

Nova Scotia

Conducted Energy Device (CED) Review

Nova Scotia Department of Justice

March 5, 2008

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Executive Summary

Since 2003, there have been 20 deaths in Canada subsequent to the use of a conducted energy device (CED) by law enforcement officers. Concerns about these incidents, including the November 2007 death of Howard Hyde in Halifax, prompted the Minister of Justice, Cecil P. Clarke, to order a review.

On December 7, 2007 the Minister outlined a two-step process for a ministerial review of CED use and policies in Nova Scotia. In the first phase, to be completed by February 29, 2008, he directed that local and cross-jurisdictional research be completed, to include data on policies and procedures respecting CED use in Nova Scotia and a review of research currently underway in other jurisdictions. This is a report on the findings of that review.

In part two of the process, an advisory panel, with representation from law enforcement and scientific communities, will be established to review the findings and provide advice to the Minister.

Use of Force by Law Enforcement

Law enforcement officers work in a very volatile environment. Situations can escalate very quickly and the officer must respond appropriately based on his/her perception of the situation and in the context of rules and regulations governing that response. When confrontations occur, the best outcome is one in which the situation is brought under control and no one is injured. However, the nature of law enforcement work is such that risk of harm to officer, subject or bystanders can never be completely eliminated.

Law enforcement agencies have developed policy regarding the use of force and provide training for all officers. All municipal police services in Nova Scotia and Sheriff Services use the National Use of Force Model; the RCMP uses the Incident Management/Intervention Model. Correctional Services uses the Situation Management/Use of Force model adapted from that used by Correctional Services Canada.

The models are similar in stressing the central issue of continuous monitoring of a subject's behavior in the context of an environment that is always in flux and the requirement to apply the least amount of force necessary to gain compliance of the subject while minimizing the risk of harm to the subject, law enforcement officers and others. They differ, however, in the categories of behavior for which the CED can be used and in the categorizations of force.

CED Policy and Procedure in Nova Scotia

Under the provisions of the *Nova Scotia Police Act*, the Minister of Justice is the constituted authority for the administration of justice within the Province. The Minister is responsible for ensuring that "an adequate and effective level of policing is maintained throughout the Province" and, for that purpose, the Minister "may issue a directive or standard operating or administrative procedure to a police department" or "require a police department, board or advisory board to develop a directive or a standard operating or administrative procedure".

In December 2006, the Public Safety Division of the Department of Justice issued a Provincial Governance Standard for CEDs which required police agencies to develop a specific operational policy and procedure (SOPP) to guide their use of CEDs. Currently, CEDs are authorized for use in eight of the twelve municipal police agencies, the RCMP, Correctional Services and Sheriff Services.

All law enforcement agencies using CEDs have developed written policy and procedure regarding the use of CEDs.

The individual SOPPs do, however, differ in their descriptions of the situations in which CEDs may and may not be used. The RCMP policy makes reference to special procedures that are to be followed in cases of subjects believed to be suffering from excited delirium. Although all police agencies and Sheriff Services specify that the CED is classified as an *intermediate* weapon in the use of force continuum (Correctional Services does not), there are differences in how they describe the process for determining whether or not CED use is appropriate in a given situation. Some SOPPs require notification of a supervisor prior to CED use, while others indicate the supervisor is to be notified as soon as possible after a CED deployment. Some SOPPs contain specific cautions regarding multiple use of the device while others contain no such reference. While some policies require that medical personnel remove probes, others permit them to be removed by CED operators. The majority of SOPPs state that persons struck with CED probes are to be evaluated promptly by medical personnel.

The amount of training received differs significantly among law enforcement agencies: municipal police officers and Sheriff Services receive eight hours of training (lecture and practical exercises) in order to qualify as a CED operator, while the RCMP and Correctional Services staff receive sixteen hours of training.

Use of CEDs in Nova Scotia

At this time there are 1748 police officers in Nova Scotia. Of these, 837 (48%) are members of municipal police departments and 911 (52%) are members of the RCMP deployed in various provincial and federal positions throughout the province. A total of 789 (45%) are trained in the use of CEDs.

In addition, of the 188 officers employed by Sheriff Services, seventeen (9%) are trained in CED use (which is authorized only in the cell areas of the Halifax Provincial Court and Sydney Justice Centre). These devices are also used by Correctional Services in three locations: the Central Nova Scotia, Cape Breton and Southwest Nova Scotia Correctional Facilities. Of a total security staff complement of 255, 44 (17%) are trained in the use of CEDs.

Use of CEDs has increased substantially over the past three years, from 101 times in 2005 to 182 times in 2007, an 80% increase. This could be partially attributed to the overall increase in the number of CEDs currently in use. While there has been an 80% increase in usage from 2005 to 2007, there was a 103% increase in the number of CEDs in use during the same time period. Significant increases (98%) occurred in the use of the 'presentation only' mode (i.e. the device is shown in warning only and not fired) and in the firing of probes (104%).

It is important to note that use of CEDs is very infrequent when viewed in the context of all police-citizen interactions. In 2007, for example, of the 340,380 calls for service to police, CEDs were deployed in only 182 incidents or 0.05% of the total interactions.

It is common for subjects to sustain minor injuries as a result of a CED application; e.g. minor bruising and skin punctures where the probes have made contact with the skin. During the period 2005-2007 Halifax Regional Police (HRP) reports only one incident where a subject received more significant injuries where

no force other than the CED was deployed.¹ Of the other municipal police forces, only Bridgewater reported an injury. The RCMP reported 5 minor injuries and one death (the case of Saulnier in Digby).

HRP prepared a report on all CED incidents from 2003-2007. The report noted a significant decrease in injuries (in all police-citizen interactions) following the introduction of the CED. That police force reports a 78% decline in injuries in 2006 after CED numbers were increased and more officers were trained in its use. However, an increase in injury rates was noted from 2006 to 2007. The authors of that report hypothesize that this is a result of officers becoming more tentative in deploying the CED after a number of well-publicized incidents critical of CED use.

Citizens who wish to complain about the behavior of a police officer have recourse to an independent complaints commission. Since 2004, there have been two complaints associated with the use of CEDs by municipal officers (one complaint was resolved informally; the other through the court system) and four regarding CED use by the RCMP (in one case the investigation found in favour of the complainant and corrective action was taken). One complaint was lodged by an inmate of the Central Nova Scotia Correctional Facility regarding alleged misuse of a CED. An investigation by HRP resulted in a finding that the complaint was unfounded.

Jurisdictional Reviews

Conductive Energy Devices (CEDs) are a relatively new tool used by law enforcement to subdue resistant subjects. But since their introduction in the United States in the 1990s, they have been adopted by an increasing number of law enforcement agencies, including police forces, sheriffs' departments and correctional institutions.

In recent years, however, public authorities have become increasingly concerned about the use of CEDs, as reports of a number of deaths proximal to CED deployment have been published. In response, with public safety as a paramount issue, a number of jurisdictions have ordered comprehensive reviews of CED use.

The jurisdictional reviews have generally concluded CEDs are effective law enforcement tools that are safe in the vast majority of cases. However, many of the reports indicate there is a need for clearer guidelines regarding CED use and more comprehensive training. The reviews emphasize the importance of accountability – the requirement that the actions of law enforcement officers be governed by policy and that these actions be subject to scrutiny through review and reporting.

Many of the reviews identify significant knowledge gaps associated with the impact of CEDs and express concern about the lack of comprehensive data to properly inform policy. They note that longitudinal studies are required to achieve a more complete understanding of the long-term impact of CEDs – and all tools associated with the use of force continuum – to determine their impact on officer, suspect and public safety.

Conclusion

Law enforcement officers must have appropriate tools to assist them in maintaining public safety. To that end, efforts have been directed at developing instruments that provide an effective response to subduing resistant subjects in situations where simple physical control tactics are inappropriate or inadequate.

¹ In the November 2007 incident involving Howard Hyde, no causal connection between CED use and Mr. Hyde's subsequent death has been established. The matter is currently under investigation by the Medical Examiner's Office.

The CED has emerged as a promising 'less-lethal' weapon that allows law enforcement officers to bring non-compliant subjects under control while ostensibly posing the least risk to the officer, the subject and other citizens. Its advantages (relative to other weapons such as the baton, OC spray and the firearm) derive mainly from its versatility – its rapid impact, use from a distance, potential for reducing injuries to officers, subjects and bystanders and its reportedly short duration of physiological impact.

But these are the very characteristics that may render the CED open to misuse or even abuse: particularly over-reliance on the weapon to subdue subjects when less intrusive means could be effective.

Some of the policy considerations for public policy-makers include:

- The adequacy of current training programs in addressing the use of the CED in the context of a force continuum and establishing appropriate qualification standards for certification and re-certification.
- Whether there should be operational procedures that clearly outline the conditions of CED deployment and the extent to which the government should be involved in establishing such procedures.
- The adequacy of current oversight and accountability mechanisms.
- Whether there is a mechanism for evaluating policy on an ongoing basis to respond to new research regarding all aspects of the impact of CED use.

Introduction

Background

Since 2003, there have been 20 deaths in Canada subsequent to the use of a conducted energy device (CED) by law enforcement officers.

On October 14, 2007, four members of the RCMP Richmond BC detachment, in attempting to subdue an individual behaving in an erratic manner at the Vancouver International Airport, deployed a conducted energy device (CED). Almost immediately following the impact of the CED, the individual lost consciousness and subsequently died. A video of the altercation involving RCMP and the individual, identified as Robert Dziekanski, was aired internationally by news media and prompted widespread concern about the use of the CED.

In July 2005 Paul Saulnier died after being exposed to a CED application by RCMP officers in Digby, Nova Scotia. The officers used the CED, baton and OC spray in attempting to gain control over Saulnier as he fled from a police building. After handcuffs were applied, Saulnier showed respiratory distress and was pronounced dead at the scene. The Chief Medical Examiner ruled that the cause of death was 'cardiac arrest due to excited delirium due to paranoid schizophrenia'. The Integrated Crisis Intervention Team led by Halifax Regional Police, who investigated the incident, concluded that the use of force by the RCMP officers was justified.

On February 19, 2007 three Halifax Regional Police officers responded to a domestic disturbance call in Dartmouth. A CED was used in touch stun mode for pain compliance against a 17 year old girl in a confrontation with the officers. A Judge hearing charges of assaulting police and resisting arrest against the girl acquitted her of the charges on January 29, 2008. In her ruling, the judge stated that she was "disturbed and disconcerted" by the use of the CED in the circumstances. This has led some to question whether the current guidelines for CED use are adequate.

