



# Refining the Role of Less-Lethal Technologies:

Critical Thinking, Communications, and Tactics  
Are Essential in Defusing Critical Incidents



POLICE EXECUTIVE  
RESEARCH FORUM



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February 2020



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The points of view expressed herein are the authors' and do not necessarily represent the opinions of all Police Executive Research Forum members.

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# Acknowledgments

**The idea for this project** initially came from a conversation I had with Los Angeles Police Chief Michel Moore. He had looked at the “Vision Zero” concept for traffic safety, which asks the question, “What would it take to reduce traffic fatalities to zero?”<sup>1</sup> Chief Moore suggested that we apply a similar focus to reducing fatal use-of-force incidents in policing.

Like other chiefs, Chief Moore has focused on preventing police use-of-force incidents that have come to be known as “lawful but awful.” These incidents are ruled as justified under current legal standards, but they undermine community trust and support, because they look unnecessary to members of the public. *Some incidents look like they could have been prevented with more thoughtful police tactics and improved less-lethal tools.*

Chief Moore suggested that we convene a diverse group of thought-leaders to do the following:

- Take a hard look at the less-lethal weapons currently available to police,
- Come up with ideas for new and more effective tools, and

- Explore how to better integrate less-lethal technologies with sound use-of-force policies and tactics.

So we held a national conference on January 31, 2019, which was a true collaboration between PERF and the LAPD. We brought together approximately 225 police chiefs and sheriffs, tactical trainers, and other law enforcement personnel, as well as industry leaders in the field of less-lethal tools, and academic experts. We spent a day in Los Angeles dissecting the challenges that police officers face in many potential use-of-force situations, and we identified new approaches for meeting those challenges.

I’m grateful to all of the many LAPD personnel who were involved in the planning and execution of the conference. And I’d like to single out the following people for their outstanding work: Assistant Chief Jon Peters; Capt. Jonathan Tom; Captain Mike Odle; Sgt. Joe Fransen; and the officers who participated in a thought-provoking use-of-force scenario that the LAPD ran to kick off the meeting. Thanks also go to Los Angeles Mayor Eric Garcetti, whose welcoming remarks challenged attendees to rely not only on technology but also on wisdom and empathy when delivering police services.

The PERF project team was led by Kevin Morison, our Chief Program Officer, and

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1. “What is Vision Zero?” Vision Zero Network.  
<https://visionzeronetwork.org/about/what-is-vision-zero/>



included Directors Tom Wilson (Applied Research and Management) and Craig Fischer (Communications), Senior Associate Dan Alioto, Assistant Communications Director James McGinty, Senior Research Associate Matt Harman, Research Assistant Nora Coyne, Executive Assistant Soline Simenauer, and Membership Coordinator

Balinda Cockrell. As always, they did a remarkable job of researching the issues, framing the discussion, producing this report, and managing the logistics that go into this type of production.

Dave Williams designed and laid out this publication, and Andrew Cullen took the photographs.

Chuck Wexler  
Executive Director  
Police Executive Research Forum  
Washington, D.C.

## INTRODUCTION:

# Critical Thinking, Communications, and Tactics Can Reduce the Need for Less-Lethal Weapons

### By Chuck Wexler

When PERF began this project, our goal was twofold:

- First, we wanted to examine the state of the art in the less-lethal weapons and tools that are available to police departments today. What tools are out there, how are they being used, and how effective are they?
- Second, we sought to imagine new technologies that could make a difference in helping police officers safely and effectively defuse the critical encounters that continue to challenge them. We focused on incidents in which a person:
  - » is in a mental health crisis, or has a condition that can cause them to behave erratically or dangerously;
  - » is unarmed, or is armed with a knife, baseball bat or other weapon, but not a firearm; and
  - » is a potential threat to himself/herself or others.

In discussing less-lethal tools, we focus on persons who do *not* have a firearm, because police generally have fewer options for resolving incidents in which a threatening person is brandishing a gun. If no gun is present, police can attempt to “slow the situation down” and

resolve it without using lethal force, or in many cases, without any use of force.

Data collected by *The Washington Post* over the last few years indicate that more than 40 percent of the fatal officer-involved shootings in the United States each year involve subjects who are not armed with a gun, and more than 20 percent of all fatal encounters involve persons with mental illness.<sup>2</sup> Other research suggests that by various estimates, approximately 10 to 29 percent or more of fatal officer-involved shootings are “suicide-by-cop” situations, in which the subjects, through their actions and words, attempt to force the officer to use lethal force against them.<sup>3</sup>

**American policing has embraced less-lethal tools:** Most less-lethal technologies have been designed to address these types of situations in which police face unstable persons who may pose a threat but are not brandishing a firearm. And over the years, police agencies have come to embrace these less-lethal weapons and tools.

For example, almost every major metropolitan police agency in the United States now equips its officers with Electronic Control Weapons (ECWs), as do a growing number of medium-size and smaller departments.

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2. “Fatal Force.” *The Washington Post*. <https://www.washingtonpost.com/graphics/2019/national/police-shootings-2019/>

3. Patton, Christina L. and Fremouw, William J. “Examining ‘suicide by cop’: A critical review of the literature. *Aggression and Violent Behavior*, 27 (2016) 107-120.

Agencies also are deploying newer less-lethal devices, such as high-powered soft projectile launchers, that are designed to slow down or immobilize subjects. The array of less-lethal tools is large—and growing.

**But as PERF began delving into the current state of less-lethal technology, several important facts became apparent:**

**1. Electronic Control Weapons are the less-lethal weapon of choice in most agencies, but they are effective less than two-thirds of the time.**

And when an ECW is ineffective, the situation tends to escalate, because the subject often becomes angry at having been hurt by the ECW probes. Furthermore, because the officer may have moved in closer to the subject in order to get within range for using the ECW, when the ECW does not work, the officer may be at greater risk than if he or she had maintained a longer distance.

**As a result, officers often end up using lethal force after an ECW failure.** One recent study found that between 2015 and 2017, 250 fatal officer-involved shootings occurred after an ECW failed to incapacitate a suspect.<sup>4</sup>

**2. Many officers are reluctant to use physical force—to go “hands-on”—even when that may be an appropriate response.**

The reluctance to use hands-on techniques may be the result of officers lacking the experience and confidence to engage in physical encounters.

In other incidents, officers may feel confident that they could resolve a situation by using hand-on tactics, but they are concerned that the “optics” of such an action – as seen by members of the public – would not be good. The public may see less-lethal weapons as less harsh, or more “scientific,” than hands-on tactics by an officer.

So officers seem more inclined to turn to a less-lethal weapon or device that *appears* to be less violent than using hands-on tactics. Many officers have said they are concerned that a bystander’s video recording of hands-on tactics may “go viral” online, portraying the officer’s actions in an unfairly negative light.

**3. Many new and emerging less-lethal technologies have limitations.** For example, various devices cannot be used or are often ineffective if the subject is moving, or is in a crowd, or is not in close proximity to the officer.

Devices that must be used at close range tend to be problematic, because one of the key tactics for de-escalating incidents is for officers to keep a safe distance from the subject. When officers can keep their distance and use cover, such as their patrol car, to protect themselves against a possible attack by a mentally unstable person, they can work to slow the incident down and buy time for talking to the person, asking questions, bringing additional resources to the scene, and trying to obtain voluntary compliance.

Thus, if an officer decides to use an ECW, pepper spray, or other less-lethal weapon and it fails to incapacitate the person, the officer may be at greater risk than if he or she had not used the weapon at all.

Furthermore, an ECW may hurt the person but not work, if one of the probes makes contact but not the other. Similarly, pepper spray may sting the subject’s eyes, but not enough to incapacitate the person. In these situations, the less-lethal tool may anger the subject and destroy any trust that the officer might have begun to establish. So the failure of a less-lethal tool may sharply reduce the likelihood of ever resolving the incident peacefully.

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4. “When Tasers Fail,” American Public Media, May 9, 2019. <https://www.apmreports.org/story/2019/05/09/when-tasers-fail>. See also <https://features.apmreports.org/taser-shootings/>

**4. In short, there is no single less-lethal tool currently in use—or on the immediate horizon—that can consistently address the range of challenging encounters that today’s police officers face.**

These realizations prompted us to step back from our initial focus on technology, and ask a more fundamental question:

**Has policing become overly dependent on less-lethal technologies, at the expense of communication skills, strategies, and tactics that have worked in the past but are not as prevalent today?**

- Why, for example, are some officers more adept at defusing situations without using any force, even when the subject is much larger than they are?
- How is it that jail deputies, who generally don’t carry firearms or ECWs, consistently defuse hostile situations peacefully?
- Why do today’s police recruits still get substantially less training in communications, de-escalation, and defensive tactics than in weapons proficiency, even though they rely on communications and de-escalation far more often in their everyday work?
- And why are officers seemingly less willing to go hands-on with subjects, in situations where that may be the appropriate course of action?

These and other questions led us to shift the focus of this project. Rather than limiting our discussions to existing and future technologies, we broadened our view to include the wide range of strategies and tactics that are often needed to resolve potential use-of-force situations.

**It became clear that we need to teach officers more about how to integrate critical thinking, communications, and tactics with technologies, in order to give officers more options for resolving incidents.**

## **Critical thinking and communication skills are key**

**Our realization that the policing profession should see less-lethal tools in a broader light, as part of a wide range of options that officers should carefully consider, fits with a great deal of other work that PERF has conducted in recent years.**

Over the past decade, one of PERF’s top priorities has been exploring ways to reduce police use of force.<sup>5</sup> The overarching theme of PERF’s work in this area is that officers’ most effective tools for resolving many incidents are often their (1) **critical thinking skills** and (2) **communication skills**.

### *Critical thinking skills*

PERF’s approach to critical thinking, defined in our 2016 publication Guiding Principles on Use of Force,<sup>6</sup> is a five-step, structured thought process that officers can use to evaluate their options in many types of situations (not just incidents involving persons behaving erratically). The five steps of the Critical Decision-Making Model are:

1. Collect information.
2. Assess the situation, any threats, and risks.

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5. The following PERF reports detail tactics and strategies for reducing use of force in certain types of incidents that occur very often in policing, such as encounters with persons who have a mental illness, developmental disability, drug addiction, or other condition that causes them to behave erratically:

Suicide by Cop: Protocol and Training Guide (2019)

ICAT: Integrating Communications, Assessment, and Tactics (2016)

Guiding Principles on Use of Force (2016)

Re-Engineering Training on Police Use of Force (2015)

Defining Moments for Police Chiefs (2015)

An Integrated Approach to De-Escalation and Minimizing Use of Force (2012)

2011 Electronic Control Weapon Guidelines (which built upon a similar publication in 2006)

6. Guiding Principles on Use of Force (2016). Police Executive Research Forum. <https://www.policeforum.org/assets/guidingprinciples1.pdf> Pp. 79-87

3. Consider whether the police have legal authority to take action, and if so, under what restrictions or conditions.
4. Identify your options and decide on your best course of action, based on what you are trying to achieve, how the subject may react if you choose a particular option, whether you need more information or resources to act, and whether there is a compelling reason to act now, as opposed to waiting.
5. Take action, review the effects of your action, and re-assess, if necessary.

