

TigerLight®
Non-Lethal Defense System
Use-of-Force Study

Conducted by the Los Angeles County Sheriff's Department

Study Dates: December 1, 2005 to May 31, 2006

Preliminary Report Date: January 1, 2007

This analysis of the preliminary statistics compiled and edited by:
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Disclaimer

THE INFORMATION CONTAINED IN THIS REPORT HAS BEEN DERIVED FROM DATA CAPTURED AND PROVIDED BY THE LOS ANGELES SHERIFF'S DEPARTMENT IN ATTEMPTING TO DETERMINE THE EFFICACY OF FLASHLIGHTS EQUIPPED WITH A PEPPER SPRAY DISPENSER ON LAW-ENFORCEMENT SITUATIONS. WHILE THE DATA REMAINS FOR ALL PURPOSES THE PROPERTY OF THE LOS ANGELES SHERIFF'S DEPARTMENT, THE ANALYSIS, FINDINGS, AND ALL REPORTS ARE THE SOLE RESPONSIBILITY OF TIGERLIGHT®, INC. THE LOS ANGELES COUNTY SHERIFF'S DEPARTMENT MAKES NO REPRESENTATIONS WHATSOEVER WITH REGARD TO THE PRODUCT, INCLUDING BUT NOT LIMITED TO ITS SAFETY OR EFFICACY. THE LOS ANGELES COUNTY SHERIFF'S DEPARTMENT DOES NOT ENDORSE ANY PRODUCT OR SERVICE AND NOTHING IN THIS REPORT SHALL BE CONSTRUED AS AN ENDORSEMENT OR RECOMMENDATION OF THE PRODUCT.

THIS IS A PRELIMINARY ANALYSIS OF THE RAW DATA GENERATED FROM THE LOS ANGELES COUNTY SHERIFF'S DEPARTMENT'S STUDY ON THE TIGERLIGHT® NON-LETHAL DEFENSE SYSTEM'S EFFECT ON USE OF FORCE.

ALL DATA USED TO GENERATE THIS ANALYSIS BY TIGERLIGHT®, INC. CAN BE REQUESTED FROM COMMANDER CHARLES "SID" HEAL, LOS ANGELES COUNTY SHERIFF'S DEPARTMENT. EMAIL: CSHEAL@LASD.ORG.

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THE "APPROVED STATISTICS" REPORTED IN THE INITIAL PRESS RELEASES BY LASD AND TIGERLIGHT®, INC. ARE FOUND IN THE ATTACHED PRESS RELEASES AT THE END OF THIS REPORT AND CONTAIN DATA FROM THE LONGER TIME PERIOD OF NINE MONTHS RATHER THAN SIX MONTHS. ALSO, THE DATA IN THE PRESS RELEASES DID NOT REFLECT THE DIFFERENCE IN THE NUMBER OF ARRESTS BETWEEN THE STUDY PERIOD AND THE COMPARISON PERIOD THE YEAR PRIOR.

Acknowledgements

We gratefully recognize Sheriff Lee Baca and the Los Angeles County Sheriff's Department for their commitment to public safety. Under the leadership of Sheriff Lee Baca, Sheriff's personnel actively seek out technology to increase the safety of the citizens whom they serve and the deputies in his command. The effort put forth by representatives of the Los Angeles County Sheriff's Department will benefit agencies throughout the world and it demonstrates the level of professionalism of the deputies who work tirelessly, day and night, to protect the people they serve.

We are grateful to the Los Angeles County Board of Supervisors for being forward-thinking and supporting the elected sheriff. In our efforts to conduct this study we found that the leadership at Los Angeles County is truly dedicated to public service and committed to protecting and serving its communities. It is heartening to see that an institution the size of Los Angeles County is willing to show such good faith and to be accountable to those whom they serve. It was a privilege to work with this organization.

Sincerely,

Randy Teig
Founder and Executive VP
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TigerLight®, Inc.

Foreword

Law enforcement has long faced the challenge of ever-changing expectations. Enforcement of law in a democratic society is done with the permission of the public, which determines the parameters and methods of how its laws will be enforced. It truly is not up to the law enforcement professional to dictate the method or manner in which enforcement is achieved. It is the public that ultimately establishes the law, and then administers that law.

Civilian law enforcement reflects the values of the democracy which it serves. In the United States, the goal is to enforce the law and to keep the peace in an as-bloodless manner as possible. The means by which law enforcement can compel compliance with laws and keep the peace has fallen under increased scrutiny. It is this scrutiny that has prompted organizations such as the National Institute of Justice to engage projects for the commercialization of technology and training in order to increase the effectiveness of law enforcement while meeting the goal of society to preserve life.

In 1986 the U.S. Attorney General convened a conference to examine less-than-lethal weapons and their development and use in law enforcement. According to the Attorney General's Conference, law enforcement officials have long recognized a dangerous gap between the tools available to them and less-lethal weapons which can preserve life. In this conference two main points were identified:

✚ *“The use of force or deadly force frequently offends some of our highest national idea - preservation of life and the right of a suspect to due process.”*

and

✚ *“A growing number of communities are suffering financial hardship as a result of civil liability suits alleging excessive force by law enforcement officers.”*

The Conference attendees determined that any weapon designed for close-proximity encounters must meet the following criteria:

- ✚ Fire more than once without reloading
- ✚ Operate at a range of less than one foot but up to five to ten feet
- ✚ Be light enough to carry on a standard service belt
- ✚ Have a mechanism that the officer can operate easily but that an assailant gaining control of the weapon might find difficult to operate

Additionally, attendees concluded that less-lethal weapons should:

- ✚ Provide a high probability of instantaneous control over a highly motivated suspect
- ✚ Have minimal medical implications for a normally healthy subject
- ✚ Indicate when the device is in proper working order
- ✚ Have observable effects, so that it is clear when it has been used
- ✚ Be durable and capable of being operated in most environments
- ✚ Have only a temporary effect
- ✚ Be of a size so that it can be operated with one hand
- ✚ Be useful in a foot pursuit
- ✚ Be useful in a building as well as outside
- ✚ Be safe and effective in close quarters

- ✚ Be able to withstand transportation in the trunk of a car and moderate changes in temperature.
- ✚ Be highly accurate
- ✚ Be able to incapacitate a subject for up to five minutes

According to the Conference report, the development of non-lethal weapons for *close-proximity* encounters was rated as “most urgent” when compared to other types of encounters (U.S. Attorney General Report on Less-Lethal Weapons, 1987).

This study will show how well the TigerLight® Non-Lethal Defense System meets the goals of the Attorney General's Conference. These goals have not changed. However, the pressure for technology to meet these demands is increasing from year to year.

Executive Summary

The Los Angeles County Sheriff's Department (LASD) conducted a study, herein referred to as The Study, to determine if the TigerLight® Non-Lethal Defense System would reduce the frequency of significant force, deputy-involved shootings, suspect injuries, and force-related complaints.

These categories are tracked from year to year and represent some level of fiscal exposure whether through law suits, time loss, or medical expenses. Additionally, the Department wanted to determine if deputies would choose to carry the TigerLight® Non-Lethal Defense System and use it instead of other force options. Three major questions answered by this study are:

1. Does the TigerLight® work?
2. Would deputies carry the TigerLight® Non-Lethal Defense System if it were made available?
3. Will the TigerLight® Non-Lethal Defense System increase the safety of citizens and deputies?

Mark Correia, PhD met with TigerLight® CEO, Michael Teig and the Sheriff's Department officials to determine what data points needed to be collected to track the appropriate information. TigerLight®, Inc. provided 500 TigerLight® Non-Lethal Defense Systems, inert training munitions, and pepper spray to deputies working four different duty assignments. The Department approved the use of Guardian P.D.® pepper spray for use in the TigerLight® System. TigerLight®, Inc. does not manufacture pepper spray and does not specifically endorse any brand.

Trainers from TigerLight®, Inc. trained sheriff's trainers at the LASD Whittier training facility and those deputies went to their respective stations and trained the deputies participating in The Study. Deputies reported monthly on their use of the TigerLight® Non-Lethal Defense System by answering questions pertaining to any use of force wherein the TigerLight® Non-Lethal Defense System was applied. The use-of-force statistics were gathered for the period extending from December 1, 2005 through May 31, 2006 and were compared to statistics occurring one year prior for the same duty assignments.

The Study revealed significant information relating to reaction time and proximity of suspect at the onset of aggression, showing that 92% of forceful confrontations occurred at less than six feet. Deputies using the TigerLight® Non-Lethal Defense System were able to react and employ pepper spray (OC) on the aggressive subjects, sometimes thwarting aggression at distances less than three feet. The average number of subjects per incident was 2.4. Deputies reported that of 100 subjects involved in 41 incidents, 96 of the subjects became compliant after the application of the TigerLight® System.

Deputies reported that 7% of the forceful confrontations were with suspects brandishing deadly or dangerous weapons (i.e. clubs and edged weapons) at less than nine feet with one occurring at less than three feet. They used the TigerLight® Non-Lethal Defense System to respond to these threats and reported that the suspects' actions were thwarted sufficiently enough to eliminate the use of deadly force. All armed suspects were taken into custody with only minor injuries, none of which required hospital admission. Even though 10% of the forceful encounters involved the use, or threatened use, of deadly force, the study period showed a 51% reduction in deputy-involved shootings and notable reductions in the use of significant force, injuries, and force-related complaints.

The Los Angeles County Sheriff's Department already had had significant training and technology in the non-lethal and less-lethal weapons category. The reduction in the mentioned force categories is particularly impressive in light of the fact that the TigerLight® Non-Lethal Defense System was being tested in an environment that had already been exposed to the most modern non-lethal weapon systems available.

In the words of command personnel at LASD, the results of this study were “surprisingly convincing” and confirm what TigerLight®, Inc. has claimed from the beginning: that the TigerLight® Non-Lethal Defense System will increase the safety of citizens and officers while paying for itself through the prevention of force-related injuries and litigation. Law enforcement administrators everywhere can use this Study, in comparison with their own non-lethal programs, to project the positive fiscal impact that the TigerLight® Non-Lethal Defense System potentially could have on their agency.

