

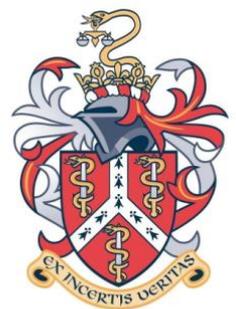
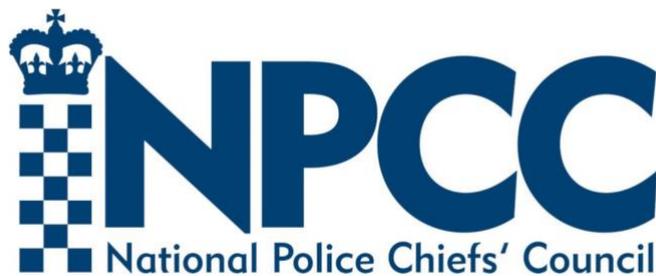
Conducted Energy Device Joint Working Group

# Healthcare assessment in police custody after conducted energy device (CED) discharge

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## Full Guideline

August 2022



Faculty of Forensic  
& Legal Medicine  
Royal College of Physicians



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## Edition

1.1 - August 2022

## Review date

This guideline will be fully reviewed by August 2025, or sooner if pertinent information becomes available.

## Disclaimer

The Conducted Energy Device Joint Working Group recognises individuals, their situations, health care professionals, forensic health care providers and the forces they serve all vary. This guideline cannot cover all possible scenarios. The ultimate responsibility for interpreting and applying this guideline, the use of current information, and an individual's overall care and well-being resides with the treating health care professional and their employer.

## Links

Where links are provided for convenience and information purposes; the Conducted Energy Device Joint Working Group bears no responsibility for the accuracy, legality or content of the external site or for that of subsequent links.

## Thank you

Prior to the formation of the Conducted Energy Device Joint Working group there were several individuals within the field of forensic and legal medicine who have reviewed, offered comments and advice in the early stages of developing this guidance. We would like to express our sincere thanks for their work and contributions during this time.

## Equality statement

Individuals have the right to be treated fairly and be involved in decisions about their treatment and care. They can expect to be treated with dignity and respect and will not be discriminated against on any grounds including age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex or sexual orientation. Equality is not treating everyone the same; it is ensuring that access is available to all by taking account of people's differing needs and capabilities.

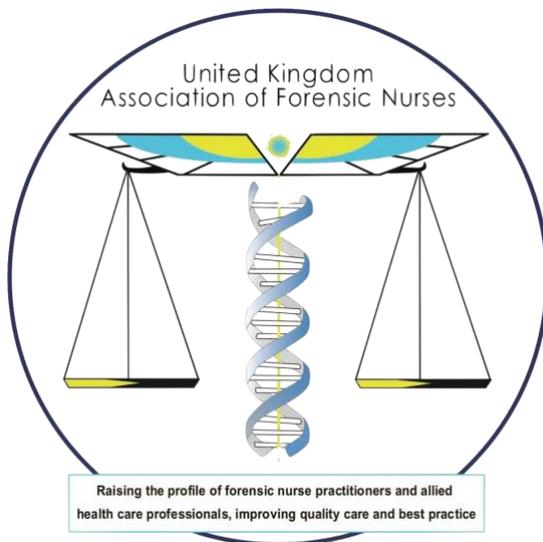
### Comment or feedback

Comments or feedback can be left using forms available on the UK Association of Forensic Nurses and Paramedics's and the Faculty of Forensic and Legal Medicine's Conducted Energy Device information hubs on their respective websites.

### Conducted Energy Device Hubs

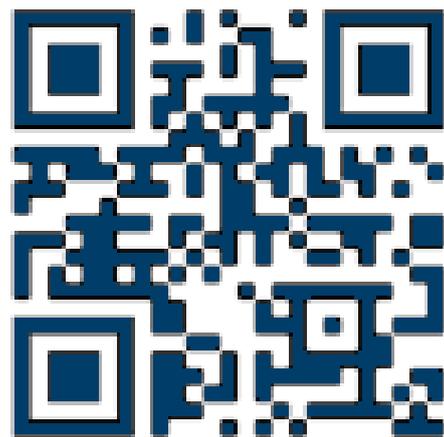
Both the UK Association of Forensic Nurses and Paramedics (UKAFNP) and the Faculty of Forensic and Legal Medicine (FFLM) have dedicated online 'Conducted Energy Device Hubs', where additional information (including all associated documents) can be found.

#### UK Association of Forensic Nurses and Paramedics



[www.ukafn.org/ced](http://www.ukafn.org/ced)

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# 1. Introduction

- 1.1. This guidance is designed to assist Health Care Professionals (HCP) undertaking the clinical assessment and management of individuals in police custody post-Conducted Energy Device (CED) deployment. Conducted energy device is an umbrella term which includes TASER™, a brand of CED.
- 1.2. Health care provision in police custody varies between independent, private and National Health Service (NHS) providers. Models differ but are typically embedded or peripatetic services. Those working in police custody include nurses, paramedics and doctors.
- 1.3. The role of the HCP in police custody is to deliver health care autonomously and independently. For nurses and paramedics, this means working at an advanced practice level, beyond their initial registration, solely responsible for the assessment and management of individuals presenting with undiagnosed and undifferentiated conditions.
- 1.4. Health care professionals must always act under their respective professional bodies' codes of practice (Nursing and Midwifery Council 2015; General Medical Council 2020; Health and Care Professions Council 2020). See [Appendix one](#) for a cross-reference of the Nursing and Midwifery Council, Health and Care Professions Council and the General Medical Council codes of practice and this guideline.

# 2. Purpose

- 2.1. The purpose of this guidance is to support HCPs assessing individuals subject to a CED discharge. It is not intended to replace appropriate training of HCPs, rather provide a reference supporting clinicians in understanding the relevant principles involved in assessing those exposed to CED.

# 3. Background

- 3.1. Across the United Kingdom (UK), specially trained and authorised police officers are issued with a TASER™ X26, TASER™ X2 or TASER™ 7, see [Appendix two](#) (College of Policing 2022). Between April 2019 and 2020, officers drew a CED on 32,540 occasions and discharged 5,045 times (Home Office 2020a; Police Service of Northern Ireland 2020; Police Scotland 2021)<sup>1</sup>. In September 2019, the Home Office announced an additional ten million pounds of funding for forces to increase the number of CED-trained officers in England and Wales (Home Office

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<sup>1</sup> For the latest data see [Police use of force statistics, England and Wales: April 2020 to March 2021](#), [Police Scotland Use of Force](#) and the [Police Service of Northern Ireland Statistics on Police Use of Force](#).