As conditions change, officers may jump forward or backward in the five-step process. For example, if an officer is at Step 5 and is about to use hands-on tactics or an Electronic Control Weapon because he believes that a person brandishing a knife is about to hurt someone, but the person suddenly sets the knife down on a table, the officer should go back to Step 2 and re-assess the threat level, which is now lower. Based on that re-assessment, the officer may decide to spend more time asking the person questions and trying to establish trust and an interpersonal connection, to resolve the incident without use of force.

### Communication skills

Police officers' interpersonal communication skills are an essential element of resolving incidents involving persons in crisis who are behaving unpredictably or dangerously.

#### **General communication principles:**

To some extent, these types of communication skills are universal, based on principles such as the following:

- Ask many questions, and listen carefully to the answers. Encourage conversation, but don't dominate the conversation. Generally aim to spend 80% of your time listening, and 20% talking.
- Speak in language the person can understand, not police jargon.
- Speak slowly, and just loudly enough to be heard. Persons in crisis may not understand everything you say, but they will notice your tone and attitude. So if you speak in a calm, peaceful voice, it can help lower the sense of crisis that the subject is experiencing.
- Always be truthful. If you are caught in a lie, you may not be able to recover credibility.
- Be patient. There is no reason for officers to feel that they must resolve every call quickly so they can move on to the next one. When lives are at stake, the best course of action may require hours of conversation to build trust, calm the person down, and seek voluntary compliance.

**Specific communication skills for various types of incidents:** Police officers also should be taught specific communication skills for particular types of situations, because the best approaches are not always intuitive.

For example, PERF's 2019 *Suicide by Cop Protocol and Training Guide*<sup>7</sup> offers guidance for officers communicating with suicidal persons. The main concept is that the officer's goal is to try to disrupt the person's thoughts about suicide. So it's not a good idea for the officer to say, "Why do you want to die?" Instead, the officer should say, "What's going on? How can I help you?" And even though it might seem kind, or encouraging, to say, "Your life doesn't sound that bad," that diminishes what the person is feeling, which can reduce trust. It's better to say, "Tell me about something good in your life."

## Integrating Critical Thinking, Communications, and Less-Lethal Options

Communications and critical thinking are especially important in the types of incidents in which officers are responding to persons who are behaving erratically or dangerously

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7. "Suicide by Cop: Protocol and Training Guide." Police Executive Research Forum (2019.) <https://www.policeforum.org/suicidebycop>

– not because they have committed a crime, but because they have a mental illness, a developmental disability, a drug addiction, or some other condition.

If the person in this type of situation does not have a firearm, many police officers, based on the traditional training that they have received, might think, “This is a situation for my Taser, or my pepper spray.”

However, these are the very types of situations that officers can often resolve without using force. The officers can take cover, keep a safe distance, slow the situation down, call for additional personnel and resources, and above all, think carefully about the situation they are facing, and communicate with the subject and try to obtain voluntary compliance.

Training of officers in many police and sheriffs’ departments has not kept up with the new way of approaching these incidents. So when officers encounter a person with a mental illness, a developmental disability, or some other condition that may cause them to behave erratically or dangerously, many officers turn immediately to a less-lethal option. That is their “Plan A.”

**But if these tools have a failure rate of 35 percent or more, and if they can make the situation worse when they do fail, isn’t it time to rethink our overall approach?**

**Wouldn’t it be better to focus on training officers that their Plan A should be to try to avoid reaching the point where less-lethal force is needed?**

**In researching Suicide by Cop incidents, the experts we consulted, who included police officials and psychologists, emphasized that in most instances, officers’ first options should be critical thinking and communications, not a less-lethal weapon.**

Another way of looking at this is that when officers encounter a person with a mental illness or other condition that causes them to behave erratically, and the officer is considering any option, the officer should have a Plan B in mind, in case Plan A doesn’t work.

So if Plan A is to use an ECW or other less-lethal tool, the officer should not implement Plan A unless he or she has a Plan B – what to do if the less-lethal tool doesn’t work.

And when officers cannot think of an effective Plan B, they should reconsider their Plan A.

**In other words, less-lethal tools should be an important option, but not necessarily the first option, in police officers’ toolkits.**

This report examines the range of less-lethal weapons that are currently in wide use in policing, or are just beginning to emerge as possible tools of the future. The report examines the advantages and shortcomings of each tool, and aims to help police and sheriffs’ departments as they consider an overall strategy for selecting less-lethal tools and training officers to use them.

By training officers to use critical thinking skills and effective communications *first*, especially in dealing with persons who have a mental illness or other challenging conditions, agencies can resolve many incidents without having to use any weapons, including less-lethal devices.

In certain situations, a less-lethal tool may be an important and effective part of an officer’s strategy for resolving an incident. In general, however, these tools should not be viewed as a first option, or as a matter of routine. Rather, they should be seen as tools that are sometimes effective, when carefully considered as part of an overall plan that relies on critical thinking, communications, and sound tactics.

# Executive Summary

**At the suggestion** of Los Angeles Police Chief Michel Moore, the Police Executive Research Forum (PERF) and the LAPD held a national conference on January 31, 2019 to discuss less-lethal options for police agencies in the United States.

Less-lethal weapons and tactics include various types of “pepper spray” or chemical agents; Electronic Control Weapons (ECWs) such as Tasers; devices that propel soft projectiles such as bean bags; officers’ batons; and other devices, including some new tools that some agencies are adopting.

Less-lethal options can be helpful to officers when they respond to calls involving persons who are behaving dangerously or threateningly due to mental illness, drug or alcohol addiction, or other conditions. When police encounter a threatening person with a firearm, officers have limited options. But when a person is armed with a knife, a blunt object, or some other weapon – but not a gun – officers have more options for resolving the incident without use of lethal force. Less-lethal tools are a part of officers’ “toolkit” for responding to such calls.

Approximately 225 police chiefs, sheriffs, and other law enforcement personnel, along with less-lethal industry representatives and academic experts, participated in the PERF-LAPD conference.

Key findings include the following:

**Officers’ Plan A for responding to these calls should focus on critical thinking and communications first, not less-lethal weapons, because success is more likely to be achieved through voluntary compliance.**

Officers should be trained to understand that when they respond to a call involving a person who has a mental illness, a drug addiction, or some other condition that is causing their erratic behavior, their best strategy should begin with two elements:

1. **Critical thinking:** Using a Critical Decision-Making Model,<sup>8</sup> officers should ask themselves questions like: “What is the nature of what is happening here? What do I know about this situation? What additional information do I need, and what is the best way to get that information? Has this person been the subject of previous calls to the police? How were those calls resolved? Who made the call to police? Does that person have more information? Are there weapons on the scene? Does this person have a mental illness or other condition? Is this person threatening? Do I need to take immediate action? What additional personnel and/or resources would be helpful

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8. See ICAT: Integrating Communications, Assessment, and Tactics (2016). Pp. 27-32. <http://www.policeforum.org/assets/icattrainingguide.pdf>

here? What is my goal for resolving this incident? Can I slow this situation down?

2. **Tactical communication skills:** The goal of communication is to establish a connection and level of trust with the person in order to obtain voluntary compliance, rather than relying on less-lethal weapons. Briefly, tactical communications include the following topics, detailed in PERF's ICAT report and training program:<sup>9</sup>

- » Active listening skills and the "80-20" principle, in which you spend 80% of your time listening and 20% talking, and you use what you hear to make a connection.
- » Using body language to show the person you are listening carefully.
- » Asking many questions, and making simple requests, one at a time.
- » Asking open-ended questions, especially questions that begin with "what" and "how."
- » Understanding how "emotional contagion" can benefit or hurt you. A person with mental illness may not understand all of the words you say, but the person will sense your tone and attitude. If you are shouting orders and appear tense, that increases tensions. Speaking slowly and calmly can help de-escalate the situation and convey to the person that you are not in a rush, that you have as much time as you need to converse and reach an understanding.

**Less-lethal tools are only one part of a plan for resolving a critical incident.** A plan typically should be based on the following:

- **Information from Dispatch.** Providing officers with as much information as possible, *before they arrive on scene*, is critical to guiding their approach. Call-takers and dispatchers must be trained to ask the right

questions and to relay crucial information in these situations.

- **Tactical pause.** It can be helpful for responding officers to huddle up—either in person or over the radio—and strategize about their response. This is an opportunity to agree upon roles and responsibilities, discuss the initial approach, and run through "what if" scenarios if a plan does not work.
- **Getting additional resources to the scene.** In some instances, a key part of a plan involves getting additional, specialized resources to the scene, such as officers who have received special training in Crisis Intervention. A sergeant or other supervisor at the scene is also very helpful in managing the response and bringing a sense of calm and order to officers' actions.

**Use of Electronic Control Weapons has increased, eclipsing some other tools.** This is partly because ECWs can be used from a somewhat greater distance. Use of older tools, such as batons, also tend to appear harsh when they are captured on video.

But ECWs often fail to work, usually because their prongs missed the target or did not penetrate the subject's clothing, or because the subject is too close or too far away from the officer. It also can be difficult to aim ECWs to ensure that both probes will make a connection, especially considering manufacturers' recommendations to avoid the center mass of the body.

In the Los Angeles Police Department, ECWs were deployed 6,065 times between 2013 and 2018, and they were effective 3,458 times, for a success rate of 57%. In other words, more than 40% of the time, the ECWs did not incapacitate the subject.

**There is growing interest in 40-mm projectile launchers,** especially in new devices that have features such as sighting mechanisms for more accurate aiming.

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9. Ibid., pp. 39-44.

Other tools include:

- Polycarbonate shields that give officers some protection against subjects wielding a knife or blunt object.
- Bola Wrap, net guns, and similar devices that entangle and immobilize persons.
- New types of pepper gel, pepper balls, and similar devices that are potentially more effective than traditional pepper spray, which can be blown by wind back toward officers or bystanders.

**Because less-lethal tools do not always work, officers should be trained to have a Plan B before they use a less-lethal tool.** This can be especially important when a less-lethal tool such as an ECW can anger the subject, erasing any trust that the officer might have built up with the subject.

**Command and control.** To help ensure that the police response to critical incidents is organized and managed well, the LAPD has a Command and Control protocol. The protocol directs the officer or officers who arrive first at a scene to immediately begin actively managing the incident, without waiting for a supervisor or specialized person to arrive. Managing the scene includes developing a plan, managing resources, developing specific objectives, directing personnel to meet the objectives, and mitigating risks.

**Learning from experience.** Some agencies are analyzing use-of-force situations for the purposes of continuous improvement and refinement of tactics. These formal examinations are separate from criminal and disciplinary investigations. The goal is not to assess blame or criminal responsibility, but rather to determine whether new policies, training, or practices could result in better outcomes in the future.

For example, following an officer-involved shooting, the New York City Police Department convenes a force investigation review of high-ranking officials. Within 72 hours, this group reviews all of the pertinent information

related to the incident, examining what was done well and what could have been done differently. Similarly, the Tucson, AZ Police Department's Critical Incident Review Board reviews uses of force and other "sentinel events" that may reveal weaknesses in systems or processes, much as the National Transportation Safety Board investigates airplane crashes.

**Changing the culture regarding police use of force.** Police agencies should critically examine their organizational "culture" regarding use of force and police-community relationships. One example of agency culture is how police departments define their awards systems. Traditionally, awards have gone to officers who engage in acts of bravery, often when they have had to use deadly force to protect and save lives. Some police leaders now are also recognizing officers who safely de-escalate and resolve critical incidents without using force or by using a lesser type of force. The LAPD and Philadelphia Police Department are among the agencies that have instituted new Lifesaving Awards for these types of situations.