On November 22, 2007, Howard Hyde, an individual suffering from schizophrenia, died in custody thirty hours after he was exposed to a CED application by Halifax Regional Police officers in attempting to subdue him. While no causal connection has been established between the CED use and the death of Mr. Hyde², the event created concern regarding the use of CEDs and prompted Minister of Justice, Cecil P. Clarke, to order a review.

Ministerial Review

On December 7, 2007 Minister of Justice, Cecil P. Clarke, outlined a two-step process for a ministerial review of conducted energy device (CED) use and policies in Nova Scotia.

In the first phase, to be completed by February 29, 2008, he directed that local and cross-jurisdictional research be completed, to include data on policies and procedures respecting CED use in Nova Scotia and

² This matter is currently under investigation by the Medical Examiner's office.

a review of research currently underway in other jurisdictions. This is the report on the findings of that review.

In part two of the process, an advisory panel, with representation from law enforcement and scientific communities, will be established to review the findings and provide advice to the Minister.

Definitions³

Active aggression

Threat or overt act of an assault (through physical or verbal means), coupled with the ability to carry out the threat or assault, which reasonably indicates that an assault or injury to any person is imminent.

Active Resistance

Physically evasive movements to defeat an officer's attempt at control, including bracing, tensing, pushing or verbally signaling an intention to avoid or prevent being taken into or retained in custody.

Conducted Energy Device (CED)

Also referred to as a conducted energy weapon (CEW), electronic control device (ECD), stun gun or TASER®. Devices that deliver high voltage, low current shocks to a subject, designed to cause temporary incapacitation through involuntary muscle disruption or pain compliance.

CED challenge

Standard form of police articulation, prior to the use of the CED, designed to identify the officer and make the subject aware of the consequences of CED deployment; e.g. "Police – stop – or you will be hit with 50,000 volts of electricity."

CED cycle

Duration of a CED electrical discharge following a CED activation.

Deadly or lethal force

Any tactic or use of force that has an intended, natural and probable consequence of serious physical injury or death.

Deployment of CED

Any use of the CED, including presentation of the CED (with or without the CED challenge), use of the CED in drive stun or probe modes.

Drive stun

Also referred to as push stun or touch stun. A mode of CED deployment where the subject is stunned by an electrical shock as the CED makes direct contact with the subject's body. Used for pain compliance.

³ Based on the Glossary of Terms developed by the Police Executive Research Forum. Cronin, J.M. and Ederheimer, J.A. *Conducted Energy Devices: Development of Standards for Consistency and Guidance*. U.S. Department of Justice Office of Community Oriented Policing Services and Police Executive Research Forum. Washington, D.C. 2006.

Duration	Aggregate period of time that CED shocks are activated.
Excessive force	The application of an unreasonable amount of force (or force too long applied) in a given incident based on the totality of the circumstances.
Excited delirium	State of extreme mental and physiological excitement, characterized by extreme agitation, hyperthermia, euphoria, hostility, exceptional strength and endurance without fatigue
Intermediate weapon	A weapon usage category situated between a <i>verbal command</i> and <i>lethal force</i> on the force continuum model.
Less lethal	A concept of planning and force application that meets an operational or tactical objective, with less potential for causing death or serious injury than more lethal police tactics
Less-lethal weapon	Any apprehension or restraint device that, when used as designed and intended, has less potential for causing death or serious injury than police lethal weapons (e.g. firearms)
Neuro-muscular disruption (NMD)	Disruption of the peripheral nervous system caused by direct stimulation of the motor nerves, causing muscle contraction.
Presentation of CED	Drawing the CED and visual display, with or without the challenge being issued.
Probe deployment	A mode of CED deployment wherein projectiles are fired from a CED at a subject; wires are attached to the probes leading back to the CED, delivering a high voltage low current shock to the subject. This generally results in muscular incapacitation in addition to pain.
Probe spread	The distance between the two probes when they reach the subject.
Proximal death	The death of a person that occurred close in time to the use of a CED (usually 24 hours)
Ventricular fibrillation (VF)	Condition in which the heart's electrical activity becomes disordered.

Use of Force by Law Enforcement

Law enforcement officers work in a very volatile environment. Situations can escalate very quickly and the officer must respond appropriately based on his/her perception of the situation and in the context of rules and regulations governing that response. When confrontations occur, the best outcome is one in which the situation is brought under control and no one is injured. However, the nature of law enforcement work is such that risk of harm to officer, subject or bystanders can never be completely eliminated.

The United Nations Basic Principles on the Use of Force and Firearms by Law Enforcement Officials⁴ acknowledges that “a threat to the life and safety of law enforcement officials must be seen as a threat to the stability of society as a whole.” The Code of Conduct for Law Enforcement Officials⁵ provides that law enforcement officials may use force only when strictly necessary and to the extent required for the performance of their duty.

The UN Principles also state that governments and law enforcement agencies should develop a range of means as broad as possible and equip law enforcement officials with various types of weapons and ammunition that would allow for a differentiated use of force and firearms. These should include the development of non-lethal incapacitating weapons for use in appropriate situations, with a view to increasingly restraining the application of means capable of causing death or injury to persons. Law enforcement officials, in carrying out their duty, shall, as far as possible, apply non-violent means before resorting to the use of force and firearms.

The use of force by law enforcement officers is addressed in the Criminal Code of Canada. Section 25(1) states that a law enforcement officer may use as much force as deemed necessary for the enforcement and the administration of the law. The onus is on the officer to show that, under the circumstances, the degree of force used was justified and not excessive.

Law enforcement agencies have developed policy regarding the use of force and provide training for all officers. All municipal police services in Nova Scotia and Sheriff Services use the National Use of Force Model. The RCMP uses the Incident Management/Intervention Model.⁶ Correctional Services uses the Situation Management/Use of Force model adapted from that used by Correctional Services Canada.

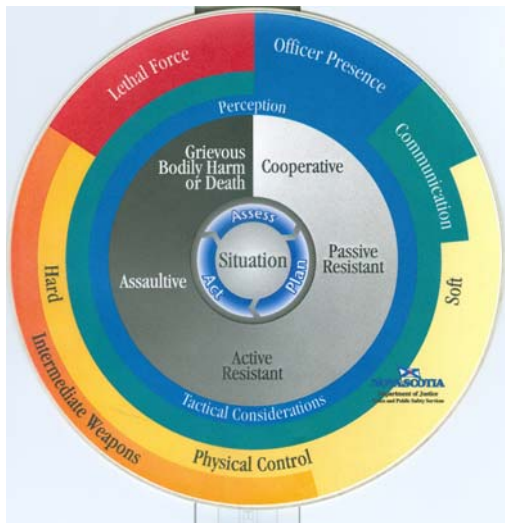
National Use of Force Model

The National Use of Force model was developed under the auspices of the Canadian Association of Chiefs of Police in the 1990s by use of force experts from across Canada. The model is shown below in a graphic which is used as a visual aid to assist law enforcement officers and others to understand various situations in which the use of force may be required.

⁴ Adopted by the 8th UN Congress on the Prevention of Crime and the Treatment of Offenders, September 1990. www.unhcr.ch/html/menu3/b/h_comp43.htm

⁵ Code of Conduct for Law Enforcement Officials, adopted by the UN General Assembly, resolution 34/169, December 17, 1979. www.unhcr/htm/menu3/b/h_comp42.htm

⁶ Royal Canadian Mounted Police, [Operational Manual](#) .c. 17.1. Ottawa



The focus of the model is *the situation* – its central location in the model highlighting the need for officers to assess a situation, plan and carry out a response and immediately re-assess the resulting new situation. The model depicts, in a general form, how the resistance demonstrated by a subject relates to the level of control the officer should exert to stabilize a situation or subdue a subject.

In interpreting how to respond to a subject demonstrating behaviors shown in the *grey* ring, the officer is directed to consider the totality of the environmental context: e.g. number of officers present, physical condition of subject(s) and officer(s), distance from the threat, condition of the physical environment, etc. It is important to note that perceptions of

two officers at the scene might accurately differ and, consequently, their responses could also vary. Differing responses to the same set of circumstances could well be valid and appropriate.

The *green*-shaded ring, which extends throughout the model, emphasizes the importance of communication throughout the officer's response; i.e. communication with the subject, with back-up/support units or others on the scene.

The *yellow*-shaded area denotes physical control – the officer's attempt to control the behavior of the subject without resorting to weaponry. This may include 'softer' techniques such as pressure points, escort positions, handcuffing, or 'hard' techniques such as striking and kicking which have a greater potential for injury to the subject and officer. Arrest situations will generally require some form of physical control as even the most co-operative subject will be physically escorted to a police vehicle and/or handcuffed.

The *orange* area refers to intermediate weapons, so-called less-lethal tools that an officer may use in attempting to control actively resistant subjects. These weapons include batons, sensory irritant aerosol sprays (e.g. pepper spray), conducted energy devices, bean bags propelled from a firearm and dogs.

The *red*-shaded area depicts lethal force, a level of intervention reasonably likely to cause grievous bodily harm or death (most often, a firearm). It is associated with behavior on the part of a subject which poses an imminent threat of death or grievous bodily harm to the subject, officer or others.

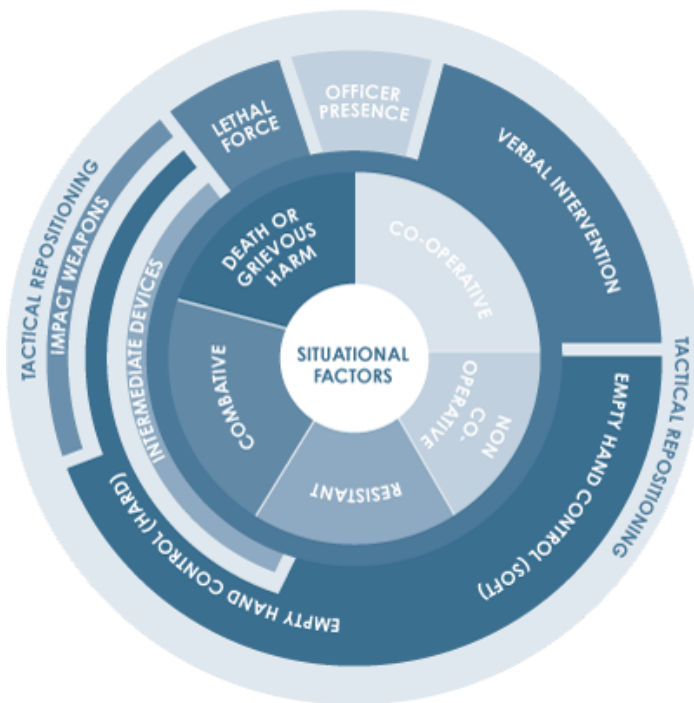
The Incident Management Intervention Model (IM/IM)

This model was adopted by the RCMP to guide RCMP members in determining and applying appropriate intervention techniques in all manner of civilian interactions.

