

**THE BILL BLACKWOOD
LAW ENFORCEMENT MANAGEMENT INSTITUTE OF TEXAS**

Justification for a Mandatory Soft Body Armor Policy

A Policy Research Project
Submitted in Partial Fulfillment
of the Requirements for the Professional Designation
Graduate, Management Institute

by
Christopher A. Kingrey

Waco Police Department
Waco, Texas
September, 1997

#597

TABLE OF CONTENTS

Section	Page
Abstract	
Introduction	1
Historical, Legal, and Theoretical	2
Review of Practice	5
Discussion of Relevant Issues	8
Conclusion	11
Bibliography	13
Appendix	

Abstract

The purpose of this research is to justify the need for administrators to adopt and support a mandatory soft body armor wear policy. Mandatory body armor wear policies have three clear benefits: They make use of the expensive equipment that the departments have furnished in most cases; they reduce the potential for firearm related fatalities, thereby lessening the city's financial exposure; and, they afford each officer with the highest level of personal protection reasonably possible.

The earliest studies indicated that many police officers did not believe their management really cared whether they wore soft body armor or not (Brand 5). Research confirms one of the most important factors influencing wear rate is the support of management (Estey 20). If a mandatory soft body armor wear policy was initiated it would improve officers perception of management, and more importantly save officers lives.

Analysis of law enforcement officers killed in the last 18 years revealed 42 percent of those officers could have been saved had they worn soft body armor. A good fitting high quality vest costs an average of \$500.00 dollars, which equates to \$100,000.00 dollars for a 200 man department. The cost of body armor is pale in comparison to the cost of an injured or slain officer, which can cost a city well over one million dollars.

With an increasingly violent culture, law enforcement officers are needlessly dying at an alarming rate. While the number of officer wearing soft body armor has increased, many officers still choose not to wear their body armor. The number of officers using protective body armor could be increased substantially through the implementation of a department developed mandatory wear policy.

Introduction

Joe Friday prepares for his tour of duty as a law enforcement officer. Running a bit behind, he hurriedly throws on his shirt, pants, shoes, and his gunbelt that he trusts to get him through the night safely. Once dressed, he rushes out of the house and heads to work, fully expecting to return to his family the following morning. This night does not go as planned, and Joe is shot twice in the chest with a 9 mm pistol, and dies. He may have survived this shooting had he been wearing body armor. Instead, his department issued body armor remained in its original box at his house in the bottom of the closet. Joe is laid to rest with his family and friends wondering, would Joe be alive if he had worn his vest. Many officers all over the United States prepare for work in the same manner as Joe Friday. When officers do not consistently wear their body armor, a tragedy of this nature may occur.

Numerous departments are still operating with optional soft body armor wear policies or no policies at all. The Waco Police Department has furnished soft body armor to each officer for the past seven years. Optional policies such as the one recently replaced at the Waco Police Department, had a 90 day mandatory wear period each year for all uniformed officers assigned to patrol operations (Miller 1). This exception to this strictly voluntary policy was enacted to encourage voluntary compliance past these mandatory periods. Although encouraged, many officers do not wear their body armor. The voluntary policy has allowed officers to become complacent with officer safety issues. When complacency on such an issue is evident, a mandatory policy is needed to protect those officers from life threatening situations.

Over the last ten years the southern states have lead the nation in law enforcement officers killed and assaulted ("Law Enforcement Officers Killed and Assaulted 1995" 23-24).

The loss of an officer can have enormous adverse effects on all involved, including members of the officer's family, the department, the community, and law enforcement as a whole. For those who will discount the personal effect of losing an officer to the "price of business," there is also the financial aspect to consider. Every time a law enforcement officer is murdered, it costs the agency more than a million dollars (Brierly; Pilant 52). Agencies may encumber an even larger financial loss in the event of a serious injury, which can prevent the injured officer from returning to duty.

The information for this research project comes from various law enforcement periodicals, statistical data from the Texas Department of Public Safety, the Federal Bureau of Investigation, and soft body armor policies from several police departments. Surveys of the clearing house cities used to justify pay scale for the Waco Police Department were also used.