Improving the police response to critical incidents involving people who are behaving erratically and possibly dangerously does not depend on any one tactic or tool. Rather, agencies need to train their officers to use a variety of skills and approaches—critical thinking and decision-making, communications, effective tactics, and, when appropriate and necessary, less-lethal tools—to resolve these types of incidents.

## CHAPTER 1:

# Use of Force Remains a Challenge in American Policing

**Every day**, law enforcement agencies across the country receive calls for service involving persons in a mental or behavioral health crisis who are creating a public safety hazard—for example, by wandering into traffic or disrupting a public gathering. While not necessarily committing a crime or directly threatening themselves or others, these individuals often create a situation that police cannot ignore.

When these types of encounters escalate—for example, the person produces a knife—the stakes get even higher. For police agencies, deploying the right combination of tools, tactics, and communications to safely defuse these situations, while ensuring officer safety, public safety, and the sanctity of life for everyone, remains a major challenge.

### Some signs of progress

In recent years, many police agencies have carefully reviewed their use-of-force policies. Some agencies have adopted new standards based on guidance such as PERF's Guiding Principles on Use of Force.<sup>10</sup> Other agencies have revamped their use-of-force training, with a greater emphasis on approaches such as Crisis Intervention Team (CIT) training and

PERF's ICAT curriculum (Integrating Communications, Assessment, and Tactics).<sup>11</sup>

In many jurisdictions, the results have been encouraging:

- The Los Angeles Police Department recorded 33 officer-involved shootings in 2018 (out of 1.7 million police-citizen encounters), a reduction of 25% from 2017.
- In New York City, officers discharged their firearms 35 times in 2018. That compares with nearly 1,000 discharges in 1972, before tighter policies were adopted (such as strictly restricting shooting at vehicles) and new training was given to officers.
- Asheville, NC experienced a 60% reduction in use-of-force incidents between 2016 and 2017, after the police department rewrote its use-of-force policy and trained every officer in ICAT.
- The Volusia County, FL Sheriff's Office experienced a 29% reduction in total use-of-force incidents in 2018 compared to 2017, and credited its de-escalation training of officers and its shift from a "warrior" to a "guardian" philosophy of policing.

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10. *Guiding Principles on Use of Force*. Police Executive Research Forum, 2016. <https://www.policeforum.org/assets/guidingprinciples1.pdf>

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11. "ICAT: Integrating Communications, Assessment, and Tactics." Police Executive Research Forum <https://www.policeforum.org/icat>

- The Baltimore Police Department, which also trains all of its officers in ICAT, has experienced reductions in citizen complaints over use of force.

According to the *Washington Post*, which over the past five years has created one of the most comprehensive data sets on fatal officer-involved shootings, the number of people killed by police fluctuated between 962 and 994 per year between 2015 and 2018. In 2019, the number of fatal officer-involved shootings declined to 933, or 59 fewer than occurred in 2018.<sup>12</sup>

In each of those years from 2015 to 2019, approximately 55% of the subjects shot and killed by police were in possession of a firearm. Approximately 32% were armed with a weapon other than a firearm (such as a knife, blunt object, etc.). Approximately 5% were unarmed, and in about 7% of the fatal incidents the Post identified, it was unknown whether the subject had a weapon. By conservative estimates, 20 to 25% of those killed by police were in a mental or behavioral health crisis, the Washington Post found.

Dr. Robin Engel of the University of Cincinnati noted that research has shown that more than half of fatal officer-involved shootings occur in jurisdictions with fewer than 50,000 people. “These agencies don’t always have the same resources, the same access to training, equipment, and all of the things that larger agencies have,” she said at the PERF-LAPD conference. If the overall national numbers on use of force are to be reduced, it is essential that small and mid-sized agencies be given the tools and training resources they need.

## The PERF-LAPD Less-Lethal Force Options Symposium

On January 31, 2019, PERF and the Los Angeles Police Department convened approximately 225 law enforcement leaders, subject matter experts, and representatives of companies that produce less-lethal weapons for a day-long exploration of what can be done to reduce the number of fatal officer-involved shootings.

Topics included:

- **Incidents:** Participants dissected the type of challenging situations that officers face. LAPD officers ran through a scenario-based training exercise that demonstrated how new tools and tactics can be beneficial in certain types of incidents. Participants at the conference also examined videos of actual incidents in which less-lethal tools were not deployed or were not immediately effective.
- **Current less-lethal tools:** Participants also reviewed the current range of less-lethal tools and discussed their levels of effectiveness.
- **Situations that do not involve a firearm:** Police officials and others brainstormed new approaches for handling encounters in which subjects do *not* have a firearm. Today’s officers have a wider array of options for de-escalating and resolving such incidents without use of lethal force.



Dr. Robin Engel, University of Cincinnati

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12. “Fatal Force.” The Washington Post. <https://www.washingtonpost.com/graphics/2019/national/police-shootings-2019/>

- **What's new:** Participants explored new and emerging tools and technologies.
- **Tactics, training, and culture:** Participants discussed the critical issues of tactics, training, and police department “culture” that can affect how officers see their roles and responsibilities.

This report documents the discussions that took place at the Less-Lethal Force Options Symposium, as well as the background research that led up to the meeting. The report is intended to help law enforcement leaders and their tactical and training personnel understand the opportunities and limitations of current less-lethal tools and tactics.

Industry representatives at the conference heard directly from police leaders about the types of situations in which officers need more tools and options, and what features police personnel would like to see in new less-lethal instruments.

## Officers' critical thinking and communication skills are paramount

While the symposium focused on less-lethal weapons and tools, it also demonstrated the importance of critical thinking, tactics and communication in these types of encounters. In most situations involving persons with mental illness or other conditions who are behaving erratically or dangerously, police officers' most important tools are their critical thinking and communication skills—their ability to ask themselves the right questions about the nature of the incident and what they can do about it, and their skills in making a connection with the subject, showing empathy, asking questions, and building trust, all with the goal of obtaining voluntary compliance.

Less-lethal tools and weapons can play a role in certain situations, but technology by itself can seldom resolve tense encounters.

In many cases, a less-lethal weapon, such as an Electronic Control Weapon (ECW), can be counterproductive. If the weapon does not work for some reason—for example, because an ECW's electric probes missed the subject or did not penetrate the subject's clothing – it can anger the person and undo any progress that police officers may have been making in building trust with the subject and obtaining voluntary compliance. And in Suicide-by-Cop encounters, in which a subject attempts to provoke an officer into using deadly force, the mere act of pointing a weapon such as a firearm, EWC, or other less-lethal device can escalate the situation and undermine communications.<sup>13</sup>

Thus, it takes a combination of critical thinking, communications, tactics, and tools—all supported by a robust training program—to enable officers to handle these situations safely and effectively.

And almost always, communications must come first.

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13. *Suicide by Cop: Protocol and Training Guide*. Police Executive Research Forum, 2019. [www.policeforum.org/suicidebycop](http://www.policeforum.org/suicidebycop).

## LAPD Chief Michel Moore: We Can Reduce Use of Force, Just as We Have Reduced Crime Rates

*The idea for a national symposium on less-lethal force options was proposed by Los Angeles Police Chief Michel Moore, and the meeting was carried out jointly by the Los Angeles Police Department and PERF. In his opening remarks, Chief Moore explained the purpose of the meeting:*

About six months ago, we had a series of critical incidents in which we weren't getting the desired outcomes, even with the use of our less-lethal tools and tactics. Our efforts to de-escalate and find alternatives were still resulting in outcomes that necessitated officers moving to deadly force.

So we decided to approach use of force in ways that are similar to how we have approached issues like crime reduction, which was to challenge the status quo and say, "Why can't we lower crime?" Bill Bratton, former Chief of LAPD, shook the profession in the 1990s by saying that cops do count, that crime is an issue that the police can influence. We can actually lower crime and make communities safer.

We've seen the same approach in the last 20 years with "Vision Zero" on traffic safety, not just in the United States, but an initiative that began in Sweden and has been successful in other parts of Europe.<sup>14</sup> Instead of thinking that traffic deaths are inevitable, Vision Zero says that traffic deaths are preventable. Vision Zero recognizes that drivers and pedestrians will make mistakes, but there are things we can do to prevent those mistakes from resulting in fatalities. So the question that came to me was, "Why can't we envision a Vision Zero for use of force?"

In our efforts to do that in the LAPD, we have had to re-emphasize that deadly force is a last resort. We have told our officers that they will be held accountable for understanding that using force is the most consequential decision of their lives. When officers use lethal force, it's something they have to live with for the rest of their lives. And we say that those decisions will be reviewed critically.

We recognize that in some instances, officers are going to have to resort to deadly force because other options just won't work. But we are creating an expectation that in most situations, officers should de-escalate. As the people we encounter escalate, we try to de-escalate whenever possible. The goal is to not allow incidents to spiral out of control. When the people you encounter are raising the temperature, police need to lower the temperature, through communications and tactics.

The LAPD has significantly expanded our training, tactics, and tools. Every officer in our agency in uniform patrol now carries a Taser. We've expanded our use of other less-lethal tools, from bean bags to 40-mm soft projective launchers. We're looking at what the next set of tools will be, to give our officers more options to get successful outcomes.



Los Angeles Police Chief  
Michel Moore

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14. "What is Vision Zero?" Vision Zero Network. <https://visionzeronetwork.org/about/what-is-vision-zero/>

## Los Angeles Mayor Eric Garcetti: De-Escalation Is About Wisdom as Well as Technology

*Los Angeles Mayor Eric Garcetti welcomed participants at the PERF-LAPD symposium and offered his perspective on reducing police use of force:*

This is a time when we have taken so many steps forward in constitutional policing, in community-based strategies that don't just rely on crime suppression. The Gang Reduction and Youth Development program we have here in Los Angeles has become a national and international model for youth engagement. We can intervene in the lives of young people so they won't commit crimes later in life.

But we're also in a time when tragedies still occur in police use of force, and they seem to dominate the feelings that people have about the police. That's why it is so important for us to find a better way forward, that is both about the human side and the technology side of this issue.

The best technology in the world means nothing if we don't give our officers the best training we can, and help them attain the wisdom they need. One of the officers who works on my security detail said that when he's on patrol, he uses what he calls the Sandwich Strategy. He said, "I carry a couple of extra sandwiches.

And when I encounter someone who is spinning out of control, the first thing I say is, 'Hey, you hungry? Want a sandwich?' And inevitably they are hungry, and I give them a sandwich, and then we start to engage."

This human wisdom that comes with years on the job is as valuable as any equipment that officers carry. And so here in Los Angeles, we've tried to be leaders on both technology and on human intelligence to advance de-escalation.



Los Angeles Mayor Eric Garcetti

## CHAPTER 2:

# The Evolution of Less-Lethal Weapons

**Most law enforcement agencies** today equip their officers with a range of less-lethal weapons. But over the years, the mix of tools and how widely they are used has shifted.

### Growth of ECWs, decline in OC spray and baton use

According to the Bureau of Justice Statistics, large majorities of local police departments authorize the use of pepper spray (94%), batons (87%), and Electronic Control Weapons (ECWs—81%).<sup>15</sup>

The percentage of departments authorizing the use of ECWs (such as Tasers) has grown dramatically over the past two decades, increasing from fewer than 10% in the year 2000 to 60% in 2007 and 81% in 2013.<sup>16</sup> Today, ECWs are common among law enforcement agencies of all sizes. In local police departments serving populations of 1 million or more, 100% authorize ECWs. In agencies serving smaller populations, the percentage authorizing ECWs ranges from 75% (populations of 2,499 or fewer) to 93% (populations of 250,000–499,999).

