAC is the only tool that covers all six behavioural pain-assessment domains that have been recommended by the American Geriatrics Society. Nonetheless, clinicians should always exercise caution when using these measures because they are relatively new and research is continuing. 2 When assessing pain in acute-care settings tools that primarily focus on evaluation of change over time should be avoided. 3 Observational assessments during movement-based tasks would be more likely to lead to the identification of underlying pain problems than assessments during rest. 4 Some pain-assessment tools, such as the PACSLAC, do not have specific cut off scores because of recognition of tremendous individual differences among people with severe dementia. Instead, it is recommended that pain be assessed on a regular basis (establishing baseline scores for each patient) with the clinician observing score changes over time. 5 Examination of pain-assessment scores before and after the administration of analgesics is likely to facilitate pain assessment. 6 Some of the symptoms of delirium (which are seen frequently in long-term care) overlap with certain behavioural manifestations of uncontrolled pain (e.g., behavioural disturbance). Clinicians assessing patients with delirium should be aware of this. On the positive side, delirium tends to be a transient state, and pain assessment, which can be repeated or conducted when the patient is not delirious, is more likely to lead to valid results. It is important to note also that pain can cause delirium, and clinicians should be astute in order to avoid missing pain problems among patients with delirium. 7 Observational pain-assessment tools are screening instruments only and cannot be taken to represent definitive indicators of pain. Sometimes they may suggest the presence of pain when pain is not present, and at other times they may fail to identify pain." (7) • "Recommendations for pain assessment in older adults with advanced dementia unable to self-report that are unique from the general recommendations include the following. Self-Report…Search for

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	Potential Causes of Pain…Observation of Patient Behaviors…Use of Behavioral Pain Assessment Tools…Proxy Reporting of Pain." (8)
Relationship to Desired Outcome	By documenting screening and treating pain for all patients with dementia including those who are not able to verbally communicate, it is anticipated that patient quality of life and movement will improve. Current dementia measures do not specifically include pain assessment in people with dementia. There is a growing body of evidence that pain influences dementia outcomes.(9)
Opportunity for Improvement	"Evidence indicates that pain is frequently undertreated and poorly managed in older persons, particularly in those with cognitive impairment." (10) "Under-treatment of pain in dementia is a frequent and frightening observation; its risk increases with the severity of dementia."(11) Pain symptoms in a patient with dementia can present as non-verbal expressions or pain behaviors that can include: changes in breathing quality (rapid breathing, short or long bursts of hyperventilation), negative types of verbalization separate from breathing (e.g. moaning, negative speech), facial expression (e.g. frowning, grimacing), body language (e.g. increased muscle tension, threatening postures), disinterest in engaging in relationships and favored activities, depression symptoms, cognitive decline, functional decline, neuropsychiatric symptoms, including agitation and aggression. People with dementia can feel pain but often cannot isolate the source of the pain.(11) Hence, pain symptoms should be measured so they can be assessed and effectively treated so that pain does not become a barrier to movement or unknowingly negatively affect other outcome measures being studied.
National Quality Strategy Domains	☐ Patient and Family Engagement ☐ Patient Safety ☐ Care Coordination ☐ Population/Public Health ☐ Efficient Use of Healthcare Resources ☒ Clinical Process/Effectiveness
Harmonization with Existing Measures	2015 PQRS Measure 131: Pain Assessment and Follow-up for patients aged 18 years and older with documentation of a pain assessment using a standardized tool(s) on each visit AND documentation of a follow-up plan when pain is present. The Work Group determined a separate measure for patients with dementia is needed to address pain in those excluded through the current PQRS measure: "patient refused to participate, and/or severe mental and/or physical incapacity where the person is unable to express himself/herself in a manner understood by others..."(12). The current PQRS measure focuses on adults with normal ability to communicate and does not take measure assessment of people with dementia via information obtained through their caregivers, pain behaviors and nationally recognized standardized non-verbal pain assessment tools (e.g. Pain Assessment in Advanced Dementia)(13).

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Measure Purpose (Check all that apply)	☒ Quality improvement ☒ Accountability
Type of Measure (Check all that apply)	☒Process ☐ Outcome ☐ Structure
Level of Measurement (Check all that apply)	☒ Individual Provider ☒ Practice ☒ System
Care Setting (Check all that apply)	☒ Outpatient ☒ Inpatient ☒ Emergency Departments and Urgent Care ☒ Post-Acute Care (i.e., Long Term Care Hospitals, Skilled Nursing Facilities, Inpatient Rehabilitation Facilities, and Home Health Agencies)
Data Source (Check all that apply)	☒ Electronic health record (EHR) data ☒Administrative Data/Claims ☐ Chart Review ☒ Registry

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Technical Specifications: Administrative Data (Claims)	
Denominator (Eligible Population)	See Appendix A for Diagnosis Codes AND CPT® Code: • 99201, 99202, 99203, 99204, 99205 (Office or other outpatient visit-New Patient); • 99211, 99212, 99213, 99214, 99215 (Office or other outpatient visit-Established Patient); • 99241, 99242, 99243, 99244, 99245 (Office or Other Outpatient Consultation-New or Established Patient); • 99201, 99202, 99203, 99204, 99205 (E/M Codes); • 99211, 99212, 99213, 99214, 99215 (E/M Codes); • 90791, 90792, 90832, 90833, 90834, 90836, 90837, 90838 (Psychiatric Diagnostic Evaluation and psychotherapy); • 96116, 96118, 96119, 96120 (Neurobehavior status exam and neuropsychological testing); • 96150, 96151, 96152, 96153, 96154, 96155 (Health and behavior assessment and interventions); • 99490, 99487, 99489 (Complex Chronic Care Management); • 99497, 99498 (Advance care planning); • 97003, 97004 (Occupational therapy evaluation and re-evaluation); • 97001, 97002 (Physical therapy evaluation and re-evaluation); • 99221-99223 (Initial Hospital Care); • 99231-99233 (Subsequent Hospital Care); • 99238-99239 (Hospital Discharge); • 99251-99255 (Initial Inpatient Consultation); • 99304, 99305, 99306, 99307, 99308, 99309, 99310 (Nursing Home Consultation); • 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337 (Domiciliary, Rest Home Care Services); • 99339, 99340 (Domiciliary, Rest Home Care Services Care Plan Oversight); • 99341, 99342, 99343, 99344, 99345 (Home Care); • 99347, 99348, 99349, 99350 (Home Care); • 99281-99285(Emergency Department); • 99201-99205 or 99211-99215 (Urgent Care).