What Is Known from Previous Studies and Statistics

Police Use of Force (National Institute of Justice, 1999)

- ✚ Police used OC in 2% of forceful encounters where its use was justified
- ✚ Force was used in just under 20% of arrests (excluding handcuffing)
- ✚ When force was used, 80% was grappling, including punches, kicks, and grabbing
- ✚ When grappling was used, officers were injured 43% of the time
- ✚ 67% of assaults on officers are preceded by some sort of a threat

Statistics Gathered by The Bureau of Justice Statistics, 2005

Officers Killed in Line of Duty

- ✚ 15 officers were feloniously killed during traffic pursuits or traffic stops
- ✚ 8 officers were slain during arrest situations
- ✚ 8 officers were killed when ambushed
- ✚ 34 of the victim officers were on assigned vehicle patrol
- ✚ 6 of the victim officers were off duty but acting in an official capacity
- ✚ 15 of the slain officers were assigned to “other” duties at the time of the fatal incidents: 3 of them were alone when attacked
- ✚ 50 of the 55 officers killed in the line of duty were murdered with firearms
- ✚ 15 officers fired their own weapons during the incidents that led to their deaths; 6 officers attempted to use their own weapons
- ✚ 31 incidents involving firearms occurred when the distance between the offender and the victim was five feet or less (statistic is consistent with The Study, 2006)

Officers Assaulted in Line of Duty

- ✚ The FBI collected assault data from 10,032 law enforcement agencies that provided service to 221 million persons (74.6 % of the nation's population)
- ✚ The law enforcement agencies that reported assault data to the FBI employed 485,048 sworn officers
- ✚ Of these, 57,546 were assaulted while performing their duties
- ✚ The rate of assaults was 11.9 per 100 sworn officers
- ✚ There were 15,763 assaults on officers that resulted in injuries
- ✚ 27.4 % of the 57,546 officers assaulted suffered injuries
- ✚ Of the officers who were injured as a result of assaults with weapons
 - 29.1 % of the officers were attacked with personal weapons
 - 13.4 % of the officers were attacked with knives or other cutting instruments
 - 9.1 % of the officers were attacked with firearms
 - 24.6 % of the officers were attacked with other types of dangerous weapons
- ✚ The largest percentage (30.5) of officers assaulted were responding to disturbance calls (family quarrels, bar fights, etc.)
- ✚ 12.8 % of the officers assaulted were handling, transporting, or maintaining custody of prisoners
- ✚ 11.1 % of the officers assaulted were performing traffic stops or pursuits
- ✚ 63.7 % of the victim officers were assigned to 1-officer vehicle patrols

- ✚ 16.7 % of the victim officers were assigned to 2-officer vehicle patrols
- ✚ 4.6 % of the victim officers were performing detective or special assignment roles
- ✚ 14.9 % of the victim officers were performing other types of duties
- ✚ The majority of officers assaulted (80%) were attacked with personal weapons such as hands, fists, or feet
- ✚ 3.7 % of the officers were assaulted with firearms
- ✚ 1.8 % of the officers were assaulted with knives or cutting instruments
- ✚ 14.4 % of the officers assaulted were attacked with other types of dangerous weapons

Police Use of Force (National Institute Of Justice, 1997)

- ✚ Officers have a 48% chance of being injured when they use physical force, such as striking with a fist
- ✚ Officers have a 43% chance of being injured when using their hands or arms to control a suspect
- ✚ Most frequently-used weapon is pepper spray
- ✚ Second most frequently-used weapon is the flashlight
- ✚ Officers report that they use or threaten to use the flashlight as an impact weapon more often than their baton
- ✚ Impact weapons result in a 67% chance of injury to suspect
- ✚ In this study of the agencies, 49,288 arrests involved physical force
- ✚ Pepper spray was used in 7% of arrests

Effectiveness of OC, Baltimore County Police (NIJ, 1994)

- ✚ Use-of-force complaints decreased by 53% (Statistic consistent with The Study, 2006)
- ✚ 17% of suspects were sprayed at distances greater than three feet (Statistic consistent with The Study, 2006)
- ✚ 24% of suspects were sprayed at two to three feet (Statistic consistent with The Study, 2006)
- ✚ 59% of suspects were sprayed at less than two feet (Statistic consistent with The Study, 2006)

The Study Method

Statistics for use of significant force, use of pepper spray (OC), deputy-involved shootings, force-related complaints, suspect injuries, and arrests are routinely collected for all of the stations in the Department, including Corrections. The LASD wanted to determine what impact the TigerLight® System would have on these statistics. The Sheriff made participation in The Study voluntary and gave no direction to deputies concerning a desire to change any specific statistical category. The goal of The Study was to train the deputies in the use of the TigerLight® Non-Lethal Defense System, to provide the system for their use, and to learn how its introduction and use would impact the Department's use-of-force statistics.

Prior to the commencement of The Study on December 1, 2005, 500 TigerLight® Non-Lethal Defense Systems were distributed to deputies in four stations and the deputies were trained. During The Study deputies used the TigerLight® Non-Lethal Defense System at their own discretion: They carried the TigerLight® System as often as they desired and used it in the manner they were trained. During the six months of use, deputies answered specific questions regarding any forceful encounters in which they deployed the TigerLight® System. They were also required to make monthly reports, even if they had not carried the TigerLight® System or had not used it in a forceful encounter. These reports were general in nature and recorded serial numbers, if and how often the deputies had carried the TigerLight® System, and any comments they had regarding the TigerLight® System. The Study contains data up to and including May 31, 2006. Statistics for use of significant force, use of OC, deputy-involved shootings, force-related complaints, suspect injuries, and arrests were compared to statistics gathered for the same four stations during the same dates of the prior year (December 01, 2004 to May 31, 2005) and a comparative analysis was made to see if there were any statistical differences.

The questions given to deputies who deployed the TigerLight® System were generally formatted for yes or no responses and multiple choice answers. Below are the categories for input:

- Evaluation Period
- TigerLight® Serial Number
- Department Assignment
- Gender of Deputy
- Deputy Height
- Deputy Weight
- Availability of the TigerLight® During Duty Period
- Preference of the TigerLight® over Other Available Weapons
- Confidence with the TigerLight®
- Date of Incident
- Time of Incident
- Type of Incident
- Number of Subjects Present During Forceful Encounter
- Number of Subjects Involved in Forceful Encounter
- Type of Location
- Was Backup Present
- Suspect's Gender
- Suspect's Weight
- Suspect's Height
- Suspect's Race
- What Degree of Deployment Was the TigerLight® in at Time of Application

- Suspect's Actions Were
- Suspect Armed with
- Subject Was Apparently Influenced by What Drug
- Suspect Apparently Mentally Ill
- Suspect Distance from Deputy at Time of Force Application
- Suspect Reaction to TigerLight® Application
- Suspect Treated for Injuries
- Alternate Force Used
- Comments

The month-to-month results were collected and maintained by the Sheriff's Department and provided to TigerLight®, Inc. periodically until the completion of The Study. At the conclusion of The Study the Sheriff's Department analyzed data with data from the prior year. All raw data is available from Los Angeles County Sheriff's Department.

Study Statistics

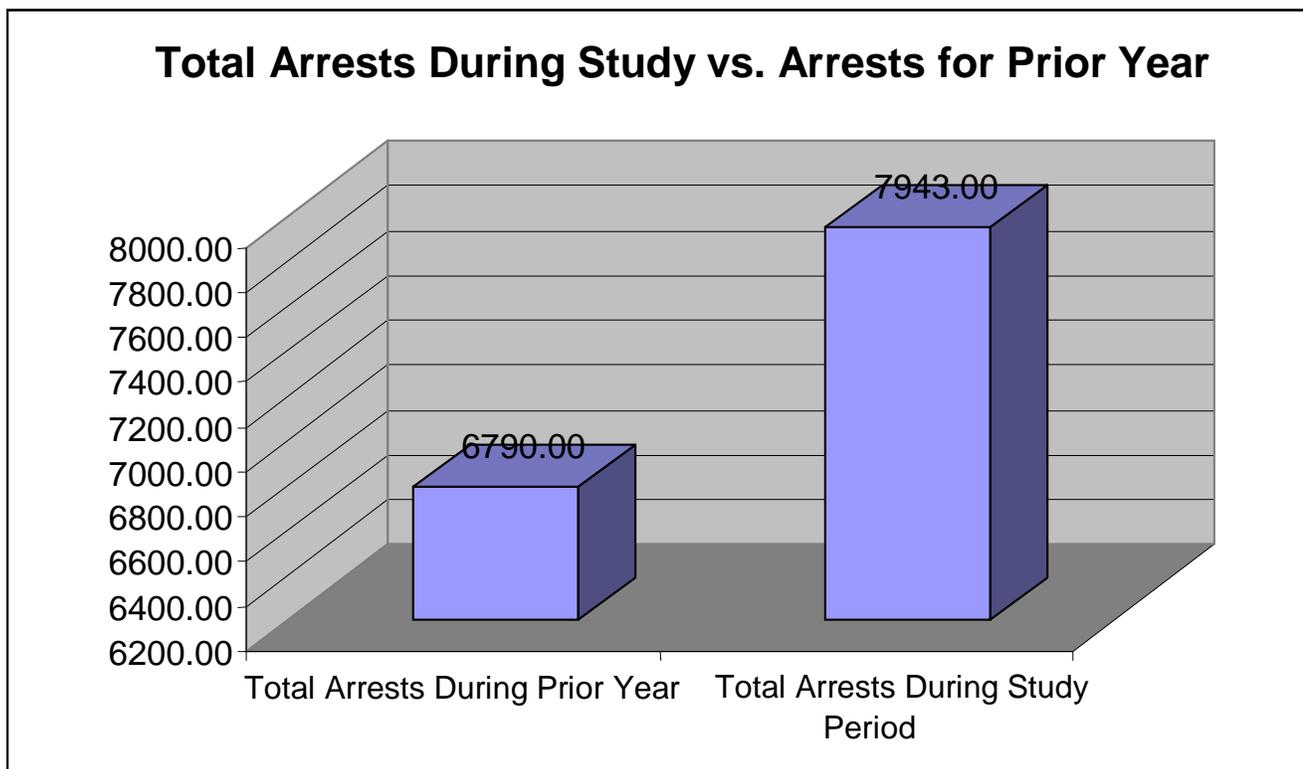
Study-Related Arrests

The total number of arrests made during a given period was tracked by The Study. The Los Angeles County Sheriff's Department provided arrest statistics for a six month period starting December 1, 2004 and ending May 31, 2005. The department also provided arrest statistics for the same period during the Use-of Force Study: December 1, 2005 to May 31, 2006.

Tracking the number of arrests indicates the level of activity that generated the use-of-force statistics. The number of arrests during a period is particularly relevant in a use-of-force study due to the fact that the arrest is a basic confrontational component. It is at the point of arrest where force is commonly used to bring a person into custody and is a reliable measurement of law enforcement activity, because the term "arrest" has a legal definition: *A person takes or seizes a person by legal authority, in response to a criminal charge.*

The legal basis for using force is formed by the need to make an arrest. This fact leads us to use the number of arrests as a factor in calculating use-of-force statistics. Figure 1 shows arrests for all four duty assignments during both periods evaluated in The Study.

Figure 1 Arrests Per Year



Discussion with Los Angeles County Trainers and TigerLight® System Trainers

During the training phase of The Study, the Los Angeles County Sheriff's Department training staff expressed a desire to provide a way for deputies to increase the use of pepper spray (OC) in lieu of more injurious force, but specified that the method employed must not reduce the safety of the deputies or citizens.

