



Measure Information

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

Brief Measure Information

NQF #: 2091

Corresponding Measures:

De.2. Measure Title: Persistent Indicators of Dementia without a Diagnosis—Long Stay

Co.1.1. Measure Steward: American Medical Directors Association

De.3. Brief Description of Measure: Percentage of nursing home residents age 65+ with persistent indicators of dementia and no diagnosis of dementia.

1b.1. Developer Rationale: A key tenet of geriatric care asserts that recognition of important geriatric syndromes leads to appropriate assessment followed by creation of a patient-centered comprehensive care plan to optimize function and independence.

Patients admitted to long-term care have experienced a decline in cognitive and physical function that triggers such a comprehensive assessment. Many elements of the Minimum Data Set are designed to measure these elements of function.

Cognitive decline may be due to dementia, delirium or depression, or a combination of these factors. Without appropriate recognition and assessment of cognitive decline, many cases of dementia, delirium and depression go undiagnosed or untreated. Each of these conditions is associated with significant morbidity and mortality; proper assessment and treatment intends to reduce this morbidity and mortality.

A quality measure that encourages recognition, comprehensive assessment and appropriate treatment of cognitive decline can be expected to have several benefits. First, since cognitive decline can have multiple etiologies, identification of the problem is expected to lead to identification of reversible or treatable medical or psychological conditions. Proper diagnosis of dementia is expected to lead to development of a comprehensive care plan that includes not only appropriate treatment, but also education of staff and family members about the disease and its prognosis.

A comprehensive care plan would focus on restoration and stabilization of intellectual function, which might include prescription of evidence-based dementia medications, discontinuation of medications known to worsen intellectual function, and implementation of appropriate non-pharmacologic interventions. Comprehensive care necessarily addresses neuropsychiatric symptoms that complicate dementia. Appropriate care of these symptoms is necessary to optimize patients' function and quality-of-life. Several elements of the Minimum Data Set capture important information about the symptoms, and this information is expected to be incorporated into the dementia care plan.

Finally, discussion of prognostic information about the stage and severity of dementia should lead to review of advanced care planning and discussion of appropriate goals of care.

Recognition, assessment, diagnosis and appropriate treatment of dementia can be expected to result in several important outcomes;

1. Initiation of appropriate medications for dementia
2. Reduction in utilization of medications known to adversely affect cognitive function
3. Reduction in inappropriate utilization of antipsychotic medications
4. Improved cognitive and physical function, leading to a. Reduction in severity of neuropsychiatric symptoms and problematic behaviors; b. Reduction in falls; c. Reduction in newly acquired pressure ulcers; d. Reduction in hospital readmission; e. Increase in discharge to home

<p>5. Increase identification and treatment of depression</p> <p>6. Increased identification and treatment of delirium</p>
<p>S.4. Numerator Statement: Number of adult patients 65 and older who are included in the denominator (i.e., have persistent signs and symptoms of dementia) and who do not have a diagnosis of dementia on any MDS assessment within the last 12 months.</p> <p>S.6. Denominator Statement: The denominator is the total of all long-stay residents in the nursing facility who have at least two MDS assessments which may be an admission annual, quarterly, significant change or significant correction assessment during the selected quarter and who do not meet the exclusion criteria.</p> <p>The denominator includes (i) residents with Section C Brief Interview for Mental Status (BIMS) score <8 on most recent target assessment and a BIMS < 8 on the prior assessment; or (ii) residents with a staff assessment for cognitive status on both the most recent target assessment and the prior assessment that shows severe cognitive impairment.</p> <p>S.8. Denominator Exclusions: Residents who are hospice or end of life, or who are comatose or with delirium, or with psychotic disorders including hallucinations, anxiety disorder, manic depressive disease, post-traumatic stress disorder, bipolar disorder or schizophrenia will be excluded from the denominator.</p>
<p>De.1. Measure Type: Process</p> <p>S.17. Data Source: Electronic Health Records</p> <p>S.20. Level of Analysis: Facility</p>
<p>IF Endorsement Maintenance – Original Endorsement Date: Mar 06, 2013 Most Recent Endorsement Date: Mar 06, 2013</p>
<p>IF this measure is included in a composite, NQF Composite#/title:</p> <p>IF this measure is paired/grouped, NQF#/title:</p> <p>De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results?</p>

