Medication Audit Criteria and Guidelines

Lamotrigine (Lamictal®)

PEFC Approved: February 2024

Indications

The PEFC acknowledges that there may be additional off-label indications that have supporting evidence for efficacy that are not listed below. If a medication is prescribed for an off-label indication, documentation in the patient chart is recommended.

Label:

- Bipolar disorder (maintenance therapy)
- Lennox-Gastaut syndrome (adjunctive therapy)
- Primary generalized tonic-clonic epileptic seizures (adjunctive therapy)
- Focal onset epileptic seizures (monotherapy or adjunctive therapy)

Off Label:

- Bipolar disorder, depressive episode (acute treatment)
- Trigeminal neuralgia
- Other seizure types

Black Box Warning

Serious and sometimes fatal rashes (including Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis) have been caused by lamotrigine. Lamotrigine should be discontinued at the first sign of rash, unless the rash is clearly not drug related. Pediatric patients have a higher risk of experiencing these rashes. Other factors that may increase the risk of rash associated with lamotrigine include coadministration with valproate, exceeding the recommended initial dose of lamotrigine, or exceeding the recommended dose escalation for lamotrigine.

Contraindications

Hypersensitivity to lamotrigine or any component of the product

Warnings and Precautions

- Abrupt discontinuation and risk of seizure

- Accumulation in the eye or other melanin-rich tissues
- Breastfeeding
- Cognitive or motor impairment
- Concomitant use of other sodium channel blockers
- Concomitant use of valproate (including valproic acid and divalproex)
- False-positive rapid urine drug screen (particularly phencyclidine, i.e., PCP)
- Hepatic impairment or history of liver disease
- History of structural or functional heart disease
- Preexisting allergy to other antiepileptic drugs
- Pregnancy
- Status epilepticus
- Sudden unexplained death in epilepsy
- Suicidal behavior or ideation

Adverse Reactions

Not all-inclusive list, see: Lexicomp, Micromedex for more information.

- Side effects with incidence >5% or greater than placebo:
  - Abnormal dreams, agitation, anxiety, irritability
  - Dermatologic reactions, including rash
  - Drowsiness, dizziness, fatigue, insomnia
  - Dysmenorrhea
  - Myalgias, back pain
  - Nausea, vomiting, diarrhea, dyspepsia, or abdominal discomfort
  - Pain in throat, rhinitis, cough
- Serious adverse reactions:
  - Aseptic meningitis
  - Blood dyscrasias (including neutropenia, anemia, leukopenia, pancytopenia, thrombocytopenia, aplastic anemia, and pure red cell aplasia)
  - Hemophagocytic lymphohistiocytosis with severe inflammation throughout the body
  - Liver failure
  - Multiorgan hypersensitivity reactions, including fatal and irreversible cases
  - Slowed ventricular conduction (wide QRS), cardiac arrhythmias, and possible sudden death
  - Stevens-Johnson syndrome/toxic epidermal necrolysis

Drug Interactions of Major Significance

See: Indiana Univ Drug Interaction Table

See: Lexicomp and Micromedex

Special Populations

- Pediatrics/Adolescents
  - See "Psychotropic Medication Utilization Parameters for Children and Youth in Texas Public Behavioral Health: Medication Tables (7th Version) 2023" for specific details.
  - Pediatric patients are at increased risk of developing a rash from lamotrigine use.
- Geriatric
  - Antiepileptics are included the Beers Criteria.
  - Avoid use in older adults with a history of falls or fractures (unless used for seizure or mood disorders) as antiepileptics may cause syncope, impaired psychomotor function or ataxia.
  - The use of any combination of ≥3 CNS-active drugs increases the risk of falls and fracture. Antiepileptics are considered CNS-active drugs.
- Hepatic
  - Mild impairment: No dosage adjustment necessary.
  - Moderate to severe impairment without ascites: Decrease initial, escalation, and maintenance doses by ~25%; adjust according to clinical response and tolerance.
  - Moderate to severe impairment with ascites: Decrease initial, escalation, and maintenance doses by ~50%; adjust according to clinical response and tolerance.
- Renal
  - No dose adjustment necessary in mild to severe renal impairment.
- Hemodialysis
  - No dose adjustment necessary.
  - Slightly dialyzable; supplemental doses are generally not required.
- Pregnancy and Breastfeeding
  - See Warnings and Precautions.
  - Review product-specific labeling. Consider risks/benefits in reviewing medication-specific labeling.

Patient Monitoring Parameters

Baseline Tests:

- Pregnancy test (females)
- CBC with differential
- Renal function
- Hepatic function
- ECG for the following patients:
  - ≥60 years of age

- <60 years of age on a concurrent sodium channel blocker or cardiac conduction-impairing substance, or those with a known cardiac disease or major cardiovascular risk factors

Ongoing Tests:

- Pregnancy test (females) as clinically indicated
- CBC with differential as clinically indicated
- Renal function as clinically indicated
- Hepatic function as clinically indicated
- ECG for the following patients:
  - Repeat in at-risk patients (i.e., those who required a baseline ECG) once target dose is achieved
  - Sudden onset syncope or presyncope without clear cause

Dosing

- See HHSC Psychiatric Drug Formulary for dosage guidelines.
- If a medication is prescribed at dosages in excess of the Psychotropic Dosage Guidelines found in the HHS Psychiatric Drug Formulary, documentation in the patient chart is recommended.
- If a medication identified as reserve status in the HHS Psychiatric Drug Formulary, documentation of justification and adherence to the guidelines for use is recommended.