

NATIONAL QUALITY FORUM

Measure Submission and Evaluation Worksheet 5.0

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the [submitting standards web page](#).

NQF #: 1983	NQF Project: Neurology Project
(for Endorsement Maintenance Review)	
Original Endorsement Date:	Most Recent Endorsement Date: Last Updated Date: Oct 21, 2015
BRIEF MEASURE INFORMATION	
De.1 Measure Title: Parkinson's Disease Cognitive Impairment or Dysfunction Assessment	
Co.1.1 Measure Steward: American Academy of Neurology	
De.2 Brief Description of Measure: All patients with a diagnosis of Parkinson's disease who were assessed for cognitive impairment or dysfunction at least annually.	
2a1.1 Numerator Statement: Patients who were assessed for cognitive impairment or dysfunction at least annually.	
2a1.4 Denominator Statement: All patients with a diagnosis of Parkinson's disease.	
2a1.8 Denominator Exclusions: None	
1.1 Measure Type: Process 2a1. 25-26 Data Source: Administrative claims , Electronic Clinical Data : Electronic Health Record , Electronic Clinical Data : Registry 2a1.33 Level of Analysis: Clinician : Individual	
1.2-1.4 Is this measure paired with another measure? No	
De.3 If included in a composite, please identify the composite measure (title and NQF number if endorsed): N/A	

STAFF NOTES (issues or questions regarding any criteria)
Comments on Conditions for Consideration:
Is the measure untested? Yes <input type="radio"/> No <input checked="" type="radio"/> If untested, explain how it meets criteria for consideration for time-limited endorsement:
1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (check De.5): 5. Similar/related endorsed or submitted measures (check 5.1): Other Criteria:
Staff Reviewer Name(s):

1. IMPACT, OPPORTUNITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT
Importance to Measure and Report is a threshold criterion that must be met in order to recommend a

measure for endorsement. All three subcriteria must be met to pass this criterion. See [guidance on evidence](#).

Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria. ([evaluation criteria](#))

1a. High Impact: H● M● L● I●

(The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.)

De.4 Subject/Topic Areas (Check all the areas that apply): [Neurology](#)

De.5 Cross Cutting Areas (Check all the areas that apply): [Health and Functional Status](#), [Health and Functional Status : Development/Wellness](#), [Health and Functional Status : Functional Status](#), [Prevention](#), [Safety](#), [Safety : Complications](#)

1a.1 Demonstrated High Impact Aspect of Healthcare: [Affects large numbers](#), [A leading cause of morbidity/mortality](#), [Patient/societal consequences of poor quality](#), [Severity of illness](#)

1a.2 If "Other," please describe:

1a.3 Summary of Evidence of High Impact (Provide epidemiologic or resource use data):

Parkinson's disease is the second most common neurodegenerative disease. The prevalence of nonmotor symptoms is high.¹ For instance, a survey of 99 patients with PD using validated questionnaires for nonmotor symptoms including anxiety, depression, sensory disturbance, fatigue, or sleep problems revealed that 88% of patients had at least one nonmotor symptom and 11% had five nonmotor symptoms.² With improved treatment of motor symptoms, it is also now evident that the nonmotor features of PD such as dementia, depression, and psychosis may result in significant disability.

Parkinson's disease is associated with cognitive impairment. It is important to assess patients with Parkinson's disease on an annual basis with regard to their cognitive abilities. Clinically significant cognitive difficulties may be present early on in the disease course, but dementia may emerge and be diagnosed later in the course of the disease. However, the insidious onset of cognitive impairment/dementia often occurs over a prolonged period of time. Emerging cognitive impairment has limited treatment, but is important to identify in terms of the patient's care and responsibilities within the home, socially, or in the work place.

Parkinson's disease affects both men and women. The average age of onset of Parkinson's disease is 61, but it may begin as early as age 40 or even before. The number of people in the United States with Parkinson's disease is estimated to be between 500,000 and one million, with about 50,000 to 60,000 new diagnoses each year. That number is growing every year as the American population ages.

Despite the high prevalence and associated disability of nonmotor symptoms in PD, physician recognition of these important clinical features is low. Furthermore, many PD symptoms overlap with features of depression and dementia including symptoms of withdrawal, lack of motivation, flattened affect, decreased physical activity, or bradyphrenia, thus confounding the identification of these behavioral and cognitive disorders.

1a.4 Citations for Evidence of High Impact cited in 1a.3: 1. Van Den Eeden SK, Tanner CM, Bernstein AL, et al. Incidence of Parkinson's disease: variation by age, gender, and race/ethnicity. *Am J Epidemiol* 2003;157:1015–1022.
2. Shulman LM, Taback RL, Bean J, Weiner WJ. Comorbidity of the nonmotor symptoms of Parkinson's disease. *Mov Disord* 2001;16:507– 510.
3. Factor, S. Weiner, W. Parkinson's Disease: Diagnosis and Clinical Management. 2002
4. Parkinson's Disease Foundation www.pdf.org

1b. Opportunity for Improvement: H● M● L● I●

(There is a demonstrated performance gap - variability or overall less than optimal performance)

1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:

Parkinson's disease is associated with cognitive impairment. It is important to assess patients with Parkinson's disease on an annual basis with regard to their cognitive abilities. Clinically significant cognitive difficulties may be present early on in the disease course, but dementia may emerge and be diagnosed later in the course of the disease. However, the insidious onset of cognitive impairment/dementia often occurs over a prolonged period of time. Emerging cognitive impairment has limited treatment, but is important to identify in terms of the patient's care and responsibilities within the home, socially, or in the work place.