2019a). This increase may result in an increasing number of individuals presenting in custody post-CED.

### 3.2. **TASER™ X26**

- 3.2.1. The TASER™ X26 was approved by the Home Office for UK police forces in 2005/06, replacing the TASER™ M26 (no longer in operational use).
- 3.2.2. The TASER™ X26 fires the 'standard' probe, see [Appendix two](#), measuring 3.7 cm, including a 1 cm dart with a single barb (Home Office 2016). The TASER™ X26 can only have one cartridge loaded at a time (Home Office 2016). Continuously depressing the trigger causes the CED to discharge until the battery is drained (Faculty of Forensic and Legal Medicine 2017).

### 3.3. **TASER™ X2**

- 3.3.1. The TASER™ X2 was approved by the Home Office in March 2017 and is the second approved device (National Police Chiefs' Council 2017). This model was introduced to replace the older TASER™ X26.
- 3.3.2. The TASER™ X2 fires an 'SP' probe, see [Appendix two](#), measuring 3.4 cm, including a 1.1 cm dart and two opposing barbs (Home Office 2016). The TASER™ X2 can hold two loaded cartridges at a time (Home Office 2016). Additionally, it is fitted with a safety feature, automatically limiting a discharge to five seconds, safeguarding against inadvertent excessive discharges (Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons (SACMILL) 2016).

### 3.4. **TASER™ 7**

- 3.4.1. The TASER™ 7 was approved by the Home Office in August 2020 and is now the third approved device (Home Office 2020b). This model offers a more accurate, compact, cheaper and faster model than the TASER™ X26 and X2 (Home Office 2020b).
- 3.4.2. The TASER™ 7 is similar to TASER™ X2, with twin cartridge bays and separate laser sights for upper and lower probe placement, see [Appendix two](#) (Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons 2020). Similarly, the TASER™ 7 is fitted with the safety feature, limiting discharges to five seconds (Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons 2020).
- 3.4.3. The TASER™ 7 diverges from previous models in several ways (Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons 2020):
  - The electrical pulse waveform is shorter compared to previous models. However, the charge is similar.
  - Delivers pulses at a higher rate, 22 pulses per second from a single cartridge compared to 19 pulses per second in the earlier models (Defence Science and Technology Laboratory 2020). However, if both

cartridges and all four probes are in contact with the subject, they are exposed to 44 pulses per second (Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons 2020).

- The probe differs markedly from previous models, with the tethering wire uncoiling from the body of the probe. Additionally, once the wire reaches the maximum length, the probe is designed to separate from the tethering wire.
- While the barb remains the same as the TASER™ X2 'SP', the probes have a new 'breakaway' design. This 'breakaway' design results in the probe's body breaking away from the dart, when it strikes clothing or skin at an angle or impacts hard tissue, such as bone.
- The technique for probe removal differs from previous models, see [9.4.5](#).
- Probes have greater kinetic energy and momentum.
- There are two cartridges available for use with the TASER™ 7, with different probe divergences: Close Quarter 3.5° and Standoff 12°. For comparison, the TASER™ X26 and X2 have only the single option of 7° and 8°, respectively.

### 3.5. How conducted energy devices work

- 3.5.1. A CED fires small probes using compressed nitrogen gas, connected through insulated conductive wires (Childers et al. 2020). The TASER™ X26 can fire one pair of probes and the TASER™ X2 and TASER™ 7 two pairs of probes without reloading (Home Office 2016; Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons 2020).
- 3.5.2. It is often reported CEDs deliver 50,000 volt electric shocks; however, the actual amount is much lower (Roberts and Vilke 2016). However, it is the electrical charge delivered, not the voltage, which risks cardiac complications (Childers et al. 2020). The CED's delivered energy is only 0.1 joules/pulse, compared with up to 360 joules from automated external defibrillators (Childers et al. 2020). There is no risk of delayed ventricular fibrillation, as electricity is not like a drug and does not accumulate within the body (Childers et al. 2020). Additionally, CED discharges do not promote coagulation or thrombus formation (Kroll et al. 2020).
- 3.5.3. When fired, the CED delivers a series of very rapid and short electrical pulses designed to cause skeletal muscle contraction by innervation of the alpha-motor neurones (Childers et al. 2020). It is this series of shocks that temporarily causes neuromuscular incapacitation, in addition to sensory overload and pain (Childers et al. 2020).
- 3.5.4. The CEDs used by UK police have several modes. However, only the probe, angled drive-stun and three-point contact modes can achieve neuromuscular

incapacitation (SACMILL 2016). Conducted energy devices are predominately used in the probe mode (Home Office 2019b).

### **3.6. Injuries associated with conducted energy devices**

3.6.1. Conducted energy devices are associated with fewer injuries (9%) when compared with other police tactics, such as physical contact (11%), baton strikes (13%), irritant sprays (17%) and police dogs (30%) (Stevenson and Drummond-Smith 2020). Significant injuries are rare, with most injuries associated with falling or probes (Roberts and Vilke 2016; Stevenson and Drummond-Smith 2020).

3.6.2. Injuries can be categorised as Primary or Secondary. Stevenson and Drummond-Smith (2020) highlight caution attributing causation to simple temporal associations.

3.6.2.1. Primary injuries can include:

- The potential for inducing a cardiac arrhythmia (Roberts and Vilke 2016).
- A single case report of seizure (Bui et al. 2009).
- A single case report of a stroke (Bell et al. 2014).
- A single case report of miscarriage (Stevenson and Drummond-Smith 2020).
- Two case reports of rhabdomyolysis, the release of myoglobin into the bloodstream from the breakdown of damaged skeletal muscle, leading to an acute kidney injury (Gross et al. 2013; Gleason and Ahmad 2015).

