



## Complete Summary

---

### GUIDELINE TITLE

Acute seizures and seizure disorder.

### BIBLIOGRAPHIC SOURCE(S)

Texas Tech University Managed Health Care Network Pharmacy & Therapeutics Committee. Acute seizures and seizure disorder. Conroe (TX): University of Texas Medical Branch Correctional Managed Care; 2003 Apr. 4 p. [6 references]

### GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Texas Tech University Managed Health Care Network Pharmacy & Therapeutics Committee. Acute seizures and seizure disorders. Conroe (TX): Texas Department of Criminal Justice, University of Texas Medical Branch; 1998 Mar. 4 p.

### \*\* REGULATORY ALERT \*\*

### FDA WARNING/REGULATORY ALERT

**Note from the National Guideline Clearinghouse:** This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- [December 12, 2007, Carbamazepine](#): The U.S. Food and Drug Administration (FDA) has provided recommendations for screening that should be performed on specific patient populations before starting treatment with carbamazepine.

### COMPLETE SUMMARY CONTENT

\*\* REGULATORY ALERT \*\*

SCOPE

METHODOLOGY - including Rating Scheme and Cost Analysis

RECOMMENDATIONS

EVIDENCE SUPPORTING THE RECOMMENDATIONS

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

QUALIFYING STATEMENTS

IMPLEMENTATION OF THE GUIDELINE

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT

CATEGORIES

IDENTIFYING INFORMATION AND AVAILABILITY

DISCLAIMER

## SCOPE

### **DISEASE/CONDITION(S)**

- Acute seizures
- Seizure disorder (simple partial, complex partial, generalized tonic-clonic, absence)

### **GUIDELINE CATEGORY**

Evaluation  
Treatment

### **CLINICAL SPECIALTY**

Emergency Medicine  
Family Practice  
Internal Medicine  
Neurology

### **INTENDED USERS**

Health Care Providers  
Physicians

### **GUIDELINE OBJECTIVE(S)**

To provide appropriate recommendations for the evaluation and treatment of acute seizures and seizure disorder

### **TARGET POPULATION**

Incarcerated offenders within the Texas Department of Criminal Justice with acute seizures or seizure disorder

### **INTERVENTIONS AND PRACTICES CONSIDERED**

#### **Evaluation**

1. Observation of seizure activity
2. Vital signs
3. Electrocardiograph (EKG) monitoring
4. Laboratory evaluations: glucose finger stick; venous samples for glucose, chemistries, hematology parameters, toxicology screens, and antiepileptic drug levels; determination of oxygenation with oximetry or arterial blood gases

#### **Treatment**

1. Oxygen administration

2. Administration of:
  - Glucose
  - Thiamine
  - Oral antiepileptic drugs (AED) (formulary agents: carbamazepine, phenytoin, primidone, valproic acid, ethosuximide; non-formulary agents: gabapentin, lamotrigine, phenobarbital, topiramate, tiagabine, clonazepam)
  - Lorazepam
  - Diazepam
3. Evaluation of responses to medications and subsequent medication adjustments as appropriate
4. Neurology consult as indicated

#### **MAJOR OUTCOMES CONSIDERED**

Not stated

### **METHODOLOGY**

#### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Searches of Electronic Databases

#### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

Not stated

#### **NUMBER OF SOURCE DOCUMENTS**

Not stated

#### **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Not stated

#### **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

Not applicable

#### **METHODS USED TO ANALYZE THE EVIDENCE**

Review

#### **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

#### **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Not stated

## **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

## **COST ANALYSIS**

A formal cost analysis was not performed and published cost analyses were not reviewed.

## **METHOD OF GUIDELINE VALIDATION**

Not stated

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

Not applicable

# **RECOMMENDATIONS**

## **MAJOR RECOMMENDATIONS**

The major recommendations are provided in the form of algorithms for: [Acute Seizures](#) and [Seizure Disorder](#).

### **Seizure Disorder**

#### **Most Commonly Used Drugs for Specific Seizure Disorders**

Begin treatment with single drug using recommended initial daily dosing. Up to 80% of patients can be managed with monotherapy. Ensure proper medication adherence prior to modifying regimen. Refer to the original guideline document for formulary and non-formulary agents used in the treatment of seizure disorders.

