# WEEK 8 SIM– Altered Mental Status #HackSheet

## Glasgow Coma scale

### What does in mean ?

**Glasgow Coma Scale**

| BEHAVIOR | RESPONSE | SCORE |
|---|---|---|
| Eye opening response | Spontaneously | 4 |
| | To speech | 3 |
| | To pain | 2 |
| | No response | 1 |
| Best verbal response | Oriented to time, place, and person | 5 |
| | Confused | 4 |
| | Inappropriate words | 3 |
| | Incomprehensible sounds | 2 |
| | No response | 1 |
| Best motor response | Obeys commands | 6 |
| | Moves to localized pain | 5 |
| | Flexion withdrawal from pain | 4 |
| | Abnormal flexion (decorticate) | 3 |
| | Abnormal extension (decerebrate) | 2 |
| | No response | 1 |
| Total score: | *Best response* | 15 |
| | *Comatose client* | 8 or less |
| | *Totally unresponsive* | 3 |

**GLASGOW COMA SCALE**

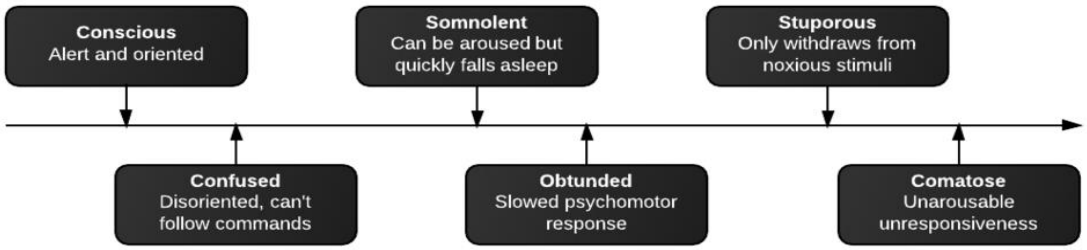
The Glasgow Coma Scale (GCS) was developed to assess the **level of neurologic injury**, and includes assessments of **movement, speech**, and **eye opening**

This avoids the need to make arbitrary distinctions between consciousness and different levels of coma

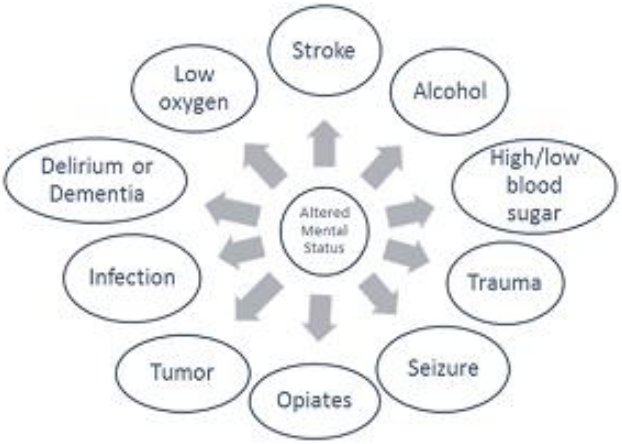
Brain injury is often classified as
**Severe** (GCS ≤ 8),
**Moderate** (GCS 9–12),
**Mild** (GCS ≥ 13)

Quick neurologic assessment for
•**Prognosis**
•Victim's ability to **maintain patent airway** on own

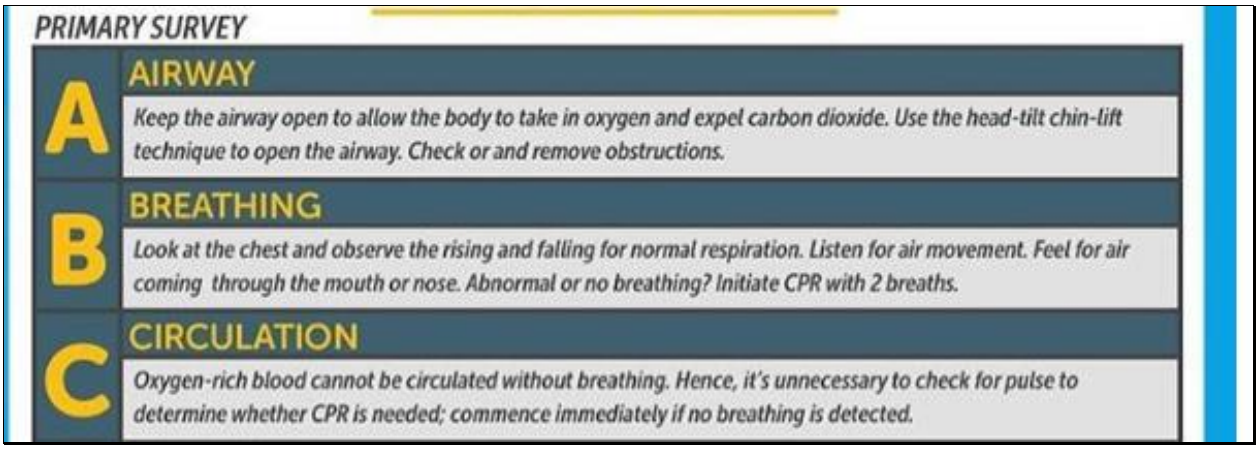
**The <u>Vocabulary</u> used to Describe Altered Mental Status is used but less clear than a GCS number!**