<p>1. Evidence, Performance Gap, Priority – Importance to Measure and Report</p>
<p>Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. <i>Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.</i></p>
<p>1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form</p> <p>1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission? Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.</p>
<p>1b. Performance Gap Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:</p> <ul style="list-style-type: none"> considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or Disparities in care across population groups. <p>1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure) <i>If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.</i> A key tenet of geriatric care asserts that recognition of important geriatric syndromes leads to appropriate assessment followed by creation of a patient-centered comprehensive care plan to optimize function and independence. Patients admitted to long-term care have experienced a decline in cognitive and physical function that triggers such a comprehensive assessment. Many elements of the Minimum Data Set are designed to measure these elements of function.</p>

Cognitive decline may be due to dementia, delirium or depression, or a combination of these factors. Without appropriate recognition and assessment of cognitive decline, many cases of dementia, delirium and depression go undiagnosed or untreated. Each of these conditions is associated with significant morbidity and mortality; proper assessment and treatment intends to reduce this morbidity and mortality.

A quality measure that encourages recognition, comprehensive assessment and appropriate treatment of cognitive decline can be expected to have several benefits. First, since cognitive decline can have multiple etiologies, identification of the problem is expected to lead to identification of reversible or treatable medical or psychological conditions. Proper diagnosis of dementia is expected to lead to development of a comprehensive care plan that includes not only appropriate treatment, but also education of staff and family members about the disease and its prognosis.

A comprehensive care plan would focus on restoration and stabilization of intellectual function, which might include prescription of evidence-based dementia medications, discontinuation of medications known to worsen intellectual function, and implementation of appropriate non-pharmacologic interventions. Comprehensive care necessarily addresses neuropsychiatric symptoms that complicate dementia. Appropriate care of these symptoms is necessary to optimize patients' function and quality-of-life. Several elements of the Minimum Data Set capture important information about the symptoms, and this information is expected to be incorporated into the dementia care plan.

Finally, discussion of prognostic information about the stage and severity of dementia should lead to review of advanced care planning and discussion of appropriate goals of care.

Recognition, assessment, diagnosis and appropriate treatment of dementia can be expected to result in several important outcomes;

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5. Increase identification and treatment of depression
6. Increased identification and treatment of delirium

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

The Mansdorf et al study makes a clear case for the need for improvement in obtaining a diagnosis of dementia from a practitioner, not just relying on symptoms of "suggestions" of dementia. In the study, a total of 41 males and 32 females were examined. Of those tested, 10 residents were not suspected of having dementia, but required testing to ascertain the nature of certain cognitive complaints presented. Of the remaining residents, 44 had an established diagnosis of dementia in their medical records, and 19 were referred because of a suspicion of dementia, but with no established diagnosis in the record. Based on data from the testing studies, of those with established diagnoses, only 17 (38.6%) met criteria for dementia, while with those with "suspected" dementia, only 3 of the 19 referred (15.7%) met criteria. The remaining half met criteria for an Axis I diagnosis, which, in this sample, included mostly depressive disorder, but also cases of anxiety and noncompliance. For those with "suspected" dementia, the overwhelming majority (84.2%) did not meet criteria for a dementia diagnosis, with 75% of those residents meeting criteria for an Axis I diagnosis and 25% meeting criteria for MCI. Only 3 of the 19 "suspected" cases (15.7%) actually met criteria for dementia, according to DSM-IV criteria. (1) Even though this particular study shows that fewer patients had dementia than expected, it reinforces the need for an accurate diagnosis which reinforces the need for our measure.

