Agitation in the ER

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Oct 5th 2019

Learning objectives

- Develop a stepwise approach to managing agitation in the ER
- Appropriately evaluate the agitated patient
- Describe how to prepare the patient for transport

COI: None to disclose.

Case 1

32 year old male brought in by RCMP

Was found running around outside with no clothing on

Paramedic report: “unable to access”

Patient is aggressively struggling with a police officer on each limb and is covered in sweat

A presentation not a diagnosis

Pathology may lurk:

- Psychiatric
- Medical
- Trauma
- Toxicologic

Pt must be calmed before a work-up can be completed

Step 1: Categorize the agitation

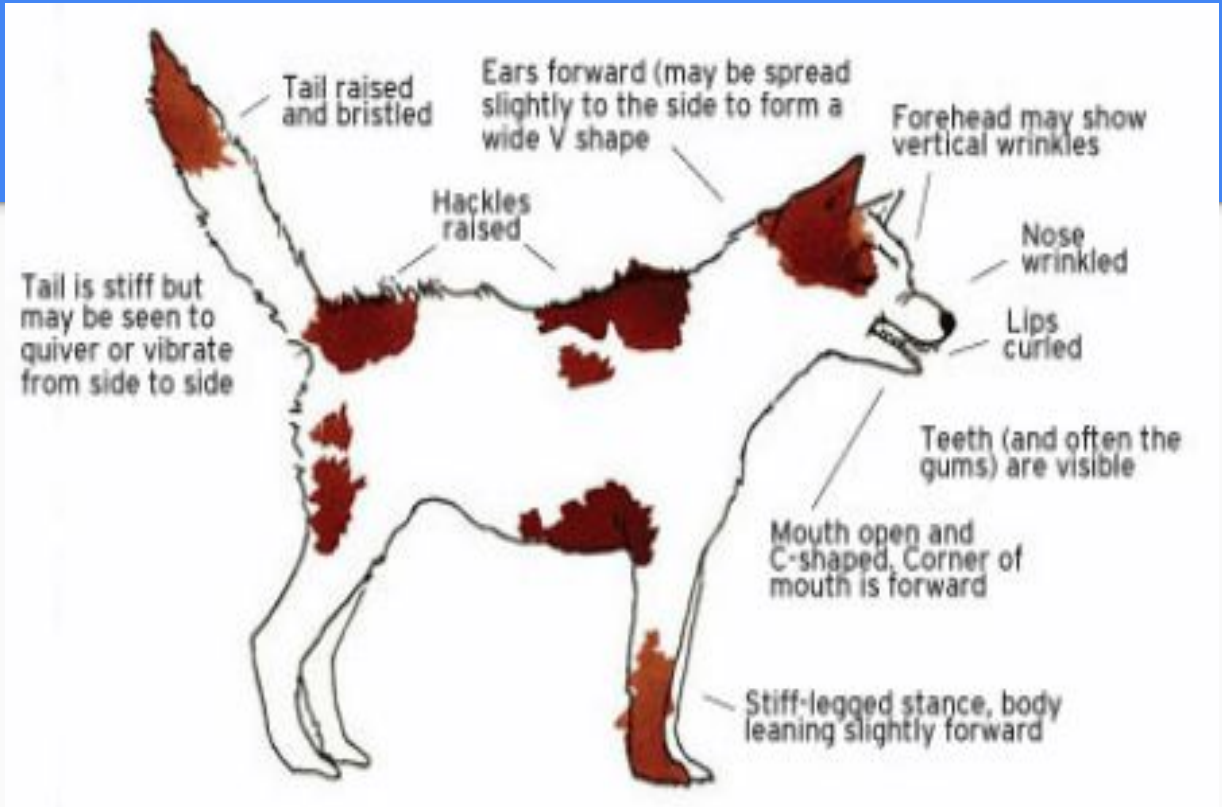
Mild -> Cooperative and can be reassured.

Moderate -> Disruptive but no danger. Calms when asked.

Severe -> Excited delirium, danger to self or staff. Life threatening

Recognizing agitation

- Restlessness
- Raised voice
- Rapid speech
- Fidgeting
- Erratic movements
- Verbally abusive
- Clenched fists
- Poor eye contact
- Arms folded
- Does not obey commands



Step 2a: For mild / moderately agitated

- Non medication based techniques
  - Support -> “Let’s work together…”
  - Acknowledge -> “I see this has been hard for you.”
  - Validate -> “I’d probably be reacting the same way if I were in your shoes.”
  - Emotional naming -> “You seem upset.”
  - Care -> “We want to help you”

Step 2a: Moderately agitated

- Provide options
  - We are going to give you something to calm you down? Would you like pills or a shot?