The intended audience for this project is the law enforcement executive that is taking a serious look at protecting officers from an increasingly violent culture we serve. The intent is to show that the current policy is neither safety conscious nor economically sound, therefore a mandatory wear policy is imperative. The adoption of a mandatory body armor policy would establish officer safety as an important issue and impress safety among the individual officers.

History, Legal or Theoretical Context

Through out the ages, those threatened with weapons sought to protect themselves from injury with some form of protective garment. Early warriors relied on brine-soaked leather garments to protect them from injury. Roman armies wore cumbersome metal breastplates (Edwards 17). The Middle Ages, brought about the advent of the mail shirt, or hauberk (composed of interlocking iron rings). The iron shirts later evolved into full suits of armor

intended to protect combatants from the slings and arrows of their opponents. Armor, which could not be made totally bulletproof, became obsolete after the Battle of Bicocca in 1522 which was won by the use of hand firearms (Hausman 80).

Over the next four centuries, not much occurred to move this body-protecting technology forward. Combatants shot it out at close range without giving much thought to protecting themselves from injury or death. In the civilian sector (particularly among advocates of the code duello, or dueling, which served as an early criminal justice system), it was considered a matter of fate or as just punishment for crimes committed to be struck down by an opponent's shot (Hausman 80).

Personal body armor was not given any consideration until the advent of modern police forces in the late 19th and early 20th centuries. The renewed interest in body armor was brought about by the surge in gangsterism which was brought on by prohibition. These efforts resulted in the invention of nonflexible "hard" body armor that would be donned when an officer was expecting to engage in a firefight. Hard body armor was heavy and restrictive of movement to a degree that made it impractical for everyday wear, and would only be used for certain tactical operations (Hausman 80).

During World War II, however, rapidly advancing technology provided some hope with the development of flak jackets by the military. The early models were bulky, heavy, and offered protection primarily from fragments and slower projectiles, not from high-powered military rifles. The military made advancements during the next two decades although little research was dedicated, to providing the law enforcement community with any type of protective clothing.

This inattention could be attributed to the lack of a perceived threat against police officers (Edwards 17).

This perception went unchallenged until the crime surge of the late 60s and early 70s as violence erupted in virtually every U.S. city (Hausman 80; Edwards 17). Law enforcement in the United States witnessed an onslaught of protests from Vietnam War demonstrations to large scale civil rights riots. During this same time period, the number of officers killed by firearms more than doubled from 55 in 1966 to 127 in 1975 (Edwards 17).

With this sudden and dramatic increase in the nature and degree of violence against the police, law enforcement agencies seriously considered the defensive options available to officers. The law enforcement community needed some form of defensive protection against what was rapidly becoming a losing battle against assaults committed with firearms (Edwards 17).

During the 1960s the DuPont Chemical Corporation developed a new synthetic fiber known as Kevlar® which was found to be five times stronger than steel (I.A.C.P. 4). Kevlar® was initially developed as a replacement for the steel cord in tires (Pilant 32). Researchers found when this fiber was woven into a multilayered garment, Kevlar® was able to prevent the penetration of rounds fired from modern firearms (I.A.C.P. 4).

The U.S. National Institute of Justice and Richard Davis, President of Second Chance Body Armor, both lay claim to originating the concept of concealable body armor. In 1971, Davis used ballistic nylon to craft his first body armor designs. In 1973, Davis created the first hybrid vest, by combining ballistic nylon with early forms of Kevlar Aramid fiber.

Kevlar® was offered to the general police public in 1972 after it had been refined to the point it could be worn as a concealable bullet resistant vest (I.A.C.P. 5). In 1975, the National

Institute of Justice distributed 5,000 bullet-resistant vests to volunteer officers in 15 cities. This began a 20-year effort to offer police officers some form of protection from firearms (Edwards 17: Pilant 33). During the 1980s and 1990s, many improvements and even new fibers have been developed to make ballistic materials lighter, more flexible, in order to provide better ballistic protection (Pilant 33).

