Agitated or Violent Patient/Behavioral Emergency

Aliases

Anxiety, Acute psychosis, patient restraint

Patient Care Goals

1. Provision of emergency medical care to the agitated, violent, or uncooperative patient
2. Maximizing and maintaining safety for the patient, EMS personnel, and others

Patient Presentation

Inclusion Criteria

Patients of all ages who are exhibiting anxiety, agitated, violent, or uncooperative behavior or who are a danger to self or others and in the sole assessment of the EMS clinician require physical and/or pharmacologic restraint to mitigate injury to self or others

Exclusion Criteria

Patients exhibiting agitated or violent behavior due to medical conditions including, but not limited to:

- Head trauma
- Metabolic disorders (e.g. hypoglycemia, hypoxia)

Patient Management

Assessment

1. Note medications/substances on scene that may contribute to the agitation, or may be relevant to the treatment of a contributing medical condition.
2. Maintain and support airway.
3. Note respiratory rate and effort — if possible
    a. Monitor pulse oximetry
    b. Capnography
4. Assess circulatory status:
    a. Blood pressure (if possible)
    b. Pulse rate
    c. Capillary refill
5. Assess mental status:
    a. Check blood glucose (if possible).
6. Obtain temperature (if possible).
7. Assess for evidence of traumatic injuries.
8. Attempt to place into one of three broad categories
    a. Agitated but Cooperative: Patients who have anxiety, agitation that is easy to redirect.
        a. Example: Patient with anxiety or dementia and restless
    b. Disruptive but not dangerous: Patients that are moderately agitated, not easily verbally deescalated/redirected, may be combative but **enough personnel present to safety control patient to while medication takes effect. Patient does not present active/immediate threat to others.**
        a. Example: Patient with substance intoxication/withdrawal displaying verbal aggression or repeated attempts to resist treatment
    c. Disruptive and Dangerous: Patients that are extremely agitated, combative **AND insufficient personnel present to safely control patient while medication takes effect. Patient presents active/immediate threat to others, immediate control of patient is needed**
        a. Example: Patient with substance intoxication with active ongoing physical aggression requiring continuous physical restraint for safety

Treatment and Interventions

1. Establish patient rapport:
    a. Attempt verbal reassurance and calm patient prior to use of pharmacologic and/or physical management devices.
    b. Engage family members/loved ones to encourage patient cooperation if their presence does not exacerbate the patient's agitation.
    c. Provide continued verbal reassurance and calming of patient following use of chemical/physical management devices.
2. Pharmacologic management
    a. Notes:
        i. Selection of medications for pharmacologic management should be based upon the patient's clinical condition, current medications, and allergies in addition to EMS resources and on-line medical control.
        ii. Note that the dosing can be adjusted to achieve different levels of sedation.
    b. Benzodiazepines (Primary option for agitated but cooperative) ***[PARA]***
        i. **Midazalom**:
            - **Adult: 2.5-5mg IV/IO/IM/IN q 5-10 minutes**
            - **Pediatric: 0.1mg/kg (Max 2.5mg) IV/IO/IM/IN q 5-10 minutes**
    c. Antipsychotics choices (Primary option for disruptive but not dangerous) ***[PARA]***
        i. **Haloperidol**
            - **Adult: 2.5-5mg IV/IO/IM**
            - **Pediatric 0.15mg/kg (max 5mg) IV/IO/IM**
        ii. **Droperidol**
            - **Adults: 5-10mg IM or 2.5-5mg IV**
            - Cardiac monitoring recommended after administration X 2 hours
        iii. **Ziprasidone 10-20mg IM**
    d. Dissociative agents (Primary option for disruptive and dangerous)
        i. **Ketamine** ***[PARA]***
            - **Adult/Pediatric: 1-2 mg/kg IV/IO or 3-5mg/kg IM**
        ii. **Medical Consultation Required if used for sedation without intention of intubation:** For safety reasons, ketamine may be given if Medical Consultation is not immediately possible but Medical Consultation MUST be contacted as soon as feasible to discuss ketamine administration
    e. Antihistamines choice (Adjunct, consider giving with antipsychotics)
        i. **Diphenhydramine** ***[PARA]***
            - **Adult: 25-50mg IV/IO/IM**
            - **Pediatric: 1mg/kg (max 25mg) IV/IO/IM**
3. **Apply an ECG cardiac monitor including pulse oximetry and capnography as soon as possible**
    a. **REQUIRED when Ketamine has been administered OR more than one medication or more than one dose of a medication has been administered**
    b. Use of droperidol requires cardiac monitoring X 2 hours related to QTc prolongation
4. Monitor closely all patients who have received pharmacologic management medications.
    a. **EMS retains ultimate responsibility to ensure the patient is medical stable after administration of pharmacologic management**
    b. Monitor for the development of hypoventilation and over sedation.
    c. Utilize capnography.
5. Physical management devices
    a. Body
        i. Stretcher straps should be applied as the standard procedure for all patients during transport.
        ii. Physical management devices, including stretcher straps, should never restrict the patient's chest wall motion.
        iii. If necessary, sheets may be used as improvised supplemental stretcher straps. Other forms of improvised physical management devices should be discouraged.