Step 2b For mod / severe agitation

- Call a “code white”
- Determine rolls and practice in advance
- Prepare medications before entering the room
- Ensure your safety and plan an exit route
- Develop a plan for respiratory support

Step 3: Physical restraints

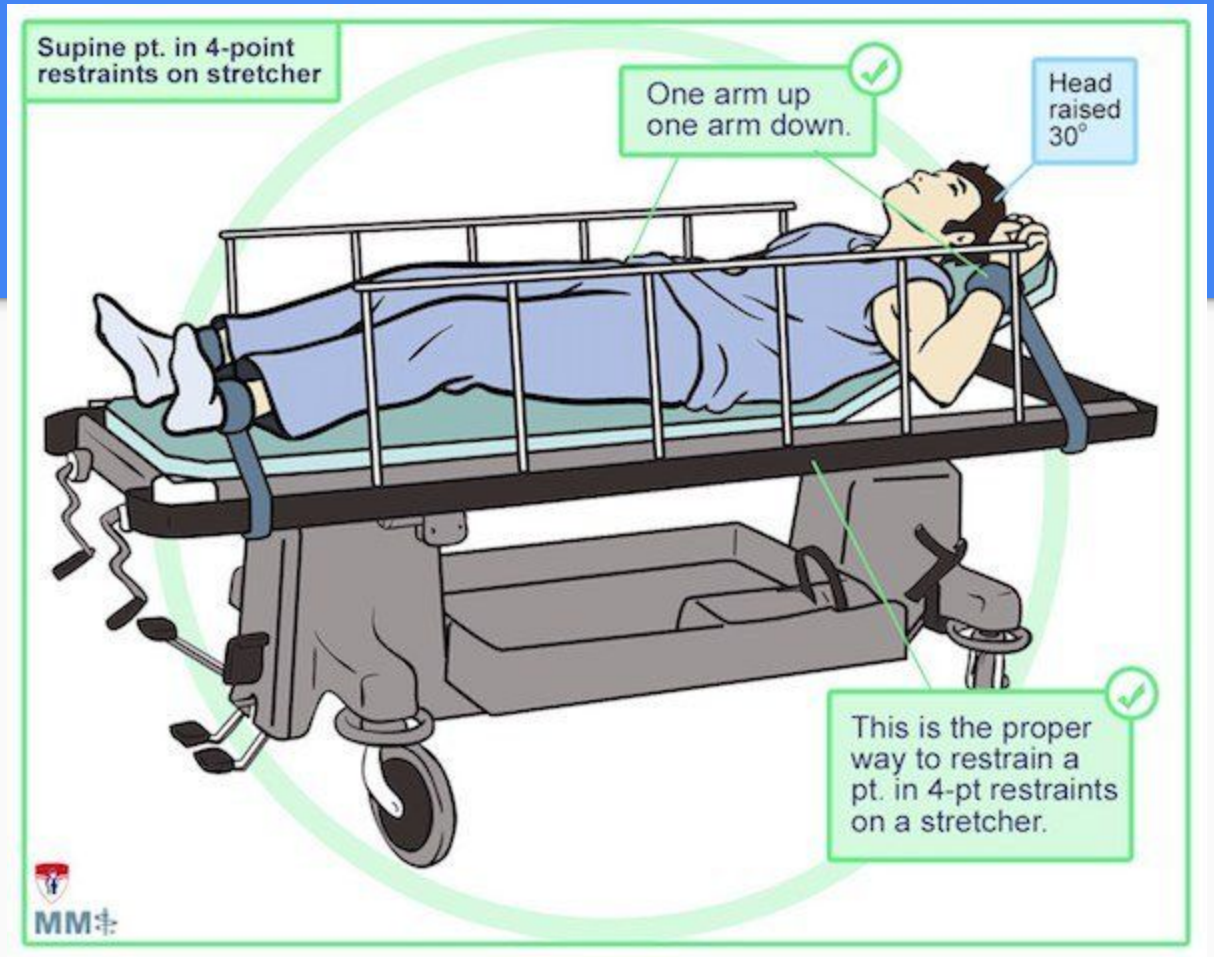
- Should only be used in combination with chemical sedation.
- Should be removed once no longer needed (15 to 20 min).
- Prolonged use may result in electrolyte abnormalities, arrhythmias, rhabdomyolysis.
- Ideally six people are involved, one on each limb, one for the head, and one for meds
- Oxygen mask can be used to prevent spitting

