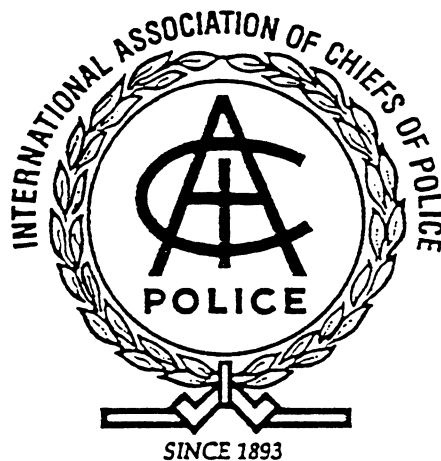


Field Evaluation Project

Results of the Introduction of Oleoresin Capsicum (OC) into the Baltimore County, MD, Police Department

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INTRODUCTION

Violent encounters between police officers and individuals resisting arrest have historically been a source of injury to officers and subjects. These violent encounters have often resulted in complaints on the level of force used by the police.

Concern for these issues along with increased civil liability and court-imposed limitations on the use of deadly force have necessitated the search for safe and effective less-than-lethal (LTL) force alternatives. One alternative that has gained popularity is Oleoresin Capsicum (OC) spray, or as it is commonly called, pepper spray. OC is a naturally occurring substance found in cayenne peppers that, when used in a spray, is reported to be both safe and effective. The agent is relatively inexpensive and, according to anecdotal evidence, reduces injuries, civil litigation and excessive force complaints.

Despite extensive field application in virtually hundreds of police departments, few evaluative studies of OC have been conducted. Although anecdotal information has been reported and some police departments have analyzed their use of OC for effectiveness, as well as injury and complaint reduction (Onnen, 1993), no formal field evaluation has been completed. To address this issue, the National Institute of Justice (NIJ) awarded a grant to the International Association of Chiefs of Police (IACP) to evaluate the effectiveness of pepper spray. The Baltimore County, Maryland, Police Department (BCPD) was selected as the site for this implementation/evaluation project. Key elements of the study include pre- and post-introduction assessments of assaults on officers, subject injuries and the number of use-of-force complaints. Implementation/process issues, including product selection, training and operational considerations were also examined.

Grant monies were allocated to purchase the pepper spray product for BCPD, to hire a grant manager, and secure the services of a researcher and on-site observer. The BCPD independently selected a pepper spray product through the normal procurement process as required by Baltimore County regulation. BODYGUARD OC spray in a three-ounce canister with a five percent concentration level and a fogger delivery system producing a full-cone pattern of spray was selected for patrol use. A pen-like canister, consisting of the same concentration level and delivery system, was selected for plain-clothes officers. The BCPD trained their officers in the use of the OC spray, required officers to complete a form detailing its use in subsequent incidents and allowed access to key departmental personnel and necessary information by the IACP research staff.

OC training and issuance began in conjunction with the start of BCPD's semi-annual in-service firearm training on July 12, 1993. Concomitantly, a news release was issued by BCPD informing the public of OC adoption (See Appendix A). Training and issuance continued and was subsequently completed on December 31, 1993.

Data suggest that despite an increase in calls for service and fewer patrol officers working their beats, use-of-force complaints substantially declined. A 53 percent decrease in complaints occurred between the first pre-OC period and the post-OC period. Likewise, a similar reduction of 40 percent occurred between the second pre-OC period and the post-OC period.

Interviews with Internal Affairs officers further substantiate this finding. They note that OC, unlike impact weapons, does not have lasting effects or leave identifiable marks on suspects, and as such lessens the probability of brutality or excessive force complaints being lodged. Also, individuals who were sprayed received aftercare from the officers who sprayed them. Officers were instructed to assist those they sprayed. This too may have lessened the need to complain.

Question 5:

How effective is OC in human and animal confrontational encounters?

OC proved to be very effective for the Baltimore County Police Department. Overall the effectiveness of OC on humans in confrontational encounters was 90 percent. A total of 156 individuals of 174 in the study were incapacitated enough to be "effectively" arrested. If the animal sprays are included with this total, OC is found to have a 91 percent effectiveness level.¹

Generally, if a suspect was properly sprayed (a one to three-second burst from a distance of four to six feet), he/she became submissive and/or complied with the instructions of the officer. The data showed that 117 individuals (65 percent) were classified as submissive by the officers after the OC had been applied. There were 26 individuals (15 percent) that were listed as complying with the officer's instructions after application. The difference between the terms submissive and complying seems substantively subtle² and therefore it might be more appropriate to collapse the two categories into one category. When that is done, 143 individuals (82 percent) of the 174 humans were affected enough to comply with officer instructions. There were 29 individuals (16 percent) that struggled and did not follow officer instructions. Only seven individuals (four percent) were not affected after OC was applied.