Trainers wanted to reduce the use of the flashlight as an improvised impact weapon, especially in situations where the dynamics of the forceful encounter result in "head strikes" with the flashlight. During the training sessions, deputies specifically referred to some heavily-publicized incidents which had occurred at the Los Angeles Police Department. These incidents prompted the Chief of Police to prohibit the use of the metal rechargeable flashlight and had prompted the Department to seek a flashlight design that the deputies refer to as a "nerf light."

This term describes a flashlight that is an effective illumination device, but too small and too soft to cause injuries to a combative subject in the event it is used as an impact weapon. The Los Angeles Police Chief publicly stated that there were no available technologies able to address the Department's concerns. The Department had concluded that its best option would be to have a custom light designed which would provide rechargeable features and effective illumination, as well as prevent the use of the light as an improvised impact weapon.

The trainers were hopeful that the TigerLight® Non-Lethal Defense System would meet their needs by providing their deputies with an effective means to defend themselves during close-proximity encounters in which they have only a fraction of a second to react, in addition to reducing or eliminating the instances of citizens being struck and injured with flashlights.

The concern was raised that eliminating the mid-level force option, provided by using the metal flashlight as an improvised impact weapon in sudden unexpected forceful encounters, might increase the chances that those situations would escalate to use of deadly force instead of being controlled at the lower level. Not one deputy stated that he believed the use of the flashlight was the most desirable method. However, deputies did point out that if they were to have a flashlight in one hand and a gun in the other when a suspect charges, then choices are limited and striking the suspect with the flashlight is better than shooting him or having him take control of the gun.

Furthermore, the deputy trainers asserted that if an officer were to have a "nerf light" in his hand during such an encounter, then the officer's choices are even more limited. Because he can't use the "nerf light" for any type of defense, then the risk of using deadly force (the gun) increases. It is logical to expect that this situation (replacing current metal flashlights with "nerf lights") may actually increase injuries to officers and suspects.

This discussion section gives significant insight into the attitudes of and the contemporary issues faced by the deputies during The Study. The Study provides data that proves that the trainers had correctly assessed the challenges facing the Department. During The Study deputies did encounter situations exactly like the hypothetical situations they had described in our discussion. Deputies were engaged by armed suspects at close range. However, because they had the TigerLight® Non-Lethal Defense System in hand, they were able to use it to defend themselves.

What might have happened to these deputies, or even to the suspects, if the deputies had had a "nerf light" in hand when confronted by these armed suspects? Their choices would have been dangerously limited to verbal commands, engaging with the suspect in hand-to-hand combat, or shooting the suspect. With a metal

flashlight the deputies would have had, at the very least, the option of striking the suspect. Although such a response may not be considered satisfactory, it is much better than making the immediate leap from verbal commands to deadly force.

In these cases, the deputies had the TigerLight® Non-Lethal Defense System and were, therefore, able to spray the suspects in the face with OC and then safely take the suspects into custody, while having simultaneous access to their side arm. This observable fact is an example of solving the problem, rather than only addressing a symptom and thereby creating new problems.

Provide Options That Work or Create Obstacles

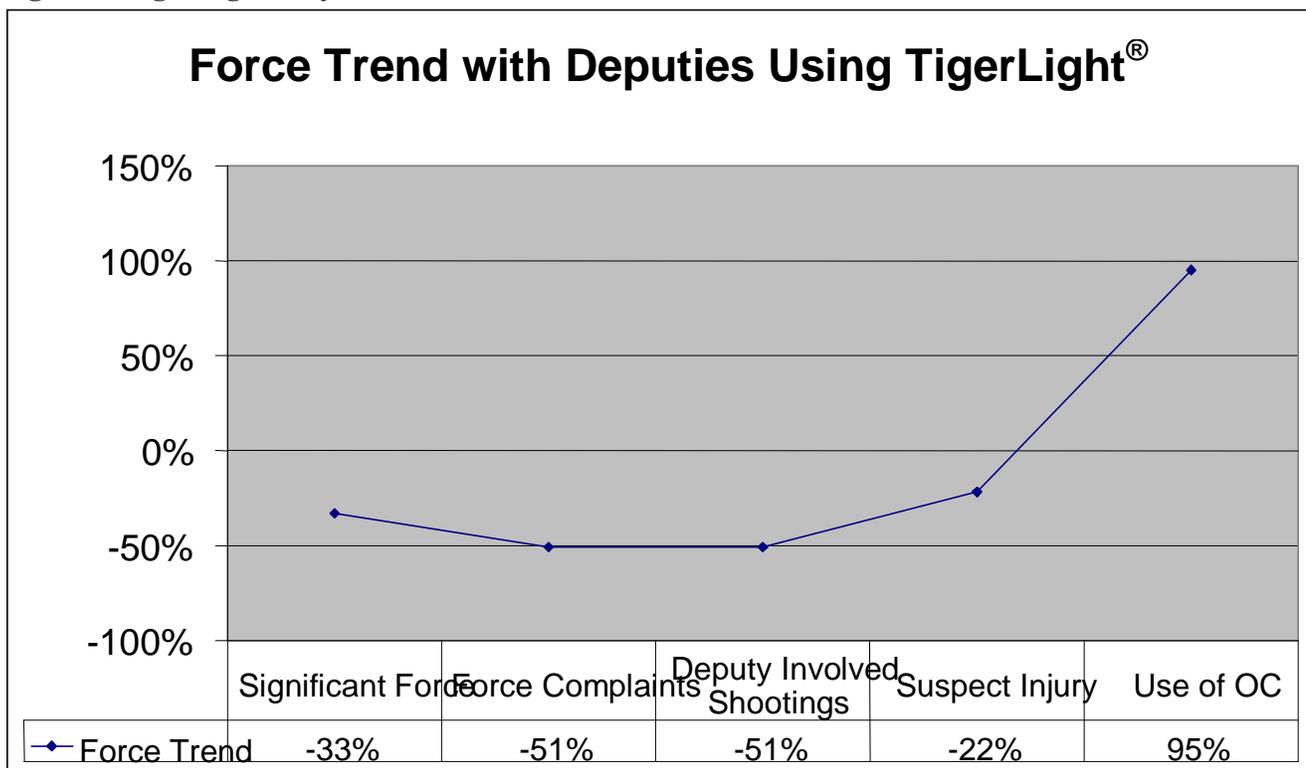
Deputies used the TigerLight® Non-Lethal Defense System for a period of six months. Figure 2 shows the impact the TigerLight® System had on key concerns of the Los Angeles County Sheriff's Department. The statistics show reductions in the use of significant force, force-related complaints, deputy-involved shootings, and suspect injuries, as well as a significant increase in the use of pepper spray

TigerLight® System training contends that the ability to react at the moment of aggression with an effective, low-level force option (i.e. pepper spray) will result in the reduction of force escalation and injurious force. The trend line in Figure 2 shows a downward propensity in critical force-related categories, accompanied by a significant spike in the use of pepper spray (OC). This increase likely would not have been possible with a belt-carried spray, based on the time required to remove it from the belt, index it, and activate it.

There was an increase in the use of OC because deputies were given an effective option counter to using the flashlight as an improvised impact device. This fact considerably reinforces the conviction of the deputies. It is not appropriate to disarm officers. Eliminating the use of metal flashlights will not resolve any issue. It will only create new problems.

The 95% increase in the use of OC demonstrates the need for a defense system that historically was fulfilled by the metal flashlight. The key to determining a solution is to examine the problem and then provide a realistic and effective remedy that addresses the realities of what law enforcement is facing. In The Study the deputies *were* provided with a means to meet the demands of their job. They need effective illumination for street level contacts and they need a tool to defend themselves against sudden, close-proximity attacks during those contacts. In The Study, the Sheriff provided deputies with the device they needed rather than simply taking away what they had. The positive results are seen in Figure 2.

Figure 2 TigerLight® System Related Force Trends



Dynamics of Forceful Encounters

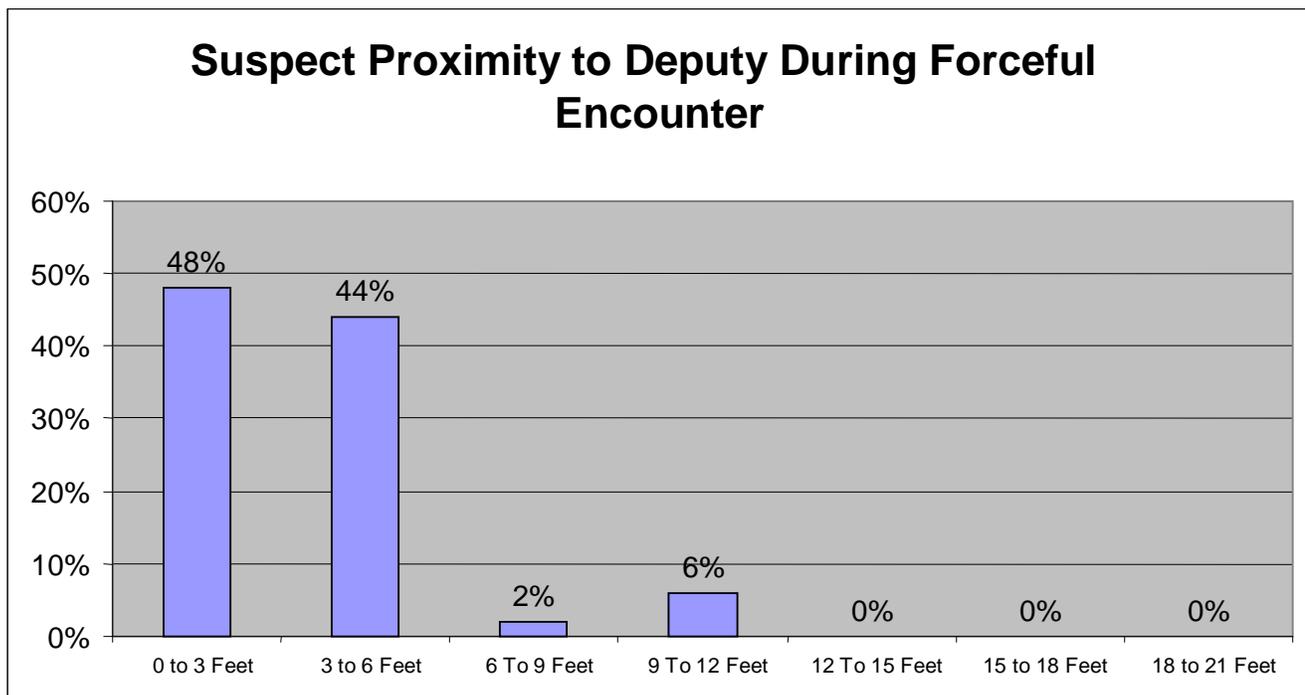
The Study reveals pertinent details regarding the dynamics of forceful encounters.