Restraint Do’s

- Use 4 or 5 point restraints
- Use medical grade restraints
- Supine position whenever possible
- Restrain one arm above the head and the other below the waist
- Elevate the head of the bed about 30 degrees
- Secure the restraints to the bed-frame (not the rails)

Restraint Don’t

- Restrain in prone position (increases risk of airway complications)
- Restrain to the bed rails (increases risk of injury)
- Use two point restraints (increases risk of injury)
- Put a pillow under the patient’s head (suffocation risk)
- Apply such that circulation is impaired


Supine pt. in 4-point restraints on stretcher
One arm up one arm down.
Head raised 30°
This is the proper way to restrain a pt. in 4-pt restraints on a stretcher.
MM

Step 4: Calming medications

(Purpose is to enable rapid stabilization and workup for life threatening diagnosis)

Level of Agitation	*1st Choice Drug, Dose, Route*	*Alternative or Adjunct Drug*
Mild	Lorazepam 1-2 mg SL	po antipsychotic that has previously been effective for that particular patient
Moderate	Midazolam 2-5 mg IM	Haloperidol 5-10 mg IM
Severe	Ketamine 5 mg/kg IM	Haloperidol 10mg IM AND Midazolam 10mg IM

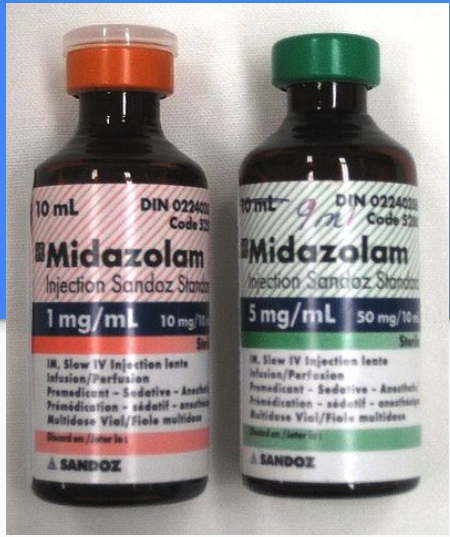
Medications

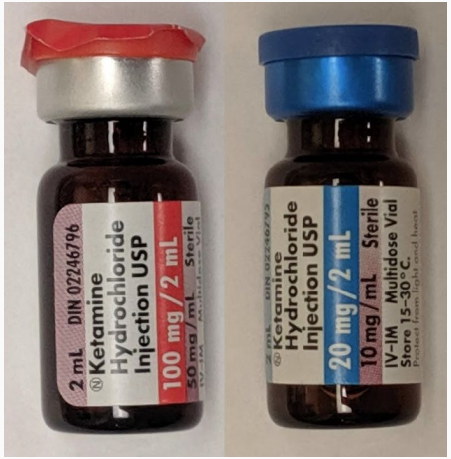
Midazolam IM: Onset 10 min. Those with ETOH on board may develop respiratory depression. Will need to monitor.

Haloperidol IM: Onset 25 min. May cause less resp. Depression in those with ETOH on board.

Ketamine IM 5mg/kg = 350 mg: Onset < 5 min. In those who are agitated it lowers HR and BP. Consider: Does your ED carry 50 mg/ml solution? That is still 2 * 3 ml IM injections

Benzo and antipsychotic better than benzo alone





Older patients

- Increased risk of resp depression and delirium with benzos.
- Thus start with 0.5 mg haloperidol or low dose atypical antipsychotic.
- Except with ETOH withdrawal than use benzos.
- May occur due to pain, anticholinergics, underlying disease (MI), separation from family

Step 5a: Treat immediately life threatening concerns (mild/mod agitation)

- Collect details from police, family, etc
- Head to toe example after pt has been undressed
- Order appropriate labs and imaging

Step 5b: Severely agitated (First few minutes after ketamine)

1. Place the patient in resuscitation room and apply cardiorespiratory monitoring, capnography, and oximetry
2. Place 1-2 large bore IV/IO lines
3. Assess for and start to treat:
    a. Hypoxia – place supplemental O2
    b. Hyperthermia – obtain rectal temperature and initiate cooling measures
    c. Hypoglycemia – obtain glucose and administer D50W
    d. Hypovolemia – most severely agitated patients will be volume depleted and be acidotic; generally initiate crystalloid 1L bolus

