Universal Neurology

Quality Measurement Set

Approved by the All Neurology Quality Measurement Work Group on April 9, 2018. Approved by the AAN Quality and Safety Subcommittee on April 16, 2018. Approved by the AAN Practice Committee on April 25, 2018. Approved by the American Academy of Neurology Institute Board of Directors on June 7, 2018.

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Table of Contents

Work Group Participants

Wayne Anderson, MD, FAAN (Chair)

Jeffrey Buchhalter, MD, PhD, FAAN

Rohit Das, MD, FAAN

Richard Dubinsky, MD, FAAN, MPH (Chair)

Justin Martello, MD (Facilitator)

Staff

Amy Bennett, JD

Gina Gjorvad

Katie Hentges

Erin Lee

Karen Lundgren, MBA

Becky Schierman, MPH

Importance and Purpose of Measures

In 2016, the American Academy of Neurology formed the All Neurology Work Group to review existing guidelines, current evidence, and gaps in care in order to develop a measurement set for all neurologists that promotes quality improvement and drives better outcomes for neurologically-ill patients.

The AAN develops quality measures based on the belief that specialists should play a leading role in selecting and creating measures that will drive performance improvement and possibly be used in accountability programs in the future. All members of the Work Group were required to disclose financial relationships with industry and other entities to avoid actual, potential, or perceived conflicts of interest.

No one measurement set is able to capture all the aspects of care needed for the diverse patients that are cared for by neurology providers. This measurement set is focused on measuring the quality of care that is universal across all conditions and does not address the whole scope of neurological conditions.

Neurologists care for a wide range of conditions that range from the simple to very complex. This measure set focuses on concepts that are universal to the majority of patients with neurological conditions. Included are concepts on falls, maltreatment, back pain, imaging, medication reconciliation, pain, advance care planning, and driving risks.

Many neurologists are asked by their health plans and other agencies to assess various health components at each encounter. Many neurologists have informed the American Academy of Neurology that the common quality measures do not apply to general neurology. Therefore, the AAN has developed some optional quality measures that may better reflect the practice of general neurology. This allows members to choose—if they so wish—different quality measures. The AAN recognizes concerns about the burden of quality measures. The AAN understands and appreciates the concerns of members and, noting the absence of many relevant neurology-related measure choices, developed these additional quality measures, providing greater clinician choice. They are optional and the AAN does not mandate their use.

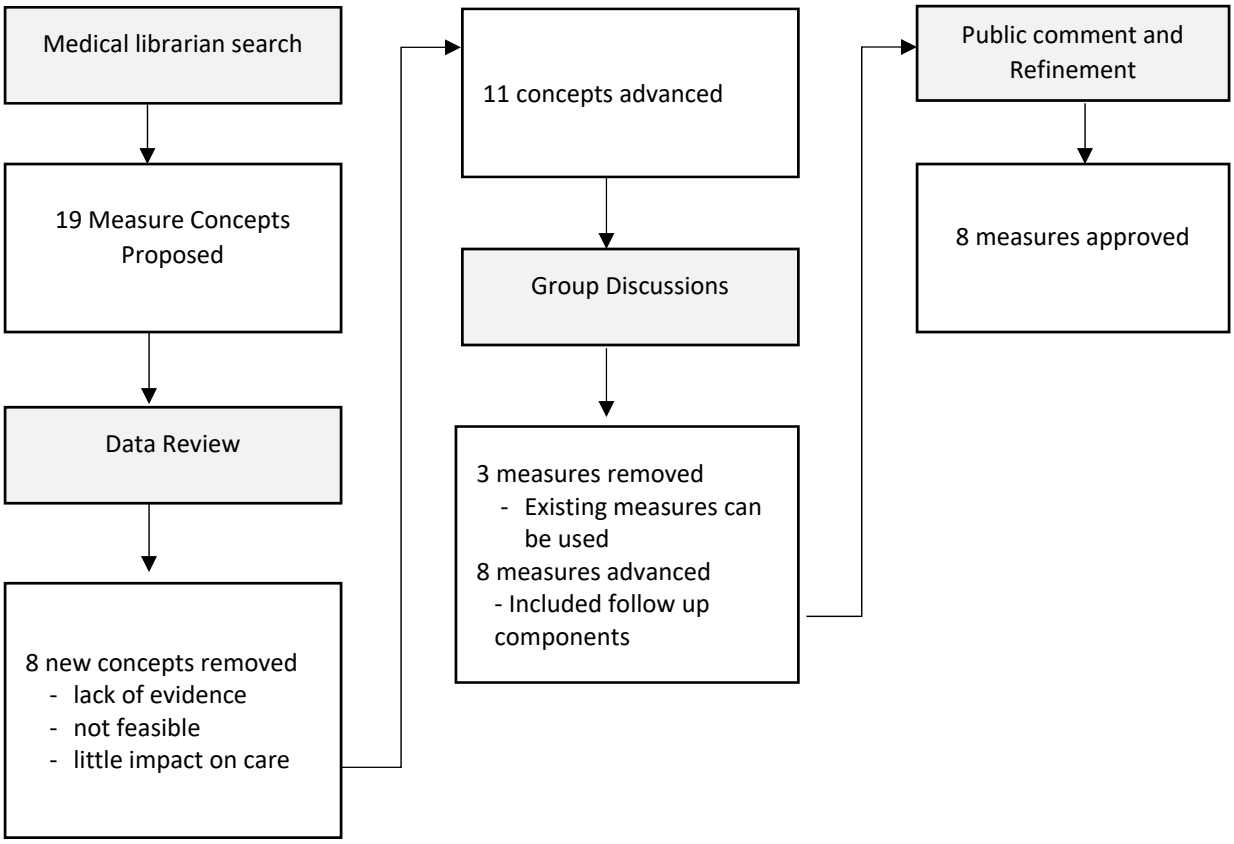
The AAN has developed additional measures that may be of interest to clinicians and teams treating patients with neurological disorders. All AAN measures are available for free at: https://www.aan.com/policy-and-guidelines/quality/quality-measures2/quality-measures/

Measure Development Process

The Quality and Safety Subcommittee (QSS) approved a new measure set concept around measures that are universal to every neurologist. The QSS commissioned a work group comprised of members of AAN committees. A facilitator from QSS was appointed to oversee the methodology. This work group was tasked with reviewing literature and using that evidence to modify existing measures to account for the younger age of patients with neurologic conditions. A series of virtual meetings was held to discuss and refine the measure concepts. The Work Group voted to approve or not approve each proposed measure.

Following the virtual meetings, measures were further refined and posted for public comment. The Work Group reviewed and responded to all of the public comments and refined the measures when feasible, and additional evidence was requested from respondents based upon their suggestions when not feasible. After the measures have been finalized, the Work Group votes to approve or not approve the whole measurement set. If approved by the Work Group, AAN staff facilitate internal AAN approvals. The Work Group drafts a manuscript which is an executive summary of the measurement set that is submitted for potential publication in *Neurology*. AAN measures undergo a maintenance review every three years.

Below is an illustration of the measure development process from proposals, discussion, research, evaluation, to approval.



2018 Universal Neurology Measurement Set

Falls Outcome and Plan of Care
Activity Counseling for Back Pain
Maltreatment Screening and Action
Overuse of Imaging for the Evaluation of Primary Headache
Medication Reconciliation
Pain Assessment and Follow-up
Advance Care Planning
Driving Risk Discussion and Referral

Other Potential Measures

The measures developed are a result of a consensus process. Work Group members are given an opportunity to submit new measures in advance of virtual meetings where all measures are reviewed and edited individually. The Work Group felt the following concepts were not ready for development at this time due to lack of strong evidence in a neurology population, difficulty locating data elements needed for measurement, or lack of known gaps in treatment. The Work Group recommends these concepts be revisited when this measurement set is updated in 3 years.

- Medication interactions/adverse events
- Time to return to activity/work/school
- Cognitive impairment screening
- Mild Cognitive Impairment/dementia screening
- Childbearing safety issues for headache medications
- Referral to specialty center or movement disorders specialist for Parkinson's Disease
- Neurology-specific exercise counseling
- Quality of Life

In addition to the measures created in this measurement set, the Work Group strongly suggests the use of these three additional measures. Neurology measures were not created for these topics as they are cross cutting and applicable to neurology patients as is.

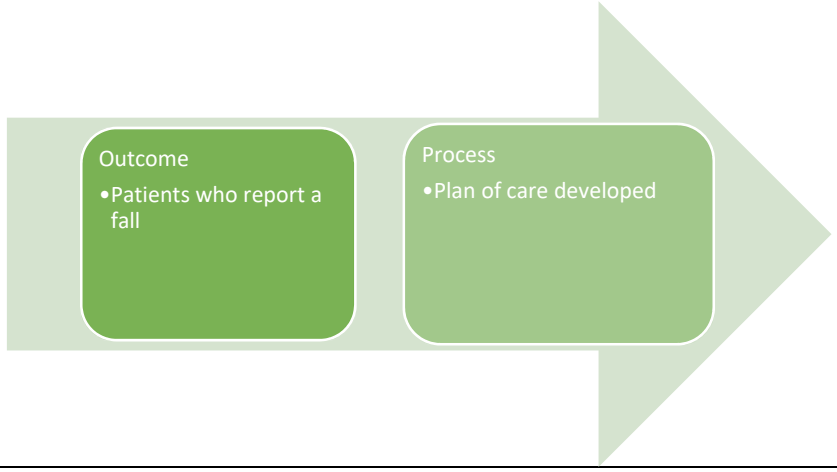
- Preventive Care and Screening: Screening for Clinical Depression and Follow-up Plan http://www.qualityforum.org/QPS/0418
- Closing the Referral Loop: Receipt of Specialist Report https://ecqi.healthit.gov/ecqm/measures/cms050v3
- Physical Activity in Older Adults http://www.qualityforum.org/QPS/0029

The AAN has developed additional measures that may be of interest to clinicians and teams treating patients with neurological disorders. All AAN measures are available for free at: https://www.aan.com/policy-and-guidelines/quality/quality-measures2/quality-measures/

Measure Harmonization

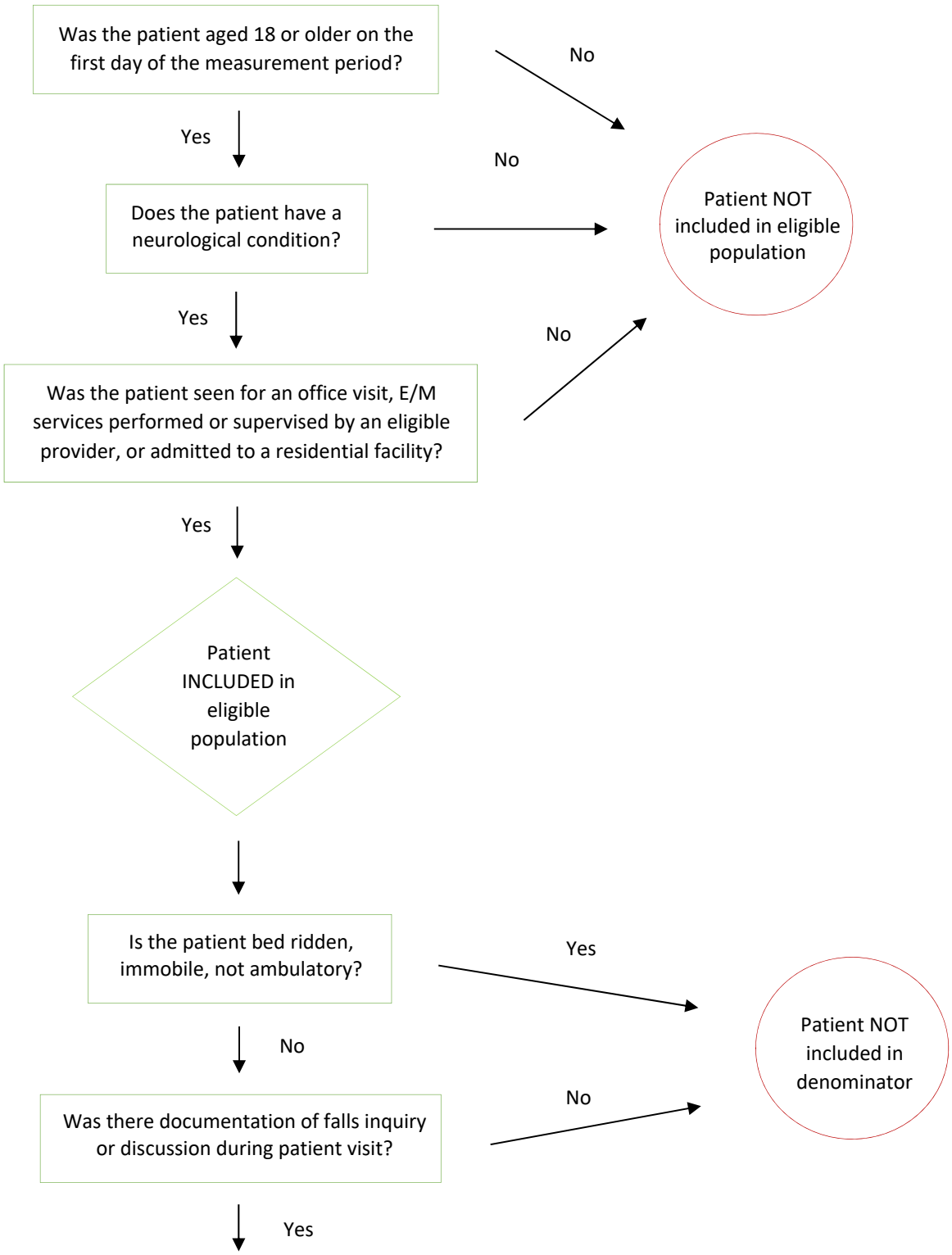
The Work Group reviewed existing measures on the topics included in this measurement set and used many as the basis for the measures. The AAN advocates for reducing duplicative measures when possible. However, many measures used in national accountability programs do not account for the younger age associated with patients who have neurologic conditions. Modifications are needed to account for the whole patient population that neurologists are responsible for. Details of these measures are incorporated into the specifications below

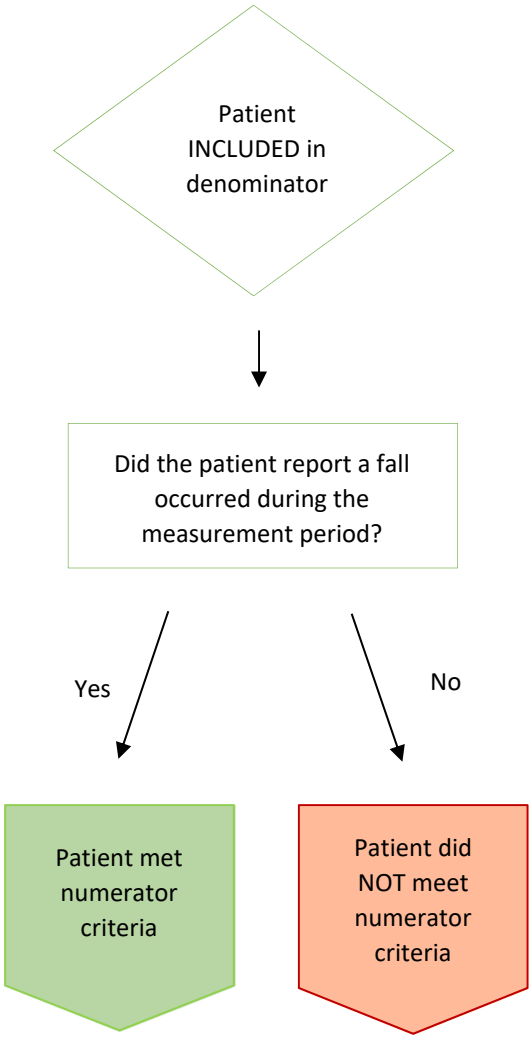
Measure Title	Falls outcome and plan of care	
Description	Percentage of patients that reported a fall during the measurement period and had a plan of care documented	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	**Eligible Providers**	Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN)
	Care Setting(s)	Outpatient, Residential (SNF, home care)
	Ages	All patients
	Event	Patient had an office visit, E/M services performed or supervised by an eligible provider, admitted to a residential facility.
	Diagnosis	A neurological condition
Denominator	A. Patients aged 18 and older with a neurological condition	
	B. Patients aged 18 and older with a neurological condition that reported a fall during the measurement period	
Numerator	A. Patients who report a fall* occurred during the measurement period *Fall: A sudden, unintentional change in position causing an individual to land at a lower level, on an object, the floor, or the ground, other than as a consequence of sudden onset of paralysis, epileptic seizure, overwhelming external force, or overwhelming environmental hazards To perform well on this measure, we suggest using key phrases: no fall or trauma, denies any falls, [number] + falls since last visit	
	B. Patients with a plan of care* for falls documented (including plans created by another provider) in the measurement period. *Plan of care must include consideration of balance, strength, and gait training OR a referral to physical therapy. To perform well on this measure, we suggest using key phrases: • balance, strength, gait training; • falls plan of care that includes education on balance, and strength, and gait training; • referral to physical therapy	
Required Exclusions	None	
Allowable Exclusions	A. • Patient is bed ridden, immobile, not ambulatory • No documentation of falls inquiry or discussion during patient visit B. • Patient is bed ridden, immobile, not ambulatory • No documentation of falls inquiry or discussion during patient visit	
Exclusion Rationale	Patients who are not mobile are not at risk of falling. A patient does not need to be asked about falls if they are nonambulatory. A visit where a procedure is performed is typically preceded by an office visit where falls would be discussed. A patient should be excluded if they were not asked about falls.	
Measure Scoring	Percentage	
Interpretation of Score	A. Lower Score Indicates Better Quality B. Higher Score Indicates Better Quality	

Measure Type	A. Outcome B. Process
Level of Measurement	Provider, Practice
Risk Adjustment	*See Appendix A AAN Statement on Comparing Outcomes of Patients* *This outcome measure is being made available in advance of development of a risk adjustment strategy. The work group identified the following potential data elements that may be used in a risk adjustment methodology for this measure:* • Comorbidities
For Process Measures Relationship to Desired Outcome	
Opportunity to Improve Gap in Care	In people aged 65 years and older, falls are one of the leading causes of death[1]. However, patients with neurological conditions are often younger and are at an increased risk of falling due to their disease symptomology. 127,457,106 non-fatal falls were recorded from 2001 to 2015[2]. For those that were hospitalized due to the fall, the cost is approximately $39,000 per patient[2]. There is evidence that vitamin D supplementation may play a role in preventing falls or preventing fractures. However, there is not enough evidence to support it for all neurological patients at this time.
Harmonization with Existing Measures	This is a variation of the NCQA measure (NQF# 0101). A separate measure is needed to capture the wider age range of neurology patients that often experience falls earlier in life due to their decreased motor function. The AAN has talked with NCQA about adjusting the denominator of their measure to capture the younger neurology population. This was not possible as treatment plans for those over 65 compared vary from the treatment plan for those younger. As such, a separate measure is necessary.
References	1. National Committee for Quality Assurance (NCQA) http://www.ncqa.org/report-cards/health-plans/state-of-health-care-quality/2016-table-of-contents/fall-risk 2. Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available at: http://www.cdc.gov/ncipc/wisqars/ Supporting evidence:

	• The American Geriatrics Society. AGS Clinical Practice Guideline: Prevention of Falls in Older Persons (2010). • The U.S. Preventive Services Task Force. Prevention of Falls in Community Dwelling Adults. May 2012. Accessed 2/27/2015. http://www.uspreventiveservicestaskforce.org/uspstf/uspsfalls.htm • National Center for Injury Prevention and Control. 2008. "Preventing Falls: How to Develop Community-based Fall Prevention Programs for Older Adults." Atlanta, GA: Center for Disease Control and Prevention. • National Council on Aging. 2012. "Fall Prevention: Fact Sheet." https://www.ncoa.org/wp-content/uploads/Fact-Sheet_Falls-Prevention.pdf • Saverino A, Moriarty A, Playford D. The risk of falling in young adults with neurological conditions: a systematic review. Disability and Rehabilitation 2014; 36:963-977. • Matsuda PN, Verall A, Finlayson M, et al. Falls among adults aging with disability. Archives of Physical Medicine and Rehabilitation 2015; 96:464-71. • Thurman D, Steven J, Rao J. Practice Parameter: Assessing patients in a neurology practice for risk of falls (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2008; 70:473-479.