There are seven underlying principles on which the IM/IM is based:⁷

- The primary objective of any intervention is public safety.
- Police safety is essential for public safety.
- The intervention model must always be applied in the context of careful risk assessment.
- Risk assessment must take into account the likelihood and extent of loss of life, injury and damage to property.
- Risk assessment is a continuous process and risk management must evolve as situations change.
- The best strategy is the least intervention necessary to manage risk.
- The best intervention causes the least harm or damage.

The IM/IM is illustrated in the graphic model below:



RCMP policy instructs officers to analyze situations according to the *CAPRA* model (i.e. Clients, Acquiring and Analyzing Information, Partnerships, Response, Assessment). This is a problem-solving model that requires the officer to consider all situational factors in determining an appropriate response.

The model describes a range of intervention responses that may be considered and notes that more than one form of intervention may be appropriate in a given circumstance.

Key to determining an officer's response is the assessment of the subject's behavior. The IM/IM model lists five categories of behavior:⁸

Cooperative

There is no resistance.
 The client responds positively to verbal requests and commands.
 The client willingly complies.
 There is little or no physical resistance.
 Usually the presence of the uniform, police car, or proper identification will suffice to initiate surrender or an arrest.

Non-cooperative

The client does not comply with the police officer's requests.
 This is done through verbal defiance with little or no physical resistance.

⁷ Royal Canadian Mounted Police, *Operational Manual*, c. 17.1

⁸ Royal Canadian Mounted Police. *PPSI Instructor's Course: Incident Management and Tactical Principles*. Ottawa: 2006

Resistant

This may include: refusal to leave the scene, failure to follow directions, taunting officers and advising others to disregard police officer's lawful instructions.

The person resists control by the police officer.

The person resists by pulling away, pushing away with the intent of not being controlled, running away, open and angry refusal to respond to lawful commands.

Combative

The client attempts or threatens to apply force to anyone; e.g. punching, kicking, clenching fists with the intent to hurt or resist arrest, or threatens assault.

Active aggression.

The client attacks the officer in order to defeat attempts of control.

The attack is a physical assault on the officer in which the client strikes or uses techniques in a manner that may result in injuries to the officer or others.

Death or Grievous Bodily Harm

The client acts in any way which would lead the officer to believe that their actions could result in death or grievous bodily harm to the police or any other person.

For this level of behavior to exist, the presence of a weapon is not an essential element as long as the fear of death or grievous bodily harm exists.

This level would be present in the case of most weapon attacks and would of course include the threat of the following: knife attack, baseball bat, firearms.

Levels of Intervention (Intervention/Response Options)

Officer Presence

An officer's presence alone may impact on how a situation unfolds (e.g. uniformed member, foot patrol, marked police vehicle, number of police vehicles in area, type of uniform/equipment worn).

Verbal Intervention

Crisis intervention techniques

Verbal communication (volume, tone, pitch, voice assistance, p.a. system)

Vocabulary (context, commands, structure)

Non-verbal communication (posture, gestures, facial expressions)

Empty hand control (soft)

Soft physical restraint methods

Restraint techniques

Joint locks

Pain compliance

	Distractions, stuns, creating imbalance Handcuffing
Empty hand control (hard)	Blocks, strikes, carotid control technique
Intermediate devices	OC spray, CS gas, conducted energy weapon, water projection system
Impact weapons	Use of police defensive baton Other Force-approved impact weapons Use of extendable baton Extended range impact
Lethal force	Firearms Self-defence techniques Use of defensive baton upon a lethal impact zone Police motor vehicle

Until 2005, the IM/IM was not a policy document *per se*; rather it was considered to be a guide to assist officers “in assessing behavioral and risk factors and thereafter in determining the most appropriate intervention option”.⁹ In 2005, the IM/IM was instituted as an official stand-alone policy.

According to the 2005 policy, the CEW is considered an *intermediate device*; its use available to respond to behaviors ranging from ‘resistant’ to situations in which there is a ‘risk of grievous bodily harm or death’.

However, in December 2007, in response to the Interim Report of the Commission for Public Complaints Against the RCMP, the RCMP issued a policy change¹⁰ which defined two sub-categories of ‘resistant behavior’ (i.e. ‘passive resistant behavior’ and ‘active resistant behavior’) and directed that CEWs be authorized only for use on persons displaying ‘active resistant behavior’. The IM/IM is currently being revised to reflect this policy change.

The revised definitions are as follows:

Passive Resistant Behavior	is the lowest level of resistance. The person resists control through passive physical actions or verbal refusal in response to lawful commands. This level of resistance can be in the form of dead weight posture intended to make the officer lift, pull, drag or push the person to maintain control; e.g. the person sitting handcuffed and refusing to get up or get into the back of a police vehicle without the person struggling defensively. <i>It is not appropriate to use the CEW in this type of situation.</i>
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⁹ Commission for Public Complaints Against the Royal Canadian Mounted Police. *RCMP Use of the Conducted Energy Weapon (CEW): Interim Report*. Ottawa: 2007.

¹⁰ RCMP, *Operational Manual Bulletin*, No. OM-478, Dec. 12, 2007.

Active Resistant Behavior

officers may find themselves confronting a person who is physically resisting their attempt at control by the person directing overt and defensive physical actions. With this level of resistance, the person may attempt to push or pull away in a manner that does not allow the officer to establish control. This may include the person trying to run away, to pull hands away or actively holding onto an object which defeats the officer's attempts at physical control; e.g. a person pushing away or struggling defensively while a member attempts to place him/her into the back of a police vehicle. ***Note: Since the person does not attempt to strike the officer or is physically unable to do so, this type of behavior should not be confused with aggressive, physical actions which are defined as combative behavior.***

Comparison of the Two Models

The models are similar in stressing the central issue of continuous monitoring of a subject's behavior in the context of an environment that is always in flux and the requirement to apply the least amount of force necessary to gain compliance of the subject while minimizing the risk of harm to the subject, law enforcement officers and others.

Until the policy amendment by the RCMP in December 2007, the category of behavior which could be the subject of CED use differed. In the IM/IM model CEDs could be used for subjects displaying 'resistant' behavior, whereas the National model stated that the subject must display at least 'active resistant' behavior. The RCMP policy amendment, as described above, subdivided the 'resistant' category into 'passive resistant' behavior and 'active resistant' behavior, specifying that CEDs should only be used for subjects displaying the latter.

The other difference in the models is the categorization of force. The National model uses the term 'intermediate' device to denote less-lethal tools that an officer may use in attempting to control actively resistant or assaultive behavior of a subject (including batons, sensory irritant aerosol sprays (e.g. pepper spray), conducted energy devices, bean bags propelled from a firearm and dogs). The IM/IM model includes an additional category of 'impact weapons' as a sub-category of intermediate' devices. It is unclear which of the intermediate devices as described in the model would not constitute an impact weapon.

'Less Lethal' Weapons

Law enforcement has sought in recent years to develop instruments that provide an effective response to subduing resistant subjects in situations where simple physical control tactics are inappropriate or inadequate. The concept of Intermediate Weapons emerged - first used by the US in the 1980s and

adopted by Canadian law enforcement in the 1990s. "This class of weapons was to be deployed when physical control tactics were ineffective or unsuitable to the situation and deadly force not justified."¹¹

Over the past 20 years there have been a number of advances in the field of 'less lethal' weapons in response to the need to supply law enforcement officers with tools to permit them to control non-compliant subjects while posing the least amount of risk to the officer, the subject and other citizens (e.g. bean bag rounds fired from twelve-gauge shotgun, oleoresin capsicum sprays, rubber projectiles fired from Arwen guns and the TASER®)¹²

In a 1998 report, the Toronto Police Force set out the criteria for the optimal less-lethal weapon:

- Temporary effect
- Minimal medical implications
- High probability of instantaneous control
- Effective on the highly motivated
- Observable effects
- Only affect the intended suspect¹³

Types of 'Less-Lethal' Devices

The National Institute of Justice¹⁴ lists seven types of 'less-lethal' devices:

Blunt Trauma Devices: Projectile devices used mainly in crowd-control situations (include bean bags, sock rounds and ring airfoil projectiles). Used to deter individual(s) from a course of action.

Chemical Devices: Used to assist in subduing and arresting dangerous, combative, violent or uncooperative subjects (include OC (oleoresin capsicum or pepper spray), PAVA (pelargonic acid vanillylamide), CS (o-chlorobenzylidene malononitrile, and malodorants (stink bombs)).

Conducted Energy Devices: Induces pain and/or involuntary muscle contractions, causing the subject to be temporarily incapacitated; deters an individual from a course of action. Includes traditional stun guns and projectile weapons sold under the names TASER® and Stinger® Handheld Projectile Stun Guns.

Distraction Devices: Temporarily incapacitate subjects' perception and deter them with minimal harm (includes multiwave laser dazzler, bright lights and noise).

Barrier Devices: Impede or defeat subject's progress (includes nets, stick foams and barriers).

¹¹ Stuart, B. and Lawrence, C. *Report on Conducted Energy Weapons and Excited Delirium Syndrome*. Ottawa: RCMP. 2007. p..9

¹² British Columbia Office of the Police Complaints Commissioner . *Taser Technology Review and Interim Recommendations*. 2004. p.1

¹³ Stuart and Lawrence, p.9

¹⁴ National Institute of Justice. *Types of Less-Lethal Devices* www.ojp.usdoj.gov/nij/topics/technology/less-lethal/types.htm

Conducted Energy Devices

'Conducted Energy Devices' refers to a class of electrical weapons that deliver high voltage, low current power into a subject in order to temporarily incapacitate the individual. CEDs are considered to be 'prohibited weapons' as defined in Section 84.1 of the Criminal Code.

The CED used most frequently by law enforcement officers is known as the Taser® (Models M26 and X26).¹⁵ The Taser®, an acronym for Thomas A. Swift Electrical Rifle, was invented by Jack Cover in the 1970s.¹⁶ Taser® International first developed the Advanced Taser® M26 (1999), powered by an alkaline battery, using nitrogen cartridges to fire projectiles. It is shaped like a handgun. The later iteration - the X26(2003), is powered by a lithium battery (also using nitrogen cartridges) and is more compact and lighter. Taser® International is preparing to launch the next generation of wireless CEDs (the X-REP, Extended Range Energy Projectile) that can be deployed at a greater distance than current models.