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Pharmacological Treatment of Dementia

Measure Description	
Percentage of patients with dementia or their caregivers with whom available guideline-appropriate pharmacological treatment options and nonpharmacological behavior and lifestyle modifications were discussed at least once in the last 12-month period.	
Measure Components	
Numerator Statement	Patients with dementia or their caregivers with whom available guideline-appropriate pharmacological treatment options and nonpharmacological behavior and lifestyle modifications were discussed at least once in the last 12-month period.
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.
Denominator Exceptions	None.
Exception Justification	This measure has no exceptions.
Supporting Guideline & Other References	**The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:** • "Cholinesterase inhibitors should be considered in patients with mild to moderate AD (Standard), although studies suggest a small average degree of benefit. There is insufficient evidence to support the use of other antioxidants, anti-inflammatories, or other putative disease-modifying agents specifically to treat AD because of the risk of significant side effects in the absence of demonstrated benefits."(1) • "The type of dementia, the individual symptom constellation and the tolerability should determine what medication should be used. There are hints that combination therapy of drugs with different therapeutic mechanisms might improve the efficacy. In treating neuropsychiatric symptoms (NPS), psychosocial intervention should be the treatment of first choice. Pharmaceuticals can only be recommended when psychosocial interventions is not adequate. However, even then the side effects of pharmaceuticals limit their use." (2) • "Many cases of dementia have more than one condition contributing to causation. Most commonly this will be a combination of AD with other brain pathology. We recommend management be based on those diagnoses that are believed to be the predominant contributing cause(s). (Grade 1B)" (3) • "We recommend ChEIs as a treatment option for AD with cerebrovascular disease. (Grade 1B)" (3) • "We recommend ChEIs as a treatment option for dementia associated with Parkinson's disease. (Grade 1A)" (3) • "There is insufficient and inconsistent evidence on which to make a recommendation either for or against the use of the currently available ChEIs for the treatment of vascular dementia. (Grade 2B)" (3) • "All three ChEIs have demonstrated efficacy for mild to severe AD. We recommend a trial of a ChEIs for most patients with AD. (Grade

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	1A)" (3) • "Direct comparisons do not suggest differences between ChEIs (Grade 2B). Selection of which agent to be used will be based on the adverse effect profile, ease of use, familiarity, and differences between the agents in their pharmacokinetics and other mechanisms of action."(3) • The specific goals of therapy are to preserve cognitive and functional ability, minimize behavioral disturbances, and slow disease progression with maintenance of patients' and caregivers' QoL. Nevertheless, realistic expectations of treatment outcomes are needed because the impact for most patients is likely to be modest and temporary, with not every patient responding to treatment. The main benefit of pharmacotherapy is an attenuation of decline over time rather than an improvement in cognitive or behavioral symptoms……..Despite minor variations in their mode of action there is no evidence to suggest any difference in efficacy between the 3 commonly used ChEIs. Likewise, the tolerability profile is similar between the ChEIs for the oral formulations. …….Donepezil, rivastigmine, and galantamine cause a broad spectrum of AEs, of which nausea, vomiting, diarrhea, and weight loss are the most common." (4) • "Use of cholinesterase inhibitors (ChEIs), memantine or selective serotonin reuptake inhibitors (SSRIs) in any of the FTLD subtypes is possibly ineffective for cognitive improvement **(**Level C**)** (Bei et al., 2010; Lebert et al., 2004). Dopaminergic replacement with bromocriptine in progressive aphasias is probably ineffective **(**Good Practice Point**)** (Reed et al., 2004). Given the insufficient classes II and III evidence and the evidence being largely based on class IV, the use of ChEIs and memantine in FTLD cannot be recommended. There is little class III evidence in support of rivastigmine and memantine (Bei et al., 2010; Lebert et al., 2004). There is no independent evidence for recommending any therapeutic intervention for CBS (Litvan et al., 2001; Zerr, 2009). Rivastigmine is the approved ChEI for the treatment of PDD with class I evidence. PDD diagnosis warrants the use of rivastigmine (Good Practice Point**)** (Maidment, Fox, & Boustani, 2006). Parallels with PDD in terms of clinical picture and disease mechanisms suggest that rivastigmine is possibly effective in DLB (GPP). The evidence for the efficacy of galantamine is insufficient for both PDD and DLB. Memantine is probably effective for both PDD and DLB (Level B) as there were consistently significant improvements in global measures, but not in cognitive measures in two class II studies (Aarsland et al., 2009; Emre et al., 2010). There is insufficient evidence for recommending any specific agent in the treatment of human prion diseases. Surgical treatment can be considered in normal pressure hydrocephalus (NPH) (Level C), and risk to benefit ratio must be individualized for each patient (Marmarou et al., 2005; Esmonde & Cooke, 2002). There is insufficient evidence for recommending any of non-pharmacological treatments." (5) • "In patients with AD, treatment with ChEIs (donepezil, galantamine,

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	or rivastigmine) should be considered at the time of diagnosis, taking into account expected therapeutic benefits and potential safety issues (Level A). Benefits on cognitive and non-cognitive symptoms have been demonstrated in those with mild, moderate, and severe disease (Level A). Realistic expectations for treatment effects and potential side effects should be discussed with the patient and caregivers (Good Practice Point)…….In patients with moderate to severe AD, treatment with memantine should be considered taking into account expected therapeutic benefits and potential safety issues (Level A). Benefits on cognitive and noncognitive symptoms are apparent, some non-cognitive symptoms (agitation, delusions) may respond better than others (Level B). Realistic expectations for treatment effects and potential side effects should be discussed with the patient and caregivers (Good Practice Point).” (6) • “Cholinesterase inhibitors (donepezil, rivastigmine, and galantamine) are effective for mild to moderate Alzheimer's disease (A) and memantine for moderate to severe Alzheimer's disease (A). Until further evidence is available other drugs, including statins, anti-inflammatory drugs, vitamin E and Ginkgo biloba, cannot be recommended either for the treatment or prevention of Alzheimer's disease (A). Neither cholinesterase inhibitors nor memantine are effective in those with mild cognitive impairment (A). Cholinesterase inhibitors are not effective in frontotemporal dementia and may cause agitation (A), though selective serotonin reuptake inhibitors may help behavioural (but not cognitive) features (B). Cholinesterase inhibitors should be used for the treatment of people with Lewy body dementias (Parkinson's disease dementia and dementia with Lewy bodies (DLB)), especially for neuropsychiatric symptoms (A). Cholinesterase inhibitors and memantine can produce cognitive improvements in DLB (A).” (7) • “An increasing number of nonpharmacologic therapies are now available for people with dementia, including behavioral therapy, reality orientation, art therapy, music therapy, complementary therapy, aromatherapy and bright-light therapy, as well as cognitive behavioral therapies;…… it is therefore useful for clinicians to be familiar with several of these approaches to enable a combination of treatments to be tailored to individual requirements…….. Nonpharmacologic interventions can be as simple as redirecting and refocusing the patient, increasing social interaction, initiating enjoyable activities, establishing regular sleep habits, eliminating sources of conflict and frustration (eg, activities that the patient can no longer undertake), and establishing rewards for successes, however small……..the removal of any triggers of behavioral problems or the provision of comforting stimulation, such as the patient’s favorite music, also may be beneficial.” (4) • “In the early stages of the disease, a referral [to occupational therapy] is indicated if cognitive limitations are barriers to participation in daily living skills, social activities, leisure interests, or work and volunteer activities. In the middle stages of the disease, additional indications for referrals may be to determine service needs such as