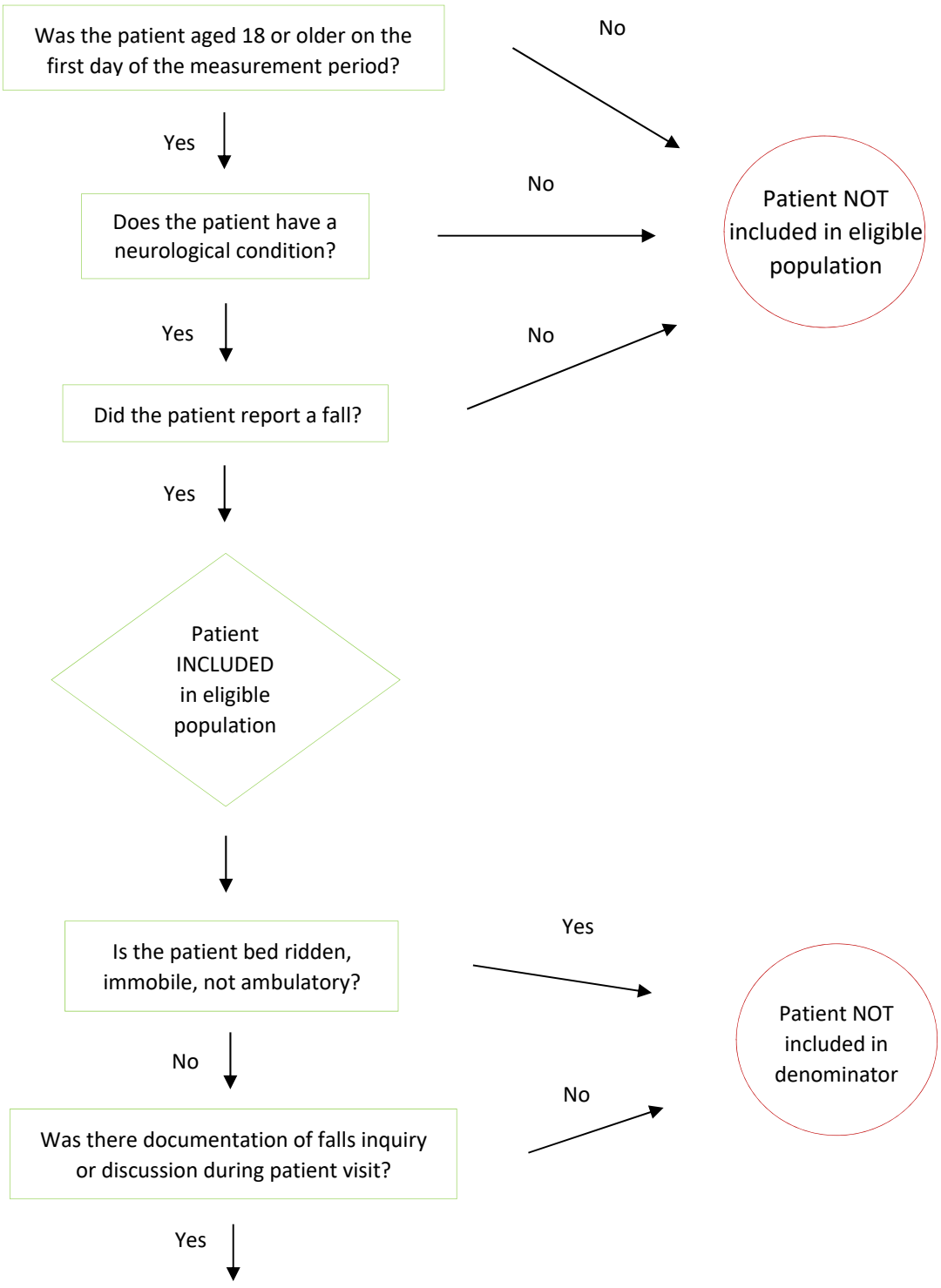
Flow Chart Diagram – Measure A

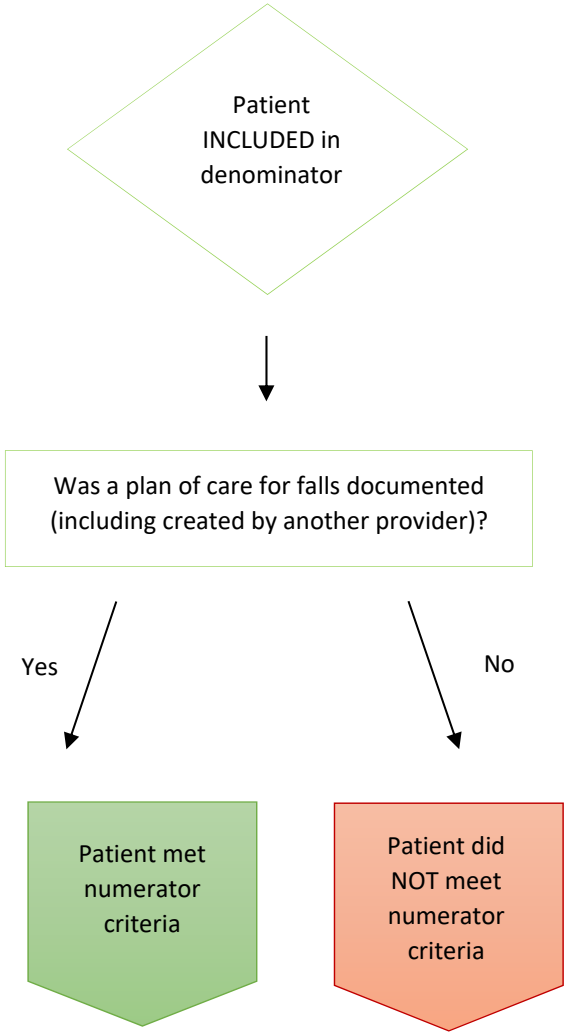




A lower score is better for this measure

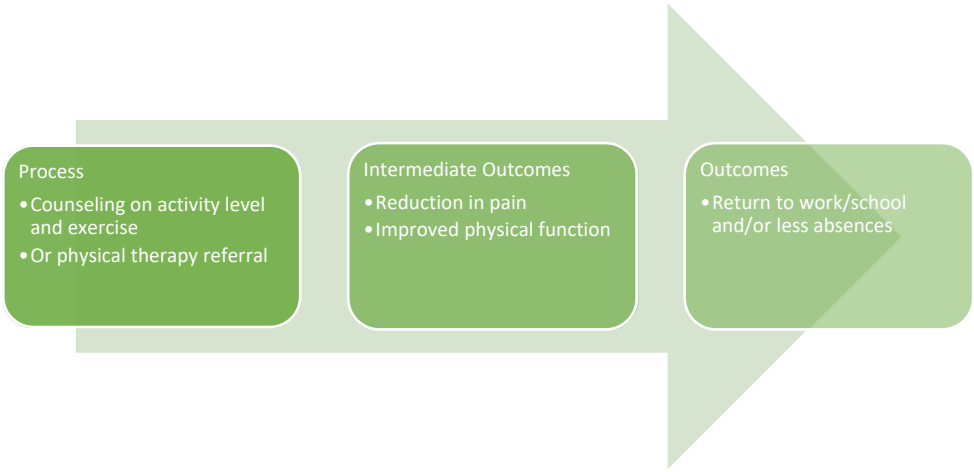
Flow Chart Diagram – Measure B





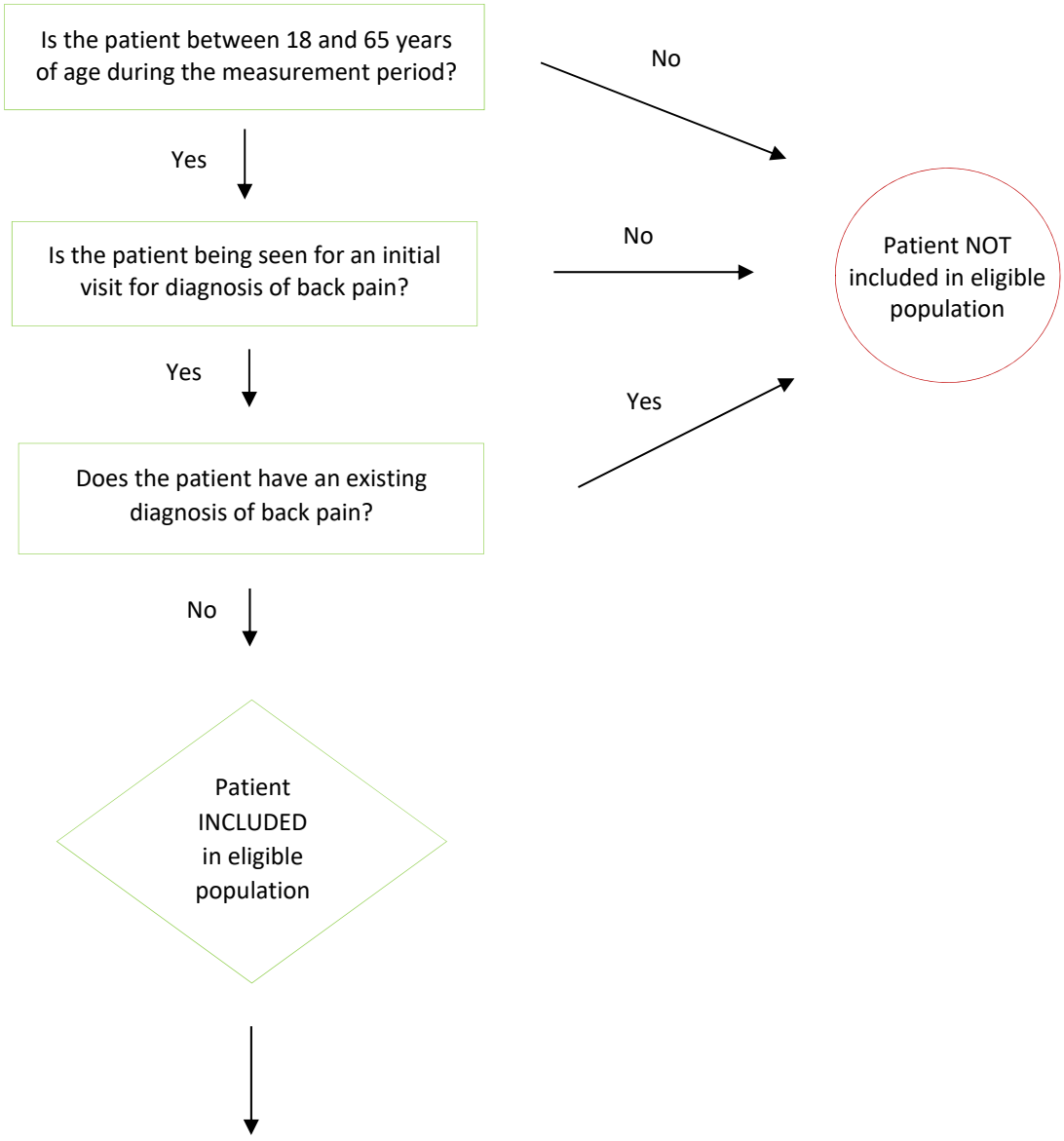
Code System	Code	Code Description
ICD-10-CM	G00-G99	Diseases of the nervous system
ICD-10-CM	I61.9	Nontraumatic intracerebral hemorrhage, unspecified
ICD-10-CM	I63.9	Cerebral infarction, unspecified
ICD-10-CM	S06.6	Traumatic subarachnoid hemorrhage
ICD-10-CM	I69	Sequelae of cerebrovascular disease
ICD-10-CM	H81	Disorders of vestibular function
ICD-10-CM	H82	Vertiginous syndromes in diseases classified elsewhere
ICD-10-CM	H83	Other diseases of inner ear
ICD-10-CM	R42	Dizziness and giddiness
ICD-10-CM	C70	Malignant neoplasm of meninges
ICD-10-CM	C71	Malignant neoplasm of brain
ICD-10-CM	F06.8	Other specified mental disorders due to known physiological condition
ICD-10-CM	R41.81	Age-related cognitive decline
ICD-10-CM	R51	Headache
ICD-10-CM	Z91.81	History of falling
ICD-10-CM	R29.6	Repeated falls
CPT	99201-99205	Office or other outpatient visit – New patient (E/M codes)
CPT	99211-99215	Office or other outpatient visit – Established patient (E/M codes)
CPT	99241-99245	Office or other outpatient consultation – New or established patient
CPT	99304-99310	Nursing Home Consultation
CPT	99318	Other Nursing Facility Service
CPT	99324-99328; 99334-99337	Domiciliary, Rest Home Care Services
CPT	99339-99340	Domiciliary, Rest Home Care Services Care Plan Oversight
CPT	99341-99345	Home Care
CPT	99347-99350	Home Care

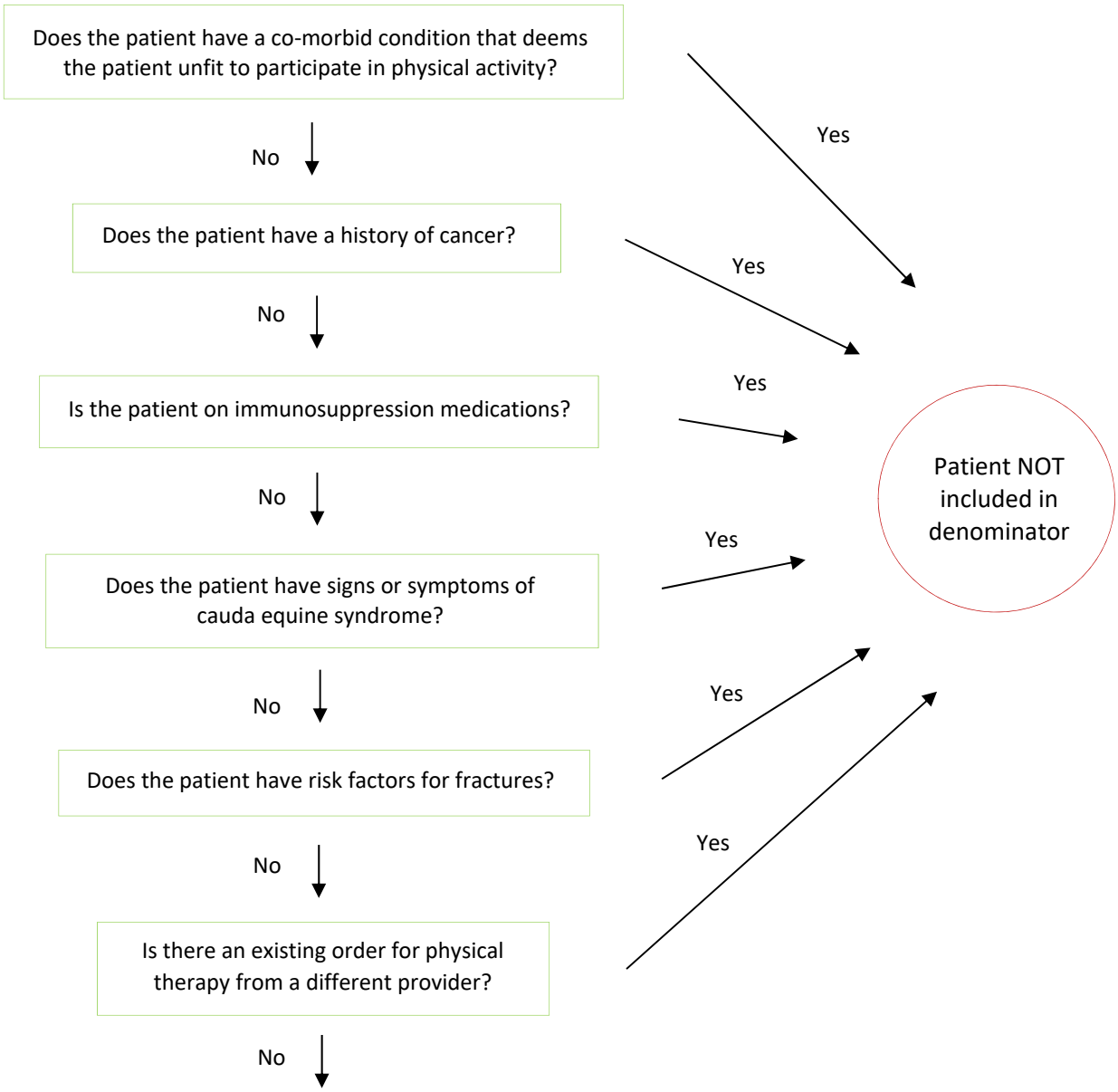
Measure Title	Activity counseling for back pain	
Description	Percentage of patients 18 to 65 years of age who were counseled to remain active and exercise or were referred to physical therapy	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	**Eligible Providers**	Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN)
	Care Setting(s)	Outpatient, Inpatient, ED or Urgent Care, Residential (SNF, home care)
	Ages	Patients aged 18 to 65 years of age
	Event	Patient had an office visit, E/M services performed or supervised by an eligible provider, admitted to an inpatient or residential facility, seen for consultation in the ED or urgent care.
	Diagnosis	Back pain
Denominator	Patients aged 18 to 65 years of age seen for an initial visit for diagnosis of back pain	
Numerator	Patients who were counseled* to remain active and exercise OR were referred to physical therapy^ at initial visit for diagnosis of back pain *Counseling: advise on the maintenance or resumption of activities AND education on the importance of an active lifestyle and exercise. ^Documentation that physical therapy was recommended To perform well on this measure, we suggest using key phrases: exercise education, exercise counseling, activity counseling, return to regular activity as soon as possible, resumption of activity, referral to physical therapy	
Required Exclusions	Patients with existing diagnosis of back pain.	
Allowable Exclusions	• Co-morbid condition that deems the patient unfit to participate in physical activity • Patient has a history of cancer • Patient is on immunosuppression medications • Patient has signs or symptoms of cauda equina syndrome • Patient has risk factors for fractures • Existing order for physical therapy from different provider	
Exclusion Rationale	Several medical conditions indicated above would exclude a patient as they require a more conservative approach to management of back pain.	
Measure Scoring	Percentage	
Interpretation of Score	Higher Score Indicates Better Quality	
Measure Type	Process	
Level of Measurement	Provider, Practice, System Specifying at a system level so it's available when an outcome measure is developed.	
Risk Adjustment	N/A	