3.6.2.2. Secondary injuries include:

- Probe injuries to the head or face may cause fractures, penetrate the skull, eye or throat (Li and Hamill 2013; Maher et al. 2015; Lewis and Lewis 2016; Kroll et al. 2019).
- Probes penetrating the chest wall may lead to pneumothoraces, particularly in the very thin (Hinchey and Subramaniam 2009).
- Retained probes.
- Burns (Kroll et al. 2017).
- Testicular penetration may lead to haemorrhage or torsion (Theisen et al. 2016).
- Falls from standing, resulting in head injuries, facial fractures, traumatic brain injury (increased age is an independent risk factor for fatal brain injuries) (Kroll et al. 2016).
- Spinal fractures have been noted, but only in demonstrations involving volunteers (Childers et al. 2020). There are no real-world reports of similar incidents.

### **3.7. Deaths and serious injuries**

- 3.7.1. CED discharge has been deemed at inquest to be causal to one death<sup>2</sup> (Inquest 2015) and contributory to a further four<sup>3</sup> (BBC 2015; Inquest 2018; Inquest 2019; Inquest 2020). In the case of one other death in which a CED was discharged for 33-seconds, the judge concluded that it was not possible to determine that the discharge was delivered to the deceased for the prolonged period of application (Judiciary of England and Wales 2021). At another inquest the jury failed to reach a conclusion and a new inquest is to take place (BBC 2021).
- 3.7.2. UK statistics on serious injuries related to CED discharge are more difficult to determine. Examples that are known include a case of facial trauma in which a CED dart penetrated close to the eye and an incident in which discharging a device on a man who was climbing a wall may have led to him falling and sustaining a life-changing injury (Campbell and Clark 2019; Independent Office for Police Conduct 2020).
- 3.7.3. There will be non-fatal cases where the administration of CED discharge may have contributed to a serious adverse medical outcome but where publicly available information, including that available to SACMILL, is scarce. SACMILL are currently seeking ways to gain timely access to the details of such cases to help identify any themes that could lead to safer use of this less-lethal weapon.
- 3.7.4. SACMILL (2016) note two further serious but non-fatal incidents. The first involves a man successfully resuscitated from ventricular fibrillation after receiving an eleven-second discharge to the chest from a TASER™ X26, the second; a man suffered a severe head injury following a CED discharge (SACMILL 2016). It is not clear if the head injury directly resulted from the CED probe or the subsequent fall. Globally, CEDs have been discharged over 6.5 million times (Childers et al. 2020).

### 3.8. Probe mode

- 3.8.1. In probe mode, the CED projects a pair of metal probes at 160 feet per second (Childers et al. 2020). The TASER™ X2 and TASER™ 7 can fire two pairs, four probes, without reloading. Allowing for one probe from each cartridge to connect, creating the circuit required. For successful neuromuscular incapacitation, at least two probes from the same CED must make contact, attaching either to the individual's clothing or penetrating the skin (SACMILL

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<sup>2</sup> [Inquest jury concludes police taser is most likely cause of death of Andrew Pimlott](#)

<sup>3</sup> [Jury finds restraint by Warwickshire police contributed to death of Darren Cumberbatch; Jordon Begley inquest: Taser and restraint 'contributed' to death; Inquest concludes Adrian McDonald died of stress of incident following police dog bites and Taser use as well as effects of cocaine; Inquest finds use of Taser by Devon and Cornwall Police contributed to death of Marc Cole when experiencing paranoia](#)

2016). Contact failure results in no effect (SACMILL 2016). Successful contact should result in an immediate effect (SACMILL 2016).

3.8.2. During discharge, in probe or angled drive-stun mode, individuals may experience neuromuscular incapacitation.

3.8.3. Neuromuscular incapacitation may present as (adapted from the College of Policing (2022)):

- Inability to control their posture, at risk of an injury from uncontrolled and unprotected fall.
- Leg rigidity, which may mimic 'kicking out' in the prone position.
- Convulse, curl up in a ball, spasm, or stiffen.
- Intense pain.
- Call out or make involuntary noises.
- Unable to respond to verbal commands.
- Confusion or disorientation post-discharge.
- Feeling exhausted.
- 'Freeze' on the spot.

### **3.9. Direct contact mode (formally known as drive-stun mode)**

3.9.1. Two electrodes on the front of the CED are driven into the individuals clothing or exposed skin. Direct contact mode achieves compliance through localised pain. It is not capable of neuromuscular incapacitation (Faculty of Forensic and Legal Medicine 2017). It is least likely to cause harm other than a localised injury.

### **3.10. Angled drive-stun and three-point contact mode**

3.10.1. Angled drive-stun and three-point contact modes are a back-up where only one probe makes contact, or there is an insufficient separation between them to achieve neuromuscular incapacitation (SACMILL 2016). Then, with the probe or probes still attached, the officer places the front of the CED, as in a direct contact mode, into the individual, causing the separation required to trigger neuromuscular incapacitation (SACMILL 2016).

3.10.2. The term 'Angled drive-stun' refers to the TASER™ X26, where officers must rock, or angle, the device to connect the necessary positive or negative electrode on the front of the device, creating the necessary circuit.

3.10.3. The term 'three-point contact' refers to both the TASER™ X2 and 7 where a cartridge has been discharged and resulted in either a single probe hit or a close probe deployment that has insufficient probe separation. As a result, the officer must place the front of the device against the subject to connect the necessary positive or negative electrode on the front of the device with the probe(s) already in the body, creating the necessary circuit.

- 3.10.4. The difference between angled-drive stun and three-point contact is a technical one. Where, if successful, both will cause individuals to experience the same effects as probe mode.

## 4. Necessity for assessment

- 4.1. On arrival in police custody all individuals subjected to a CED discharge require a clinical assessment regardless of whether assessed by paramedics or attending hospital before arrival in custody. Therefore, whilst these guidelines are primarily intended for HCPs working in police custody, they may also be of interest to those assessing individuals exposed to CEDs in other settings.
- 4.2. Where an attempt to use a CED has resulted in no effect because the probes have failed to connect and no energy has been conducted, the full breadth of this guideline may not be relevant. Individuals may still require a Fitness to Detain (FTD) assessment as rarely are CEDs used in isolation. Additionally, the circumstances leading to arrest and the necessity for CED use may need investigating (i.e., mental illness or substance misuse). However, these fall outside the scope of this guideline.

