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Ministère de la Santé et des Soins de longue durée

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February 28, 2012

MEMORANDUM TO: EMS Directors, Managers and CAOs of Upper Tier Municipalities and Designated Delivery Agents
Ornge

FROM: Malcolm Bates
Director
Emergency Health Services Branch

RE: **Training Bulletin, Issue Number 112 – version 1.0**
Excited Delirium

I am pleased to present Training Bulletin, Issue Number 112 which has been developed on the advice of the EHSB Medical Advisory Committee as a result of several Coroner's Inquests. This bulletin will reinforce the signs and symptoms of excited delirium and the risk of death associated with this condition.

The attached Training Bulletin will be printed by the Branch and made available to you in quantities that you request. Some services may elect to distribute the Training Bulletin to their paramedic staff in electronic format (e.g. PDF copy).

If you have any questions, please contact Ms. Cathy Francis, Manager of Education and Patient Care Standards at (416) 327-7843.

M. Bates

Malcolm Bates

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Training Bulletin

Excited Delirium

February 2012

Issue Number 112 – version 1.0

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Excited Delirium

Several Coroner's Inquests in Ontario have been convened into cases of excited delirium. One of the recommendations from these inquests is the need to reinforce the signs and symptoms of excited delirium, the risk of death associated with the condition and the need to respond and manage patients appropriately in cases of suspected excited delirium.

Signs and Symptoms of Excited Delirium

Early recognition of excited delirium is important to minimize any risks to the patient, bystanders, allied agency personnel and paramedics. The following is a list of signs and symptoms often associated with excited delirium:

- impaired thought processes e.g. disorientation, acute paranoia, panic, hallucinations;
- unexpected physical strength;
- apparent ineffectiveness of pepper spray;
- significantly decreased sensitivity to pain;
- sweating, fever or heat intolerance, or, dry/hot skin with no sweating despite extreme agitation;
- sudden tranquility after frenzied activity (could be the pre-arrest state).

Death may occur in patients experiencing excited delirium secondary to hypoxia, asphyxia, drug-related cardiopulmonary problems or other life-threatening complications. Risk of sudden death is increased by restraining the patient in the prone position.

Approach and Management of the Violent, Aggressive or Agitated Patient

Special consideration must be given in situations where paramedics are called upon to manage violent, aggressive or agitated patients, including patients suspected of experiencing excited delirium. The following has been extracted from the *Basic Life Support Patient Care Standards,* Section 8 – Psychiatric Disorders – The Violent, Aggressive or Agitated Patient Standard - to provide an overview of the responsibilities of paramedics when managing this type of patient.

Personal and Patient Safety and Protection

1. Assign first priority to personal safety. If in doubt regarding personal safety, request and await police assistance before approaching the patient.

Note: Police should already be at scene or enroute if dispatch information indicated a potentially dangerous situation.

2. Wait for police assistance if you see or hear active gunfire or evidence of other violence. If you decide to approach a scene where violence has been reported but none is obvious, follow these guidelines to reduce risk of harm:

    - Turn off lights and siren a few blocks from the scene.
    - Ensure a clear, vehicle exit route.
    - Carry your portable radio.
    - Park a safe distance from the scene.
    - Walk on soft ground or grass if possible - avoid making noise.
    - If using a flashlight, hold it by your side, not out in front of you.
    - If more than one paramedic approaches the scene, walk single file with the one in front holding a flashlight, and the one behind carrying the first response kit and other equipment as required.
    - Note areas of concealment which would offer protection if necessary.
    - Stand to the side of a door when knocking, never in front.
    - If no one answers, call dispatch for more information; check the back door.
    - Stay out of kitchens - they are full of weapons (knives, forks, scissors).

3. If providing care at a crime scene:
    - only touch or move items as needed to protect the patient and to provide proper care;
    - identify yourself to the patient; do not question them directly about the crime;
    - note the position and condition of the patient before removing the patient from the scene;
    - preserve the chain of evidence as much as possible; carefully bag and hold all linen for the investigating officer.

Assessments

1. Assume an underlying organic cause for the patient's behaviour until assessment indicates otherwise.
2. If the patient is uncooperative, elicit incident history from others at the scene. Attempt to ascertain whether illness, injury and/or alcohol/drug ingestion has triggered the present behaviour and whether there is a past history of violence.
3. In the event that a paramedic is forced to deal with a dangerous situation e.g. while awaiting police arrival, or the situation is unexpected, attempt to stabilize the situation:

    - **Observe for behavioural signs of impending violence** and be prepared to protect self and others if necessary. Behavioural signs include:
        - pacing, especially the approach/avoidance pattern i.e. the patient walks rapidly towards, then away from you;
        - tense posture;
        - loud, strident, accusatory or challenging speech;
        - reflex actions such as a startle response out of proportion to a minor stimulus;
        - open threats (verbal, physical and/or with weapons).
    - If confronted with an armed patient, seek a safe escape route and attempt to withdraw carefully.
    - If you cannot withdraw safely from an armed patient or if the patient is coherent and unarmed but agitated, aggressive and hostile, attempt to speak with and calm the patient.