1b.2 Summary of Data Demonstrating Performance Gap *(Variation or overall less than optimal performance across providers): [For Maintenance – Descriptive statistics for performance results for this measure - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.]*

The presence of psychosis, depressive disorder, increasing depression severity, age, duration of PD, cognitive impairment, apathy, sleepiness, motor impairment, and percentage of time with dyskinesias were related to greater disability in bivariate analyses. Entering these factors into two multiple regression analyses, only the increasing severity of depression and worsening cognition were associated with greater disability using the UPDRS ADL score, accounting for 37% of the variance in disability ($P < .001$). These two factors plus increasing severity of PD accounted for 54% of the variance in disability using the Schwab and England ADL score ($P < .001$).¹

We examined the medical records, from 1998 to 2004, of 401 Los Angeles veterans with Parkinson's disease to determine whether care met key indicators of PD care quality. We compared adherence to each indicator through logistic regression models. Over the study period, 10 indicators of PD care quality were triggered 2,227 times. The 10 PD indicators were triggered 2,227 times during the study period, and patients received recommended care 1,541 times (69%). Gaps in care were particularly large for annual assessment of nonmotor symptoms such as orthostatic hypotension, falls, depression, and hallucinations. Gaps in care were also noted for treatment of wearing off among non-neurologists.²

1b.3 Citations for Data on Performance Gap: *[For Maintenance – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]*

1. Weintraub, D., Moberg, P. J., Duda, J. E., Katz, I. R. and Stern, M. B. (2004), Effect of Psychiatric and Other Nonmotor Symptoms on Disability in Parkinson's Disease. *Journal of the American Geriatrics Society*, 52: 784–788. doi: 10.1111/j.1532-5415.2004.52219.x
2. Cheng E, Swartztrauber K, Siderowf A, Eisa M, Lee M, Vassar S, Jacob E, Vickrey B. Association of specialist involvement and quality of care for Parkinson's disease. *Movement disorders*. 2007;22:515

1b.4 Summary of Data on Disparities by Population Group: *[For Maintenance –Descriptive statistics for performance results for this measure by population group]*

In a study conducted by Kaiser Permanente between 1994-1995 A total of 588 newly diagnosed (incident) cases of Parkinson's disease were identified, which gave an overall annualized age- and gender-adjusted incidence rate of 13.4 per 100,000 (95% confidence interval (CI): 11.4, 15.5). The incidence rapidly increased over the age of 60 years, with only 4% of the cases being under the age of 50 years. The rate for men (19.0 per 100,000, 95% CI: 16.1, 21.8) was 91% higher than that for women (9.9 per 100,000, 95% CI: 7.6, 12.2). The age- and gender-adjusted rate per 100,000 was highest among Hispanics (16.6, 95% CI: 12.0, 21.3), followed by non-Hispanic Whites (13.6, 95% CI: 11.5, 15.7), Asians (11.3, 95% CI: 7.2, 15.3), and Blacks (10.2, 95% CI: 6.4, 14.0). These data suggest that the incidence of Parkinson's disease varies by race/ethnicity.¹

We examined the medical records of 309 (83%) non-Hispanic White and 65 (17%) non-White Los Angeles veterans with PD from 1998 to 2004 to determine if care quality as measured by 10 PD indicators different by race/ethnicity. In multivariate modeling, adherence to indicators was higher among non-Hispanic Whites

(71% vs. 65%, risk ratio 1.15, 95% CI [1.07–1.32]) compared to non-Whites. Differences in adherence by race/ethnicity were greatest for initial treatment for depression and follow-up treatment of depression ($p < 0.05$). We detected disparities in quality of PD care, particularly in initial treatment and follow-up treatment of depression.²

1b.5 Citations for Data on Disparities Cited in 1b.4: [*For Maintenance* – Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]

1. Van Den Eeden SK, Tanner CM, Bernstein AL, et al. Incidence of Parkinson's disease: variation by age, gender, and race/ethnicity. *Am J Epidemiol* 2003;157:1015–1022.
2. Cheng EM, Siderowf AD, Swartztrauber K, Lee M, Vassar S, Jacob E, Eisa MS, Vickrey BG. Disparities of care in veterans with Parkinson's disease. *Parkinsonism Relat Disord*. 2008;14:8-14

1c. Evidence (Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.)

Is the measure focus a health outcome? Yes ☒ No ☐ If not a health outcome, rate the body of evidence.

