



Clinical Practice Guidelines: Behavioural disturbances /Conducted energy weapon related injuries

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Date	February, 2021
Purpose	To ensure a consistent management of patients who have been exposed to conducted energy weapon related injuries.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
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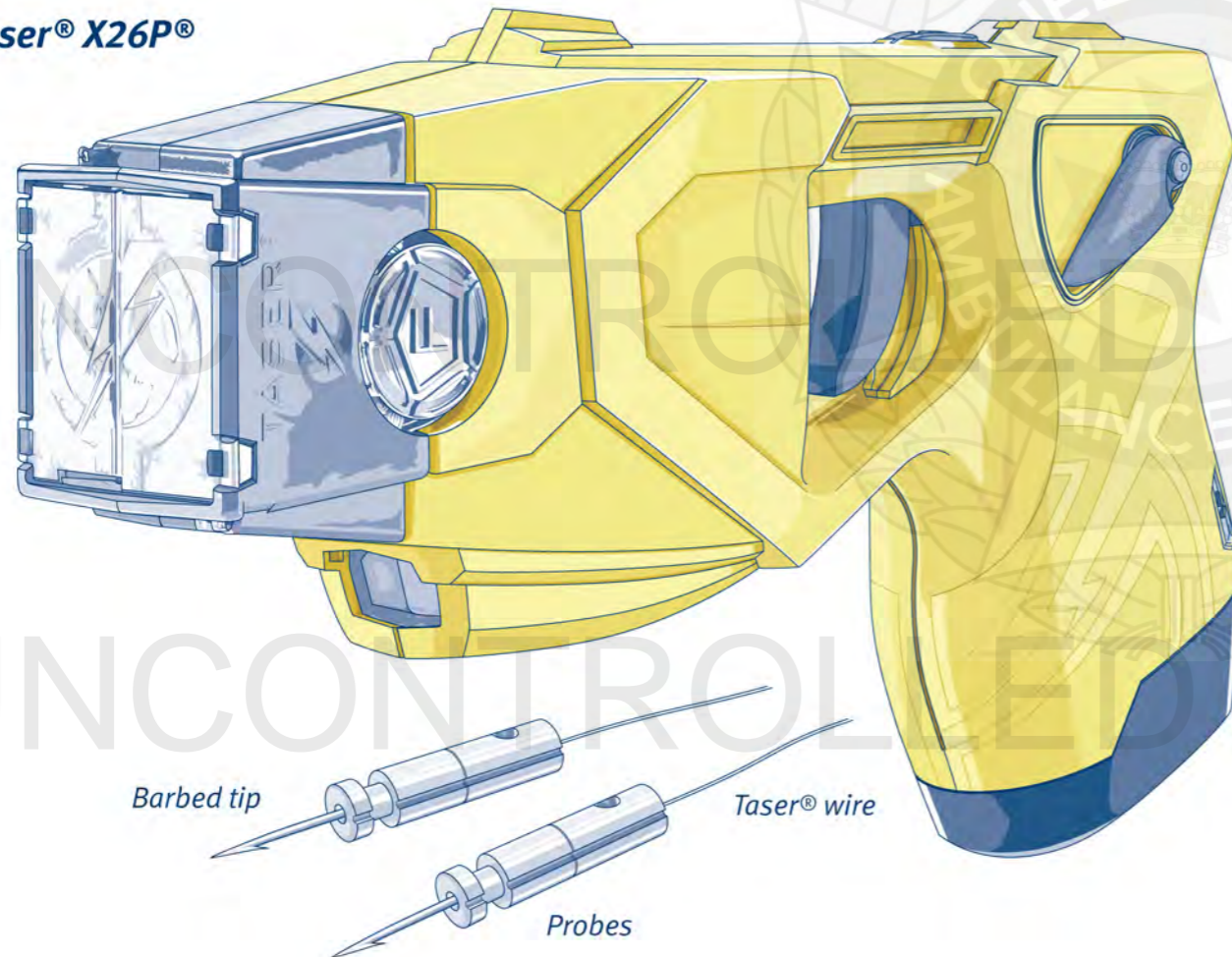
Conducted energy weapon related injuries

February, 2021

Conducted energy weapons (CEW) include TASERs®, stun guns, shock batons and cattle prods.^[1] These devices cause neuro-muscular disruption, capable of temporarily incapacitating a person and causing pain through the application of an electric current. When used by police and security services, they are less than lethal alternatives to conventional weapons including batons and hand guns.^[1] Ambulance clinicians may also encounter patients injured by CEWs outside law enforcement operations including cases involving interpersonal violence and when CEWs are used in the livestock industry.