Next few minutes

- Hyperkalemia and acidemia – blood gas with lytes
- Monitoring – ideally vitals q5min for the first 30 mins
- Set up transport with PTN and consider HART, consider CT head
- Consider primary diagnoses such as: sepsis, neuroleptic malignant syndrome, thyrotoxicosis, meningitis
- Rule out rhabdomyolysis, traumatic injuries

Differential of Severe Causes

- Neurologic
  - Head injury
  - Stroke
  - Intracranial bleed
  - CNS infection
  - Seizure
  - Dementia
- Psychiatric
  - Psychosis
  - Schizophrenia
  - Paranoid delusions
  - Personality disorder
- Metabolic
  - Electrolytes
  - Low blood sugar
  - High blood sugar
  - Hypoxia
  - Hypercarbia
  - Renal / liver failure
  - Thyrotoxicosis
  - Hypothyroid
  - Wernicke's
- Infection
  - Sepsis
  - Systemic infections
  - Fever related delirium
- Toxics
  - Anticholinergic
  - Stimulants
  - Steroids
  - Carbon monoxide
  - ETOH
  - Serotonin syndrome
  - Neuroleptic malignant syndrome

Separating Medical versus Psychiatric Causes

	Psychiatric	Medical
History		
Age of onset	Puberty to 45	Any age
Acuity of onset	Days to weeks	May be acute
Prior psyc history	**Usually**	Variable
Mental Status		
Alertness	Normal to hyperalert	Maybe impaired
Orientation	Usually oriented	Often disoriented
Memory	Usually unimpaired	Impaired
Speech	**Normal or pressured**	Slurred speech
Hallucinations	Auditory hallucinations	Visual hallucinations
Delusions	**Paranoia, grandeur**	Confused
Physical exam		
Vitals	Often normal	Often abnormal
Physical	Usual normal	Often present

Hyperthermia

- Once agitation is controlled
- Cool the person quickly to 38 C (within 20 min)
- Spray the person with water and run a fan (can put cooling device under the person)
- Give cool intravenous fluids
- Do not use pressors (as they decrease blood flow to the skin and decrease ability to cool)

If you need to intubation

Ketamine is critical to allow appropriate preparation (preoxygenation, setup, etc). This is known as delayed sequence intubation.

Recommended to use rocuronium rather than succ due to concerns of hyperK

Preparation for Transport

- Carry out medical workup and physical and chemical restraint.
- Consider need for medical transfer first.
- LLTO psyc transfer only after insufficient benefit from attempted stabilization with sedatives and antipsychotics
- Either way go through PTN.

If it is NOT safe for pt to be in your hospital, it is NOT safe for them to be in the back of an ambulance at 110km/hr with just a BLS crew.

