
Conducted Electrical Weapons & Resolution of Use of Force Encounters

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The mission of law enforcement agencies can be considered tenuous in American society. While police officers are charged with maintaining the peace and order, this is complicated by a myriad of factors unique to each and every situation. When an officer responds to a citizen call for assistance or reacts to problems observed in the field, the officer is charged with either quelling the disturbance or apprehending a suspect, sometimes through the use of force. Usually, when utilized, the use of force is justifiable and legal, particularly when overcoming resistance during arrests or in course of protecting themselves or others from harm.

Some of the largest leaps in modern law enforcement have been the result of the deployment of new technologies. For example, the widespread use of the law enforcement cruiser and radio communications allowed officers to move to situations quickly, and to apprehend those who fled. The implementation of mobile data terminals, in-car video, and computer-aided dispatch are all other examples of the positive effects of technology on law enforcement. However, some of the most successful and widespread developments in law enforcement technology have been in the area of non-lethal weapons. Since officers often had to resort to hand-to-hand tactics (which have high incidence of injury) technological advancements have allowed officers to minimize injuries while still maintaining order.

Non-lethal weapons are designed, as their name implies, to cause compliance by discomfort or incapacitation rather than to kill. While there are many different

types of non-lethal weapons, arguably the greatest technological advancements have been in the development of the Conducted Electrical Weapon (CEW). These devices, widely known by the names of their manufacturers such as TASER® and Stinger®, have changed the non-lethal environment and sparked controversy and debate in academia and professional, trade, and medical journals. CEWs were initially heralded as a Star Trek “Phaser- like” device that incapacitated without lasting debilitating effects. However, as reports grew in the media of subjects that died after CEW application, they have also now become tied to very negative unpleasant things, such as “excited delirium,” “cocaine psychosis,” and “in-custody death.”

This chapter examines the use of the CEW at the event level, those complicated circumstances in which officers of the law, and those they attempt to control. Researchers examined 4,303 police reports where force was utilized. These documents were collected from 2 major central Florida law enforcement agencies that use CEWs, employing a total of over 2,000 officers. Of specific interest for this review was the context in which the CEWs were used and the outcomes on suspect and officer injuries.

Legal Review

Defining Police Use of Force

Use of force can be defined as the “exertion of power to compel or restrain the behavior of others”¹, or when used in the context of policing, “acts that threaten or inflict physical harm on suspects”². Generally, police force can be classified

into several modal categories including: 1) deadly vs. non-deadly; 2) physical vs. non-physical; and 3) reasonable vs. excessive¹. “Deadly force” is used to define force that is likely to cause death or some serious bodily injury²; conversely, “non-deadly force,” “less-than-lethal force,” or “non-lethal force” is the application of force that is not likely to result in death or serious bodily injury^{3,4}. “Physical force” implies the touching, prodding, redirection, or physical manipulation of a subject to comply with demands⁵, whereas “non-physical force” implies the use of threats or other verbalization techniques to gain compliance⁶. “Reasonable force” is applied force which is necessary to achieve a legal goal, while “excessive force” is applied force which is disproportionate to what is necessary to achieve a legal goal⁷. Bittner⁸, Garner, et al.⁹, Reiss¹⁰; Scharf and Binder¹¹, and Sherman¹² have all discussed the hypothesis that the capacity to use non-negotiable coercive force is at the core of the police role in society. So basic is the element of force to the police, that some researchers claim that the main reason citizens call the police is based on the belief that force may be necessary¹³.

The decision of police officers to intervene, or apply force, in a given incident is a subset of discretionary choices facing them everyday. As noted by Davis¹⁴ “a police officer may be said to exercise discretion whenever effective limits of his or her power leave the officer free to make choices among possible choices of action or inaction.” Conclusions to use force, and decisions concerning the extent of force to be used, are within the discretion of police officers. Thus, an individual officer must decide in each situation whether to ignore, or confront and

coerce a citizen to follow his direction. Through studies that have examined police use-of-force reports, citizen complaint reports, and police/citizen surveys, it has become clear that police officers today rarely apply physical force¹⁵.