Information gathered in The Study establishes that deputies were faced with both violent situations and subjects with unknown capabilities and that the majority of forceful confrontations develop at close proximity. In situations where the TigerLight® Non-Lethal Defense System was applied, deputies were usually at conversational distances. Nearly all of the applications occurred at less than six feet and nearly half of the forceful encounters occurred at less than three feet. At the distance of less than three feet, a suspect could forcefully overtake a deputy very quickly. To control a situation, any deputy has only the time it takes for a suspect to move three feet. These numbers shed some light on the dynamics that compel law enforcement officers to strike suspects with their flashlights. If a deputy has a flashlight in his hand when a routine contact suddenly turns violent, it is not surprising that he or she would strike at the subject with the flashlight.

During an arrest, the close-proximity, sudden attack is the biggest concern. While taking the metal flashlight away may decrease the incidents of impact injuries, it certainly does not eliminate forceful contact. It only removes the availability of mid-level force option and obliges the need for some other weapon. The gun is the only alternative to the improvised impact device, and a deadlier one at that.

Placing the TigerLight® System in a deputy's hand gives the deputy a non-lethal and effective tool for dealing with these fast-action, close-proximity, forceful encounters. The statistics of The Study convey the effectiveness of the TigerLight® Non-Lethal Defense System at dealing with these close-range, forceful encounters.

Figure 3 Suspect Proximity When TigerLight® System Applied During Forceful Encounter



Breakdown of Force Faced by Deputies

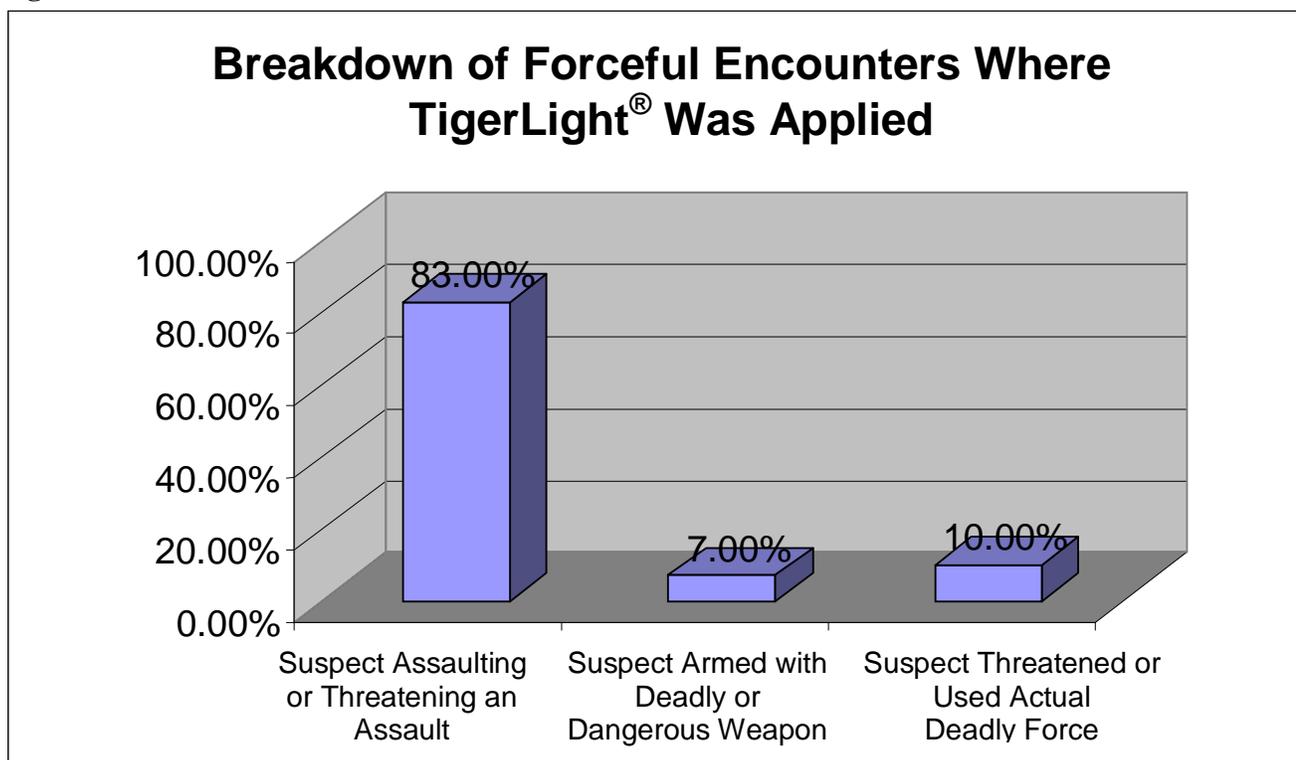
Figure 4 represents the types of forceful encounters deputies faced at the time they applied the TigerLight® Non-Lethal Defense System.

These statistics reveal what the deputies knew at the time they applied force, not what they may have discovered after the arrest was made. The vast majority of situations faced by, and later described by, deputies during The Study involved suspects who were either threatening to assault or who were actively attempting to assault the deputies. Deputies reported that 7% of the suspects were armed with a deadly or dangerous weapon and were brandishing said weapon.

In one incident a suspect with an edged weapon was attempting to provoke a confrontation with deputies. Officers reported that the suspect was less than three feet away from the deputy when the deputy applied the TigerLight® Non-Lethal Defense System, sufficiently reducing the aggression of the suspect to enable deputies to take down and handcuff the subject. Deputies reported that family members and onlookers cheered as the deputies took the uninjured man away, thanking the deputies for not shooting the man.

Because the deputy had the TigerLight® System in hand, he was able to spray the subject the moment he perceived the threat. The deputy also had the ability to use deadly force if he felt he needed to, but because he had the TigerLight® System in hand, prepared to deploy, he was able to get the OC on the subject in that split second before he would have drawn his firearm. His ability to accurately dispense OC onto the subject thwarted the subject's attack and enabled the deputy time to assess the situation and proceed accordingly. At no time did the deputy forfeit his ability to use deadly force.

Figure 4 Forceful Encounter Breakdown

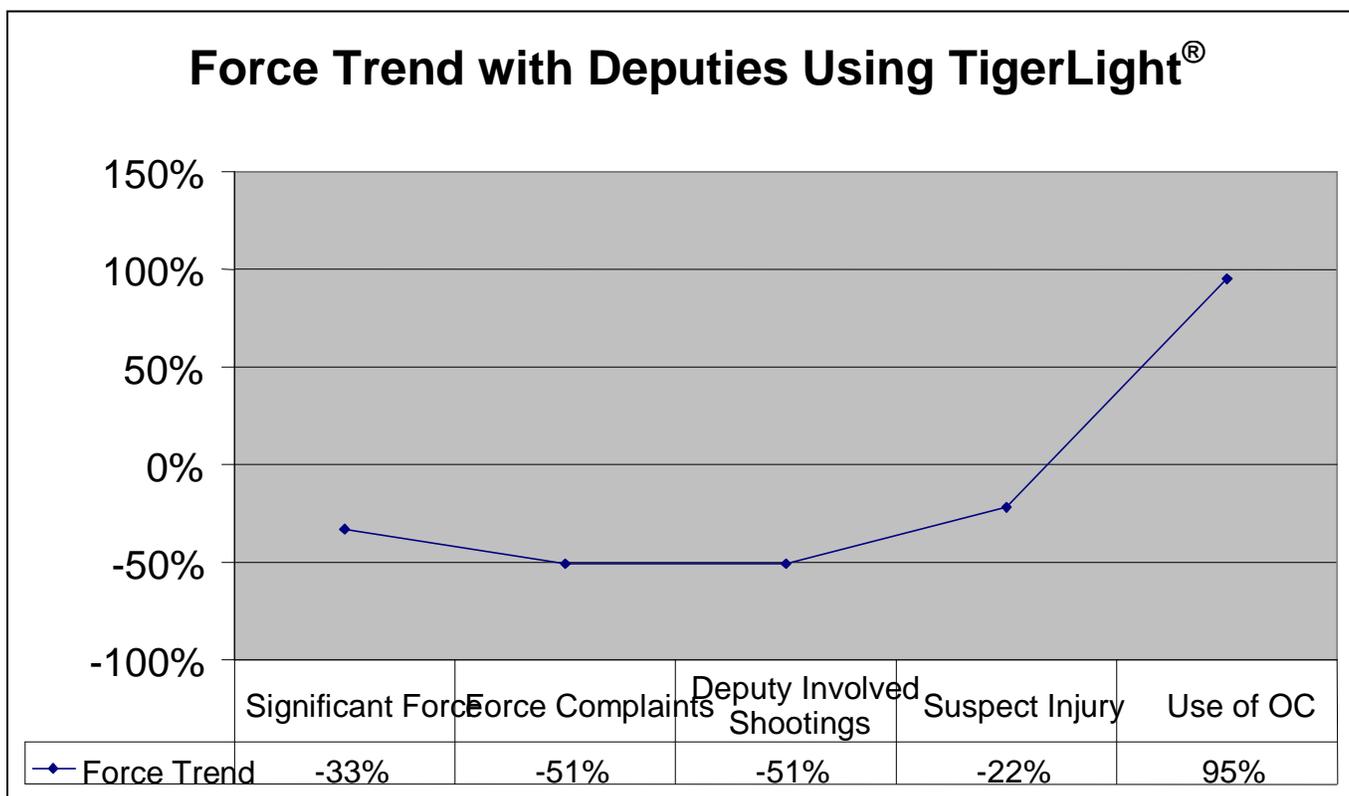


Advantages of Precision Low-Level Force

A review of the aforementioned situation, in which the deputy used the TigerLight® Non-Lethal Defense System in that split second and thereby prevented a shooting, demonstrates an obvious benefit to using the TigerLight® System. A dangerous circumstance was resolved without injury and medical treatment, without complaints and litigation, and with a significant reduction of trauma to all involved parties. Harder to quantify is the impact on those who witnessed the deputy turn a situation from one that could have been deadly to one that preserved a human life. Recall that bystanders shouted approval to the deputy for not gunning down the suspect.

The Study generated a significant increase in the use of OC, yet there was a reduction in complaints. This reduction may be an indicator that citizens are showing increased support for the means of non-lethal force chosen by the deputies. A reduction in complaints is also a trend toward reducing force-related litigation.