Early and accurate diagnosis is clearly vital in order to optimize care planning and long-term outcomes for persons with dementia and their families. By delaying the diagnosis, opportunities to improve the care process and disease trajectory are missed, with negative consequences. Dementia diagnoses may be inaccurate for many nursing home residents. Using objective measurement of cognitive functioning provided by neuropsychological testing could result in greater diagnostic accuracy and help provide for more accurate and appropriate treatment planning. Few, if any previously established diagnoses of dementia were based at all on data from neuropsychological testing. Their analysis involved personal examination of all residents with standardized neuropsychological

testing tools and raised questions regarding the validity of a diagnosis of dementia one may find in a skilled nursing facility (SNF). Many residents seem to arrive in an SNF with a diagnosis based on a hospital record, but they could not find any evidence that any objective data accompanied the diagnosis. Since clear clinical data supporting assessment of cognitive functioning is present with neuropsychological testing, its use would provide a far greater standard of reliability in establishing a diagnosis of dementia. Moreover, treatment planning and therapy approaches differ not only depending on whether or not a resident has bona fide dementia but also depending on the level and extent of that dementia. (1)

The intermingling of depression and dementia is a common phenomenon, although proper diagnostic testing, including psychological testing, can aid in determining which diagnosis is predominant or present. Up to 32% of individuals referred for dementia evaluations were actually clinically depressed. (1)

Approximately half of nursing home residents have dementia, and the cost of nursing home care is a major burden of Alzheimer's disease and other dementias. Residents with dementia have more limitations in activities of daily living (ADLs) and psychosocial and behavioral problems than do those without dementia. A delay in diagnosing dementia may result in more-serious medical problems, more-extensive treatment, and greater mortality. Identifying persons with dementia in a representative sample of new nursing home admissions represents an important first step in addressing the many issues in care required by this group, how this care differs from care required by those without dementia. (2-6)

One study indicated that approximately 50% of all persons 65 years old and older entering a nursing home for the first time had dementia but did not necessarily have a diagnosis of dementia. These authors look at the studies of Burns et al 1998 up to the Canadian Study of Health and Aging Work Group (9 studies in all with a total of over 1.5 million nursing home resident and analyzed method of case ascertainment of diagnosis. (3)

More than 50% of nursing home (NH) residents are reported to have cognitive impairment. Cognitive impairment is associated with poorer functional outcomes and influences resource and support needs. Changes in cognitive function may indicate an important clinical change related to delirium or significant mood disorder. Reliable and valid screening is therefore important for identifying residents who need further evaluation and modified care planning. (7)

Ferretti et al also shows the gap in having a formal physician diagnosis of dementia and the need for it. In that study, dementia was present in almost a fourth of elderly patients admitted to a nursing home, but was diagnosed in less than a third. Oldest old patients appear especially at risk for underrecognition. These results emphasize the high need of systematic cognitive assessment in the postacute (nursing home) care setting to improve these patients' management and quality of life. (8)

Detection and accurate diagnosis of cognitive impairment and dementia in LTCF remains deficient. Failure to recognize dementia can lead to failure to protect the patient from their own poor decision-making, and produce misunderstandings between residents and caregivers who are not aware of how dementia is influencing the patient's behavior. Failure to accurately diagnosis dementia in LTCFs deprives the resident the advantages of early treatment and can increase the risk of medication errors, falls, delirium, and other dementia related problems. Failure to prepare staff to provide necessary physical and emotional care will lead to unnecessary suffering of LTCF residents with dementia, from entry into the facility to end-of-life. Accurate diagnosis of dementia will allow clinicians to provide a prognosis and expectations for families having to make difficult decisions on behalf of LTC residents with dementia. Dementia is a risk factor for falls and can limit the effectiveness of training to reduce the risk of falls. Dementia increases risk for delirium from acute illness and medications, and the underlying dementia is sometimes recognized for the first time only when delirium develops. Although delirium itself is predictive of poor functional outcomes, delirium superimposed on dementia is associated with even poorer outcomes if the dementia is not recognized. Dementia can impair a person's ability to report pain. Awareness of dementia and the atypical and nonspecific features of pain behavior in people with dementia are likely to improve pain detection and treatment. Special pain assessment scales for people with dementia have been investigated and found to improve detection of pain in this population. (9)

Cognitive status and dementia prognosis needs to be accurately determined to better inform end of life decisions. Accurate diagnosis of dementia and its underlying cause will allow clinicians to provide a prognosis and expectations for families having to make difficult decisions on behalf of LTC residents with dementia. Unrecognized dementia can subject an LTC resident to the risk of fiduciary abuse or other forms of undue influence. Residents can be called on to make decisions when they lack capacity to appropriately do so. (9)

Patients with dementia are less likely to report depression, pain, and other health problems. Recognition of the dementia should lead to more active surveillance of their health status.(9)