**As ECWs have become more commonplace, the actual use of some longstanding less-lethal tools, such as OC spray and batons, seems to have declined.** PERF researchers contacted several agencies for statistics on their deployments of various less-lethal weapons. Their experiences generally reflect the overall trend:

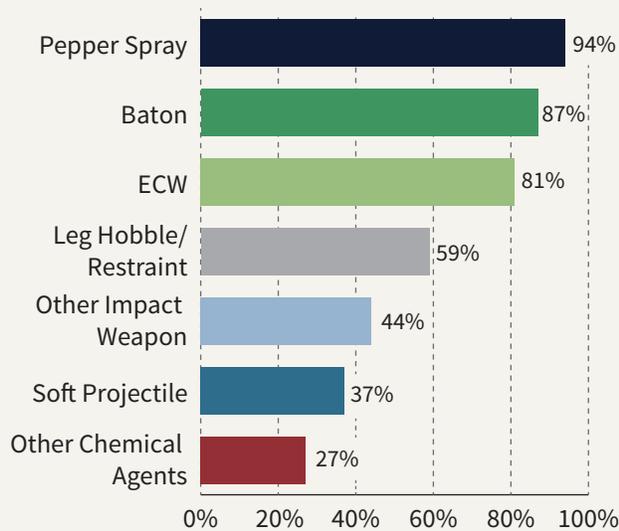
- In the Los Angeles Police Department, Taser deployments rose 45%, from 398 in 2013 to 580 in 2017, before dropping sharply to 313 in 2018. During that same time period, OC spray deployments declined 82% and baton strikes fell 62%. In 2018, the number of Taser deployments in the LAPD was more than seven times the number of OC spray deployments and baton strikes combined. (See page 17.)
- Members of the New York City Police Department deployed their ECWs 766 times during 2018. By contrast, OC spray (211 deployments) and impact weapons (76) were used much less frequently. (See page 18.)
- In the Tempe, AZ Police Department, ECW deployments averaged about 62 a year between 2014 and 2017. During this time, use of chemical agents declined sharply to only 19 deployments in 2017, and use of impact devices was extremely rare. (See page 18.)

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15. Reaves, Brian A. (2015). *Local Police Departments, 2013: Equipment and Technology*. Washington, DC: Bureau of Justice Statistics. <https://www.bjs.gov/content/pub/pdf/lpd13et.pdf>

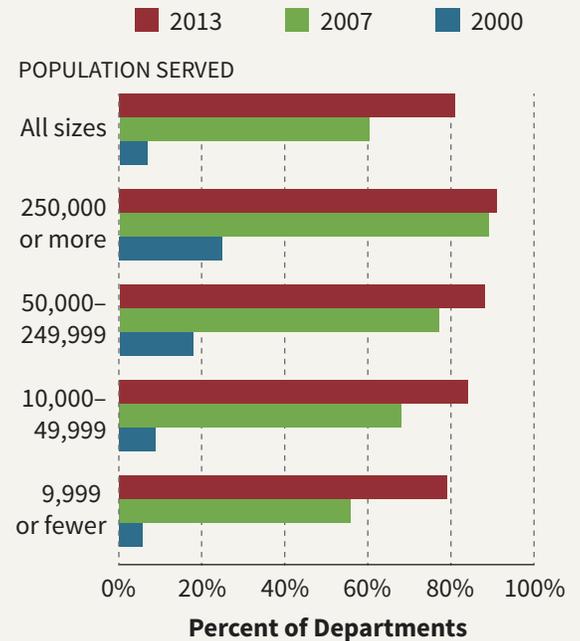
16. Ibid.

## Selected nonlethal weapons authorized by local police departments, 2013



Source: Bureau of Justice Statistics. "Local Police Departments, 2013: Equipment and Technology"

## Local police departments authorizing the use of Electronic Control Weapons, by size of population served, 2000, 2007, and 2013



Source: Bureau of Justice Statistics. "Local Police Departments, 2013: Equipment and Technology"

## Los Angeles Police Department Less-Lethal Force Deployments, 2014–2018

Force Option	2014	2015	2016	2017	2018
40MM Launcher	0	0	6	11	33
Baton/Impact Device	64	53	39	22	23
Beanbag Shotgun	54	71	74	97	60
Body Weight	1,335	1,301	1,394	1,576	1,620
Firm Grip/Joint Lock	1,539	1,511	1,627	1,840	1,968
OC Spray	98	85	55	32	20
Other	332	353	383	347	349
Physical Force	830	811	1,009	1,304	1,402
Strike/Kick/Punch	350	285	190	208	163
Takedown/Leg Sweep	787	736	775	794	836
TASER	419	522	577	580	313

Source: Los Angeles Police Department Use of Force Year-End Review, 2018. <http://assets.lapdonline.org/assets/2018-uof-yr-end-rpt.pdf>

Not all agencies have experienced increases in ECW usage, however. The Seattle Police Department recorded just 27 Taser deployments in 2017, along with 6 OC spray and 3 baton usages. And some cities—including San Francisco; Berkeley, CA; and Cambridge, MA—do not equip their officers with ECWs.

## Increasing reliance on Electronic Control Weapons

Symposium participants identified factors that may be driving the overall trend of greater reliance on ECWs and declining use of other tools.

**Batons require proximity:** Batons require officers to be in close proximity to the subjects they are dealing with. But many agencies are now training their officers to use time and distance, especially in encounters with persons who may be armed with a knife or other

## New York City Police Department — Officer Use of Force

Force Categories	CY2017	CY2018
Firearm (Discharge)	52	35
Electrical Weapon (Intentional)	543	766
Impact Weapon	105	76
Police Canine	7	12
OC Spray	324	211
Restraining Mesh Blanket	82	34
Physical Force	6071	6513
<b>Total</b>	<b>7,184</b>	<b>7,647</b>

Notes: 2018 data is preliminary and subject to change

## Tempe, AZ Police Department — Officer Use of Force

	2014	2015	2016	2017
Number of Use-of-Force Incidents	361	388	429	351
Display of Firearm	306	481	621	440
Takedowns	139	148	157	140
Strikes	62	66	68	36
Taser/ECW	61	69	54	65
Chemical Agent	42	63	34	19
Impact Device	1	1	1	4
Sage Gun	1	2	1	0
*K9 (Bite)	2	0	1	1
Carotid Control Technique	0	0	2	2
Lethal Force	1	5	1	0
Other (Complaint of Injury)	20	13	21	6

\*Data is retrieved via Versadex/RMS, all other data from IAPro.

weapons but not a firearm and who may be experiencing a mental health or behavioral crisis. “We’re teaching our officers to use time and distance, particularly distance,” said LAPD Chief Michel Moore. “The use of the baton requires officers to get close to the subject.”

**OC spray can be difficult to control, but it works in some situations:** Traditional OC sprays require fairly close proximity to the subject, and the spray tends to spread across large areas. Depending on wind and other factors, a deployment can impact both police officers and subjects. (See page 28 for information on how Police Scotland is attempting to address this issue with the use of PAVA spray.) There is also a widely held belief that OC spray is not effective on people who are intoxicated, under the influence of substances such as PCP, or in a mental health crisis.

However, members of the Vancouver, British Columbia Police Department reported that OC spray is the *most effective* of the intermediate less-lethal weapons used by that agency. It is most commonly used on non-compliant individuals in Vancouver’s entertainment district when late-night bars and nightclubs close.

**Some tools and tactics can be effective, but they appear negative on video:** The prevalence of cell phone video means that many police-citizen encounters are now captured on camera and shared on social media and the news media. Symposium participants noted that one of the unintended consequences of citizen-generated video is that it may be making some officers reluctant to “go hands-on”

with a suspect or to use an ASP baton or other less-lethal tool.

Even when a baton or physical strikes might be the most appropriate less-lethal tool in certain circumstances, some officers fear the negative community reaction that can occur when they are videotaped using an impact weapon or physical strikes.

Ironically, these less-lethal options may be the most effective in many situations and, in fact, may reduce the chances of an ECW or even deadly force being deployed.

One such incident occurred in Cambridge, MA in April 2018. A naked man, apparently under the influence of psychedelic drugs, was walking dangerously close to a major thoroughfare filled with speeding traffic. Officers attempted to communicate with the subject, but could not make him understand the danger he was in. Fearing that the man could be struck by a passing vehicle, officers rushed and tackled him, and took him into custody.

The incident was captured on cell phone video, and officers were initially criticized for their actions. However, their options in this case were restricted due to the dangerous traffic conditions. Cambridge officers do not carry ECWs, and other less-lethal tools could have agitated the subject and caused him to run into traffic. Department leaders had to explain to the public that going hands-on was the safest and most effective way to resolve the situation without endangering the subject or others.

“

We have created a culture where officers are afraid to use certain types of force—either afraid to transition to batons, afraid to strike people, afraid to take people down, afraid to physically control people.

That means they’re going to use a more intensive less-lethal weapon, or they’re going to use deadly force.

— **Training Sergeant Spencer Fomby**  
**Berkeley, CA Police Department**

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## Growing interest in 40 mm. soft projectile launchers

While not nearly as commonplace as pepper spray, batons, or ECWs, soft projectile devices are authorized by 37% of local police departments in the United States. (See page 17.) These weapons are designed to slow and temporarily incapacitate subjects by striking them with projectiles that cause short-term pain.

The first generation of these weapons was the “bean-bag shotgun.” However, agencies at the PERF-LAPD symposium reported a number of shortcomings with these devices:

- Officers need to be somewhat close to the subject for the weapon to be effective;
- Multiple shots are often needed;
- Subjects can use makeshift shields to protect themselves; and
- Some people (especially those under the influence of drugs such as PCP, or persons in crisis) seem impervious to the pain caused by the devices.

As a result, more agencies are shifting to a newer 40-mm device that launches soft projectiles. Participants identified several advantages with these weapons. Many have sighting mechanisms, making them more accurate than traditional bean-bag shotguns. In addition, the projectiles they fire can travel longer distances and are more effective on subjects wearing bulky clothing.

The Huntington Beach, CA Police Department was an early adopter of 40-mm launchers. For the past 10 years, all of the department’s patrol units have been equipped with the devices. According to Chief Robert Handy, the 40-mm launchers are “the first tool deployed in many types of scenarios,” such as a person in crisis armed with a knife. The LAPD is speeding up the testing and

acquisition of 40-mm launchers as it transitions away from bean-bag shotguns.

Although they are gaining in popularity, 40-mm launchers are used infrequently. (The LAPD, for example, used the devices only 33 times in 2018.) However, agencies that have adopted the tool report encouraging results:

- The Saint Paul, MN Police Department deployed the devices less than a half dozen times over the past year; each of the deployments was effective.
- The Dallas Police Department acquired 40-mm launchers about a year ago. There were approximately 28 deployments during the first year, with an 85% effectiveness rate.

“The 40-mm launcher has been incredibly effective. We have used it multiple times with great success. Having additional less-lethal tools has provided our officers with options. It has become a part of our daily deployment and has saved lives.”