Figure 5 Force Trends with Deputies Using TigerLight® System

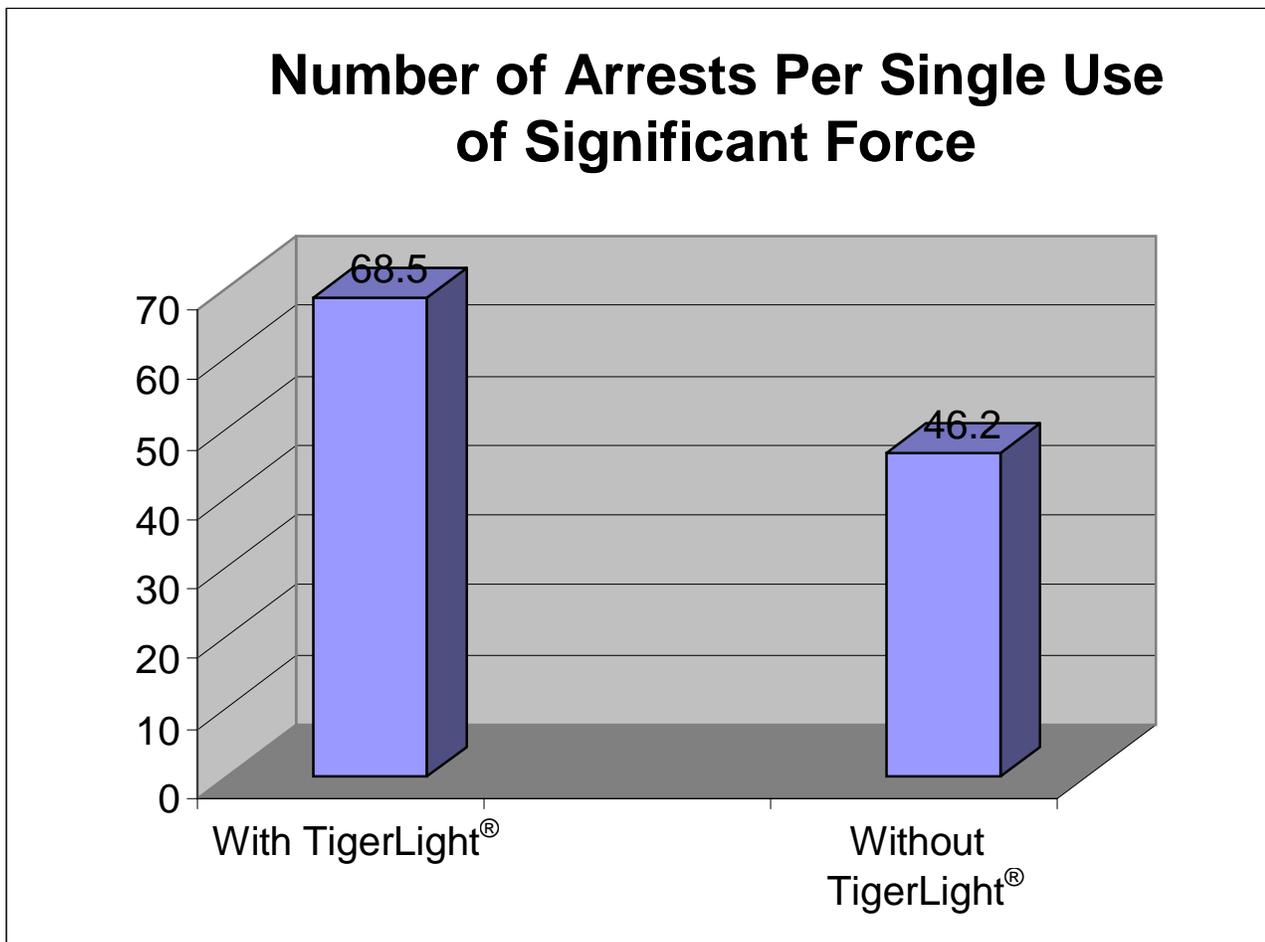


Increased Arrests, Less Force

Figure 6 represents the impact of the TigerLight® Non-Lethal Defense System on the use of significant force during The Study. Significant force refers to the use of impact weapons and improvised impact weapons, strikes, grappling, and carotid restraint.

Figure 6 compares the number of arrests per single use of significant force using the TigerLight® System and the number of arrests per single use of significant force without using the TigerLight® System. The statistics show that deputies made more arrests before resorting to significant force in the period during which they were issued the TigerLight® Non-Lethal Defense System. In the time period exactly one year prior to The Study period, the ratio of arrests without significant force to arrests using significant force is 46:1. That same ratio is 69:1 during The Study period. This represents a 33% decrease in significant force when using the TigerLight® System.

Figure 6 Arrests Per Single Use of Significant Force

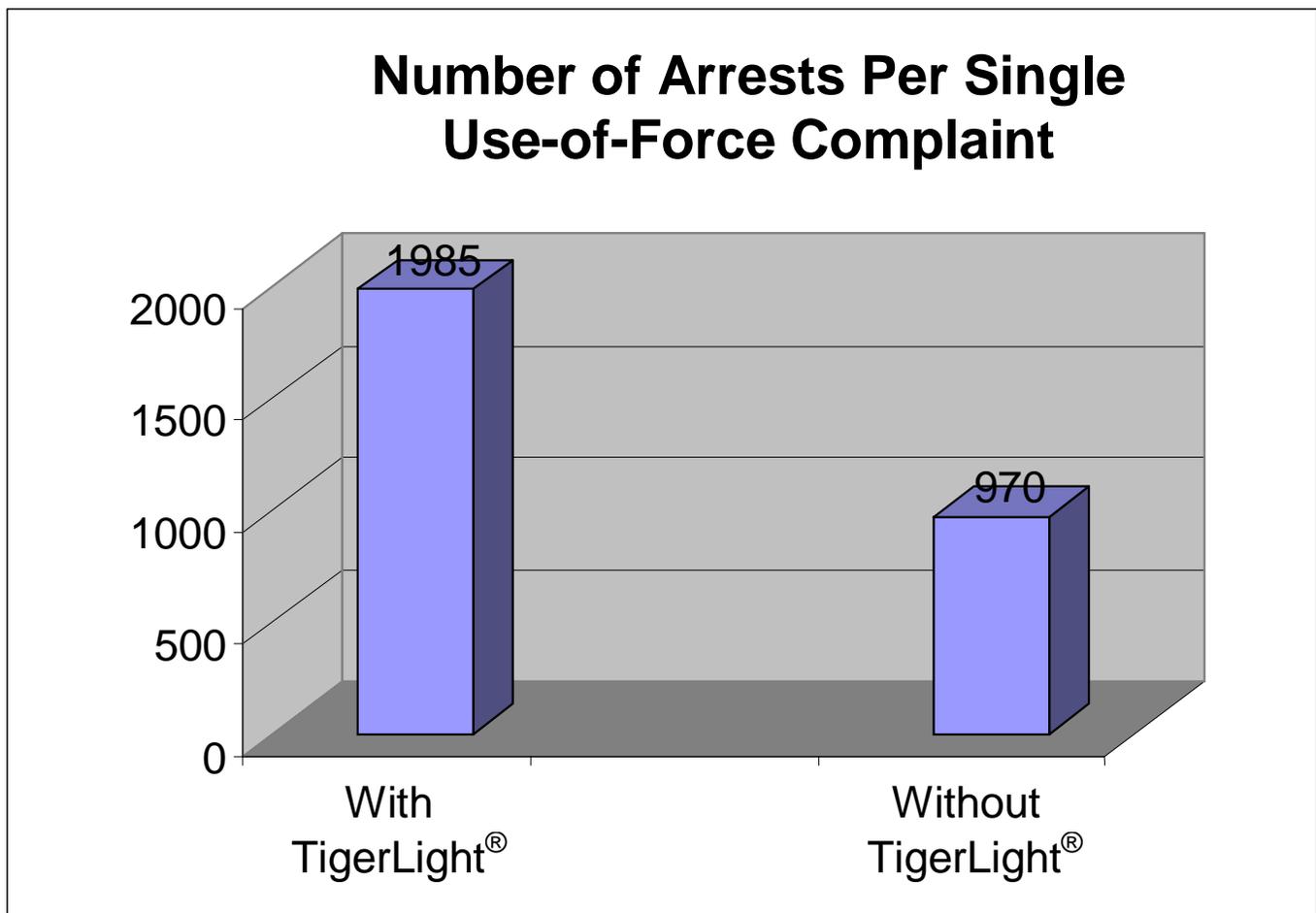


Increased Arrests, Fewer Complaints

Figure 7 represents the impact of the TigerLight® Non-Lethal Defense System on use-of-force-related complaints during The Study.

Figure 7 compares the number of arrests per single use-of-force complaint using the TigerLight® System and the number of arrests per single use-of-force complaint without using the TigerLight® System. In the time period exactly one year prior to The Study period, the ratio of arrests per single force-related complaint is 970:1. That same ratio is 1985:1 during The Study period. This represents a 51% decrease in force-related complaints against deputies using the TigerLight® System.

Figure 7 Arrests Per Single Use-of-Force Complaint

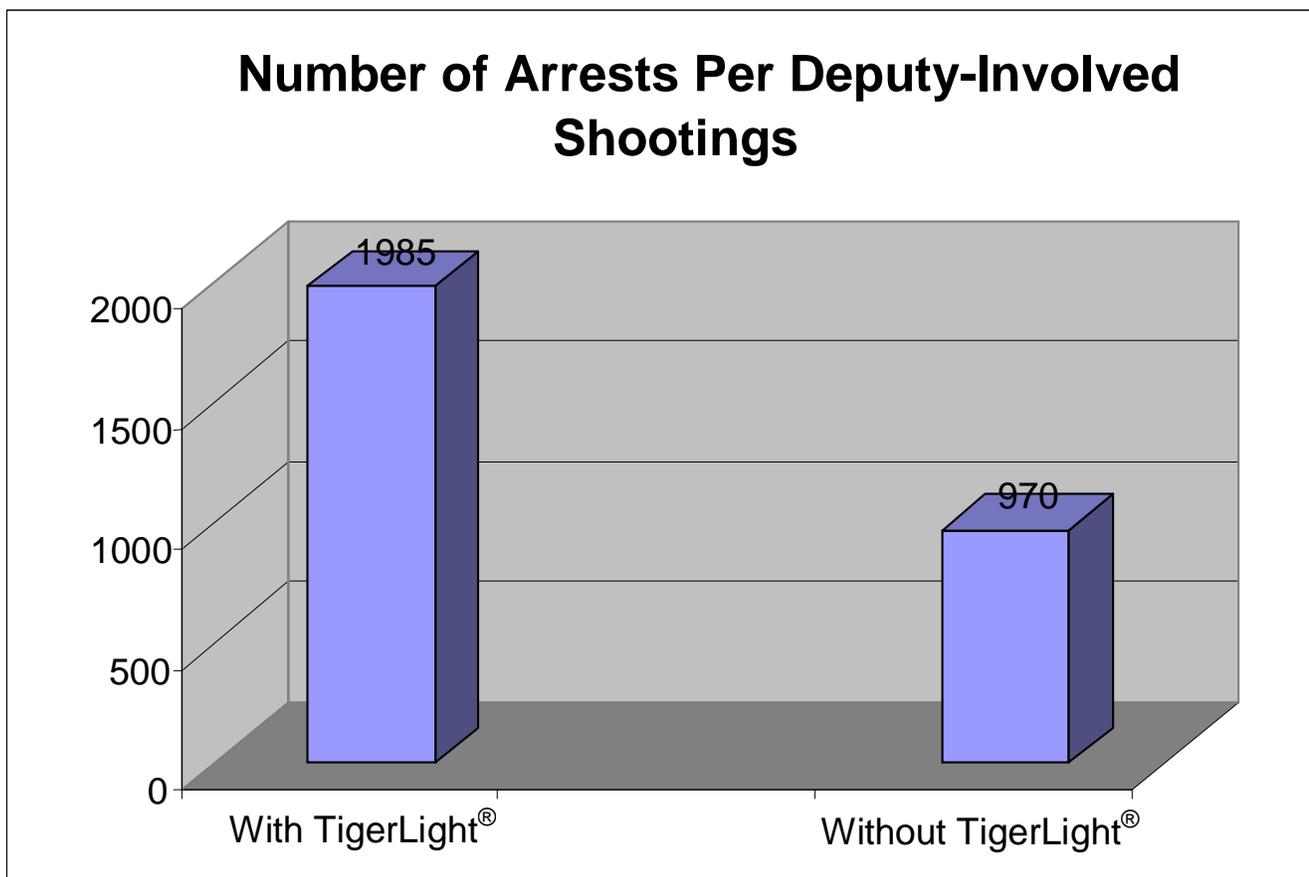


Increased Arrests, Fewer Shootings

Figure 8 represents the impact of the TigerLight® Non-Lethal Defense System on arrests which included deputy-involved shootings during The Study.