Quantity: H ☒ M ☐ L ☐ I ☐ Quality: H ☒ M ☐ L ☐ I ☐ Consistency: H ☒ M ☐ L ☐ I ☐

Quantity	Quality	Consistency	Does the measure pass subcriterion 1c?
M-H	M-H	M-H	Yes <input checked="" type="radio"/>
L	M-H	M	Yes <input checked="" type="radio"/> IF additional research unlikely to change conclusion that benefits to patients outweigh harms: otherwise No <input type="radio"/>
M-H	L	M-H	Yes <input checked="" type="radio"/> IF potential benefits to patients clearly outweigh potential harms: otherwise No <input type="radio"/>
L-M-H	L-M-H	L	No <input type="radio"/>

Health outcome – rationale supports relationship to at least one healthcare structure, process, intervention, or service

Does the measure pass subcriterion 1c?
Yes ☒ IF rationale supports relationship

1c.1 Structure-Process-Outcome Relationship (Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process-health outcome; intermediate clinical outcome-health outcome):

Cognitive disorders and dysfunctions are common among individuals affected by Parkinson's disease. An assessment for cognitive impairment or dysfunction will lead to an increase identification of these impairments/dysfunctions, which are regularly associated with PD. The assessment will also in turn help the clinician to assist patients in receiving the appropriate treatment for their cognitive impairment or dysfunction, provide additional resources for the patient and/or caregiver (as necessary), and lead to a better quality of life for the patient.

The American Academy of Neurology has preliminary data from the implementation of these measures into the Maintenance of Certification Performance in Practice (NeuroPI) Parkinson's disease Modules. There have been 119 physicians to date who have enrolled in Parkinson's disease modules. The extrapolation of data from this module is not yet appropriate as the sample size is believed to be too small to be able to provide generalizable data. However, by the time this measure comes back to the NQF for the end of the Temporary Endorsement period (estimated by 1/2014) there will be additional data available to support the link of this measure to the desired patient outcomes. In addition, the AAN will have some data back from the CECity registry database, which just went live in August 2012, by 1/2014 to add additional support to this measure.

1c.2-3 Type of Evidence (*Check all that apply*):

Clinical Practice Guideline, Other, Systematic review of body of evidence (other than within guideline development)
indicator paper

1c.4 Directness of Evidence to the Specified Measure (*State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population*):

The measure is stated more generally as "assessed for cognitive function or disorder" rather than stating a specific type of assessment tool (eg MMSE or CAM Cog) because of the feedback received during the development of the measure by the measure development work group and by the public during the public comment period. The clinicians felt that not all clinicians used the same assessment tool to assess for cognitive impairment or dysfunction. The clinicians also felt that there are other valid tools available that were not specified in the AAN 2006 guideline that are commonly used in practice today that could be used to meet this measure. The purpose of this measure is get the clinician focused on the assessment (independent of the type of tool used) so that the patient can have appropriate cognitive impairments or dysfunctions identified and treated.

Screening tools are available for depression and dementia in patients with PD, but more specific validated tools are needed. There are no widely used, validated tools for psychosis screening in Parkinson disease (PD). <http://www.neurology.org/content/66/7/996.full.pdf>

1c.5 Quantity of Studies in the Body of Evidence (*Total number of studies, not articles*): 1 guideline and 1 indicator paper were used as the basis for this quality measure.

1c.6 Quality of Body of Evidence (*Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events*): The guideline/indicator authors did not provide an explicit process or documentation of a process like GRADE whereby precision, directness, etc were detailed in a systematic review to demonstrate the quality of the body of evidence for this measure. The available information from the guideline/indicator paper is provided below.

Recommendation: The Mini-Mental State Examination (MMSE) and the Cambridge Cognitive Examination (CAM Cog) should be considered as screening tools for dementia in patients with PD (Level B). AAN QSS (April 2006)

1. AAN QSS Mental (April 2006) Miyasaki JM, Shannon K, Voon V, Ravina B, Kleiner-Fisman G, Anderson K, Shulman LM, Gronseth G, Weiner WJ, Quality Standards Subcommittee of the American Academy of Neurology. Practice parameter: evaluation and treatment of depression, psychosis, and dementia in Parkinson disease (an evidence-based review): report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2006 Apr 11;66(7):996-1002.

From the Guideline with Direct Evidence for this recommendation Statement:

Six studies were identified: one Class I, 17 two Class II, 18, 19 and three Class III. 20-22 All were randomized controlled trials. Interventions included amitriptyline, nortriptyline, citalopram, fluoxetine, sertraline, pergolide, pramipexole, and nefazodone. Three of the studies used placebo comparators. 17-19 One study compared nefazodone to fluoxetine, 22 one amitriptyline to fluoxetine, 20 and one pramipexole to pergolide. 21 In four studies, depression was defined by DSM criteria. One study employed ICD-10 criteria for depression. In another study, the author's ad hoc scale was used. In all but one study, the severity of the depression was mild to moderate; depression was severe in the study of amitriptyline. 20 Outcome measures varied and included BDI, HAM-D, MADRS, Zung Self Rating Depression Scale, and a unique

rating scale.

