

Summary of Quality Measurement Set for **CLINICIANS**

INPATIENT AND EMERGENCY QUALITY MEASUREMENT SET

This is a summary of the American Academy of Neurology's quality measurement set on inpatient and emergency care for patients with neurologic illnesses. Please refer to the full measurement set at AAN.com/practice/quality-measures for more information, including the complete set of measurement specifications. These measures use the following formulae to identify quality of care performance.

$$\text{Quality of Patient Care} = \frac{\text{patients who meet criterion}}{\text{(eligible population-exclusions)}}$$

Documentation of Brain Death

Measure Purpose: Ensure consistent application of brain-death determination guidelines to avoid misdiagnosis and promote family acceptance of diagnosis

To meet the measure: In patients that have been diagnosed with brain death, document that apnea testing or acceptable ancillary testing was performed in order to declare brain death

Numerator: Patients >37 weeks gestational age who died in the hospital with a diagnosis of brain death who had documentation of apnea testing* OR, if apnea testing not possible, documentation of an acceptable ancillary* test performed

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Result: Quality of care provided for patients diagnosed with brain death

Denominator: Patients >37 weeks gestational age who died in the hospital with a diagnosis of brain death

Reduction of Urinary Catheters Used for Patients with Neurologic Conditions

Measure Purpose: Reduce UTI prevalence in patients with neurologic conditions

To meet the measure: Have a protocol in place that contains a list of appropriate neurologic indications for catheter placement that should specifically include stroke and altered mental status

Numerator: The hospital has a protocol for rational urinary catheter use specifically in neurologically ill patients, including stroke and altered mental status*, that contains a list of appropriate indications for catheter placement. Efforts should be made to avoid usage of catheters in neurologically ill patients given their relationship with Catheter Associated Urinary Tract Infection (CAUTI)

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Result: Quality of care provided for patients with neurologic conditions

Denominator: All hospitals that care for patients with neurologic illnesses including stroke and altered mental status

*See full specifications for additional details at AAN.com/practice/quality-measures.

Delirium Risk Factor Screening and Preventative Protocol

Measure Purpose: Reduce the likelihood of longer inpatient treatment and increased treatment cost

To meet the measure: Institute a delirium preventative protocol for those patients greater than 18 years of age who are identified as high risk of developing delirium

Numerator: High risk[^] patients who had a preventative protocol* instituted

Result: Quality of care provided for patients with neurologic conditions

Denominator: All patients >18 years of age who are at high risk[^] of developing delirium

Exceptions:

- Diagnosis of delirium at time of, or prior to, admission
- Patient or family/caregiver refuses preventative protocol
- Unable to institute protocol for medical reasons

Non-Pharmacological Treatment of Delirium

Measure Purpose: Treatment of delirium with non-pharmacologic measures before medications

To meet the measure: Use non-pharmacological methods as a first-line measure to treat patients that develop delirium at inpatient facilities

Numerator: Patients who were treated initially with a non-pharmacological treatment*

Result: Quality of care provided for patients with delirium

Denominator: All patients admitted to an inpatient facility and who are diagnosed with delirium, not present on admission

Exceptions:

- Preexisting antipsychotic medication prescribed
- Drug intoxication or alcohol withdrawal
- Patient who is posing direct harm to self or others

Immunosuppressive Therapy for Myasthenic Crisis

Measure Purpose: Initiation of proper treatment promotes rapid recovery including weaning from mechanical ventilation, decreasing the likelihood of requiring tracheostomy, regaining functional independence

To meet the measure: Treat and document that patients who have a diagnosis of myasthenic crisis received timely immunosuppressive therapy using either plasmapheresis or IVIG

Numerator: Patients with myasthenic crisis that are given immunosuppressive therapies (PE or IVIG)

Result: Quality of care provided for patients with myasthenic crisis

Denominator: Patients admitted to inpatient facility with a diagnosis of myasthenic crisis

Exceptions:

- Patient has a previous history of severe systemic or anaphylactic response to IVIG
- Patient is known to have anti-IgA antibodies with selective IgA deficiencies
- Patient cannot tolerate central line placement
- Patient is actively septic or hemodynamically unstable
- Patient has an allergy to fresh frozen plasma or albumin
- Patient has a heparin allergy that prevents receiving heparin as an anticoagulant during plasmapheresis
- Patient with hypocalcemia
- Patients who refuse

*See full specifications for additional details at AAN.com/practice/quality-measures.

Status Epilepticus Identification and Seizure Cessation

Measure Purpose: Reduce morbidity and mortality for patients in status epilepticus

To meet the measure: Rapidly identify patients in generalized convulsive status epilepticus and treat with benzodiazepines.