Figure 8 compares the number of arrests per single deputy-involved shooting using the TigerLight® System and the number of arrests per single deputy-involved shooting without using the TigerLight® System. In the time period exactly one year prior to The Study period, the ratio of arrests which did not include a deputy-involved shooting to arrests which included a deputy-involved shooting is 970:1. That same ratio is 1985:1 during The Study period. This represents a 51% decrease in arrests which included deputy-involved shootings when using the TigerLight® System.

Figure 8 Arrests Per Single Deputy-Involved Shooting



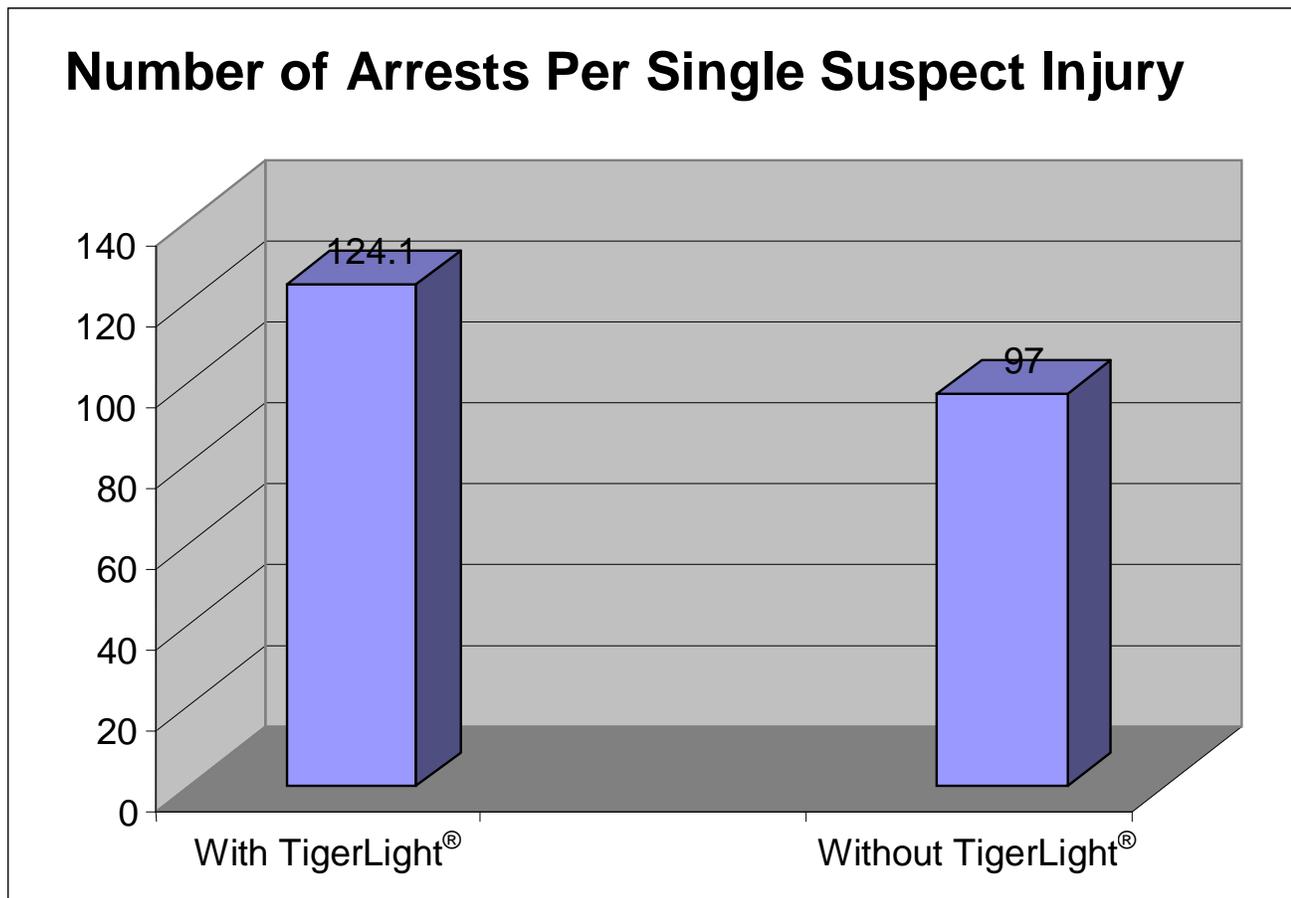
Increased Arrests, Decreased Injuries

Figure 9 shows a 22% reduction in suspect injuries during The Study when compared to the same months of the prior year. The Los Angeles County Sheriff does not instruct deputies to make medical evaluations, but the deputies do report the treatment track for a situation, as described below:

- No injury —examined and released at scene by paramedics
- Minor injuries —released at scene for booking
- Some injuries —examined and released at hospital
- Admitted to hospital

This model does inform us if an injury was reported and, thereby, a general indication of the level of treatment needed. It does not have a mechanism that tracks unfounded complaints of injuries. However, the information gathered was adequate to show the direction of the trend with the TigerLight® Non-Lethal Defense System in the field.

Figure 9 Arrests Per Single Suspect Injury



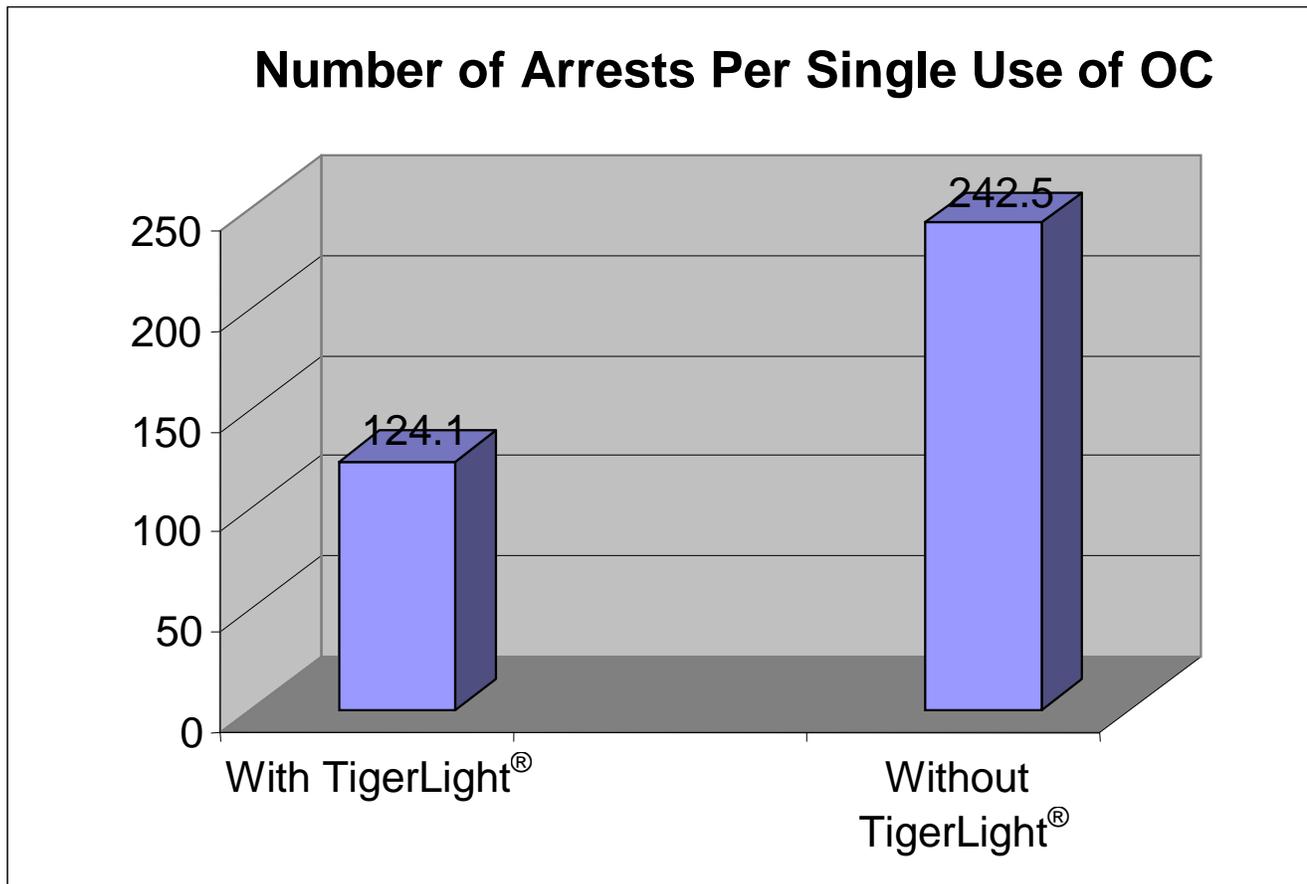
The Use of OC Per Arrests Increases

Figure 10 represents the impact of the TigerLight® Non-Lethal Defense System on the use of pepper spray (OC) during arrests.

Figure 10 compares the number of arrests per single use of OC using the TigerLight System and the number of arrests per single use of OC without using the TigerLight® System. Before The Study, OC use occurred once in every 243 arrests (243:1). During The Study, OC use occurred once in every 124 arrests (124:1), which is a 96% increase in the use of pepper spray. These statistics, when analyzed alongside the other data from The Study, show that because deputies used OC much more often than they had the prior year, the overall use-of-force status was greatly improved, by enabling a statistical reduction in both the use of force and force-related complaints.