Data analysis also uncovered 18 subjects (nine percent) who were not incapacitated in the opinion of the officer. This suggests that a suspect's behavior at encounter may determine how well OC works or does not work. In seven of the 18 incidents, officers reported that OC had "no effect." In those conditions where individuals exhibited drugged behavior or seemed to have mental problems, spraying with OC to control that subject's behavior had no effect.

From these data, there is indication that individuals who are heavily intoxicated, drugged and/or mentally ill are in such a state that OC will have little or no effect and may make the individual more difficult to control.³ Additionally, these types of encounters may cause the officer to be cross-contaminated if the incident escalates to a physical confrontation. Training officers may

want to stress to patrol officers the importance of assessing the effect of the spray in such an encounter and be prepared to move to another force alternative to control the subject.

Animal Control

Examination of the effectiveness of OC to incapacitate dogs revealed success. Interest in how successful OC is in animal encounters was high because previous to the implementation of the OC project, BCPD had experienced a large number of incidents where officers were forced to shoot dogs.

During the OC field study, there were 20 incidents in which dogs were sprayed with OC. Officers used their spray when the dog posed a threat. The data showed that officers sprayed the dogs at distances greater than those from which they sprayed humans. Officers sprayed the majority of dogs at a distance of three to eight feet, whereas officers sprayed humans at a distance of one to three feet. The difference in application distances may account for the differences in the effectiveness levels for dogs and humans. OC was effective 100 percent of the time in all dog encounters (one officer was bitten but required no medical treatment).

The majority of the dogs sprayed were medium to large in size. Ten of the dogs sprayed were between 25 and 50 pounds, and six were greater than 50 pounds. Attacking and aggressive animals were affected by the OC spray.

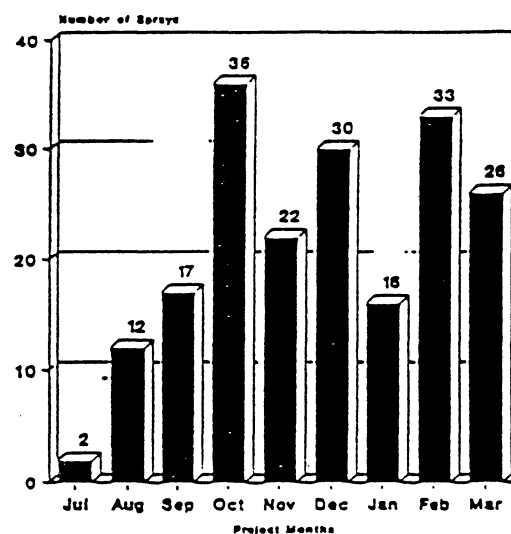
Summary of Outcome Findings

In the nine-month period OC spray was adopted and in use by the BCPD, the spray was used 194 times on either humans or dogs (see Figure A). The arrest/intervention incidents necessitating the use of spray were, in the majority, battery, assault, disorderly conduct, domestic, mental and traffic-related (see Figure B). Most incidents occurred outdoors (62 percent) with the remaining incidents either indoors or in vehicles. Most of the humans sprayed were males (84 percent) of either medium or large frame size.

The sprayed humans at the time of encounter were predominantly intoxicated, belligerent or combative with a large number both combative and intoxicated. (See Figure C.) The force or threat used by the sprayed individuals toward the officers was largely physical (79 percent) versus with any type of weapon.

Figure A

Monthly OC Sprays



VI. CONCLUSION

The BCPD, like all police departments in the United States, has a significant concern for officer and public safety. In recent years, this concern has focused on injuries to police officers and citizens during arrest confrontations. To address this issue, departments have looked to the field of research for answers in technology involving less-than-lethal weapons. The future holds great promise for advancements in LTL weapons. In the meantime, departments can look to OC as BCPD did to address the officer/citizen injury issue.