CEDs exist in a number of different forms and are produced by various manufacturers. While some are available to individual citizens in the United States (e.g. Nova Consumer Spirit Stun Device; Storm Stun Gun) the product most often used by law enforcement officers in Canada is manufactured by TASER® International of Scottsdale Arizona.¹⁷

Taser M26



Taser X26



How the TASER® Works

The TASER® delivers a high voltage, low-amperage current when electrodes, connected to a battery powered device, contact exposed skin or clothing of a subject. This electrical current interferes with the body's neuromuscular system, temporarily incapacitating a targeted person, in order to give the law enforcement officer time to gain control of the subject. To place the magnitude of the CED 'shock' in context, the defibrillator (commonly used to re-start the heart in cases of cardiac arrest) delivers 150-400 joules of energy while the CED delivers 0.07 joules.¹⁸

The Taser® can be used in three modes: 'probe', 'touch stun' and 'presentation'.

¹⁵ TASERs are used by more than 12,000 law enforcement agencies; by more than 300,000 officers in 45 countries. It is estimated that 95% of the CEDs used in the United States are manufactured by TASER International.

¹⁶ Cronin and Ederheimer. p.3

¹⁷ Although TASER-produced CEDs are the most commonly used in all jurisdictions, similar devices are manufactured by Stinger Systems™ and Law Enforcement Associates

¹⁸ BC Office of the Police Complaint Commissioner. p. 40. While each pulse of the M26 contains 1.76 joules, efficiency losses mean that the energy is less when delivered to the body.

In the *probe* mode, the cartridges project, through a set of wires, a pair of probes (or darts with hooks) that attach to clothing or penetrate the skin after the Taser® is fired, delivering an electrical charge. When the probes strike, the electrical current is sent down the wires and through the body between the 2 probe points.



The probes are attached to 25 feet¹⁹ of coated copper wire. When the operator pulls the trigger, the probes are propelled toward the intended target at 180 feet per second. When the probes are deployed from the cartridge they travel forward, the top probe in line with the laser sight and the bottom probe at a downward angle of eight degrees. The rate of spread of the probes is 0.3 meters for every 2.13 meters distance between the weapon and the subject.²⁰



¹⁹ Cartridges range from 15 to 35 feet

²⁰ British Columbia Office of the Police Complaint Commissioner.

The probes can penetrate the subject's skin to a maximum depth of .89 cm. and remain secured by barbs. The probes are fired with enough force to penetrate layered clothing.²¹ Each of the probes must come within two inches collectively of the subject or the TASER® will have no effect (as the electrical circuit is not completed). Neuro-muscular incapacitation is caused by the direct stimulation of skeletal muscles located between the probes. Thus the greater the spread, the more muscles will be affected. At the optimal range; i.e. 2.1-4.6 meters away from the subject, the probe spread is 33-66 cm. Officers are generally instructed to aim the device at the centre body mass of the subject, avoiding the sensitive areas such as the face, throat or groin. The Tasers are programmed to release a five-second electrical discharge if the operator pulls the trigger and releases it. However, if the operator continues to press the trigger, the electrical discharge will continue until the trigger is released.

In the *touch stun* mode, electrical contacts on the Taser® are pressed directly onto a person (without a cartridge, or with a fired-not live-cartridge). A five-second discharge of energy occurs, which can be shortened by removing the weapon from the subject or by engaging the safety. Electricity is only applied to a small portion of the body and thus the subject is not usually incapacitated. The effect of the shock is pain rather than neuromuscular disability.²²



In *presentation* mode, the device is merely displayed, generally with the challenge: “police – stop or you will be hit with 50,000 volts of electricity”. In some cases the device is ‘arced’ to show a flash of electricity (not directed at the person) to convey that the device is about to be deployed on the subject. Presentation alone is often sufficient to gain compliance of a subject.

The M26 TASER® stores data (for the last 585 trigger pulls) for later retrieval (the X26 for the last 1500 trigger pulls) and may be fitted with a camera to record the incident in which the device is used. The dataport of the Taser X-26 records time, duration of cycle, temperature, battery status and is searchable for 2000 cycles.

The transitory nature of the pain reported is notable. Police trainers have reported that police trainees frequently are more concerned about the effects of OC spray than the CED because the pain of the CED, while severe, passes quickly while the effects of the OC spray are long-lasting.

CED Policy and Procedure in Nova Scotia

Municipal Police Agencies

Under the provisions of the *Nova Scotia Police Act*, the Minister of Justice is the constituted authority for the administration of justice within the Province. The Minister is responsible for ensuring that “an adequate

²¹ A single deployment can arc through two cumulative inches of clothing or one inch of clothing per probe. The electrical discharge can travel through up to two inches of clothing; thus the probes do not have to penetrate the body.

²² Although as the Taser Technology Review (cited above) states the Taser in touch stun mode can override the nervous system if the operator contacts nerve endings in certain parts of the body. p.7

and effective level of policing is maintained throughout the Province” and, for that purpose, the Minister “may issue a directive or standard operating or administrative procedure to a police department” or “require a police department, board or advisory board to develop a directive or a standard operating or administrative procedure”.

The Police Act further describes the responsibility of municipalities for policing. Section 35(1) of the Act states that “every municipality is responsible for the policing of and maintenance of law and order in the municipality and for providing and maintaining an adequate, efficient and effective police department at its expense in accordance with its needs”.

Operationally, the responsibilities of the Minister are carried out by the Public Safety Division in its role of providing “oversight, governance and advice to police and private security services”; specifically “acting in an advisory role to all police services and managing contracts with the RCMP and First Nations Policing; and strengthening policing initiatives through the development of standards and training”.²³

The Public Safety Division develops and issues Governance Standards to municipal police agencies, requiring the police to develop specific ‘operational or administrative policy and procedure’ (SOPPs) on numerous issues, including the use of CEDs, and directing what that policy is to include. Compliance with the Governance Standard is measured through a system of audits, reviews and inspections.

Provincial Governance Standard for CEDs

The Department issued a governance standard regarding Conducted Energy Devices on December 12, 2006. The governance standard is as follows:

- 007.02 The police agency is to have a written policy and operational procedure for all operational police officers in the use and deployment of police agency Conducted Energy Devices.
- 007.03 Operational or administrative policy and procedure approved by the police agency is to include and demonstrate:
 - a) Operational conditions in which police officers are to be issued a police agency Conducted Energy Device as approved by the police agency
 - b) Operational police officers are to only use the police agency approved and issued Conducted Energy Devices
 - c) A police agency Conducted Energy Device is only to be discharged in the execution of police officer duty, and where risk from aggression, violence or other reasonable conditions exist given the articulation of circumstances are in the interests of public or officer safety
 - d) Operational police officers are to only use the police agency Conducted Energy Device in keeping with police agency approved use of force policy and training

²³ Nova Scotia. *Department of Justice Business Plan 2007-08*, p.8

e) Operational police officers discharging a police agency Conducted Energy Device in the line of duty are to file a written report with the police agency as soon as reasonably possible, and any such report is to be reviewed by a police agency supervisor

f) Safe storage and cleaning requirement

007.04 The police agency is to assure all operational police officers have received training from a recognized and certified police or subject matter instructor specific to the police agency approved Conducted Energy Devices, prior to the police agency authorizing a police officer to use such a device.

007.05 The police agency is to assure all operational police officers have received training and/or recertification training from a recognized and certified police or subject matter instructor specific to the police agency approved Conducted Energy Devices, as required and police officer certification is not to exceed every 36 months.

007.06 The police agency is to maintain records of Conducted Energy Device training and certifications.

007.07 The police agency is to maintain a record of all police agency approved Conducted Energy Devices; including make, model, serial number and Conducted Energy Device assignments.

Compliance with the Provincial Governance Standard

Law enforcement agencies have developed Standard Operational Policy and Procedures (SOPPs) governing the use of CEDs, initially to follow the general provincial standard governing the Use of Force and, subsequently, to comply with the Provincial Governance Standard on CEDs, issued in December 2006. The earliest agency SOPPs were instituted in 2002 by the Halifax Regional Police to address the initial use of CEDs by this agency. Other agencies followed suit, many of them basing their policies on the HRP model. Many agencies have revised their policies in recent years. During the review it was established that municipal police agencies are compliant with the Governance Standard with the exception that some agencies are not in compliance with the following two sections; section 007.03 (b) officers are to only use the police agency approved and issued Conducted Energy Devices and section 007.03 (f) safe storage.

There are variations in some areas of their SOPPs, these are noted below:

Written Policy and Operational Procedure:

All agencies using CEDs have developed written SOPPs in the use and deployment of CEDs. They all indicate the operational conditions under which officers are to be issued a CED for use; e.g. completion of specified training; designation by management.

Police Agency Approved and Issued CEDs:

A number of agencies do not state this requirement directly. All law enforcement agencies in fact use CEDs manufactured by TASER® International. Some note that this is the CED approved for use by the agency and some note specific approved models: i.e. M26 and X26.

Situations in Which the CED May Be Deployed:

These situations are described broadly in the Governance Standard; i.e. where risk from aggression, violence or *other reasonable conditions* exist.

All agencies provide specific examples of where the CED may be used; i.e.

- Persons armed with offensive weapons other than firearms where the safety of the officer is not in jeopardy and the officer has lethal force backup. Should a failure in deployment of the Taser® occur, the officer must have an alternative method of protecting himself and others. *(Two agencies did not specifically exclude the use of the CED when a subject has a firearm)*
- Violent persons who are under the influence of drugs and/or alcohol. *(all SOPPs include this example)*
- Persons expressing the intent and having the means to commit suicide (e.g. an individual who is using a sharp object to inflict self-injury) *(all SOPPs include this example)*
- Persons expressing an intent to resist or who act in an aggressive or violent manner toward police or civilians and the officer believes the Taser® is the force option least likely to result in injury to any party involved. (Some agencies state “when deemed to be a reasonable alternative to lesser force options that will likely be ineffective or greater options that may be inappropriate under the circumstances.”)
- Two police agencies included a specific example relating to the “execution of a warrant where the threat is perceived to be high or unknown”
- An emotionally disturbed person who is perceived to be violent. *(all SOPPs include this example)*

All agencies provide specific examples of where the CED may **not** be used; i.e.

- The CED operator cannot, for safety or other reasons, approach the subject within an effective range of the device.
- In proximity to flammable liquids, gases, or other hazardous materials that may be ignited by use of the device
- Where it is reasonable to believe that incapacitation of the subject may lead to serious injury or death

A number of agencies include the following categories of individuals as persons who must **never** be the subject of a CED deployment:

- Persons in wheelchairs who do not have a weapon
- Persons who are in control of a vehicle
- Pregnant women, the elderly and/or other persons who are likely to be injured by a fall
- Handcuffed prisoners

Other agencies **do not specifically exclude** these groups, but indicate that “good judgment must be used and all other options carefully considered before using the CED on those persons”.