Five of the six studies used masked outcome assessment. The nefazodone vs fluoxetine study utilized independent but not masked outcome assessment (Class III).²² Three studies lacked allocation concealment of treatment groups (the attempt to prevent selection bias by concealing the assignment sequence until allocation to avoid maneuvering a patient to a particular assignment, either intentionally or unintentionally),²⁰⁻²² one had nonstandard inclusion criteria,¹⁹ and one had less than 80% completers without an intent to treat analysis.²⁰ Despite randomization, there were confounding differences in the severity of depression between groups in the pramipexole vs pergolide study (Class III).²¹ Follow-up ranged from 6 weeks to 12 months. The single Class I study, citalopram vs placebo, had the shortest duration of follow-up and used the HAMD for assessment.

Primary Evidence:

Based on one Class II study, amitriptyline is possibly effective in treating depression associated with PD. There is insufficient evidence to support or refute the efficacy of other specific antidepressants in the treatment of PD depression. Anti-cholinergic side effects, especially problematic with tricyclics, are an important consideration in the PD population due to concerns regarding potential worsening of cognition, as is the concern about orthostatic hypotension increasing the risk of falls.

Although the age at onset of PD is generally in adulthood, it should be noted that the Food and Drug Administration issued a drug labeling change in 2004 for a black box warning of the increased risk of suicidal ideation and suicide in adolescents and children with all antidepressants.

Despite advances in treatment that improve motor symptoms for many patients, PD remains a progressive disease with complex, long-term, nonmotor symptoms that are often unrecognized. In order to identify the impact of depression, psychosis, and dementia, validated diagnostic questionnaires and rating scales are needed.

Recommendations:

All veterans with PD should be reassessed for complications of PD (including, but not limited to functional status, excessive daytime somnolence, speech and swallowing difficulties, dementia, depression, and psychosis) at least on an annual basis. Cheng #10 (Reassessment for complications for PD) 2004

2. Cheng Eric, Siderowf Andrew, Swaztrauber Kari, Eisa Mahmood, Lee Martin and Vickrey Barbara. Development of Quality of Care Indicators for Parkinson's disease Movement Disorders Vol. 19, No.2, 2004 (P136-150)

Primary Evidence:

Members of the research team reviewed the literature for each PD-specific indicator and created an evidence summary. Relevant randomized, controlled trials and/or observational studies that were identified in our search strategy but not summarized in existing guidelines or systematic reviews were also included in the evidence summaries. We formally graded the medical evidence using the format issued by the Fifth American College of Chest Physicians Consensus Conference on Antithrombotic Therapy.

Summaries of evidence from the scientific literature for the ACOVE indicators have been published previously. The evidence summaries for the 33 selected ACOVE indicators identified as relevant to PD were reviewed and slightly modified to make them more relevant to PD care, for example, substituting the phrase "a PD patient" for "a vulnerable elder".

Of the 38 PD-specific indicators meeting criteria for validity and feasibility, 16 also met criteria for having the

highest potential value for subsequent quality improvement interventions (Table 2). Among the highest-rated indicators were ones that dealt with dopaminergic therapy, assessment of functional status, and assessment of depression. At least one indicator from each domain of care was in the highlighted list. Applying our criteria for highlighting indicators of highest potential value for subsequent quality improvement interventions in PD, we identified 13 of the 33 PD-relevant ACOVE indicators (Table 4). Among the highest rated indicators were ones in the areas of coordination of care, medication use, and recognition and treatment of depression (Table 4).

1c.7 Consistency of Results across Studies (*Summarize the consistency of the magnitude and direction of the effect*): The studies are consistent that all patients with a diagnosis of Parkinson's disease should be assessed for cognitive impairment.

1c.8 Net Benefit (*Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms*):

See quality of body of evidence question

1c.9 Grading of Strength/Quality of the Body of Evidence. Has the body of evidence been graded? **Yes**

1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: American Academy of Neurology

Classification of evidence for therapeutic articles

Class I: Prospective, randomized, controlled clinical trial with masked outcome assessment, in a representative population. The following are required:

- a) Primary outcome(s) is/are clearly defined.
- b) Exclusion/inclusion criteria are clearly defined.
- c) Adequate accounting for drop-outs and cross-overs with numbers sufficiently low to have minimal potential for bias.
- d) Relevant baseline characteristics are presented and substantially equivalent among treatment groups or there is appropriate statistical adjustment for differences.

Class II: Prospective, matched, group cohort study in a representative population with masked outcome assessment that meets a-d above OR a RCT in a representative population that lacks one criterion a–d.

Class III: All other controlled trials including well-defined natural history controls or patients serving as own controls in a representative population, where outcome assessment is independently assessed or independently derived by objective outcome measurement (an outcome measure that is unlikely to be affected by an observer's [patient, treating physician, investigator] expectation or bias [eg, blood tests, administrative outcome data]).

Class IV: Evidence from uncontrolled studies, case series, case reports, or expert opinion.

Classification of recommendations

A _ Established as effective, ineffective, or harmful for the given condition in the specified population. (Level A rating requires at least two consistent Class I studies.)