## 5. Health care professional experience and knowledge

- 5.1. Health care professionals should have successfully completed their local induction competencies, shadowing and be deemed competent to work without supervision in police custody before undertaking training for post-CED assessments.
- 5.2. However, all HCPs should be able to identify presentations or conditions where immediate referral to a hospital is indicated.
- 5.3. The Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons outline the competencies for HCPs undertaking post-CED assessments, from which this guideline is based. See [Appendix three](#) for an overview of the competencies and how they link with this document.
- 5.4. The experience, knowledge and skills of HCPs will vary depending on their background. Therefore, all HCPs undertaking post-CED assessments must receive an appropriate level of training before independent practice, as outlined in points [12.6 to 12.8](#). The individual's specific training and supervision needs should be considered.
- 5.5. Those HCPs new to post-CED assessments should successfully complete an appropriate course with an end-point assessment. Health care professionals

should have opportunities to be observed in practice undertaking post-CED assessments.

- 5.6. Health care professionals should competently complete a minimum of three independent post-CED assessments. Before making any final decisions, they should discuss their assessment with a HCP experienced and competent in post-CED assessments. Ideally, all discussions should be via a recorded line. Regardless, it is essential both HCPs document discussions, ideally on a shared medical record, which should include the date, time and details of the conversation, findings and advice.
- 5.7. Once HCPs have completed a minimum of three independent post-CED assessments without direct observation **and** are deemed competent, they are no longer required to discuss each case with a senior HCP. However, any clinical concerns in future cases should still be considered by the HCP. Quality assurance of these post-CED assessments and advice calls should be undertaken by an identified clinical lead, with feedback provided.
- 5.8. At all times, HCPs should act within their level of competence (Nursing and Midwifery Council 2015; General Medical Council 2020; Health and Care Professions Council 2020).

## 6. Health care professional referral

- 6.1. All individuals post-CED should be referred to an HCP without delay.
- 6.2. Referrals should be triaged, with post-CED assessment taking a higher priority than routine referrals.
- 6.3. Where there are any delays between the arrival of an individual post-CED and appropriately trained HCP availability, consideration should be given to recommending an increased level of observations, such as level 3 or 4 (see [Appendix four](#)).

## 7. Clinical assessment

- 7.1. The following section outlines the various aspects of the assessment. It is not intended to lay out the sequence, that is for individual HCPs to determine depending on the individual circumstances and presentation. In addition, the CED Joint Working Group have produced a document titled '*Conducted Energy Device (TASER™) At a glance guidance for Police Custody*' (available from either the [UKAFNP](#) or [FFLM](#) Conducted Energy Device Hub).
- 7.2. In addition to reviewing the police risk assessment, a collateral history should be obtained from officers at the scene, this may include:
  - The individual's demeanour and behaviour before and after CED deployment.

- The use of any other forms of force, such as; irritant spray, baton, physical restraint or police dogs.
  - The number of probe strikes, direct contacts or discharges.
  - Impact sites.
  - The direction the individual fell.
  - The surface they landed on, e.g., concrete or grass.
  - Whether they had sustained a potential head injury.
  - If the probes have been removed, where they are now and are they available for inspection?
  - Any other relevant information from the arrest scene.
  - Review any available body-worn video footage of both events leading to and the CED deployment.
  - Any information from paramedics where an individual is assessed before arrival in custody.
- 7.3. As with all clinical assessments, the medical room should ideally be used for post-CED assessments. In part to protect confidentiality, improved lighting, environment, cleanliness and atmosphere. However, personal safety is paramount and decisions should be risk-assessed jointly with the custody officer.
- 7.4. Health care professionals should identify themselves by name, profession and outline their role and the scope of the assessment. This should also include the potential for preparing statements or evidence in court. It is also essential to highlight the limits to confidentiality.
- 7.5. Consent must be sought. However, HCPs should be aware that consent can be withdrawn at any stage.
- 7.6. Consent should be considered in line with the relevant mental capacity legislation. Where an individual lacks the capacity to consent to assessment or treatment, HCPs may have to make best interest decisions. Any such decisions should be accurately documented.
- 7.7. Good practice is to record observations at the start of the assessment.
- 7.8. Individuals should be asked to recall the events surrounding the CED's use and in particular, where any probes struck and what, if any, effect the CED had. It is important to understand their positioning and surroundings at the time to identify any potential mechanisms of injury. As well as identifying any injuries.
- 7.9. A complete history should be obtained, as is typical with all referrals:
- Past medical history (specifically enquire about a cardiac history).
  - Psychiatric history and intellectual disability (or other vulnerability).
  - Medication history (specifically enquire about prescribed, herbal, over the counter, borrowed or street-bought-medication).
    - Anticoagulants; increased risk of bleeding.
    - Statins; theoretical increased risk of rhabdomyolysis.
  - Allergies.

- Alcohol or drug use (specifically enquire about recent use, quantity and timings). Please refer to the ['Detainees with substance use disorders in police custody: Guidelines for clinical management \(fifth edition\)'](#).
  - Family History (specifically enquire about relevant cardiac history).
  - Self-harm or suicide thoughts and attempts.
  - Injuries.
- 7.10. A comprehensive clinical examination, including (this list is not exhaustive):
- Assessment of physical and mental vulnerability.
  - General survey
  - Mental state
  - Injury documentation
  - Respiratory
  - Cardiovascular
  - Abdominal
  - Neurological
  - Musculoskeletal
  - Genital (if indicated)
- 7.11. The minimal observations that should be recorded in all cases:
- Blood pressure
  - Pulse rate and rhythm
  - Respiratory rate
  - Oxygen saturation
  - Blood glucose level
  - Temperature
  - Pupillary size and response
  - Conscious level.
- 7.12. Where an individual refuses part of the assessment, documentation should outline attempts made.
- 7.13. Probe sites should be inspected and documented using a body diagram. Injuries should be measured for size and positioning from their nearest fixed anatomical landmark.
- 7.14. Where HCPs have appropriate training and facilities, HCPs should consider photography of probe sites with a linear scale. However, this should only happen where trained, specific equipment and the correct storage, security and handling for such images are outlined in local policy and procedure, in line with General Data Protection Regulation (GDPR), with informed consent.
- 7.15. Analgesia should be offered, if indicated, following local policy and procedure.
- 7.16. Individuals exposed to CED should be provided with appropriate advice outlining symptoms or potential complications to be aware of and a copy of *'Conducted*

*Energy Device (TASER™) Patient Factsheet'* should be provided (available from either the [UKAFNP](#) or [FFLM](#) Conducted Energy Device Hub).