Review of Literature or Practice

The earliest studies indicated that many police officers did not believe their management (up through the chief of police and even extending to the city councils and executive city administration), really cared whether they wore soft body armor or not (Brand 5). Some officer rationalized their failure to wear body armor by suggesting, if management thought we should wear soft body armor they would make it mandatory, like some rules regarding the size of heel on your boot, the color of your socks, or the type of jewelry worn. Research confirms one of the most important factors influencing wear rate is the support of management (Estey 20).

A large percentage of all police officers are involved in professional activities which expose them in one way or another to personal danger. One of the primary safeguards available against such danger is the use of soft body armor. A study conducted just a few years ago indicated that about half of all police officers had protective soft body armor available for their use. In recent years, that number has probably increased substantially (Brand 1). This armor is often furnished to them by the local law enforcement agency for which they work or a local citizens group. In some cases, it is purchased by the officers privately, either with an allowance provided to them or with their own funds.

While supplying vests to each and every law enforcement officer in the U.S. is very important, *wearing* of soft body armor is paramount to saving officers lives. Analysis of law enforcement officers killed in the last 18 years revealed 42% of those officers could have been saved had they worn soft body armor. During the 1980s, soft body armor wear was estimated between 14% to 19%. As recent as August of 1997, the FBI estimates 35% of officers regularly wear body armor (Knight and Brierley 23).

Threat problems can exist virtually any time an officer is on duty. Quite often, actual personal attacks or serious accidents occur at unexpected times, in seemingly non-threatening situations and not just at times of obvious risk, such as in raids or dangerous arrest situations. It is interesting to note that at times of obvious danger, the officer is likely to wear protective soft body armor nearly 100% of the time. Normal nonrisk utilization is far less than that (Brand 1).

The FBI conducted a study in the 1990s that shows the risk of a firearms-related fatality for an officer not wearing body armor is 14 times higher than for an officer who is wearing armor. The study revealed that 89% of officers are killed with their own weapons, making a convincing argument that soft body armor is a quick and easy way to increase the survival rate among law enforcement officers (Estey 20; Westriek 41).

With an increasingly violent culture, law enforcement officers are needlessly dying at an alarming rate. While the number of officers wearing soft body armor has increased over the past several years, many officers still choose not to wear their body armor. The number of officers using protective body armor could be increased substantially through implementation of a department developed mandatory wear policy.

As part of this policy proposal research a series of telephone interviews were conducted in May 1998. The respondents included a representative from each of the 15 cities used by the City of Waco to justify police officers' salaries. The interviews focused on who purchases the vests and what policy, if any, each city had about soft body armor. The results show that all but one of the departments interviewed furnish soft body armor for their officers or give an allowance towards the purchase (Appendix B).

Out of the fifteen departments, ten departments have optional wear policies (Appendix A). One department does not have a written policy for body armor, however the custom in that department allows an officer to wear body armor if the officer buys it. This type of policy is essentially an unwritten optional wear policy. Optional wear policies are ineffective in protecting the lives of officers, this is evident by the number of slain officers that could have been saved if they had been wearing body armor, thus supporting the need for mandatory wear policies.

Two departments surveyed have across the board mandatory policies. Mandatory body armor wear policies have three clear benefits: They make use of the expensive equipment that the departments have furnished in most cases; They protect the city against possible lawsuits resulting from optional policies; and, They afford each officer with the highest level of personal protection reasonably possible.

Two departments had optional policies that contain certain exceptions. One exception made it mandatory for probationary officers to wear body armor. Taking the current studies into account, younger officers under 30 fail to wear body armor less than ten percent of the time (Pilant 35). The other exception makes body armor wear mandatory for high risk warrant service. Life threatening situations can occur any time, in fact from 1986 to 1995, more officers

lost their lives while investigating suspicious persons or circumstances than while performing any other duty including high risk warrant service (Maguire and Pastore 379).