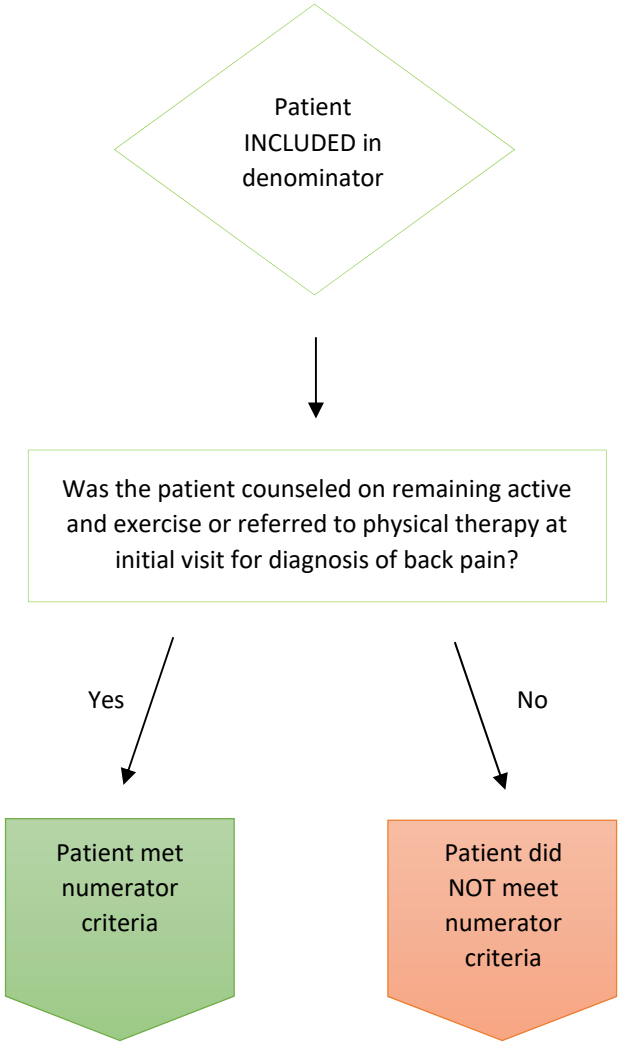
For Process Measures Relationship to Desired Outcome	
Opportunity to Improve Gap in Care	Back pain is a frequent cause of sick days for those in the work force[1]. In 1990 it was reported that low back pain was the fifth most common reason to see a physician[2]. A 2002 National Health Interview Survey indicated that one fourth of U.S. adults reported back pain in the last 3-month period[3]. A 2006 socioeconomic study showed total costs attributable to low back pain in the United States were estimated at $100 billion, two thirds of which were indirect costs of lost wages and productivity[4]. The Work Group debated how best to define counseling for this measure. Many studies recommended counseling patients on the use of heat and against the use of bed rest. After much discussion, these recommendations were removed as the intent of the measure is to remain active. Additionally, bed rest may be appropriate in some cases for a limited time span. The Work Group will reconsider these concepts in 3 years when the measures are updated.
Harmonization with Existing Measures	This is a variation of the ICSI measure on back pain. The modified measure was created to account for the role of neurologists in dealing with all types of back pain, not just low back and sciatica. https://qualitymeasures.ahrq.gov/summaries/summary/39391/adult-acute-and-subacute-low-back-pain-percentage-of-patients-who-were-advised-on-maintenance-or-resumption-of-activities-against-bed-rest-use-of-heat-education-on-importance-of-active-lifestyle-and-exercise-and-recommendation-to-take-antiinflammatory-or-analg?q=back+pain
References	1. Schaafsma FG, Whelan K, van der Beek AJ, et al. Physical conditioning as part of a return to work strategy to reduce sickness absence for workers with back pain. Cochrane Database of Systematic Reviews 2013, Issue 8. 2. Hart L, Deyo R, Cherkin D. Physician Office Visits for Low Back Pain: Frequency, Clinical Evaluation, and Treatment Patterns From a U.S. National Survey. Spine 1995; 20(1):11-9. 3. Deyo R, Mirza S. Back Pain Prevalence and Visit Rates: Estimates From U.S. National Surveys, 2002. Spine 2006; 31(23):2724-2727. 4. Qaseem A, Wilt TJ, McLean RM, Forciea MA, Clinical Guidelines Committee of the American College of Physicians. Noninvasive treatments for acute, subacute, and chronic low back pain: a clinical practice guideline from the American College of Physicians. Ann Intern Med. 2017 Apr 4;166(7):514-30.

	Supporting Evidence: • Chou R, Qaseem A, Snow V, et al. Diagnosis and treatment of low back pain: A joint clinical practice guideline from the American College of Physicians and the American Pain Society. Ann Internal Med 2007; 147:478-491. • National Guideline Centre. Low back pain and sciatica in over 16s: assessment and management. London (UK): National Institute for Health and Care Excellence (NICE); 2016 Nov 30. 18 p. (NICE guideline; no. 59). • Goertz M, Thorson D, Bonsell J, et al. Adult acute and subacute low back pain. Institute for Clinical Systems Improvement (ICSI); 2012 Nov.

Flow Chart Diagram

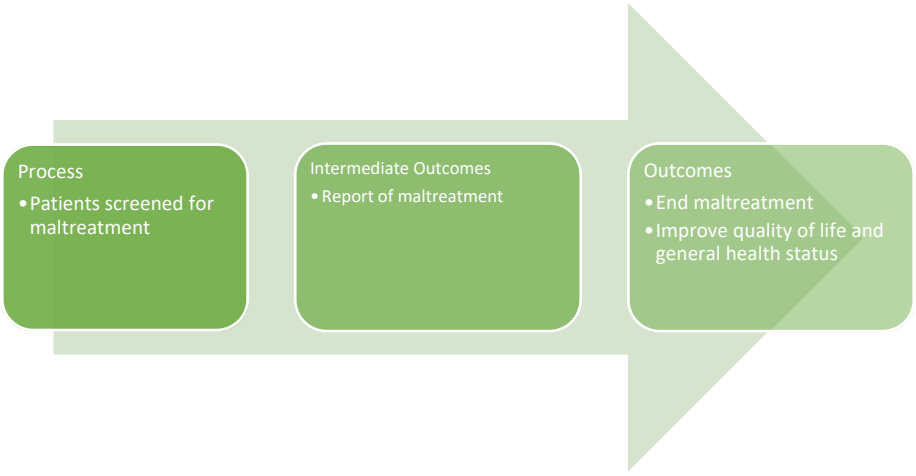






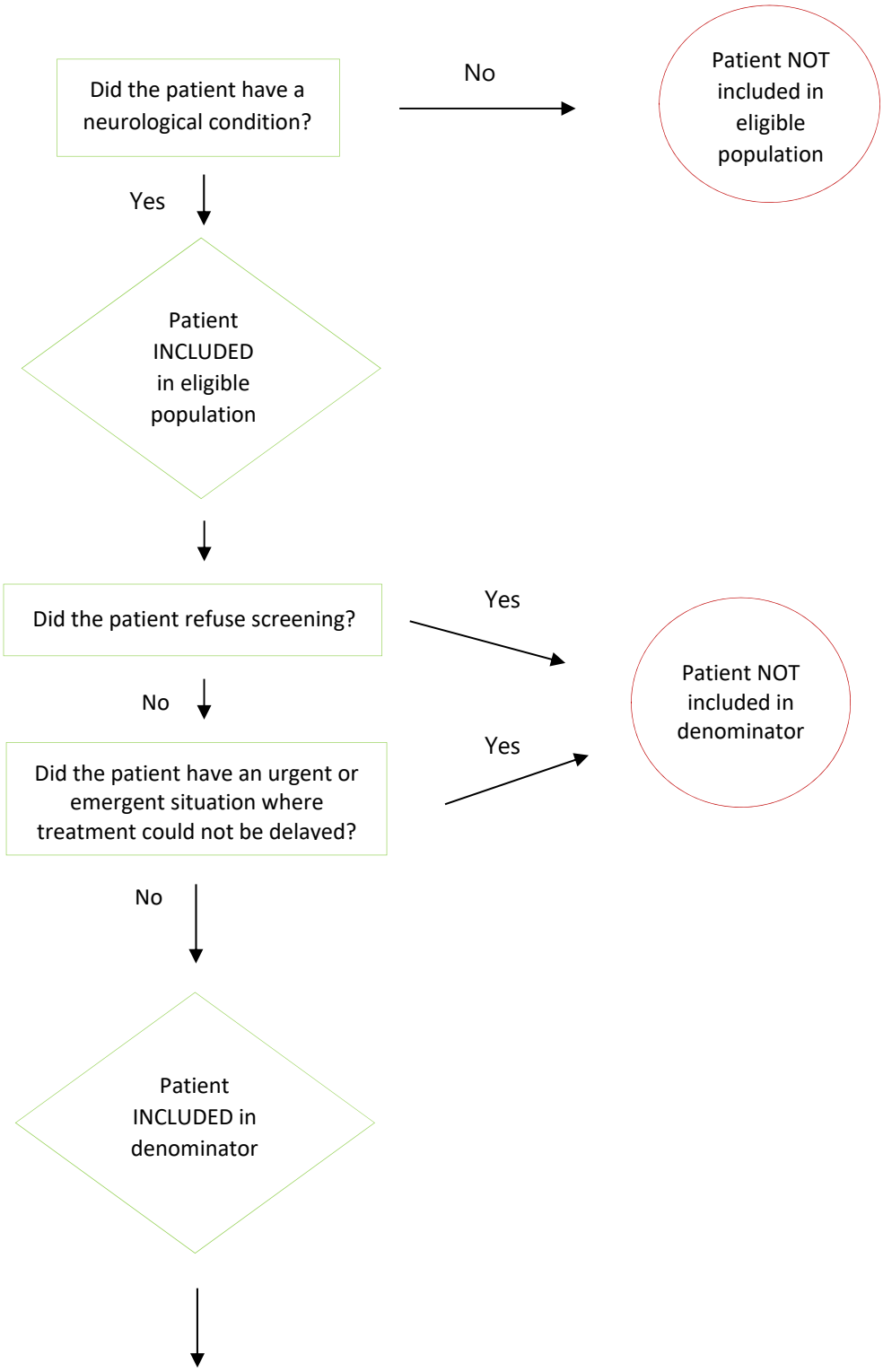
Code System	Code	Code Description
ICD-10-CM	M54	Dorsalgia
ICD-10-CM	M54.0	Panniculitis affecting regions of neck and back
ICD-10-CM	M54.1	Radiculopathy
ICD-10-CM	M54.2	Cervicalgia
ICD-10-CM	M54.3	Sciatica
ICD-10-CM	M54.4	Lumbago with sciatica
ICD-10-CM	M54.5	Low back pain
ICD-10-CM	M54.6	Pain in thoracic spine
ICD-10-CM	M54.8	Other dorsalgia
ICD-10-CM	M54.9	Dorsalgia, unspecified
CPT	99201-99205	Office or other outpatient visit – New patient (E/M codes)
CPT	99211-99215	Office or other outpatient visit – Established patient (E/M codes)
CPT	99241-99245	Office or other outpatient consultation – New or established patient
CPT	99304-99310	Nursing Home Consultation
CPT	99318	Other Nursing Facility Service
CPT	99324-99328; 99334-99337	Domiciliary, Rest Home Care Services
CPT	99339-99340	Domiciliary, Rest Home Care Services Care Plan Oversight
CPT	99341-99345	Home Care
CPT	99347-99350	Home Care
CPT	99221-99223	Initial hospital care 30, 50, or 70 minutes, per day, for the evaluation and management of a patient
CPT	99231-99233	Subsequent hospital care 15, 25, or 35 minutes, per day, for the evaluation and management of a patient
CPT	99291, 99292	Critical care, evaluation and management of the critically ill or critically injured patient; first 30-74 minutes, each additional 30 minutes

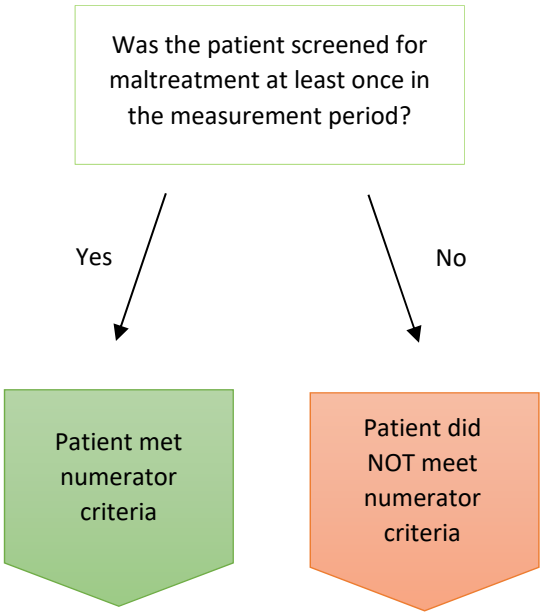
Measure Title	Maltreatment screening and action	
Description	Percentage of patients screened for maltreatment and if screening positive, follow-up action documented	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	**Eligible Providers**	Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN)
	Care Setting(s)	Outpatient, Inpatient, ED or Urgent Care, Residential (SNF, home care)
	Ages	All patients
	Event	Patient had an office visit, E/M services performed or supervised by an eligible provider, admitted to an inpatient or residential facility, seen for consultation in the ED or urgent care.
	Diagnosis	A neurological condition
Denominator	A. All patients with a neurological condition	
	B. All patients with a neurological condition that screened positive for maltreatment	
Numerator	A. Patients screened* for maltreatment at least once in the measurement period *Screening is a yes/no question: Do you feel safe in your home? If no, additional assessment and documentation of all of the following: • Physical abuse • Emotional or psychological abuse • Sexual abuse • Neglect • Elder abandonment • Financial or material exploitation • Self-neglect • Unwarranted control • Question and/or physical examination To perform well on this measure, we suggest using key phrases: Maltreatment screening, maltreatment screening negative, maltreatment screening positive	
	B. Patients that had documentation that follow-up action* was taken at the visit where maltreatment screening is positive *Action: • Mandated report as required by the state the provider is practicing in • Referral to counseling or social services if maltreatment does not rise to the level of a mandated report To perform well on this measure, we suggest using key phrases: Report was made, referral to counseling, referral to social services	
Required Exclusions	None	
Allowable Exclusions	A. • Patient refuses • Patient is in an urgent or emergent situation where time is of the essence and to delay treatment would jeopardize the patient's health status • Patients that are non-verbal B. None	

Exclusion Rationale	Patient has the right to refuse. Emergent medical needs should always be a higher priority.
Measure Scoring	Percentage
Interpretation of Score	A. Higher score indicates better quality B. Higher score indicates better quality
Measure Type	Process
Level of Measurement	Provider, Practice
Risk Adjustment	N/A
For Process Measures Relationship to Desired Outcome	
Opportunity to Improve Gap in Care	Preventing and detecting maltreatment has been a national priority for at least a decade. The American Medical Association reports that "Physicians have an ethical obligation to promote the well-being of patients by taking appropriate actions to avert the harms caused by violence and abuse."[1] Many specialty societies have recommendations related to maltreatment including the American College of Obstetrics and Gynecologists, American College of Emergency Physicians, Emergency Nurses Association, American Academy of Family Physicians, American Dental Association, American College of Nurse Midwives, and the American Nursing Association. Patients with neurologic conditions that involve functional impairment report maltreatment at a higher frequency.[2] Consistent application of screening and reporting maltreatment will improve the health status of patients with neurological conditions.[3]
Harmonization with Existing Measures	This is a variation of the CMS elder maltreatment quality measure (MIPS #181). A new measure was needed to capture the younger population that neurology providers encounter.
References	1. American Medical Association. Report of the Council on Ethical and Judicial Affairs. https://www.ama-assn.org/sites/default/files/media-browser/public/about-ama/councils/Council%20Reports/council-on-ethics-and-judicial-affairs/i07-ceja-violence-abuse.pdf [Accessed on 8/14/17]. 2. Diaz-Olavarrieta C, Campbell J, Garcia de la Caden C, et al. Domestic Violence Against Patients with Chronic Neurologic Disorders. Arch Neurol 1999; 56:681-685. 3. Roque A, Weinberg J, Hohler A. Evaluating Exposure to Abuse and Violence in Neurological Patients. Neurologist 2013; 19:7-10. Supporting Evidence:

