North Carolina Department Of Correction
Division Of Prisons

SECTION: Chronic Disease Guidelines

POLICY # CD-6

SUBJECT: Seizures

EFFECTIVE DATE: January 2009
SUPERCEDES DATE: None

References

Related ACA Standard **4th Edition Standards for Adult Correctional Institutions 4-4359**

PURPOSE

To assure that DOP inmates with Seizures are receiving high quality Primary Care for their condition.

POLICY

All DOP Primary Care Providers and Chronic Disease Nurses are to follow these guidelines when treating inmates with this chronic disease. Deviations from these guidelines are permissible only on a case by case basis. When deviations are made they must be clearly documented in the medical record along with a clear explanation of the rationale for the deviation.

PROCEDURE

SEIZURES

(Document care on Seizure Flow Chart, DC-)

I. ***Initial evaluation:*** May be done by Chronic Disease Nurse (CDN) at the first housing assignment after processing. It should be completed within 10 working days of arrival at the first housing assignment. If stable should see MD/PA within 60 days of the initial evaluation by CDN, if new diagnoses or unstable must see MD/PA within 10 days.

- **A. Vital Signs:** Blood pressure, height and weight without shoes, determine BMI.
- **B. History of Present Illness:** When was their last seizure; if having seizures - how often, what type, how severe, etc.; any current symptoms or side effects; compliance with medication. If this is their first seizure try to get a detail description of the event from witnesses. Nervous System ROS – Ask if they are having any weakness, loss of sensation (numbness), dizziness/vertigo, loss of balance, or any other changes in sensation.
- **C. Seizure History:** When first diagnosed, the cause of their seizures, previous medications and/or treatments, any previous problems with medications, any surgery or hospitalizations. History of other neurological problems, or mental illnesses.
- **D. Social History:** Smoking, alcohol use, elicit drug use, occupation/educational back ground.
- **E. Family History:** Seizures, other neurological diseases, or mental illness in first or second-degree relatives.
- **F. Physical Exam:** Comprehensive neurological, plus any other areas of concern identified from history.
- **G. Educate:** Usually it is best to discuss only one or two issues at a single visit. The following areas should be covered (listed in order of importance).
  1. **Medication compliance:** Stress that failure to take their seizure medications could result in a reoccurrence of their seizures.
  2. **Medication side effects:** Use Central Pharmacy Patient Information sheet as a guide.
  3. **Seizure precautions:** If they have had a seizure or change in medication in the past 3 – 6 months caution about driving, heights, or dangerous machinery.
  4. **Dental hygiene:** If on Phenytoin, encourage them to brush and floss daily and to have teeth cleaned q 6 months to help prevent gum hyperplasia (side effect of Phenytoin).
- **H. Evaluation and treatment:**
  1. **New Diagnosis:** Evaluation by and/or phone consult with MD/P within 24 hours

a. History: Is it a seizure? The suspected seizures are often confused with psuedoseizures and/or syncope. The following are the typical characteristics of each:

1. Seizures:

a. Abrupt onset
b. Last 90 to 120 seconds, except in status
c. Altered level of consciousness
d. Purposeless involuntary activity
e. Accompanied by a postictal state and amnesia regarding the event
f. Are paroxysmal and stereotypic

2. Pseudoseizures:

a. Overly dramatic event with immediate return of normal mental function
b. Normal prolactin levels within 30 minutes of pseudoseizure (prolactin levels are elevated <30 minutes post seizure, except in simple partial seizures)
c. Lack of any injury

3. Syncope:

a. May have repetitive clonic, myoclonic or dystonic movements but usually last only 5 – 10 seconds
b. No progression from clonic to tonic activity
c. No postictal phase, tongue biting, incontinence

b. Studies:

1. Laboratory: CBC, BMP, hepatic panel
2. MRI
3. EEG: Awake and sleep deprived
4. Other studies should be based on history and physical findings

2. Established diagnosis

a. Stable: No seizures or change in medications in past 6 months along with no or tolerable side effects

1. Labs: Hepatic panel; no other tests indicated, other tests usually not needed on a routine basis
2. Continue present medication and dosing

b. Unstable: Does not meet criteria above

1. Labs:

a. Hepatic panel
b. Drug level: Maybe helpful to access compliance, however should not be the primary determinant of therapy changes. If not having side effects even those with levels above the usual therapeutic range can have their medication cautiously increased.