TigerLight®, Inc. asserts that using proper and effective low-level force, such as pepper spray, at the onset of aggression in suspects will reduce injuries, deadly force, and complaints associated with the use of force. This is achieved because the precision use of low-level force prevents a situation from escalating out of control and resulting in bodily injury. The TigerLight® Non-Lethal Defense System enables deputies to apply OC at the moment it will be the most effective.

Figure 10 Arrests Per Single Use of OC



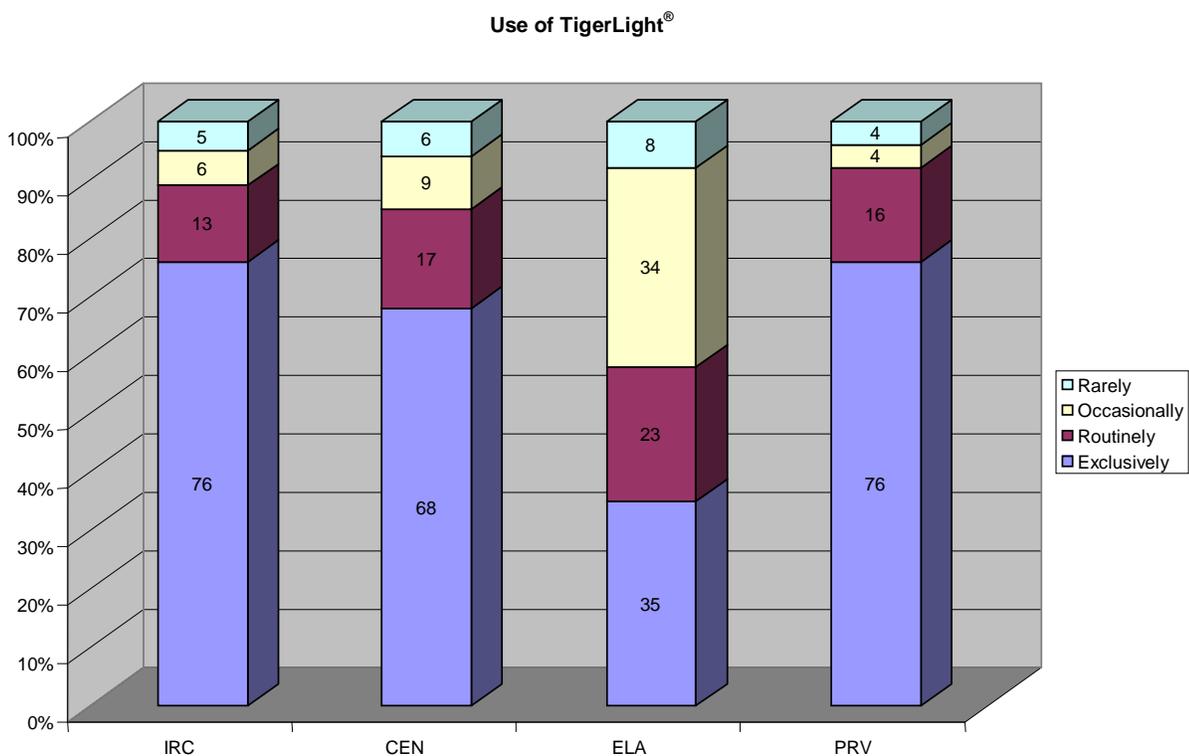
Majority of Deputies Prefer Using TigerLight® System

Figure 11 represents the deputies' propensity for use of the TigerLight® System at each of four duty assignments. The deputies' use of the TigerLight® Non-Lethal Defense System was completely voluntary, as per the design of The Study, because the LASD wanted to determine if deputies preferred using the TigerLight® System or preferred using the weapons available prior to The Study.

Revealed by The Study, and reflected by the graph below, is that as deputies became more familiar with the use of the TigerLight® Non-Lethal Defense System they began to use it more regularly. Deputies reported using the TigerLight® System routinely (81% of the time).

Those who reported that they “rarely” carried the TigerLight® Non-Lethal Defense System gave reasons in the monthly reports. The most common complaint pertained to the placement of the on/off switch; that the TigerLight® System felt awkward to hold due to developed muscle memory for the old flashlight. Others reported that the dimensions made carrying it uncomfortable. Some deputies related that their issued TigerLight® System broke during use and they were concerned about reliability, while still others explained that their assignments had changed since the inception of The Study and they, therefore, had no need to carry the TigerLight® System while performing their duties. However, these deputies who “rarely” carried the TigerLight® System make up only six percent of the total involved in The Study. The vast majority of deputies chose to use the TigerLight® Non-Lethal Defense System.

Figure 11 Deputy Use of TigerLight® Non-Lethal Defense System



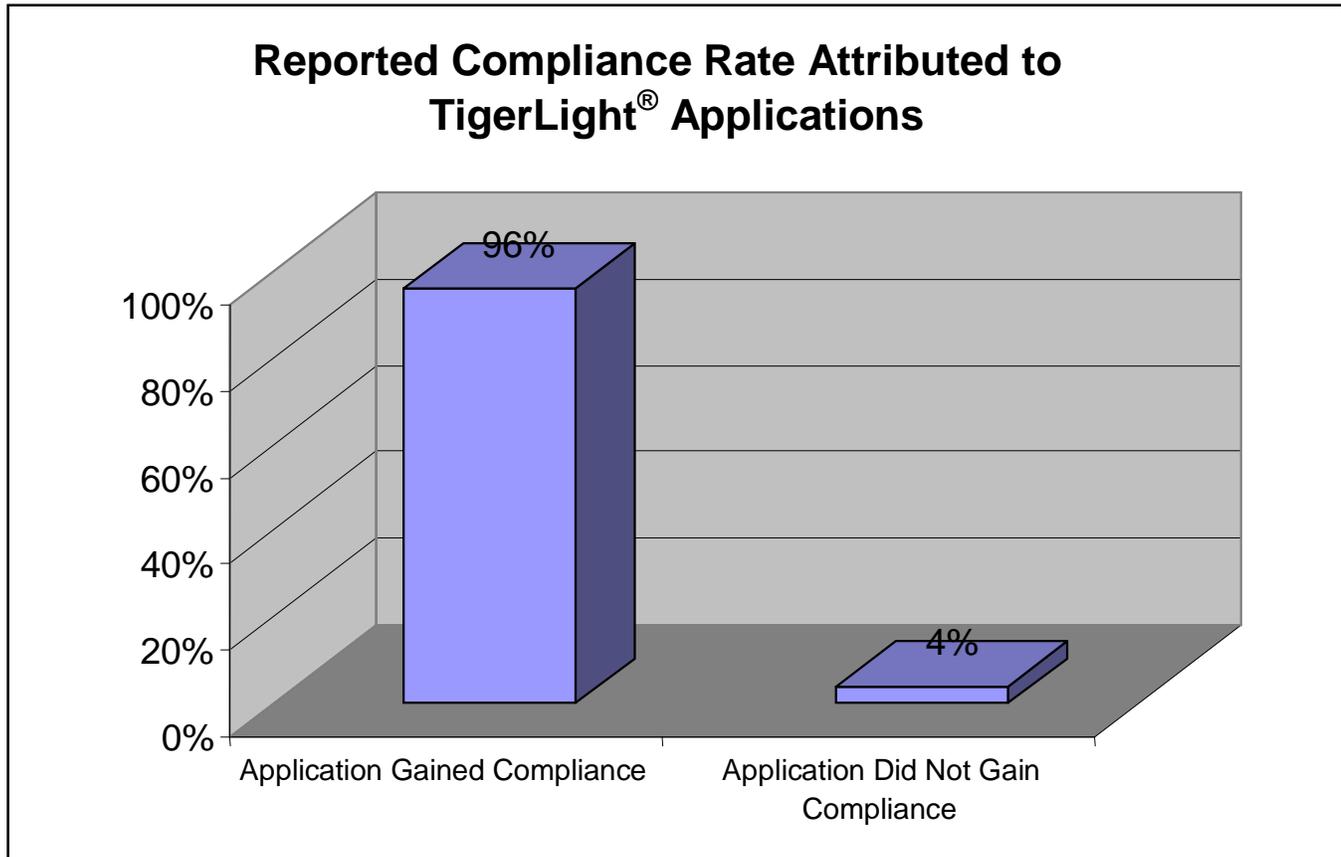
Subject Compliance Rate

The effectiveness of a non-lethal weapon is difficult to quantify, because the definition of “effective” is subjective.

The Study was not intended to provide an “effectiveness” statistic, however it was designed to report whether a deputy applied the TigerLight® System, how many people were the subject of the application, and whether or not the application resulted in the subject complying with the deputy’s directives.

Deputies reported employing the TigerLight® Non-Lethal Defense System on 100 subjects who were engaged in provocative or combative behavior. Those deputies indicated that out of the 100 subjects, 96 became compliant after the TigerLight® System was used. Deputies reported that only four suspects were not responsive to the application of the TigerLight® System. Of those four, two had mental illnesses, one was under the influence of a stimulant, and the last was under the influence of alcohol.