The design of this research effort allowed IACP staff to obtain information on product selection, training and policy development on use, pre- and post-data on the impact of OC spray versus other sprays used earlier, and officer/management perceptions of OC spray value. Based on all of the above data, it is clear that OC was successfully implemented in the BCPD and that the use of OC spray had a substantially positive impact. Statistics on effectiveness of the spray are quite high, while resultant officer assault and citizen complaint data are conversely low. In light of the data collected, the IACP believes that OC spray is a clear alternative to other more problematic sprays (for example CS or CN) and that implementation of a well developed OC spray program can have a variety of operational benefits for law enforcement agencies.

The process of OC adoption that BCPD followed provides a sound model for any other agency. BCPD's success with OC in reducing injuries to citizens and law enforcement officers, reducing complaints by citizens on excessive use of force and preventing the need to shoot dogs, reflects a successful implementation of, and policy for, use of OC.

COMMENTS BY OFFICERS REGARDING THE USE OF OC

The following comments were extracted from the OC data collection sheets completed by the involved officer(s) or from the follow-up interviews that were conducted.

- ▶ Wish we would have had it awhile ago.
- ▶ I think it's great ... great alternative for initial use of force.
- ▶ The spray is one of the best items we have been issued.
- ▶ I like it and prefer it to other forms of LTL.
- ▶ Good faith in product.
- ▶ Definitely better than using a nightstick.
- ▶ Love it.
- ▶ Great stuff.
- ▶ Best thing department has done since I've been on the force.
- ▶ Good stuff, I wouldn't want to sprayed with it.
- ▶ The word is out (on the street) ... all people have to do is hear the velcro and they comply pretty quickly. (This officer has actually pulled his OC from his holster at least ten times but has actually only sprayed once.)
- ▶ One subject actually said to the officer, "next time just beat me instead."
- ▶ I feel that PCP subjects are actually running more from the spray than from the officer.
- ▶ Some subjects actually apologize after being sprayed.

SAMPLE CASES

- BCPD officers were called to a scene involving a distraught subject who was attempting to commit suicide by hanging himself with a bed sheet. When the officers arrived, he was already suspended from a tree. One officer attempted to ease the stress and weight on the subject's neck by grabbing his feet, but the subject continued to kick uncontrollably. He was administered a mild dose of pepper spray in the face and subsequently became limp allowing the officers to remove the noose from his neck. As a result of the officers' speedy response and use of the pepper spray, the subject did not suffer from any visible injuries.
- An undercover officer was following a subject who was involved in a narcotics violation. The officer called for a backup who subsequently stopped the vehicle. The occupants were ordered out of the car. The driver complied, but the passenger resisted and proceeded to ingest an undetermined amount of drugs. The undercover officer attempted to grab the subject and, with the help of the other two officers, tried to extract him from the vehicle. He was warned several times that he would be sprayed with OC, but still refused to comply. When he was sprayed, he immediately became limp and was easily removed from the vehicle "like a bag of jello." The neighbors and spectators who witnessed the incident described the OC as "pretty neat stuff." Unlike other situations where spectators may observe more forceful tactics being applied, such as the use of a nightstick, the OC appeared to gain better acceptance as a more humane alternative force option.
- A BCPD officer responded to a call concerning an elderly woman who was found unconscious in her bathroom. Emergency medical personnel were summoned but the victim's dog would not allow them, or the officer, to attend to her. After several attempts of luring him away, he was administered a mild dose of OC under a blanket. The blanket was then wrapped around him, and he was removed from the scene without harm. This enabled the medics to administer the necessary medical treatment to the woman.
- After being arrested, a subject was transported to the precinct for a narcotics violation and placed in a temporary holding area. While cuffed to a retaining bar mounted to the wall, he became extremely agitated and shattered a mirror with his head. He then took his free hand and grabbed a huge jagged piece of glass and began to swing it at the officers. He was then sprayed with OC and immediately dropped the glass. One of the officers involved, who felt his life was threatened, was convinced that if he did not have the OC, he would have shot the subject.
- In a previous incident last year, three unusually large brothers had a confrontation with BCPD officers at a local bar. The officers attempted to arrest one of the brothers and a struggle took place. The subject attempted to grab the officer's gun, at which time the officer, fearing for his life, shot the subject, who then subsequently died. Recently, officers were engaged in another confrontation with the two remaining brothers. Another struggle took place, and in this incident, the officer utilized his OC to subdue the subjects who complied after being sprayed. They were arrested without further incident.