Use of CED in Keeping With Use of Force Policy and Training:

The SOPPs state that the CED is to assist with the control of violent or potentially violent individuals where alternative control tactics have been or would likely be ineffective or where it would be unsafe for officers to approach a subject to apply restraints. It is deemed to be a reasonable alternative to lesser force options that will likely be ineffective or greater force options that may be inappropriate in the circumstances.

Some SOPPs indicate that the use of the CED is not intended to be a substitute for other non-lethal *or* lethal force options, while others indicate only that it is not to be a substitute for other non-lethal force options. Some SOPPs state that the CED may only be used after all available force options have been considered. A number of agencies specifically state that the CED must never be used in punishment or in malice.

All municipal police agencies specify that the CED is classified as an *intermediate weapon* for purposes of the Nova Scotia use of force policy.

Issuing a Verbal Warning:

All SOPPs indicate that subjects should be warned the CED will be used to gain compliance, whenever possible and without jeopardizing the safety of any person involved. Some SOPPs direct officers, if possible, to use an arc demonstration prior to deployment.

Target Area:

All SOPPs direct officers to fire the CED at the centre body mass wherever possible.

Prior Notification of Supervisor:

Some SOPPs indicate that a supervisor is to be contacted *prior* to CED deployment, where the immediate safety of any person is not in jeopardy. Other policies require that the supervisor be notified as soon as practical *after* the use of the device.

Multiple Applications of the CED:

Some SOPPs specify that subsequent CED applications, following an initial unsuccessful application, shall only be used when the subject continues to resist. Other SOPPs contain no reference to multiple applications.

Removal of Probes:

Most SOPPs require that Emergency Health Services (EHS) personnel remove probes lodged in the subject's skin. However some SOPPs indicate that officers may remove any seeded probes and that only those lodged in 'sensitive' areas are to be removed by medical personnel.²⁴

Medical Attention:

The majority of SOPPs require that persons struck with CED probes are to be *promptly* evaluated by EHS personnel to determine if the person has suffered any injury as a result of the CED use. One police SOPP indicates that following a CED application, medical attention is to be sought at the *discretion* of the NCO or senior officer on shift. Another police SOPP contains a detailed list of persons who shall be transported to a medical examination following CED exposure.

²⁴ Taser International reports the results of an August 2004 survey in which, of 4000 law enforcement agencies responding, 62% allowed officers to remove probes; 23% required medics to do so; and 13% required probes to be removed in hospital.

Re-Certification:

A number of police SOPPs require that refresher training be provided to CED operators annually. Many do not specifically state that re-certification is to occur at least every 36 months; this would be reviewed through audits.

Reporting of Use:

All municipal police SOPPs require that officers complete a Controlled Response Report following any use of the CED (including arc demonstrations and accidental discharges).

Safe Storage and Cleaning:

All SOPPs contain specific cleaning requirements. Not all specify safe storage requirements.

Training²⁵:

In order to become certified as a CED operator, officers receive an eight hour training course. The course consists of four hours of lecture followed by practical exercises.

The lecture and theory component addresses such topics as: technology overview; how the unit delivers shocks and the effects of those shocks (impact on the body); care and maintenance of the device. Forty minutes of the lecture segment is dedicated to a discussion of the most common causes of sudden death. Lectures are augmented by video presentations.

Students progress from basic weapon handling to firing inert cartridges at live quarry during scripted scenarios. They are critiqued on their responses. Students are then required to complete a test on the theory aspects of the course.

A Master Instructor for the Halifax Regional Police has trained officers for all municipal police forces as well as sheriffs. Some municipal agencies have sent officers to Halifax to participate in a two-day 'train-the-trainer' course, which then enables them to train officers from their own agencies.

R.C.M.P.**RCMP Policy Regarding Use of CEDs:**

The Operational Policy Section of the RCMP (CCAPS: Community, Contract and Aboriginal Policing Service) is responsible for the development of all national operational policy, including that governing the use of CEDs.

According to the RCMP the policy development process includes research of RCMP policies and those of other organizations to identify best practices; consultation with outside experts and consultation with the Commission for Public Complaints Against the RCMP.²⁶ The most recent RCMP policy regarding CED use was published in August 2007 and was endorsed by the CPC. An Operational Manual Bulletin was issued on December 18, 2007 to advise that CEDs are only to be used where subjects display active aggressive or combative behavior or that threatening grievous bodily harm or death.

²⁵ Description of municipal police training provided in Stienburg, D., Hernden, L. and Croft, T. Taser Overview for Department of Justice. 2008. Halifax Regional Police. Pp. 14-21

²⁶ Stuart and Lawrence. p.19

Written Policy and Operational Procedure:

This is contained in the national policy document: RCMP Operational Manual, Part 17.

Agency Approved Weapons:

The policy specifies that only Taser M26 (model 44000) and Taser X26 (model 26012) are approved for use. It further specifies that no new M26s will be purchased and that as M26s reach their life expectancy, they will be replaced with X26s.

Situations in Which the CED May Be Deployed:

CEDs are to be used in push stun or probe mode only on persons displaying Active Resistant Behaviour and higher categories of behavior; e.g. combative or death, grievous bodily harm according to their use of force continuum.

The policy also makes specific note of excited delirium (ED) and describes special procedures to be followed in these cases: i.e.

- that individuals experiencing ED require medical treatment that first requires that they be restrained
- that the use of probe mode may be most effective to establish control
- that, wherever possible, Emergency Medical Services attend at the scene

The policy does not provide examples of when the CED may not be used.

Use of CED in Keeping With Use of Force Policy and Training:

RCMP policy requires that CEDs be used in accordance with IM/IM.

Warning:

The CED challenge is to be given, when tactically feasible, before the CED is used. The specific challenge is contained in the policy: "Police, stop or you will be hit with 50,000 volts of electricity".

Multiple Use:

RCMP policy specifies that multiple deployment or continuous cycling may be hazardous to a subject and that, unless situational factors dictate, officers are not to cycle repeatedly or for more than 15-20 seconds at a time.

Removal of Probes:

The policy states that a member currently certified in first aid may remove the probes, and further that it is not necessary to have a medically trained person examines the individual, unless a probe is lodged in a sensitive part of the body, such as the eye or groin, or the individual's medical condition warrants medical attention.

Medical Attention:

Officers are to ensure that the subject receives medical attention if any unusual reactions occur or if the officer believes that the subject is in distress.

Certification:

Requalification is required every three years.

Reporting:

The RCMP require the completion of Form 3996 before the end of a shift in which the CED is deployed. The form is completed electronically; sent to the supervisor for comments; forwarded to Headquarters of 'H' Division (Criminal Operations) for review; and finally sent to a central database in Ottawa within 72 hours of the incident.

Safe Storage and Cleaning:

The policy requires safe storage and cleaning.

Training²⁷:

The CEW operator course is 16 hours in length. Officers must be qualified in First Aid, baton, OC spray, carotid control technique and firearms. The curriculum covers the following subjects: technological aspects of CEW use; effects on the central, sensory and motor nervous systems; medical considerations; principles of the IM/IM, RCMP policy; weapon maintenance; field applications related to those suffering from addictions, mental health crises and potential suicides; and special issues related to excited delirium. Certification is valid for three years. The re-certification course is four hours in length. As of January 2008, all cadets at Depot will be certified in the use of the CEW.

Correctional Services

Correctional Services first issued policy and procedures regarding the use of CEDs in 2003. The policy has been revised a number of times, most recently in January 2008.

The general parameters of CED use are contained in the Correctional Services Situation Management/Use of Force Model. This model differs from those used by police in that CEDs are not considered intermediate weapons: they are placed prior to intermediate weapons and lethal force on the continuum.

Situations in Which the CED May Be Deployed:

CED use may only be authorized when 'lesser measures of control have been ineffective'. The Correctional Services training manual provides examples of situations in which use of the CED may be considered:

- "Staff are confronted with a violent and physically uncooperative offender and verbal and other physical control options have failed or are not possible without increasing the risk of injury to staff or the offender.
- Excessive damage to property is occurring and staff are unable to safely intervene to control the offender without putting themselves in jeopardy.
- Dealing with an offender in an environment that would allow the device to be deployed without undue risk to other offenders, staff or visitors.
- Verbal de-escalation has been exhausted.
- The device will not be deployed until there is a full intervention team, dressed, on scene, and standing ready."

²⁷ This description of training is adapted from the 2007 report of the Commission for public Complaints Against the RCMP. *RCMP Use of the Conducted Energy Weapon: Interim Report*

The policy states that the CED may *not* be used when:

- Medical information indicates the offender is confirmed pregnant, has suffered a recent serious head injury, or has had recent major surgery.
- The offender is frail, in restraints (handcuffs, shackles), is at a dangerous elevation or has been exposed to a potential flammable hazard (e.g. gasoline, OC spray application by an outside agency).

Conditions of Deployment:

Correctional officers do not carry CEDs; they are accessed from storage when needed and their use authorized by the facility superintendent or deputy superintendent. Two staff must attend at any CED deployment, one as primary operator, the other as secondary operator. The CED may not be aimed at the face, throat or groin area. The CED must be deployed for the full five-second cycle, without interruption, unless circumstances dictate otherwise.

Multiple Use:

Two subsequent applications beyond the initial five seconds are only to be used when the offender continues to physically resist.

Removal of Probes:

Probes are to be removed by the CED operator unless it will result in medical complications.

Medical Attention:

A medical assessment is required for all offenders exposed to a CED application. The assessment is to be completed immediately, once their behavior is under control, no later than four hours after exposure. If medical complications occur and on-site health care staff are not available, the offender is to be transferred immediately to hospital. Offenders who have been exposed to a CED application are to be monitored closely, every 30 minutes for a minimum of four hours. An *Offender Accident and Injury Report* must be completed and photographs of the injuries taken.

The Correctional Services Use of Physical Force policy and procedures notes that in cases of 'Sudden Unexpected Death Warning Signs' (excited delirium) the institution must have health care staff or Emergency Medical Services on stand-by.

Authorization:

Use of the CED must be authorized by the facility superintendent/deputy superintendent.

Reporting:

The Taser® operator must complete the *Taser Operator Report*. A designated staff person must download the device data report. Following the deployment of a CED, the captain must conduct an operational debrief and review all staff reports, evidence and supporting documentation to confirm completion and accuracy. The superintendent must notify the Director, Correctional Services within 12 hours; notify the Master Trainer the next business day; conduct a full investigation and provide a report to the Director, Correctional Services and the Master Trainer. The Master Trainer is responsible for reviewing the justification for use and deployment to ensure proper procedures are followed and submitting the report to the Director, Correctional Services.