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	home health assistance, memory care or day service programs, or caregiver respite support. In later stages of the disease, occupational therapy is referred to resolve barriers to performance in self-care or to manage challenging behaviors such as agitation, aggression, disruptive vocalizations, wandering, altered sleep–wake cycles, catastrophic reactions, or frustrations related to communication problems." (8)
Relationship to Desired Outcome	Pharmacologic therapy to address symptomatic progression and occupational therapy to maximize function and safety are available and should be discussed with patients and their caregivers, with the goal of improving quality of life and delaying or preventing institutionalization.
Opportunity for Improvement	Guideline-adherent dementia interventions occurred in 33-91% of primary care practices according to a recent meta-analysis.(9) Individual health care providers can provide counseling about simple interventions that may be novel to caregivers: redirecting and refocusing, providing tolerable social interaction, adhering to good sleep hygiene, ceasing activities that provoke frustration, addressing and ameliorating triggers, and offering soothing measures (music, aromas) that provide comfort. Occupational therapy is available in most medical centers. Newer, more involved interventions, such as cognitive behavior or dialectical behavior therapy, light therapy, reality orientation and others will be available more sparsely; to date no national directory is available. The AAN has created a shared decision-making tool to assist providers and patients who are starting a discussion on if a medication is appropriate for their situation.(10) Health care providers need to tailor treatment recommendations based on each individual patient situation. Health care providers must provide patients and caregivers with information on efficacy and lack of efficacy for treatment options. Memantine is not approved for treatment of mild AD and there is no current evidence supporting the benefits of supplemental oils, foods or other nutritional supplements to prevent the advancement of dementias. Treatment options for the beginning stages will vary greatly from patients who may opt to end pharmacological treatments as they near their end-of-life.
National Quality Strategy Domains	☐ Patient and Family Engagement ☐ Patient Safety ☐Care Coordination ☐ Population/Public Health ☐ Efficient Use of Healthcare Resources ☒ Clinical Process/Effectiveness
Harmonization with Existing Measures	No measures addressing treatment via pharmacologic and non-pharmacologic means are known.
Measure Purpose (Check all that apply)	☒ Quality improvement ☒ Accountability
Type of Measure (Check all that apply)	☒ Process ☐ Outcome

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	☐ Structure
Level of Measurement (Check all that apply)	☒ Individual Provider ☒ Practice ☒ System
Care Setting (Check all that apply)	☒ Outpatient ☐ Inpatient ☐ Emergency Departments and Urgent Care ☒ Post-Acute Care (i.e., Long Term Care Hospitals, Skilled Nursing Facilities, Inpatient Rehabilitation Facilities, and Home Health Agencies)
Data Source (Check all that apply)	☐ Electronic health record (EHR) data ☒Administrative Data/Claims ☒ Chart Review ☐ Registry

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Technical Specifications: Administrative Data (Claims)	
Denominator (Eligible Population)	See Appendix A for Diagnosis Codes AND CPT® Code:

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	• 99201, 99202, 99203, 99204, 99205 (Office or other outpatient visit-New Patient); • 99211, 99212, 99213, 99214, 99215 (Office or other outpatient visit-Established Patient); • 99241, 99242, 99243, 99244, 99245 (Office or Other Outpatient Consultation-New or Established Patient); • 99201, 99202, 99203, 99204, 99205 (E/M Codes); • 99211, 99212, 99213, 99214, 99215 (E/M Codes); • 90791, 90792, 90832, 90833, 90834, 90836, 90837, 90838 (Psychiatric Diagnostic Evaluation and psychotherapy); • 96116, 96118, 96119, 96120 (Neurobehavior status exam and neuropsychological testing); • 96150, 96151, 96152, 96153, 96154, 96155 (Health and behavior assessment and interventions); • 99490, 99487, 99489 (Complex Chronic Care Management); • 99497, 99498 (Advance care planning); • 97003, 97004 (Occupational therapy evaluation and re-evaluation); • 97001, 97002 (Physical therapy evaluation and re-evaluation);99304, 99305, 99306, 99307, 99308, 99309, 99310 (Nursing Home Consultation); • 99318 (Other Nursing Facility Services); • 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337 (Domiciliary, Rest Home Care Services); • 99339, 99340 (Domiciliary, Rest Home Care Services Care Plan Oversight); • 99341, 99342, 99343, 99344, 99345 (Home Care); • 99347, 99348, 99349, 99350 (Home Care).

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Appendix A: 2018 Diagnostic Codes

In 2018, the AAN and APA seated a small group of technical experts to improve the feasibility of data collection and to address a coding issue identified during implementation. The below codes reflect the 2018 update to the diagnostic codes. The sole changes made were the removal of Parkinson's disease (ICD-9 332.0 and ICD-10 G20) and Human immunodeficiency virus [HIV] disease (ICD-9 042 and ICD-10 B20) from the eligible population.

ICD-9	ICD-10
290.0 Senile dementia, uncomplicated	F03.90 Unspecified dementia without behavioral disturbance Includes: presenile dementia NOS presenile psychosis NOS primary degenerative dementia NOS senile dementia NOS senile dementia depressed or paranoid type senile psychosis NOS Excludes1: senility NOS (R41.81) Excludes2: mild memory disturbance due to known physiological condition senile dementia with delirium or acute confusional state (F05)
290.10 Presenile dementia, uncomplicated	F03.90 Unspecified dementia without behavioral disturbance Includes: presenile dementia NOS presenile psychosis NOS primary degenerative dementia NOS senile dementia NOS senile dementia depressed or paranoid type senile psychosis NOS Excludes1: senility NOS (R41.81) Excludes2: mild memory disturbance due to known physiological condition senile dementia with delirium or acute confusional state (F05)
290.12 Presenile dementia with delusional features	F03.90 Unspecified dementia without behavioral disturbance Includes: presenile dementia NOS presenile psychosis NOS primary degenerative dementia NOS senile dementia NOS senile dementia depressed or paranoid type senile psychosis NOS Excludes1: senility NOS (R41.81) Excludes2: mild memory disturbance due to known physiological condition senile dementia with delirium or acute confusional state (F05) F05 Delirium due to known physiological condition Acute or subacute brain syndrome Acute or subacute confusional state (nonalcoholic) Acute or subacute infective psychosis Acute or subacute psycho-organic syndrome Delirium of mixed etiology Delirium superimposed on dementia Sundowning *Code first the underlying physiological condition* Excludes1: delirium NOS Excludes2: delirium tremens alcohol-induced or unspecified (F10.231, F10.921)
290.13 Presenile dementia with depressive features	F03.90 Unspecified dementia without behavioral disturbance Includes: presenile dementia NOS