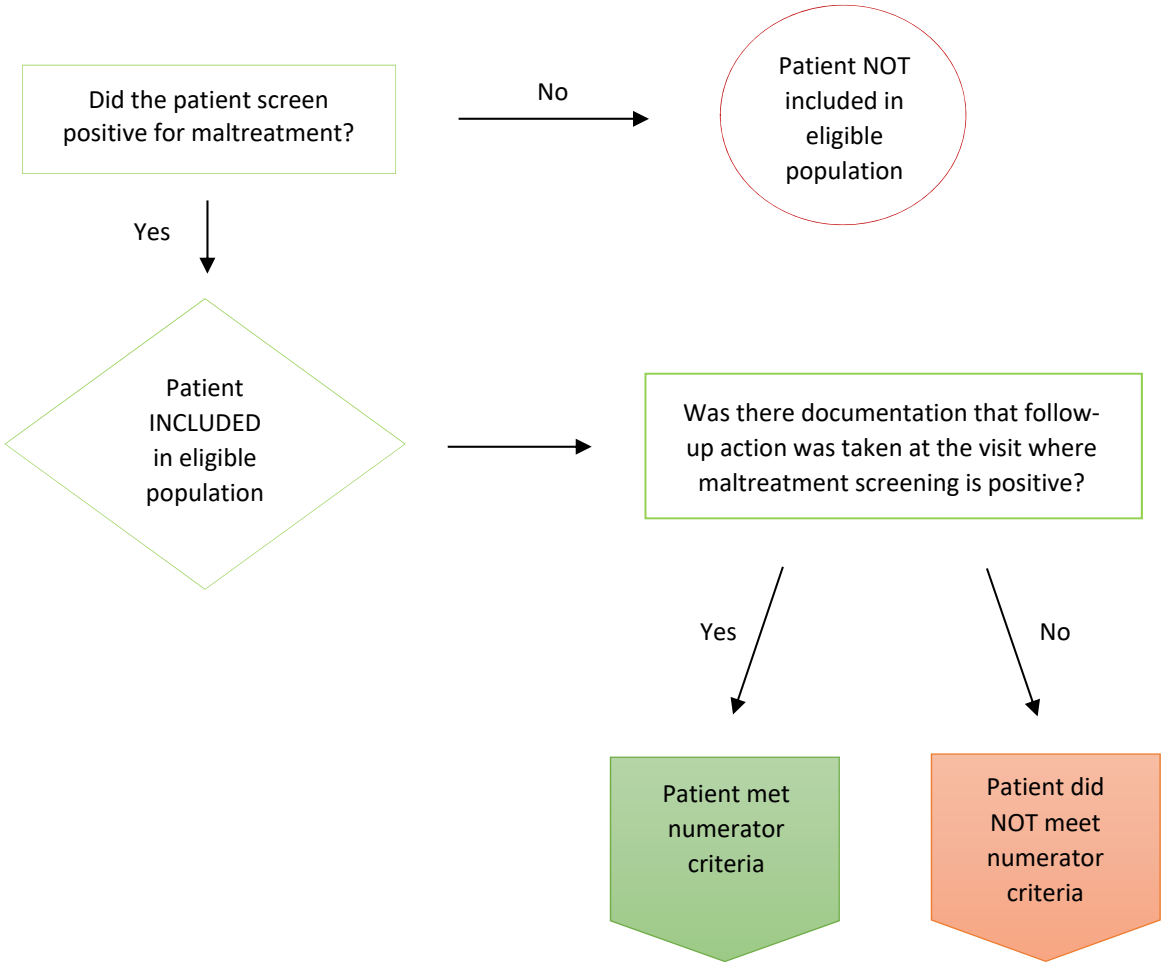
	• Peterlin B, Ward T, Lidicker J, Levin M. A Retrospective Comparative Study on the Frequency of Abuse in Migraine and Chronic Daily Headache. Headache 2007; 47:397-401. • Schulman E, DePold Hohler A. The American Academy of Neurology position statement on abuse and violence. Neurology 2012; 78:433-435.

Flow Chart Diagram – Measure A





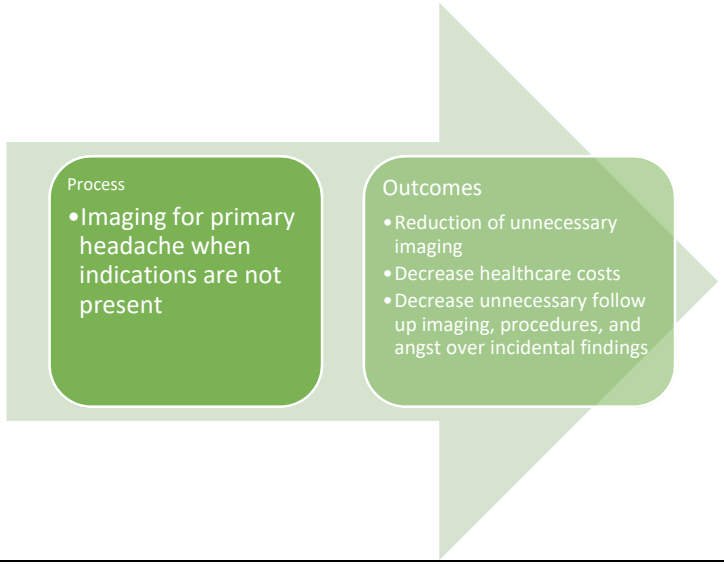
Flow Chart Diagram – Measure B



Code System	Code	Code Description
ICD-10-CM	G00-G99	Diseases of the nervous system
ICD-10-CM	T74.92XA	Unspecified child maltreatment, confirmed, initial encounter
ICD-10-CM	T74.92XD	Unspecified child maltreatment, confirmed, subsequent encounter
ICD-10-CM	T76.92XD	Unspecified child maltreatment, suspected, subsequent encounter
ICD-10-CM	T74.91XA	Unspecified adult maltreatment, confirmed, initial encounter
ICD-10-CM	T74.91XD	Unspecified adult maltreatment, confirmed, subsequent encounter
ICD-10-CM	T76.91XD	Unspecified adult maltreatment, suspected, subsequent encounter
ICD-10-CM	Y07.50	Unspecified non-family member, perpetrator of maltreatment and neglect
ICD-10-CM	Y05.510	At-home childcare provider, perpetrator of maltreatment and neglect
ICD-10-CM	Y05.511	Daycare center childcare provider, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.512	At-home adult care provider, perpetrator of maltreatment and neglect
ICD-10-CM	Y05.513	Adult care center provider, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.519	Unspecified daycare provider, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.528	Other therapist or healthcare provider, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.529	Unspecified healthcare provider, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.59	Other non-family member, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.01	Husband, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.02	Wife, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.410	Brother, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.411	Sister, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.430	Stepfather, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.433	Stepmother, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.435	Stepbrother, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.436	Stepsister, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.9	Unspecified perpetrator of maltreatment and neglect
ICD-10-CM	Y07.03	Male partner, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.04	Female partner, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.11	Biological father, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.12	Biological mother, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.13	Adoptive father, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.14	Adoptive mother, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.20	Foster father, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.421	Foster mother, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.490	Male cousin, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.491	Female cousin, perpetrator of maltreatment and neglect
ICD-10-CM	Y07.499	Other family member, perpetrator of maltreatment and neglect
ICD-10-CM	T74.02XA	Child neglect or abandonment, confirmed, initial encounter
CPT	99201-99205	Office or other outpatient visit – New patient (E/M codes)
CPT	99211-99215	Office or other outpatient visit – Established patient (E/M codes)

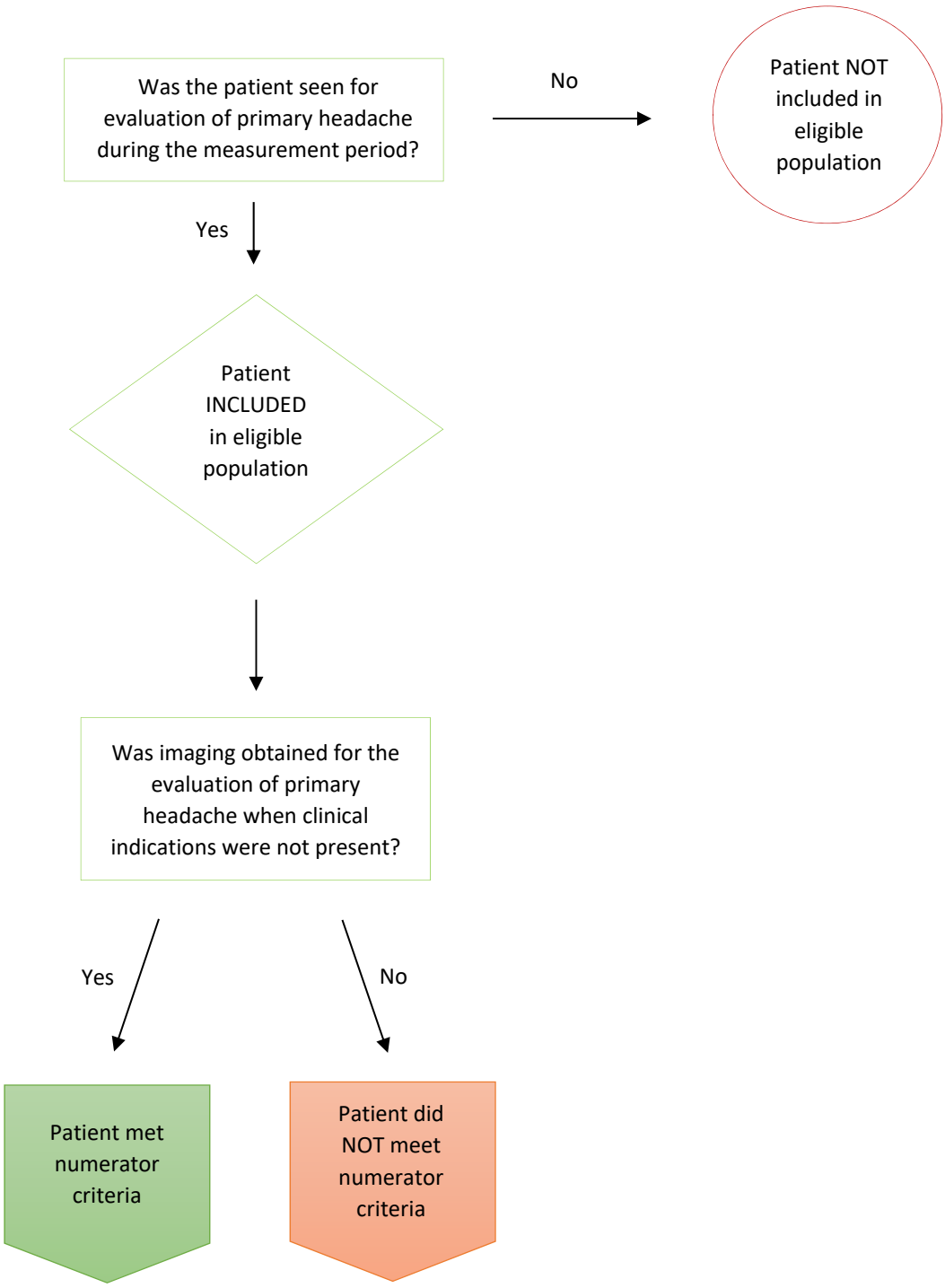
CPT	99241-99245	Office or other outpatient consultation – New or established patient
CPT	99304-99310	Nursing Home Consultation
CPT	99318	Other Nursing Facility Service
CPT	99324-99328; 99334-99337	Domiciliary, Rest Home Care Services
CPT	99339-99340	Domiciliary, Rest Home Care Services Care Plan Oversight
CPT	99341-99345	Home Care
CPT	99347-99350	Home Care
CPT	99221-99223	Initial hospital care 30, 50, or 70 minutes, per day, for the evaluation and management of a patient
CPT	99231-99233	Subsequent hospital care 15, 25, or 35 minutes, per day, for the evaluation and management of a patient
CPT	99291, 99292	Critical care, evaluation and management of the critically ill or critically injured patient; first 30-74 minutes, each additional 30 minutes

Measure Title	Overuse of imaging for the evaluation of primary headache	
Description	Percentage of patients for whom imaging of the head (CT or MRI) is obtained for the evaluation of primary headache when clinical indications are not present	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	**Eligible Providers**	Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Nurse (APN)
	Care Setting(s)	Outpatient
	Ages	All patients
	Event	Patient had an office visit, E/M services performed or supervised by an eligible provider.
	Diagnosis	Primary headache
Denominator	All patients seen for evaluation of primary headache	
Numerator	Patients for whom imaging of the head (CT or MRI) is obtained for the evaluation of primary headache when clinical indications* are not present during the measurement period **If a clinical indication is present, patient would not meet the measure. Indications that would warrant imaging include: • Head trauma • New or change^ in headache above 50 years of age • Abnormal neurologic exam • Thunderclap headache • Headache radiating to the neck • Trigeminal pain • Persistent and positional headaches • Temporal headaches in patients over 55 years of age • New onset headache in pre-school children or younger (<6 years of age) • New onset headache in pediatric patients with disabilities for which headache is a concern as inferred from behavior • Occipital headache in children ^Change in headache: A significant change in severity of the headache including changes in location or quality. Other criteria take into account most red flag symptoms and also may reflect change (if a stable primary headache were previously present) but do not reflect a previously tolerated headache that now becomes suddenly disabling in severity. Change also includes any and all new symptoms that may be associated with a headache: arm numbness, speech disturbance, etc. To perform well on this measure, we suggest using key phrases: Imaging not recommended, imaging not performed, no clinical indications for imaging	
Required Exclusions	None	
Allowable Exclusions	None	
Exclusion Rationale	N/A	
Measure Scoring	Percentage	
Interpretation of Score	Lower score indicates better quality	

Measure Type	Process
Level of Measurement	Provider
Risk Adjustment	N/A
For Process Measures Relationship to Desired Outcome	
Opportunity to Improve Gap in Care	Care for those with headaches amounts to 12 million outpatient office visits and 4 million emergency department visits.[1] Females aged 18-44 had the highest burden with a prevalence of 26.1%.[1] Migraine care alone accounts for approximately $1 billion per year.[2] Additional costs are also accrued through missed work and activities.[2] One analysis indicated that between $146 and $211 million was spent on low-value care by imaging the head.[3] Analyses indicate that the abnormal finding yield for CT is 2% and for MRI is 5%.[4] Providers should be aware that incidental findings on scans can result in patient anxiety. Abnormal findings on images can lead to "practical and ethical dilemmas with regard to management." (SIGN 2008) The Work Group discussed excluding patients who request imaging. It was agreed upon that those patients should be included. The AAN will review any implementation data and the effect this decision had on performance rates, including unintended consequences, when this measure is due for updating in three years.
Harmonization with Existing Measures	This is a variation of the Q-METRIC measure (Available at: https://www.chear.org/qmetric1). A new measure was needed to capture a wider range of ages[4].
References	1. Smitherman TA, Burch R, Loder E. The prevalence, impact, and treatment of migraine and severe headaches in the United States: review of statistics from national surveillance studies. Headache 2013; 53:427-36. 2. Hu X, Markson L, Lipton R, et al. Burden of Migraine in the United States. Arch Intern Med 1999; 159:813-818. 3. Schwartz A, Landon B, Elshaug A, et al. Measuring low-value care in Medicare. JAMA Intern Med 2014; 174:1067-1076. 4. Medical Advisory Secretariat. Neuroimaging for the Evaluation of Chronic Headaches: an evidence-based analysis. Ont Health Assess Ser. 2010 December; 10(26) 1-57.

	Supporting Evidence: • Beithon J, Gallenberg M, Johnson K, Kildahl P, Krenik J, Liebow M, Linbo L, Myers C, Peterson S, Schmidt J, Swanson J. Institute for Clinical Systems Improvement. Diagnosis and Treatment of Headache. Updated January 2013. • Scottish Intercollegiate Guidelines Network. Diagnosis and management of headache in adults. A national clinical guideline. 2008. • Douglas A, Wippold F, Broderick D, et al. ACR Appropriateness Use Criteria Headache. J Am Coll Radiol 2014; 11:657-667. • Overuse of Imaging for the Evaluation of Children with Primary Headache. http://chear.org/sites/default/files/stories/pdfs/img2_primaryhd_rt.pdf [Accessed on 8/14/17].