B _ Probably effective, ineffective, or harmful for the given condition in the spec

1c.11 System Used for Grading the Body of Evidence: GRADE

1c.12 If other, identify and describe the grading scale with definitions:

1c.13 Grade Assigned to the Body of Evidence: Level B

1c.14 Summary of Controversy/Contradictory Evidence: N/A

1c.15 Citations for Evidence other than Guidelines(Guidelines addressed below):

Cheng Eric, Siderowf Andrew, Swaztrauber Kari, Eisa Mahmood, Lee Martin and Vickrey Barbara.

Development of Quality of Care Indicators for Parkinson's disease Movement Disorders Vol. 19, No.2, 2004 (P136-150)

1c.16 Quote verbatim, the specific guideline recommendation (Including guideline # and/or page #):
The Mini-Mental State Examination (MMSE) and the Cambridge Cognitive Examination (CAM Cog) should be considered as screening tools for dementia in patients with PD (Level B). AAN QSS (April 2006)

All veterans with PD should be reassessed for complications of PD (including, but not limited to functional status, excessive daytime somnolence, speech and swallowing difficulties, dementia, depression, and psychosis) at least on an annual basis. Cheng #10 (Reassessment for complications for PD) 2004

1c.17 Clinical Practice Guideline Citation: AAN QSS Mental (April 2006) Miyasaki JM, Shannon K, Voon V, Ravina B, Kleiner-Fisman G, Anderson K, Shulman LM, Gronseth G, Weiner WJ, Quality Standards Subcommittee of the American Academy of Neurology. Practice parameter: evaluation and treatment of depression, psychosis, and dementia in Parkinson disease (an evidence-based review): report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2006 Apr 11;66(7):996-1002.

1c.18 National Guideline Clearinghouse or other URL:

<http://www.aan.com/globals/axon/assets/9084.pdf>;

<http://www.guideline.gov/search/search.aspx?term=parkinson+aan>

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? Yes

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: American Academy of Neurology Guideline development subcommittee

1c.21 System Used for Grading the Strength of Guideline Recommendation: GRADE

1c.22 If other, identify and describe the grading scale with definitions:

1c.23 Grade Assigned to the Recommendation: Level B

1c.24 Rationale for Using this Guideline Over Others: Supports the basis for the measure and demonstrates the gap in current care provided.

Based on the NQF descriptions for rating the evidence, what was the developer's assessment of the quantity, quality, and consistency of the body of evidence?

1c.25 Quantity: High **1c.26 Quality:** Moderate **1c.27 Consistency:** High

1c.28 Attach evidence submission form:

1c.29 Attach appendix for supplemental materials:

Was the threshold criterion, *Importance to Measure and Report*, met?

(1a & 1b must be rated moderate or high and 1c yes) Yes ☒ No ☐

Provide rationale based on specific subcriteria:

For a new measure if the Committee votes NO, then STOP.

For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.

2. RELIABILITY & 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. **(evaluation criteria)**

Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See [guidance on measure testing](#).

S.1 Measure Web Page (*In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained*). Do you have a web page where current detailed specifications for this measure can be obtained? **Yes**

S.2 If yes, provide web page URL: <http://www.aan.com/globals/axon/assets/9084.pdf>

2a. RELIABILITY. Precise Specifications and Reliability Testing: H● M● L● I●

2a1. Precise Measure Specifications. (*The measure specifications precise and unambiguous.*)

2a1.1 Numerator Statement (*Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome*):

[Patients who were assessed for cognitive impairment or dysfunction at least annually.](#)

2a1.2 Numerator Time Window (*The time period in which the target process, condition, event, or outcome is eligible for inclusion*):

[At least once annually](#)

2a1.3 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, codes with descriptors, and/or specific data collection items/responses*):

[Report the CPT Category II, Cognitive Impairment or Dysfunction Assessment 3720F.](#)

2a1.4 Denominator Statement (*Brief, narrative description of the target population being measured*):

[All patients with a diagnosis of Parkinson's disease.](#)

2a1.5 Target Population Category (*Check all the populations for which the measure is specified and tested if any*): [Populations at Risk](#)

2a1.6 Denominator Time Window (*The time period in which cases are eligible for inclusion*):

[At least once annually](#)

2a1.7 Denominator Details (*All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses*):

[Denominator \(Eligible Population\): All patients with a diagnosis of Parkinson's disease.](#)

• CPT ®Procedure Codes: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99304, 99305, 99306, 99307, 99308, 99309, 99310

[AND](#)

• ICD-9 diagnosis codes: 332.0

2a1.8 Denominator Exclusions (*Brief narrative description of exclusions from the target population*):

[None](#)

2a1.9 Denominator Exclusion Details (*All information required to identify and calculate exclusions from*

the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses):

N/A

2a1.10 Stratification Details/Variables *(All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses):*

N/A

2a1.11 Risk Adjustment Type *(Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13):* [No risk adjustment or risk stratification](#) **2a1.12 If "Other," please describe:**

2a1.13 Statistical Risk Model and Variables *(Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.):*

N/A

2a1.14-16 Detailed Risk Model Available at Web page URL (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed:

2a1.17-18. Type of Score:

2a1.19 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):*

2a1.20 Calculation Algorithm/Measure Logic *(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; aggregating data; risk adjustment; etc.):*

N/A

2a1.21-23 Calculation Algorithm/Measure Logic Diagram URL or attachment:

2a1.24 Sampling (Survey) Methodology. If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):

2a1.25 Data Source *(Check all the sources for which the measure is specified and tested).* If other, please describe:

[Administrative claims](#), [Electronic Clinical Data : Electronic Health Record](#), [Electronic Clinical Data : Registry](#)

2a1.26 Data Source/Data Collection Instrument *(Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.):* [AAN NeuroPI clinical modules are designed to help neurologists meet the American Board of Psychiatry and Neurology \(ABPN\) Part 4 performance in practice requirement for Maintenance of Certification \(MOC\). There is a Parkinson disease module that includes this quality measure.](#)

National Parkinson Foundation Registry
CECity PQRI Wizard
Physician Quality Reporting System (2012) program measure

2a1.27-29 Data Source/data Collection Instrument Reference Web Page URL or Attachment: [URL
http://www.aan.com/practice/pip/](http://www.aan.com/practice/pip/)

2a1.30-32 Data Dictionary/Code Table Web Page URL or Attachment:
[URL
http://www.aan.com/go/practice/quality/measurements](http://www.aan.com/go/practice/quality/measurements)

2a1.33 Level of Analysis (Check the levels of analysis for which the measure is specified and tested):
[Clinician : Individual](#)

2a1.34-35 Care Setting (Check all the settings for which the measure is specified and tested): [Ambulatory Care : Clinician Office/Clinic, Post Acute/Long Term Care Facility : Nursing Home/Skilled Nursing Facility](#)

2a2. Reliability Testing. (Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability.)

2a2.1 Data/Sample (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):
[N/A](#)

2a2.2 Analytic Method (Describe method of reliability testing & rationale):
[N/A](#)

2a2.3 Testing Results (Reliability statistics, assessment of adequacy in the context of norms for the test conducted):
[N/A](#)

2b. VALIDITY. Validity, Testing, including all Threats to Validity: **H● M● L● I●**

2b1.1 Describe how the measure specifications (measure focus, target population, and exclusions) **are consistent with the evidence cited in support of the measure focus (criterion 1c) and identify any differences from the evidence:**
[N/A](#)

2b2. Validity Testing. (Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.)

2b2.1 Data/Sample (Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):
[N/A](#)

2b2.2 Analytic Method (Describe method of validity testing and rationale; if face validity, describe systematic assessment):
[N/A](#)

2b2.3 Testing Results (Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment):
[N/A](#)

POTENTIAL THREATS TO VALIDITY. (All potential threats to validity were appropriately tested with

adequate results.)
2b3. Measure Exclusions. (<i>Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.</i>)
2b3.1 Data/Sample for analysis of exclusions (<i>Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included</i>): No exclusions
2b3.2 Analytic Method (<i>Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference</i>): N/A
2b3.3 Results (<i>Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses</i>): N/A
2b4. Risk Adjustment Strategy. (<i>For outcome measures, adjustment for differences in case mix (severity) across measured entities was appropriately tested with adequate results.</i>)
2b4.1 Data/Sample (<i>Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included</i>): N/A
2b4.2 Analytic Method (<i>Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables</i>): N/A
2b4.3 Testing Results (<i>Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata</i>): N/A
2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment: N/A
2b5. Identification of Meaningful Differences in Performance. (<i>The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.</i>)
2b5.1 Data/Sample (<i>Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included</i>): N/A
2b5.2 Analytic Method (<i>Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance</i>): N/A
2b5.3 Results (<i>Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance</i>): N/A
2b6. Comparability of Multiple Data Sources/Methods. (<i>If specified for more than one data source, the various approaches result in comparable scores.</i>)

2b6.1 Data/Sample (Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

N/A

2b6.2 Analytic Method (Describe methods and rationale for testing comparability of scores produced by the different data sources specified in the measure):

N/A

2b6.3 Testing Results (Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted):

N/A

2c. Disparities in Care: H ☐ M ☐ L ☐ I ☐ NA ☐ (If applicable, the measure specifications allow identification of disparities.)

2c.1 If measure is stratified for disparities, provide stratified results (Scores by stratified categories/cohorts): N/A

2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:

N/A

2.1-2.3 Supplemental Testing Methodology Information:

Steering Committee: Overall, was the criterion, *Scientific Acceptability of Measure Properties*, met? (Reliability and Validity must be rated moderate or high) Yes ☐ No ☐
Provide rationale based on specific subcriteria:

If the Committee votes No, STOP

3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (**evaluation criteria**)

C.1 Intended Actual/Planned Use (Check all the planned uses for which the measure is intended):

Payment Program, Professional Certification or Recognition Program, Public Reporting, Quality Improvement (Internal to the specific organization), Regulatory and Accreditation Programs

3.1 Current Use (Check all that apply; for any that are checked, provide the specific program information in the following questions): Public Reporting, Payment Program, Professional Certification or Recognition Program, Regulatory and Accreditation Programs, Quality Improvement (Internal to the specific organization)

3a. Usefulness for Public Reporting: H ☐ M ☐ L ☐ I ☐

(The measure is meaningful, understandable and useful for public reporting.)