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	presenile psychosis NOS primary degenerative dementia NOS senile dementia NOS senile dementia depressed or paranoid type senile psychosis NOS Excludes1: senility NOS (R41.81) Excludes2: mild memory disturbance due to known physiological condition senile dementia with delirium or acute confusional state (Comm)
290.20 Senile dementia with delusional or depressive features	F03.90 Unspecified dementia without behavioral disturbance Includes: presenile dementia NOS presenile psychosis NOS primary degenerative dementia NOS senile dementia NOS senile dementia depressed or paranoid type senile psychosis NOS Excludes1: senility NOS (R41.81) Excludes2: mild memory disturbance due to known physiological condition senile dementia with delirium or acute confusional state (F05) F05 Delirium due to known physiological condition Acute or subacute brain syndrome Acute or subacute confusional state (nonalcoholic) Acute or subacute infective psychosis Acute or subacute psycho-organic syndrome Delirium of mixed etiology Delirium superimposed on dementia Sundowning *Code first the underlying physiological condition* Excludes1: delirium NOS Excludes2: delirium tremens alcohol-induced or unspecified (F10.231, F10.921)
290.21 Senile dementia with delusional features	F03.90 Unspecified dementia without behavioral disturbance Includes: presenile dementia NOS presenile psychosis NOS primary degenerative dementia NOS senile dementia NOS senile dementia depressed or paranoid type senile psychosis NOS Excludes1: senility NOS (R41.81) Excludes2: mild memory disturbance due to known physiological condition senile dementia with delirium or acute confusional state (F05)
290.40 Vascular dementia, uncomplicated *Use additional code to identify cerebral atherosclerosis (437.0) or other condition resulting in this diagnosis*	F01.50 Vascular dementia without behavioral disturbance Includes: arteriosclerotic dementia *Code first the underlying physiological condition or sequelae of cerebrovascular disease*
290.42 Vascular dementia with delusions *Use additional code to identify cerebral atherosclerosis (437.0) or other condition resulting in this diagnosis*	F01.51 Vascular Dementia with behavioral disturbance Vascular dementia with aggressive behavior Vascular dementia with combative behavior Vascular dementia with violent behavior Includes: arteriosclerotic dementia *Code first the underlying physiological condition or sequelae of cerebrovascular disease*

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290.43 Vascular dementia with depressed mood *Use additional code to identify cerebral atherosclerosis (437.0) or other condition resulting in this diagnosis*	F01.51 Vascular Dementia with behavioral disturbance Vascular dementia with aggressive behavior Vascular dementia with combative behavior Vascular dementia with violent behavior Includes: arteriosclerotic dementia *Code first the underlying physiological condition or sequelae of cerebrovascular disease*
291.2 Alcohol-induced persisting dementia	F10.27 Alcohol dependence with alcohol-induced persisting dementia
294.10 Dementia in conditions classified elsewhere without behavioral disturbance *Code first the underlying condition*	F02.2 Dementia in Huntington Disease F02.3 Dementia in Parkinson's Disease F02.80 Dementia in other diseases classified elsewhere, without behavioral disturbance Dementia in other diseases classified elsewhere not otherwise specified *Code first the underlying physiologic condition*
294.11 Dementia in conditions classified elsewhere with behavioral disturbance *Code first the underlying condition*	F02.2 Dementia in Huntington Disease F02.3 Dementia in Parkinson's Disease F02.81 Dementia in other diseases classified elsewhere, with behavioral disturbance Dementia in other diseases classified elsewhere with aggressive behavior Dementia in other diseases classified elsewhere with combative behavior Dementia in other diseases classified elsewhere with violent behavior *Code first the underlying physiologic condition*
294.20 Dementia, unspecified, without behavioral disturbance Dementia, not otherwise specified	F03.90 Unspecified dementia without behavioral disturbance Includes: presenile dementia NOS presenile psychosis NOS primary degenerative dementia NOS senile dementia NOS senile dementia depressed or paranoid type senile psychosis NOS Excludes1: senility NOS (R41.81) Excludes2: mild memory disturbance due to known physiological condition senile dementia with delirium or acute confusional state (F05)
294.21 Dementia, unspecified, with behavioral disturbance	F03.91 Unspecified dementia with behavioral disturbance Unspecified dementia with aggressive behavior Unspecified dementia with combative behavior Unspecified dementia with violent behavior
331.0 Alzheimer's disease *Use additional code, where applicable, to identify dementia:* with behavioral disturbance (294.11) without behavioral disturbance (294.10)	G30.0 Alzheimer's disease with early onset G30.1 Alzheimer's disease with late onset G30.8 Other Alzheimer's disease G30.9 Alzheimer's disease, unspecified *Use additional code to identify*: delirium, if applicable (F05) dementia with behavioral disturbance (F02.81) dementia without behavioral disturbance (F02.80)
331.11 Pick's disease	G31.01 Pick's disease Circumscribed brain atrophy Progressive isolated aphasia *Use additional code to identify*: delirium, if applicable (F05) dementia with behavioral disturbance (F02.81) dementia without behavioral disturbance (F02.80)
331.19 Other frontotemporal dementia	G31.09 Other frontotemporal dementia

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331.6 Corticobasal degeneration	G31.85 Corticobasal degeneration
331.7 Cerebral degeneration in diseases classified elsewhere. *Code first underlying disease*	G94 Other disorders of brain in diseases classified elsewhere *Code first underlying disease*
331.82 Dementia with Lewy bodies	G31.83 Dementia with Lewy bodies Dementia with Parkinsonism Lewy body dementia Lewy body disease
331.89 Other cerebral degeneration, Other (Corticobasal degeneration)	G31.89 Other specified degenerative diseases of nervous system
094.1 Neurosyphilis, General Paresis Dementia Paralytica *Use additional code to identify associated mental disorder*	A52.17 General paresis Dementia paralytica
046.11 Variant Creutzfeld-Jacob disease vCJD *Use additional code to identify dementia:* *with behavioral disturbance (294.11)* *without behavioral disturbance (294.12)* 046.19 Other and unspecified Creutzfeld-Jacob disease CJD Familial Creutzfeldt-Jacob disease Iatrogenic Creutzfeldt-Jacob disease Sporadic Creutzfeldt-Jacob disease Subacute spongioform encephalopathy *Use additional code to identify dementia:* *with behavioral disturbance (294.11)* *without behavioral disturbance (294.12)*	A81.00 Creutzfeldt-Jacob disease, unspecified A81.01 Variant Creutzfeldt-Jacob disease vCJD A81.89 Other Creutzfeldt-Jacob disease CJD Familial Creutzfeldt-Jacob disease Iatrogenic Creutzfeldt-Jacob disease Sporadic Creutzfeldt-Jacob disease Subacute spongioform encephalopathy (with dementia)

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Appendix B: 2018 Implementation Updates

In 2018, the AAN and APA seated a small group of technical experts to improve the feasibility of data collection. The below guidance is provided to users to better allow for data collection via a registry and to ensure comparability of results.

The definition of "caregiver" has been expanded to refer to any relative, partner, friend, neighbor, *or other individual* who has a significant relationship with, and who provides a broad range of assistance for, an older adult or an adult with chronic or disabling conditions.

This technical update was reaffirmed by the AANI Quality and Safety Subcommittee on October 15, 2018 and AANI Practice Committee on October 29, 2018. Approved by the APA Committee on Quality and performance Measurement (CQPM) on October 19, 2018 and Council on Quality Care on November 8, 2018.

Disclosure of Dementia Diagnosis

No technical updates made.

Disclosure of the diagnosis of the dementia syndrome and its underlying disease remains an opportunity for urgent improvement in 2018. Disclosure is closely linked to education and caregiver support, as up to a third family members and caregivers alike may not be able to report the diagnosis correctly, even just minutes after hearing it. (Barrett AM, Keller M, Damgaard P, et al. Short-term effect of dementia disclosure: How patients and families describe the diagnosis. J Am Geriatr Soc 2006;54:1968–1970.) Further, discrepancies continue to exist in a paternalistic manner: general practitioners and specialists alike are much more likely to inform family members and caregivers than the patient of the diagnosis. (Low LF, McGrath M, Swaffer K, et al. Communicating a diagnosis of dementia: A systematic mixed studies review of attitudes and practices of health practitioners. Dementia (London). 2018 Jan 1: 1471301218761911.)

