Use of Conducted Energy Devices (often referred to by the trade name Taser®) can help reduce injuries both to police officers and suspects, according to a federally funded study released by PERF this month. But PERF continued to urge police agencies to adopt clear policies to prevent the unnecessary use of CEDs, just as police impose limits on officers’ use of other types of force.

PERF compared the experiences over four years of seven law enforcement agencies that use Conducted Energy Devices with six agencies that do not use CEDs, reviewing thousands of incidents in which police used CEDs or other types of force against suspects. The study was supported by the National Institute of Justice, the research arm of the U.S. Department of Justice.

Overall, the study showed that use of CEDs is associated with a 70-percent reduction in the chances of an officer being injured compared to agencies that do not use CEDs. And the odds of a suspect being injured are reduced by more than 40 percent in CED agencies compared to non-CED agencies.

“All in all, we found consistently strong effects for CEDs in increasing the safety of officers and suspects,” said Dr. Bruce Taylor, director of research at PERF. “Not only are CED sites associated with greater levels of safety compared to a matched group of non-CED sites, but also within CED agencies, in some cases the actual use of a CED by an officer is associated with a higher level of safety compared to incidents in which officers used other types of less-lethal weapons, such as batons.”

HELPING POLICE AVOID HAND-TO-HAND STRUGGLES

Because CEDs can be fired from a distance, allowing police officers to keep their distance from resisting suspects, the devices help to prevent or minimize the physical struggles that can cause injuries both to officers and suspects, the study showed.

“While no use of force technique or device is foolproof, our research supports the proposition that CEDs, when used properly, can serve as a useful addition to the use-of-force continuum in police departments,” said PERF Executive Director Chuck Wexler. “Our study shows that CEDs can often help officers make arrests with less risk of injury to arrestees and to the officers themselves. But thorough training of officers is required to ensure that any use-of-force technique or device is used only when necessary to protect officers and bystanders. These decisions about whether to use force, and what kind of force to use, are extremely difficult, given the infinite variety of circumstances that police face on the street and the fact that officers sometimes have only seconds to evaluate a situation and make a decision.”

Wexler noted that a set of 52 CED guidelines issued by PERF in 2005, which a number of police agencies have adopted, calls for tight restrictions on CED use. For example, the guidelines provide that CEDs should be used only against people who are actively resisting police or are a threat to themselves or others, not against passive suspects; that no more than one officer at a time should activate a CED against a person; that officers should be trained to understand that multiple activations appear to increase the risk of death or serious injury; that CEDs should not be used solely because a person is fleeing; that CEDs should not generally be used against pregnant women, elderly or visibly frail persons, or young children absent exigent circumstances; and that CEDs should not generally be used if the subject is in a location where a fall may cause substantial injury or death.

The PERF guidelines also recommend that anyone subjected to a CED activation receive a medical evaluation and be monitored regularly while in police custody, even after receiving medical care. When possible, emergency medical personnel should be notified in advance as officers respond to a call that they anticipate may result in a CED activation, one of the guidelines states.
There has been a lot of discussion in the last few months about whether the United States is seeing a loss of civility in its public discourse. I watch the videos of these Town Hall Meetings about health care, and see people yelling at politicians and each other with hate in their eyes, and have to wonder, where is this coming from?

Some people are worried that the angry talk may agitate the mentally unbalanced and cause them to become violent. House Speaker Nancy Pelosi recently urged people to “understand that some of the ears that [bitter rhetoric] is falling on are not as balanced as the person making the statements may assume.”

On the other hand, President Obama seems inclined to downplay the threat, saying, “Yelling at politicians is as American as apple pie.”

From my perspective, I think there are elements that go into having a civil society, and two of the most important are the ideas of respect and restraint. In order for the government and the governed to get along, we all need to show each other a little human respect. In the interests of all, people need to restrain themselves and try not to offend each other. You have a Constitutional right to tell an off-color joke at a dinner party, but out of decency and respect for your hosts and the other guests, you restrain yourself and don’t do it.

For those of us in policing, the question of angry political rhetoric is being eclipsed by a new, more extreme phenomenon—people bringing firearms to Presidential events. In some states, people have a legal right to bear arms and display them publicly, even at a location where the President is expected.