#### **Monitoring Parameters for Formulary Anticonvulsant Medications**

##### Carbamazepine

- Complete blood count (CBC) with platelets at baseline, then twice monthly first two months, and annually or as clinically indicated
- Blood chemistries with emphasis on hepatic and renal function and electrolytes at baseline, then at one month, and annually or as clinically indicated
- Electrocardiogram (EKG) at baseline for patients >40 years old and as clinically indicated
- Carbamazepine level weekly for two weeks, then at one month and annually or as clinically indicated

### Phenytoin

- CBC at baseline and as clinically indicated
- Blood chemistries with emphasis on hepatic and renal functions at baseline, annually and as clinically indicated
- EKG at baseline for patients >40 years old and as clinically indicated
- Phenytoin level in one week, then in one month, and annually or as clinically indicated

### Valproic Acid

- CBC with platelets at baseline, then twice monthly first two months, and annually or as clinically indicated
- Blood chemistries with emphasis on hepatic function at baseline, then at one month, and annually or as clinically indicated
- Protome, international normalized ratio (INR), partial prothrombin time (PPT) at baseline and annually
- Valproic acid level weekly for two weeks, then annually or as clinically indicated

### **CLINICAL ALGORITHM(S)**

Algorithms are provided for:

- [Acute Seizures](#)
- [Seizure Disorder](#)

## **EVIDENCE SUPPORTING THE RECOMMENDATIONS**

### **TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

The guideline was adapted from the following sources:

McAuley JW, Biederman TS, Smith JC, Moore JL. Newer therapies in the treatment of epilepsy. *Ann Pharmacother* 2002; 36:119-29.

Anderson GD, Miller JW. The newer antiepileptic drugs: Their collective role and defining characteristics. *Formulary*. 2001; 36:114-31.

Baker GA, Camfield P, et al. Commission on the outcome measurement in epilepsy, 1994-1997: final report. *Epilepsia*. 1998; 39:213-31.

Quality Standards Subcommittee of AAN. Practice parameter: a guideline for discontinuing antiepileptic drugs in seizure-free patients – summary statement. *Neurology*. 1996; 47:600-2.

Working Group on Status Epilepticus, Treatment of Convulsive Status Epilepticus. *JAMA*. 1993; 270:854-859

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

Appropriate evaluation and treatment of acute seizures and seizure disorder

### POTENTIAL HARMS

Adverse effects of drugs

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

The pathways do not replace sound clinical judgment nor are they intended to strictly apply to all patients.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

### IMPLEMENTATION TOOLS

Clinical Algorithm

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Getting Better  
Living with Illness

### IOM DOMAIN

Effectiveness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Texas Tech University Managed Health Care Network Pharmacy & Therapeutics Committee. Acute seizures and seizure disorder. Conroe (TX): University of Texas Medical Branch Correctional Managed Care; 2003 Apr. 4 p. [6 references]

## **ADAPTATION**

The guideline was adapted from the following sources:

McAuley JW, Biederman TS, Smith JC, Moore JL. Newer therapies in the treatment of epilepsy. *Ann Pharmacother* 2002; 36:119-29.

Anderson GD, Miller JW. The newer antiepileptic drugs: Their collective role and defining characteristics. *Formulary*. 2001; 36:114-31.

Baker GA, Camfield P, et al. Commission on the outcome measurement in epilepsy, 1994-1997: final report. *Epilepsia*. 1998; 39:213-31.

Quality Standards Subcommittee of AAN. Practice parameter: a guideline for discontinuing antiepileptic drugs in seizure-free patients – summary statement. *Neurology*. 1996; 47:600-2.

Working Group on Status Epilepticus, Treatment of Convulsive Status Epilepticus. *JAMA*. 1993; 270:854-859

## **DATE RELEASED**

1998 Mar (revised 2003 Apr)

## **GUIDELINE DEVELOPER(S)**

University of Texas Medical Branch Correctional Managed Care - Academic Institution

## **SOURCE(S) OF FUNDING**

University of Texas Medical Branch Correctional Managed Care

## **GUIDELINE COMMITTEE**

Texas Tech University Managed HealthCare Network Pharmacy & Therapeutics Committee

## **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

Not stated

## **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Not stated

## **GUIDELINE STATUS**

This is the current release of the guideline.

This guideline updates a previous version: Texas Tech University Managed Health Care Network Pharmacy & Therapeutics Committee. Acute seizures and seizure disorders. Conroe (TX): Texas Department of Criminal Justice, University of Texas Medical Branch; 1998 Mar. 4 p.

## **GUIDELINE AVAILABILITY**

Print copies: Available from University of Texas Medical Branch (UTMB), 3009A HWY 30 West, Huntsville, TX, 77340.

## **AVAILABILITY OF COMPANION DOCUMENTS**

None available

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This summary was updated by ECRI on April 21, 2004. This summary was updated by ECRI on November 16, 2006, following the FDA advisory on Lamictal (lamotrigine). This summary was updated by ECRI Institute on January 10, 2008, following the U.S. Food and Drug Administration advisory on Carbamazepine.

## **COPYRIGHT STATEMENT**

This NGC summary is based on the original guideline, which is subject to the guideline developer's copyright restrictions.

## **DISCLAIMER**

### **NGC DISCLAIMER**

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at <http://www.guideline.gov/about/inclusion.aspx>.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

© 1998-2008 National Guideline Clearinghouse

Date Modified: 11/3/2008