Education and Support of Caregivers for Patients with Dementia

The numerator definition has been updated with greater specificity below. The use of a finite list of tools to meet the measure is required for data collection through a registry and in accountability programs, such as CMS' Merit-based Incentive Payment System (MIPS). The key phrases are provided to allow leeway in meeting the measure through a structured interview. Exceptions were added to address the measure intent.

Numerator Statement	Patients with dementia whose caregiver(s) were provided with education on dementia disease management and health behavior changes AND were referred to additional resources** for support in the last 12 months. * "Caregiver" is broadly defined and the Work Group adopted the definition utilized by the National Quality Forum and Feinberg.(1) Caregiver refers to any relative, partner, friend, or neighbor who has a significant relationship with, and who provides a broad range of assistance for, an older adult or an adult with chronic or disabling conditions.(1)

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	** "Education" requires learning and processing information about disease management and health behavior changes. This should also include advising the caregiver that, *as a caregiver*, he or she is at "increased risk of serious illness (including circulatory and heart conditions and respiratory disease and hypertension), increased physician visits and use of prescription medications, emotional strain, anxiety, and depression."(2) Providers are encouraged to review state specific guidelines to ensure education is being provided as required. Examples of key phrases required to meet the measure's education on dementia disease management and health behavior changes via a registry follow: • "Caregiver/spouse/family education resources" • "Caregiver/spouse/family provided with education" • "Education/counseling and coordination of care" • "Disease education" • "Disease management and health behavior changes" • "Caregiver/spouse/family education" • "Caregiver/spouse/family anxiety" • "Caregiver/spouse/family depression" • "Caregiver/spouse/family education resources" • "Caregiver/spouse/family training" • "Caregiver/spouse/family counseling" • "Caregiver/spouse/family exhaustion" • "Caregiver/spouse/family distress" • "Caregiver/spouse/family burnout" • "Caregiver/spouse/family burden" • "Emotional strain" • "Increased risk to caregiver" *** "Additional Resources" are defined as situation-specific, tailored programs to assist the caregiver; these included national organizations such as the Alzheimer's Association, but also include local resources, such as community, senior center and religion-based support groups. Examples of key phrases required to meet the measure's referral to additional resources via a registry follow: • "Referral to Alzheimer's Association" • "Referred to the Alzheimer's Association" • "Referral to community resources" • "Referred to community resources" • "Referral to support group" • "Referred to support group" • "Support groups and resources are available through the Alzheimer's Association" • "Referred to additional resources" • "Support and resources from the Alzheimer's Association" • "Alzheimer's Association provides educational and support groups"

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	The following key phrase could be used via a registry to meet both measure requirements, education and referral: • "Caregiver/spouse/family education resources" • "Caregiver/spouse/family education and referral to community resources" • "Caregiver/spouse/family education and referral to Alzheimer's Association" • "Caregiver/spouse/family education and referral for anxiety" • "Caregiver/spouse/family education and referral for depression"
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.
Denominator Exceptions	• Patient does not have a caregiver. • Caregiver is trained and certified in dementia care. • Patient/caregiver dyad has been referred to appropriate resources and connection to those resources confirmed. Examples of key phrases required to identify these exceptions via a registry follow: • "Caregiver/spouse/family connected with existing supports" • "Caregiver is trained and certified in dementia care" • "No caregiver identified" • "Patient does not have a caregiver" • "has been referred to appropriate resources and connection to those resources confirmed" • "Trained and certified caregivers"

Functional Status Assessment for Patients with Dementia

The numerator definition has been updated with greater specificity below. The use of a finite list of tools to meet the measure is required for data collection through a registry and in accountability programs, such as CMS' Merit-based Incentive Payment System (MIPS). The key phrases are provided to allow leeway in meeting the measure through a structured interview. Exceptions were added to address the measure intent.

Numerator Statement	Patients with dementia for whom an assessment of functional status* was performed at least once in the last 12 months. *Functional status is assessed by use of a validated tool, direct assessment of the patient, or by querying a knowledgeable informant. A direct assessment of functional status includes an evaluation of the patient's ability to perform instrumental activities of daily living (IADL) and basic activities of daily living (ADL). To meet this measure providers must assess BOTH IADL and ADL performance. **1. IADL Assessment** *(users must meet one of the two below bullets to meet IADL assessment component)*

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	• To meet the measure's IADL component using a validated tool, providers must use one of the following tools: o Lawton Instrumental Activities of Daily Living Scale (1) o Bristol Activities of Daily Living Scale (8) o Katz Index of Independence in Activities of Daily Living (3) o Functional Activities Questionnaire (4) o Functional Independence Measure Instrument (9) • To meet the measure's IADL component using a direct assessment, providers must document 3 out of the following 5 domains. Examples of key phrases required to meet the measure via a registry follow each domain: o Cleaning or hobbies, ▪ "Able to keep home/dwelling clean" ▪ "Able to keep home/dwelling tidy" ▪ "Able to do laundry" ▪ "Requires/Needs help with laundry" ▪ "No assistance needed/required with laundry" ▪ "Caregiver/spouse/wife/husband helps with laundry" ▪ "Requires/Needs help with chores" ▪ "No assistance needed/required with chores" ▪ "Caregiver/spouse/wife/husband helps with chores" ▪ "Continues to engage in hobbies" ▪ "No longer able to engage in hobbies" o Money management, ▪ "Able to manage finances for self" ▪ "Requires/Needs help with finances" ▪ "No assistance needed/required with finances" ▪ "Caregiver/spouse/wife/husband helps with finances" ▪ "Able to pay bills on time" ▪ "Requires/Needs help to pay bills on time" ▪ "No assistance needed/required to pay bills on time" ▪ "Caregiver/spouse/wife/husband helps pay bills on time" ▪ "Requires/Needs help to manage checkbook" ▪ "No assistance needed/required to manage checkbook" ▪ "Caregiver/spouse/wife/husband helps with managing checkbook" o Medication management, ▪ "Able to manage medications" ▪ "Requires/Needs help with managing medications" ▪ "No assistance needed/required with managing medications" ▪ "Caregiver/spouse/wife/husband helps with managing medications" ▪ "Able to take meds independently" ▪ "Requires/Needs help to take meds" ▪ "No assistance needed/required to take meds" ▪ "Caregiver/spouse/wife/husband helps with meds" ▪ "No longer able to manage medications" o Transportation, and ▪ "Able to drive car"