But just because you can do something doesn’t mean you should. Text-messaging while driving, smoking a pack of cigarettes a day, taking a third mortgage on your house to finance an expensive vacation—all these things may be legal, but that doesn’t mean they’re good ideas.

I would like to ask the people who bring guns to Presidential events, “Where is your sense of respect and restraint? Why are you being so unnecessarily provocative? What is your point?”

It is particularly sad that this is happening in the United States, which, unlike most other modern Western democracies, has a terrible history of assassinations and attempted assassinations. President John Kennedy. Rev. Martin Luther King. Senator Robert Kennedy. President Gerald Ford. President Ronald Reagan.

You would think that people who are in favor of gun rights would be particularly sensitive to the fact that guns were used against all of these leaders. Advocates of gun rights should be the last people to bring a gun to a Presidential event, because it reminds everyone of this terrible history and undermines support for gun rights. So you have a legal right to bring a gun to a place where the President will be visiting. Why on earth would you want to do that?

On a practical level, we police have a tough enough time when we have these Presidential visits. This is especially true in smaller locales. I know that the New York City Police Department, by virtue of its size, can literally cordon off an entire area so that the President will be relatively safe. But in smaller communities, police departments are not able to provide this type of “cordon sanitaire” around the site of a Presidential event, keeping any threats at bay.

So these smaller departments are stretched as it is, and if someone shows up with a gun, they need to respond. We police officers are trained to act only on what we observe; we don’t know what may be on a person’s mind. Someone carrying a firearm could be of the right mind, or the wrong mind; we don’t know. All we know is that we have a guy with a gun near a President, and that ain’t good. So we’ve got to focus on that individual; we may have one or two cops just keeping a very close eye on that person.

People may say, “Well, that’s your job.” But this is a situation where economists would say there are opportunity costs. If I’m totally preoccupied doing X, that means I’ve giving up the opportunity to do Y. If I have two cops watching someone with a gun, those two cops are less able to watch for threats elsewhere.

And for all we know, this might be a more nefarious situation, where someone intent on doing harm to the President could have one or two guys in the crowd carrying guns and drawing police attention.

I suppose there is room for disagreement about whether the screaming matches at Town Hall Meetings are a sign that our society is disintegrating, or merely a healthy sign of a robust debate. But as a police chief, I have to say that welcoming the President of the United States to your town by walking around with a firearm is far beyond any sense of reason.
Congress has begun to hold hearings on possible reforms to the nation's forensic science systems, in light of a National Academy of Sciences (NAS) report released in February which concluded that with the exception of nuclear DNA analysis, "no forensic method has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual or source."

On September 9, the Senate Judiciary Committee held a hearing on "Strengthening Forensic Science in the United States." On September 22, a House Judiciary subcommittee held a hearing on reauthorization of the Innocence Protection Act, for which the NAS report has strong implications.

Sen. Patrick Leahy, chairman of the Judiciary Committee, said that the NAS report "is detailed and far-reaching, and can provide a foundation for building broad consensus for change."

But Senator Leahy suggested a "go-slow" approach to two of the NAS report's most sweeping recommendations—creating a National Institute of Forensic Science to establish and enforce best practices and mandatory accreditation standards, and providing funds to remove forensic laboratories from the control of police and prosecutors' offices.

"There are areas of significant controversy, including the report's recommendation of another major new government agency, and for the total separation of forensics from law enforcement," Leahy said. "I hope we will be able to put aside those differences for now in order to focus on the many areas of consensus."

Following are excerpts from the testimony of several witnesses at the Senate hearing:

**Dr. Eric Buel**

*Director, Vermont Forensic Laboratory*

Several years ago, I had the opportunity to serve as a board member for the American Society of Crime Laboratory Directors. A theme that I brought forward for consideration was a long-term goal for us and for society. That goal was for every crime victim to expect the highest level of forensic science services, regardless of where in the United States he/she was victimized. …

The resources necessary to make that desire a reality have not been provided to the state and local crime labs. Federal funds have flowed toward the reduction of backlogs in DNA, and although this assistance is appreciated and has done much good, crimes continue to go unsolved and citizens continue to be victimized as backlogs in other forensic disciplines grow and leave cases unresolved.