Training:

Correctional Services has a Master Instructor who has been certified and designated as a Master Trainer by TASER® International. Before undertaking training as a TASER® operator, staff must have completed 14 days of prerequisite training (e.g. first aid, basic security, conflict crisis intervention, verbal crisis intervention, documentation and enhanced security). The Correctional Services Operator Training consists of 2 days (16 hours) of training, combining lectures, video presentations and practice deployment. TASER® operators receive refresher training of 4 hours every six months, followed by an 8-hour re-certification course annually. Every two years, TASER® operators must take a new 2-day course.

Sheriff Services

Use of CEDs by Sheriff Services was authorized in the cell areas of Halifax Provincial Court and the Sydney Justice Centre in April 2004. Use of the CED continues in those locations. It is not used in any other court locations in the province.

The model that guides the use of force by Sheriff Services is similar to the National Use of Force continuum adopted by municipal police agencies in Nova Scotia, with the notable exception that sheriffs are not authorized to use lethal force. In situations where such force might be required, police are contacted.

The CED is classified as an 'intermediate weapon' within the Nova Scotia Use of Force Continuum. The Standard Operational and Administrative Policy and Procedure (SOAPP) governing the use of CEDs by Sheriff services states that the CED "is to be deployed as a force option for resistive and aggressive behaviours by any individual threatening the security and safety of the officer, the aggressor themselves, the Judiciary, staff or any other members of the general public". The primary purpose of the CED is "to save human life and/or reduce injury...it is not intended to be a substitute for other non-lethal force options."

Situations in Which the CED May Be Deployed:

Examples are given of situations in which the CED may be used:

- An emotionally disturbed person who is violent;
- Persons armed with offensive weapons where the safety of the officer, the subject themselves or others is in jeopardy;
- Violent persons who are under the influence of drugs, alcohol or prescriptive and non-prescriptive medications contributing to violent or resistive behaviours, and violence is present;
- Persons expressing the intent and having the means to commit suicide;
- Barricaded or detained persons threatening others, and having the ability to injure themselves or others;
- Person threatening officer where cell extraction is required and violence is present;
- Person injuring or threatening officer or others in unsecured areas; and
- Resistive aggression and violence by offenders; persons attempting to escape custody.

The SOAPP states that "where time and circumstances permit, intervention options other than CED deployment will be considered. The CED may be used "where alternative control tactics have been or would likely be ineffective or where it would be unsafe for officers to approach a subject to apply restraints".

The policy states that the CED may not be used:

- Where the CED operator cannot, for safety or other reasons, approach the subject within effective range of the device;
- In proximity to flammable liquids or gases
- Against persons in wheelchairs who do not have a weapon;
- Persons who are in control of a vehicle;
- Pregnant women, the elderly and/or other persons who are likely to be injured by a fall;
- Handcuffed persons

The policy also indicates the CED may never be used as punishment or in malice.

Conditions of Deployment:

Sheriffs do not carry CEDs on their person. The CED is taken from a locked cabinet when it is required to be used. The CED can only be deployed in the cell area, not in courtrooms or exterior to the courthouse.

The CED is to be aimed no higher than the subject's centre body mass. The warning ('This is a Taser[®], stay still and follow my instructions or you will be hit with 50,000 volts of electricity') is to be issued before CED use and may be issued a maximum of two times. Deployment should be delivered for the full five second cycle without interruption.

Multiple Applications:

The SOAPP indicates that "subsequent deployments beyond the initial application are only to be used when the subject continues to resist".

Removal of Probes:

The CED operator may remove the probes with the permission of the subject, the permission being witnessed by at least one other Sheriff officer. Probes lodged in sensitive areas of the body are to be removed only by a medical health professional.

Medical Attention:

When a subject has been exposed to a CED application, "health care professionals are to be contacted to attend and evaluate the subject, when operationally possible or at the earliest opportunity after exposure". Medical services are to be provided when requested by any subject who has received a CED application or whenever medical complications arise.

Authorization:

Any officer taking possession of the CED must have the approval of the Sheriff Supervisor. The policy also states that "where practical and when the immediate safety of any person is not in jeopardy, the Sheriff Supervisor is to be contacted prior to the deployment of the CED".

Reporting:

The CED operator is required to complete an Incident Occurrence Report for every deployment of the CED. Any complaint regarding the use of the CED is to be reported to the Sheriff Supervisor without delay. The Sheriff Supervisor is responsible "for ensuring the CED is only used in approved circumstances and locations" and that CED operators "provide adequate reporting on the use of the CED".

Training:

CED operators for Sheriff Services receive 8 hours of training and must be re-certified 'at least every 36 months, or at the discretion of the Director of Sheriff Services'.

Use of CEDs in Nova Scotia²⁸

At this time there are 1748 police officers in Nova Scotia. Of these, 837 (48%) are members of municipal police departments and 911 (52%) are members of the RCMP deployed in various provincial and federal positions throughout the province. A total of 789 (45%) are trained in the use of CEDs.

In addition, of the 188 officers employed by Sheriff Services, Department of Justice, seventeen (9%) are trained in CED use. These devices are also used by Correctional Services, Department of Justice in three locations: the Central Nova Scotia, Cape Breton and Southwest Nova Scotia Correctional Facilities. With a total security staff complement of 255, a total of 44 (17%) are trained in the use of CEDs.

CED Use in Nova Scotia Type of CEDs Used; Number of Officers Trained

Law enforcement agency	CED use	Total # Officers	Total # Officers Trained	% of Officers Trained	Date Policy Issued	# and Type of CEDs Used (2007)
Annapolis Police Service	no	N/A	N/A	N/A	N/A	N/A
Amherst Police Service	yes	23	23	100%	June 2004	M26 - 1 X26 - 1
Bridgewater Police Service	yes	20	19	95%	Aug. 2004 Dec. 2007 (revised)	X26 - 4
Cape Breton Regional Police	yes	197	147	75%	Sept. 2007	X26 - 17
Halifax Regional Police	yes	480	214	45%	Aug. 2003 Apr. 2007 (revised)	M26 - 7 X26 - 26
Kentville Police Services	yes	15	13	87%	May, 2004	M26 - 1 X26 - 1
New Glasgow Police Service	yes	25	8	32%	Feb. 2003 Jan. 2008 (revised)	M26 - 1 X26 - 1

²⁸ The information in this section was provided by law enforcement agencies. No independent audit of the data has been conducted.

Springhill Police Service	no	N/A	N/A	N/A	N/A	N/A
Stellarton Police Service	Yes	11	8	73%	Nov. 2006	X26 - 1
Trenton Police Service	no	N/A	N/A	N/A	N/A	N/A
Truro Police Service	yes	36	27	75%	Feb. 2004	M26 - 1 X26 - 2
Westville Police Service	no	N/A	N/A	N/A	N/A	N/A
RCMP	yes	911	330	36%	May, 2002 Dec.2007 (revised)	M26 – 70 X26 - 27
Canadian Armed Forces	no	N/A	N/A	N/A	N/A	N/A
Sheriff Services	yes	188	17	9%	Apr. 2004 Feb. 2005 (revised)	X26 - 2
Correctional Services	yes	255	44	17%	2003 Jan. 2008 (revised)	M26 - 16 X26 - 4
Total		2161	850	39%		M26 - 97 X26 - 86

¹ All CEDs used are manufactured by TASER® International

CED use began in 2002 when Halifax Regional Police (HRP) acquired 9 devices, used by 30 shift supervisors. Of the sixteen law enforcement agencies in Nova Scotia, eleven currently own and operate CEDs. The number of devices in operation varies widely by agency, with smaller agencies possessing only one or two and larger agencies owning significant numbers; e.g. 33 operated by the Halifax Regional Police and 97 by the RCMP. Significant numbers of police officers have been trained – 46% of a total of 1718 officers.

Nova Scotia was the first jurisdiction in Canada to authorize the use of CEDs in correctional institutions. At present, the devices are authorized for use in British Columbia, Manitoba, New Brunswick and by Correctional Services Canada. Alberta, Saskatchewan and Newfoundland are studying the use of CEDs.

Law enforcement agencies supplied details of all occasions when CEDs were used during the years 2005-2007. This includes instances where the device was removed from the holster and '*presented*' only (i.e. pointed at the subject together with or without the challenge); used in '*push stun*' mode (i.e. the contacts

on the end of the device are directly applied to a portion of the subject's body); and/or *'probe'* mode (i.e. where two probes are fired from the device and aimed at a subject's body).

CED Deployment by Agency By Year

Agency	2005				2006				2007			
	Present	Stun	Probe	Total	Present	Stun	Probe	Total	Present	Stun	Probe	Total
Amherst		2		2		1		1		1	2	3
Bridgewater				unavail.				unavail	6	3	5	14
Cape Breton											3	3
Halifax ²⁹	29	16	9	58	31	14	16	59	53	17	21	91
Kentville			1	1			1	1				
New Glasgow	5		3	8			2	2	4		3	7
Stellarton											1	1
Truro				unavail				unavail	2	1	1	4
RCMP ³⁰	7 ³¹	11	11	26	17	17	20	51	23	21	14	55
Sheriffs	5			5	4			4	3			3
Corrections	1		1	1			3	3	1		1	1
Total	47	29	25	102	52	32	42	121	92	43	51	183

It is important to note that use of CEDs is very infrequent when viewed in the context of all police-citizen interactions. In 2007, for example, of the 340,380 calls for service to police, CEDs were deployed in only 178 incidents or 0.05% of the total interactions.

Use of CEDs has increased substantially over the past three years, from 101 times in 2005 to 182 in 2007, an 80% increase. This could be partially attributed to the overall increase in the number of CEDs currently in use. While there has been an 80% increase in usage from 2005 to 2007, there was a 103% increase in the number of CEDs in use during the same time period. Significant increases have occurred in the **'presentation'** only mode (the device is shown in warning only and not deployed) and in the firing of probes.

²⁹ The mode of CED use is unknown for a small number of cases.

³⁰ One incident may involve both stun and probe CED use.

³¹ The RCMP believes there was significant under-reporting of presentation only CED uses in 2005 as the reporting system was new.

CED Usage by Year Summary

Year	Total in Use	Total	Presentation		Stun		Probe	
	#	#	#	%	#	%	#	%
2005	90	102	47	47	29	29	25	25
2006	116	121	52	43	32	26	42	35
2007	183	183	92	50	43	24	51	28
Total		406	191	47	104	26	118	29

HRP conducted a review of calls and Controlled Response Reports for the period January 2003 – December 2007. Officers used verbal communication in 99.8% of the interactions with citizens; they were required to use force in only 0.2% of these interactions. The following is a summary of the frequency of the use of various force options.