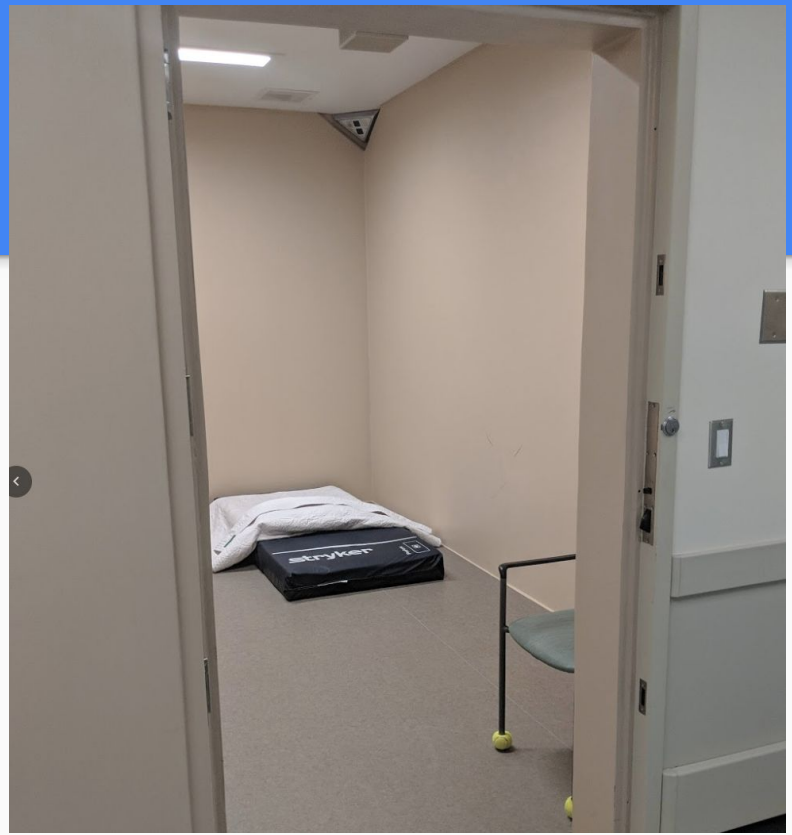
Preparation for Transport

- For high risk psyc pts bring HART into the discussion with PTN (if available)
- Preferable go direct to psych (unless not medically clear or too sedated)
- If not “formed” need consent for restraints for transfer
- Start sedation 60 min before transport
- Provide nicotine replacement
- Preferably transfer during daylight hours

Is a Seclusion Room required?

Must be medically cleared first

Agitated delirium ≠ Medically clear



Returning to Case 1

32 year old male brought in by RCMP

Was found running around outside with no clothing on

Paramedic report: “unable to access”

Patient is aggressively struggling with a police officer on each limb and is covered in sweat

Questions

What level of agitation is this?

What is your first priority?

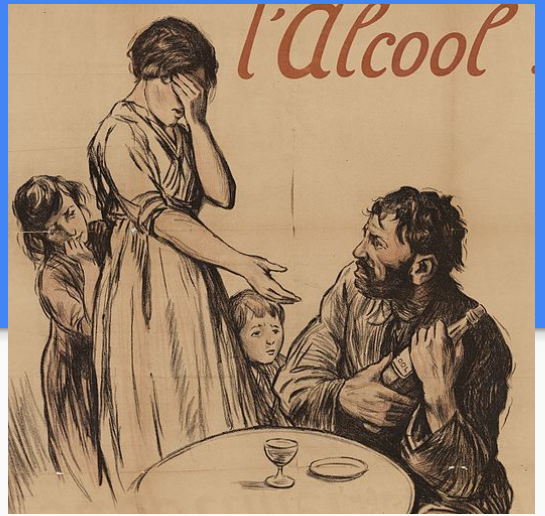
What do you do next?

After a dose of ketamine you find: HR=140, temp=39.4, BP=90/60

What next?

Who should you send this pt to and how?

Case 2



45 year old male bought in by EMS at 3 am

Was out drinking all night

When approached states “Just leave me the &*^$*% alone” and mumbles “people are out to get me...”

Settles otherwise

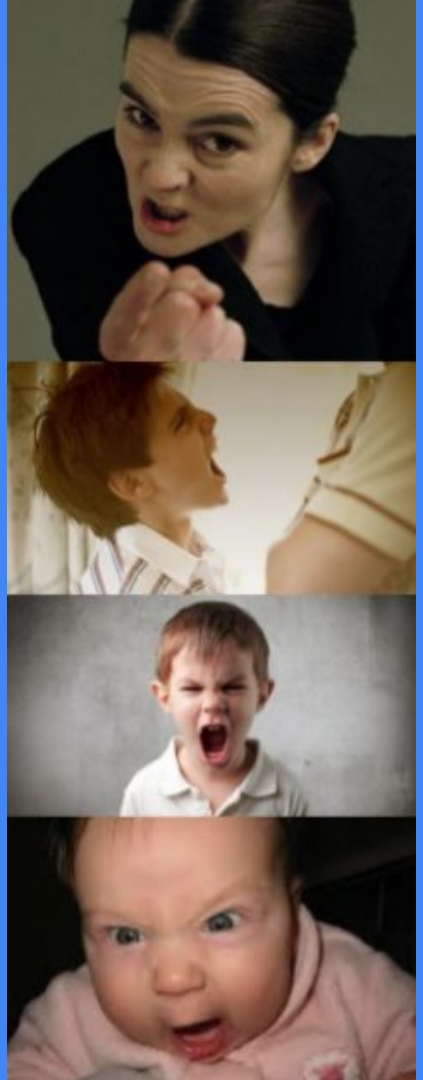
Questions

What level of agitation is this?