Staff-related factors can have a major impact on the LTC resident with dementia, particularly when the dementia is undiagnosed. Weight loss and eating-related behavioral disorders are common in dementia, and the staff's interpretation of resistance to feeding can contribute to inadequate caloric intake. Staff can intervene to improve fluid intake in residents known to have dementia. Recognition of dementia can allow interventions that prevent elopement and that otherwise facilitate the safety of the resident. In general, failure to teach staff to recognize dementia, to provide them with the skills they need, and to support their efforts to provide appropriate care is a recipe for disaster in LTCFs. (9)

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

American Medical Directors Association. Dementia Clinical Practice Guideline. Columbia, MD: AMDA 2012

Forbes S, Bern-Klug m, Gessert C. End-of-life decision making for nursing home residents with dementia. J Nurs Scholarsh 2000;32:251-258

Jones, a, Moss AJ and Harris-Kojetin LD. Use of Advance Directives in Long Term Care Populations. NCHS Data Brief No 54. Jan 2011

Rubenstein LZ. Editorial: a view from the USA on the Alzheimer's disease international position paper. J Nutr Health Aging. 2010;14 (2):104.

Chen Y, Briesacher BA, Field TS, Tjia J, Lau DT, Gurwitz JH. Unexplained Variation Across US Nursing Homes in Antipsychotic Prescribing Rates. Arch Intern Med. 2010 Jan 11;170(1):89-95.

Singer C, Luxenburg J. Diagnosing Dementia in Long-Term Care Facilities. JAMDA 2003: S134-S140

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. (*This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.*) For measures that show high levels of performance, i.e., "topped out", disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.

Currently, no measures of the extent of under diagnosis of dementia in nursing homes exist, therefore there is no extant data on the comparative adverse outcomes for those with a diagnosis vs. those without, nor within the various population sub groups in order to evaluate the degree of disparity in outcomes for diagnosed that may occur.

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4

1. Mansdorf IJ, Harrington M, Lund J, Wohl N. Neuropsychological testing in skilled nursing facilities: The failure to confirm diagnoses of dementia. J Am Med Dir Assoc 2008; 9(4): 271–274. Epub 2008 Apr 8.

2. Magaziner J, Zimmerman S, Gruber-Baldini AL, van Doorn C, Hebel JR, German P, Burton L, Taler G, May C, Quinn CC, Port CL, Baumgarten M; Epidemiology of Dementia in Nursing Homes Research Group. Mortality and adverse health events in newly admitted nursing home residents with and without dementia. J Am Geriatr Soc. 2005 Nov;53(11):1858-66

3. Magaziner J, German P, Zimmerman SI, et al. The prevalence of dementia in a statewide sample of new nursing home admissions aged 65 and older: Diagnosis by expert panel. Epidemiology of Dementia in Nursing Homes Research Group. Gerontologist 2000;6:663–672.

4. Magaziner J, Zimmerman SI, German PS et al. Ascertaining dementia by expert panel in epidemiologic studies of nursing home residents. Ann Epidemiol 1996;6:431–437.

5. Menzin J, Lang K, FriedmanMet al. The economic cost of Alzheimer's disease and related dementias to the California Medicaid Program ('Medi-Cal') in 1995. Am J Geriatr Psychiatry 1999;7:300–308.

6. Burns BJ, Larson DB, Goldstron ID. Mental disorder among nursing home patients: Preliminary findings from the National Nursing Home Survey Pretest. Intl J Geriatr Psychiatry 1988;3:27–35.

7. Saliba D, Buchanan J, Elden M et al. MDS 3.0: Brief Interview for Mental Status. J Am Med Dir Assoc. 2012 Jul 13.

8. Ferretti M, Seematter-Bagnoud L, Martin E, Büla CJ. New diagnoses of dementia among older patients admitted to postacute care. J Am Med Dir Assoc. 2010 Jun;11(5):371-6. Epub 2010 Mar 24.

9. Singer C, Luxenberg J. Diagnosing dementia in long-term care facilities. J Am Med Dir Assoc. 2003;4:S134-S140.

10. American Medical Directors Association. Dementia Clinical Practice Guideline. Columbia, MD: AMDA 2012

11. Chandler JD, Chandler JE. The prevalence of neuropsychiatric disorders in a nursing home population. J Geriatr Psychiatry Neurol 1988;1:71–76.