Flow Chart Diagram

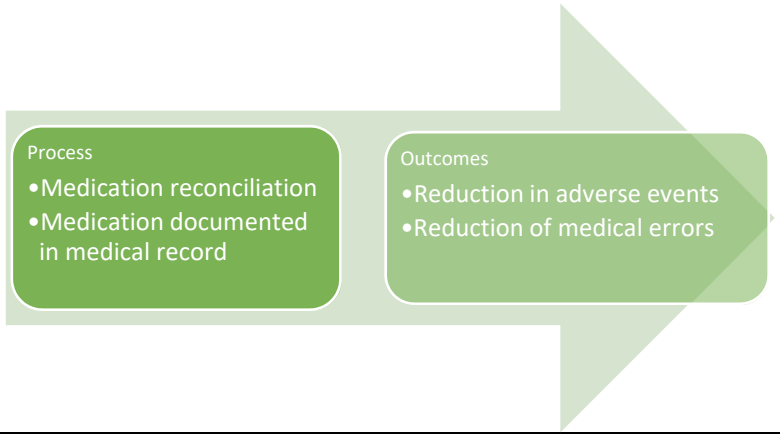


A lower score is better for this measure

Code System	Code	Code Description
ICD-10-CM	G43.109	Migraine with aura, not intractable, without status migrainosus
	G43.119	Migraine with aura, intractable, without status migrainosus
	G43.101	Migraine with aura, not intractable, with status migrainosus
	G43.111	Migraine with aura, intractable, with status migrainosus
ICD-10-CM	G43.009	Migraine without aura, not intractable, without status migrainosus
	G43.019	Migraine without aura, intractable, without status migrainosus
	G43.001	Migraine without aura, not intractable, with status migrainosus
	G43.011	Migraine without aura, intractable with status migrainosus
ICD-10-CM	G43.809	Other migraine, not intractable without status migrainosus
	G43.819	Other migraine, intractable, without status migrainosus
	G43.801	Other migraine, not intractable, with status migrainosus
	G43.811	Other migraine, intractable, with status migrainosus
ICD-10-CM	G43.709	Chronic migraine without aura, not intractable, without status migrainosus
	G43.719	
	G43.701	Chronic migraine without aura, intractable, without status migrainosus
	G43.711	
		Chronic migraine without aura, not intractable, with status migrainosus
		Chronic migraine without aura, intractable, with status migrainosus
ICD-10-CM	G43.809	Other migraine, not intractable, without status migrainosus
	G43.819	Other migraine intractable without status migrainosus
	G43.801	Other migraine not intractable with status migrainosus
	G43.811	Other migraine intractable with status migrainosus
ICD-10-CM	G43.909	Migraine unspecified not intractable without status migrainosus
	G43.919	Migraine unspecified intractable without status migrainosus
	G43.901	Migraine unspecified not intractable with status migrainosus
	G43.911	Migraine unspecified intractable with status migrainosus
ICD-10-CM	G43.4	Hemiplegic migraine
	G43.409	Hemiplegic migraine, not intractable without status migrainosus
	G43.41	Hemiplegic migraine, intractable, without status migrainosus
	G43.401	Hemiplegic migraine, not intractable with status migrainosus
	G43.411	Hemiplegic migraine, intractable with status migrainosus
ICD-10-CM	G43.8	Other migraine
	G43.829	Menstrual migraine, not intractable without status migrainosus
	G43.839	Menstrual migraine, intractable, without status migrainosus
	G43.821	Menstrual migraine, not intractable with status migrainosus
	G43.831	Menstrual migraine, intractable, with status migrainosus
ICD-10-CM	G43.5	Persistent migraine aura without cerebral infarction
	G43.509	Persistent migraine aura without cerebral infarction, not intractable without status migrainosus
	G43.519	Persistent migraine aura without cerebral infarction, intractable without status migrainosus
	G43.501	Persistent migraine aura without cerebral infarction, not intractable with status migrainosus
	G43.511	Persistent migraine aura without cerebral infarction, intractable with status migrainosus
ICD-10-CM	G43.6	Persistent migraine aura with cerebral infarction
	G43.609	

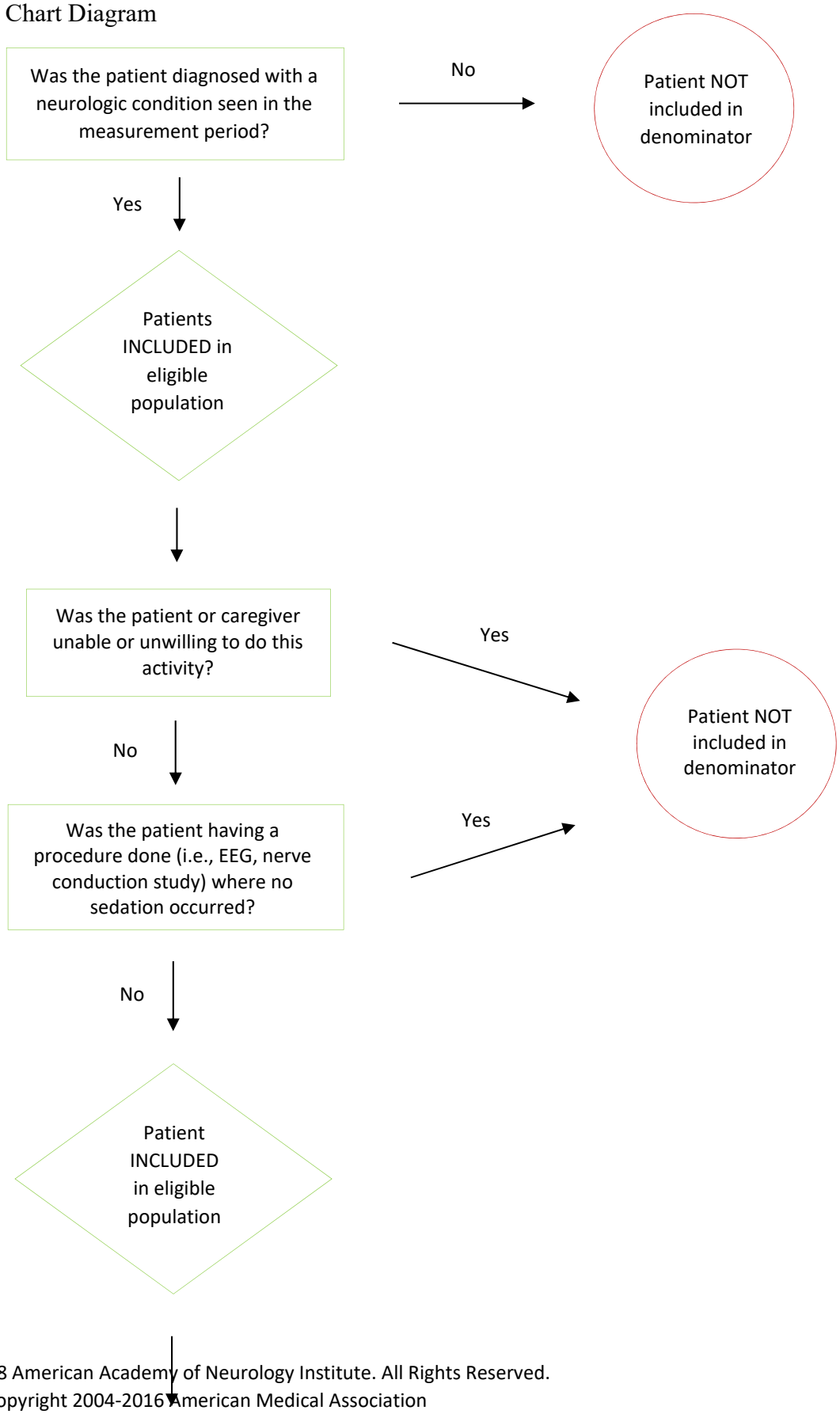
	G43.619 G43.601 G43.611	Persistent migraine aura with cerebral infarction, not intractable without status migrainosus Persistent migraine aura with cerebral infarction, intractable without status migrainosus Persistent migraine aura with cerebral infarction, not intractable with status migrainosus Persistent migraine aura with cerebral infarction, intractable with status migrainosus
ICD-10-CM	G44.1	Vascular headache, not elsewhere classified
ICD-10-CM	R51	Headache
ICD-10-CM	G44.009 G44.019 G44.029 G44.039 G44.049 G44.059 G44.099	Cluster headache syndrome, unspecified, not intractable Episodic cluster headache, not intractable Chronic cluster headache, not intractable Episodic paroxysmal hemicrania, not intractable Chronic paroxysmal hemicrania, not intractable Short lasting unilateral neuralgiform headache with conjunctival injection and tearing (SUNCT), not intractable Other trigeminal autonomic cephalgias (TAC), not intractable
ICD-10-CM	G44.209 G44.219 G44.221 G44.229	Tension-type headache, unspecified, not intractable Episodic tension-type headache, not intractable Chronic tension-type headache, intractable Chronic tension-type headache, not intractable
ICD-10-CM	G44.51 G44.52 G44.53 G44.59	Hemicrania continua New daily persistent headache (NDPH) Primary thunderclap headache Other complicated headache syndrome
ICD-10-CM	G44.81 G44.82 G44.83 G44.84 G44.85 G44.89	Hypnic headache Headache associated with sexual activity Primary cough headache Primary exertional headache Primary stabbing headache Other headache syndrome
CPT	99201-99205	Office or other outpatient visit – New patient (E/M codes)
CPT	99211-99215	Office or other outpatient visit – Established patient (E/M codes)
CPT	99241-99245	Office or other outpatient consultation – New or established patient

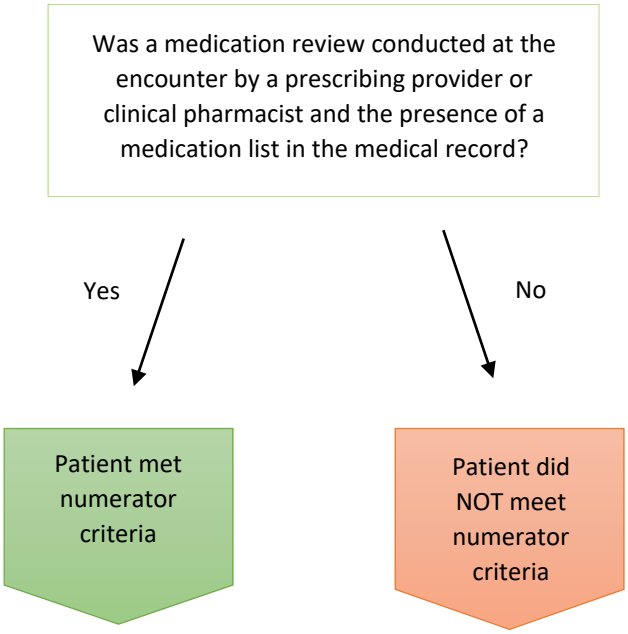
Measure Title	Medication reconciliation	
Description	Percentage of patients who had a medication review at every encounter and a medication list present in the medical record.	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	**Eligible Providers**	Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN), Clinical Pharmacist
	Care Setting(s)	• Outpatient, • On admission to inpatient or residential facility, • ED and Urgent Care
	Ages	All patients
	Event	Patient had an office visit, E/M services performed or supervised by an eligible provider, admitted to an inpatient or residential facility, seen for consultation in the ED or urgent care.
	Diagnosis	A neurologic condition
Denominator	All patients	
Numerator	Medication review+ conducted at every encounter* during the measurement year and the presence of a medication list^ in the medical record. +Medication review is a review of all patient's medications, including prescription medications, over-the-counter (OTC) medications and herbal or supplemental therapies by a prescribing provider or clinical pharmacist *Encounter: Face-to-face visit with provider. Includes CPT codes 99201-99205, 99211-99215, 99241-99245. ^Medication list: current medication in the medical record and must contain the medication name, and dosage, and frequency, and route of administration. To perform well on this measure, we suggest using key phrases: Medication review completed, medication list updated, medication list up to date	
Required Exclusions	None	
Allowable Exclusions	• Patient and/or caregiver is unable or unwilling to do this activity. • Procedure visit (i.e., EEG, nerve conduction study) where no sedation occurs.	
Exclusion Rationale	It is appropriate to exclude patients who decline or are unwilling to participate in medication reconciliation. A visit where a procedure is performed is typically preceded by an office visit where medication reconciliation would have been completed.	
Measure Scoring	Percentage	
Interpretation of Score	Higher Score Indicates Better Quality	
Measure Type	Process	
Level of Measurement	Provider, Practice, System	
Risk Adjustment	N/A	

For Process Measures Relationship to Desired Outcome	
Opportunity to Improve Gap in Care	Medication reconciliation reduces the risk of medication errors and supports the management of patients with chronic conditions[1]. Polypharmacy increases the complexity of medication errors. In addition, to review at every encounter, all patients should have medication list reviewed and updated as appropriate at time of discharge from inpatient facilities.
Harmonization with Existing Measures	This is a variation of the NCQA measure on medication review for adults 66 years of age and older. A modification is needed to take neurology patients into account who are generally younger but still have complicated conditions with comorbidities and polypharmacy. Additionally, many measures in CMS' MIPS payment program include similar measures for those age 18 and above. The Work Group felt it was necessary to include children as many pediatric neurologic conditions also involve polypharmacy.
References	1. National Institute of Clinical Excellent. Medicines optimization: the safe and effective use of medicines to enable the best possible outcomes. Supporting Evidence: • Administration on Aging (AOA). A profile of older Americans. Washington (DC): U.S. Department of Health and Human Services; 2009. 15 p. • Bikowski RM, Ripsin CM, Lorraine VL. Physician-patient congruence regarding medication regimens. J Am Geriatr Soc. 2001 Oct;49(10):1353-7. • Chodosh J, Solomon DH, Roth CP, Chang JT, MacLean CH, Ferrell BA, Shekelle PG, Wenger NS. The quality of medical care provided to vulnerable older patients with chronic pain. J Am Geriatr Soc. 2004 May;52(5):756-61. • National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p. • Task Force on Medicines Partnership. The national collaborative medicines management services programme. Room for review. A guide to medication review. [internet]. 2002. • Sorensen, L., J.A. Stokes, D.M. Purdie, M. Woodward, R. Elliott, M.S. Roberts. Medication reviews in the community: results of a randomized, controlled effectiveness trial. Br. J. Clin. Pharmacol. 2004. 648-64. • Nassaralla CL, Naessens JM, Chaudhry R, et al. Implementation of a medication reconciliation process in an ambulatory internal medicine clinic. Qual Saf Health Care 2007;16: 90-94. • Pronovost P, Weast B, Schwarz M, et al. Medication Reconciliation: A Practical Tool to Reduce the Risk of Medication Errors. J Crit Care. 2003;18(4):201-5. • Institute of Medicine (IOM). Preventing Medication Errors. National Academies Press, Washington D.C. 2006. - Institute of Medicine (IOM): Committee on Quality

	Health Care in America. To err is human: building a safer health system. Washington, D.C: National Academy Press. 2002. • Gurwitz JH, et al. Incidence and preventability of adverse drug events among older persons in the ambulatory setting. 2003; 289: 1107-16. • George J, Elliott RA, Stewart DC. A systematic review of interventions to improve medication taking in elderly patients prescribed multiple medications. Drugs Aging. 2008; 25:307-24. • Vinks Th, Egberts TC, de Lange TM, De Koning FH. Pharmacist-based medication review reduces potential drug-related problems in the elderly: the SMOG controlled trial. Drugs Aging. 2009;26:123-33. • Hanlon JT, Lindblad CI, Gray SL. Can clinical pharmacy services have a positive impact on drug-related problems and health outcomes in community-based older adults? Am J Geriatr Pharmacother. 2004;2:3-13. • Gillespie U, Alassaad A, Henrohn D, et al. A Comprehensive Pharmacist Intervention to Reduce Morbidity in Patients 80 Years or Older. Arch Intern Med. 2009;169:894-900. • Zermansky AG, Silcock J. Is medication review by primary-care pharmacists for older people cost effective?: a narrative review of the literature focusing on costs and benefits. Pharmacoeconomics. 2009; 27:11-24. • Krska J, Cromarty JA, Arris F, et al. Pharmacist-led medication review in patients over 65: a randomized, controlled trial in primary care. Age Ageing, 2001;30:205-211. • Knight, E.L., J. Avorn. Quality indicators for appropriate medication use in vulnerable elders. Ann. Intern. Med. 2001. 703-10.

Flow Chart Diagram





Code System	Code	Code Description
ICD-10-CM	G00-G99	Diseases of the nervous system
ICD-10-CM	I61.9	Nontraumatic intracerebral hemorrhage, unspecified
ICD-10-CM	I63.9	Cerebral infarction, unspecified
ICD-10-CM	S06.6	Traumatic subarachnoid hemorrhage
ICD-10-CM	I69	Sequelae of cerebrovascular disease
ICD-10-CM	H81	Disorders of vestibular function
ICD-10-CM	H82	Vertiginous syndromes in diseases classified elsewhere
ICD-10-CM	H83	Other diseases of inner ear
ICD-10-CM	R42	Dizziness and giddiness
ICD-10-CM	C70	Malignant neoplasm of meninges
ICD-10-CM	C71	Malignant neoplasm of brain
ICD-10-CM	F06.8	Other specified mental disorders due to known physiological condition
ICD-10-CM	R41.81	Age-related cognitive decline
ICD-10-CM	R51	Headache
CPT	99201-99205	Office or other outpatient visit – New patient (E/M codes)
CPT	99211-99215	Office or other outpatient visit – Established patient (E/M codes)
CPT	99241-99245	Office or other outpatient consultation – New or established patient
CPT	99304-99310	Nursing Home Consultation
CPT	99318	Other Nursing Facility Service
CPT	99324-99328; 99334-99337	Domiciliary, Rest Home Care Services
CPT	99339-99340	Domiciliary, Rest Home Care Services Care Plan Oversight
CPT	99221-99223	Initial hospital care 30, 50, or 70 minutes, per day, for the evaluation and management of a patient
CPT	99231-99233	Subsequent hospital care 15, 25, or 35 minutes, per day, for the evaluation and management of a patient
CPT	99291, 99292	Critical care, evaluation and management of the critically ill or critically injured patient; first 30-74 minutes, each additional 30 minutes

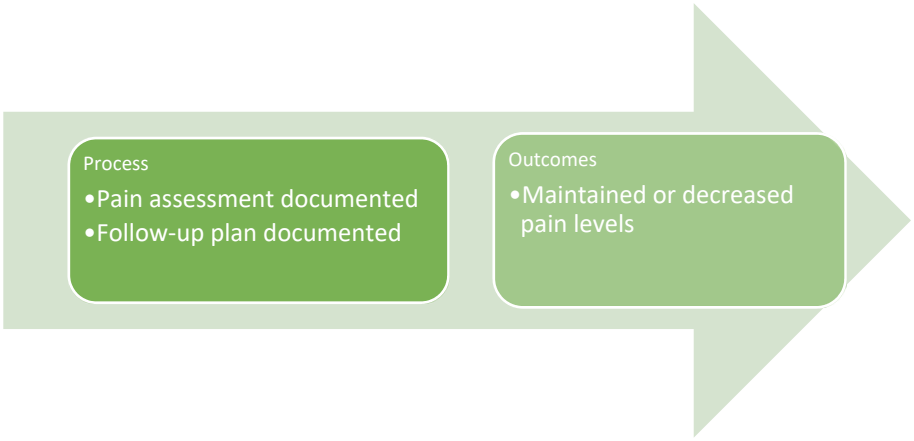
<table>
<tr><td>Measure Title</td><td colspan="2">Pain Assessment and Follow-up</td></tr>
<tr><td>Description</td><td colspan="2">Percentage of patients with documentation of a pain assessment through discussion with the patient that may include the use of a standardized tool(s) at least once during the measurement period and documentation of a follow-up plan when pain is present.</td></tr>
<tr><td>Measurement Period</td><td colspan="2">January 1, 20xx to December 31, 20xx</td></tr>
<tr><td rowspan="5">Eligible Population</td><td>Eligible Providers</td><td>Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN), Nurse, Medical Assistant (MA)</td></tr>
<tr><td>Care Setting(s)</td><td>Outpatient</td></tr>
<tr><td>Ages</td><td>All patients</td></tr>
<tr><td>Event</td><td>Patient had an office visit, E/M services performed or supervised by an eligible provider</td></tr>
<tr><td>Diagnosis</td><td>A neurologic condition</td></tr>
<tr><td rowspan="2">Denominator</td><td colspan="2">A. All patients with a neurologic condition</td></tr>
<tr><td colspan="2">B. All patients that have a positive pain assessment</td></tr>
<tr><td>Numerator</td><td colspan="2">A. Patient pain assessment* is documented through discussion with the patient or caregiver and may include the use of a standardized tool(s)^ or by healthcare provider observation at least once during the measurement period.

*Pain Assessment – A multi-dimensional clinical assessment of pain using a standardized tool may include characteristics of pain; such as: location, intensity, description, and onset/duration.