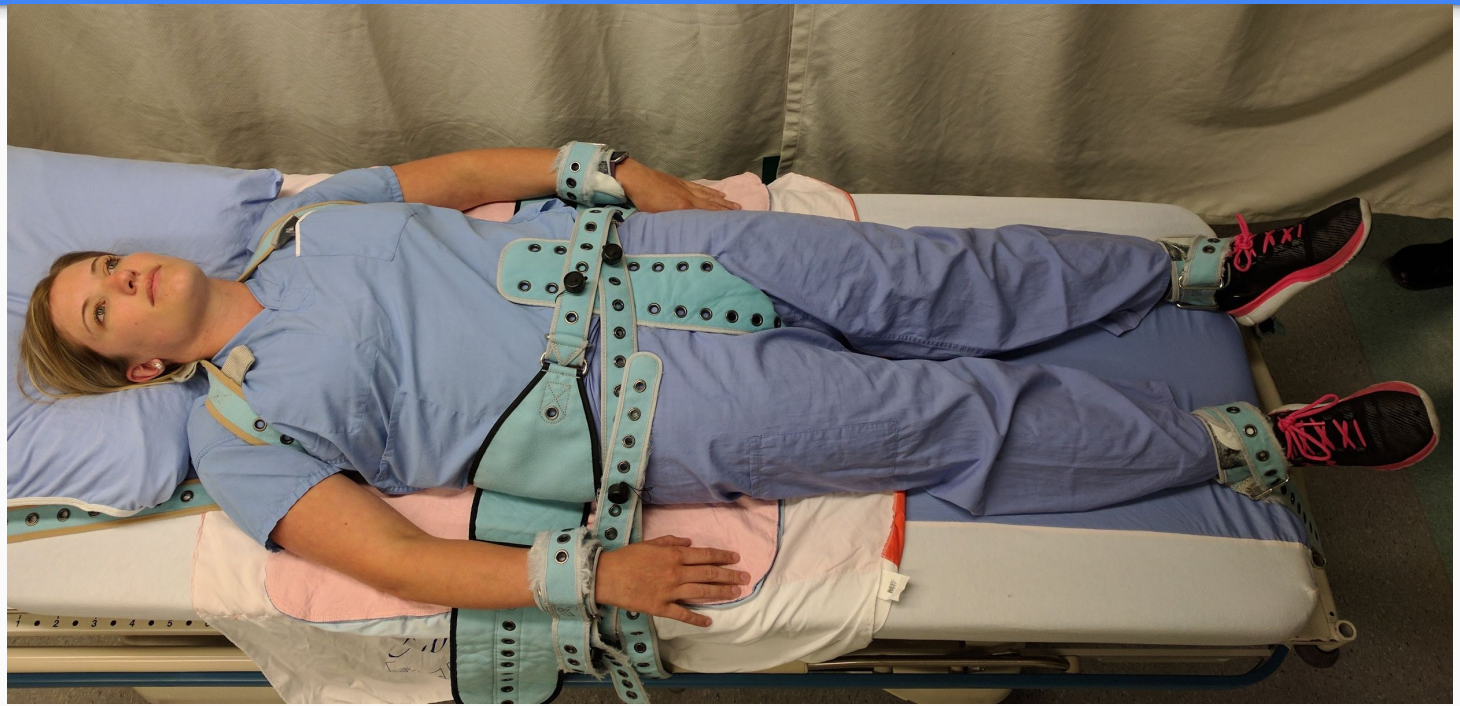
What is your first priority?

What do you do next?

Questions?



What is wrong in this picture? Chest / pelvis restraints generally not needed...



BCEHS Risk Assessment

Low Risk = RASS 0 to -1 (none, antihistamines, benzos)

Med Risk = RASS -1 to -2

High Risk = RASS -2 to -3

Ultra High = RASS -4 to -5

Richmond Agitation Sedation Scale (RASS)

Target RASS	RASS Description
+ 4	Combative, violent, danger to staff
+ 3	Pulls or removes tube(s) or catheters; aggressive
+ 2	Frequent nonpurposeful movement, fights ventilator
+ 1	Anxious, apprehensive , but not aggressive
0	Alert and calm
- 1	awakens to voice (eye opening/contact) >10 sec
- 2	light sedation, briefly awakens to voice (eye opening/contact) <10 sec
- 3	moderate sedation, movement or eye opening. No eye contact
- 4	deep sedation, no response to voice, but movement or eye opening to physical stimulation
- 5	Unarousable, no response to voice or physical stimulation