12. Rovner BW, German PS, Broadhead J, et al. The prevalence and management of dementia and other psychiatric disorders in nursing homes. Int Psychogeriatr 1990;2:13–24.

American Medical Directors Association. Dementia Clinical Practice Guideline. Columbia, MD: AMDA 2012

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when

implemented. **Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):
[Behavioral Health](#) : [Other Serious Mental Illness](#), [Neurology](#)

De.6. Non-Condition Specific(check all the areas that apply):
[Safety](#)

De.7. Target Population Category (Check all the populations for which the measure is specified and tested if any):
[Elderly](#)

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)
www.amda.com

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

Attachment:

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

Attachment:

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) DO NOT include the rationale for the measure.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

[Number of adult patients 65 and older who are included in the denominator \(i.e., have persistent signs and symptoms of dementia\) and who do not have a diagnosis of dementia on any MDS assessment within the last 12 months.](#)

S.5. Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses,

code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Resident is included in the numerator if the resident does not have a diagnosis of dementia on any assessment within one year of the most recent target assessment date coded as:

1. Section I on the MDS, under Neurological, I4200 Alzheimer's Disease = 0 and I4800 Dementia = 0. I4800 includes non-Alzheimer's dementia such as vascular or multi-infarct dementia; mixed dementia; frontotemporal dementia such as Pick's disease; and dementia related to stroke; Parkinson's or Creutzfeldt-Jakob disease.

2. Section I0800 a-j does not include one of following ICD-9 –CM Diagnosis Code for dementia:

290 Dementias

290.0 Senile dementia, uncomplicated

290.1 Presenile dementia

290.10 Presenile dementia, uncomplicated

290.11 Presenile dementia with delirium

290.12 Presenile dementia with delusional features

290.13 Presenile dementia with depressive features

290.2 Senile dementia with delusional or depressive features

290.20 Senile dementia with delusional features

290.21 Senile dementia with depressive features

290.3 Senile dementia with delirium

290.4 Vascular dementia

290.40 Vascular dementia, uncomplicated

290.41 Vascular dementia with delirium

290.42 Vascular dementia with delusions

290.43 Vascular dementia with depressed mood

290.8 Other specified senile psychotic conditions

290.9 Unspecified senile psychotic condition

294 Dementia in conditions classified elsewhere

294.10 Dementia in conditions classified elsewhere without behavioral disturbance

294.11 Dementia in conditions classified elsewhere with behavioral disturbance

294.8 Other persistent mental disorders due to conditions classified elsewhere

294.9 Unspecified persistent mental disorders due to conditions classified elsewhere

331 Other cerebral degenerations

331.0 Alzheimer's disease

331.1 Frontotemporal dementia

331.11 Pick's disease

331.19 Other frontotemporal dementia

331.2 Senile degeneration of brain

331.3 Communicating hydrocephalus

331.4 Obstructive hydrocephalus

331.7 Cerebral degeneration in diseases classified elsewhere

331.8 Other cerebral degeneration

331.82 Dementia with Lewy bodies

S.6. Denominator Statement (Brief, narrative description of the target population being measured)

The denominator is the total of all long-stay residents in the nursing facility who have at least two MDS assessments which may be an admission annual, quarterly, significant change or significant correction assessment during the selected quarter and who do not meet the exclusion criteria.

The denominator includes (i) residents with Section C Brief Interview for Mental Status (BIMS) score <8 on most recent target

assessment and a BIMS < 8 on the prior assessment; or (ii) residents with a staff assessment for cognitive status on both the most recent target assessment and the prior assessment that shows severe cognitive impairment.

S.7. Denominator Details (All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Residents are included in the denominator if they meet any of the following criteria:

1. Section C Cognitive Patterns CO100 = 1 (yes) and BIMS is completed. The BIMS is a validated cognitive screening tool now embedded in the new Minimum Data Set (MDS) 3.0 resident assessment tool used for all nursing home patients nationwide and is thus readily available. The BIMS is the accepted tool for evaluating cognitive status in the long term care population, including by the Centers for Medicare and Medicaid Services (CMS). Residents with BIMS score <8 are considered to have severe cognitive impairment and should be evaluated for dementia.