Mr. Chairman, we need to address the capacity in our crime lab system; we need to provide resolution to these cases; we need to have comprehensive forensic reform. As you know, the NAS study clearly recognized this and it provided numerous recommendations to reform and modernize our system. I and the rest of the forensics community have studied this document and believe that that report can help us realize the dream that every victim receives timely and excellent forensic services, no matter where the crime occurs. This dream will not be easy to achieve, it will not be cheap, and it will take the concerted efforts of all to ensure we spend our limited resources wisely to reach our goal.

**Matthew F. Redle**

*County and Prosecuting Attorney*  
*Sheridan County, Wyoming*

It is in my capacity as a member of the Board of Directors of the National District Attorneys Association that I appear before the committee today.

When a crime is committed within our communities, it is not enough that someone is arrested. The person arrested must be the right someone. Like our colleagues in law enforcement, we know that the arrest of the wrong person allows the true perpetrator to continue to victimize others. The excellent work of our nation's forensic scientists is critical to ensuring we get the criminal off the street and the victims can be assured that justice has been rightly served. All prosecutors want the best forensic science analysis available.

The better the information available, the greater the likelihood that our judgment will be better informed. We recognize that the best system of justice is one that exonerates the innocent before trial. Our interest, therefore, is keen.

The publication of the [NAS] report has provided an agenda for a healthy discussion about the future of forensic science in this country. Though "the devil is always in the details," many of the recommendations found in the report have merit. We believe that many of these recommendations can effectively be implemented within a framework that already exists between the Department of Justice, existing accrediting agencies, and to a lesser degree the National Institute of Standards and Technology. One of the more important areas addressed in the report is the clear need for increased funding for our nation's forensics laboratories. Too often, justice is delayed because the forensics community lacks the resources to effectively and efficiently process the evidence submitted to them.

**Peter Neufeld**

*Co-Director, The Innocence Project*

The development of DNA testing has allowed the Innocence Project to help exonerate 242 factually innocent Americans—17 of whom were on death row awaiting execution… We then deconstruct the wrongful convictions, looking for common causes while distinguishing “one off” situations. Our research into these wrongful convictions yielded a stunning insight: unvalidated and/or improper forensics was the second-greatest contributing factor to those miscarriages of justice.

When a crime’s true perpetrator is not identified, communities are less safe: among the first 241 post-conviction DNA exonerations nationwide, the real perpetrators were identified in 105...
CHIEF TIMONEY: TRAIN OFFICERS TO THINK OF CEDs AS A SERIOUS WEAPON

“CEDs can be an effective tool for police, but we need to make very sure that our officers understand that these devices are a serious weapon that should be used only when necessary,” said Miami Chief of Police John F. Timoney. “Often, police can de-escalate a situation without using any type of physical force. So while our research offers encouraging results about CEDs, we do not want our study to be used as a green light to use these devices when lesser means of control should be used.”

Wexler added that while this new research indicates a reduction in injuries to suspects and officers when CEDs are used, PERF is concerned about the potential for overuse of CEDs, particularly in light of the deaths that have followed use of CEDs in some instances. Wexler noted that a 2008 study of deaths following CED use, conducted by a high-level panel of medical experts for the National Institute of Justice, found that “the purported safety margins of CED deployment on normal healthy adults may not be applicable in small children, those with diseased hearts, the elderly, those who are pregnant, and other at-risk individuals,” and that “the medical risks of repeated or continuous CED exposure are unknown and the role of CEDs in causing death is unclear in these cases.” 1 The NIJ panel also found that not all of the people who have died after being subjected to a CED activation were chemically dependent or had heart disease or mental illness; “some were normal healthy adults.” Wexler called for additional research to explore these issues.

Following are details about the PERF study:

RESEARCH DESIGN

Through a careful selection process, PERF identified 13 law enforcement agencies for participation in the research—seven that employ CEDs and six that do not. Criteria for selection included
- Agencies needed to be able and willing to provide four years’ worth of data on all incidents of use of force, including data on the type of force used and any injuries to officers and/or suspects stemming from the uses of force.
- Agencies needed to have a written policy identifying the placement of CED use and other less-lethal weapons on a use-of-force continuum.
- Agencies were required to have at least 100 sworn officers (in order to provide sufficiently large numbers of use-of-force incidents to allow for a robust analysis).