— **Deputy Chief Matthew Toupal**  
**Saint Paul, MN Police Department**

## The emerging use of shields

For years, clear, polycarbonate shields have been widely used among police in the United Kingdom. Outside of the Police Service of Northern Ireland, the vast majority of UK officers do not carry firearms. The shields offer a level of protection from subjects who are armed with a knife or blunt object. And because the shields are clear, they can assist UK officers in deploying less-lethal options (such as chemical spray) more effectively.

Polycarbonate shields do not have ballistic capabilities, which is a primary reason they have not been widely adopted by police in the United States. However, a growing number of U.S. agencies are beginning to use the shields in situations involving subjects who are not armed with a gun and those who are in crisis.

“

You need to have the right tool for the right situation. Often when we deploy OC spray, a Taser, or a 40-mm or beanbag, the contact team then rushes the individual and pins them to the ground. We bring the shield in because, if the person has another weapon or is able to use his hands as a weapon, the shield gives us a little more distance and another tool, so we can separate ourselves from the individual.

— **Chief Michael Yankowski**  
Lansing, MI Police Department

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For example, the Lansing, MI Police Department has placed shields in all of its patrol vehicles, and officers receive regular scenario-based training on how to use them. The shields are commonly used by officers rushing in and pinning a suspect after another less-lethal tool (such as OC spray, an ECW, or a projectile) has been deployed. The Burlington, VT Police Department also has purchased polycarbonate shields for every police cruiser.

The NYPD's Emergency Service Unit has used different types of shields for many years. Today, all the department's radio motor patrol vehicles have been equipped with polycarbonate shields, and more than 15,000 NYPD officers have been trained in their use. "The officers love the shields, but we have to make sure that it's changing the way we do business," said then-NYPD Commissioner James O'Neill. "Officers need to remember to take the shields out of the car and use them, especially on calls involving emotionally disturbed persons."

The LAPD has taken a slightly different approach with shields. It has worked with Point Blank Enterprises, a developer of protective solutions for the military and police, to develop a portable *ballistic* shield. The department has placed five of the shields in each of its divisions. The shields are small enough to fit in patrol cars, light enough to carry, and can withstand rifle fire. The shields are often used at the termination of vehicle pursuits or when approaching a non-compliant suspect.

## New devices and refinements to existing tools

One purpose of the PERF-LAPD symposium was to examine less-lethal products that have recently entered the market, as well as upgrades or refinements of existing less-lethal systems. Representatives from several companies were invited to discuss recent product developments.

- **Bola Wrap.** The size of a smartphone, the Bola Wrap fires an eight-foot Kevlar cord at 640 feet per second; the cord wraps around the person to restrict mobility. Designed to control persons who are in crisis or non-compliant, the Bola Wrap is effective at distances of 10-25 feet. Some meeting participants said that the device is not ideal for individuals who are moving, in a corner,

or in a crowd. There is also a concern that the device's hook could puncture skin, causing the spread of blood-borne pathogens. As of September 2019, over 110 agencies in the United States had taken delivery of Bola Wrap devices.<sup>17</sup>



PHOTO FROM WRAP TECHNOLOGIES, INC.

- **Pepper gel.** SABRE Security Equipment's pepper gel delivery system is designed as an alternative to stream-based systems (which can have the unintended effect of contaminating large areas and impacting police officers), and foam-based systems (which subjects can wipe off and throw back at officers). The gel system provides more precise targeting and cannot be easily wiped off. According to SABRE, the gel system also has a range of 18-20 feet and is less affected by wind than other systems.

- **OC vapor system.** Safariland's OC vapor system delivers a high-volume concentration of micro-particle capsaicinoids. It affects the respiratory system, causing a shortness-of-breath sensation that may lead a subject to comply with police directions.



PHOTO FROM SAFARILAND

- **Pepper balls.** The Saint Paul, MN Police Department received private funding to start a pilot program to equip some officers with PepperBall launchers. The projectiles produce effects similar to pepper spray, but have the advantage of being able to be launched from distances of 60 feet or more. (Traditional pepper spray often requires

Launchers →



Projectiles →



PHOTO FROM PEPPERBALL.COM

officers to close the distance with a subject before deploying.) Less than two weeks after the PERF-LAPD symposium, Saint Paul police successfully used the PepperBall to take into custody a woman who was threatening to blow up a building by turning on the gas in her apartment, and who was not responding to officers' communications.<sup>18</sup>

- **Net Gun.** Net gun systems are designed to entangle and capture suspects at ranges of 15-35 feet. An estimated 50 departments in 15 countries are using the device. In the United States, its use is generally restricted to SWAT teams and other specialized units.



PHOTO FROM THE NET GUN STORE

- **A-WASP.** The Acoustic Warning Signal Projector is a portable but powerful loud-speaker system that allows for the projection of clear audio messages from distances of 800 feet or more. As a de-escalation tool, it is designed to help officers make contact and provide directions to groups of people or individuals from a safe distance. The A-WASP also has an "intense sound mode" that allows a precise beam of unpleasant sound to be projected toward individuals or small groups as a way of distracting them

17. Wrap Technologies Reports Third Quarter Results. Press Release, October 31, 2019. [www.wraptechnologies.com/wrap-technologies-reports-third-quarter-results/](http://www.wraptechnologies.com/wrap-technologies-reports-third-quarter-results/)

18. "St. Paul police use PepperBall for first time on woman threatening to blow up building," by Mara H. Gottfried. TwinCities.com, February 12, 2019. [www.twincities.com/2019/02/12/st-paul-police-use-pepperball-for-first-time-on-woman-threatening-to-blow-up-building/](http://www.twincities.com/2019/02/12/st-paul-police-use-pepperball-for-first-time-on-woman-threatening-to-blow-up-building/)

or disrupting their behavior. Marketed primarily in the UK, the device is compliant with U.S. OSHA and European Union health and safety regulations.



- **The WRAP.**

The WRAP is a four-piece restraint system designed to protect officers and subjects and to reduce the likelihood of injury or death when someone is being taken into custody. Already used by emergency medical personnel and in psychiatric facilities, the system is intended to help officers quickly and safely take combative subjects into custody. This can be especially important when a person needs emergency medical attention but is resisting police officers' efforts to help.

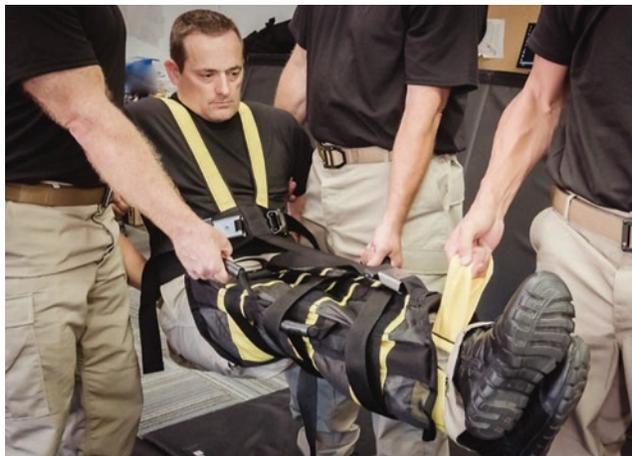


PHOTO FROM SAFE RESTRAINTS, INC.

## Low-Tech Solutions

While much of the focus in less-lethal devices is on high-tech or specialized tools, participants at the PERF-LAPD conference also discussed simple, low-tech devices that can help slow some situations down and allow for more personnel and resources to get to the scene.

For example, for years NYPD's Emergency Service Unit has used a length of rope to tie doors closed, in order to prevent a person in crisis from bursting out of a room suddenly and attacking officers. Now, the NYPD is equipping all officers with a length of rope, teaching them a rudimentary knot to tie, and giving them a door stop. Other agencies, including the Burlington, VT Police Department, are also issuing rope and other "low-tech" tools to their officers.<sup>19</sup>

“ In a scenario with an emotionally disturbed person armed with a knife or a baseball bat, alone inside an apartment, patrol officers can tie the door off and call for other resources to get there. They might want to probe the room with a fiber-optic camera, and then start a dialogue with the subject. Rope is a very simple tool that can help bring about a safe resolution to these types of situations.

— **Lt. Sean Patterson**  
**NYPD Emergency Service Unit**

19. "Burlington Police Department to Roll Out New Emergency Response Vehicle," by Katie Jickling. [Sevendaysvt.com](http://Sevendaysvt.com), April 5, 2018. [www.sevendaysvt.com/OffMessage/archives/2018/04/05/burlington-police-department-to-roll-out-new-emergency-response-vehicle](http://www.sevendaysvt.com/OffMessage/archives/2018/04/05/burlington-police-department-to-roll-out-new-emergency-response-vehicle)

## CHAPTER 3:

# How Effective Are Less-Lethal Weapons?

**A major topic** of the PERF-LAPD symposium was an examination of the effectiveness of various less-lethal tools. Much of this discussion centered on Electronic Control Weapons (ECWs), such as Tasers. Over the past two decades, ECWs have emerged as the less-lethal weapon of choice in many agencies (see page 16).

Research has found that ECWs can reduce injuries to both officers and suspects.<sup>20</sup> However, according to Geoff Alpert, a professor at the University of South Carolina who has studied less-lethal weapons, recent data suggest that while officer injuries are still down, injuries to suspects have started to rise.

One major challenge is that there is no common definition of “effectiveness.” For

example, if an officer displays but does not activate an ECW (so-called “red-dotting”) and the subject complies, does that count as an



Dr. Geoff Alpert, University of South Carolina

“effective” deployment? Police agencies have different policies on keeping records on these types of situations.

### What departments are saying about ECW effectiveness

Despite the lack of reliable, industry-wide definitions and data, PERF gathered data from individual agencies that PERF researchers contacted. In general, PERF found that most agencies reported their ECWs being effective a little less than two-thirds of the time.

The LAPD, which reports detailed use-of-force statistics annually, found that between 2013 and 2018, the percentage of ECW deployments that were effective ranged from 53% to 64%. From 2013 to 2017, the number of ECW deployments generally increased (from 853 to 1,242), and the effectiveness percentage declined (from 60% to 54%). In 2018, ECW deployments in the LAPD declined sharply to 653, and the effectiveness percentage rose to 56%.

The Seattle Police Department characterizes ECW deployments as either effective, not effective, or of limited effectiveness. The latter involves, for example, situations in which one, but not both, of the device’s prongs has made a good contact and, as a result, the deployment is not generating full compliance on the part of the subject. Among ECW deployments

20. Smith, Michael R., et. al. (2010). *A Multi-Method Evaluation of Police Use of Force Outcomes: Final Report to the National Institute of Justice*. U.S. Department of Justice. <https://www.ncjrs.gov/pdffiles1/nij/grants/231176.pdf>

## LAPD ECW Effectiveness

	2013	2014	2015	2016	2017	2018
# of ECW Incidents	398	419	522	577	580	313
# of total deployments	853	817	1137	1363	1242	653
# of effective deployments	509	522	606	782	672	367
% of deployments effective	60%	64%	53%	57%	54%	56%

Source: Use of Force Year-End Review, Los Angeles Police Department, 2018 and 2017.

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The other thing that’s not reflected in the statistics about Taser effectiveness is the failure to differentiate between probe launching vs. drive stunning. Drive stunning is notoriously ineffective. Over the years, I’ve grown to be very vocally anti-drive stun. It works in extremely limited situations, and a lot of agencies limit it by policy to the very limited situations.