4. Perform a **head-to-toe secondary survey** (including baseline Glasgow Coma Score) if the patient becomes cooperative or is restrained.

Management

1. Manage primary survey critical findings and other life-threatening conditions on a priority basis.
2. With respect to **restraint -**
   - Restrain a patient only if:
   - a physician or police officer makes a direct request of the paramedic, or
   - an unescorted patient becomes violent (at scene or enroute) and must be protected from inflicting serious bodily harm to themselves or others, and all reasonable verbal efforts have failed to calm the patient.
   - Use only the reasonable and minimum force deemed necessary to keep the patient under control, having regard to the physical and mental condition of the patient and the safety of others.
   - Use appropriate techniques to restrain the patient (see *Restraint of Patients Standard*).

Patient Transport

1. Delay transfer and request a police escort if violence is expected and additional assistance/restraint is likely to be required.

   If upon ambulance arrival, police are restraining a patient, or have applied restraints, advise police that an officer must accompany the patient in the ambulance.

2. Use on-going assessment and judgement to determine the necessity for continued restraint throughout ambulance transfer.

Guidelines

If the patient has been restrained, it is best to keep them restrained, especially if travelling by air and especially when dealing with:
- drug-induced violent behaviour or excited delirium, e.g. cocaine abuse;
- florid psychosis, e.g. paranoid hallucinations, delusions;
- other conditions which predispose to sporadic outbursts of violence, e.g. tricyclic overdose.

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3. With respect to **inter-facility transfers:**
   - If upon arrival at the sending facility, facility staff or police are restraining a patient or have applied restraints, advise that a police officer or hospital escort must accompany the patient in the ambulance.
   - If sending staff indicate that a patient requires restraint during transfer:
     - Advise that restraints must be provided and applied by hospital staff or police prior to transport;
     - Advise that an appropriate facility escort must accompany the patient;
     - Determine the need for a police escort and request as required, prior to transport.

4. Enroute: monitor; re-evaluate and manage as required; prepare for problems expected on the basis of working assessment.

Reporting and Documentation

1. If the patient has threatened violence towards specific individuals, either by gesture or by name, document this information. Advise receiving staff and police officers assigned to the case.
2. If restraint was required, document the:
   - reason for restraint;
   - name and title of the person ordering restraint, e.g. physician, police officer, paramedic;
   - method of restraint;
   - position of the patient during restraint;
   - consequences and effects of restraint.

The Restraint of Patients Standard found within the *Basic Life Support Patient Care Standards*, Section 8 – Psychiatric Disorders – provides paramedics with detailed information on the correct procedures to safely restrain patients.

Restraint of Patients Standard

To be used only if a paramedic is authorized by police or a physician to assist in restraining a violent, aggressive patient, or if emergency restraint is required in the back of a land or air ambulance during transport. In the latter situation, time and resources will **not be available to carry out the preparatory steps (A, B, & C).*

A. Organize the team **before** attempting restraint. An ineffective attempt may incite the patient to greater violence. Four to five (4-5) people will be required. Identify a clear team leader. Assign at least one person to each limb. A fifth person is ideal to control the head and/or be team leader. If six people are available, the fifth can control the head and the sixth can coordinate the procedure.

Four or more team members will also provide a show of force and may be face-saving for the patient.

B. Rehearse the response and the entire procedure in advance. If extra personnel arrive in the interim, brief them quickly on the problem and the planned intervention.

C. Prepare all equipment in advance.

Use restraints which are durable and in good condition to avoid tearing or breaking with resultant injury to rescuers or the patient. If available, soft padded leather or cloth restraints are recommended to avoid injury to the struggling patient. If police apply metal handcuffs, be aware that they can cause injury. Avoid body restraints as they may cause strangulation or impaired respiration if the patient is struggling.

D. Inform the patient of the need to restrain them and explain the procedure. Treat the patient with respect; avoid injury to yourself and to the patient if at all possible.

E. On command from the team leader, immobilize the patient's limbs and head in one coordinated effort. Grasp each limb at the main joint and between the main joint and the distal joint, e.g. one hand on the elbow, the other on the forearm.

F. Place the patient in a "spread eagle" position supine (arms and legs spread apart) or in the left lateral position (see *Note 3* at the end of this Standard).