The final selection of participating agencies included consideration of several criteria to provide a close “match” between CED and non-CED agencies, in terms of agency size, size of population served, violent crime levels, and police activity (number of violent crime arrests).

PERF reviewed the data on all use-of-force incidents, not just CED cases, and examined the range of less-lethal weapons used (e.g., pepper spray and batons), as well as unarmed tactics that police employ to arrest suspects.

To measure the extent of injuries to officers and suspects in incidents where police used CEDs or other forms of force, PERF used nine criteria for injury “outcomes”:
1. Officer was injured (yes or no)
2. Officer injury severity (“Severe” injuries were defined to include broken bones, stab wounds, and gun wounds. “Minor” injuries included bruises, lacerations, punctures, and burns.)
3. An officer’s injury required medical attention (yes or no)
4. An officer’s injury resulted in the officer being taken to a hospital, clinic, or other medical facility for either outpatient or inpatient evaluation and/or treatment (yes or no)
5. Suspect was injured (yes or no)
6. Suspect injury severity (“severe” or “minor,” as in Number 2 above.)
7. Suspect died. (There were no officer deaths in the sample, so no officer death measure was tabulated.)
8. Suspect injury required medical attention (yes or no)
9. Suspect injury resulted in the suspect being taken to a hospital, clinic, or other medical facility, as in Number 4 above (yes or no)

In addition, the PERF researchers conducted further multivariate analyses of the raw data in an effort to “control” statistically for factors that might skew the findings regarding use-of-force outcomes. These factors included data on police departments and their jurisdictions, including: number of sworn officers per 100,000 population; number of arrests per 100,000 population; violent crime arrest rates; total reported crime rates; violent crime rates; homicide rates; percentage of population below the poverty line; median household income; unemployment rates; population density; percentage of female-headed households with children; residential stability; racial heterogeneity; percentage of population this is male; and percentage of population age 15 to 24. In addition, factors about the suspects, including their age, sex, race, and any level of resistance were statistically “controlled” for, in order to search for any alternative explanations for any measured differences in outcomes. These analyses generally did not change the direction of the researchers’ findings or cause them to alter their conclusions.

PERF researchers acknowledged that a randomized clinical trial (RCT) design is preferable to the quasi-experimental design (QED) that was used. However, an RCT design was impossible in this context because PERF is unaware of any police agency that would randomly assign a CED, or any other weapon, to its officers. Ethical considerations dictate that police chiefs develop use-of-force policies based on their best judgments of what is safest and most effective in their jurisdictions; there is no room for randomness in those calculations.

**FINDINGS**

Overall, the study found that the law enforcement agencies that use CEDs were associated with improved safety outcomes in six of the nine criteria for measuring safety when compared to agencies that do not use CEDs: officer injuries, suspect injuries, suspect severe injuries, officers receiving injuries that required medical attention, suspects receiving injuries that require medical attention, and suspects receiving injuries that resulted in a trip to a hospital or clinic.

For the three remaining safety outcomes, there were no differences between the CED and non-CED departments.

To take one of the nine outcomes as an example—how often officers sustained injuries significant enough to require medical attention as a result of a use of force incident—the following more detailed results were found:

- Among the seven departments that have deployed CEDs, during the two years before they began using CEDs, 13.2 percent of the officers involved in a use-of-force incident suffered injuries requiring medical attention. But after those agencies began using CEDs, they saw a significant reduction in these injuries; only 7.5 percent of the use-of-force incidents resulted in officers suffering injuries requiring medical attention.

- Similarly, regarding another key outcome—how often suspects sustained injuries significant enough to require medical attention—the following results were found:
  - Among the seven departments that have deployed CEDs, during the two years before they began using CEDs, 54.8 percent of the suspects involved in a use-of-force incident suffered injuries requiring medical attention. But after those agencies began using CEDs, they saw a significant reduction in these injuries; only 39.8 percent of the use-of-force incidents resulted in suspects suffering injuries requiring medical attention.
  - Regarding deaths of suspects, before the deployment of CEDs, fewer than 1 percent (0.2 percent) of the use-of-force incidents in CED sites involved a suspect killed by an officer; after CED implementation, that number remained about the same statistically (0.4 percent). In the non-CED sites, the percentage of use-of-force cases resulting in the death of a suspect remained at 0.9 percent throughout the four-year period.