Numerator: Patients in generalized convulsive status epilepticus rapidly* identified and treated with benzodiazepines

== **Result:** Quality of care provided for patients with status epilepticus

Denominator: Patients diagnosed with generalized convulsive status epilepticus

— **Exceptions:**

- Neonates
- Patient received benzodiazepines by emergency services prior to arrival at ED that resulted in SE resolving
- Patients with allergies or reaction to these types of drugs

Status Epilepticus Treatment with AED/Anti-seizure Medication

Measure Purpose: To stop status epilepticus and rapidly attain therapeutic levels of an AED/anti-seizure medication for maintenance therapy

To meet the measure: Treat patients older than 16 years of age that are in generalized convulsive status epilepticus with a non-benzodiazepine anti-seizure medication following or simultaneously with the administration of a benzodiazepine

Numerator: Patients in generalized convulsive status epilepticus rapidly* treated with non-benzodiazepine antiepileptic/anti-seizure medication following (or simultaneously ordered with) the administration of a benzodiazepine

== **Result:** Quality of care provided for patients with status epilepticus

Denominator: Patients aged 16 and older diagnosed with generalized convulsive status epilepticus

— **Exceptions:**

- Status epilepticus due to alcohol or benzodiazepine/barbiturate withdrawal
- Pediatric febrile SE patients
- Pediatric patient already prescribed an anti-epileptic medication

EEG for Status Epilepticus and Coma

Measure Purpose: Investigate nonconvulsive status epilepticus as cause of altered consciousness

To meet the measure: Conduct an EEG urgently on patients that remain in coma after experiencing generalized convulsive status epilepticus

Numerator: Patients with generalized convulsive status epilepticus who remain in coma should have urgent* EEG applied and interpreted

== **Result:** Quality of care provided for patients with status epilepticus

Denominator: Patients aged 16 and older with generalized convulsive status epilepticus that are in coma

*See full specifications for additional details at AAN.com/practice/quality-measures.

Discussion and Documentation of Advanced Directives

Measure Purpose: Engaging patients to develop care directives for those with life threatening illnesses

To meet the measure: Discuss and document the advanced care directives of adult patients with neurologic illnesses that are admitted to the hospital

Numerator: Patients with a neurologic condition admitted to the hospital who have documentation of advanced directives presence and a health care proxy OR documentation of a conversation to determine advanced directives and a durable power of attorney during the course of admission

== **Result:** Quality of care provided for patients with neurologic conditions

Denominator: Any adult patient with a primary neurologic diagnosis at the time of admission

Exceptions:

- Patients with new diagnosis at the time of admission
- Patients who are aphasic or otherwise unable to speak for self

Discussion and Documentation of Goals of Care

Measure Purpose: Engaging patients in treatment planning

To meet the measure: Discuss and document the goals of care for patients with primary neurologic illnesses that are admitted to the ICU

Numerator: Patients with a primary neurologic condition that are admitted to the intensive care unit (ICU) who have documentation of a goals of care discussion with patient or patient surrogate

== **Result:** Quality of care provided for patients with neurologic conditions

Denominator: Any patient with a primary neurologic condition admitted to the ICU

Exceptions:

- Elective admissions into the hospital
- Patients who are unable to verbalize or discuss the issue who have no surrogate decision maker

Treatment of Bacterial Meningitis

Measure Purpose: Ensure the rapid diagnosis and treatment of bacterial meningitis

To meet the measure: Patients older than 21 years of age that are suspected of having acute bacterial meningitis are given 10mg of dexamethasone intravenously before or with the first dose of antibiotics

Numerator: Patients >21 years of age where dexamethasone 10mg is given intravenously before or with the first dose of antibiotics in suspected acute bacterial meningitis

== **Result:** Quality of care provided for patients with suspected meningitis

Denominator: Patients with suspected acute bacterial meningitis

Exceptions:

- History of hypersensitivity to corticosteroids
- Treated with oral or parenteral antibiotics in the previous 48 hours
- Recent history of head trauma, neurosurgery
- CSF shunt

*See full specifications for additional details at AAN.com/practice/quality-measures.

Initiation of Treatment for GBS

Measure Purpose: Decrease the duration of functional impairment in Guillain-Barré Syndrome (GBS)

To meet the measure: Treat and document that patients who have been confirmed as having Guillain-Barré Syndrome received timely immunosuppressive therapy using either plasmapheresis or IVIG in an inpatient facility

Numerator: Patients admitted to an inpatient facility with GBS who are nonambulatory with documentation that immunosuppressive therapy using plasmapheresis (PE) or IVIG given and not prescribed corticosteroids

Result: Quality of care provided for patients with Guillain-Barré Syndrome

Denominator: Patients admitted to inpatient facility with confirmed diagnosis of GBS who are nonambulatory

Exceptions:

- Alternative diagnosis suspected and treated
- GBS refractory to first line treatments
- Patient has a previous history of severe systemic or anaphylactic response to IVIG
- Patient is known to have anti-IgA antibodies with selective IgA deficiencies
- Patient cannot tolerate central line placement
- Patient is actively septic or hemodynamically unstable
- Patient has an allergy to fresh frozen plasma or albumin
- Patient has a heparin allergy that prevents receiving heparin as an anticoagulant during plasmapheresis
- Patient with hypocalcemia
- Patients that are beyond four weeks of onset
- Patients who refuse

Inpatient and emergency care encompasses a wide array of conditions. No one measurement set is able to capture all the aspects of treatment needed for the diverse patients in these settings. As such, this measurement set does not address the whole scope of each condition or disease, nor all of inpatient and emergency neurology. In many instances, the set identified gaps in research that will hopefully lead in continued refinement in these metrics and others in the years to come.

*See full specifications for additional details at AAN.com/practice/quality-measures.

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Copies of this summary and additional companion tools are available at AAN.com or through AAN Member Services at (800) 879-1960.