Discretionary decisions regarding when, where, and how much force to use is a cumulative process¹⁶. Once a course of action is decided upon, additional discretionary choices follow that may lead an officer to either increase or decrease the level of force used. Terrill¹⁷ examined the complexity of police-citizen encounters involving force. He reported that when verbal commands are considered as a use of force, force occurs in more than half of all encounters. He also reported that the inclusion of suspect resistance into police force studies offers a “more complete picture within the context of how officers apply varying forms of force.” Terrill based his study on previous observational and data collection studies^{18,19}; these studies underscored the importance of understanding force in varying degrees and levels, from verbal commands to the use of deadly force. These studies also included suspect resistance levels as a measure to understand the police use of force.

An officer’s decision to use force is not an arbitrary one; rather it is shaped by the U.S. Constitution, the U.S. Supreme Court and local court decisions, state laws, agency policy, and training. As such this chapter has included a section on the most influential court decisions that have the greatest impact on current police use of force practices.

How the U.S. Courts Have Framed Police Use-of-Force

For a very long time, nearly all federal circuits framed police use of force within the Fourteenth Amendment substantive due process "shocking to the conscience" standard articulated by the Second Circuit in *Johnson v. Glick* (1973)²⁰. Because this case focused on establishing the intent of the officer rather than the reasonableness of their actions, there remained no clear standard for evaluating claims of excessive force by the police. Later, the Court addressed the use of deadly force in the case of *Tennessee v. Garner* (1985)²¹, possibly the Supreme Court case with the largest effect ever on police policy²². The Court ruled in this case that the state can legally "seize the life of an individual" only when an officer believes that a suspect's actions place either the life of the officer or the lives of other citizens nearby in imminent jeopardy. The significance of an officer's intent gave way to the reasonableness of the Fourth Amendment in cases where "seizures" of an individual are deemed to have occurred²³. The Supreme Court also interpreted excessive force with the decision of *Graham v. Connor* (1989)²⁴. In this case, the Court established the "objective reasonableness standard," mandating that actions of officers involving questions of use of excessive force be "judged from the perspective of a reasonable officer coping with a tense, fast-evolving situation." These U.S. Supreme Court decisions, while providing a general standard for the efficacy of police behavior, continued to fail to provide specific criteria that officers may use when deciding whether and how much force should be applied.

In more recent case law, *Brosseau v. Haugen (2004)*²⁵, the Court remained ambiguous, allowing that even unwise use of force may be legal, and there is a “sometimes hazy border between excessive and acceptable force”²⁶. Even more recently, in *Scott v. Harris (2007)*, the court’s conclusion regarding an officer’s right to use force may continue to provide controversy to this topic:

A police officer's attempt to terminate a dangerous high-speed car chase that threatens the lives of innocent bystanders does not violate the Fourth Amendment, even when it places the fleeing motorist at risk of serious injury or death.²⁷

Thus, there remains an indistinct and obscure understanding on the appropriate use of force by case law, leaving much room for interpretation and perception; police agencies therefore create Use of Force Continuums and policy to more clearly define accepted agency practices.

The Use of Force Continuum

To appreciate the complexity of situations where the police utilize CEWs as a non-lethal force alternative, one must conceptualize force not as a static concept but rather as a series of responses, ranging from verbal commands, as a minor exertion of force, to deadly force, the maximum amount of force possible to apply^{28,29, 30,31}. These continuums provide officers with means to measure the escalation or de-escalation of force within agency policy that can be legitimately used in a confrontation. While use of force continuum policies provide officers with the ability to jump from one step to another based on the officer’s

interpretation of the suspect's level of resistance, the underlying philosophy centers on protecting both the officer and suspect³².

The use of force continuum relies on the concept of multiple categories of increasing officer perceptions of suspect resistance linked to similar groupings of the officer's response to those perceptions. As law enforcement officers are expected to make split second decisions based on rapidly evolving situations, the incorporation of a use of force continuum into departmental policy provides guidance to officers in making force decisions; albeit the continuum is reflective of public opinion and agency liability concerns rather than a maximum legal level standard. Law enforcement agencies incorporate these force continuums into pre-service and on-the-job training programs in order to be able to identify varying levels and severity of resistance³³. While these continuums within agency policies are not universal, indeed there are almost as many Use of Force Continuums in American policing as there are agencies, they all rely on legally and publicly acceptable responses by the police³⁴. These continuums propose that officers should progressively examine and react to each situation, de-escalating once resistance has declined or stopped³⁵.