- 7.17. Any individual subjected to a CED should be observed on a minimum of Level 1 with checks every 30 minutes for the duration of their detention (see [Appendix four](#)). However, where forces have specific advice or guidelines indicating a higher minimum level of observation, this should be followed. Health care professionals should have a low threshold for recommending an increased level of observation, where there are any concerns or identified risks.
- 7.18. Consideration should be given to the potential for developing long-term psychological consequences from CED use, such as anxiety or post-traumatic stress disorder. While no specific services exist for any such post-CED complications, individuals should be directed to their General Practitioner for advice, support or referral.
- 7.19. Assessments, impressions and decision-making must be documented comprehensively. Services may wish to use or develop a service-specific assessment tool based on the *'Post Conducted Energy Device (CED) Assessment form for Forensic Clinicians'* prepared by the CED Joint Working Group (available from either the [UKAFNP](#) or [FFLM](#) Conducted Energy Device Hub).

## 7.20. Safeguarding

- 7.20.1. Health care professionals should be mindful of their safeguarding responsibilities, specifically to young people under 18-year-old, regardless of mental capacity (Faculty of Forensic and Legal Medicine 2020). Concerns may include the antecedent behaviour leading to CED use, or solely the use of a CED on a young person. Where concerns regarding harm are identified, follow the local Child Safeguarding Partnership procedures and share concerns with the local authority children's social services department.

## 8. Emergency Department referral criteria

- 8.1. Not every individual who receives a CED discharge requires routine referral to the Emergency Department and there should be no such blanket policies (Childers et al. 2020). Fit and well individuals who present asymptomatic and free from injuries do not require referral to the Emergency Department (Fulde and Fulde 2014). There is no requirement for routine bloods or electrocardiogram (ECG) (Childers et al. 2020). Less than 2% of those referred to hospitals are admitted (Stevenson and Drummond-Smith 2020).
- 8.2. Table 1 highlights those who must be referred to the hospital.

**Table 1 | Red Flags requiring immediate hospital referral**

An [Acute Behavioural Disturbance \(ABD\)](#) / [Excited Delirium Syndrome \(ExDS\)](#) should be considered if there are any of the following:

- Tactile hyperthermia (hot to the touch, excessive sweating)
- Constant or near-constant physical activity
- Extreme agitation or aggressive (super-human strength)

Where a probe has penetrated and remains embedded in a sensitive area:

- Face
- Neck
- Genital
- Spine
- Hands
- Feet
- Joints
- Areas with major underlying cardiovascular structures (such as the carotid, femoral, brachial or radial arteries)

Anyone with an implanted device<sup>4</sup>, such as: (College of Policing 2022)

- Pacemaker
- Internal cardiac defibrillator
- Vagus nerve stimulator

Pregnant<sup>5</sup>

Chest pain, palpitations or irregular pulse.

Any condition where there is a threat to the Airway, Breathing or Circulation (ABC)

Anyone with a head injury who is intoxicated or meets the [National Institute for Health and Care Excellence](#) (2019) guideline hospital referral criteria:

- Glasgow Coma Scale (GCS) score of less than 15 on initial assessment
- Any loss of consciousness as a result of the injury
- Any focal neurological deficit since the injury<sup>6</sup>
- Any suspicion of a skull fracture or penetrating head injury<sup>7</sup>
- Amnesia for events before or after the injury
- Persistent headache since the injury
- Any vomiting since the injury

<sup>4</sup> In the absence of any clinical concerns, HCPs should consider liaising directly with the cardiologist or neurologist to arrange device interrogation.

<sup>5</sup> In the absence of clinical concern, HCPs should consider liaising directly with the obstetrician, early pregnancy unit or maternity assessment centre to arrange for direct assessment, without the need for attending the Emergency Department.

<sup>6</sup> Problems restricted to a particular part of the body or a particular activity, for example, difficulties understanding, speaking, reading or writing; decreased sensation; loss of balance; general weakness; visual changes; abnormal reflexes; and problems walking.

<sup>7</sup> Clear fluid running from the ears or nose, black eye with no associated damage around the eyes, bleeding from one or both ears, bruising behind one or both ears, penetrating injury signs, visible trauma to the scalp or skull of concerns to the HCP.

<ul style="list-style-type: none"> <li>• Any seizure since the injury</li> <li>• Any previous brain surgery</li> <li>• A high-energy head injury<sup>8</sup></li> <li>• Any history of bleeding or clotting disorders</li> <li>• Current anticoagulant therapy</li> <li>• Continuing concern by the health care professional</li> </ul>
Presents as 'drunk and incapable'

8.3. Table 2 highlights those where referral to a hospital may not be necessary but should be considered.

<b>Table 2   Amber Flags which may require referral to hospital (This list is not exhaustive)</b>
Any significant burn injury at probe site
Where a probe has penetrated, but no longer remains embedded in, a sensitive area: <ul style="list-style-type: none"> <li>• Face</li> <li>• Neck</li> <li>• Genitals</li> <li>• Spine</li> <li>• Hands</li> <li>• Feet</li> <li>• Joints</li> <li>• Areas with major underlying cardiovascular structures (such as the carotid, femoral, brachial or radial arteries)</li> </ul>
Anyone aged 17 years or younger, because of the different physiology and lack of research of CED use in children.
Previous spinal and neurosurgery.
Injuries requiring further assessment and management not available in custody

8.4. Health care professionals should determine the most appropriate method for transporting individuals to the hospital depending on the clinical circumstances. Not all individuals will require an ambulance, with some being suitable for police to transfer. Where an ambulance is called, the ambulance service is responsible for determining the level of response based on the information provided to them, in line with their guidelines.

8.5. It should be noted that many of the mandatory referral criteria will not require a 'blue light transfer' and it may well be more appropriate to seek alternative transport options.

8.6. Requests for NHS ambulance service attendance should be communicated and triaged according to locally agreed procedures.

<sup>8</sup> For example, fall from a height of greater than 1 metre or more than 5 stairs.

- 8.7. Individuals referred to the Emergency Department by a HCP should be accompanied with a documented referral letter using the S-B-A-R structured communication tool (Situation – Background – Assessment – Recommendation). Consideration should be given to including a copy of, or refer the Emergency Department to, the document '*Conducted Energy Device (TASER™) At a glance guidance for ED clinicians*' (available from either the [UKAFNP](#) or [FFLM](#) Conducted Energy Device Hub).