^Standardized Tool – An assessment tool that has been appropriately normed and validated for the population in which it is used. Assessment tools approved for use in this measure include: Alder Hey Triage Pain Score, Bieri Faces, Brief Pain Inventory (BPI), COMFORT, Faces Pain Scale (FPS), Children’s Hospital Eastern Ontario Pain Scale (CHEOPS), FLACC, McGill Pain Questionnaire (MPQ), Multidimensional Pain Inventory (MPI), Neonatal Infant Pain Scale, Neuropathic Pain Scale (NPS), N-PASS, Numeric Rating Scale (NRS), Oswestry Disability Index (ODI), OUCHER, Patient-Reported Outcomes Measurement Information System (PROMIS), premature infant pain profile (PIPP), Roland Morris Disability Questionnaire (RMDQ), Verbal Descriptor Scale (VDS), Verbal Numeric Rating Scale (VNRS) and Visual Analog Scale (VAS), Wong-Baker.
This list must be finite for calculation via registry and CMS accountability programs. This list will be updated during future reviews as appropriate.

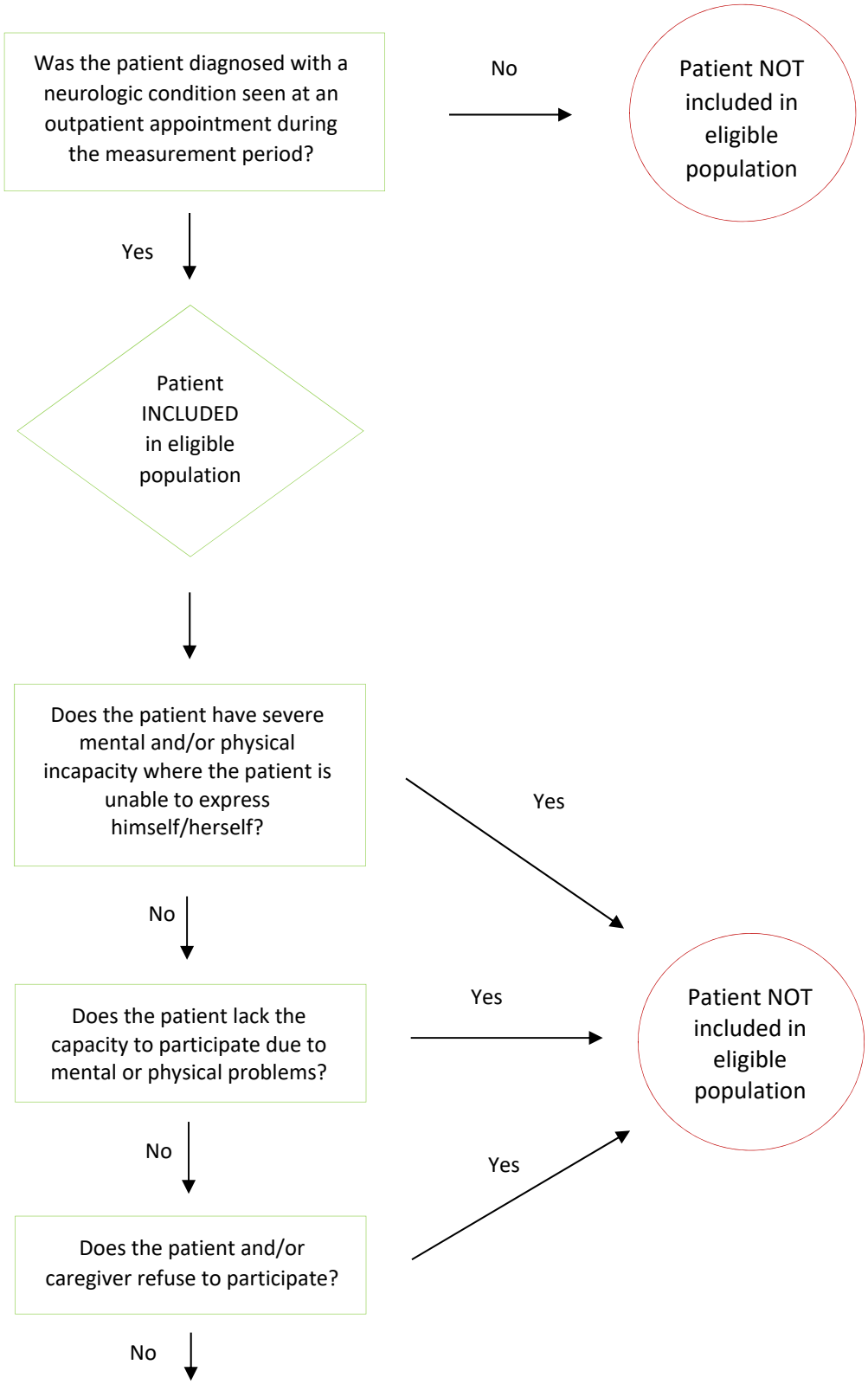
To perform well on this measure, we suggest using key phrases: Pain assessed, pain assessed with [X] tool, pain assessed by observation, discussion with patient/caregiver about pain</td></tr>
<tr><td colspan="2">B. Patients that have a follow-up plan* documented (including created by another provider) when pain is present at the visit where pain assessment is positive.

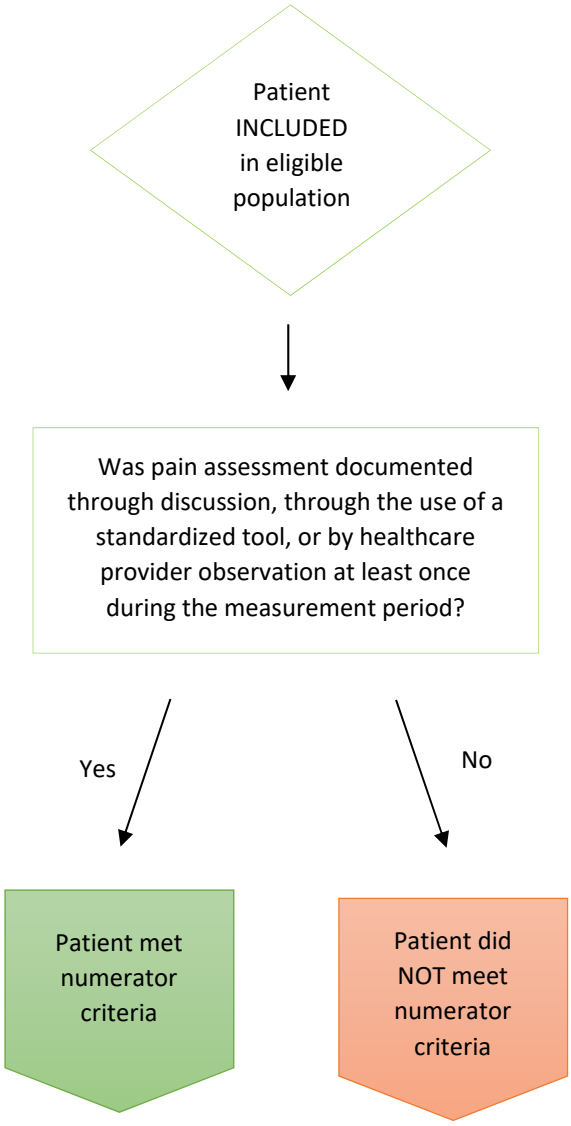
*Follow-Up Plan – A documented outline of care for a positive pain assessment. This must include a planned follow-up appointment or a referral, a notification to other care providers as applicable OR indicate the initial treatment plan is still in effect. These plans may include pharmacologic, behavioral, physical medicine and/or educational interventions.</td></tr>
</table>

	To perform well on this measure, we suggest using key words: pain plan discussed, pain plan documented
Required Exclusions	None
Allowable Exclusions	A. • Severe mental and/or physical incapacity where the person is unable to express himself/herself in a manner understood by others. For example, cases where pain cannot be accurately assessed through use of nationally recognized standardized pain assessment tools • Patient and/or caregiver refuse to participate B. • Severe mental and/or physical incapacity where the person is unable to express himself/herself in a manner understood by others. For example, cases where pain cannot be accurately assessed through use of nationally recognized standardized pain assessment tools • Patient and/or caregiver refuse to participate • Patient is in palliative care
Exclusion Rationale	A patient should be excluded if they cannot participate in the activity. A patient and/or caregiver have the right to refuse this assessment. Patients that are in palliative care will have pain management through those services.
Measure Scoring	Percentage
Interpretation of Score	Higher Score Indicates Better Quality
Measure Type	Process
Level of Measurement	Provider **Health systems should help facilitate this process by making tools available to providers
Risk Adjustment	N/A
For Process Measures Relationship to Desired Outcome	
Opportunity to Improve Gap in Care	The Medical Expenditure Panel Survey estimated that roughly 100 million adults suffer from chronic pain.[3] The economic cost of pain is massive ranging from $261 to $300 billion.[3] Several group of people, including minorities and women, are typically underdiagnosed and undertreated.[4]
Harmonization with Existing Measures	This is a variation on a CMS measure (NQF# 0420). A denominator variation was created to capture younger patients and numerator variation created to include assessment of pain through discussion and observation.

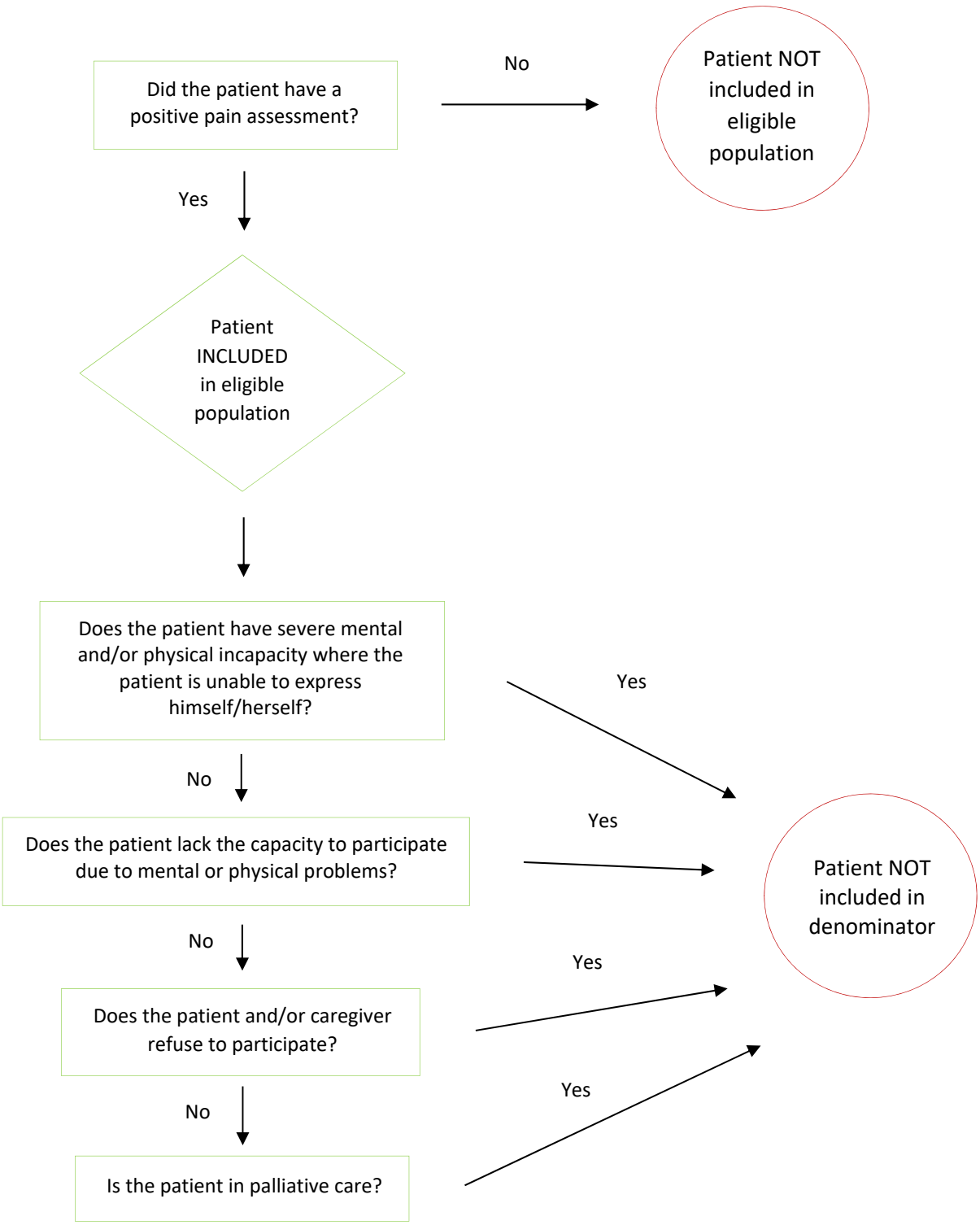
References	1. Registered Nurses' Association of Ontario. Assessment and Management of Pain, Third Edition. December 2013. http://rnao.ca/bpg [Accessed on 8/14/17] 2. Hooten M, Thorson D, Bianco J, et al. Pain: assessment, non-opioid treatment approaches and opioid management. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2016 Sep. 3. Gaskin D, Richard P. The economic costs of pain in the United States. J Pain 2012; 13:715-24. 4. Chronic Pain Research Alliance. Relieving Pain in America. A Blueprint for Transforming Prevention, Care, Education, and Research. National Academies of Sciences Engineering Medicine. 2011. http://www.nationalacademies.org/hmd/Reports/2011/Relieving-Pain-in-America-A-Blueprint-for-Transforming-Prevention-Care-Education-Research.aspx [Accessed on 8/14/17].