Although continuums are useful for training and policy setting, they provide little knowledge for academicians who delve into the subject, quite simply because there is very little information on the actual levels of non-criminal resistance that police officers encounter. Additionally, the fact that there are so many different agency-adopted continuums makes study difficult.

To further complicate the study of police use of force, Conner³⁶ found that 95 to 97% of all police-citizen contacts involve cooperative subjects. Alpert and Dunham³⁷ reported that 61% of the suspects who were being placed under arrest did not resist the officer at all; 18% offered only slight resistance. Even though the vast majority of citizens that police interact with on a daily basis can be classified as cooperative, many observational studies have found “disrespectful” or “uncooperative” citizens to be arrested more often^{38,39,40,41,42}. From both a legal and policy perspective, perceived suspect resistance is a decisive factor in police use of force⁴³.

While the use of non-lethal force is agency specific, most agencies utilize a use of force matrix system with similar delineations. Progressively, levels 1-5 indicate more serious levels of force that are not apparently deadly in intent, while level 6 indicates force that is could be interpreted by the officer as deadly. The force continuum example pictured in Figure 1 offers an interval level of measurement of uses of force that are bi-directional. The arrows in the center of the diagram indicate the level of force used by the suspects (as perceived by the officer) and the authorized, or acceptable, levels of force in response. Using a similar bi-directional approach to understanding use of force, this chapter examines variables included from officer use of force reports so as to examine the levels of officer force and suspect resistance at event level where conflict takes place.

Measuring Police Use of Force

Studies that examine police force do not “always specify clearly how force was defined or measured, and the definitions and measures of force tended to be unique to each study”⁴⁴. Additionally, research on police use of force has focused on several theoretical perspectives: situational, organizational, psychological, or neighborhood characteristics. However, none of these theoretical perspectives has appeared in all studies, and are often not even measured or reported⁴⁵.

Scholarly efforts have been able to determine that police force, and its intensity, is commonly affected by the context in which the police and citizens meet^{46,47,48}. Thus, to better understand officer definitions of appropriate police force, it is necessary to explore the impact of theoretically relevant individual, situational, and community factors⁴⁹.

Garner⁵⁰ explained that police use of force research, while expansive, has varying approaches that are each fraught with “limited strengths and substantial weaknesses.” A review of the literature reveals that there are numerous accepted ways to gather information about police use of force. These include examinations of agency policy^{51,52}, observational accounts of police force incidents^{53,54,55,56}, analysis of official police records and use-of-force reports^{57,58}, citizen complaints about the use of force^{59,60}, and surveys of police officers or arrested persons^{61,62}. Regardless of the research strategy employed, one constant finding is that police force utilization is uncommon and its improper use is exceedingly rare^{63,64,65,66}.

While each type of data collection has strengths and weaknesses, the review of police records may have certain advantages over other categories. The review of police records may provide more organized data on more use of force incidents than do interpretations of police work through observations⁶⁷.

Additionally, review of police report data provides a wider view of police behavior over the studied jurisdictions than can normally be captured through observational accounts. A major weakness, however, of police report review in the context of police force is that these reports suffer from bias provided by the officers who wrote the reports. It has been reported that this approach may be most suitable for inter-jurisdictional comparisons rather than intra-jurisdictional comparisons⁶⁸.

Conducted Electrical Weapons

Conducted Electrical Weapons (CEWs) are non-lethal weapons or devices designed to deploy electric current through the body of the target to temporarily cause loss of muscle control. Over the past several years, the technology for these devices has become more user-friendlier than the original, more rustic devices, allowing the user to apply the device from greater distances, with more accurate application.

The use of CEWs in the context of more human policing has allowed law enforcement agencies to use a technology that allows them to stop a confrontation that otherwise would have resulted in a “Level 6,” or deadly force, response. Findings from this study tend to corroborate anecdotal evidence of

numerous events wherein officers could have justifiably and legally used deadly force and would have had immunity from prosecution, but instead utilized a CEW, thus potentially saving lives⁶⁹.