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	▪ "No longer able to drive" ▪ "Takes public transportation/bus/subway independently" ▪ "Requires/Needs help to take public transportation/bus/subway" ▪ "Requires/Needs help with transportation" ▪ "Caregiver/spouse/wife/husband helps with transportation" o Cooking or communication ▪ "Able to cook for self" ▪ "Dependent on others for most of her/his meals" ▪ "Requires/Needs help with cooking/meals" ▪ "No assistance needed/required with cooking" ▪ "Caregiver/spouse/wife/husband helps with cooking" ▪ "Able to answer telephone/phone/Skype/Facetime/Video call for self" ▪ "Requires/Needs help with answering telephone/phone/Skype/Facetime/Video call" ▪ "Caregiver/spouse/wife/husband helps with answering telephone/phone/Skype/Facetime/Video call" ▪ "Uses telephone/phone/Skype/Facetime/Video call independently" **2. ADL Assessment** *(users must meet one of the two below bullets to meet ADL assessment component)* • To meet the measure's ADL component using a validated tool, providers must use either: o Barthel ADL Index (2) o Bristol Activities of Daily Living Scale (8) • To meet the measure's ADL component using a direct assessment, providers must document 3 out of the following 7 domains. Examples of key phrases required to meet the measure via a registry follow each domain: o Grooming, ▪ "Able to care for self" ▪ "Dependent on others for most of her/his self-care" ▪ "Requires/Needs help with hygiene" ▪ "No assistance needed/required for grooming" ▪ "Caregiver/spouse/wife/husband helps groom" o Bathing, ▪ "Independently bathes" ▪ "Requires/Needs help with bathing" ▪ "No assistance needed/required for bathing" ▪ "Caregiver/spouse/wife/husband helps bathing" ▪ "Bathes without assistance" ▪ "Can bathe alone" ▪ "Cannot bathe alone" ▪ "Independently showers" ▪ "Requires/Needs help with showering" ▪ "No assistance needed/required for showering" ▪ "Caregiver/spouse/wife/husband helps shower"

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	▪ "Showers without assistance" ▪ "Can shower alone" ▪ "Cannot shower alone" ▪ "Takes baths alone" ▪ "Takes showers alone" o Dressing, ▪ "Independently dresses" ▪ "Can dress alone" ▪ "Cannot dress alone" ▪ "No assistance needed/required to dress" ▪ "Difficulty putting on his/her clothes" ▪ "Requires/Needs help with dressing" ▪ "Needs help getting dressed" ▪ "Caregiver/spouse/wife/husband helps dress" o Eating, ▪ "Independently eats" ▪ "No assistance needed/required to eat" ▪ "Difficulty eating independently" ▪ "Requires/Needs help with eating" ▪ "Caregiver/spouse/wife/husband helps with eating" ▪ "Feeds him/herself" o Toileting, ▪ "Independently toilets" ▪ "Dependent for most of her/his toileting" ▪ "Requires/Needs help with toileting" ▪ "No assistance needed/required with toileting" ▪ "Caregiver/spouse/wife/husband helps with toileting" ▪ "Continent of bowel and bladder" ▪ "Incontinent of bowel and bladder" ▪ "Continent of bowel" ▪ "Incontinent of bowel" ▪ "Continent of urine" ▪ "Incontinent of urine" o Gait, and ▪ "Independently ambulates/walks" ▪ "Using a walker" ▪ "Using an assisted walking device" ▪ "Patient has fallen since last visit" ▪ "Independently navigates/climbs stairs" ▪ "Needs/requires help with stairs" ▪ "Caregiver/spouse/wife/husband helps with stairs" o Transferring ▪ "Independently transfers to bed/toilet" ▪ "Requires help to transfer to bed/toilet" ▪ "Can transfer to toilet/bed" ▪ "Cannot transfer to toilet/bed" ▪ "Caregiver/spouse/wife/husband helps with transfers"
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.

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Denominator Exceptions	• Advanced stage dementia and caregiver knowledge is limited.
Exception Justification	Documentation why an assessment could not be completed due to advanced stage of dementia in combination with a lack of a knowledgeable informant would justified as an exception for failure to gather the data despite best attempts.
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Screening and Management of Behavioral and Psychiatric Symptoms Associated with Dementia

Regarding the screening and management of behavioral and psychiatric symptoms associated with dementia, it should be noted that BPSD symptoms were unified into a single quality measure during the previous review in 2015. This change incorporated the previous stand-alone screening of depression into the overall BPSD assessment. Our current literature review reaffirms this decision, as recent studies typically utilize a comprehensive analysis of the full range of behavioral symptoms. For example, a report by Kales, et al. from a multidisciplinary expert panel provided recommendations for the spectrum of aggression, agitation, depression, anxiety, delusions, hallucinations, apathy and disinhibition. (Kales HC, Gitlin LN, Lyketsos CG, et al. Management of neuropsychiatric symptoms of dementia in clinical settings: recommendations from a multidisciplinary expert panel. J Am Geriatr Soc. 2014;62(4):762-769.) Regarding specific treatment interventions for BPSD, there have been a number of recent studies examining both pharmacologic and non-pharmacologic methods as well as the effects of antipsychotic discontinuation. (Dyer SM, Harrison SL, Laver K, et al. An overview of systematic reviews of pharmacological and non-pharmacological interventions for the treatment of behavioral and psychological symptoms of dementia Int Psychogeriatr 2018;30(3):295-309; Van Leeuwen E,

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Petrovic M, van Driel ML, et al. Withdrawl versus continuation of long-term antispsychotic drug use for behavioural and psychological symptoms in older people with dementia. Cochrane Database Syst Rev. 2018;3:CD007726.) However the findings do not provide data suggesting that a modification to the current quality measures is needed.

The numerator definition has been updated with greater specificity below. The use of a finite list of tools to meet the measure is required for data collection through a registry and in accountability programs, such as CMS' Merit-based Incentive Payment System (MIPS). The key phrases are provided to allow leeway in meeting the measure through a structured interview. Exceptions were added to address the measure intent.

Numerator Statement	Patients with dementia for whom there was a documented screening* for behavioral and psychiatric symptoms, including depression in the last 12 months and for whom, if screening was positive, there was also documentation of recommendations for management in the last 12 months. *Screening is defined as using a validated instrument or directly examining the patient or knowledgeable informant to determine the presence or absence of symptoms from three domains: activity disturbances, mood disturbances (including depression), and thought and perceptional disturbances. The following validated instruments can be used to meet the measure: • Dementia Signs and Symptoms (DSS) Scale (1) • Neuropsychiatric Inventory (NPI) (2) • Minimum Data Set (MDS) (suggested for nursing home only) (4). The following is a non-exhaustive list of symptoms falling into each of the three domains pertinent to this measure: *Activity disturbances (To meet measure, patient or knowledgeable informant must be screened for at least one symptom from this list):* • "Activity disturbances" • "Agitation" • "Wandering" • "Purposeless hyperactivity" • "Verbal aggressiveness" • "Physical aggressiveness" • "Resisting care" • "Apathy" • "Impulsiveness" • "Socially inappropriate behaviors" • "Eating disturbances" • "Sleep problems" • "Sleep-wake cycle disturbances" • "Diurnal disturbances" • "Repetitive behavior" • "Minnesota Impulsive Disorders Interview (or MIDI)"(12)