Resident is included in the denominator if C0500 = 0 – 7 (BIMS summary score) on both the target and prior assessment (i.e. on two consecutive assessments).

2. If C0500 = missing, the resident is unable to complete the BIMS interview (CO100 = 0) and C600 = 1 (resident was unable to conduct BIMS interview and staff conduct interview for cognitive status). In this case, resident is included in denominator if resident meets CMS definition of severe cognitive impairment based on staff assessment on both most recent and target assessment (i.e., on two consecutive assessments): C0700 = 1 (short term memory problem) and C1000 Cognitive Skills for Daily Decision Making > 0 (1 = Modified independence - some difficulty in new situations only. 2 = Moderately impaired - decisions poor; cues/supervision required. 3 = Severely impaired - never/rarely made decisions).

S.8. Denominator Exclusions (Brief narrative description of exclusions from the target population)

Residents who are hospice or end of life, or who are comatose or with delirium, or with psychotic disorders including hallucinations, anxiety disorder, manic depressive disease, post-traumatic stress disorder, bipolar disorder or schizophrenia will be excluded from the denominator.

S.9. Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

1. Exclude if resident is comatose (B0100 = 1) on target and/or prior assessment.

2. Exclude if resident is in Hospice (O0100K2 = 1) and/or diagnosed as end of life (J1400 Prognosis =1) on target or prior assessment.

3. Exclude residents with Delirium as measured by Section C1300 Residents with delirium (from CAM©). Residents with If C1300 > 0 on target or prior assessment are excluded from denominator.

4. Exclude residents with one or more psychotic disorders, including (i) residents with E0100 Psychosis >= 1 (E0100A hallucinations = 1 or E0100B delusions = 1) or (ii) Residents with Section I5700 Anxiety Disorder = 1 or I5800 Depression (other than bipolar) = 1 or I5900 Manic Depression (bipolar disease) = 1 or I5950 Psychotic Disorder (other than schizophrenia) = 1 or I6000 Schizophrenia (e.g., schizoaffective and schizophreniform disorders) = 1 or I6100 Post Traumatic Stress Disorder (PTSD) = 1 or Section I0800 a-j includes one or more of ICD-9 Codes: I3a-e = 295.00-295.9; 297.00-298.9 (Types of schizophrenia) or schizophrenia (I1gg = 1) or manic depressive disease [ICD-9 Codes: I3a-e = 296.00-296.9 or I1ff = 1] or Total Brain Injury [ICD-9 code 854.0] or Encephalopathy [ICD-9 code 348.30] on target or prior assessment

5. Exclude residents with severe depression as measured by PHQ9 total severity score range 20 – 27 or PHQ9-OV (staff assessment) total severity score range 20 - 30. If D0300 >= 20 on target and/or prior assessment, exclude resident from denominator or if D0600 >= 20 on target or prior assessment exclude resident from denominator.

S.10. Stratification Information (Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)

N/A

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

No risk adjustment or risk stratification

If other:

S.12. Type of score:

Rate/proportion

If other:

S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Lower score

S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)

Denominator Algorithm Narrative for Long-Stay Nursing Facility: Measure Population

Denominator: Number of all long-stay residents in the nursing facility that has at least two MDS assessments which may be an admission annual, quarterly, significant change or significant correction assessment during the selected quarter and who do not meet the exclusion criteria.