TASER International is the company best known today for producing CEWs. Their product has become so well known that the name "TASER" has become synonymous with "CEW," much like BandAid® is to a plastic bandage. However, additional CEW manufacturers, such as Stinger, have entered the law enforcement marketplace and are seeing use in some departments.

TASER CEWs were being tested or used in over 7,200 law enforcement, military and correctional agencies throughout the United States and abroad in 2005⁷⁰, and are reportedly used by over 11,000 agencies in 2007.⁷¹ TASER International continues to advertise their device as among the safest and most effective less-than-lethal force choice available, claiming that TASER use reduces officer shootings and suspect injuries⁷². The darts fired from the TASER can reach from 15 feet (civilian model) to 35 feet (law enforcement model). Despite the length of the wire, recent best practices guides by the Police Executive Research Forum (PERF)⁷³ suggest restricting targeting to less than 15 feet as the darts travel at an angle to each other, limiting accuracy beyond this distance. This is consistent with other studies, which indicate that beyond 15 feet accurate placement of probes is difficult⁷⁴. Early studies indicated this weapon's effectiveness at incapacitating a subject ranged from 50% - 85%⁷⁵ when deployed. Police agencies have reported that since the TASER weapon was deployed to officers in the field, the use of deadly force by officers and the

number of officers injured during arrest confrontations has been dramatically reduced⁷⁶.

CEW Effectiveness and Officer/Suspect Injuries

The Use of Force Report

To examine the use of CEWs at the event level and develop an understanding of possible outcomes in the escalation or de-escalation of force as a result their application, the authors designed a research methodology that would embrace an understanding of levels of force and resistance, agency policy, and the limitations of Conducted Electrical Weapons. Resulting injuries to officers or citizens were also an important part of this research.

To capture this data the researchers used the “Use of Force Report,” a regular tool that most law enforcement agencies utilize when a citizen/officer encounter requires the intervention of police force. This reporting tool captures a considerable amount of data and allowed this research endeavor to begin at the event level. Examples of data captured by the report includes: suspect demographics, specific information about the type of force used in an encounter, and the type of resultant injuries. The use of force reports were collected via public information requests at the respective agencies and coded into SPSS for analysis.

Some data was not collected in regards to incidents that resulted in a death. This was due to ongoing litigation regarding the individual incidents, and

as a result of sealed settlements. In order to comply with state law and court orders, the researchers did not pursue the agencies for cases involving these incidents. An additional factor not examined within this study is the threatened use of force by officers. Use of force reports from both agencies fail to illustrate this useful variable, and as a result are not captured. In order to maintain coding consistency, if the report did happen to state that a weapon was drawn, displayed, or threatened, it was coded as “No Force” as no actual force was used against the suspect.

Data Collection

Both the Orange County Sheriff’s Office (OCSO) and the Orlando Police Department (OPD) provided photocopies of use of force reports that were dated between January 1, 2001 and December 31, 2005. OCSO provided the researchers with 2,450 reports (57.1% of all reports reviewed); and OPD provided 1,843 reports (42.9% of all reports reviewed) for incidents that occurred during the identified time period.

Orlando is America’s 27th-largest metropolitan area, but the jurisdictional limits of the city of Orlando “proper” have a population of 217,327. The City of Orlando is the largest municipality within the jurisdictional limits of Orange County, which has a total population of over 1.04 million. In addition to the resident population, the Orlando Metropolitan Statistical Area acts as host to over 47 million tourists a year, creating a need for additional government resources, which include policing resources.

The Orlando Police Department has a mayoral appointed Chief of Police and serves a jurisdiction of approximately 94 square miles. The population living in the city of Orlando is 61% white, 27% African-American, 17.5% Hispanic, 2.7% Asian, and 0.4% other. The median age of the population is 32.9 years, and 40.8% of the population owns their own home. Of the 25 year-or-older population, 82.2% have a high school (or equivalent) education or higher, 19.9% have a bachelor's degree, and 8.3% have a graduate or professional degree. The median annual household income in Orlando is \$35,732 with 19.9% living under poverty.⁷⁷