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	Mood disturbances (To meet measure, patient or knowledgeable informant must be screened for depression AND at least one other mood disturbance.) • *Depression (Use one of the following depression screening tools or document key phrases)* o "PROMIS Depression"(13) o "PHQ-2"(14) o "PHQ-9"(15) o "Depression Anxiety Scale (or Depression Anxiety Stress Scales or DASS)"(16) o "Center for Epidemiological Studies Depression Scale (or CESD or CES-D)"(17) o "Cornell Scale for Depression (or CSDD)"(18) o "Duke Anxiety Depression Scale (or Duke-AD)"(19) o "Geriatric Depression Scale (or GDS)"(20) o "Hamilton Rating Scale for Depression (or HAM-D)"(21) o "Major Depression Inventory"(22) o "Montgomery Asberg Depression Rating Scale (or MADRS)"(23) o "Wakefield Self-Assessment Depression Inventory"(24) o "Depression" o "Depressed mood" • *Other mood disturbances (Use one of the following screening tools or document key phrases)* o "Anxiety" o "Elation" o "Irritability" o "Mood lability" o "Mood fluctuations" o "PROMIS Anxiety"(25) o "Hamilton Anxiety Rating Scale (or HAM-A or HARS)"(26) o "State Trait Anxiety Rating Scale (or STAI)"(27) o "Self-rating Anxiety Scale"(28) o "Depression Anxiety Scale (or Depression Anxiety Stress Scales or DASS)"(16) o "Duke Anxiety Depression Scale (Duke-AD)"(19) o "GAD-2"(29) o "GAD-7"(30) *Thought and perceptual disturbances (To meet measure, patient or knowledgeable informant must be screened for at least one symptom from this list):* • "Thought and perceptual disturbances" • "Having fixed false beliefs" • "Delusions" • "Hearing non-present entities" • "Seeing non-present entities" • "Hallucinations" • "Paranoia" • "Brief psychiatric rating scale (or BPRS)"(31) For positive screening, the following key phrase examples are provided for documentation of recommendations for symptom management: • "Recommendations for symptom management"

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	• "Discussed follow-up plan" • "Follow-up plan developed" • "Treatment plan developed" • "Treatment plan reviewed" • "Treatment plan updated" • "Treatment plan adjusted" • "Medication reviewed" • "Medication adjusted" • "Rx adjusted"
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Safety Concern Screening and Follow-up for Patients with Dementia

The numerator definition has been updated with greater specificity below. The use of a finite list of tools to meet the measure is required for data collection through a registry and in accountability programs, such as CMS' Merit-based Incentive Payment System (MIPS). The key phrases are provided to allow leeway in meeting the measure through a structured interview.

The assessment of safety is an identified gap in dementia care (Black BS, Johnston D, Rabins PV, et al. Unmet Needs of Community-Residing Persons with Dementia and Their Informal Caregivers: Findings from the MIND at Home Study. J Am Geriatr Soc 2013;61(12):2087-2095.) Persons with dementia are at increased risk of having safety concerns for several reasons. Cognitive loss can lead to confusion regarding use of medications, handling of weapons or machinery, or the ability to remember to turn off appliances, such as ranges and stoves. Dementia also impairs the person's judgment, and as such, increases the risk for financial abuse and exploitation. The risk of falls among persons with dementia is greater, and following injury, persons with dementia are less likely to recover than other seniors (Allan LM, Ballard CG, Rowan EN, Kenny RA. Incidence and prediction of falls in dementia: a prospective study in older people. PLoS ONE. 2009;4). Persons with dementia are at greater risk of burns due to hot water. Similarly, persons with dementia may exhibit aggressive behaviors towards themselves or others (Salzman C, Jeste D, Meyer RE, Cohen-Mansfield j, et.al. Elderly Patients with Dementia-Related Symptoms of Severe Agitation and Aggression: Consensus Statement on Treatment Options, Clinical Trials, Methodology and Policy. J Clin Psychiatry 2008 June:69(6):889-898). These and other types of injuries are preventable through mitigating strategies, however, the risks must be identified. This quality measure requires screening for safety concerns in two risk domains: dangerousness to self/others and environment. Current treatment guidelines for the management of dementia recommend that healthcare providers screen for safety risks. There are community and online resources to facilitate home safety (Alzheimer's Association. Home Safety. Available at: https://www.alz.org/help-support/caregiving/safety/home-safety. Accessed November 25, 2018). By routinely screening for safety issues, the clinician will also become increasingly more familiar with the range of problems identified, and thus be able to continuously improve the quality of care delivered.

Measure Components	
Numerator Statement	Patients with dementia or their caregiver(s) for whom there was a documented safety screening * in two domains of risk: 1) dangerousness to self or others and 2) environmental risks; and if screening was positive in the last 12 months, there was documentation of mitigation recommendations, including but not limited to referral to other resources. To meet measure requirements a patient's medical record must have documentation of being screened on at least one concern from each of the two domains. Examples of key phrases required to meet the measure via a registry follow each domain: *Dangerousness to self (patient) or others (caregivers and other individuals)* • Medication misuse ○ "Medication misuse"

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	○ "Rx mismanagement" ○ "Missing medications" • Physical aggressiveness ○ "Physical aggressiveness" ○ "Violent behavior" ○ "Acts of aggression" • Wandering ○ "Wandering" ○ "Got lost" ○ "Disoriented in home" • Inability to respond rapidly to crisis/household emergencies ○ "Inability to respond rapidly to crisis/household emergencies" ○ "Unprepared for emergency" ○ "Unprepared for crisis" ○ "Unable to respond rapidly to emergency" ○ "Unable to respond rapidly to crisis" ○ "Unable to address crisis" ○ "Unable to address emergency" • Financial mismanagement, including being involved in "scams" ○ "Financial mismanagement" ○ "Unable to balance checkbook" ○ "Financial concerns identified" ○ "Scams" ○ "Victim of scam" • Other concerns raised by patient or their caregiver ○ "Discussed other safety concerns" *Environmental risks* (must document at least one example phrase) • Home safety risks that could arise from cooking or smoking ○ "Home safety risks that could arise from cooking or smoking" ○ "Risks from cooking" ○ "Risks from smoking" • Access to firearms or other weapons ○ "Access to firearms or other weapons" ○ "Access to guns" ○ "Access to firearms" ○ "Access to knives" ○ "Access to weapons" • Access to potentially dangerous chemicals and other materials ○ "Access to potentially dangerous chemical and other materials" ○ "Access to chemicals" ○ "Access to potentially dangerous materials" • Access to and operation of tools and equipment ○ "Access to and operation of tools" ○ "Access to and operation of vehicle" ○ "Access to and operation of equipment" • Trip hazards in the home which increase the risk of falling ○ "Trip hazards in the home increasing the risk of falling" ○ "Trip hazards" ○ "Fall due to trip on loose carpet" • Other concerns raised by the patient or their caregiver

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	○ "Discussed other safety concerns" *If following screening there are no safety concerns identified*, document one of the example key phrases: • "No safety concerns" • "Safety concerns screen negative" • "Safety concerns screen provided and negative" *Mitigation Recommendations* • "Recommended personal companion" • "Personal companion suggested" • "Adequate lighting assessment" • "Advised to consider purchase of pill organizer" • "Advised to consider purchase of pill dispenser" • "Advised to purchase pill organizer" • "Advised to purchase pill dispenser" • "Alternate fire alarm systems" • "Avoid yelling" • "Avoiding restraint" • "Avoiding force" • "Being aware of caregiver stress" • "Black mat in front of door" • "Change banking mailing contact" • "Clear walking paths inside home" • "Clear walking paths inside the home" • "Attend day care" • "Start adult day program" • "Decrease clutter" • "Discussed wandering and physical measures" • "Discussed wandering and counter measures" • "Durable POA" • "Establish POA" • "Power of attorney" • "Encouraged locks" • "Evaluated causes of discomfort leading to aggression" • "Fence or hedge" • "Fire starting materials removed" • "Remove firearms" • "Gathering financial documents and securing" • "Implementation of sleep schedule" • "Importance of providing clear easy to understand instructions" • "Improve visual cues" • "Planned for emergencies" • "Install fence" • "Install hedge" • "Secured lighters" • "Removed lighters" • "Secured matches"