Halifax Regional Use of Force January 2003 – December 2007

Control Type	Frequency (%)
Empty hand control	54.8
Firearms (presented) ³²	26.3
CED	23.1
OC spray	11.2
Baton	3.0
K-9	3.4

In their review of CED usage, HRP noted that the proportion of 'presentation only' deployments has risen from 29% in 2003 to 58% in 2007. This is attributed to changes in training and deployment techniques.³³

Injuries Reported:

It is common for subjects to sustain minor injuries as a result of a CED application; e.g. minor bruising and skin punctures where the probes have made contact with the skin.

HRP reports only one incident where a subject received more significant injuries where no force option other than the CED was deployed. In this situation, officers were dispatched to a shopping centre where an aggressive, disturbed male was brandishing a sword and threatening bystanders. Following a CED presentation and warning which had no effect, the CED was deployed in probe mode. The subject suffered a bloody nose and broken tooth, resulting from his fall to the floor.

³² Firearms were discharged in less than 5 instances

³³ Stienburg, S. et al. p.4

In the incident involving Howard Hyde, no causal connection between CED use and Mr. Hyde's subsequent death has been established. This matter is currently under investigation by the Medical Examiner's Office.

Of the other municipal police forces, only Bridgewater reported an injury; medical intervention was required to remove a probe from the subject's neck.

HRP reported a significant decrease in injuries (in all police-citizen interactions) following the introduction of the CED.³⁴ That police force reports a 78% decline in injuries in 2006 after CED numbers were increased and more officers were trained in its use. However, an increase in injury rates was noted from 2006 to 2007. The authors of that report hypothesize that this is a result of officers becoming more tentative in deploying the CED after a number of well-publicized incidents critical of CED use.

Complaints Reported:

Citizens who wish to complain about the behavior of a municipal police officer have recourse to the Office of the Police Complaints Commission. Since 2004 there have been two complaints associated with the use of a CED by municipal police officers. One of the complaints was resolved informally; the other through the court system.

Individuals who have a concern about the conduct of an RCMP officer can lodge a complaint with the Commissioner for Public Complaints Against the Police. Four public complaints have been lodged in connection with RCMP use of CEDs in Nova Scotia. In one case the investigation sided with the complainant (CED use deemed inappropriate) and corrective actions taken.

In March 2006 a complaint was lodged by an inmate of the Central Nova Scotia Correctional Facility alleging excessive use of force by correctional officers. An investigation by HRP resulted in a finding that the complaint was unfounded. The individual is pursuing civil litigation.

Jurisdictional Reviews

Conductive Energy Devices (CEDs) are a relatively new tool used by law enforcement to subdue resistant subjects. But since their introduction in the United States in the 1990s, they have been adopted by an increasing number of law enforcement agencies, including police forces, sheriffs departments and correctional institutions.³⁵

In recent years, however, public authorities have become increasingly concerned about the use of CEDs, as reports of a number of deaths proximal to CED deployment have been published. In response, with public safety as a paramount issue, a number of jurisdictions have ordered comprehensive reviews of CED use.

³⁴ Stienburg and Hernden

³⁵ A recent report indicates that these devices are now used by more than 11,500 law enforcement agencies.

Commission for Public Complaints Against the RCMP³⁶

In December 2007 the Commission for Public Complaints Against the Royal Canadian Mounted Police issued an Interim Report on the RCMP Use of the Conducted Energy Weapon (CEW). The review by the Commission was undertaken in response to a request from the Minister of Public Safety to “review the RCMP’s protocols on the use of CEDs and their implementation, including compliance with such protocols” following the deaths in British Columbia of two individuals proximal to the deployment of a CEW by the RCMP.

In its report, the Commission stated that the CEW has a role “in specific situations that require less than lethal alternatives to reduce the risk of injury or death to both the officer and the individual when use of force is required...it is an option in cases where lethal force would otherwise have been considered” (p.42). Concern was expressed by the Commission about ‘usage creep’ where, in practice, “CEW use has expanded to include subduing resistant subjects who do not pose a threat of grievous bodily harm or death and on whom the use of lethal force would not be an option” (p.2).

The Commission recommended that the CEW be classified as an ‘impact weapon’ (as opposed to its current classification as an ‘intermediate weapon’); its use permissible “only in those situations where an individual is behaving in a manner classified as being ‘combative’ or posing a risk of ‘death or grievous bodily harm’”(p.2).

In summarizing recent research that has been conducted on the physiological impact of CEDs, the Commission stated that it “lends credence to the assertion that CEWs are typically safe when used on healthy populations”, but the Commission was concerned that “there has not been sufficient research to examine the negative effects CEDs may have on vulnerable populations” (p.23)

The Commission expressed concern that RCMP policy regarding the use of CEDs had evolved without adequate analysis of the usage by officers and impact of the weapon. This shortcoming was attributed to the lack of an appropriate data collection system and seen as a significant barrier to instituting systemic accountability processes, such as public reporting (p.27).

In addressing the issue of supervision and oversight, the Commission was concerned that not all supervisors responsible for reviewing each CED usage by their subordinates were trained in the use of CEDs and that their ability to provide effective direction was thereby compromised (p.43).

The Commission recommended that CED operators be required to re-certify more frequently; i.e. every two years as opposed to the current three-year requirement (p.43).

The Commission made additional recommendations regarding more stringent reporting of CEW incidents; the appointment of a National Use of Force Coordinator to provide national direction, coordination, and monitoring of all use of force techniques, incidents and equipment; and commitment to ongoing research regarding the medical, legal and social aspects of the weapon’s use.

The Commission has indicated that a Final Report will be issued by the summer of 2008.

³⁶ Commission for Public Complaints Against the Royal Canadian Mounted Police. *RCMP use of the Conducted Energy Weapon: Interim Report*. Ottawa:2007

Quebec Report³⁷

In December 2007 the Department of Public Safety released a report containing 60 recommendations on the use of Tasters. The report indicated “when used appropriately...the CED is not a weapon that is capable of causing serious bodily harm or death. There is no research study or proof establishing a cause-and-effect relationship between the use of a CED and the death of a person who was exposed to it”.

The report did identify the need for clearer guidelines and better training on the use of CEDs. It recommended that the CED be used in order to control a person whose resistance represents a significant risk to the safety of the subject, police officer or other person; or to protect the subject or other person against the threat of imminent bodily injury. It also recommended that police consider an extremely agitated person to be a medical emergency and that police should, wherever possible, call for medical assistance before physically intervening with the subject.

The report stated that before using a CED, the police must recognize persons at risk: pregnant women, elderly, thin or short persons. Officers must attempt to avoid vulnerable parts of the body: head, neck, heart area and genitals. The report recommended that police use the fewest cycles possible and avoid continuous cycles exceeding 15-20 seconds. The report also recommended that persons subjected to neuromuscular incapacitation receive a medical assessment as soon as possible.

In response, the government of Quebec ordered that CED use be restricted to situations where a subject's resistance poses a security risk either to the suspect or the officer. Police are required to call for medical help if a suspect appears agitated.

Toronto Police Service³⁸

In February 2007, the Chief of Police of the Toronto Police Services presented an Annual Report on the Use of Tasters 2006 to the Toronto Police Services Board. This report presented the results of a pilot project on the use of Tasters by front-line uniform supervisors in selected Divisions. The report noted that the TASER® was used 174 times during 156 incidents; 44% of the total usage was in ‘demonstrated force presence’ only; 19% in ‘drive stun’ mode and 37% in full deployment/probe mode. No injuries other than minor skin punctures were reported. The report noted that the TASER® “successfully de-escalated 94% of the total incidents, while 6% required another force option to de-escalate the incident” and concluded that “the TASER® has been proven to be an effective intermediate force option for front-line policing in the de-escalation of violent incidents”.

Halifax Regional Police

In January 2008, Halifax Regional Police submitted a report entitled *Taser Overview for the Department of Justice*³⁹. In reviewing research conducted within Canada and internationally, the report concludes that

³⁷ www.msp.gouv.gc.ca/police/publicat/Taser/rapport_Taser.pdf

³⁸ www.Taser.com/research/statistics/Documents?Toronto%20Annual%20TASER%20ECD%202006%20Report%2002%2018%2007.pdf

³⁹ Stienburg, D., Hernden, L. and Croft, T. *Taser Overview for Department of Justice*. Halifax Regional Police:2008.

"there is overwhelming evidence that electricity from the TASER® does not cause ventricle fibrillation (stop the heart) or pose any other life threatening conditions" (p.2)

The report notes that the use of force by police is a rare event, constituting only 0.2% of police responses to calls for service from the public during the period January 2003 to December 2007. Of all use of force options available, CEDs were deployed in approximately 23% of the use of force incidents. The report notes that 'presentation only' (i.e. no shock administered) has become the predominant form of CED use. This is attributed by the authors to changes in training and deployment techniques. Out of the 305 deployments the report notes that only one incident was recorded in which a subject received minor injuries which was seen to be a direct result of the CED with no other force option being deployed.

The report disputes the assertion that the CED is a tool meant to be used in place of lethal force. "If used only when lethal force is authorized, you are only getting a small portion of the benefit offered by the Taser®. It has proven itself to be a tool that can significantly reduce the amount of force needed to control many common situations officers face" (p.18). The report points to a significant decrease in injuries to suspects following the introduction of the CED.

British Columbia Office of the Police Complaint Commissioner

Following the deaths of four individuals proximal to the use of a CED, the Police Complaint Commissioner in August 2004 directed the Victoria Police Department to "review the present use of force protocol and make such interim recommendations as he deems appropriate for the use of the TASER® by police officers in the Province of British Columbia pending the results of emerging studies presently underway".

Following a review of field data the reviewers concluded in their interim report⁴⁰, that:

"the TASER® is an effective intermediate weapon with a very high (exceeding 90%) success rate. The TASER® has a superior success rate to oleoresin capsicum spray, which is particularly prone to fail on subjects who are either emotionally disturbed or under the influence of stimulant drugs. Also notable is the generally low rate of injury for both officers and subjects when the TASER® is deployed, although there is a significant possibility of secondary injuries which must be included in the totality of circumstances when the TASER® is employed." (p.31)

The review team concluded that the TASER® should be retained as an intermediate weapon for use by police in British Columbia and that appropriate use of the TASER® presents an acceptable level of risk to subjects being controlled. (p.55)

The interim report of the review team contained a number of recommendations for standardizing training of officers in the use of the TASER® (development of a course training standard and core curriculum to be delivered to all recruits and all in-service TASER® users); mandatory reporting to capture information on all TASER® use; training of all officers regarding excited delirium; elimination of the use of the maximal restraint position (where handcuffs and ankles are bound behind the back). (pp.55,56)

⁴⁰ British Columbia Office of the Police Complaint Commissioner. *Taser Technology Review and Interim Recommendations*. Victoria, BC:2004

In the preparation of its final report, the review team considered a number of significant studies regarding the use of CEDs, including the 2005 PACE study funded by the US Office of Naval Research⁴¹; the 2004 HECO study⁴²; research conducted by the United States Air Force Research Laboratory⁴³; and an overview of CED use in the United States by Amnesty International⁴⁴. The team also convened a meeting of medical professionals and CED experts to review the current research and identify key issues.