The Orange County Sheriff's Office has an elected Sheriff, and serves a total jurisdiction of approximately 907 square miles. Within this jurisdiction, however, there are 13 separate municipalities, each run by their own governments and most with their own police agencies. Home to Disney World, the population served by the Orange County Sheriff's Office (those residents that are not in the city limits of a municipality) is 680,687. Those living in unincorporated Orange County are 68.6% white, 18.2% African-American, 18.8% Hispanic, 3.4% Asian, and 0.4% other. The median age of the population is 33.3 years, and 60.7% of the population owns their own home. Of the 25 or older population, 81.8% have a high school (or equivalent) education or higher, 18.3% have a bachelor's degree, 7.9% have a graduate or professional degree. The median household income is \$41,311 and 12.1% live under the poverty limit.⁷⁸

Analysis of the Data

The force used by the police in a police-subject encounter does not occur in a vacuum. “Virtually any inquiry concerning how or why officers use force is augmented by the inclusion of citizen resistance. Knowing an officer used force tells us very little without knowing the specific type of force used, how many times it was used, and what the citizen behavior was prior to each use”⁷⁹(p. 157). Klinger⁸⁰ noted that prior attempts to study non-lethal force in police encounters failed to examine that multiple levels of force may be used within a single encounter. To overcome this issue, this study decomposed confrontations at the event level into a series of iterations, representing a single suspect action and officer reaction. If the confrontation was not brought to resolution within the first iteration, it then progressed into second and third iterations.

A total of 4,303 uses of force were examined during this time period. Both agencies utilized TASER CEW as their first choice, although during the course of this study some transition was made from the M-26 to the X-26 model. Over half of the suspects (55.6%) were subdued at the end of the 1st iteration, which allows us to examine 2,394 cases to determine which less lethal weapons were most effective in bringing conflict to resolution. Slightly less than 30% (29.3%, n = 1262) of the confrontations ended at the 2nd iteration, while 15% (n = 647) ended in the 3rd iteration. There were no confrontations that extended beyond 3 iterations of force, although there were some cases where the suspect escaped and could not be identified.

In cases which ended at the 1st iteration, it was possible to show linkage between the injury and the choice of the officer's weapon or tactic. Of key interest to this study were the resulting injuries to both officers and suspects in their confrontations. However, it was difficult, if not impossible, to assign responsibility for the injury to a specific officer action in cases that surpassed the initial iteration, as in many cases multiple techniques or less lethal weapons were used. As an example, it was possible for an officer to use a control technique in the 1st iteration, a chemical agent in the 2nd, and a CEW in the 3rd.

Application of the CEW

In examining the effectiveness of CEWs, specific attention was paid to the method for coding effectiveness, as this is highly controversial measure. For the purpose of this study a CEW deployment was coded as effective if after a 5-second application a suspect became immediately compliant. To ensure clarification, this study defines a CEW deployment as a single application of the CEW (which entails pulling the trigger a single time and deploying the probes; a drive stun, which is described later, was also considered a single application).

It must be acknowledged that TASER International training suggests the use of multiple applications until compliance of the subject is achieved. For the purpose of this study the researchers have viewed each application of a CEW as a single unique event and subsequent deployments are coded and captured as "Iteration 2" or if applied again, "Iteration 3." In light of negative media coverage over multiple applications of CEWs, it was prudent to capture the data in this

manner. However, it must be clear that the coding of “ineffective” in a single application does not necessarily mean that in the context of the complete encounter the CEW was ineffective, rather only that a single use did not gain immediate suspect compliance.

Table 1: Effectiveness of CEW's at Various Iterations

	<u>Iteration 1</u>		<u>Iteration 2</u>		<u>Iteration 3</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Missed	209	9.9	26	3.2	5	1.8
Baggy clothes	73	3.5	18	2.2	1	0.4
Probe came loose	13	0.6	2	0.2	0	0
Wire broke	54	2.6	17	2.1	5	1.8
Suspect grabbed	3	0.1	3	0.4	0	0
Malfunction	37	1.8	10	1.2	2	0.7
Cartridge fell off	8	0.4	5	0.6	1	0.4
Ineffective	452	21.4	176	21.9	36	13.3
Effective	1264	59.8	548	68.1	219	81.5
Total	2113		802		270	

Note: Due to rounding, percentages may not total to 100%

Viewed in this light CEWs may be disproportionately weighted, as a grapple or compliance hold may be applied for a significant amount of time in order to gain acquiescence, whereas a CEW can only be applied for 5-second intervals. Conversely, in some cases the probes may have missed, the CEW may have malfunctioned, or baggy clothing may have prevented a proper application of the CEW, yet the suspect may still have surrendered for any number of reasons.