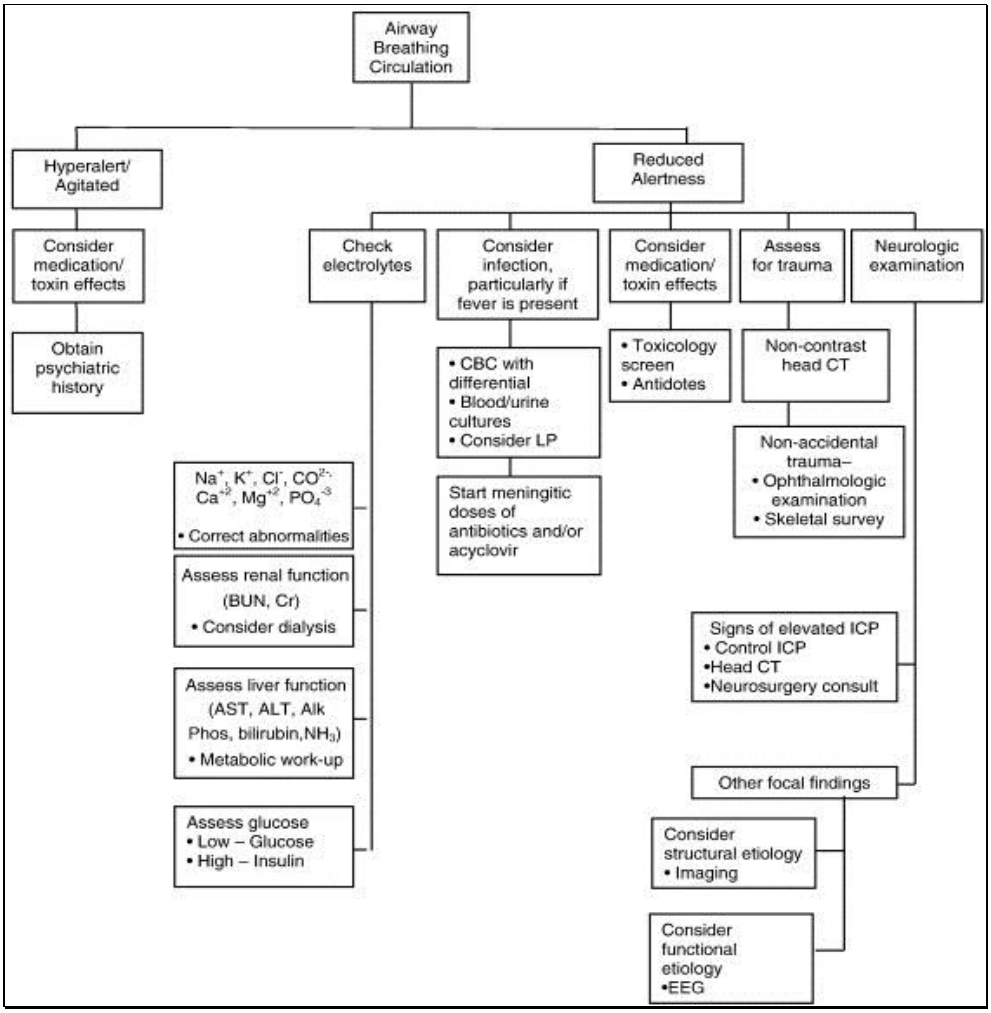



**Differential- Clue to Top 3 likely in your HPI:**



# ABCs – a Primary Survey in an Obtunded Patient



# CAM for Delirium (Not Dementia tool like the MMSE or SLUMS)

## Confusion Assessment Method

| | |
|---|---|
| **Feature 1: Acute Onset and Fluctuating Course** | Obtained from a family member or nurse:<br>• Is there evidence of an acute change in mental status from the patient's baseline?<br>• Did the (abnormal) behavior fluctuate during the day, that is, tend to come and go, or increase and decrease in severity? |
| **Feature 2: Inattention** | • Did the patient have difficulty focusing attention, for example, being easily distractible, or having difficulty keeping track of what was being said? |
| **Feature 3: Disorganized thinking** | • Was the patient's thinking disorganized or incoherent, such as rambling or irrelevant conversation, unclear or illogical flow of ideas, or unpredictable switching from subject to subject? |
| **Feature 4: Altered Level of consciousness** | • Overall, how would you rate this patient's level of consciousness?<br>alert [normal]),<br>vigilant [hyperalert],<br>lethargic [drowsy, easily aroused],<br>stupor [difficult to arouse], or<br>coma [unarousable]) |

The diagnosis of delirium by CAM requires the presence of features 1 and 2 and either 3 or 4.

## Toxicology and Bad Reactions on Call -

**an·ti·dote' an(t)i¸dōt/** ***noun***
**1. a medicine taken or given to counteract a particular poison.**

**Narcotic overdose – Narcan (naloxone)**
Tylenol overdose – Na CN acetylcysteine
Ethylene glycol – **Fomepizole** , ethanol if unavailable, look for **calcium oxalate crystals** in urine
**Benzodiazepine overdose – supportive cares, controversy w/ flumazenil**
Methanol – **Fomepizole**, ethanol if unavailable
Haldol acute dystonic reaction - **diphenhydramine 1-2 mg/kg** injection (50 mg), benztropine,
Heparin - protamine
Lovenox - protamine
Anaphylaxis – epinephrine