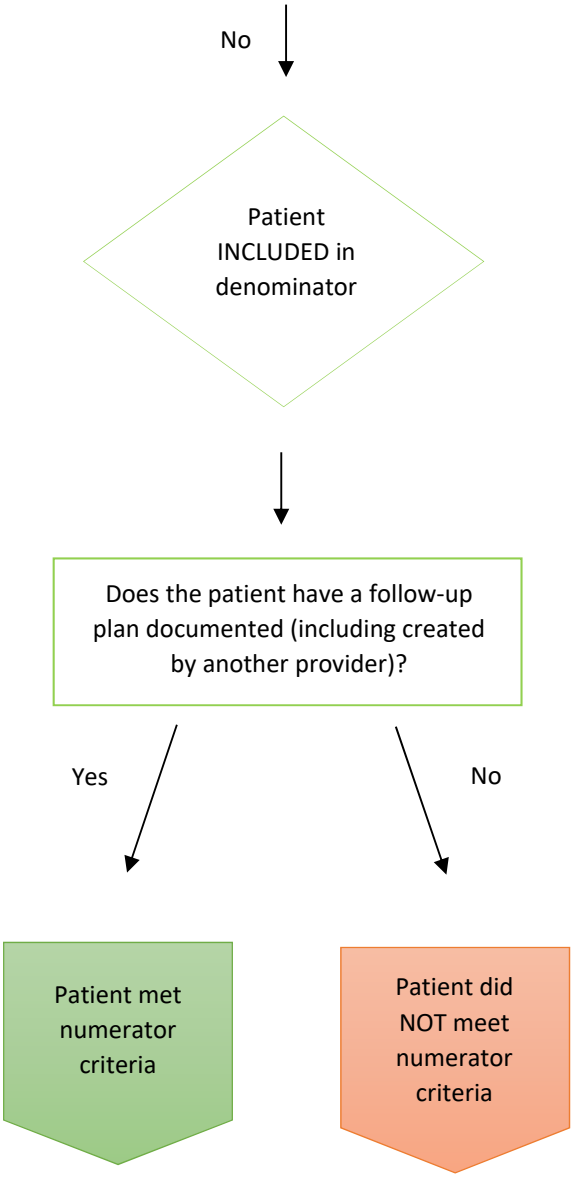
Flow Chart Diagram – Measure A





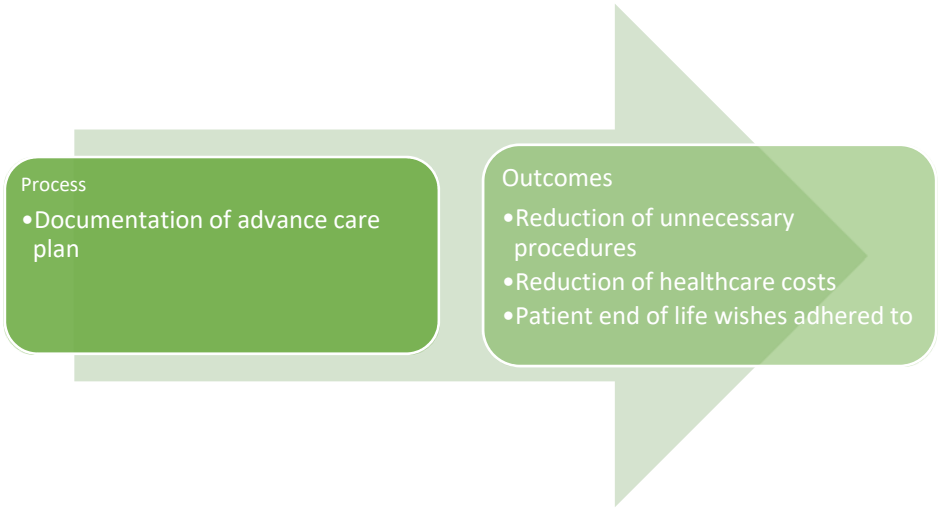
Flow Chart Diagram – Measure B



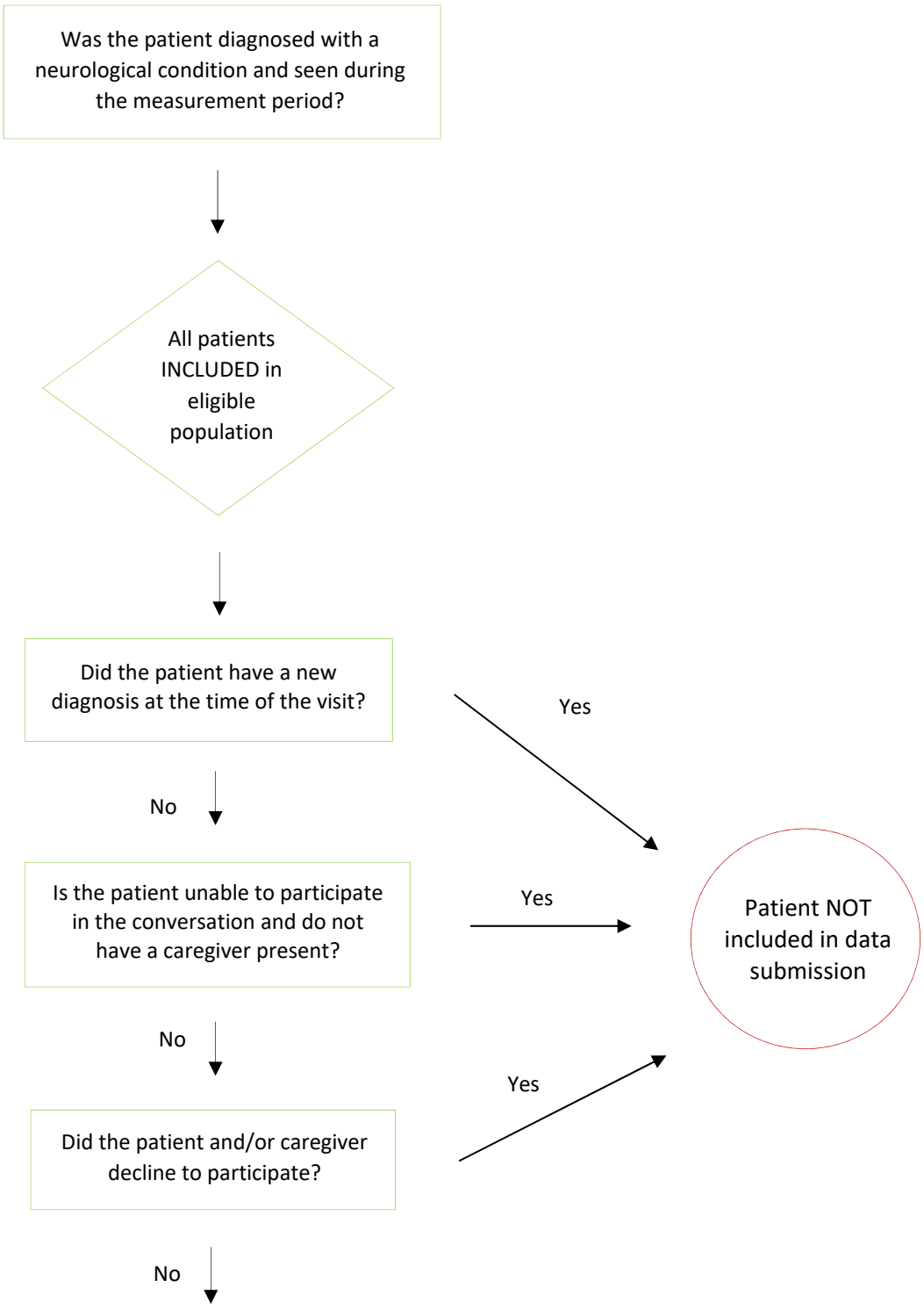


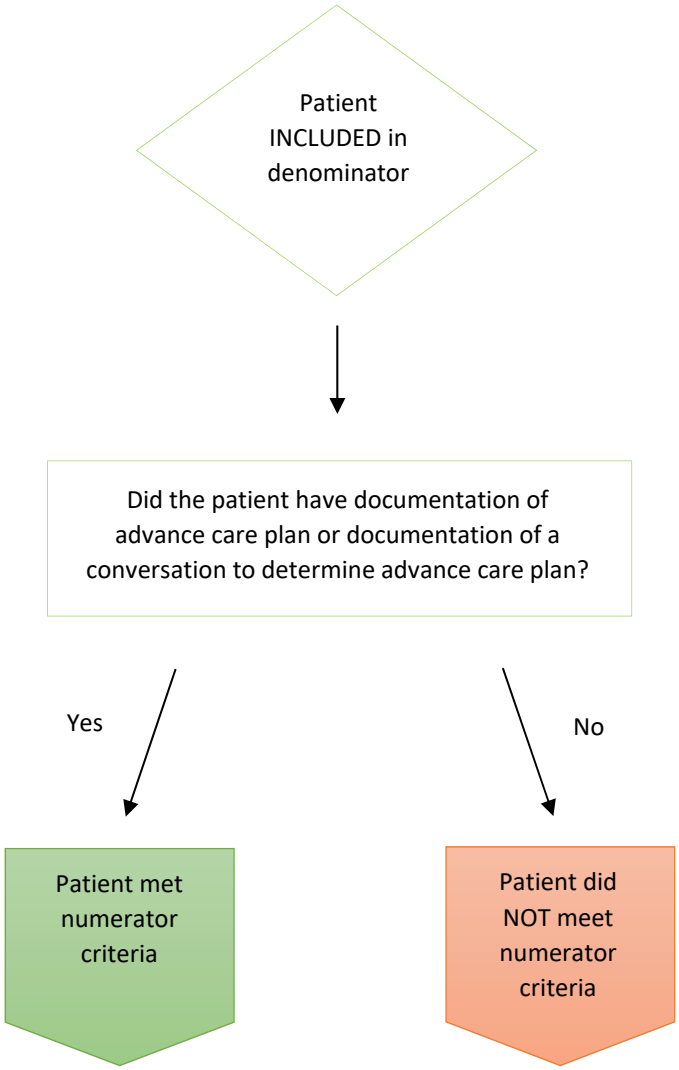
Code System	Code	Code Description
ICD-10-CM	G00-G99	Diseases of the nervous system
CPT	99201-99205	Office or other outpatient visit – New patient (E/M codes)
ICD-10-CM	I61.9	Nontraumatic intracerebral hemorrhage, unspecified
ICD-10-CM	I63.9	Cerebral infarction, unspecified
ICD-10-CM	S06.6	Traumatic subarachnoid hemorrhage
ICD-10-CM	I69	Sequelae of cerebrovascular disease
ICD-10-CM	H81	Disorders of vestibular function
ICD-10-CM	H82	Vertiginous syndromes in diseases classified elsewhere
ICD-10-CM	H83	Other diseases of inner ear
ICD-10-CM	R42	Dizziness and giddiness
ICD-10-CM	C70	Malignant neoplasm of meninges
ICD-10-CM	C71	Malignant neoplasm of brain
ICD-10-CM	F06.8	Other specified mental disorders due to known physiological condition
ICD-10-CM	R41.81	Age-related cognitive decline
ICD-10-CM	R51	Headache
CPT	99211-99215	Office or other outpatient visit – Established patient (E/M codes)
CPT	99241-99245	Office or other outpatient consultation – New or established patient

Measure Title	Advance Care Planning	
Description	Percentage of patients with a neurological condition who have documentation of advance care plan	
Measurement Period	January 1, 20xx to December 31, 20xx	
Eligible Population	**Eligible Providers**	Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN)
	Care Setting(s)	Outpatient
	Ages	All patients
	Event	Patient had an office visit, E/M services performed or supervised by an eligible provider
	Diagnosis	A neurological condition
Denominator	Patients aged 18 to 64 years of age diagnosed with a neurological condition	
Numerator	Patients who have documentation of advance care plan* OR documentation of a conversation to determine advance care plan once during the measurement period. *Advance Care Plan: may include the presence of a health care proxy (durable power of attorney), living will, organ donation wishes, or goals for care including resuscitation and breathing machines as well as artificial nutrition and hydration. To perform well on this measure, we suggest using key phrases: advance care plan created, advance care plan updated, advance care plan discussed, advance care plan revised	
Required Exclusions	None	
Allowable Exclusions	• Patients with a new diagnosis at the time of visit • Patients unable to participate in the conversation and do not have a caregiver present • Patient and/or caregiver decline	
Exclusion Rationale	Patients that receive a new diagnosis at the time of visit should not be expected to create an advance care plan for their condition until they have more information. A patient needs to be able to participate in the dialogue to create an advance care plan. A patient and/or their caregiver have a right to refuse this service.	
Measure Scoring	Percentage	
Interpretation of Score	Higher Score Indicates Better Quality	
Measure Type	Process	
Level of Measurement	Provider	
Risk Adjustment	N/A	

For Process Measures Relationship to Desired Outcome	
Opportunity to Improve Gap in Care	It is estimated that only about 21% of seriously ill patients have advanced directives documented.[5] Advance directives, or advance care plans, have been found to be associated with less spending, reduced in-hospital deaths, and an increase in hospice care.[6,7] Additionally, elderly patients who had advance care plans were found to receive the care that was expressed in their plan.[5,7]
Harmonization with Existing Measures	There are several measures available for use on advance care planning (AAN, CMS). The AAN created a measure on this topic to fill a gap in ages included in other measures (CMS measure is for those 65 years of age and older).
References	1. Clinical Practice Guidelines for Quality Palliative Care, Third Edition. National Consensus Project for Quality Palliative Care. 2. McCusker M, Ceronsky L, Crone C. Institute for Clinical Systems Improvement. Palliative Care for Adults. Updated November 2013. 3. Michigan Quality Improvement Consortium Guideline. Advance Care Planning. January 2014. http://www.mqic.org/pdf/mqic_advance_care_planning_cpg.pdf 4. British Columbia Medical Services Commission. Palliative Care for the Patient with Incurable Cancer or Advanced Disease – Part 1: Approach to Care. 2010. http://www2.gov.bc.ca/assets/gov/health/practitioner-pro/bc-guidelines/palliative1.pdf. Accessed on October 15, 2015. 5. Silveira MJ et al. "Advance directives and outcomes of surrogate decision making before death." NEJM. 2010; 362:1211-1218 6. Nicholas LH, Langa KM, Iwashyna TJ, Weir DR. Regional variation in the association between advance directives and end-of-life medicare expenditures. JAMA 2011; 306:1447-53. 7. Aleccia JoNel. In Oregon, End-of-Life Wishes Are Just A Click Away. Kaiser Health News. https://khn.org/news/in-oregon-end-of-life-wishes-are-just-a-click-away/ [Accessed on 10/11/17].

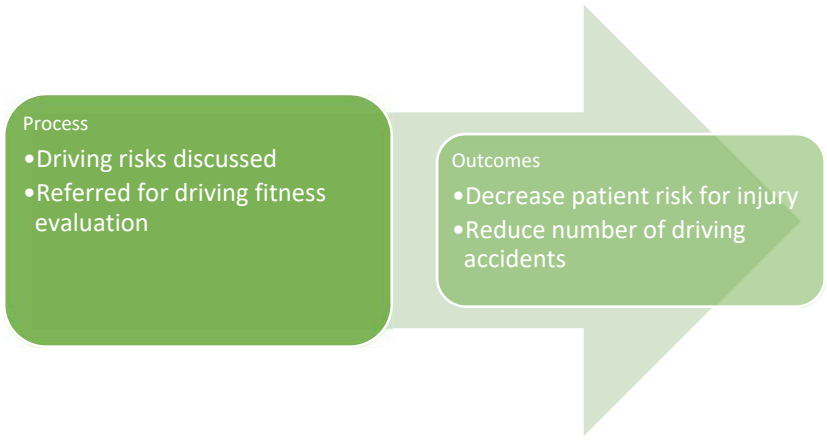
Flow Chart Diagram





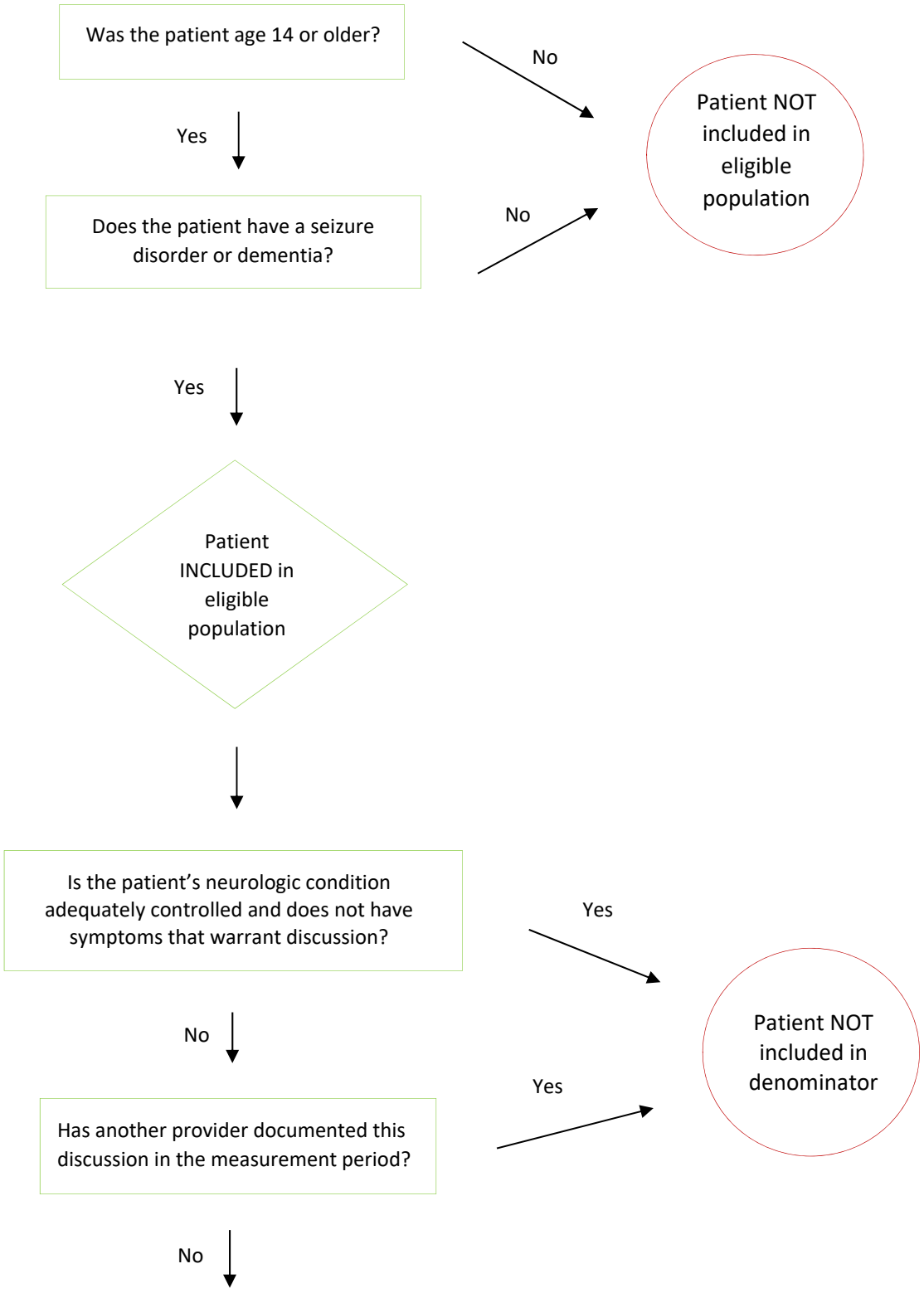
Code System	Code	Code Description
ICD-10-CM	99497	Advance care planning including the explanation and discussion of advance directives such as standard forms (with completions of such forms, when performed), by the physician or other qualified health care professional; first 30 minutes, face-to-face with the patient, family member(s), and/or surrogate
ICD-10-CM	G00-G99	Diseases of the nervous system
ICD-10-CM	I61.9	Nontraumatic intracerebral hemorrhage, unspecified
ICD-10-CM	I63.9	Cerebral infarction, unspecified
ICD-10-CM	S06.6	Traumatic subarachnoid hemorrhage
ICD-10-CM	I69	Sequelae of cerebrovascular disease
ICD-10-CM	H81	Disorders of vestibular function
ICD-10-CM	H82	Vertiginous syndromes in diseases classified elsewhere
ICD-10-CM	H83	Other diseases of inner ear
ICD-10-CM	R42	Dizziness and giddiness
ICD-10-CM	C70	Malignant neoplasm of meninges
ICD-10-CM	C71	Malignant neoplasm of brain
ICD-10-CM	F06.8	Other specified mental disorders due to known physiological condition
ICD-10-CM	R41.81	Age-related cognitive decline
ICD-10-CM	R51	Headache
ICD-10-CM	99498	Advance care planning including the explanation and discussion of advance directives such as standard forms (with completion of such forms, when performed), by the physician or other qualified health care professional; each additional 30 minutes
CPT	99201-99205	Office or other outpatient visit – New patient (E/M codes)
CPT	99211-99215	Office or other outpatient visit – Established patient (E/M codes)
CPT	99241-99245	Office or other outpatient consultation – New or established patient

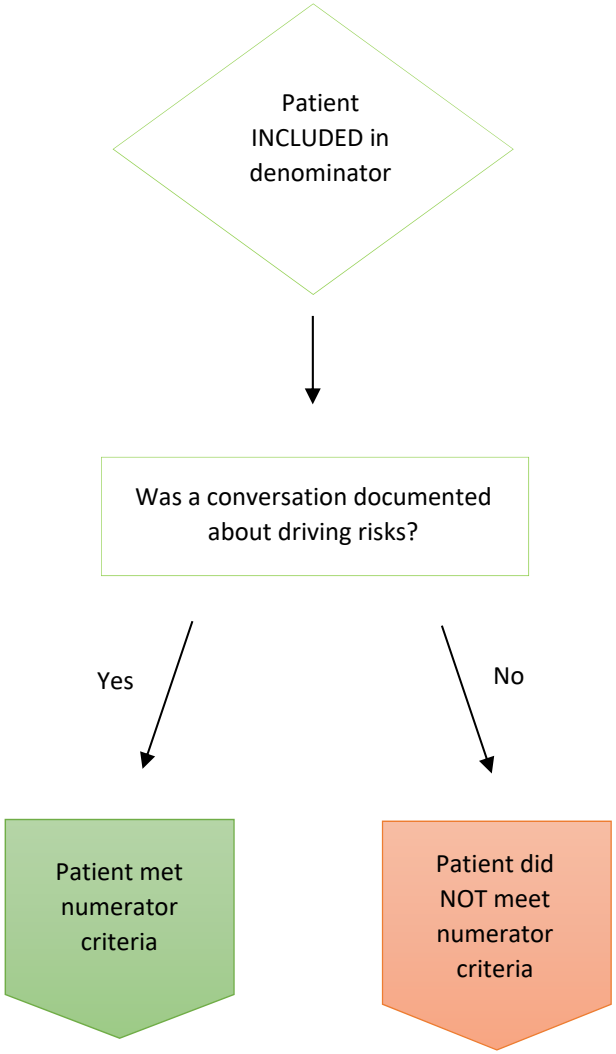
Measure Title	Driving Risk Discussion and Referral	
Description	Percentage of patients with a neurological condition that could impair operation of a motor vehicle who had a conversation documented about driving risks and who were referred for a driving fitness evaluation or were advised not to operate a motor vehicle.	
Measurement Period	January 1, 20xx in Year 1 to December 31, 20xx in Year 2	
Eligible Population	**Eligible Providers**	Medical Doctor (MD), Doctor of Osteopathy (DO), Physician Assistant (PA), Advanced Practice Registered Nurse (APRN)
	Care Setting(s)	Outpatient, Inpatient, ED or Urgent Care
	Ages	Patients 14 years of age and above
	Event	Patient had an office visit, E/M services performed or supervised by an eligible provider, admitted to an inpatient facility, seen for consultation in the ED or urgent care.
	Diagnosis	Seizures disorder or dementia
Denominator	A. All patients age 14 years of age and older with a diagnosis of seizures or dementia.	
	B. Patients age 14 years of age and older who were identified as at risk for impairment during motor vehicle operation conversation	
Numerator	A. Patients for whom there was a conversation documented about driving risks at least once every 24 months. To perform well on this measure, we suggest using key phrases: driving risks discussed, recommend patient no longer drives, recommend patient stops driving	
	B. Patients who were referred for a driving fitness evaluation OR who were advised to no longer operate a motor vehicle at the visit where driving risk is positive *Refer to appropriate entity in your state (i.e., physical therapy, occupational therapy, driver's bureau, or other) To perform well on this measure, we suggest using key phrases: patient referred for evaluation, recommend patient no longer drives, patient advised to no longer drive	
Required Exclusions	None	
Allowable Exclusions	A: • Provider documents patient's neurological condition is adequately controlled and does not have symptoms that warrant discussion. • Another provider has documented this discussion in the measurement period. • Patients that don't drive or no longer drive • Patient refuses B: • Patients that don't drive or no longer drive • Patient refuses	
Exclusion Rationale	If a patient's condition is not at high risk of deterioration, the provider should not need to have a conversation regarding driving risks. If another provider has already documented this discussion, a second discussion is not necessary. Patients that are not of driving age or are no longer driving cannot be assessed for driving risk. Patients are allowed to refuse referral for a driving fitness evaluation.	
Measure Scoring	Percentage	