3a.1. Use in Public Reporting - disclosure of performance results to the public at large (If used in a public reporting program, provide name of program(s), locations, Web page URL(s)). If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: **[For Maintenance**

– If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.]

All of six Parkinson's disease measures are currently in use in the 2012 Physician Quality Reporting System program. They have also been implemented in the CE City Registry, a CMS qualified registry for PQRS, so that physicians can complete the registry and individual claims based measures. In addition, these measures were used as the basis for the American Academy of Neurology's Maintenance of Certification Performance in Practice (NeuroPI) Parkinson's disease Modules. Although we do not have specific data to identify which physicians are using these measures, we do know that many AAN members have told the AAN that they are aware of these measures and are using them in their practices.

3a.2. Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting. If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results: The AAN has not yet received any data from CMS regarding the usefulness of the measures in the PQRS program as the measures were only implemented as part of the program in 2012.

3.2 Use for other Accountability Functions (payment, certification, accreditation). If used in a public accountability program, provide name of program(s), locations, Web page URL(s): [NeuroPI](http://www.aan.com/practice/pip/)
<http://www.aan.com/practice/pip/>

Feasibility

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement.

3b. Usefulness for Quality Improvement: H ☐ M ☐ L ☐ I ☐

(The measure is meaningful, understandable and useful for quality improvement.)

3b.1. Use in QI. If used in quality improvement program, provide name of program(s), locations, Web page URL(s):

[For Maintenance – If not used for QI, indicate the reasons and describe progress toward using performance results for improvement].

NeuroPI <http://www.aan.com/practice/pip/>

There are currently 119 individuals participating in the AAN's NeuroPI module on Parkinson's disease.

3b.2. Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement. If usefulness was demonstrated (e.g., QI initiative), describe the data, method and results:

Due to the amount of time it takes to complete a Performance in Practice module the AAN does not yet have data from those participating using the Parkinson's disease measures. We expect to have additional data no later than January 2014, the end of the temporary endorsement period for this measure.

Overall, to what extent was the criterion, Usability, met? H ☐ M ☐ L ☐ I ☐

Provide rationale based on specific subcriteria:

4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (**evaluation criteria**)

4a. Data Generated as a Byproduct of Care Processes: H ☐ M ☐ L ☐ I ☐

4a.1-2 How are the data elements needed to compute measure scores generated? (Check all that apply).

Data used in the measure are:

generated by and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value,

See Guidance for Definitions of Rating Scale: H=High; M=Moderate; L=Low; I=Insufficient; NA=Not Applicable

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medical condition, Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

4b. Electronic Sources: H ☐ M ☐ L ☐ I ☐

4b.1 Are the data elements needed for the measure as specified available electronically (*Elements that are needed to compute measure scores are in defined, computer-readable fields*): Some data elements are in electronic sources

4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources: Currently, this measure has been specified for administrative claims. The AAN has contracted with two separate consultants to learn the process to develop eSpecifications, code value sets, logic, and develop eMeasures. The training was complete as of 9/25/12 and the measures will be fully specified for eMeasures by December 2012..

4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: H ☐ M ☐ L ☐ I ☐

4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:

Testing has not begun yet but will be completed by January 2014. Strategies to prevent, minimize or detect unintended consequences will be identified during testing in 2013. Operational use of this measure has not identified any inaccuracies, errors or unintended consequences of measurement

4d. Data Collection Strategy/Implementation: H ☐ M ☐ L ☐ I ☐

A.2 Please check if either of the following apply (*regarding proprietary measures*):

4d.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues (e.g., fees for use of proprietary measures):

Testing has not begun yet but will be completed by January 2014. Operational use of this measure helped identify the need for a registry to simplify usage of measures (available via the CECity registry as of 8/2012). No other problems or issues have been identified.

Overall, to what extent was the criterion, *Feasibility*, met? H ☐ M ☐ L ☐ I ☐
Provide rationale based on specific subcriteria:

OVERALL SUITABILITY FOR ENDORSEMENT

Does the measure meet all the NQF criteria for endorsement? Yes ☐ No ☐

Rationale:

If the Committee votes No, STOP.

If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

5. COMPARISON TO RELATED AND 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 before a final recommendation is made.

5.1 If there are related measures (either same measure focus or target population) or competing measures (both the same measure focus and same target population), list the NQF # and title of all related and/or competing measures:

5a. Harmonization

5a.1 If this measure has EITHER the same measure focus OR the same target population as [NQF-endorsed measure\(s\)](#): Are the measure specifications completely harmonized?