1. Start Long-Stay Nursing Facility Population Logic (cases eligible for Persistent Indicators of Dementia without a Diagnosis Measure Set)
2. Process all cases of long-stay nursing facility residents who have at least two MDS assessments
3. Check Resident Impairment Status
 - a. If the resident received a BIMS summary score =8 on two consecutive assessments (i.e. the most recent and prior target assessments) or did not meet CMS' definition of severe cognitive impairment on two consecutive staff assessments (i.e. the most recent and prior target assessments), Then the patient is not eligible to be sampled for the Persistent Indicators of Dementia without a Diagnosis Measure Set. Set the Long-Stay Nursing Facility Population Reject Case Flag to YES. Stop processing case.
 - b. If the resident received a BIMS summary score <8 on two consecutive assessments (i.e. the most recent and prior target assessments) or met CMS' definition of severe cognitive impairment on two consecutive staff assessments (i.e. the most recent and prior target assessments), Then continue processing and proceed to Check for Comatose
4. Check for Comatose
 - a. If the resident received a 1 for comatose on the MDS assessment tool, Then the patient is not eligible to be sampled for the Persistent Indicators of Dementia without a Diagnosis Measure Set. Set the Long-Stay Nursing Facility Population Reject Case Flag to YES. Stop processing case.
 - b. If the resident received a 0 for comatose on the MDS assessment tool, Then continue processing and proceed to Check for Hospice
5. Check for Hospice
 - a. If the resident received a 1 for hospice on the MDS assessment tool, Then the patient is not eligible to be sampled for the Persistent Indicators of Dementia without a Diagnosis Measure Set. Set the Long-Stay Nursing Facility Population Reject Case Flag to YES. Stop processing case.
 - b. If the resident received a 0 for hospice on the MDS assessment tool, Then continue processing and proceed to Check Delirium Score
6. Check Delirium Score
 - a. If the resident received a delirium score >0 (from CAM©), Then the patient is not eligible to be sampled for the Persistent Indicators of Dementia without a Diagnosis Measure Set. Set the Long-Stay Nursing Facility Population Reject Case Flag to YES. Stop processing case.
 - b. If the resident received a delirium score = 0 (from CAM©), Then continue processing and proceed to Check Psychosis Score
7. Check Psychosis Score
 - a. If the resident received a psychosis score >=1 on the MDS assessment tool, Then the patient is not eligible to be sampled for the Persistent Indicators of Dementia without a Diagnosis Measure Set. Set the Long-Stay Nursing Facility Population Reject Case Flag to YES. Stop processing case.

- b. If the resident received a psychosis score = 0 on the MDS assessment tool, Then continue processing and proceed to Check ICD-9 CM Code
8. Check ICD-9 CM Code
 - a. If the resident received an ICD-9 CM Code = 295.00-295.9; 296.00-296.9; or 297.00-298.9 on the MDS assessment tool, Then the patient is not eligible to be sampled for the Persistent Indicators of Dementia without a Diagnosis Measure Set. Set the Long-Stay Nursing Facility Population Reject Case Flag to YES. Stop processing case.
 - b. If the resident did not receive an ICD-9 CM Code = 295.00-295.9; 296.00-296.9; or 297.00-298.9 on the MDS assessment tool, Then continue processing and proceed to Check for Severe Depression
9. Check for Severe Depression
 - a. If the resident received a severe depression total severity score range from 20-27 on the MDS assessment tool, Then the patient is not eligible to be sampled for the Persistent Indicators of Dementia without a Diagnosis Measure Set. Set the Long-Stay Nursing Facility Population Reject Case Flag to YES. Stop processing case.
 - b. If the resident did not receive a severe depression total severity score range from 20-27 on the MDS assessment tool, Then continue processing and proceed to Calculate Patient Age
10. Calculate Patient Age on Encounter Date (in years)
11. Check Patient Age
 - a. If the resident age <65 years, Then the patient is not eligible to be sampled for the Persistent Indicators of Dementia without a Diagnosis Measure Set. Set the Long-Stay Nursing Facility Population Reject Case Flag to YES. Stop processing case.
 - b. If the resident age =65 years, Then the patient is eligible to be sampled for the Persistent Indicators of Dementia without a Diagnosis Measure Set and in the Long-Stay Nursing Facility Population. Set the Long-Stay Nursing Facility Population Reject Case Flag to NO. Stop processing case and Return to Data Processing Flow (date transmission section).

Numerator Algorithm Narrative for Persistent Indicators of Dementia without a Diagnosis—Long Stay

Numerator: Number of adult patients 65 and older who are included in the denominator (i.e., have persistent signs and symptoms of dementia) and who do not have a diagnosis of dementia on any MDS assessment within the last 12 months.