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	• "Secured lighters" • "Locks obtained" • "Lower noise levels" • "Medication safety" • "Monitor phone calls and emails for possible scammers" • "Move important things to one location" • "Placing reminders in common places" • "Placing tools in secured location" • "Providing activity to keep hands busy" • "Recommended family evaluate video surveillance" • "Recommended family evaluate GPS" • "Recommended family evaluate Safe Return program" • "Reduce financial and paper clutter" • "Reducing the number of questions asked at one time" • "Reduction of excessive stimulation in environment" • "Rehabilitative measures suggested" • "Remove/removing guns or lock them up" • "Remove/removing weapons" • "Remove/removing chemicals" • "Remove/removing cigarettes" • "Remove/removing gas" • "Remove/removing hazards" • "Remove/removing keys from equipment" • "Remove/removing knobs" • "Remove/removing/locking up firearms" • "Remove/removing sharp objects" • "Remove/removing tools" • "Risk mitigation strategies" • "Ruled out pain as cause" • "Ammunition stored separate" • "Safety slippers" • "schedule modification" • "Secure banking passwords" • "Sell guns" • "Sell weapons" • "Storing chemicals out of reach" • "Suggested stop cooking" • "Strategies to reduce physical aggression" • "Suggested moving in with…" • "Talk with financial advisor" • "Discussed removing hazards" • "Trying something different to diffuse situation" • "Use of music" • "Velcro shoes" • "Walking exercise to soothe"
Denominator Statement	All patients with dementia. Diagnostic codes listed in Appendix A.

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Denominator Exceptions	Patient unable to communicate and informant not available. Key phrases are suggested for: • "Unable to communicate and informant not available" • "Unable to communicate and no knowledgeable informant available" • "Unable to communicate and no caregiver available"

Driving Screening and Follow-up for Patients with Dementia

No technical updates made.

Advance Care Planning and Palliative Care Counseling for Patients with Dementia

No technical updates made. The Advance Care Planning (ACP) and Palliative Care Counseling Measure has two components involving documentation of an advanced care plan or surrogate decision maker as well as counseling regarding palliative care, symptom management and end of life decisions. There were no changes in this measure during the previous review. Current data reaffirms the present measurement set. Recent studies have made considerable progress in better defining the scope and definition of optimal palliative care in dementia (van der Steen JT, Radbruch L, Hertogh CM, et al. White paper defining optimal palliative care in older people with dementia: A Delphi study and recommendations from the European Association for Palliative Care. Palliative Medicine 2014; 28(3):197-209.). Further, advancements have occurred in developing guidelines for specific circumstances such as feeding and swallowing issues, etc. (Mathew R, Davies N, Manthorpe J, et al. Making decisions at the end of life when caring for a person with dementia: a literature review to explore the potential use of heuristics in difficult decision-making. BMJ Open 2016;6:e010416.) These important studies facilitate progress in implementing the current measure and support its current utility.

Pain Assessment and Follow-up for Patients with Dementia

Numerator Statement	Patients with dementia who underwent documented screening * for pain symptoms at every visit and if screening was positive also had documentation of a follow-up plan**. *Screening is defined as use of one of the following validated screening tools approved for use in this measure: • Wong-Baker FACES Pain Rating Scale^(13) • Visual Analog Scale and Verbal Pain Intensity Scale^ (4) • 0-10 Pain Scale^(14) • Pain Assessment in Advanced Dementia (PAINAD) (1) • Nonverbal Pain Scale for Nonverbal Patients(15) • Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC or PACSLAC-II) (2,3) • Pain Assessment for the Dementing Elderly (PADE) (5) • Likert Pain Scale (16) • Minimum data set (MDS)–version 3.0, Section J (6) OR evaluation of verbal and non-verbal expressions of pain behaviors (i.e., changes in breathing quality, negative types of verbalization separate from breathing, facial expression, body language, and/or medication usage). If a verbal patient reports the absence of pain a formal scale is unnecessary.

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	**Follow-up plan must include documentation and rationale for treatment considerations. Health care providers may consider analgesic, NSAID, long acting agents, liniments, massage, lidocaine patches, physical therapy, or orthopedic evaluation. ^These scaled could potentially be administered by rooming and support staff streamlining care and review by providers.
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Pharmacological Treatment of Dementia

No technical updates made.

Despite entrenched therapeutic nihilism, evidence-based guidelines and meta analyses continue to support the use of cholinesterase inhibitors in Alzheimer's disease and even more so in Dementia with Lewy Bodies / Parkinson's disease dementia. (Knight R, Khondoker M, Magill, N, et al. A Systematic Review and Meta-Analysis of the Effectiveness of Acetylcholinesterase Inhibitors and Memantine in Treating the Cognitive Symptoms of Dementia. Dement Geriatr Cogn Disord 2018;45(3-4): 131-151.) Evidence supporting the efficacy of cholinesterase inhibitors and memantine is strong. (O'Brien JT, Holmes C, Jones M, et al. Clinical practice with anti-dementia

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drugs: A revised (third) consensus statement from the British Association for Psychopharmacology. J Psychopharmacol 2017;31(2):147-168.)

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Appendix C: 2018 CPT® Codes

The below CPT codes are a guide to implementation. Review individual measure specifications to determine which care settings measures apply to: outpatient, inpatient, emergency and urgent care, or post-acute care.

CPT Code	Brief Descriptor
90791, 90792, 90832, 90833, 90834, 90836, 90837, 90838	Psychiatric Diagnostic Evaluation and psychotherapy
96116, 96121, 96130, 96131, 96132, 96133, 96136, 96137, 96138, 96139, 96146	Neurobehavior status exam and neuropsychological testing
96150, 96151, 96152, 96153, 96154, 96155	Health and behavior assessment and interventions
97161, 97162, 97163, 97164	Physical therapy evaluation and re-evaluation
97165, 97166, 97167, 97168	Occupational therapy evaluation and re-evaluation
99201, 99202, 99203, 99204, 99205	Office or Other Outpatient Visit-New Patient
99211, 99212, 99213, 99214, 99215	Office or Other Outpatient Visit-Established Patient
99221, 99222, 99223	Initial Hospital Care
99231, 99232, 99233	Subsequent Hospital Care
99238, 99239	Hospital Discharge
99251, 99252, 99253, 99254,99255	Initial Inpatient Consultation
99304, 99305, 99306, 99307, 99308, 99309, 99310	Nursing Home Consultation
99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337	Domiciliary, Rest Home Care Services
99339, 99340	Domiciliary, Rest Home Care Services Care Plan Oversight
99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350	Home Care
99490, 99487, 99489	Complex Chronic Care Management
99497, 99498	Advance care planning

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