This research reveals that the optional wear policy is the current trend for surrounding agencies. If a mandatory soft body armor wear policy was initiated, it would save both officers' lives and money. It is interesting to note that in the several research studies conducted, officers were probed on their reaction to the possibility of a mandatory wear policy by their departments. Although most indicated they would resent such an imposition, virtually all indicated they would accept it (Brand 6). The research indicates that officers desire clear direction, and want to be told what to do. Whenever arguments, disagreements, and political points of view are openly aired in this field, they tend to indicate lack of assurance, of equivocation, and thus support the officer's decision not to wear (Brand 7).

Discussion of Relevant Issues

The purpose of this research is to justify the need for administrators to adopt and support a mandatory soft body armor wear policy. The advantages and disadvantages of mandatory soft body armor policies will be discussed as well as the myths surrounding the use of soft body armor.

The foremost advantage of adopting a mandatory soft body armor policy is the higher wear rate among officers. The current estimated soft body armor wear rate is somewhere between 20 and 35 percent (Knight and Brierly 23; Estey 20) . A mandatory wear policy for soft body armor would correct the wear rate to nearly 100 percent of uniformed officers. The higher wear rate would most likely result in a significant reduction in the number of officers killed.

Soft body armor has proven its ability by protecting officers from injuries suffered during accidents and assaults. History shows that soft body armor is not only bullet-resistant, but has provided protection in such life-threatening events as falls, car crashes, motorcycle spills, explosions, stabs, slashes, punctures, and several thermal threats. Fortunately, vests can help reduce the threat of injury or death from the many dangers facing law enforcement officers by providing a protective wrap around the vital organs (Knight 24).

Although there is no monetary figure that can be put on an officers life, apparently for some it is the cost that matters. Those people may be interested to know that when an officer is killed in the line of duty, it costs the city an average of 1.4 million dollars (Brierley). The average slain officer is a male 31 years of age, leaving behind a spouse between 26 and 27 years of age with a life expectancy of 79.2 years (Maddox 3). The spouse gets 50 percent of the slain officers salary for the rest of their life which can easily exceed the one million dollar mark . The monetary figure for an injured officer who is unable to return to work may far exceed that of the slain officer, as he receives 75 percent of his salary for the rest of his life. Mandatory soft body armor policies protect the officer and the city. Without question there are not many cities that could afford such expenditures, yet many leave the decision of vest wear up to the individual officer. It would be far more cost effective to institute a mandatory wear policy. For those departments that have yet to purchase body armor the federal government is offering assistance which should make body armor affordable for most any department.

This research would not be complete without discussing the disadvantages of body armor and mandatory wear policy. Louis Pilants' article titled "The Importance of Body Armor" in the December 96 issue of Police Chief states:

The Number-one reason officers do not wear their vests, is comfort, or the lack of it. Many complain that concealable body armor is hot, bulky, heavy, uncomfortable. Indeed, in its original incarnation, the armor was like wearing a corset and the carrier was made of cotton, which absorbs and hold perspiration. Today's armor weighs 50 percent less than the same vest five years ago. One company manufactures a vest that weighs less than one pound per square foot. Some vests have padding on the shoulders, top straps for a more comfortable fit, and removable elastic straps. New carriers are constructed of Gore-Tex™ which is a soft, silky material that is waterproof and breathable (Pilant 32-30).

One can argue that policy, not comfort, is the number one reason officers do not wear body armor. Duty belts with firearms and radios are the most uncomfortable equipment officers are issued. This equipment has been attributed to lower back pain in many officers, yet nearly every uniformed law enforcement officer wears it. The reason for such a high wear rate is very simple, it is a result of mandatory wear policy for this equipment. So the number one reason officers do not wear their body armor is because policy allows them not to.

Time on the job is the second most common reason for not wearing body armor comes from the truly veteran officer, the "old-timers." Just under half of the officers over 50 say they do not possess a vest or wear it only one time out of four when working on the street. Less than 10 percent of the officers under 30 take such chance. Younger officers are far more feverent about wearing body armor than are veteran officers (Pilant 35).