1. Start
2. Run cases that are included in the Long-Stay Nursing Facility Population Algorithm and passed the edit defined in the Data Processing Flow through this measure. Proceed to ICD-9 CM Diagnosis Code
3. Check ICD-9 CM Diagnosis Code
 - a. If the resident received an ICD-9 CM Diagnosis Code for Dementia on the MDS assessment tool in the last 12 months, Then the case will not be in the numerator population. Stop processing case.
 - b. If the resident did not receive an ICD-9 CM Diagnosis Code for Dementia on the MDS assessment tool in the last 12 months, Then the case will be in the numerator population. Stop processing case.

Quality Measure (QM) Calculation

Percent of Residents with Persistent Indicators of Dementia without a Diagnosis—Long Stay = (Numerator / Denominator)*100

S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.

S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)

Specify calculation of response rates to be reported with performance measure results.

S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.18.

Electronic Health Records

S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)

IF instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.

MDS 3.0 resident assessment instrument. Section A0310 A Type of Assessment will capture the type of assessment. A0310.A. Federal OBRA Reason for Assessment. 01. Admission assessment (required by day 14). 02. Quarterly review assessment. 03. Annual assessment. 04. Significant change in status assessment. 05. Significant correction to prior comprehensive assessment. 06. Significant correction to prior quarterly assessment. 99. Not OBRA required assessment.

S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

S.20. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)
Facility

S.21. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)
Post-Acute Care

If other:

S.22. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

2. Validity – See attached Measure Testing Submission Form [2091_MeasureTesting_MSF5.0_Data.doc](#)

2.1 For maintenance of endorsement

Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

2.2 For maintenance of endorsement

Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

2.3 For maintenance of endorsement

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1,2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

3. Feasibility

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

3a. Byproduct of Care Processes

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

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

Other

If other: [MDS 3.0 Assessment Tool and Process](#)

3b. Electronic Sources

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

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

ALL data elements are in defined fields in electronic health records (EHRs)

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources. For **maintenance of endorsement**, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:

3c. Data Collection Strategy

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

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

NA

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

4. Usability and Use

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

4a. Accountability and Transparency

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

4.1. Current and Planned Use

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

Specific Plan for Use	Current Use (for current use provide URL)

4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor

- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., *Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?*)

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

4a2.2.2. Summarize the feedback obtained from those being measured.

4a2.2.3. Summarize the feedback obtained from other users

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

Improvement

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

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b2. Unintended Consequences

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

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

Measure predicated on standardized assessment instruments which are audited on a regular basis by state and federal surveyors for accuracy. MDS 3.0 is a validated assessment tool.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

5. Comparison to Related or Competing Measures

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

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

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

Are the measure specifications harmonized to the extent possible?

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

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

Appendix
<p>A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.</p> <p>Attachment:</p>
Contact Information
<p>Co.1 Measure Steward (Intellectual Property Owner): American Medical Directors Association</p> <p>Co.2 Point of Contact: Jacqueline, Vance, jvance@amda.com, 401-992-3105-</p> <p>Co.3 Measure Developer if different from Measure Steward: American Medical Directors Association</p> <p>Co.4 Point of Contact: Jacqueline, Vance, jvance@amda.com, 401-992-3105-</p>
Additional Information
<p>Ad.1 Workgroup/Expert Panel involved in measure development Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development. The work group members contributed to all aspects of measure development making contributions based on their expertise in geriatric medicine, dementia care, MDS, quality measurement and improvement, clinical medicine and other related experience and expertise:</p> <p>Paul R. Katz, MD, CMD Baycrest Centre for Geriatric Care</p> <p>William Smucker, MD, CMD Summa Health System</p> <p>Christie Teigland, PhD Inovalon, Inc.</p> <p>James Lett II, MD, CMD Hebrew Home of Rockville</p> <p>Jurgis Karuza, PhD Monroe Community Hospital Geriatrics and Aging</p> <p>Jacqueline Vance, RNC, BSN, CDONA/LTC, FACDONA AMDA-Dedicated to Long Term Care Medicine™</p>
<p>Measure Developer/Steward Updates and Ongoing Maintenance</p> <p>Ad.2 Year the measure was first released:</p> <p>Ad.3 Month and Year of most recent revision:</p> <p>Ad.4 What is your frequency for review/update of this measure?</p> <p>Ad.5 When is the next scheduled review/update for this measure?</p>
<p>Ad.6 Copyright statement:</p> <p>Ad.7 Disclaimers:</p>
Ad.8 Additional Information/Comments: