

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.

EXECUTIVE SUMMARY

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 of 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.

Despite extensive field application in virtually hundreds of police departments, few evaluative studies of OC have been conducted. 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 IACP, in turn, partnered with the Baltimore County, Maryland, Police Department (BCPD) as the site agency for pepper spray implementation and evaluation. 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.

I. LITERATURE REVIEW

Various forms of chemical agents have been used in war as offensive weapons for centuries. After World War I, however, officials expressed an interest in extending the use of chemicals into the realm of law enforcement. It was hypothesized that these agents could effectively control criminals and riotous crowds as effectively as they controlled enemies during warfare.

Chloroacetophenone (CN)

This organic compound, in its most pure form, is a white crystalline solid resembling salt or sugar. It is available in many forms (e.g., mist, vapor or dust), and must be projected into the air to disperse the lacrimating (tear-producing) material. For use as a liquid aerosol, CN must be mixed with alcohol or ether. CN is a tearing agent that causes the eyes to water profusely and the respiratory passages to become irritated. Breathing thus becomes shallow and difficult. Other physical symptoms include tightness in the chest, stinging sensations on the skin and nausea. Psychological effects of fear and panic may also occur (Jones, 1976).

As an irritant that relies on pain compliance, CN is most effective on those individuals who are lucid and have a normal pain threshold. Those who are intoxicated, extremely agitated and/or mentally ill are generally less affected by the agent because of their greater tolerance for pain (Jones, 1976).

Although humans are susceptible to agent effects, animals suffer little, if any, from the symptoms induced by CN. In addition, CN effectiveness is temperature-dependent. Although the agent is useful in any temperature over 50° F (Oleoresin Capsicum Chemical Agent Study, 1991), it is most effective when utilized in temperatures of 72° F and above (Jones, 1976).

CN presents an additional problem of decontamination. The microscopic particles can remain airborne for some time after being discharged. Dissipation time depends upon the amount of the agent dispensed, the air current, temperature and humidity.

Finally, CN cross-contamination between subjects and police officers is common. Officers note that they are often contaminated by the agent when arresting and transporting sprayed subjects. This cross-contamination is purportedly responsible for officers' reluctance to use this agent.

Ochlorobenzylidene-Malononitrile (CS)

The U.S. Army and the National Guard continued to use CN as a riot control agent until 1960, whereupon it was replaced with the ochlorobenzylidene-malononitrile (CS). Officials held that CS was considerably less toxic and more effective than CN (Jones, 1976). Following military protocols, American law enforcement agencies subsequently adopted CS in 1965.

In pure form, CS is a white, crystalline substance similar to talcum powder that can be discharged in smoke, liquid or dust form. Like CN, it is classified as a solid, not a gas, since it requires a carrying agent to disperse it into the desired target area.

CS is a lacrimating irritant that immediately affects the mucous membranes producing tears, runny noses, and persistent coughing and/or sneezing. Additional symptoms include respiratory distress accompanied by tightness in the chest, a burning sensation on the skin, and nausea or vomiting. In addition to the physical effects, CS also causes intense fear, panic and cognitive disorientation.

According to military and law enforcement personnel, CS is a preferred alternative to CN (Selected Military Reports on CS Riot Control Agent). It produces immediate effects and is less toxic (Jones, 1976). Like CN, CS is also more effective on those areas of the skin that are moist (Compton, 1987) and virtually ineffective on animals.

Unlike CN, CS is considered to be effective over a wide temperature range. The microparticulate nature of CN results in agent persistency and thus can make decontamination problematic, especially in enclosed/confined spaces.

Serious injury to an individual is improbable if CS is used properly. Extensive toxicological testing indicates that in spite of the potency of CS, it is a more safe, less toxic and more effective alternative to CN (Special Summary Report on the Toxicology of CN, CS and DM).

Oleoresin Capsicum (OC)

CN and CS are still used by many law enforcement agencies, especially for tactical use in crowd control situations. However, some law enforcement officials contend that these chemical agents are neither effective nor reliable. The potential risk of injury and cross-contamination, as well as decontamination problems, have led law enforcement officials to seek a safer, more effective alternative chemical agent. Another less-than-lethal alternative that has recently gained popularity and acceptance is Oleoresin Capsicum (OC), also referred to as pepper spray.

Although OC has been available since the mid-1970s, it has become widely used only within the past few years. Unlike the synthetic chemicals CN and CS, OC is a naturally occurring substance derived from the cayenne pepper plant.

OC is considered an inflammatory agent, unlike the traditional chemical irritants (i.e., CN and CS). Upon contact with OC, the mucous membranes of the eyes, nose and throat become inflamed and swell. The symptomatic swelling produces involuntary eye closure, nasal and sinus drainage, gagging, coughing and shortness of breath. A burning sensation occurs on any exposed skin areas.

Because OC is an inflammatory agent, it is purportedly more effective than CN and CS on violent, intoxicated/drugged and mentally ill individuals. Moreover, the symptomatic involuntary closing of the eyes and the automatic irritation of the respiratory tract explain why OC is so effective on animals.

No special decontamination protocols are required for OC because it is biodegradable. Unlike chemical irritants, OC will not persist in clothing or affected areas.

Examination of in-custody deaths that occurred subsequent to OC use has excluded the agent as a contributory factor. To date, OC has not caused any deaths, even among persons with pre-existing conditions (Granfield, Onnen and Petty, 1994). Finally, unlike the other chemical agents, OC use will not result in dermatitis, skin depigmentation or burns.

Currently, OC spray does not fit into a category or classification that would place it under the jurisdiction of any federal regulatory agency. Many people within the OC industry and law enforcement officials would like to see OC spray come under the jurisdiction of a regulatory agency so issues of product standards and safety could be more extensively examined. Clinical studies employing human subjects are needed; however, until such studies are conducted, information will be derived solely from experience in the field.

II. THE RESEARCH SETTING

Baltimore County, Maryland, site of this research project, has a population of approximately 695,000 people and covers an area of 612 square miles. The county covers urban, suburban and rural areas. The Baltimore County Police Department (BCPD) has sole responsibility for delivery of police services to Baltimore County. The department has an authorized strength of nearly 1,500 officers, 80 percent of whom are assigned to the Field Operations Bureau. These officers responded to 442,436 calls for service in 1993, which included 44,074 Part I offenses. Police service is generally provided through the Patrol Bureaus' nine precincts.

BCPD Interest in a Force Alternative

As a result of a strong commitment by the chief and the executive corps for experimentation and research into police functions and technology, and more importantly, a significant concern for officer and public safety, an examination of less-than-lethal alternative weapons was initiated. A committee was established that subsequently gathered information from other police departments and agent vendors. They analyzed concerns relative to legal and medical issues, product selection, training requirements, funding ability and safety. The committee decided that OC was a safe and effective alternative that, relative to existing forms of force, could result in a lowered incidence of officer and citizen injury. Moreover, it was suggested that civil liability suits and citizen complaints would diminish as OC use would not result in any overt visible signs of injury to the suspect like those associated with normal officer and subject struggles.

III. PROJECT METHODOLOGY

This evaluation was designed to examine two major components: (1) how OC was adopted and implemented by BCPD; and (2) the impact that OC use had on police and subject injuries and brutality/use-of-force complaints and on its effectiveness of subduing uncooperative or physically resistant subjects.

Process Evaluation

In order to examine OC project development, officers and command staff members who initiated and were critically involved with the project were identified. Those identified met intermittently throughout the entire project. Formal and informal meetings were continually held by BCPD during which specific OC-related issues were addressed. Research staff attended these meetings and collected information on the process of OC adoption and implementation. The issues addressed during the process evaluation included:

- selection of pepper spray product line
- development of written use policy
- development of training program and materials
- implementation of documentation for post-use reporting
- identification of required follow-up (in-service) training needs.

Outcome Methodology

Outcome evaluation was concerned with assessing the impact of OC spray in confrontations between police officers and citizens, as well as police officers and animals (dogs). Five principle research questions were developed:

1. Would assaults on officers be reduced in arrest and other confrontational encounters?
2. Would injuries to police officers be reduced in arrest and other confrontational encounters?
3. Would injuries to suspects be reduced in arrest and other confrontational encounters?
4. Would use-of-force complaints on police officers be reduced in arrest and other confrontational encounters?
5. How effective is OC in human and animal encounters?

Development of the Measurement Instruments

Measurement of the effectiveness of OC spray is critically dependent on the data received from the field. Data collection instruments were developed to obtain information from the field on each OC spraying incident. A form was constructed as the initial collection instrument to be completed by each officer who used OC. The form included both open-ended and forced-choice questions relating to the following: weather conditions, suspects, OC application, injury, decontamination and animals. The form would be completed along with the departmental incident report as soon as practical after the conclusion of the event.

A second measurement instrument, an unstructured follow-up interview, was developed to validate all information collected by the data form. This interview was conducted by the on-site observer with each officer after the data collection form was received. The unstructured interviews addressed the same issues as the data collection form, allowing, however, the officers to add any comments, suggestions or observations.

Prior to their use in BCPD, the data collection sheet and the unstructured follow-up interview were pilot-tested in the Anne Arundel County, Maryland, Police Department (AAPD). Pilot testing indicated that the measurement instruments were suitable for the needs of the project and were generally user-friendly. Following the pilot test, the form was printed in quantity for distribution throughout all BCPD precincts and operations sections. Upon completion of the data collection forms and unstructured interviews, incident reports were requested and subsequently mated with the other measurement instruments. These reports further verified the data validity. This methodological triangulation provided the research team with official (the incident report), structured (the data collection form) and unstructured (the unstructured follow-up interview) sources, thus preventing reliance on one sole information source.

Data Collection

Data collection for both the impact and process evaluations began in mid-July 1993 with a site visit to the BCPD. Prior to the research team's arrival, the department had undertaken a considerable study of the type of OC product (fog delivery system spray versus stream, manufacturer and desired strength of OC) it wanted to provide its officers. The data were provided by BCPD's Crime Analysis Unit and Internal Affairs Section. Monthly *Maryland Law Enforcement Officers Killed or Assaulted* data sheets were also utilized. The time periods for which data were collected were:

- ▶ Pre-OC 1: July 1, 1990 to March 31, 1991
- ▶ Pre-OC 2: July 1, 1991 to March 31, 1992
- ▶ Pre-OC 3: July 1, 1992 to March 31, 1993

— Introduction of OC - July 1993 —

- ▶ Post-OC 4*: July 1, 1993 to March 31, 1994

* Comparison data were gathered for the post period (July 1993 to March 1994).

While the information provided by Crime Analysis and Internal Affairs was important, each incident of spray was additionally "tracked" through the use of a spray data collection form that was developed by the research staff. As mentioned, each officer using his/her spray in a confrontational encounter with either a human or animal was required to complete the form.

IV. FINDINGS: OUTCOME EVALUATION

The types of encounters in which Baltimore County officers generally used OC were routine disorder complaints that beat police officers often handle. These types of complaints generally involved aggressive, excitable behavior on behalf of both the complainant and victim. Moreover, they tended to escalate quickly, resulting in confrontational outcomes.

Findings indicated that 39 percent of the incidents occurred inside (e.g., house, car) while the other 62 percent occurred outside. Weather conditions did not seem to affect an officer's decision to use OC or OC's effect on suspects. Of the human sprays, 84 percent (148) were males and 16 percent (28) were females. Generally, individuals who were intoxicated (drugs or alcohol), belligerent and/or combative were sprayed with OC. The preponderance of incidents involved physical threats by the suspect to the police officer. Very few incidents involved use of firearms or knives.

Data indicated that almost all officers applied OC to the face as they had been instructed in training. However, the officers did not spray from a distance of four to six feet as instructed. Many of the sprays in this sample (144 of 194) were done at a distance of three feet or less. There were 102 incidents where OC was sprayed at a distance of two feet or less. Consequently, the OC may not have been maximally effective on the suspects.

OC was effective in the majority of incidents in our data. Most incidents (143) only required the use of one spray to incapacitate a subject. There were, however, four incidents where officers used full cans of OC in attempts to control suspects. There is no indication in our data that spraying more is better, if the subject is given a "good" spray the first time. Lastly, if suspects were properly sprayed, they became sufficiently incapacitated to be arrested in 90 percent of all cases.

Findings: The Five Principle Questions

Question 1:

Will assaults on officers be reduced in arrest and other confrontational encounters as a result of the use of OC spray?

Three years of prior "assault" data (pre-OC data) were collected, to be compared to the time period after which OC was adopted by the department (post-OC data). The pre-OC data were examined to identify any possible trends regarding assaults. Overall, these data showed that officer assaults were decreasing prior to OC use. Similarly, the post-OC data indicated that

assaults continued to decline. Most importantly, the total number of officers assaulted in the post-OC data period was substantially lower than any of the pre-OC data periods.

Question 2:

Will injuries to police officers be reduced in arrest and other confrontational encounters as a result of the use of OC spray?

Data from the spray collection form showed that very few officers were injured when they used OC to control a confrontational encounter. Of the 194 total (human or animal) spray incidents, only 21 officers (11 percent) reported receiving any injuries. Most of the injuries officers received were minor and did not result in any work time lost. While data from the pre-OC use period was not comparable and did not permit a complete pre-post analysis, the low level of officers injured in the post-OC period suggests that OC use has the potential to lessen officer injuries.

Question 3:

Will injuries to suspects be reduced in arrest and other confrontational encounters as a result of the use of OC spray?

The number of injuries to suspects was very similar to the number of injuries to officers: very few suspect injuries occurred during the post-OC project period. Of the 194 spray incidents, only 14 suspects (seven percent) received any injuries. Although staff were unable to collect comparable pre-OC suspect injury data, post-OC data indicate that all suspect injuries were minor, not requiring hospital treatment.

Given that staff were not able to gather the pre-OC comparison data, other methods were employed to examine how suspect injuries might be affected by OC. Specifically, it was hypothesized that if suspects were injured, complaints of force would be filed more often. However, the data indicated that such complaints were decreasing. Consequently, it is likely that OC had an equally positive effect on reducing the number of suspect injuries.

Question 4:

Will use-of-force complaints on police officers be reduced in arrest and other confrontational encounters as a result of the use of OC spray?

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

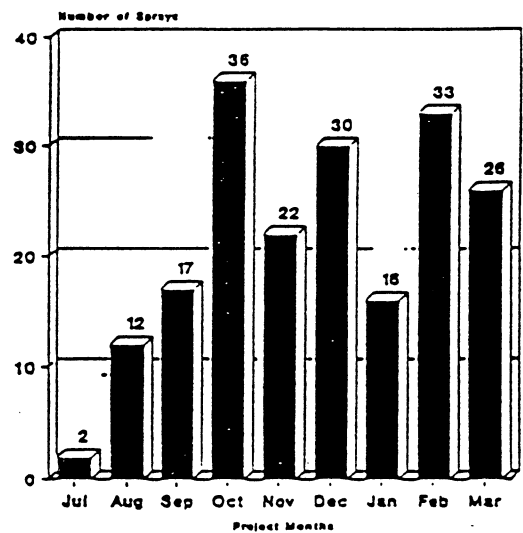


Figure B

Initial OC Contacts

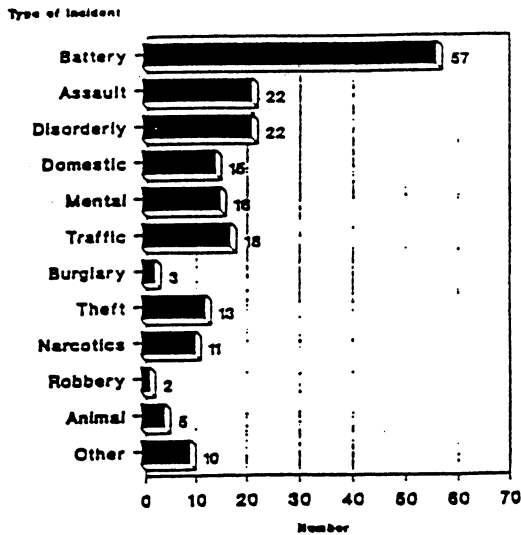
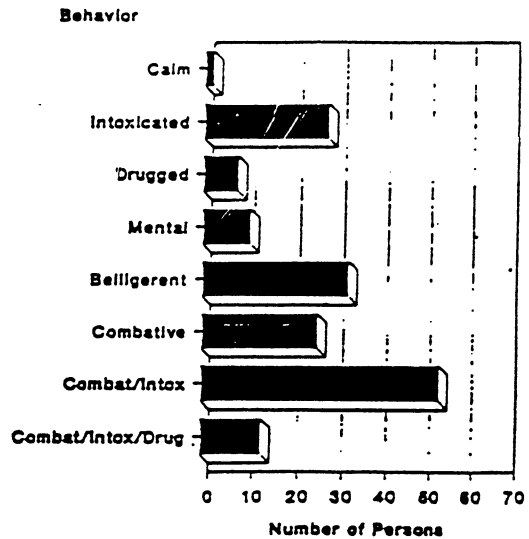


Figure C

Behavior at Encounter

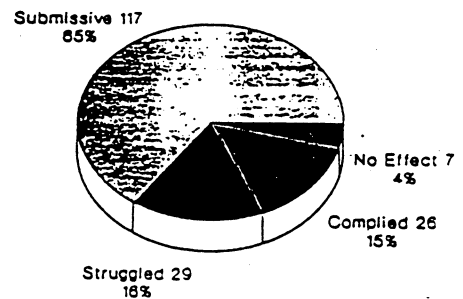


In most cases (91 percent), the spray was administered to the face of the individual, typically (74 percent) from a distance of one to three feet. Twenty-one officers and 14 suspects were injured in the 194 applications.

In the vast majority of cases of OC use, officers reported that the individual sprayed was effectively controlled: 65 percent were "submissive" and another 15 percent were "compliant" (see Figure D). Overall, officers reported that in 90 percent of incidents the individual was sufficiently incapacitated to permit arrest or other officer actions. In the 18 cases where OC spray was not effective, some combination of alcohol/drug use and combative behavior appeared to prompt or even permit individual resistance to OC spray.

Figure D

Suspect Actions after Application



Looking at comparative data from pre-OC spray periods in 1992 and 1993, the total number of complaints by citizens alleging force were lower during the OC spray use period (see Figure E). Similarly, the total number of officers assaulted was lower during the OC spray period than in the two

non-OC spray periods (see Figure F). While only a preliminary investigation of OC effectiveness and impact, this comparative data certainly imply that OC has the potential to reduce the number of officers assaulted and the number of force complaints lodged against the department.

Figure E

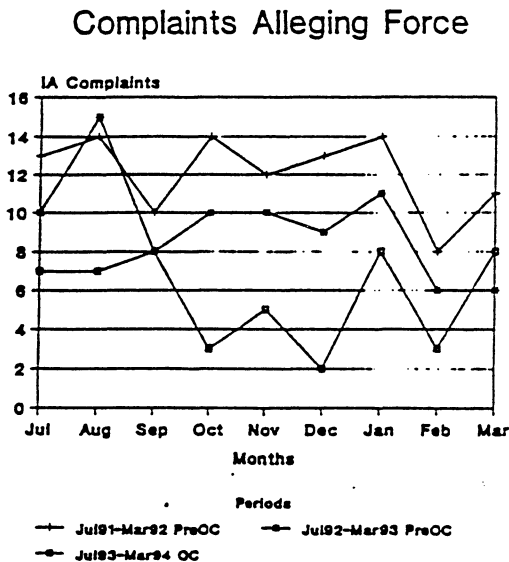
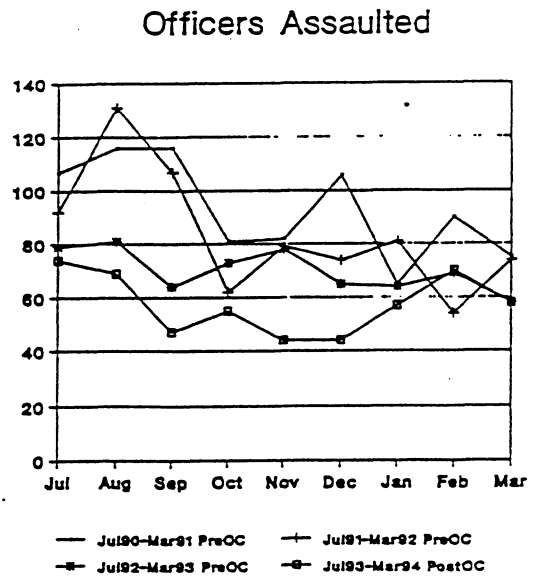


Figure F



V. FINDINGS: PROCESS EVALUATION

BCPD Training Issues

The need to train approximately 1,400 officers in a three-hour block of instruction, not affect assignments or manpower, without necessitating payment of overtime, required a phase-in approach to OC training in BCPD. BCPD addressed their OC training needs by conducting the three-hour block as an addition to officer in-service firearms training. Firearms in-service with OC training began on July 12, 1993 and continued through December 31, 1993. During this time, 1,345 officers were trained in the use of OC and issued OC canisters.

Decontamination

OC decontamination was another significant concern addressed by the BCPD entities. Decontamination of OC spray and assurance to the suspect of the temporary nature of its effects

are two very important requirements an officer must deal with after a subject has been sprayed and is no longer combative.