CEW Drive Stun (Touch Stun)

The data collected in this study captured information from the use of force reports where CEWs were deployed in a drive stun or touch stun manner. A drive stun is achieved by removing the cartridge from the CEW, activating the CEW, and then physically maintaining contact with the subject and the CEW's contact points. As the name implies the CEW is pushed or driven into the subject aiming for a muscle mass or group. This contact can be 5 seconds or less in duration as the operator has the ability to retract the device thereby discontinuing or shortening the duration of the application. Situations included forcing belligerent non-compliant suspects into handcuffs or into patrol cars after they were handcuffed, but remained non-compliant.

This application has advantages and inherent disadvantages; one advantage is that by removing the weapon the CEW can be deployed in environments where firing the probes is inappropriate. In addition, the operator can easily reduce the duration of the current if the subject becomes immediately compliant. As a disadvantage, however, the distance between the probes is comparably small, resulting in less loss of physical control by the subject.

In reviewing the data collected, the number of drive stuns was analyzed; in the 1st iteration a total of 176 (4.1% of all uses of force, or 8.3% if all TASER CEW deployments) contacts, or drive stuns, were made. In officer/suspect confrontations that extended into Iteration 2 and Iteration 3, the drive stun

function was used 159 (3.7% of all uses of force) times and 67 (1.6% of all uses of force) times, respectively.

Table 2: Comparison of Probe Deployment and Drive Stun Effectiveness

	<u>Probe</u>		<u>Drive Stun</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Iteration 1	1151	59.4	113	64.2
Iteration 2	365	67.7	108	67.9
Iteration 3	131	80.4	56	83.6

Note: Due to rounding, percentages may not total to 100%

Suspect and Officer Injuries

Substantially more suspects sustained injury than law enforcement officers. While 23% of suspects were injured during force encounters only 3% of officers were. Injuries to both officers and suspects were more likely to occur during traffic stops and disturbances, with the majority of injury types comprised of bruises and abrasions. However, a trend emerged once the data was deconstructed at the event level. Injuries to both suspects and officers increased in proportion to the length and duration of the confrontation. This in itself is not startling; it is common sense to expect that more injuries would occur in longer confrontations. Traditional force, wielded by either officer or suspect, may be cumulative and the more applications substantially increase the possibility of

injury to either or both. A prior study⁸¹ indicated that both officer and suspect injuries are closely related to the non-lethal weapon deployed.

In the 1st iteration, 19% of suspects were injured in relation to only 1% of officers. However, in the 2nd iteration, 25% of suspects and 3% of officers were injured. In the final iteration, 33% of suspects were injured in comparison with 11% of officers. Clearly, as the confrontation continues, the rate of injuries to both officers and suspects continues to climb. The researchers therefore examined CEWs in the context of their effectiveness at reducing conflict by ending a confrontation.

CEW's Potential to Reduce Injuries

When examining conflict at the event level, this research focused on the CEW's ability to end officer and suspect confrontations; this is inherently a measure for their effectiveness. A total of 2,391 Use-of-Force reports described the conflict as ended at the 1st iteration. CEWs were deployed 2,113 times in the 1st iteration, and out of those deployments, 1,460 conflicts were ended at this level (representing a 69% conflict resolution success rate). In comparison, other non-lethal weapons and tactics were not nearly as successful. Impact weapons represented 45% success rate, compliance holds were successful 16% of the time, takedowns had a 41% success rate, and chemical agents were 65% effective in stopping conflicts before they escalated to a higher level, or before resorting to alternative tactics or weapons.

Limitations

Because this study used 2 large sized departments in a single geographic region, the results may not be able to generalized to agencies that do not fit this demographic. However, there is no reason to believe that results from these other departments would be significantly different since law enforcement training, tactics and use of force is fairly generalized across America. This work dealt only with the TASER brand of CEWs. It is unclear if these statistics can be generalized across the entire field of CEWs. The data was analyzed retrospectively and the conclusion is only as accurate as the data collected or recorded.

Conclusion

CEWs play an important role in law enforcement. This research shows that CEWs are deployed more frequently than other non-lethal weapons and tactics, but they also appear to have higher success rates in conflict resolution. This success in bringing officer/suspect confrontations to an end is invaluable, as it has the effect of reducing injuries to all persons in the conflict. When confrontations continue into multiple iterations, the result is a much higher injury rate for both suspects and officers. This immediately begets the conclusion that the law enforcement community has a duty to use sufficient levels of force (equal or greater to that of the subject's level of resistance) quickly and decisively at the onset of a conflict. This may cause concern to some, especially if there is community distrust in the police; however, when properly administered in the

hands of a legitimate police organization, they may in fact be reducing injuries to all parties.

The fact that CEWs offer society the best “set phasers on stun” solution currently available makes them extremely appealing to police in use of force situations. In a police use of force confrontation, the most humane weapon or tactic would be one in which the resultant injury would be the least severe. While CEWs are not injury free (puncture wounds from dart probes, or skin burns from drive stuns), the alternative (broken bones from batons, and burning pain from pepper spray, and potential death from firearm) makes them a preferential choice. Clearly this research has shown that CEWs are very effective at ending conflict situations quickly, this in turn leads to less injuries to both suspects and officers.

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Figures

Figure 1. Example of a Use of Force Matrix



Note: reprinted with permission⁸²

Figure 2: Deployment Problems through Three Iterations

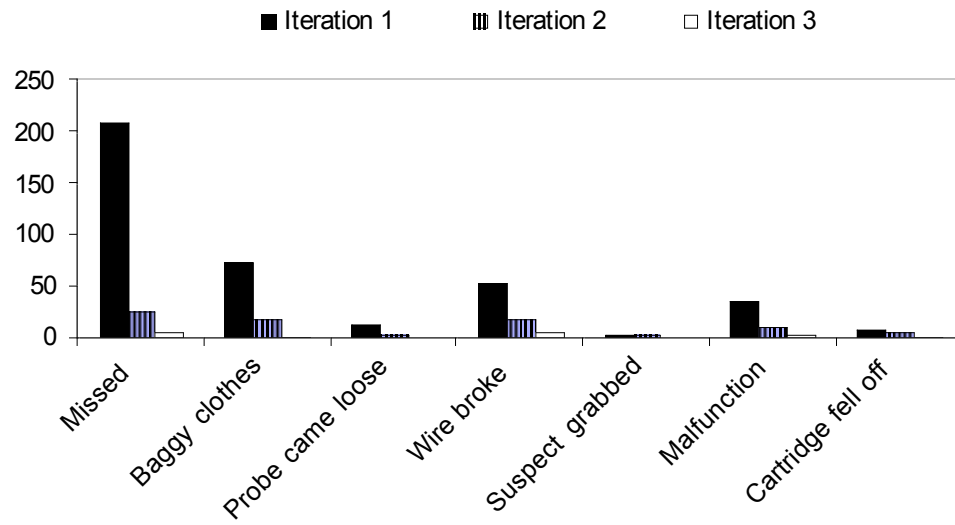
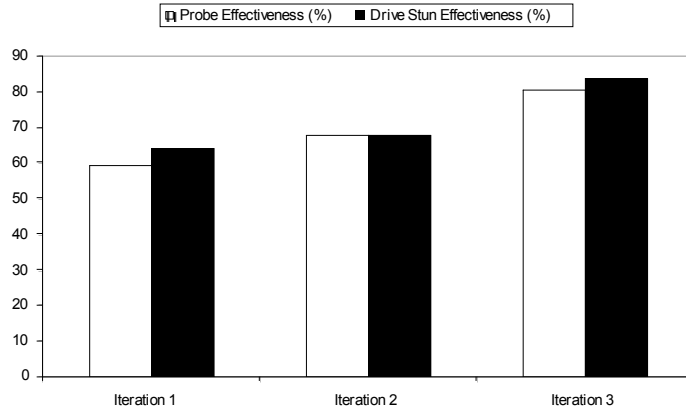


Figure 3: Probe and Drive Stun Effectiveness by Iteration



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