— **Capt. Greg Meyer (ret.)**  
**Los Angeles Police Department**

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in Seattle in 2017, 39% were effective, 41% were not effective, and 20% had limited effectiveness.

Other police agencies contacted by PERF reported ECW deployments being effective nearly two-thirds of the time they are used. These included Huntington Beach, CA (65%); London Metropolitan Police (65%); Madison, WI (66%), and Pasadena, CA (60%). In a recent analysis of ECW effectiveness in 12 of the 20 largest cities in the United States, American Public Media found similar results. Agencies reported effectiveness rates between 54.7% (Indianapolis) and 79.5% (El Paso).<sup>21</sup>

Police departments typically do not investigate what causes an ECW to not be effective. Therefore, most of the information about why ECWs are not effective in many cases is anecdotal.

### Limitations of ECWs

Participants at the PERF-LAPD symposium offered a number of reasons, including user error and subjects wearing heavy clothing, which can prevent ECWs from being effective. Police officials in cold-weather cities such as Saint Paul, MN and Madison, WI reported that their officers don’t even attempt ECW deployments during the winter months, because the devices are unlikely to be effective through bulky winter coats and other clothing.

Another factor in the effectiveness of ECW deployments is the distance between the officer and the subject. For many Taser models, the optimal distance is up to 15 feet. The devices lose effectiveness when the officer is too far away from, *or too close*, to the subject. Greg Meyer, a retired LAPD captain who was involved in the early analysis of ECWs and remains an expert witness today, explained that when an officer is too close, the

21. “When Tasers Fail,” American Public Media, May 9, 2019. <https://www.apmreports.org/story/2019/05/09/when-tasers-fail>

two probes strike the subject too close to each other, which reduces neuromuscular incapacitation. “An officer who is 8 or 10 feet away takes that tactical step forward and quickly is only a couple of feet away. You don’t get a good spread in the probes then,” Meyer said.

To address the distance issue, Axon released the Taser 7, which has two different angles for the cartridges. One is a close-quarter cartridge that the company says can work at distances as close as four feet. The other is a distance cartridge.

**One drawback of many less-lethal weapons is that officers frequently need to close the distance between themselves and the subject for the tool to be effective.** This is the case not only with ECWs but also pepper spray, batons and even some beanbag shotguns.

Closing the distance runs counter to de-escalation training principles, such as PERF’s ICAT (Integrating Communications, Assessment, and Tactics) program, which instruct officers to seek cover and create distance in many types of situations. By keeping a safe distance from a subject, police officers can protect themselves while buying time to talk to the subject, find out what is causing the subject to behave dangerously or erratically, and identify a way to resolve the incident without use of force.

Several participants at the PERF conference emphasized that less-lethal tools should serve to complement de-escalation strategies, not interfere with them. This means accommodating the need for distance and cover.

## The Importance of Having a Plan

As noted in this report, the police response to incidents involving persons with mental illness or other conditions that cause them to behave erratically or dangerously should begin with critical thinking about the situation and strategies for resolving it, and strong efforts to communicate with the subject, establish a connection and a level of trust, and obtain voluntary compliance.

An important part of this approach is to slow the situation down, establish an atmosphere of calmness, and convey to the subject that the police are willing to take as much time as necessary to talk to the subject and try to find ways to help him and resolve the incident peacefully.

Participants at the less-lethal conference cited several elements of what should occur:

- **Information from Dispatch.** Providing officers with as much information as possible, *before they arrive on scene*, is critical to guiding their initial approach. This information is especially important in cases that may involve someone who is experiencing a mental or behavioral health crisis or where weapons are present. Call-takers and dispatchers must be trained to ask the right questions and relay crucial information in these situations.
- **Tactical pause.** When time and circumstances permit, it can be helpful for responding officers to huddle up—either in person or over the radio—and strategize about their



“ In responding to many of these incidents, it’s about getting the right officers on the scene. We have a robust clinician program where we have psychiatric emergency clinicians riding with our officers and responding to scenes with them. That way, the officers get tactical advice on how to approach somebody, and then they try to slow everything down and buy more time to talk to the person. ”

— Chief David Nisleit  
San Diego Police Department

“

We teach officers that 35% of the time, the Taser is not going to work, so you have to think about what you'll do if that happens. We try to train on “what's Plan B and C?” as you go into the situation. Don't try to figure out your Plan B while you're in a reaction mode. Try to figure it out in advance, and plan your approach accordingly.

— **Chief Robert Handy**  
Huntington Beach (CA) Police Department

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response. This is an opportunity to agree upon roles and responsibilities (for example, which officer will be the contact officer to communicate with the person, and which officer or officers will be tasked with providing cover and protection to the contact officer and everyone else at the scene). Officers should discuss their plans for the initial approach, and run through some “what if” scenarios.

- **Getting additional resources to the scene.** In most instances, officers should call additional, specialized resources to the scene. This approach is especially important in cases involving people with mental illness. These additional resources can include officers with training in mental illness and critical response, mental health clinicians and other medical personnel, and any additional less-lethal options beyond what the initial responding officers are carrying.

In situations where, despite these efforts at de-escalation and communications, tensions remain high and unstable and officers are considering using a less-lethal option, they should be aware that ECWs and other less-lethal tools are not effective in a sizable percentage of cases. And thus, they should have a Plan B in mind for what they will do if the less-lethal tool does not subdue the person.

Unfortunately, in many situations today, if less-lethal force fails, Plan B seems to be escalating to lethal force. An American Public Media study found that between 2015

and 2017, 250 fatal officer-involved shootings occurred after an ECW failed to incapacitate a suspect.<sup>22</sup>

Before officers consider using a less-lethal tool, they should ask themselves several questions:

- Do I need to use this weapon now, or can I continue my efforts to communicate with the subject?
- Have I considered the likelihood that if my less-lethal weapon does not work, it may make the situation worse, because it will likely anger the person and eliminate any trust I may have established with the person? In other words, will use of a less-lethal tool foreclose any further attempts to obtain trust and seek voluntary compliance?
- If I decide that a certain less-lethal weapon is necessary, what is my Plan B if the weapon fails to incapacitate the person?

Thus, officers must consider what their Plan B options may be *before* they execute Plan A. That way, officers can avoid trying to make split-second decisions in tense, highly stressful circumstances.

Developing and executing Plan B can be challenging for smaller agencies that have limited resources to call on. And larger departments can face difficulties in securing

22. “When Tasers Fail,” American Public Media, May 9, 2019. <https://www.apmreports.org/story/2019/05/09/when-tasers-fail>

## The UK Perspective on Less-Lethal Force Options

Like their counterparts in the United States, police officers in the United Kingdom often encounter individuals who are in a mental health or behavioral health crisis, are threatening public safety, and are not complying with police directions. And while very few people in the United Kingdom own and carry firearms, police there frequently encounter persons who are armed with knives and other weapons.

Because the vast majority of police officers in the UK do not carry firearms themselves, they must rely on communications, tactics, and some less-lethal technologies to handle incidents involving persons with weapons.

Representatives of the Metropolitan Police Service of London and Police Scotland participated in the PERF-LAPD symposium. Here are some of their perspectives on less-lethal options:

- Electronic Control Weapons are not regularly issued to most police officers in the UK. Rather, ECWs are treated as a specialized device (much like a firearm) that is issued only to select, highly trained personnel and are deployed only in specific, high-risk circumstances. On the limited occasions when ECWs are deployed, they are effective approximately 95% of the time.
- While use of batons and OC spray has generally declined in the United States, those devices (along with shields) are still the primary less-lethal tools used by police in the UK when confronting a person armed with a knife, a blunt object, or another weapon besides a firearm.
- Different police forces in the UK use different types of chemical sprays.
  - » Police Scotland uses a 0.3% synthetic capsaicin spray called PAVA. The department's 17,000 officers deploy PAVA approximately 300 times per year, according to Inspector James Young. Because the PAVA devices shoot a more concentrated stream, there is less chance of cross-contamination affecting officers or bystanders (a major factor in the limited use of OC spray in the United States). PAVA needs to make contact with a subject's eyes and is 90% effective when it does, Inspector Young said. The manufacturer claims that PAVA's range is 21 feet. Inspector Young said in practice, the optimal range is 9-10 feet. With PAVA, there is no risk of ignition from a subsequent ECW deployment.
  - » The Metropolitan Police uses CS spray, which is 90% effective, according to Inspector Nick Sutcliffe. However, as the department expands its use of ECWs, it will likely move to PAVA, because of the reduced risk of ignition when deployed in conjunction with an ECW.
- In Scotland, clear, polycarbonate shields provide an "extra layer of protection" for officers in a range of situations, Inspector Young said. Even though the shields aren't designed specifically for edged weapons, Young said that officers frequently use them in those situations. Inspector Sutcliffe said that Metropolitan Police public order officers sometimes use 6-foot shields that can be interlocked and, as a team, approach, contain, and box in subjects.



**LEFT:** Inspector Nick Sutcliffe, Metropolitan Police of London  
**RIGHT:** Inspector James Young, Police Scotland

the range of resources that may be needed to effectively respond to critical incidents.

Regardless of their resource limitations, police agencies need to think about Plan B as more than just another weapon or tool in every instance. Symposium participants

emphasized that the Plan B response should always consider how the threat has changed, and what the most appropriate response to that threat is. The failure of one weapon does not automatically mean that Plan B is a different weapon.

## Legal Considerations Governing Less-Lethal Force Options

*Statutes and case law governing the use of less-lethal force are complex. At the PERF-LAPD symposium, Arif Alikhan, the LAPD's Director of Constitutional Policing and Policy, provided an overview of the legal landscape on "intermediate force" incidents in which a less-lethal device may be an option:*

**Policy governing intermediate force can be more challenging than policy on lethal force.** There are three reasons for this, in my opinion.

- One, officers are dealing with complex and difficult factual circumstances in intermediate use-of-force incidents. These include whether the subject is holding a weapon, whether he has a mental illness or is under the influence of drugs or alcohol, and whether the incident is occurring in a public place and is endangering bystanders. And some of these factors can change during the incident; the scene and subject may be highly volatile.
- The second challenging factor is that there are many tools that officers can use during an intermediate force incident. Officers have to ask themselves, "Which tool is the right tool to use in this circumstance?" and then make a decision. The decision-making is more complex than if officers are presented with an incident in which they must use lethal force.
- The third reason is that public opinion and judicial analysis occur in a very sterile environment, but it is more difficult for officers to evaluate what's happening and assess their options under the high stress of the moment. Body-worn cameras demonstrate this point. They are great tools, but they can contribute to the lack of public understanding if not seen in the correct context. After the fact, we can look at video footage frame by frame and see a lot of what was happening. But that doesn't mean that the officer was able to simultaneously look in all directions and see everything that was happening in real time.



Arif Alikhan, Director of Constitutional Policing and Policy, LAPD

## CHAPTER 4:

# Looking Ahead: Taking Use-of-Force Thinking to the Next Level

**The PERF-LAPD symposium** sought to explore new less-lethal options and advance the profession's understanding of use-of-force issues.