Heat retention and water absorption are other disadvantages of soft body armor. Soft body armor is hot on sultry summer days. The increased heat retention produces more sweat which can be absorbed by the ballistic material. Water will also be absorbed by the material in the event it becomes submerged during water rescues etc., making the body armor increasingly heavy and difficult to manage during such situations. The newest addition to soft body armor is the Gore-Tex™ carrier which prevents water absorption.

A mandatory wear policy for body armor is expensive, on average a good fitting high quality vest cost \$500.00 dollars. This is expensive when outfitting an entire department. The replacement cost of body armor that expires or is damaged must also be considered.

Recently the federal government has shown it's belief in the life saving abilities of soft body armor. On May 15 1998, the federal government set aside 125 million dollars to be spent over the next five years on soft body armor. This money is set aside for U.S. law enforcement officers who work for departments unable to afford body armor ("Senate Oks funding bill for police vests" 6A). This money is to be matched dollar for dollar by the receiving department. This will drastically reduce the fiscal impact of departments providing law enforcement officers with soft body armor (Brierley). All of this money will have little effect on the death toll of officers if the body armor is not worn.

Conclusion

The purpose of this research is to justify the need for administrators to adopt and support a mandatory soft body armor wear policy. Once the mandatory policy is adopted, administrators can be confident they have addressed a serious officer safety issue. The city coffers will have added protection from the cost of a slain or injured officer and, possibly, a more costly law suit that can result from having an optional wear policy.

The optional wear policy, or lack of any policy concerning soft body armor, has not been effective in saving officers lives. In the past 18 years alone 557 officers' lives could have been saved if they were wearing their soft body armor. The number of slain officers for the past 18 years is 1327. This number could have been much lower had these slain officers worked for departments that had adopted mandatory wear policies.

The means for officers to save their lives is available to most officers; although, some departments do not have the fiscal resources available to furnish soft body armor to their officers. A large percentage of officers have body armor available to them but choose not to wear it due to myths, current policy, and perceived attitude of management concerning body armor. The current policy of most departments surveyed is still optional wear, which reduces the belief in the life saving ability of soft body armor. The optional wear policy will continue to claim the lives of officers until administrators have a change of attitude and institutes mandatory wear policies. It is much more cost effective; which is also important with fiscal resources lessening everyday. Law enforcement executives can make a simple decision to reduce the number of officer deaths by instituting mandatory wear policies for soft body armor. The Law Enforcement Officers Memorial can hold 29,233 names and unless specific measures are taken to reduce the current rate of 153 deaths per year, the monument will be filled to capacity by the year 2100 (Cipriano 81).

BIBLIOGRAPHY

- Beatty, Sgt Midland Police Department Telephone interview. 28 May 1998.
- "Body Armor Concepts and Issues Paper." IACP National Law Enforcement Policy Center 1, June 1990: 1-11.
- Brierley, William Telephone interview. 29 May 1998.
- Capriano, Richard F. "Executives Can Take Action to Reduce the Number of Officers Murdered in the Line of Duty." Human Resources in Criminal Justice 1994: 73-82.
- Dionisi, Joe Grand Prairie Police Department Telephone interview. 28 May 1998.
- Edwards, Terry D. "Soft Body Armor The Legal Issues." FBI Law Enforcement Bulletin March 1995: 17-23.
- Estey, Joseph G. "Survivors' Club Hits 2000." The Police Chief May 1997: 19-20.
- Floyd, Craig "Crime is down, but policing is still deadly." National Law Enforcement Officers Memorial Fund Newsletter February 1998: 1.
- Garcia, Arnie Corpus christi Police Department Telephone interview. 28 May 1998.
- Hodges, Officer Richardson Police Department Telephone interview. 28 May 1998.
- "Law Enforcement Officers Killed and Assaulted 1995." US Department of Justice, Bureau of Justice Statistics Washington, DC: USGPO, 1997: 23-24.
- Maddox, George L., PH.D. The Encyclopedia of Aging New York: Spring, 1995: 3.
- Maguire, Kathleen and Pastore, Ann L., eds. Sourcebook of Criminal Justice Statistics 1995 U.S. Department of Justice, Bureau of Justice Statistics Washington DC: USGPO, 1996: 379.
- Malony, Sgt. Wichita Falls Police Department Telephone interview. 28 May 1998.
- Marsh, Kevin Mesquite Police Department Telephone interview. 28 May 1998.
- Martin, Sgt. Arlington Police Department Telephone interview. 28 May 1998.
- McFee, Officer Carrollton Police Department Telephone interview. 28 May 1998.
- Miller, Gilbert "Soft Body Armor Policy." Waco Police Department February 1996: 1-2.