The Queensland Police Service (QPS) currently uses the TASER® X26P® during law enforcement operations.^[2]

Taser® X26P®



The Taser® X26P® delivers bursts of high voltage, low amperage electric current through two separate modes of operation:

1. *Probe mode (hook and wire)* – two barbed probes are fired with compressed gas at the targeted person from a distance and these become embedded in the skin or clothing. An electrical charge is transmitted through the wires causing the subject to experience involuntary muscle contractions, rendering the person temporarily incapacitated.
2. *Drive stun mode* – the TASER® unit is held directly onto the body of the targeted person and compliance is gained by administering an electric current, causing considerable localised pain, without immobilising the person.

CWEs used by law enforcement are generally safe and effective, however have on rare occasions caused serious injury or death.

Clinical features



- CEWs have the potential to cause strong muscle contractions and serious secondary injury including:
 - fractures
 - spinal injuries
 - head injuries
 - soft tissue injuries
 - hyperthermia.
- Cardiac arrest immediately following Taser® use has been reported.

Risk assessment



- Significant injuries following law enforcement use of CEWs are rare, however can occur.
- Clinical assessment should focus on probe penetration sites, local pressure and burn effects, potential injuries due to muscular contractions and trauma due to secondary falls.
- CEW patients **MUST** be transported to an emergency department for assessment in the following instances:
 - when probes are imbedded in the face, neck or groin;
 - when probes are unable to be easily removed due to resistance;

Risk assessment (cont.)



- all incidents involving non QPS activated CEWS;
- known or suspected stimulant ingestion;
- significant cardiac history; and
- known or suspected injuries.
- The application of a TASER® should not cause permanent damage or long-term effects to the subject's muscles, nerves or other body functions.^[3]
- Stimulant drug intoxication or pre-existing cardiovascular disease may increase the risk of cardiac dysrhythmias.^[3]
- Current medical literature does not support the routine acquisition of 12-Lead ECGs for uncomplicated and brief duration, law enforcement CEW exposures (less than 15 seconds) in the otherwise asymptomatic, awake and alert patient.^[4]
- Ambulance clinicians must be aware of the physiological derangements that can occur during any restraint attempts, around the time a CEW is used on the patient.

Additional information

- All barbed probes must be considered a contaminated sharp.
- Risk of infection associated with TASER® probe implantation is extremely low.^[5]
- In the majority of cases the probes will have been removed by QPS prior to QAS arrival. If probe removal is required, ambulance clinicians must follow the procedural steps listed below.

8. Inspect the removed probes for completeness. If there is any suspicion that parts of a probe have remained in the wound, the patient must be transported to hospital.
9. Dispose of the probes immediately into a sharps container.
10. Clean the probe penetration site with an appropriate microbial swab.
11. Consider application of an appropriate wound dressing.

Probe removal instructions

1. Explain to the patient the steps that will occur and that there may be some discomfort.
2. Don gloves and eye protection. The potential of blood and body fluid exposure during this procedure is **HIGH**.
3. Confirm suitability of probe removal – probes embedded in the face, neck or genitals must remain in situ and removed at hospital.
4. Separate (cut) the probes from the copper coated wire.
5. Place the non-dominant hand on the patient and stabilise the skin surrounding the probe.
6. In one continuous motion, use the dominant hand to grip and firmly pull the probe until removed. **Do not twist the probe** as the barbed tip may cause additional injury.
7. Repeat this procedure with the second probe.