**USE OF CEDs VERSUS OTHER TYPES OF FORCE**

PERF also conducted a separate evaluation of the CED agencies during the two-year period after they began using CEDs, looking for any differences in use-of-force incidents in which CEDs were used, as opposed to incidents in which other forms of force were used.

Specifically, levels of injuries were compared for five categories of use of force:
- CED use only
- Baton use only
- OC (pepper) spray only
- Other weapon use or multiple-weapon use, and
- Non-weapon force by officers, such as hands-on tactics.

The results showed significantly lower injury rates for officers who used CEDs rather than other types of force:
- Only 5.4 percent of the CED incidents resulted in injuries to the officer. By contrast, 24.3 percent of the officers using a baton were injured, and 20.5 percent of the officers using hands-on tactics or other types of force that did not include a weapon suffered injuries.
- Regarding the criterion of officers suffering injuries severe enough to require medical attention, 3.9 percent of the CED incidents resulted in officers seeking medical attention, compared to 12.3 percent of the baton incidents, 12.6 percent of the OC spray incidents, and 8.9 percent of the non-weapon use-of-force incidents.

The findings regarding injuries to suspects were less clear-cut:
- 58 percent of the CED incidents resulted in the suspect receiving medical attention—compared to 62.5 percent of the incidents involving use of a baton, 44.2 percent of the OC spray incidents, and 55.7 percent of the hands-on tactics or other non-weapon use of force.
- Regarding suspect injuries resulting in suspects being taken to a hospital or clinic, 29.5 percent of the CED incidents resulted in suspects being hospitalized, compared to 19.7 percent of the baton incidents, 11.2 percent of the OC spray incidents, 12.3 percent of the multiple-weapon incidents, and 16.7 percent of the non-weapon uses of force. Thus, the chance of a person being sent to a hospital or clinic is roughly twice as great for CEDs as for other types of force.

However, these findings may be explained in part by the fact that CED use involves at least a minor degree of injury to suspects, in that CEDs fire darts that penetrate suspects’ skin in order to deliver a significant electrical charge. Thus, in some cases suspects who were subjected to a CED activation may have been sent to a hospital or other medical facility as a precaution, not because they were seriously injured. (PERF’s CED guidelines, it should be noted, provide that “all persons who have been exposed to a CED activation should receive a medical evaluation.”) PERF researchers discussed this finding with police personnel at the CED departments in its study, and were told that many departments have an informal practice of sending persons who have been subjected to a CED activation to a hospital or clinic, which is consistent with PERF’s CED guidelines recommending close attention to medical issues related to CED use. PERF called for additional research to explore the implications of this finding.

The text of PERF’s full study, *Comparing safety outcomes in police use-of-force cases for law enforcement agencies that have deployed conducted energy devices and a matched comparison group that have not: A quasi-experimental evaluation*, is available at www.policeforum.org.
People in the News

This month, Subject to Debate is launching a new occasional feature, providing quick updates about the lives and careers of PERF members and other police executives.

Earl L. Cook has been named chief of the Alexandria, Va. Police Department. The Washington Post noted that Cook “took over as Alexandria’s first black police chief more than three decades after he played for the newly integrated T.C. Williams High School football team that was later depicted in the movie Remember the Titans.”

Clearwater, Fla. Police Chief and longtime PERF member Sid Klein has announced his retirement. Chief Klein began his career in policing as a deputy sheriff in Dade County in 1963, and spent most of the 1970s in the Lakewood, Colo. Department of Public Safety. He has served as chief in Clearwater since 1981.

Anthony W. Batts has been named chief in Oakland, Calif. In what may be a first, Chief Batts won praise from the unions in both departments. “It’s a sad day for us,” said Lt. Steve James, president of the Long Beach Police Officers Association. Meanwhile, Sgt. Dom Arotzarena, head of the Oakland Police Officers Association, said that while union members would have preferred to see a new chief chosen from inside the department, “We’ve heard good things about him.”

