



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
- Prottime, 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

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ADAPTATION

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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

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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.

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Date Modified: 9/29/2008