## 9. Conducted energy device probes

- 9.1. Probes rarely penetrate beyond the dermis. Direct bone injuries are rare, with most injuries affecting the trunk or back (Dunet et al. 2015; Lewis and Lewis 2016).
- 9.2. Probes should be removed by a HCP or trained officer at the earliest opportunity (increasingly officers will consider this at scene if there is an operational necessity), providing they have not penetrated a sensitive area as outlined in [Table 1](#) (Faculty of Forensic and Legal Medicine 2017).
- 9.3. Where a probe has lodged in a sensitive area, the individual should be transferred to the Emergency Department, where they may require specialist input.

### 9.4. Removing Probes

- 9.4.1. Wear the appropriate personal protective equipment, which should as a minimum include gloves and apron.
- 9.4.2. If not already, cut the wires from the CED to the probe, careful not to pull on the wires while they are attached (Peel 2017).
- 9.4.3. Warn the individual they will experience some discomfort while the probe is removed. Support and slightly stretch the skin around the probe with one hand, careful to prevent an accidental sharp injury (Joint Royal Colleges Ambulance Liaison Committee and Association of Ambulance Chief Executives 2019).

#### 9.4.4. **TASER™ X26 and TASER™ X2**

- 9.4.4.1. Grasp the body of the probe and apply firm rapid traction (Joint Royal Colleges Ambulance Liaison Committee and Association of Ambulance Chief Executives 2019).

#### 9.4.5. **TASER™ 7**

- 9.4.5.1. The TASER™ 7 cartridges are shipped with a safety clip. The clip has been designed to aid the removal of probes penetrating the skin. Officers should ensure a safety clip is available to any HCP tasked with removing a probe.
- 9.4.5.2. See [Appendix five](#) for an illustration of TASER™ 7 probe removal with the safety clip.

9.4.6. Ensure the probe is intact. Where there is suspicion a fragment remains embedded, an X-ray may be required. Probes should be treated as evidence and retained by the police, using a suitable evidential container (College of Policing 2022). Probes are a biohazard.

9.4.7. Where a probe is not intact and the individual is referred to the Emergency Department. Preserve the probe in a suitable sealed, clear container for inspection. The contents should be marked as containing a biohazard and handed over as a forensic exhibit.

## 9.5. Aftercare

9.5.1. The area should be cleaned and if necessary, covered with an adhesive dressing (Joint Royal Colleges Ambulance Liason Committee and Association of Ambulance Chief Executives 2019). There is no evidence probes are an infection risk requiring routine prophylactic antibiotics (Childers et al. 2020). However, there may be special circumstances, such as those who are immunocompromised.

# 10. Aggressive behaviour

10.1. Individuals may exhibit challenging, obstructive, aggressive or volatile behaviour making a full clinical assessment difficult. While aggression limits clinical examination, it does not negate the need for assessment. Aggressive behaviour may be a result of:

- Drug or alcohol intoxication or withdrawal.
- Mental illness.
- Neurodisability.
- Autistic spectrum disorders.
- Learning disabilities.
- Acute behavioural disturbance.
- Head injury.
- Hypoglycaemia.
- Hypoxia.
- Infection.

10.2. Extreme aggression or agitation could be due to an ABD. If there are any ABD features, the individual should be transferred to the Emergency Department (Faculty of Forensic and Legal Medicine 2019).

10.3. Attempts should be made to engage with the individual with support from custody staff. Depending on the specific risks, HCPs may consider engaging via the cell door hatch or intercom.

- 10.4. Useful observations may be made from behind the booking desk on the individual's arrival, during their risk assessment or observing CCTV footage from the cell to assist decision-making.
- 10.5. Contemporaneous medical records must still be completed detailing the individual's presentation such as gait, speech and responses given. Any concerns the individual's behaviour results from an underlying medical condition should be transferred to the Emergency Department.

## **11. Refusing assessment**

- 11.1. Competent adults retain the right to refuse assessment and treatment. Therefore, capacity should always be assessed in line with the relevant guidance and legislation. Consider any factors which may affect capacity, such as substance misuse, prescribed medications, learning disability and cognitive impairment. Additionally consider the use of interpreters and other communication aids.
- 11.2. Where an individual refuses assessment, obtain a collateral history and information from the police, their systems and review any available health care records, with the necessary permission. To determine the presence of an indicator for immediate referral to the Emergency Department.
- 11.3. Where possible, a face-to-face discussion is preferable. Ascertain any reasons for refusal and inform the individual they are free to change their mind at any time. Health care professionals should consider re-visiting regularly to monitor changes and review their willingness for assessment or treatment.
- 11.4. Health care professionals may offer a limited opinion based upon their observation, discussion and limited assessment of the individual. They should highlight in writing and verbally to the custody officer any opinions and recommendations are based on a limited assessment.
- 11.5. Where only limited or minimal opinion can be offered, the level of observation should be increased at the custody officer's discretion.
- 11.6. Contemporaneous notes must still be completed detailing the individual's presentation such as gait, speech and responses given. Any concerns about the individual's behaviour resulting from an underlying medical condition should be conveyed to the Emergency Department.

## **12. Guidance for health care providers**

- 12.1. It is for individual providers and their commissioners to determine their approach to post-CED assessments. Small forces, with few post-CED assessments, may struggle to develop competency across whole teams. Providers should be mindful of HCPs ability to maintain competence.

- 12.2. Where HCPs have not received training on post-CED assessments and are in custody, another appropriately trained HCP should be mobilised. No HCP without prior knowledge or training should make the ultimate assessment and decision regarding FTD. They should be able to undertake an initial assessment and recognise those not FTD and needing referral to the Emergency Department.
- 12.3. Providers should develop a documented and accessible post-CED assessment policy and procedures updated in line with local and national guidance or serious case reviews.
- 12.4. A register should be held of all HCPs who have successfully completed the CED training course and assessed competent in practice. These records should be made available for audit and inspection purposes.
- 12.5. Providers must include a basic understanding of CEDs as part of their induction process for new HCPs. For example, identifying conditions requiring immediate referral to the Emergency Department. However, this training is insufficient to enable them to undertake complete post-CED assessments.
- 12.6. Whilst the working group recognises additional training is only mandatory for some groups of HCPs working in police custody, we recommend as best practice, all HCPs (including doctors) should undergo additional training. The additional training enabling all HCPs to undertake post-CED assessments should be delivered in line with both the [National Police Chiefs' Council circular 05LL'2021](#) and the Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons recommendations (see [Appendix three](#)), to include:
  - 12.6.1. An overview of capacity and consent in relation to post-CED assessments.
  - 12.6.2. An overview of the situations and antecedent behaviour which may lead to a CED being discharged.
  - 12.6.3. About CEDs:
    - Overview of CEDs currently used by the respective force.
    - The electrical principles of CEDs.
  - 12.6.4. The different modes of use and their effects:
    - Probe.
    - Direct contact mode.
    - Angled drive-stun and three-point contact
  - 12.6.5. Overview and implication of neuromuscular incapacitation.
    - Including examples of CEDs in use (videos may be useful but should be dealt with respectfully and sensitively).
  - 12.6.6. Physiological effects and complications of CED.
  - 12.6.7. The clinical assessment as outlined in [section 7](#).
  - 12.6.8. Probe management, with examples of injuries.
  - 12.6.9. Recognising those needing referral to other health care professions, including the Emergency Department.