The final report⁴⁵ of the review team recommended that police should, where possible, minimize multiple TASER® applications (particularly continuous cycling of the Taser® for periods exceeding 15-20 seconds) (p.31); that CEDs not be used against subjects who are demonstrating only passive resistance; that CEDs be used in 'push stun' mode only for subjects displaying active resistance who are resisting an officer's efforts to take them into custody without attacking the officer; and that CEDs be used in either a 'push stun' or 'probe deployment' mode when officers are confronted by active resistance, assaultive resistance or the threat of grievous bodily harm or death. (pp.34,35)

Prefacing these recommendations is the observation that "the variety and complexity of the circumstances that may confront an officer make it impossible for any policy to encompass every possible scenario". (p.34) The review team also concluded that "blanket prohibitions against TASER® use on specific groups can be counterproductive and that the test in every case remains one of reasonableness". (p.33)

Canadian Police Research Centre

In August 2004 the Canadian Police Research Centre (CPRC) was asked by the Canadian Association of Chiefs of Police to conduct a comprehensive review of the existing scientific research and data and provide a national perspective on the safety and use of CEDs. The report was published in August 2005⁴⁶.

The CPRC team concluded that "CEDs are effective law enforcement tools that are safe in the vast majority of cases". (p.ii)

The following policy considerations were presented by the CPRC team:

- "The use of CEDs are related to a decrease in the use of lethal force in some jurisdictions and are also related to substantial decreases in police officer and subject arrest-related injuries.
- Although each use of force incident needs to be judged separately, for the most part the increased use of CEDs in non-lethal incidents is appropriate.
- Originally marketed and accepted as an alternative to lethal force, usage has grown to include incidents where intermediate (but not lethal) weapons should be used.
- Police services and their governing bodies and agencies should give thoughtful consideration to developing CED usage reporting procedures, forms, or databases.

⁴¹ McDaniel, W.C. et al. *Cardiac Safety of Neuromuscular Incapacitating Defensive Devices*. Journal of Pacing and Clinical Electrophysiology. 2005. V.28(1) (284-287)

⁴² United States Department of Defense. Human Effects Centre of Excellence. *Report on Human Effectiveness and Risk Characterization of Electromuscular Incapacitation Devices*. 2004

⁴³ Jauchem, J.R. *Effectiveness and Health Effects of Electro-muscular Incapacitating Devices*. Air Force Research Laboratory. 2004.

⁴⁴ Amnesty International. *United States of America. Excessive and Lethal Force?* 2004. Index AMR 51/139/2004.

⁴⁵ British Columbia Office of the Police Complaint Commissioner. *Taser Technology Review Final Report*. 2005.

⁴⁶ Manojlovic, D., Hall, C., Laur, D., Goodkey, S., Larence, C., Shaw, R., St-Amour, S., Neufeld, A. and Palmer, S. *Review of Conducted Energy Devices*. Canadian Police Research Centre: 2005.

- It would be unwise and counter-productive for any police service or government body to develop policies and procedures that explicitly specify in what kinds of circumstances a CED may or may not be used.
- Notwithstanding the above, police officers need to be aware of the adverse effects of multiple, consecutive cycles of a CED on a subject; deploying a CED on a subject's head, neck or genitalia; deploying a CED where a person can fall from a height; and deploying a CED on a subject where it is known to the officer that the subject has flammable substances on their clothing or on their person, or are standing in or near obvious flammable/explosive substances." (p.iii)

Based on the research on ED, the CPRC report recommended that:

- "Police officers should recognize that acutely agitated persons are suffering from a medical emergency, and that emergency medical services (EMS) involvement is warranted as early as possible in the restraint process.
- Notification of EMS for dispatch prior to actual physical engagement with the subject may be the most rational policy." (p.v)

The CPRC identified a number of gaps in the existing research; e.g. information on death proximal to restraint; physiological effects of ED and how persons suffering from ED can best be subdued by police in order to expedite medical treatment.

The CPRC team also voiced concern that "there is no known, scientifically tested, independently verified and globally accepted CED safety parameters" (p.vi) which would allow law enforcement agencies to evaluate the safety, effectiveness and reliability of CEDs independent of the manufacturer.

Police Executive Research Forum

The Police Executive Research Forum, supported by the United States Department of Justice and the Bureau of Justice Assistance, conducted two years of research on CED usage by law enforcement agencies in the United States, hosted a number of international symposia and reviewed studies and policies of various law enforcement jurisdictions.

The product of the work was the document *Conducted Energy Devices: Development of Standards for Consistency and Guidance*⁴⁷ – a set of guidelines to assist policy-makers and law enforcement agencies in determining how CEDs should be used. The following is a summary of the key guidelines:

Situations in which CED use should be considered:

CEDs should only be used against persons who are actively resisting or exhibiting active aggression, or to prevent individuals from harming themselves or others. CEDs should not be used against a passive subject.

⁴⁷ Cronin, J.M. and Ederheimer, J.A. *Conducted Energy Devices: Development of Standards for Consistency and Guidance*. U.S. Department of Justice Office of Community Oriented Policing Services and Police Executive Research Forum. Washington:2006.

Number of activations:

No more than one officer at a time should activate a CED against a person. CED should be used for one standard cycle (5 seconds) and then the situation re-evaluated. Number and duration of cycles should be kept to the minimum necessary to gain control over subject. Training should emphasize that multiple activations and continuous cycling of a CED appear to increase risk of death or serious injury and should be avoided.

Categories of subjects:

CEDs should not generally be used against pregnant women, elderly persons, young children or visibly frail persons unless exigent circumstances exist. Should not be used on a handcuffed person unless they are actively resisting or exhibiting active aggression and/or to prevent individuals from harming themselves or others. CEDs should not be used when a subject is in a location where a fall may cause substantial injury or death, nor against individuals driving a vehicle. Officers should be aware that there is a higher risk of sudden death in people under the influence of drugs and/or symptoms associated with excited delirium.

Method of deployment:

CEDs should not be fired at subject's head, neck, and genitalia. Only trained personnel should remove darts. All persons exposed to CED activation should receive medical assessment. Persons in custody who have been exposed to CED activation should be monitored regularly when in custody, even if they have received medical care. Following a CED activation, officers should use a restraint technique that does not impair respiration. CEDs should not be used in the presence of combustible vapours and liquids. "Probe mode" should be the primary setting option, with 'drive stun mode' generally used as a secondary option. Challenge should be given before CED activation, unless to do so would put another individual at risk. Supervisor should respond to all incident scenes where CED was activated. Supervisor should conduct an initial review of the CED activation. Force investigation outside chain of command should be considered when any of the following factors are involved:

- Subject experiences death or serious injury
- Person experiences prolonged CED activation
- CED appears to have been used in a punitive or abusive manner
- Appears to be a substantial deviation from training
- Person in at-risk category has been subjected to activation.

Random audits should be conducted.

Training:

Agencies should not rely solely on training curriculum provided by the CED manufacturer. Should ensure training is consistent with approved use-of-force policies. Recertification should occur annually and consist of physical competency and device retention, changes in agency policy, technology changes. Supervisors and command staff should receive CED training.

Reporting:

Statistics should be kept to identify CED trends and deployment concerns.

Future Research Directions

Although a significant amount of research has been undertaken in recent years to determine the impact of CEDs in order to guide its use as a law enforcement tool, there remain a number of issues which have not been resolved by the research to date and require further study. A number of initiatives are now planned or underway to address these information gaps.

The United States National Institute of Justice commissioned a two-year study in June 2006 to assist in understanding whether the CED technology can contribute to or cause death and, if so, in what ways. The study is entitled "In-Custody Deaths Due to Use of Conducted Energy Devices" and will review more than 100 deaths associated with CEDs over the past five or more years. A panel of physicians will conduct mortality reviews on the deaths, using police data, autopsy results, toxicological analysis and analysis of medical care received. This comprehensive study will obviously be of considerable interest to governments and police agencies.

The House of Commons Public Safety Committee began a review of TASERs on January 30, 2008, hearing testimony from TASER® International and the Canadian Police Research Centre.

In November 2007 the Canadian Association of Chiefs of Police announced that the Canadian Police Research Centre would undertake, on its behalf, a comprehensive review of, and additional research on, the use of CEDs "to provide a national perspective on the safety and use of the devices". The research will include a year-long study to identify links between the characteristics of people who have been subject to police restraint, different methods of restraint and the risk of death associated (the RESTRAINT study). A report on the state of CED-related technology and issues is expected to be completed by March 31, 2008. The RESTRAINT study is due to be completed in 2009.

Longitudinal studies are required to achieve a more complete understanding of the long-term impact of CEDs and all measures used within the force continuum – to determine their impact on officer, suspect and community safety.

Conclusion

Law enforcement officers must have appropriate tools to assist them in maintaining public safety. To that end, efforts have been directed at developing instruments that provide an effective response to subduing resistant subjects in situations where simple physical control tactics are inappropriate or inadequate.

The CED has emerged as a promising 'less-lethal' weapon that allows law enforcement officers to bring non-compliant subjects under control while ostensibly posing the least risk to the officer, the subject and other citizens. Its advantages (relative to other weapons such as the baton, OC spray and the firearm) derive mainly from its versatility – its rapid impact, use from a distance, potential for reducing injuries to officers, subjects and bystanders and its reportedly short duration of physiological impact.

But these are the very characteristics that may render the CED open to misuse or even abuse: particularly over-reliance on the weapon to subdue subjects when less intrusive means could be effective.

Some of the policy considerations for public policy-makers include:

- The adequacy of current training programs in addressing the use of the CED in the context of a force continuum and establishing appropriate qualification standards for certification and re-certification.
- Whether there should be operational procedures that clearly outline the conditions of CED deployment and the extent to which the government should be involved in establishing such procedures.
- The adequacy of current oversight and accountability mechanisms.
- Whether there is a mechanism for evaluating policy on an ongoing basis to respond to new research regarding all aspects of the impact of CED use.