        iv. Supplemental straps or sheets may be necessary to prevent flexion/extension of torso, hips, legs by being placed around the lower lumbar region, below the buttocks, and over the thighs, knees, and legs.
    b. Extremities
        i. Do not use devices that require a key to release them (use soft or leather devices).
            - If patient is in Law Enforcement custody and in handcuffs requiring a key to unlock then a Law Enforcement officer must be immediately available to release restraints if needed to provide patient care
        ii. Secure all four extremities to maximize safety for patient, staff, and others.
        iii. Secure all extremities to the stationary frame of the stretcher.
        iv. Do not use multiple knots to secure a device.

Transport of Patients in Law Enforcement Custody

- The application of handcuffs or other restraint by law enforcement is not a medical restraint and is managed at the discretion of the law enforcement officer
- If handcuffs or other restraints need to be removed in order to provide appropriate medical care, the request should be made to law enforcement to remove/re-position/adjust the restraint
- The key to release handcuffs or other restraints must be immediately available to release restraints if needed to provide patient care
    - Ideally the officer should be present in the patient compartment during transport
    - If the officer is not able to be present in the patient compartment and is immediately following the ambulance, handcuffs or other restraints may remain in place at the discretion of the EMS personnel if placed in such a manner that medical care can be appropriately performed
    - If the officer is not able to be present in the patient compartment and is **NOT** immediately following the ambulance, handcuffs or other restraint may remain in place at the discretion of the EMS personnel if placed in such a manner that medical care can appropriately performed **AND** EMS personnel have access to key to remove the handcuffs or other restraint
        - Handcuffs or other restraint can be removed to facilitate care **OR** if requested by the patient as EMS does not have the ability to detain persons against their will

Patient Safety Considerations

The management of violent patients requires a constant reevaluation of the risk/benefit balance for the patient and bystanders in order to provide the safest care for all involved. These are complex and high-risk encounters. There is no one size fits all solution for addressing these patients.

1. Don PPE.
2. Do not attempt to enter or control a scene where physical violence or weapons are present.
3. Dispatch law enforcement immediately to secure and maintain scene safety.
4. De-escelate patient agitation. This is imperative in the interest of patient safety as well as for EMS personnel and others on scene.
5. Uncontrolled or poorly controlled patient agitation and physical violence can place the patient at risk for sudden cardiopulmonary arrest due to the following etiologies:
    a. Delirium with agitated behavior: A postmortem diagnosis of exclusion for sudden death thought to result from metabolic acidosis (most likely from lactate) stemming from physical agitation or physical control measures and potentially exacerbated by stimulant drugs (e.g. cocaine) or alcohol withdrawal
    b. Positional asphyxia: Sudden death from restriction of chest wall movement and/or obstruction of the airway secondary to restricted head or neck positioning resulting in hypercarbia and/or hypoxia
6. Monitor closely patients who have received antipsychotic medication for pharmacologic management. Monitor them for the potential development of:

   a. Dystonic reactions (this can easily be treated with diphenhydramine/benzodiazepines).
   b. Mydriasis (dilated pupils).
   c. Ataxia.
   d. Cessation of perspiration.
   e. Dry mucous membranes.
   f. Cardiac arrhythmias (particularly QT prolongation).
7. Place stretcher in sitting position to prevent aspiration. This also reduces the patient's physical strength by placing the abdominal muscles in the flexed position.
8. Physically secure patients who are more physically uncooperative. Secure with one arm above the head and the other arm below the waist, and both lower extremities individually secured.
9. The following techniques are **expressly prohibited** by EMS providers:
   a. Securing or transporting in a prone position with or without hands and feet behind the back (i.e., hobbling or "hog-tying")
   b. "Sandwiching" patients between backboards
   c. Using techniques that constrict the neck or compromise the airway
   d. Using weapons as adjuncts in managing a patient
10. Avoid concurrent use of IM/IV benzodiazepines and olanzapine IM (it is not recommended as fatalities have been reported).

Notes and Educational Pearls

Key considerations

- Contact on-line medical control at any time for advice, especially when patient's level of agitation is such that transport may place all parties at risk.
- Avoid transport by air
- Use stretchers with adequate foam padding, particularly around the head, as it facilitates patient's ability to self-position the head and neck to maintain airway patency.

Pertinent assessment findings

Continuous monitoring of:

1. Airway patency.
2. Respiratory status with pulse oximetry and/or capnography.
3. Circulatory status with frequent blood pressure measurements.
4. Mental status and trends in level of patient cooperation.
5. Cardiac status, especially if the patient has received pharmacologic management medication.
6. Extremity perfusion with capillary refill in patients in physical management device.

Quality Improvement

Associated NEMSIS Protocol(s) (eProtocol.01)

9914053 – General-Behavioral/Patient Restraint

Key Documentation Elements

- Etiology of agitated or violent behavior if known
- Patient's medications, other medications or substances found on scene
- Patient's medical history or other historic factors reported by patient, family or bystanders
- Physical evidence or history of trauma
- Adequate oxygenation by pulse oximetry
- Blood glucose measurement
- Measures taken to establish patient rapport
- Dose, route, and number of doses of pharmacologic management medications administered
- Clinical response to pharmacologic management medications
- Number and physical sites of placement of physical management devices
- Duration of placement of physical management devices

- Repeated assessment of airway patency
- Repeated assessment of respiratory rate, effort, pulse oximetry /capnography
- Repeated assessment of circulatory status with blood pressure, capillary refill, ECG cardiac monitoring
- Repeated assessment of mental status and trends in the level of patient cooperation
- Repeated assessment of capillary refill in patient with extremity securing devices
- Communications with EMS on-line medical control
- Initiation and duration of engagement with law enforcement

Performance Measures

- Incidence of injuries to patient, EMS personnel, or others on scene
- Incidence of injuries to patient, EMS personnel, or others during transport
- Medical or physical complications (including sudden death) in patients
- Advance informational communication of EMS protocols for the management of agitated and violent patients to others within the emergency care system and law enforcement
- Initiation and engagement with EMS on-line medical control
- Initiation and duration of engagement with law enforcement

EMS Compass® Measure *(for additional information, see www.emscompass.org) PEDS-03: Documentation of estimated weight in kilograms.* Frequency that weight or length-based estimate are documented in kilograms

References

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10. *White Paper Report on Excited Delirium Syndrome.* ACEP Excited Delirium Task Force, American College of Emergency Physicians; September 10, 2009.