Interpretation of Score	Higher Score Indicates Better Quality
Measure Type	Process
Level of Measurement	Provider
Risk Adjustment	N/A
For Process Measures Relationship to Desired Outcome	
Opportunity to Improve Gap in Care	Some patients with neurological conditions with a functional or cognitive disability can pose harm to themselves or others while driving. Decreased reflexes and ability to move quickly can put drivers at risk for crashing. Driving is an important part of maintaining independence and quality of life. Monitoring patients for driving risks and referring to other providers for evaluations is key to the health and well-being of patients with neurological conditions. State laws: http://www.iihs.org/iihs/topics/laws/olderdrivers?topicName=older-drivers https://www.epilepsy.com/driving-laws
Harmonization with Existing Measures	The American Academy of Neurology has a measure on driving screening and follow up for patients with dementia. These two measures are the same concept. This measure simply expands on the age and conditions included.
References	1. Driver Fitness Medical Guidelines. September 2009. https://www.ems.gov/pdf/811210.pdf [Accessed on July 25, 2017] 2. Iverson DJ, Gronseth GS, Reger MA, et al. Practice Parameter update: Evaluation and management of driving risk in dementia. Report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2010;74(16):1316-1324. 3. Sorbi S, Hort J, Erkinjuntti T, et al. EFNS-ENS Guidelines on the diagnosis and management of disorders associated with dementia. Eur J Neurol 2012;19(9):1159-1179. 4. American Geriatrics Society & A. Pomidor, Ed. (2016, January). Clinician's guide to assessing and counseling older drivers, 3rd edition. (Report No. DOT HS 812 228). Washington, DC: National Highway Traffic Safety Administration.

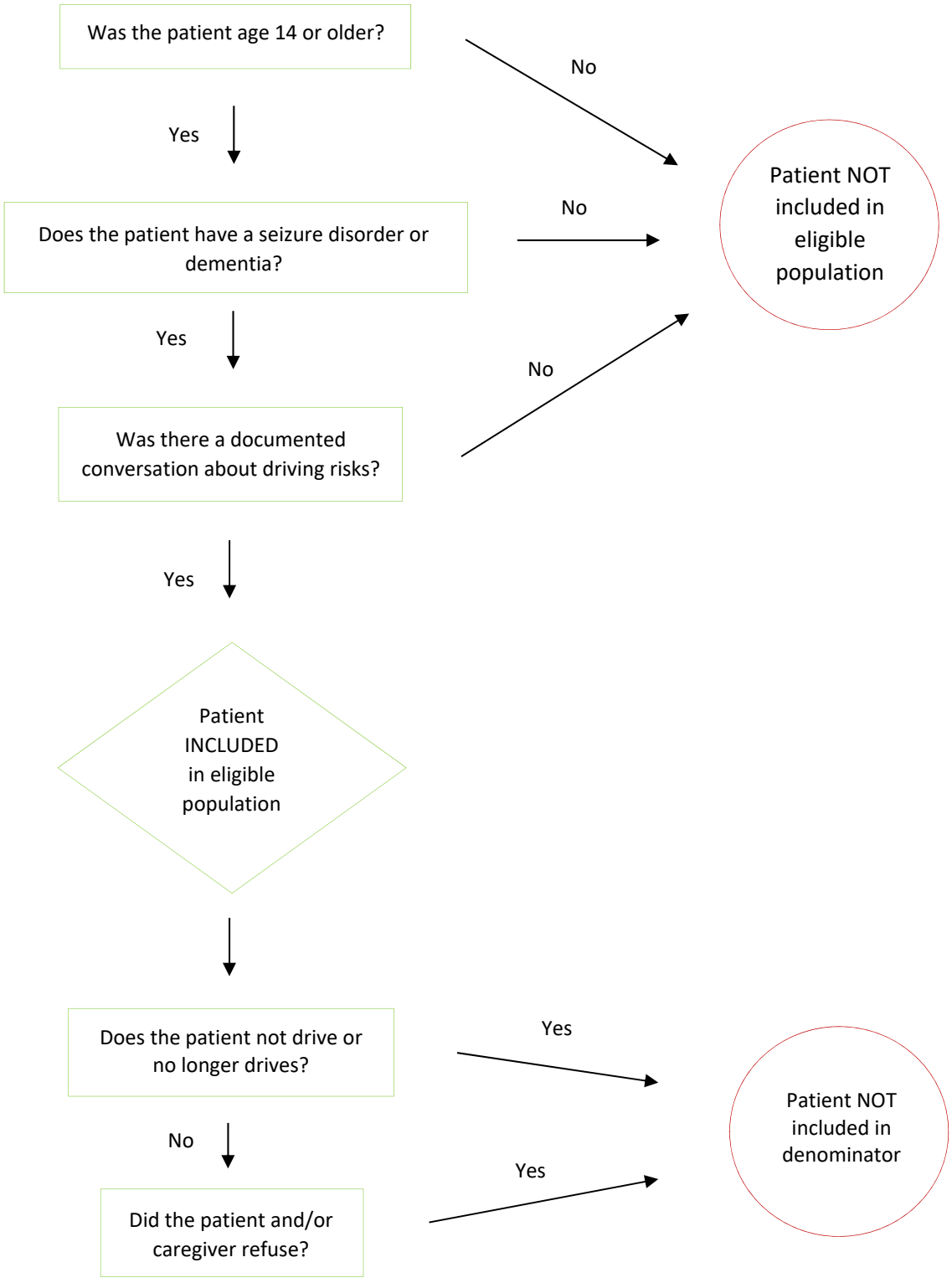
	5. Stav W. Occupational therapy practice guidelines for driving and community mobility for older adults. American Occupational Therapy Association; 2015. 158 p.

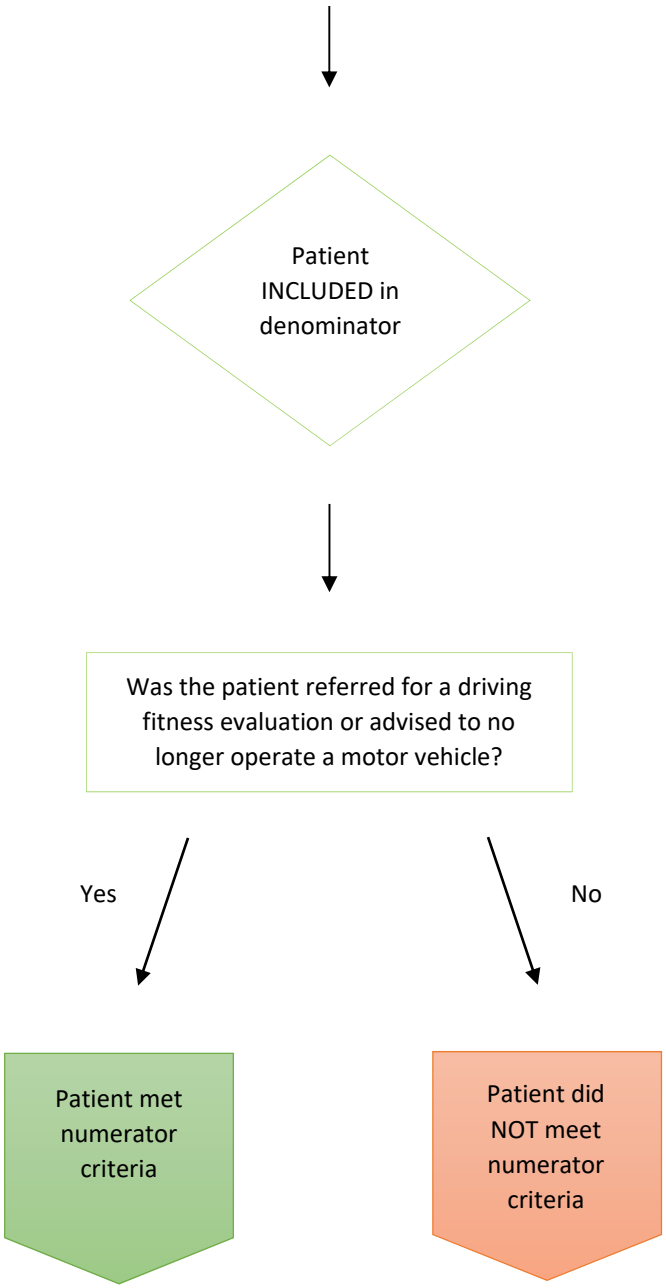
Flow Chart Diagram – Measure A





Flow Chart Diagram – Measure B





Code System	Code	Code Description
ICD-10-CM	G31.84	Mild cognitive impairment, so stated
ICD-10-CM	G31.9	Cerebral degeneration
ICD-10-CM	G30.0	Alzheimer's disease with early onset
ICD-10-CM	G30.1	Alzheimer's disease with late onset
ICD-10-CM	G30.8	Other Alzheimer's disease
ICD-10-CM	G30.9	Alzheimer's disease, unspecified
ICD-10-CM	G31.01	Pick's disease
ICD-10-CM	G31.09	Other frontotemporal dementia
ICD-10-CM	G31.1	Senile degeneration of brain, not elsewhere classified
ICD-10-CM	G31.2	Degeneration of nervous system due to alcohol
ICD-10-CM	G31.81	Alpers disease
ICD-10-CM	G31.82	Leigh's disease
ICD-10-CM	G31.83	Dementia with Lewy bodies
ICD-10-CM	G31.84	Mild cognitive impairment, so stated
ICD-10-CM	G31.85	Corticobasal degeneration
ICD-10-CM	G31.89	Other specified degenerative diseases of nervous system
ICD-10-CM	G31.9	Degenerative disease of nervous system, unspecified
ICD-10-CM	F01.50	Vascular dementia without behavioral disturbance
ICD-10-CM	F01.51	Vascular dementia with behavioral disturbance
ICD-10-CM	F03.90	Unspecified dementia without behavioral disturbance
ICD-10-CM	F03.91	Unspecified dementia with behavioral disturbance
ICD-10-CM	R41.8	Age related cognitive decline
ICD-10-CM	G40.A09	Absence epileptic syndrome, not intractable, without status epilepticus
ICD-10-CM	G40.A11	Absence epileptic syndrome, intractable with status epilepticus
ICD-10-CM	G40.A19	Absence epileptic syndrome, intractable, without status epilepticus
ICD-10-CM	G40.109	Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, not intractable, without status epilepticus
ICD-10-CM	G40.119	Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, intractable, without status epilepticus
ICD-10-CM	G40.209	Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures, not intractable, without status epilepticus
ICD-10-CM	G40.219	Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with complex partial seizures, intractable, without status epilepticus
ICD-10-CM	G40.309	Generalized idiopathic epilepsy and epileptic syndromes, not intractable, without status epilepticus OR G40.409 Other generalized epilepsy and epileptic syndromes, not intractable, without status epilepticus
ICD-10-CM	G40.319	Generalized idiopathic epilepsy and epileptic syndromes, intractable, with status epilepticus
ICD-10-CM	G40.419	Other generalized
ICD-10-CM	G40.822	Epileptic spasms, not intractable, without status epilepticus
ICD-10-CM	G40.824	Epileptic spasms, intractable, without status epilepticus

ICD-10-CM	G40.909	Epilepsy, unspecified, not intractable, without status epilepticus
ICD-10-CM	G40.919	Epilepsy, unspecified, intractable, without status epilepticus
CPT	99201-99205	Office or other outpatient visit – New patient (E/M codes)
CPT	99211-99215	Office or other outpatient visit – Established patient (E/M codes)
CPT	99241-99245	Office or other outpatient consultation – New or established patient
CPT	99221-99223	Initial hospital care 30, 50, or 70 minutes, per day, for the evaluation and management of a patient
CPT	99231-99233	Subsequent hospital care 15, 25, or 35 minutes, per day, for the evaluation and management of a patient
CPT	99291, 99292	Critical care, evaluation and management of the critically ill or critically injured patient; first 30-74 minutes, each additional 30 minutes

Appendix A AAN Statement on Comparing Outcomes of Patients

Why this statement: Characteristics of patients can vary across practices and differences in those characteristics may impact the differences in health outcomes among those patients. Some examples of these characteristics are: demographics, co-morbidities, socioeconomic status, and disease severity. Because these variables are typically not under the control of a clinician, it would be inappropriate to compare outcomes of patients managed by different clinicians and practices without accounting for those differences in characteristics among patients. There are many approaches and models to improve comparability, but this statement will focus on risk adjustment. This area continues to evolve (1), and the AAN will revisit this statement regularly to ensure accuracy, as well as address other comparability methods (2) should they become more common.

AAN quality measures are used primarily to demonstrate compliance with evidence-based and consensus-based best practices within a given practice as a component of a robust quality improvement program. The AAN includes this statement to caution against using certain measures, particularly outcome measures, for comparison to other individuals/practices/hospitals without the necessary and appropriate risk adjustment.

What is Risk Adjustment: Risk adjustment is a statistical approach that can make populations more comparable by controlling for patient characteristics (most commonly adjusted variable is a patient's age) that are associated with outcomes but are beyond the control of the clinician. By doing so, the processes of care delivered and the outcomes of care can be more strongly linked.

Comparing measure results from practice to practice: For process measures, the characteristics of the population are generally not a large factor in comparing one practice to another. Outcome measures, however, may be influenced by characteristics of a patient that are beyond the control of a clinician.(3) For example, demographic characteristics, socioeconomic status, or presence of comorbid conditions, and disease severity may impact quality of life measurements. Unfortunately, for a particular outcome, there may not be sufficient scientific literature to specify the variables that should be included in a model of risk adjustment. When efforts to risk adjust are made, for example by adjusting socioeconomic status and disease severity, values may not be documented in the medical record, leading to incomplete risk adjustment.

When using outcome measures to compare one practice to another, a methodologist, such as a health researcher, statistician, actuary or health economist, ought to ensure that the populations are comparable, apply the appropriate methodology to account for differences or state that no methodology exists or is needed.

Use of measures by other agencies for the purpose of pay-for-performance and public reporting programs: AAN measures, as they are rigorously developed, may be endorsed by the National Quality Forum or incorporated into Centers for Medicare & Medicaid Services (CMS) and private payer programs. 14

It is important when implementing outcomes measures in quality measurement programs that a method be employed to account for differences in patients beyond a clinicians' control such as risk adjustment.

References and Additional Reading for AAN Statement on Comparing Outcomes of Patients

1. Shahian DM, Wolf RE, Iezzoni LI, Kirle L, Normand SL. Variability in the measurement of hospital-wide mortality rates. N Engl J Med 2010;363(26):2530-2539. Erratum in: N Engl J Med 2011;364(14):1382.
2. Psaty BM, Siscovick DS. Minimizing bias due to confounding by indication in comparative effectiveness research: the importance of restriction. JAMA 2010;304(8):897-898.

3. National Quality Forum. Risk Adjustment for Socioeconomic Status or Other Sociodemographic Factors. August 2014. Available at: http://www.qualityforum.org/Publications/2014/08/Risk_Adjustment_for_Socioeconomic_Status_or_Other_Sociodemographic_Factors.aspx Accessed on January 8, 2015.
- Sharabiani MT, Aylin P, Bottle A. Systematic review of comorbidity indices for administrative data. Med Care. 2012;50(12):1109-1118.
- Pope GC, Kauter J, Ingber MJ, et al. for The Centers for Medicare & Medicaid Services' Office of Research, Development, and Information. Evaluation of the CMS-HCC Risk Adjustment Model. March 2011. Available at: http://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/downloads/evaluation_risk_adj_model_2011.pdf Accessed on January 8, 2015.

Appendix B Disclosures

Work Group Member	Disclosures
Wayne Anderson, MD, FAAN (Chair)	None
Jeffrey Buchhalter, MD, PhD, FAAN	Consultant services: UCB, Insys, Ultragenyx, Epilepsy Study Consortium Funded research: Child Neurology Foundation, PCORnet, Pediatric Epilepsy Research Foundation, Epilepsy Foundation, BAND Foundation
Rohit Das, MD, FAAN	Nothing to disclose.
Richard Dubinsky, MD, FAAN, MPH (Chair)	Nothing to disclose.
Justin Martello, MD (Facilitator)	Received personal compensation for consulting, serving on scientific advisory board, speaking, or other activities with Neurocrine and Medtronic.

Contact Information

For more information about quality measures please contact:

American Academy of Neurology
201 Chicago Avenue
Minneapolis, MN 55415
Phone: (612) 928-6100
Fax: (612) 454-2744

References

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. Various p.