



# Portage County EMS Patient Care Guidelines



## Seizures

### Note:

- Whenever seizures occur, look for an underlying cause and treat it. This is especially important if there is no previous history of epilepsy.
- If the patient is pregnant or recently (1 – 2 weeks) post-partum, refer to the *Obstetrical Emergencies Guidelines*.
- Status epilepticus is defined as a seizure lasting longer than 5 minutes, or recurring seizures without a return to baseline neurological status. This is a life-threatening emergency!
- Pseudo-seizures look like seizures, but are actually a behavioral disturbance characterized by intermittent spells of non-epileptic convulsions that are usually involuntary. They are frequently misdiagnosed as epilepsy and often treated with anti-epilepsy drugs for a long time, before the true nature of the attacks is revealed.

| Priorities            | Assessment Findings   |
|-----------------------|---|
| Chief Complaint       | "Seizure" "Unresponsive" "Convulsions"  |
| LOPQRST               | How long did it last? Description of seizure activity. History of seizures? Possible contributing factors[1]  |
| AS/PN                 | Unresponsive, postictal, incontinent, tongue biting?  |
| AMPL                  | History of seizures, Seizure medications?   |
| Initial Exam          | ABC's and correct any immediate life threats  |
| Detailed Focused Exam | <b>Scene size-up:</b> Is there a significant mechanism of injury? Fall?<br><b>General Appearance:</b> Pt. currently seizing? Unresponsive? Postictal? Evidence of trauma?<br><b>Vitals:</b> BP, HR, RR, Temp, SpO <sub>2</sub> , ETCO <sub>2</sub><br><b>Skin:</b> Flushed, warm<br><b>Neuro:</b> ALOC?, Focal deficits (CVA) |
| Data                  | Blood Glucose, SpO <sub>2</sub> , ETCO <sub>2</sub>   |
| Goals of Therapy      | Stop the seizure<br>Treat the underline cause<br>Monitor and maintain airway.   |
| Monitoring            | Vitals, cardiac monitoring, SpO <sub>2</sub> , neurological checks  |

### EMERGENCY MEDICAL RESPONDER/ EMERGENCY MEDICAL TECHNICIAN

- Routine medical care
- Consider nasopharyngeal airway if the patient is unable to maintain a patent airway
- Protect the patient with ongoing seizures from harming themselves by clearing away potential hazards and placing a pillow or padding under the head.
- Administer oxygen 2 – 4 LPM per nasal cannula if SpO<sub>2</sub> < 94%. Increase flow and consider non-rebreather mask to keep SpO<sub>2</sub> > 94%
- Initiate spinal immobilization if the patient sustained a fall or any other trauma to the head, neck or back
- Obtain blood glucose. If < 60 mg/dL refer to *Altered Level of Consciousness Guidelines*

**Give a status report to the ambulance crew by radio ASAP.**

## ADVANCED EMERGENCY MEDICAL TECHNICIAN

- IV normal saline @ KVO

*Contact Medical Control for the following:*

- Additional fluid orders

## INTERMEDIATE

- If the patient is actively seizing, give **midazolam** intranasal (IN) via mucosal atomizer.
  - >50 kg: 10 mg IN
  - <50 kg: 0.2 mg/kg IN
- If IN administration is not possible, consider **midazolam** 1 – 5 mg (PEDS 0.1 mg/kg) IM[3]
- Once an IV has been established, consider **midazolam** 1 – 5 mg (PEDS 0.1 mg/kg) IV/IO for continued seizures
- Titrate IV dose to effect. May repeat once in 5 minutes. Maximum total dose 10 mg

*Contact Medical Control for the following:*

- Additional midazolam doses
- Persistent seizures

## PARAMEDIC

- Consider **lorazepam** 1 – 2 mg (PEDS 0.1 mg/kg) IV/IO/IM if the patient is still seizing after the maximum dose of midazolam has been given
  - May repeat every 5 min until seizures stop. Maximum dose 5 mg

*Contact Medical Control for the following:*

- Persistent seizures (additional doses of lorazepam or midazolam)
- There appears to be a need for RSI/RSA [2]. Note: Once the patient is paralyzed, muscular convulsions will cease, but occult CNS seizure activity may persist. Therefore, you must repeat doses of midazolam or lorazepam every 5 minutes under the assumption of ongoing seizure activity.

## FOOTNOTES:

[1] The causes of seizures include: epilepsy, eclampsia, hypoglycemia, hypoxia, drug or alcohol withdrawal, drug overdose, stroke and head trauma.

[2] RSI/RSA requires 2 qualified paramedics at the patient's side

[3] In the event of a midazolam medication shortage:

- a. Lorazepam 1 – 2 mg adults (PEDS 0.1 mg/kg) IM/IN/IV/IO or
- b. Diazepam 1 – 10 mg adults (PEDS 0.1 mg/kg) IM/IV/IO.

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