Figure 1. Algorithm for Diagnosis and Management of Alterations in Mental Status

ALTERED MENTAL STATUS

MANAGE THE ABCs

Consider C-spine immobilization if trauma

Consider DON'T, Electrocardiogram

DOES THE PATIENT HAVE ANY OF THE FOLLOWING?
- Fever
- General malaise
- Murmurs/endocarditis stigmata
- Headache/meningismus

YES → Consider infectious causes (See Table 4) Consider head CT, LP → **Normal**

NO

Physical exam: Toxidromes present? See Tables 1 & 2

NEURAL EXAMINATION FOCAL?
- Pupils: unequal
- Motor response: asymmetric
- Ocular movements: abnormal

NO ← ← → **YES** → **DOES THE PATIENT RESPOND TO THE FOLLOWING?**
- Anticholinergic
- Sympathomimetic
- Opioid
- Withdrawal
  See Table 2 for management/antidotes

NO → **NO**

YES (left) **Consider structural causes**
- stroke
- hemorrhage
- space-occupying lesion
  See Table 4

Consider Toxic-Metabolic

YES (right)
- Supportive treatment
- Re-evaluate

Coma

Toxic:	Non-Toxic
• Tricyclic antidepressants • Benzodiazepines • Alcohols • Barbiturates • GHB • Carbon monoxide • Cyanide • Lithium • Sulfonylureas • Insecticides • Warfare agents like sarin, tabun, soman, VX • Isoniazid	• TTP • Meningitis • Hypernatremia • Hyponatremia • Hepatic encephalopathy • Uremia • Stroke • Neurosurgical emergencies • SLE

Agitation

Toxic:	Non-Toxic
• Cocaine • PCP • LSD • Mushrooms • Serotonin syndrome • Anticholinergic agents • Ethanol withdrawal • GHB withdrawal • Table 1	• Frontal contusion • Stroke • Dementia • Meningitis • Encephalitis • Endocarditis • Sepsis • Hypoglycemia • Hyponatremia • Wernicke's encephalopathy • Hypoxia

Seizures

Toxic:	Non-Toxic
Remember OTIS CAMPBEL mnemonic See Table 3 **O**rganophosphates, some opiates **T**heophylline, TCAs **I**NH, insulin **S**alicylates **C**ocaine, camphor, CO, CN **A**mphetamines, anticholinergics **M**etaldehyde, MMH **P**enicillin (high doses) **B**arbiturate (withdrawal), bupropion **E**thanol (withdrawal) **L**ead, Li, lindane	• Hypoxia • Hypoglycemia • Hyponatremia • Hypernatremia • Thyrotoxicosis • Meningitis • Stroke • Eclampsia • Epilepsy