2. Adjust therapy:

a. Increase current medication if not having side effects and compliance is not a concern.
b. Consider DOT if compliance is a concern.
c. Change to another drug and taper off current drug

3. Treatment:

a. Is it needed?

1. New diagnosis: Patients with normal MRI and EEG after a single seizure in one study had only a 12% risk of a recurrence, those with nonspecific abnormalities on EEG had a 41% risk, and those with epileptiform abnormalities had an 83% risk. Most recurrences occur in the first 3 to 12 months.

2. Established diagnosis: Offer a trial off therapy to patients as follows:

a. Low risk for recurrence: 2 – 3 years seizure free

1. Control was quickly obtained on the first and only drug
2. No abnormalities on EEG
3. Generalized absence

4. Provoked seizures

b. High risk for recurrence: After 5 years of seizure free
1. Control was difficult to obtain
2. Multiple medications
3. Associated neurological abnormalities
4. Abnormalities on EEG
5. Frequent generalized seizures
6. Multiple seizure types

c. Discounting therapy: If patient requests a trial off medications:
1. Taper medication slowly over 2 - 6 months
2. 50% of relapses occur during withdrawal of medications and 80% within first year after discounting medication.
3. If relapse occurs restart medication at the original dosage

b. Initiate treatment if indicated:
1. Treatment should usually be with a single agent which is gradually increased until either control or side effects occur.
2. If the initial choice does not achieve control a second agent should be started and the first agent tapered and stopped.
3. Usually at least three individual agents should be tried before starting combination therapy

c. Recommended medications: Start only on MD/P order
1. **Primary generalized tonic-clonic** (Grand Mal):
   a. **Valproate:** Usually best tolerated, and best agent to try first
   b. **Carbamazepine**
   c. **Phenytoin**
2. **Partial, including secondary generalized:**
   a. **Carbamazepine or Phenytoin:** Both are equally effective and have similar side effect profile
   b. **Valproate:** Good choice in woman on birth control pills since it does not affect their metabolism like most other seizure medications

I. PULHEAT: Redo PULHEAT based on the PULHEAT guidelines for seizures.

II. ***Follow-up visits:***

A. Frequency:
1. **Stable:**
   a. **Nurse:** q 6 months
   b. **MD/PE:** q 12 months (after initial evaluation)
2. **Unstable/new diagnosis**
   a. **MD/PE:**
      1. If initial visit is with RN then first follow up should be within 10 days
      2. If initial visit is with MD/PA then follow up should be in 15 – 30 days
      3. Thereafter every 3 months until stable
   b. **RN:** q monthly until stable

B. Vital signs: Blood pressure, height and weight without shoes, determine BMI.

C. Interval history: Ask about the following:
1. **Compliance with medications/ medication side effects**
2. **Seizure activity:** Ask if there has been any seizures or "spells" since last visit. If so obtain a detailed description of what the patient is experiencing before, during and after each event (and/or from witnesses); how often they are occurring; and if there are any precipitating factors and/or if they had missed any doses of their medicine prior to having the seizure.
3. **Nervous System review of systems:** Ask if they are having any weakness, loss of sensation (numbness), dizziness/vertigo, loss of balance, or any other changes in sensation.

4. **Other problems –** Ask if they are having any other problems/symptoms, or if their seizures and/or treatment is interfering with their job/school assignments.
5. **Health habits –** Ask about smoking, exercise, dental hygiene

D. **Labs/EKG:**
1. **Hepatic panel –** annual if on medications
2. **Drug levels –** *NO ROUTINE LEVELS.* Indicated only if patient is having side effects or seizures uncontrolled.

E. Education: Review topics that have not previously been discussed and/or ones that are on going. Limit to one or two topics per visit.

F. Referral: If being seen by Chronic Disease Nurse, refer to or discuss with MD/PE any patient who is having new problems or side effects and/or decreasing control of their seizures.

G. PULHEAT: Review their current rating and update as indicated. See PULHEAT guidelines for seizures for guidance. *PULHEAT IS TO BE REEVALUATED AT EVERY FOLLOW UP VISIT.*

1/13/2010

Paula Y. Smith, MD, Director of Health Services Date

SOR: Deputy Medical Director