**Serotonin syndrome – Ativan** , cyproheptadine
**Opiate myoclonus – Ativan**, clonazepam



$$Anion\ Gap = Na^+ - (Cl^- + HCO_3^-)$$

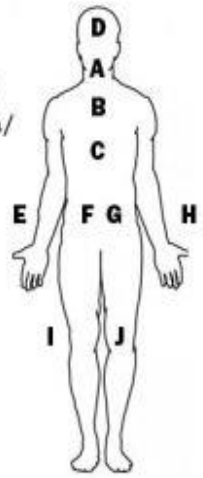
**calcium oxalate crystals**

# Approach to altered GCS

**A: airway**
⇨ assess airway +/- ETT

**B: CHEST**
⇨ oxygen, VBG
* consider **H**yperinflate (hyperCO2)
**C**ollapse/**E**ffusion/**S**ick pneumonia/
**T**umour (hypoxia)

**C: CARDIOVASCULAR**
⇨ monitor, IV, ECG
* consider **C**ardiac arrhythmia
**A**round heart (tamponade)
**R**v strain (PE),
**D**ysfunction LV (ACS),
**O**utflow dissection,
**V**olume depletion
**A**bdo bleed, **S**oft tissue bleed
**C**hild-bear (ectopic),
**U**rticaria (anaphylaxis), **L**actate (septic)
**A**drenal crisis, **R**x




**D: NEUROLOGIC**
* consider **N**euron seizure,
**E**ncephalitis/meningitis,
**U**nregulated ICP (hydro),
**R**BC bleed/clot, **O**nco tumour

**E: ENDO**
* consider **E**lectrolyte,
**N**ormothermia (hyper/hypo)
h**O**rmones (thyroid/adrenal)

**F: fluids/fertility**
* consider uremia

**G: ABDOMINAL**
*consider **A**scites
(hepatic encephalopathy

**H: HEME**
* consider TTP

**I: INTOX**
* consider **I**ngest (eg etoh,etc)
**T**x (eg benzo, opioid, Li),
**X** poison (eg CO, Pb)

www.avoidingERrors.com

# Consider These Toxicology Scenarios:

**LSD - dilated pupils with hallucinations**, young girl asked by friends totry white strip-LSD shaped like a white strip "ACID".

**Amphetamine/ MDMA "Ecstasy"** - dilated pupil, guy just went to white house at 2 in morning saying he can end terrorism in 7 days.

**PCP - very violent person, NYSTAGMUS**...next step is remove noise in the room...

**Marijuana**...**red eyes + tachycardia + dry mouth with increased appetite**...classic patient will be one driving car in the highway at very slow speed...time sense impaired.

**TCA**...**coma, convulsion and cardio-depression...torsades**.... elevated body temperature, blurred vision, dilated pupils, sleepiness, confusion, seizures, rapid heart rate, and cardiac arrest.

**Opioids....**constricted pupils, resp. depression and coma.