**One clear take-away from the meeting was that improving police effectiveness does not lie in any one tool, tactic or training program. It must be a combination of approaches that integrate technology, tactics, and training.**

### Continued exploration of new technology

Symposium participants said it is important that inventors and manufacturers continue exploring new tools, including possible adaptation of less-lethal devices used in the military for civilian police purposes. Attendees said that new less-lethal tools should have these key features:

- Tools should support officers' use of distance, cover, and time to protect themselves and the public, while buying time to use their communication skills and develop a rapport and trust with the subject. Less-lethal tools should not require that officers significantly close the gap between themselves and a subject in order for the tool to be effective. Keeping a safe distance

between officers and the subject is often an essential tactic.

- Ideally, tools should function well whether the subject is in a crowd or is alone.
- Tools should be effective when the subject is stationary or moving.
- Tools should work in different weather conditions, including precipitation, wind, and extreme temperatures.
- Police agencies must also be sensitive to appearances—how a less-lethal tool is viewed by the public. This can be difficult, because sometimes a less dangerous tool or tactic appears more aggressive, while a tactic that appears aggressive may be the best option for quickly obtaining compliance without injury.

### Aligning technology, tactics, and training

**Symposium participants also emphasized that any less-lethal tool should complement an agency's de-escalation strategies, tactics, and training. They warned against an over-reliance on technology, at the expense of solid tactics, effective communications, and teamwork.**

Some agencies have experienced reductions in officer-involved shootings, even as deployments of less-lethal weapons have also fallen. For example:

- In Seattle, officer-involved shootings have generally declined in recent years, while officers' use of less-lethal tools remains low as well. In 2017, Seattle had just 27 deployments of ECWs, 6 uses of OC spray, and 3 baton deployments. The department estimates that it is using some level of force (beyond going hands-on and similar low-level approaches) in just 2% of the calls involving persons in crisis. Significantly, the department has not seen any increase in officer injuries resulting from its tactics.
- **In the NYPD's Emergency Service Unit, use of less-lethal tools has also declined, in large part because ESU members are using distance and cover to obtain time to think more carefully and critically about each encounter and plan what the best approach should be.**

"We're seeing a drop in less-lethal deployments, because we're asking officers to think more critically," ESU Lieutenant Sean Patterson said at the PERF-LAPD meeting. "They're creating that time, distance, and cover, which is giving them the opportunity to have a better focus on what they want to employ and when. Even if you have all the technologies, it's more about the tactics—slowing things down, and creating time and distance."

- The Saint Paul, MN Police Department cut the number of SWAT team deployments from more than 100 in 2007 to about 20 in 2018. According to Deputy Chief Matthew Toupal, the agency is not feeling compelled to rush in and quickly resolve every call involving persons who are posing a threat only to themselves. The department is empowering and training commanders and patrol officers to try to come up with solutions that don't require a response from specialized personnel.

In July 2018, the LAPD formalized this process through a new Command and Control structure, which department representatives outlined at the symposium. At its core, the LAPD Command and Control system directs any officer on the scene of a critical incident "who has gained sufficient situational awareness" to establish Command and Control and begin developing a plan of action. (See page 36 for additional information on the LAPD's new Command and Control protocol.)

Based on the concept of active leadership, Command and Control does not require that a supervisory officer be on scene before an initial plan can be formulated and executed. Rather, all department personnel are trained to begin addressing each critical incident using available resources (including less-lethal technologies), focusing on accomplishing specific tasks, and minimizing risk to those impacted by the incident, including community members, first responders, and the subject of the call.

“ In the last few years we've really seen an increase in the number of “person-in-crisis-with-a-knife” calls. Even though the officers may have had points in the contact where they could have used their firearms lawfully, the vast majority of those incidents are being resolved safely for everybody involved. Officers are slowing things down, using time, distance, and shielding. All of our officers participate in Crisis Intervention Team training, and the majority of patrol officers are CIT-certified through a 40-hour class with annual refreshers.

— **Captain Mike Teeter**  
**Seattle Police Department**





“ At the conclusion of a 16-month training cycle that covered de-escalation strategies, the natural progression moving forward is to focus on command and control. Traditionally, when we’ve talked about command and control, the focus has been on the decisions and actions taken by a supervisor after they have arrived on scene. Now, the emphasis is on the first officers on scene and the expectation that they will begin the command and control process. Command and control require that the first officers on scene gain situational awareness, take a leadership role, and start making decisions. Although the average tenure for a patrol officer is 3-5 years, every Los Angeles Police Officer is considered a leader. Therefore, the command and control process must begin as the first officers arrive on scene.

— **Captain Mike Odle**  
**Los Angeles Police Department**

**In terms of training, meeting participants identified two key areas that agencies should focus on: (1) decision-making skills on how to most effectively resolve critical incidents, using the best tools for each individual incident, and (2) technical proficiency in less-lethal tools.**

Trainers at the PERF-LAPD symposium noted that deploying an ECW, OC spray, or a 40 mm. projectile launcher is a perishable skill. Just as officers qualify regularly with their service firearms, they should also undergo regular proficiency training with their less-lethal devices. One-time training, without regular refreshers, can increase the chances of user error and inappropriate or unsafe deployments.

Critical decision-making should also be integrated into agencies’ use-of-force and de-escalation training. PERF’s ICAT training (Integrating Communications, Assessment, and Tactics) is one example of how this can be accomplished. ICAT uses the Critical Decision-Making Model (CDM), a straightforward, five-step process designed to help

officers manage a range of critical incidents. In addition to improving officers’ decision-making skills, training such as ICAT can also change their mindset when entering tense, unpredictable situations, because it provides officers with an organized, methodical way to channel their thinking and consider all options.

### Critical Decision-Making Model



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It's all about making sure that officers have the right mindset before they even get to the scene. That's one of the reasons that we're working with Dr. Robin Engel of the University of Cincinnati, to see if ICAT training will change the mindset of our officers and the attitudes they have in these situations. Our goal is that when officers come up on these complex situations, they'll be thinking one or two or three steps ahead.

— **Deputy Chief Mike Sullivan**  
**Louisville Metro Police Department**

The Louisville, KY Metro Police Department is working with Dr. Robin Engel of the University of Cincinnati to evaluate the impact of ICAT, which relies heavily on scenario-based training exercises. The evaluation is systematically measuring changes in officers' attitudes, knowledge, *and confidence*, both before and after the training, and in a follow-up period, along with actual changes in their behavior in the field. "When they get to practice these de-escalation techniques, we think officers will feel more confident in using them," Dr. Engel said. Findings are expected in the spring of 2020, she said.

Tempe, AZ Police Chief Sylvia Moir suggested that agencies should explore the practice of mindfulness to help officers improve their use-of-force decision-making. "Mindfulness is really situational awareness. The practice of mindfulness trains individuals on how to be present to take in more data, so they can redefine what constitutes a threat. It can help them be more precise in selecting the proper tool and exerting the emotional control to make a clear decision," Chief Moir said.

## Learning from experience

In addition to increasing training for their officers, several agencies are formalizing processes for analyzing use-of-force situations for the purposes of continuous improvement and refinement of tactics and use of less-lethal tools. These formal examinations are separate from the traditional criminal and disciplinary investigations that agencies also conduct. The goal of the separate process is not to assess blame or criminal responsibility, but rather to determine whether new policies, training, or practices could result in a better outcome in the future.

For example:

- Following an officer-involved shooting, the NYPD immediately convenes a force investigation review of high-ranking officials. Within 72 hours, this group assembles and reviews all of the pertinent information related to the incident, examining what was done well and what could have been done differently. In addition,

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People talk about "Monday morning quarterbacking" as if it's a bad thing. But in policing, it's our job to review and assess what we've done. If people are reluctant to criticize tactics, that gets us into trouble. We need to be objective and ask, "Would it have been better if we had done this instead of that?"

— **Commissioner James O'Neill**  
**New York City Police Department**

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“ The conversation can’t be about blaming. It has to be about understanding and improvement. Historically, policing does a better job of blaming than we do of understanding the circumstances. We must have clear conversations not just about what the officer did or didn’t do, but about whether the department’s systems supported the decisions that the officer made or should have made.

— **Chief (ret.) Darrel Stephens**  
**Charlotte-Mecklenburg Police Department**

“ We’ve increased our transparency and our accountability. Today, if you go to LAPD online, you’ll see more than 55 videos we have produced about officer-involved shooting incidents. These videos show the officers’ body-worn camera videos and in-car videos, and they provide a description of what happened. We’ve seen that our officers look at these videos and have important conversations about them with each other, in squad cars and outside of a roll call room. The conversations are not always led by a command officer or chief; it’s the officers discussing the incidents among themselves.

— **Chief Michel Moore**  
**Los Angeles Police Department**

the NYPD convenes monthly ForceStat meetings that are chaired by the First Deputy Commissioner and modeled after the department’s CompStat approach. The purpose is to look at trends in use of force and promptly identify needs for training or tools.

- The Tucson Police Department assembles a Critical Incident Review Board (CIRB) to review officer-involved shootings and other critical incidents. Consisting of a range of people inside and outside the department—lieutenants, sergeants, academy trainers, patrol officers, union representatives, community members, and other stakeholders—the CIRB asks questions such as, *What can we learn from this incident? What other options were available? If a less-lethal weapon was used, was it appropriate? Would other tools have been more helpful? Did the department*

fail to provide officers with any tools that might have been helpful?

These discussions are documented in a report that details proposed improvements in training, tactics, and tools. These reports are made available to the public.<sup>23</sup>

- The LAPD conducts similar reviews and, when appropriate, produces and releases to the public a detailed video that describes the situation and the officers’ decision-making. These “Critical Incident Videos” typically contain body-worn camera footage, 911 calls, and radio traffic associated with the incidents. The videos can serve as internal training tools and as a way for the public to better understand the incident and why officers made the decisions they did.

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23. For information on the Tucson Police Department’s Critical Incident Review Board process, see [https://www.tucsonaz.gov/files/police/CIRB/CIRB\\_OPS\\_Pamphlet\\_021518.pdf](https://www.tucsonaz.gov/files/police/CIRB/CIRB_OPS_Pamphlet_021518.pdf).

## Changing the culture regarding police use of force

Police agencies should critically examine and strengthen their organizational “culture” regarding use of force and police-community relationships, according to several of the police executives at the PERF-LAPD symposium.

One example of agency culture that symposium participants mentioned is how police departments structure their awards systems. Traditionally, awards have gone to officers who engage in acts of bravery and heroism, often when they have had to use deadly force to protect and save lives.

While those types of awards are appropriate and necessary—and an important part of the police culture—some police leaders have

argued that agencies also need to recognize officers who safely de-escalate and resolve critical incidents without using force or by using lesser types of force. The LAPD is among the agencies that have instituted new Lifesaving Awards for these types of situations.

Dr. Rebecca Neusteter, Senior Research Fellow at the Vera Institute of Justice, said it is important for agencies to document the de-escalation efforts of their officers, and to measure the effectiveness of those efforts.

“By measuring what officers do in this area, chiefs let officers know that this is a behavior that they care about, and expect their officers to implement when appropriate,” she said. “De-escalation is a hard thing to measure, but I think there can be some creative ways to develop new data points to understand this further.”



“ It is essential for us to have a conversation about how the systems, the structure, the culture, and the climate of a police organization support the ways in which we engage in these less-lethal encounters. Culture takes a long time to influence. But as we see the culture evolve—in Los Angeles, New York City, Tempe, and elsewhere—we will begin to see a dramatic shift in how agencies handle many of these difficult situations.

