

CLINICAL PRACTICE GUIDELINE FOR EMERGENCY DEPARTMENT MANAGEMENT OF NEW ONSET SEIZURE (NOS)

(CLICK HERE FOR RESCUE MEDICATIONS IN THE STATUS EPILEPTICUS GUIDELINE)

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Criteria

Inclusion

- Child >8 weeks old
- First recognized seizure-general or partial

Exclusion

- Child ≤ 8 weeks old
- Patient presenting with absence seizure or febrile seizure

Nursing Considerations

- Position to maintain airway
- Oxygen and suction set up at bedside; place patient on oxygen as needed to keep sats >93% (non-rebreather)
- Monitor: cardiac monitor, pulse ox & obtain full set VS
- Establish IV access if actively seizing

Rescue Medications

Admission Considerations

Non-Active/Post Seizure Management

Active Seizure

Follow **Status Epilepticus Clinical Practice Guideline** for rescue medication. Click [here](#) for the algorithm.

- Timeline starts when the seizure starts as witnessed by a provider
- If seizure stops, discontinue medication timeline and see Post-Seizure Management, Diagnostics, and Discharge.

CONSIDER OBS/GENERAL CARE

- <6 months old
- If CT negative and no other indicators for admission present it may not be necessary to admit this age group
- Administration of fosphenytoin (i.e. per guideline, patient has received 3 doses of medication)
- Sedated from medications
- Not at baseline or prolonged postictal phase
- Multiple seizures
- Diagnostic test results indicate intervention/observation needed

CONSIDER PICU

- Admission criteria met
- Patient does not return to baseline between seizure activity
- Frequency of seizure and pervasive seizure activity

PICU Admission Criteria

- Respiratory depression and/or concern for airway
- Refractory status epilepticus

- Seizure precautions-Policy 12.05
- If seizure activity recurs, proceed to Rescue Medications
- Monitor physiologic parameters
- Monitor until patient returns to baseline mental status
- Obtain labs and diagnostic evaluation if indicated
- Consider starting antiepileptic therapy if there are risk factors for recurrence (see Consult Neurology section below)
- Evaluate if patient meets discharge criteria

Cardiac Monitoring

Imaging*

Labs

Diagnostics

Obtaining EKG is recommended when:

- Cardiac etiology suspected as cause of seizure;
- Exercise induced seizure; and/or
- Family history of sudden cardiac death <50 years old

For NOS, MRI is preferred modality and may often be done as outpatient. Emergent MRI usually does not change the treatment plan for NOS.

Considerations for Emergent CT without contrast

- Abnormal neuro exam
- Closed head injury
- Non-accidental trauma
- <3 years old with focal onset of seizure
- Underlying condition concern for intracranial pathology
- <6 months old
- Malignancy
- Neurocutaneous disorder
- VP shunt present*

CT scan is not routinely necessary if patient has:

- No underlying conditions suggesting concern for intracranial pathology; AND
- Returned to baseline mental status; AND,
- Non focal physical exam

After 6 months of age in previously healthy children who have returned to baseline, yield of laboratory screening with new onset unprovoked seizure is very low. However, if clinically indicated, consider the following:

- CBC, CMP
- POC CG8; toxicology screen
- Lumbar Puncture **if** patient has signs/symptoms of meningitis or encephalopathy

Discharge Criteria

Discharge Home Orders

Discharge

- Recovered from seizure
- Returned to baseline mental status
- Results of diagnostic tests (if obtained) do not require ongoing intervention
- Consider parent/caregiver anxiety and ability to understand education

- Patient to follow up with PCP
- Patient is eligible to follow-up at NOS clinic: 404-785-KIDS (5437)
 - Eligible since seen in ED and if patient does not have a PCP or it has been over 12 months since seen
 - Optimal to have EEG within 3 days, if possible
 - EEG and clinic visit can be scheduled by NOS clinic during initial call
- Consider or Prescribe rectal diazepam/Diastat and education
 - ≤5 years and ≥5kg: 0.5mg/kg
 - ≥12 years: 0.2mg/kg
 - 6-11 years: 0.3mg/kg
 - **Max Dose:** 20mg
- Provide Seizure Education

Consult Neurology

Seizure Education

Imaging*

Special Considerations

- If considering antiepileptic therapy and associated with a risk factor:
 - Remote symptomatic seizures
 - Family history of seizure disorder
 - Predisposing condition such as autism; cerebral palsy; moderate to severe developmental delay
- Consideration for admission
- Status epilepticus requiring multiple medications
- Abnormal exam
- Abnormal imaging

- Videos on Demand: Seizure First-Aid Diastat Teaching (if prescribed at discharge)
- Teaching Sheets NOS Seizure Rectal diazepam/diastat

- Order an Emergent CT scan when a VP shunt is present *with* other signs concerning for shunt infection or malfunction are present
- Please note, a brief generalized seizure, in isolation, is not highly suggestive of a shunt malfunction