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

5b. Competing Measure(s)

5b.1 If this measure has 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):

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner): [American Academy of Neurology, 201 Chicago Avenue, Minneapolis, Minnesota, 55415](#)

Co.2 Point of Contact: [Amy, Bennett, abennett@aan.com, 612-928-6072-](#)

Co.3 Measure Developer if different from Measure Steward: [American Academy of Neurology, 201 Chicago Avenue, Minneapolis, Minnesota, 55415](#)

Co.4 Point of Contact: [Amy, Bennett, abennett@aan.com, 612-928-6072-](#)

Co.5 Submitter: [Amy, Bennett, abennett@aan.com, 612-928-6072-, American Academy of Neurology](#)

Co.6 Additional organizations that sponsored/participated in measure development:

[American Parkinson's Disease Association](#)
[National Parkinson Foundation](#)
[Parkinson's Disease Foundation](#)
[American Academy of Family Physicians](#)
[American Association of Neurosurgeons/Congress of Neurological Surgeons](#)
[American Neurological Association](#)
[American Psychological Association](#)
[American Psychiatric Association](#)
[Movement Disorder Society](#)
[National Academy of Neuropsychology](#)
[Aetna Inc.](#)
[Anthem Blue Cross and Blue Shield](#)
[Humana Inc.](#)
[UnitedHealth Group Inc.](#)

Co.7 Public Contact: [Rebecca, Swain-Eng, MS, rswaineng@aan.com, 612-928-6121-, American](#)

Academy of Neurology

ADDITIONAL INFORMATION

Workgroup/Expert Panel involved in measure development

Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

William Weiner, MD (Co-Chair, American Academy of Neurology)
 Stewart Factor, MD (Co-Chair, American Academy of Neurology)
 Christopher Bever Jr., MD, MBA (Expert Panel Facilitator, American Academy of Neurology)
 Eric Cheng, MD (Expert Panel Facilitator, American Academy of Neurology)
 Michele Popadynec, RN (Panel Member, American Parkinson's Disease Foundation)
 Joyce Oberdorf, MA (Panel Member, National Parkinson Foundation)
 Jim Beck, PhD (Panel Member, Parkinson's Disease Foundation)
 H. James Brownlee Jr., MD (Panel Member, American Academy of Family Physicians)
 Lisa Shulman, MD (Panel Member, American Academy of Neurology)
 Sotirios A. Parashos, MD, PhD (Panel Member, American Academy of Neurology)
 Helen Bronte-Stewart, MD (Panel Member, American Academy of Neurology)
 Janis Miyasaki, MD (Panel Member, American Academy of Neurology)
 Marian Evatt, MD (Panel Member, American Academy of Neurology)
 Karl Sillay, MD (Panel Member, American Association of Neurological Surgeons/Congress of Neurological Surgeons)
 Blair Ford, MD (Panel Member, American Neurological Association)
 Paul Moberg, PhD, ABPP/CN (Panel Member, American Psychological Association)
 Laura Marsh, MD (Panel Member, American Psychiatric Association)
 Daniel Tarsy, MD (Panel Member, Movement Disorder Society)
 Alexander Troster, PhD (Panel Member, National Academy of Neuropsychology)
 Marc R. Nuwer, MD, PhD (Panel Member, American Academy of Neurology Coding Specialist)
 Mustafa Saad Siddiqui, MD (Panel Member, American Academy of Neurology Coding Specialist)
 Robert M. Kropp, MD, MBA (Panel Member, Aetna, Inc.)
 Wesley B. Wong, MD, MMM (Panel Member, Anthem Blue Cross and Blue Shield)
 Monte Masten, MD (Panel Member, Humana, Inc.)
 David Stumpf, MD (Panel Member, UnitedHealth Group, Inc.)
 Rebecca Kresowik (Panel Member, Methodologist)
 Rebecca Swain-Eng, MS (American Academy of Neurology Staff)
 Sarah Tonn, MPH (American Academy of Neurology Staff)

Ad.2 If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward: N/A

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.3 Year the measure was first released: 2010

Ad.4 Month and Year of most recent revision: 11, 2010

Ad.5 What is your frequency for review/update of this measure? Every 3 years

Ad.6 When is the next scheduled review/update for this measure? 01, 2013

Ad.7 Copyright statement: ©2009 American Academy of Neurology. All rights reserved. AAN BOD approved 12.21.09.

Ad.8 Disclaimers: Physician Performance Measures (measures) and related data specifications developed by the American Academy of Neurology (AAN) are intended to facilitate quality improvement activities by physicians.

These measures are intended to assist physicians in enhancing quality of care. Measures are designed for use by any physician who manages the care of a patient for a specific condition or for prevention. These measures are not clinical guidelines and do not establish a standard of medical care, and have not been tested for all potential applications.

Measures are subject to review and may be revised or rescinded at any time by the AAN. The measures may not be altered without prior written approval from the AAN. The measures, while copyrighted, can be reproduced and distributed, without modification, for noncommercial purposes (e.g. use by health care providers in connection with their practices). Commercial use is defined as the sale, license, or distribution of the measures for commercial gain, or incorporation of the measures into a product or service that is sold, licensed, or distributed for commercial gain. Commercial uses of the measures require a license agreement between the user and the AAN. Neither the AAN nor its members shall be responsible for any use of the measures.

Ad.9 Additional Information/Comments:

Date of Submission (MM/DD/YY): 07/13/2012