— **Chief Sylvia Moir**  
**Tempe, AZ Police Department**

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“ As a profession, we still don’t do enough to celebrate the circumstances where an officer or a group of officers saves a life by using more time, stepping back, being creative about how they approach a situation, and not necessarily using their weapons. That kind of lifesaving doesn’t get celebrated in the same way that we celebrate other kinds of lifesaving in our organizations. This is part of the culture change that we should work towards.

— **Chief Chris Magnus**  
**Tucson, AZ Police Department**



## LAPD's Command and Control Protocol

To improve its response to critical incidents (natural disasters, tactical situations, etc.) and improve decision-making in situations in which use of force may be required, the Los Angeles Police Department implemented a new Command and Control protocol in July 2018. The new system directs officers who have arrived on the scene of a critical incident to establish Command and Control and begin developing a plan of action. A key element of Command and Control is that initial responding officers do not need to wait for supervisors or specialized personnel to arrive on scene to begin a plan of action for actively managing the critical incident.

The LAPD defines Command and Control as “the use of active leadership to direct others while using available resources to coordinate a response, accomplish tasks and minimize risk.” The *Command* aspect focuses on establishing order, providing stability and structure, setting objectives, and creating conditions for the *Control* function to be achieved with less risk. *Control* involves implementing the plan of action while continuously assessing the situation, making necessary adjustments, managing resources, managing the scope of the incident (containment), and evaluating whether existing Police Department protocols apply to the incident.

There are four key elements to Command and Control:

- **Displaying active leadership:** Using clear communications to develop and implement a plan, direct personnel, and manage resources.
- **Using available resources:** Identifying and managing the resources needed to implement the plan.
- **Accomplishing tasks:** Breaking down the plan of action into smaller objectives and directing personnel and resources to meet those objectives.
- **Minimizing risk:** Taking appropriate actions to mitigate risks to everyone impacted by the incident.

In addition to the officer who initiates Command and Control, all officers on the scene of a critical incident share in the responsibility for Command and Control. Individual officers must identify the lead officer and be prepared to follow directions from that person, including playing supporting roles such as traffic control, perimeter responsibilities, and deploying less-lethal options. Command and Control is designed to reduce simultaneous commands to subjects that may be contradictory or confusing, to ensure deployment of less-lethal options when possible, to minimize the potential for “contagious” use of firearms, and to reduce “over-response” to many situations.

Command and Control also complements the LAPD’s decision-making model, “Planning, Assessment, Time, Redeployment and/or Containment” (PATROL).

All LAPD patrol personnel have received training on Command and Control. At the PERF-LAPD meeting, LAPD representatives described incidents in which the protocol was used to successfully de-escalate and defuse critical incidents.

# Conclusion

**The PERF-LAPD Symposium** on Less-Lethal Force Options was a brainstorming session that brought together top police executives, police trainers, legal experts, and representatives of the industries that design and manufacture less-lethal tools.

The meeting included discussions about current and emerging less-lethal technologies, and trends in which tools are used most often. A major theme was that technology alone cannot address the challenges that police officers face in handling critical incidents. In fact, less-lethal technologies often do not work as desired. Electronic Control Weapons, which have been overshadowing other less-lethal weapons in recent years, fail in as many as one-third or more of their deployments.

Thus, it is critically important that officers be trained to understand that less-lethal weapons are not in themselves a strategy for resolving critical incidents. At most, they are one possible element of a plan. Officers should be trained to expect that less-lethal tools often fail, so before officers execute any plan that includes a less-lethal tool, they should know what their Plan B will be if the tool fails.

It is also critical for officers to understand that when a less-lethal weapon does not work, it may make the situation worse. An ineffective ECW, OC spray, or soft projectile deployment will often anger the person and undermine any trust that may have been established between the responding officers and the subject. Agencies must avoid the tendency to become over-reliant on technology, at the expense of strong communications, solid tactics, and sound decision-making.

Less-lethal tools must be integrated with an agency's use-of-force policies, training, and tactics. Technologies also must align with an agency's culture regarding use of force and with department efforts to build trust and support in the community.

When all of those factors are in alignment—policy, training, tactics, technology, and culture—the policing profession is likely to see positive movement in use-of-force statistics and improvements in police-community relations.

# About the Police Executive Research Forum

To learn more about PERF, visit [www.policeforum.org](http://www.policeforum.org).

## **The Police Executive Research Forum**

**(PERF)** is an independent research organization that focuses on critical issues in policing. Since its founding in 1976, PERF has identified best practices on fundamental issues such as reducing police use of force; developing community policing and problem-oriented policing; using technologies to deliver police services to the community; and developing and assessing crime reduction strategies.

PERF strives to advance professionalism in policing and to improve the delivery of police services through the exercise of strong national leadership; public debate of police and criminal justice issues; and research and policy development.

The nature of PERF's work can be seen in the variety of reports PERF has produced over the years. Recent reports have addressed issues such as officer safety and wellness, police suicide, sexual assault investigations, police recruitment and retention, the police response to homelessness, the opioid epidemic, mass demonstrations, the changing nature of crime and criminal investigations,

mobile broadband technologies, and police use of force. Nearly all PERF reports are available without charge online at <http://www.policeforum.org/free-online-documents>.

In addition to conducting research and publishing reports on our findings, PERF conducts management studies of individual law enforcement agencies; educates hundreds of police officials each year in the Senior Management Institute for Police, a three-week executive development program; and provides executive search services to governments that wish to conduct national searches for their next police chief.

All of PERF's work benefits from PERF's status as a membership organization of police officials, who share information and open their agencies to research and study. PERF members also include academics, federal government leaders, and others with an interest in policing and criminal justice.

PERF is governed by a member-elected President and Board of Directors and a Board-appointed Executive Director.

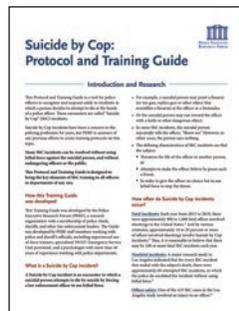
# APPENDIX A: PERF Reports on Use of Force

*Since its founding in 1976, PERF has studied issues related to police use of force. Those efforts have intensified in recent years with the increased public attention to use of force and less-lethal technologies. Here are PERF's recent reports on these topics (all are available on the PERF website):*

## **Suicide by Cop: Protocol and Training Guide (2019)**

<https://www.policeforum.org/suicidebycop>

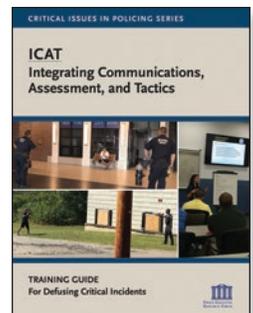
This Protocol and Training Guide is a tool for police officers to recognize and respond safely to incidents in which a person decides to attempt to die at the hands of a police officer. Many of these “suicide by cop” incidents can be resolved without using lethal force against the suicidal person, and without endangering officers or the public.



## **ICAT: Integrating Communications, Assessment, and Tactics (2016)**

<https://www.policeforum.org/assets/icattrainingguide.pdf>

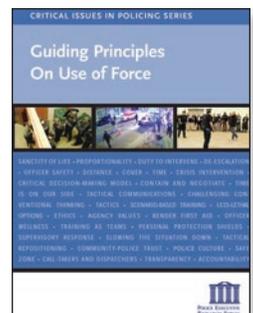
This training guide focuses on critical decision-making, effective communications, recognition of persons in crisis, and sound tactics. ICAT emphasizes the integration of these skills through scenario-based training exercises. Additional ICAT resources are available at <https://www.policeforum.org/icat>.



## **Guiding Principles on Use of Force (2016)**

<https://www.policeforum.org/assets/guidingprinciples1.pdf>

Presents 30 principles that police agencies should adopt to improve their use-of-force performance in four key areas: policy; training and tactics; equipment; and information exchange.



## Re-Engineering Training on Police Use of Force (2015)

<https://www.policeforum.org/assets/reengineeringtraining1.pdf>

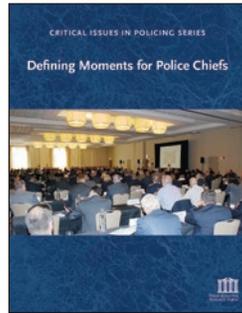
Summarizes the results of a survey on police agencies' use-of-force training and makes recommendations on how this training should be expanded and improved.



## Defining Moments for Police Chiefs (2015)

<https://www.policeforum.org/assets/definingmoments.pdf>

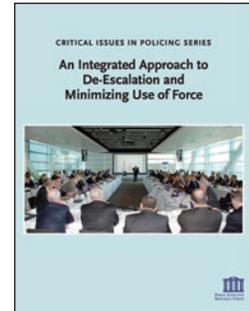
This report includes discussion by leading police chiefs of use-of-force issues and community trust; de-escalation of incidents to prevent the need for force; and evaluation of officers' actions in the minutes before a use of force occurred, in order to determine whether opportunities for de-escalation were missed.



## An Integrated Approach to De-Escalation and Minimizing Use of Force (2012)

[https://www.policeforum.org/assets/docs/Critical\\_Issues\\_Series/an%20integrated%20approach%20to%20de-escalation%20and%20minimizing%20use%20of%20force%202012.pdf](https://www.policeforum.org/assets/docs/Critical_Issues_Series/an%20integrated%20approach%20to%20de-escalation%20and%20minimizing%20use%20of%20force%202012.pdf)

This report details strategies for minimizing use of force in incidents involving persons with mental illness, drug or alcohol addictions, developmental disabilities, conditions such as autism, hearing impairments, or other conditions that can cause them to behave erratically or dangerously or fail to respond to commands, requests, or questions from police officers.



## Electronic Control Weapons Guidelines (2011)

[https://www.policeforum.org/assets/docs/Free\\_Online\\_Documents/Use\\_of\\_Force/electronic%20control%20weapon%20guidelines%202011.pdf](https://www.policeforum.org/assets/docs/Free_Online_Documents/Use_of_Force/electronic%20control%20weapon%20guidelines%202011.pdf)

Published in conjunction with the U.S. Justice Department's Office of Community Oriented Policing Services, this report presents comprehensive guidelines for agencies to follow in their use of Electronic Control Weapons.



## APPENDIX B:

# Participants at the PERF-LAPD Symposium

January 31, 2019 ■ Los Angeles, California

*Participants' titles and affiliations are those at the time of the meeting.*

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**Dr. Geoff Alpert**  
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Christina Ambriz**  
Los Angeles Police Department

**Mandar Apte**  
From India With Love

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Sacramento (CA) Police Department

**Master Police Officer  
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Vail (CO) Police Department

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LAAW International, LLC

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Los Angeles Police Department

**Chief Allwyn Brown**  
Richmond (CA) Police Department

**Sergeant II Alma Burke**  
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**Special Agent in Charge  
Tyler Burtis**  
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Laconia (NH) Police Department

**Captain Lillian Carranza**  
Los Angeles Police Department

**Captain II Armand Carranza**  
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**Chief (Ret.) Rob Davis**

San Jose Police Department

**Lieutenant Richard Davis**

UCLA Police Department

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Don DeLucca

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**VP Dave DuBay**

Safariland

**Officer Jay Ealy**

Los Angeles Police Department

**Lieutenant Sherri Egan**

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**Captain Steve Embrich**

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**Dr. Robin Engel**

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**Tammy Felix**

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**Chief Pete Fisher**

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**Commander Colin Fleury**

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**Patrol Lieutenant****Gawin Gibson**

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**Lieutenant John Gilbert**

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