Moad, Sgt. Odessa Police Department Telephone interview. 28 May 1998.

Pilant, Lois. "The Importance of Body Armor." The Police Chief December 1996: 30-52.

Plymail, Lee Tyler Police Department Telephone interview. 28 May 1998.

Stanley, Officer Pasadena Police Department Telephone interview. 28 May 1998.

Townley, Bill Lubbock Police Department Telephone interview. 28 May 1998.

Warren, Officer Irving Police Department Telephone interview. 28 May 1998.

Westrick, Aaron J. "The Role of Body Armor." Law and Order August 1997: 41-43.

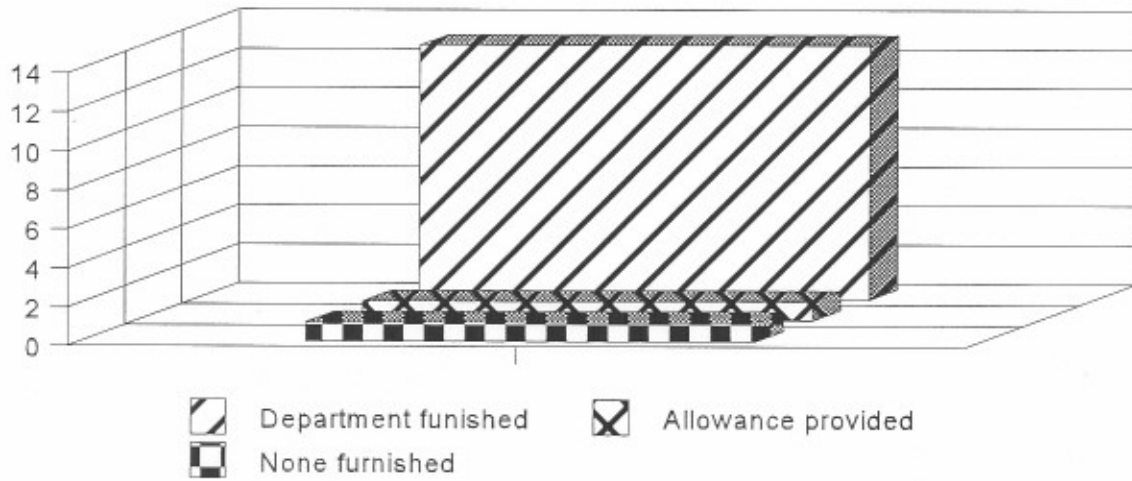
Woodsmall, Edward Beaumont Police Department Telephone interview. 28 May 1998.

"Senate OKs funding bill for police vests." Waco Tribune-Herald 16 May 1998: sec. A: 6.

Appendix A

Soft Body Armor Survey

Fifteen Departments Surveyed



Appendix B

	<i>Mandatory body armor policy</i>	<i>Mandatory for probationary officers. Optional for all others.</i>	<i>Mandatory for "High Risk Situations." Optional for other situations.</i>	<i>Optional Body armor policy</i>	<i>No Policy</i>
Arlington Police Dept.				X	
Beaumont Police Dept.				X	
Carrollton Police Dept.				X	
Corpus Cristi Police Dept.		X			
Grand Prairie Police Dept.				X	
Irving Police Dept.				X	
Lubbock Police Dept.				X	
Mesquite Police Dept.				X	
Midland Police Dept.				X	
Odessa Police Dept.					X
Pasadena Police Dept.				X	
Richardson Police Dept.	X				
Tyler Police Dept.			X		
Waco Police Dept.	X				
Wichita Falls Police Dept.				X	
<i>TOTAL</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>10</i>	<i>1</i>