- 12.7. Scenario, group work and simulation should be considered, including reflection on real-world cases. In particular, with a focus on any serious adverse incidents or case reviews.
- 12.8. The course should have an end-point theoretical and practical assessment encompassing all aspects of the taught content.
- 12.9. It is beneficial if provider and force guidelines align, particularly what constitutes a referral to the Emergency Department. However, if there is any discrepancy, the HCP should follow clinical guidelines and clinical judgement.
- 12.10. Providers should identify a senior HCP to undertake quality assurance and provide feedback on post-CED assessments.
- 12.11. Providers should discuss CED cases as part of their clinical governance meeting agenda as a set item. Health care professionals should be encouraged to discuss post-CED assessments at clinical supervision.
- 12.12. Providers should annually audit their post-CED assessments and training against the criteria within this guideline.
- 12.13. All HCPs should be encouraged to complete at least one written reflection on a CED case they have assessed, which could be used in their revalidation and portfolio.
- 12.14. A face-to-face, two-yearly update should be provided to staff on CED to ensure that any national or local force changes have been included.

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**Appendix one | Regulatory body codes of practice cross reference**

	<b>Nursing and Midwifery Council</b>	<b>Health and Care professional Council</b>	<b>General Medical Council</b>
	The code	Standards of conduct, performance and ethics	Good medical practice
1. Introduction	1.1, 1.6, 3.1, 6.2 16.2, 16.3, 16.5, 17.3, 19.1, 19.4 20.1, 20.2, 20.5, 20.6, 20.7, 20.8	1.1, 1.5, 1.7, 2.1, 3.1, 3.3, 3.4, 7.4, 9.1	1, 3, 7, 11, 14,
2. Purpose 3. Background 4. Necessity for assessments	1.4, 5.1, 7.2, 10.5, 13.1,13.2, 14.1, 15.2, 24.1, 25.1	8.2, 8.3	8, 12
5. Health care professional experience and knowledge	8.1, 8.2, 8.6, 9.2, 13.2, 13.3, 17.3	3.2	
6. Booking in and health care professional referral	1.4, 13.2, 14.1, 15.2, 25.1		56
7. Clinical assessment	2.1, 3.4, 4.2, 4.3, 5.1, 5.2, 5.4, 7.1, 7.2, 7.4, 8.2, 8.3, 8.5, 8.9.3, 10.1, 10.2, 10.4, 10.5, 13.1, 17.1, 17.2, 18.1, 18.2, 18.3, 18.4, 20.3, 24.1	1.2, 1.3, 1.4, 2.5, 2.6, 5.2, 7.1, 7.3, 8.2, 8.3, 10.1, 10.2, 10.3	2, 15, 16, 19, 20, 21, 27, 31, 32, 33, 34, 46, 47, 48, 49, 50, 51, 57,
8. Emergency department referral criteria	3.3		26, 44
9. Conducted energy device probes	19.3		
10. Aggressive behaviour	2.6, 13.4, 15.3, 19.4	6.1, 6.2	58, 60
11. Refusing assessment	1.3, 2.1, 2.3, 2.4, 2.5, 4.1, 4.2, 4.3, 5.2, 7.1, 16.6, 17.1	1.1, 1.2, 1.3, 1.4, 2.2, 2.3, 2.4	17,
12. Guidance for health care providers	8.4, 9.1, 9.4, 10.7 11.1, 11.2, 11.3, 12.1, 13.5, 15.2,	3.1, 9.4	9, 10, 13, 22, 23, 25, 35, 36, 37, 39, 40, 42, 45,

Healthcare assessment in police custody after CED discharge

	16.1, 17.3, 19.2, 23.1, 24.2		
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Appendix two | TASER™ model comparison

	Taser™ X26	Taser™ X2	Taser™ 7
Probe (dart)			
Loaded cartridges	3.8 cm (1 cm dart) One	3.4 cm (1.1 cm dart) Two	2.2 cm (1.1 cm dart) Two
Laser sighting	Single red laser	Dual red laser	Dual laser; green (upper) and red (lower)
Range	6.4 meters	7.6 meters	7.6 meters
Pulse rate	19 pulses per second	19 pulses per second	22 pulses per second
Pulse duration	110 microseconds	80 microseconds	45 microseconds

(Peel 2017; Childers et al. (2020); Defence Science and Technology 2020; Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons 2020)

### Appendix three | SACMILL competencies

The Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons (SACMILL) recommend that any individual subjected to a discharge from a Conducted Energy Device (CED) should be seen by an appropriately trained and experienced health care professional who has been formally assessed as being competent to practise in this role. This health care professional may be a doctor, nurse or paramedic who has undergone appropriate training and assessment and who possesses the following skills, knowledge and competencies:

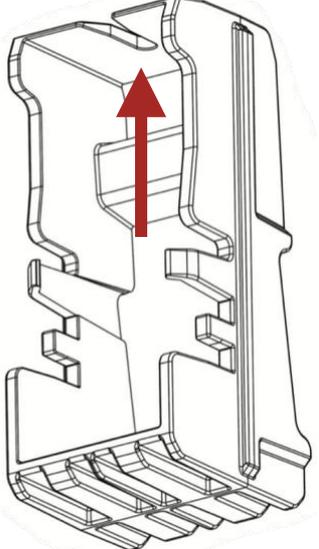
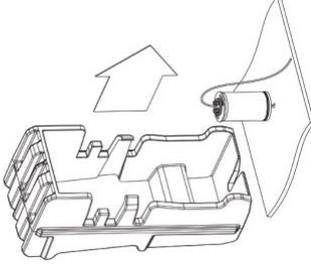
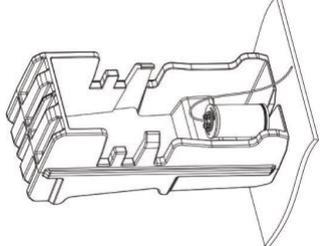
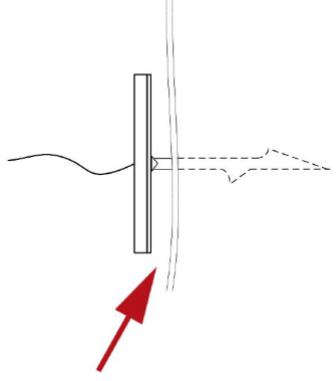
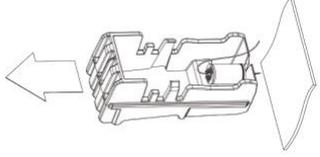
	Mapped to document
Has an understanding of the physiological effects and context of CED use within the policing environment;	12.6.3 12.6.4 12.6.5 12.6.6
Has an understanding of the antecedents to the types of behaviour that may lead to an individual being subjected to CED discharge;	12.6.2
Is skilled in the medical assessment, recognition and recording of individual vulnerabilities as they relate to exposure to CED discharge and, additionally, has knowledge of the range of primary and secondary injuries associated with exposure to the electrical discharge;	12.6.6 12.6.7
Has the ability to frame the medical assessment in the context of the individual's condition before the incident, at the time of CED deployment and in the post- discharge period, taking into consideration other use-of-force options that may also have been used (such as physical restraint and irritant spray) - this should take into account both physical and mental health factors and the influence of intoxicants;	12.6.7 12.6.8
Be able to identify all of the known outcomes of being subjected to CED discharge;	12.6.3 12.6.4 12.6.5 12.6.6 12.6.8
Be able to demonstrate the clinical decision-making skills required to recognise the need for referral to other health care professionals.	12.6.9

## Appendix four | Level of observations

<p><b>Level 1</b></p>	<p><b>General observations</b></p> <ul style="list-style-type: none"> <li>• The detainee is checked at least every hour (the risk assessment is updated where necessary).</li> <li>• Checks are carried out sensitively in order to cause as little intrusion as possible.</li> <li>• If no reasonable foreseeable risk is identified, staff need not wake a sleeping detainee (checks of the sleeping detainee must, however, continue and if any change in the detainee’s condition presents a new risk, the detainee should be roused).</li> <li>• If the detainee is awake, staff should communicate with them.</li> </ul>
<p><b>Level 2</b></p>	<p><b>Intermittent observation</b></p> <ul style="list-style-type: none"> <li>• The detainee is visited and roused at least every 30 minutes.</li> <li>• Physical visits and checks must be carried out – CCTV and other technologies can be used in support of this.</li> <li>• The detainee is positively communicated with at frequent and irregular intervals.</li> <li>• Visits to the detainee are conducted in accordance with PACE Code C Annex H.</li> </ul>
<p><b>Level 3</b></p>	<p><b>Constant observations</b></p> <ul style="list-style-type: none"> <li>• The detainee is under constant observation and accessible at all times</li> <li>• Physical checks and visits must be carried out at least every 30 minutes</li> <li>• CCTV is constantly monitored (other technologies can also be used)</li> <li>• Any possible ligatures are removed</li> <li>• The detainee is positively communicated with at frequent and irregular intervals</li> <li>• Review by the HCP in accordance with the relevant service level agreement.</li> </ul>
<p><b>Level 4</b></p>	<p><b>Close proximity</b></p> <ul style="list-style-type: none"> <li>• The detainee is physically supervised in close proximity to enable immediate physical intervention to take place if necessary</li> <li>• CCTV and other technologies do not meet the criteria of close proximity observation but may complement it</li> <li>• Issues of privacy, dignity and gender are taken into consideration</li> <li>• Any possible ligatures are removed</li> <li>• The detainee is positively communicated with at frequent and irregular intervals</li> <li>• Review by the HCP in accordance with the relevant service level agreement.</li> </ul>

(College of Policing 2020)

**Appendix five | TASER™ 7 probe removal**

<p><b>Step 1</b></p>  <p>The Taser™ 7 cartridge safety clip has been designed with a notch to enable probe removal.</p>	<p><b>Step 2</b></p>  <p>The cartridge safety clip should be available to any HCP tasked with removing a barb.</p>	<p><b>Step 3</b></p>  <p>Slide the safety clip between the probe and the subject, catching the probe between the dart body and the dart point.</p>	<p><b>Step 3 (continued)</b></p> 	 <p>If the probe bumper has broken free of the rest of the probe assembly, slide the safety clip in the same way to catch the probe between the probe bumper and</p>	<p><b>Step 4</b></p>  <p>Pull the safety clip (and the probe with it) straight out. Do not twist the safety clip or probe as the barbed tip may cause additional injury.</p>
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# Glossary

<b>ABD</b>	Acute behavioural disturbance.
<b>Arrhythmia</b>	An abnormality of the heart's rhythm. It may beat too slowly, too quickly or irregularly.
<b>CCTV</b>	Closed Circuit Television.
<b>CED</b>	Conducted Energy Device.
<b>Custody Officer</b>	A constable of at least the rank of Sergeant who works in a custody suite.
<b>Detention Officer</b>	A police civilian who assists the Custody Officer in processing individuals in police custody, they are having caring and welfare responsibilities.
<b>ExDS</b>	Excited Delirium Syndrome.
<b>FFLM</b>	Faculty of Forensic and Legal Medicine.
<b>FTD</b>	Fitness To Detain.
<b>HCP</b>	Health Care Professional.
<b>NHS</b>	National Health Service.
<b>PACE</b>	Police and Criminal Evidence Act 1984.
<b>Peripetatic</b>	Travel from place to place (i.e., respond to calls across various locations).
<b>Recorded line</b>	A dedicated phone line capable of recording a telephone conversation (typically digital).
<b>SACMILL</b>	Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons.
<b>Senior HCP</b>	Senior health care professionals with training and experience of post-CED assessments without supervision (direct or indirect).
<b>UKAFNP</b>	UK Association of Forensic Nurses and Paramedics.

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