Standard Operating Procedures

The BCPD committee charged with examining the feasibility of the department adopting OC drafted a Standard Operating Procedure (SOP). The document was developed following consultation with BCPD's legal counsel, training officers, Internal Affairs, and command and staff officers. Additional directives were added following instructor training and writing of the lesson plan.

The SOP requires that all members of BCPD whose normal duties include making arrests or supervising arrest situations carry OC spray. Uniformed members of the department carry the device on their gun belt in an issued holster, while non-uniformed officers carry pen-sized containers.

Use-of-Force Issues

The BCPD, like most other police departments, adheres to the use-of-force continuum and its range of response, beginning with the mere presence of an officer and escalating to the use of deadly force. BCPD places the use of OC spray above verbal commands on the force continuum. Officers who find that verbal commands are ineffective or inappropriate, or who find that physical confrontation is necessary and/or anticipated, are justified in employing OC as a means of control and restraint. BCPD emphasizes that OC is not a substitute for a firearm. If when faced with an armed individual the officer deems deadly force necessary, then the firearm is the correct weapon.

Reporting the Use of OC as a Use of Force

Departmental reporting of OC spray was another significant issue of concern for personnel, including the executive corp, patrol officers and the FOP. BCPD policy states that a use-of-force report must be completed if the subject complains or goes to the hospital for treatment. If neither of these situations occur, then a use-of-force report is not required.

Discussion among BCPD officials occurred prior to the adoption of OC about the possibility of having each use of OC a reportable use of force. However, since any other LTL use of force did not require a report unless a complaint was made or hospital treatment was required, it was concluded that treating OC differently could inappropriately hinder its use.

During the time of data collection (July 21, 1993 to March 31, 1994) and over the span of 194 sprayings, five complaints of brutality and one use-of-force case were received by BCPD. These complaints centered on the officer and his/her purportedly inappropriate behavior. The

complaints did not address the spray itself. At the time of this report, BCPD has not had any complaints or suits filed that relate to the issue of OC spray itself.

Police Use of Deadly Force in Defense of an OC Spray Attack

During the study, patrol officers voiced significant concern about whether they would be allowed to use deadly force if attacked with OC spray. The Legal Officers Section of the IACP holds that an officer may use deadly force to protect himself from the use or threatened use of OC spray when the officer reasonably believes that deadly force will be used against him if he becomes incapacitated. Incapacitation includes situations in which officers may be unable to adequately defend themselves due to the effect of chemical sprays.

In determining whether an officer's use of deadly force was reasonable, the following factors may be considered:

- ▶ The nature of the crime committed by the person or persons confronting the officer.
- ▶ The nature of the verbal or physical threats on the part of the person confronting the officer.
- ▶ The relative strength and fighting skills of the officer and his opponent.
- ▶ The number of officers versus the number of potential assailants.
- ▶ The nature of weapons in the possession of or available to the assailant.
- ▶ The ability to avoid the potential effect of the OC spray.
- ▶ The alternative means of defending against the use or effect of the OC spray.
- ▶ The availability of assistance from other nearby officers.

When a criminal attacks an officer with OC spray, he does so with the intent to harm the officer, escape or both. It is common knowledge that a high percentage of officers who are incapacitated or have had their guns taken away from them are later shot with their own weapons. It would be unconscionable to ask an officer to take a chance that the OC spray attacker is merely going to walk away after incapacitating the officer.

ENDNOTES

¹All twenty animal sprays were reported 100 percent effective at deterring an attacking or threatening dog. There were no reported failures when the animals (dogs) were sprayed.

²The terms submissive and complied were terms used by the officers completing the data collection form. In many respects the difference between the two seems slight and it would be easy to collapse the two categories into one. This brings into question the meaning of submissive and complied. There may well be wide differences in the use of the terms depending on the individual officer's understanding and expectation of what OC is to do to a suspect. Some officers might believe that the purpose of OC is to totally incapacitate a subject with no resistance (individual was submissive), therefore the product worked. If the OC did not do this, the product was reported to have no effect, despite the fact the OC made the person easier to arrest. Other officers might believe that the product worked well even though the individual offered a struggle. This discussion is offered as a possible word of caution for interpreting this information.

³This is not unlike the findings presented in an earlier study on OC and in-custody deaths. See Appendix B for a copy of the study.

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.