G. Restrain each extremity as follows:

- secure one arm above the head and secure the other to the stretcher at waist level;. *alternately* secure both hands to one side of the stretcher;
- elevate the head of the stretcher to protect the airway and to allow the paramedic greater visibility;
- secure the feet, with legs still spread apart;
- assess distal pulses in the extremities after restraints have been applied.

Ensure that the limbs are secured to the main frame of the stretcher, not to the stretcher side rails. Attachment to the main frame will allow tightening of both restraints at once (should they become loose) simply by raising the patient's head and shoulders a notch or two by raising the head of the stretcher.

H. Ensure the stretcher is fixed inside the ambulance to prevent the patient from flipping it over.

I. Reassure the patient. Remind them that you are there to assist in their getting care, to protect them and to prevent them from causing injury to themselves or others.

J. If restraint has been authorized by police or a physician, do not remove the restraints enroute to hospital. Never bargain with the patient for removal. If emergency restraint is applied during ambulance transport i.e. an unescorted patient becomes violent and all reasonable verbal efforts fail to calm the patient, use on-going assessment and judgement to determine the necessity for continued restraint throughout the transport. It is advisable to maintain restraint, especially if travelling by air, when dealing with drug-induced violence e.g. excited delirium, or florid psychotic behaviour.

K. Never leave the patient alone once restraints have been applied.

L. Once restrained:

- obtain set of vitals; reassess every 10 minutes;
- assess the patient within the limits possible imposed by the restraints;
- manage life-threats/serious conditions as permitted by the restraints and the patient's behaviour;
- if possible and prudent, carefully search the patient for hidden weapons such as knives or razors, and search for drugs.

Do not forget the common medical causes for combativeness:

- hypoglycemia;
- hypoxia;
- head injury;
- hypo/hyperthermia;
- drug/alcohol ingestion.

Deterioration secondary to any of these conditions may cause the patient to "calm down". Be alert and repeat the primary survey when violent behaviour abates.

M. Check neurovascular status in the limbs at 10 minute intervals. Perform other assessments as permitted by time, the patient's condition and the restraints.

N. Continually monitor the patient, even when in the placid state (may indicate a pre-arrest condition).

O. Notify the receiving facility of the patient's condition and the need for restraints.

Notes

1. Stockinette is tubular, stretchy material, that is applied to a patient's arm before applying a cast or is used as a type of sling apparatus. It is often used to restrain patients as well, especially elderly patients who have thin, fragile skin which bruises easily.

For purposes of restraint, apply stockinette (if available), as follows:

- take a piece of stockinette approximately 7-10 cm wide and approximately 1 metre long;
- slip it onto the patient's forearm;
- wrap about five turns of 5 cm (approximately) cloth adhesive tape snugly around the narrowest part of the patient's wrists, on top of the stockinette's distal end;
- turn the stockinette inside out, thus covering the fingers, and tie it to the frame of the stretcher.

This technique works well for all patients, even stronger ones. If stockinette is not available, towels can be applied as restraints, using a similar technique.

2. Patients suffering from excited delirium or others who are struggling violently should be restrained and transported either on their side, on their back, or upright, with careful attention to airway patency and adequacy of respirations. Whenever possible, two paramedics should be with the patient at all times during ambulance transport. Paramedics may need to request assistance of police, allied agency personnel or another paramedic crew to facilitate this.

3. **Prone positioning is not to be utilized for several reasons:**

    - impairs patient assessment, management and monitoring;
    - increases risk of death in patients suffering from excited delirium especially if police have tied the patient's hands behind their back (see the *Violent, Aggressive or Agitated Patient Standard* re: excited delirium);
    - violent struggling combined with factors such as obesity, full stomach, drug and alcohol impairment and exhaustion can compromise diaphragm and lung functions and increase cardiac irritability, leading to **sudden death** from positional asphyxia or drug-related cardiopulmonary problems.

Summary

Paramedics may be faced with the challenging situation of managing a patient who is aggressive, violent or potentially violent. These situations require paramedics to react quickly to prevent harm to the patient, themselves and other persons on the scene. Paramedics are encouraged to review all of the applicable standards within the *Basic Life Support Patient Care Standards* regularly to ensure that they are well versed in the assessment and management of these types of patients.

References

1. Ministry of Health and Long-Term Care – Emergency Health Services Branch
   Basic Life Support Patient Care Standards, Version 2.0 (January 2007)
   Available at:
   http://www.ambulance-transition.com/pdf_documents/bls_patient_care_standards_2.0.pdf

2. American College of Emergency Physicians – ACEP Excited Delirium Task Force
   White Paper Report on Excited Delirium Syndrome (September 10, 2009)
   Available at:
   http://ccpicd.com/Documents/Excited%20Delirium%20Task%20Force.pdf