Los Angeles Chief William Bratton announced his resignation in order to take a new position as chief executive of Altegrity Security Consulting, a company that does consulting work for police agencies around the world. And Michael Berkow is resigning his position as chief of the Savannah-Chatham Metropolitan Police in order to take a new position as president and chief operating officer of Altegrity.

Jane Castor has been named chief of police in Tampa, Fla. Chief Castor, a 25-year veteran of the Tampa Police Department and the department’s first female chief, will now lead all of its 1,300 employees.

Troy Riggs is stepping down as assistant chief of the Louisville, Ky. Metro Police to become chief in Corpus Christi, Texas. Chief Riggs has a special expertise in the relationship between police agencies and the news media.

Bill Rector announced his plans to retire in January. The Bakersfield city charter requires that the new chief come from within the department, and Chief Rector said that one of his goals when he became chief in 2004 was to prepare a new generation of leaders.

Mark Delaney has announced he will retire as superintendent of the Massachusetts State Police, where he has served for more than 35 years. Colonel Delaney’s experience includes extensive work in the Detective Division as well as
Col. Mark Delaney

Chief William “Mike” Card

Commissioner Alan Bersin

Chief Tom McCarthy

boarding the department’s crime lab.

Sheridan, Wyo. Chief William “Mike” Card is returning to California to serve as chief of the department where he started his career in policing in 1973, in Capitola.

Matt Baggott was named chief constable of the Police Service of Northern Ireland. Mr. Baggott was serving as chief in Leicestershire, and previously served for many years in London. He replaces

PERF Board Member Sir Hugh Orde, who recently moved to a new position as president of the Association of Chief Police Officers, a London-based agency that leads the direction of the police services in England, Wales, and Northern Ireland.

President Obama nominated Alan Bersin to be commissioner of U.S. Customs and Border Protection (CBP), the nation’s largest law enforcement agency. In addition to experience in the Department of Homeland Security, Mr. Bersin’s career has included stints as U.S. Attorney in San Diego and California Secretary of Education.

Sadly, Chief Tom McCarthy died on September 7. Chief McCarthy retired as chief in Fayetteville, N.C. in 2007 with more than 29 years of police service. He previously served as chief in Gaston County, N.C. and Fort Lauderdale, Fla., and at the time of his death was serving as interim chief in Hope Mills, N.C. while city officials chose a permanent chief.

Col. Mark Delaney

Chief William “Mike” Card

Commissioner Alan Bersin

Chief Tom McCarthy

overhauling the department’s crime lab.

cases. In many of those cases, the real perpetrator had gone on to commit additional violent crimes while an innocent person was in prison. These perpetrators were convicted of at least 90 serious, violent crimes—including 56 rapes and 19 murders—that they committed after innocent people were convicted for their earlier crimes. The NAS report alarmingly observes that many of the commonly used non-DNA forensic assays have not been scientifically validated, and there is no formal apparatus in place to do so for new and emerging forensic technologies. Many forensic techniques—such as hair microscopy, bite mark comparisons, latent fingerprint comparisons, firearm/tool mark analysis, and shoe and tire print comparisons—have never been sufficiently validated to permit an examiner to assert that a particular defendant is the “source” of the trace or impression evidence recovered from the crime scene.

Moreover, there has been almost no research to establish the limits and measures of performance and to address the sources of variability and potential for inadvertent bias, despite the fact that these types of studies are routine in other applied sciences such as medicine and engineering. Finally, even for forensic disciplines that have been properly validated, imprecise or exaggerated expert report writing and testimony can lead to the admission of erroneous or misleading testimony.

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The Police Executive Research Forum is a nonprofit association of progressive police professionals dedicated to improving services to all our communities. Subject to Debate, published by the Police Executive Research Forum, welcomes input from PERF members and other interested parties. Please submit articles, ideas and suggestions to Craig Fischer, PERF, 1120 Connecticut Ave., NW, Suite 930, Washington, D.C. 20036. Phone: (202) 454-8332; fax: (202) 466-7826; e-mail: cfscher@policeforum.org. Contributors’ opinions and statements do not necessarily reflect the policies or positions of the Police Executive Research Forum. ISSN 1084-7316. Subscription price: $35/year.
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