Figure 12 Subject Compliance Rate

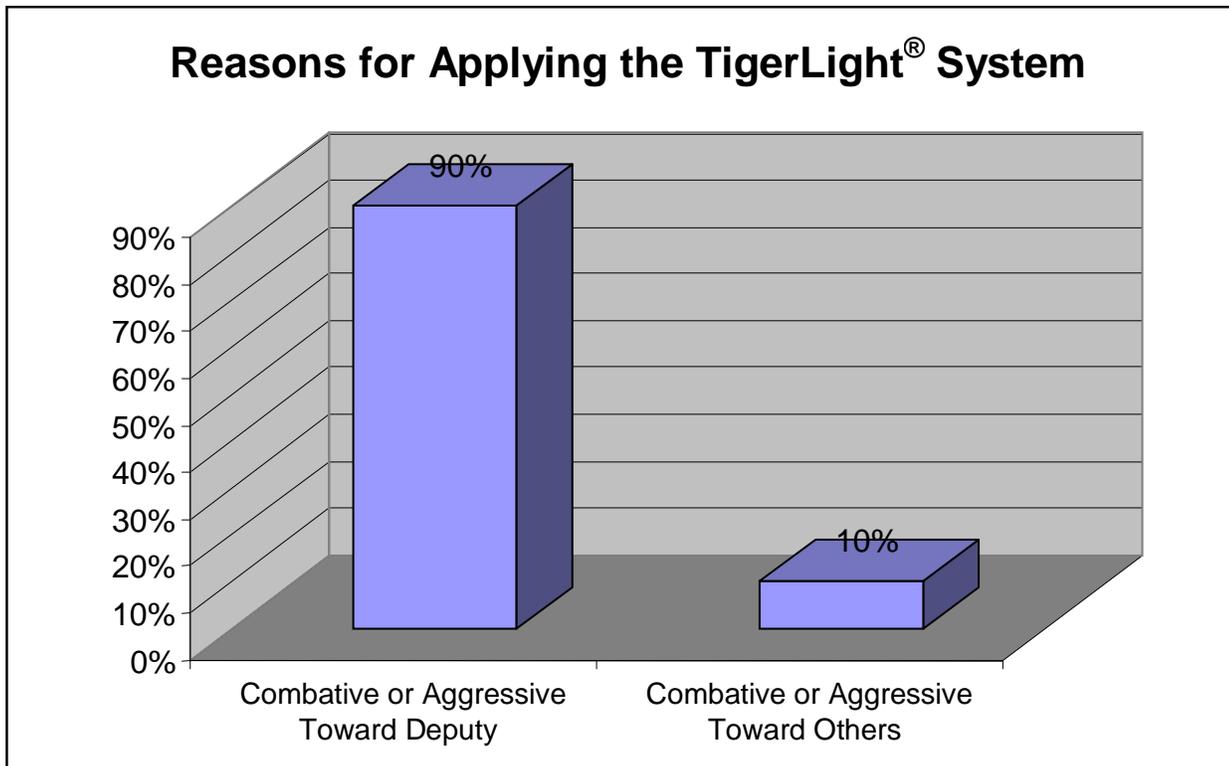


Deputies Use TigerLight® System In Defense of Self

During The Study, 90% of the TigerLight® Non-Lethal Defense System applications were in self-defense. The remaining applications were used in situations to prevent combative behavior or to defend others.

In one particular instance of the latter, a deputy responded to a hostage situation. When he arrived, the suspect was choking the hostage, a nurse, and although other deputies on the scene had attempted to free the nurse through various forms of physical force, they had been unsuccessful. The responding deputy employed the TigerLight® System and the subject immediately complied with the deputies' orders.

Figure 13 Using TigerLight® System in Self Defense



Conclusion

In TigerLight® Inc.'s opinion, the conclusion of The Los Angeles County Sheriff's Department's Use-of-Force Study is unarguably clear. Issuing the TigerLight® Non-Lethal Defense System to deputies caused significant reductions not only in the use of force itself, but in force-related complaints and force-related injuries. Following are the two key reasons that make the TigerLight® Non-Lethal Defense System exceptionally effective and set it apart from other technology.

First, the TigerLight® System is practical to carry in a ready position and practical to use. It can easily be carried ready in the hand other than the side arm hand and is deployable in a split second. Because the TigerLight® System is a flashlight and not "gun-like" and because law enforcement officers are already trained to carry their flashlights in the non-gun hand, the TigerLight® System will never hamper the use of the actual side arm, should that be necessary. Most other non-lethal weapons, such as the Taser®, do require the use of the officer's gun hand. And even if they don't require the gun hand, they cannot be used simultaneously with a flashlight. Consider these unparalleled facts: With the TigerLight® Non-Lethal Defense System, use of the side arm is *always* an option that is *never* precluded, as it would be with the presence other non-lethal weapons. Moreover, because the TigerLight® Non-Lethal Defense System is *always* available, use of the side arm is never *forced*, as it would be by the absence of other non-lethal weapons.

Because the TigerLight® System is easily carried, prepared to discharge, in the non-side-arm hand, it is realistic to expect officers to carry it while conducting routine business, such as traffic stops and citizen contacts. In fact, during The Study deputies routinely had the TigerLight® System at the ready while dealing with citizens, approaching cars, and entering buildings. On the other hand, it is not practical for officers to approach citizens or peer into cars while holding a "bean bag" gun or a Taser® gun in its deployable state. Not only is it impractical for officers to carry other non-lethal weapons, but it is unnecessary as well because the vast majority of citizen contacts do not require the use of force.

Also, because the TigerLight® System is easily carried, prepared to discharge, in the non-side-arm hand, it can be employed as a force immediately when necessary. An officer has the power to use it exactly like a standard flashlight while his finger is on the trigger (spray actuator) and then respond to aggression in a split second with non-lethal force. Other means of non-lethal force require varying degrees of advance preparation to be put to effective use. Data from The Study proves that deputies could apply the TigerLight® Non-Lethal Defense System at the instant of necessity, which prevented a needless leap to deadly force.

Second, the carrying of the TigerLight® System in a ready position is not offensive to the public and even serves to protect them. Because the TigerLight® Non-Lethal Defense System doesn't resemble anything but a standard flashlight, and the general population expects law enforcement officers to carry and use flashlights, citizens do not feel threatened by its presence. As explained in the forward, this is an age of litigation and many communities are under financial stress caused by not only injuries but civil suits alleging excessive use of force in law enforcement situations. The use of the TigerLight® System in law enforcement can do much to remedy that dilemma as well as promote society's value of life preservation

In regard to other non-lethal weapons, if officers were to approach each situation and each individual with their finger on the trigger poised to employ force, it would not be tolerated by members of society. In fact, such a practice would likely escalate already-dangerous situations and generate complaints against deputies in all types of situations. However, it was shown in the LASD Use-of-Force Study, as well as over the past

five years, that the TigerLight® Non-Lethal Defense System does not fall into that “offensive” category because it is not perceived as a weapon. During The Study, deputies in Los Angeles approached numerous situations with the TigerLight® System in hand, prepared to use, and this did not annoy or offend citizens. In fact, use-of-force complaints decreased by 51% during the time that deputies carried the TigerLight® Non-Lethal Defense System.

Not only does the carrying of the TigerLight® System decrease citizen use-of-force complaints, but it decreases injury to suspects, innocent citizens, and deputies themselves, because deputies are set to respond at the moment they detect the need to subdue or defend. Because the TigerLight® System can be engaged and effective in an instant, only as long as it takes to bring the arm from the upright “cocked” position down to a horizontal extended position, situations are kept in control and injuries are prevented. The 51% reduction in officer-involved shootings illustrates that the split-second use of the TigerLight® System is hugely beneficial, and even life-saving.

Although most of this report must be considered a preliminary, and therefore unofficial, analysis of The Study's data, it provides overwhelming evidence that the TigerLight® Non-Lethal Defense System, if instituted, would have a major positive impact on the Los Angeles County Sheriff's Department's use of force. The TigerLight® System certainly satisfies the criteria set forth by the U.S. Attorney General's Conference. And, because the TigerLight® System is practical to carry in a ready position and practical to use and because carrying of the TigerLight® System in a ready position is not offensive to the public and even serves to protect them, the TigerLight® Non-Lethal Defense System truly is more effective than any and all other non-lethal weapons.

PRESS RELEASES

Note: Statistics for these press releases cover nine months rather than the six months in the official study period, but were used by LASD command staff to obtain immediate Board of Supervisors' approval for the TigerLight® Non-Lethal Defense System

Editorial Contact:
Michael Teig
435-657-9529

For Immediate Release

Los Angeles County Sheriff's Department Achieves 25% Decrease in "Significant Force" and 43% Reduction in "Lethal Force" with TigerLight®



Heber City, UT – December 4, 2006

Los Angeles County Sheriff's Department has responded to the outcry for more effective non-lethal means of subduing violent subjects without jeopardizing the safety of its deputies.

"The preliminary findings indicate that having an ability to quickly employ pepper spray directly from a flashlight rather than retrieving it from a belt has resulted in a reduction in more significant force. One of the units using the TigerLight® experienced as much as a 32% reduction!" says LASD Commander Charles "Sid" Heal.

Commander Heal and Chief Bill McSweeney worked with TigerLight®, Inc. CEO Michael Teig and Mark Correia, PhD. to structure the scientific study with Lt. Rich Daniels as Project Coordinator. TigerLight®, Inc. donated 500 TigerLight® Non-Lethal Defense Systems to deputies for the study. Participation of the deputies was voluntary.

TigerLight® Master Trainers Randy Butler and Randy Teig (TigerLight® inventor) and Assistant Trainer Marshall Luton conducted an 8 hour Train-the-Trainer Course at the Los Angeles County Sheriff's Training Academy in Whittier, CA. under the direction and supervision of LASD Sgts. John Mack and Bryan Proctor. Each of the 500 deputies then received a condensed version of the training course.

In 52 incidents involving 146 subjects, the rapid response and multi-subject capability of the TigerLight® Non-Lethal Defense System helped prevent serious injuries to deputies and subjects, including a nurse taken hostage by an inmate and another incident involving a knife-wielding man who, under lethal cover by deputies, would not comply with commands to drop his knife.

The TigerLight® enables deputies to have non-lethal force in one hand and lethal force in the other, providing a much quicker and more effective low-level response to an act of aggression while giving the deputy far greater discretion to choose a level of force.

"This translates to lives being saved, injuries and liability reduced, and a significant financial savings to the county," states TigerLight® CEO, Michael Teig. "There is still a lot of data analysis to be done, but we believe, when all is said and done, that the numbers will clearly indicate that the Department-wide integration of the TigerLight® Non-Lethal Defense System would save LASD millions of dollars a year."

"We have known for years that the TigerLight® Non-Lethal Defense System, due to its stealth nature; its instant response; its multi-subject capability; and the fact that it enables the simultaneous synergistic

application of lethal and non-lethal force, would have a big impact. Now we have good, solid proof," says Teig. There was also a 43% decrease in subject complaints of excessive force.

The TigerLight® is light-weight, powerful and rechargeable, yielding up to 375 lumens of blinding light and a highly potent blast of pepper spray, including several of the most favored brands. Guardian PD pepper spray from Guardian Protective Devices was used in the LASD study.

Departments can call 1-888-701-4500 for a free training demo. Email info@tigerlight.net. Web site: <http://www.tigerlight.net>.

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT AUTHORIZES DEPUTIES TO USE NEW TECHNOLOGY

The Los Angeles County Sheriff's Department is pleased to announce the authorization for Department use of the TigerLight® and the Cobra Stunlight flashlights. The flashlights not only provide illumination, but are also capable of releasing a stream or spray of Oleoresin Capsicum (O.C. pepper spray, a non-lethal chemical agent) as far as 21 feet.

Deputies from six patrol stations and two custody facilities volunteered to test the flashlights and report their findings regarding use of force incidents. Initial findings indicate that an ability to quickly employ OC spray allowed deputies to defend themselves without resorting to more serious types of force. Some of the results were surprisingly convincing with one of the units resulting in significant force being reduced as much as 32 percent while the use of O.C. pepper spray increased 62 percent from exactly one year prior.

One of the benefits to this new technology is that it allows deputies to defend themselves without resorting to striking with a flashlight or dropping a flashlight to retrieve O.C. pepper spray.

The 1,000 flashlights used in this test were donated by the TigerLight® and the Cobra Stunlight companies.

For additional information contact Commander Charles "Sid" Heal at (323) 526-5466.