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**Police Patrol Rifle:
A Viable Tool for a Law Enforcement agencies?**



**An Administrative Research Paper
Submitted in Partial Fulfillment
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ABSTRACT

Patrol rifles considered as a viable tool for law enforcement agencies, is relevant to contemporary law enforcement because the mindset of today's criminal element is becoming ever more dangerous for law enforcement officers. Today's criminals are often armed with automatic and semiautomatic high-powered rifles of different types. The criminal element are often wearing body armor and have a more willingness to shoot and attempt to kill law enforcement officers. The purpose of this research is to establish the need for the first responding officer to have a more versatile weapon while responding to ever more dangerous situations. It is this researcher's belief that this weapon should be the .223/5.56 mm carbine. More law enforcement departments across the country are becoming more and more concerned with this trend and as a result are beginning to arm officers with this versatile weapon. The top choice for that tool is the .223/5.56 mm caliber carbines.

The researcher will also identify the benefits of implementing the .223/5.56 mm carbine into the patrol function. The method of inquiry used by the researcher included: a review of books, magazine articles, police journals, various Internet sources and a written survey. The researcher discovered that a valid concern of law enforcement executives and the public alike is the likelihood of over penetration of the round and concerns that innocent bystanders may be struck by that round. Research has demonstrated that with the right type ammunition, over penetration is very unlikely and is thus of no real concern. Research had also shown that, in tests using wallboard and 10% ballistic gelatin, many of the commonly used police handgun ammunition would penetrate a much greater distance than the .223/5.56 mm round. Due to the design of

the .223/5.56 mm round, it has much more superior terminal ballistics that will consistently penetrate body armor when handgun caliber ammunition and shotgun ammunition will not. Additionally, due to the design of the bullet, it more likely to break up and fragment upon striking a hard surface, thus eliminating the concern of over penetration or ricochet. Research has also suggested that just the opposite is true for the handgun ammunition and shotgun ammunition commonly used by law enforcement where these rounds are likely to ricochet or over penetrate.

The researcher, agreeing with many experts in the field, has come to the conclusion that .223/5.56 mm carbine has characteristics that will give law enforcement officers distinct advantages in the field. It is the recommendation of the researcher that departments considering the use of a carbine should research and implement the necessary policies that will govern officer's training and qualifications before issuing the carbine to officers.

TABLE OF CONTENTS

	Page
Abstract	
Introduction.	1
Review of Literature	3
Methodology	15
Findings	17
Discussions/Conclusions	22
References	28

INTRODUCTION

On February 28, 1997, a bank robbery and shootout occurred in Los Angeles, California. This incident brought attention to the fact that commonly used police weapons lack effectiveness in certain instances. The Los Angeles Police Department responded quickly to the scene at the North Hollywood bank and encountered two heavily armed suspects. Each of the suspects were armed with fully automatic military type assault rifles and handguns. Both suspects were also wearing personal body armor at the time of the robbery. Realizing their efforts to stop the suspects were ineffective, Los Angeles police officers entered a nearby gun store and borrowed rifles and ammunition to confront the current threat and bring it to an end. SWAT officers, utilizing rifles mortally wounded the suspects, bringing the threat to an end. When the shooting was over, 11 police officers and 3 civilians had been injured. It was discovered that the two suspects had fired over 1200 rounds of ammunition during the confrontation. As a result of this robbery attempt, police departments across the country began to reevaluate the effectiveness of current police patrol equipment, especially the type firearms issued to officers (Williams).

The issue to be examined considers whether or not the patrol rifle will be a viable tool for the law enforcement community. The relevance of patrol rifles to law enforcement is to identify the benefits of implementing .223/5.56 mm caliber carbines to the patrol function. The purpose of this research is to establish the benefits of the addition of a .223/5.56 mm caliber carbine to the current weapons (handguns and shotguns) used by smaller police agencies. For example, currently at the present time, many law enforcement agencies allow officers to utilize shotguns, but are restricted in

the use of patrol rifles while on patrol. The research question to be examined focuses on whether or not it will be viable and affordable for the smaller police agencies to start a patrol rifle program for the patrol officer/first responder in smaller agencies. The final ARP project will be submitted to the administration of the Bastrop County Sheriff's Office for review and consideration.

The intended method of inquiry includes: magazines articles, books, professional journals and various Internet sources. The researcher's intended outcome of this project is to address the viability of adding a patrol rifle to the existing police department arsenal and to prove that the patrol rifle will be a useful tool to protect and serve the citizens and the officers that serve them. Certainly, a major concern in a small municipal department will be the initial startup cost of such a program. Although cost of the necessary equipment is of a high priority, the quality of the equipment must be of higher priority. At present research has shown that the most popular and one of the most reliable platforms available are the AR-15/M4 type weapons. By searching through several on line law enforcement catalogs, the researcher was able to obtain approximate initial costs for all of the equipment needed to initiate the program. The author's research was based on the costs for 10 weapons, Bushmaster M4 .223/5.56 mm carbines, red dot type scopes, slings, storage cases, ammunition (duty and practice) for one year. Additional cost incurred would also include locking racks for each vehicle and the costs of mounting those racks. From GT Distributors, the cost for 10 Bushmaster M4 carbines will be a total cost of approximately \$9000. Slings will be approximately \$350. EOTech sighting systems will be approximately \$4000. Storage bags will be approximately \$900. Practice ammunition will be approximately \$2500 and

duty will be approximately \$ 750. Locking gun racks for 10 patrol vehicles will initially come at a cost of approximately \$2200 with an installation fee of approximately \$500. This will be an initial startup cost of approximately \$ 20200. Yearly maintenance of the program would be approximately \$8000 per year for officer salaries and ammunition for practice and qualification.

The researcher feels that the implementation of the use of patrol rifles in the smaller agencies of our nation will give administration and officers a better variety of options in cases where deadly force is needed. The researcher also believes that having patrol rifles available to designated police officers will provide a safer community and provide a safer work environment for the police officers. Moreover, the researcher feels that, due to the increased accuracy and lessened likelihood of ricochet and over penetration, the introduction of patrol rifles may also help reduce liability issues to the Sheriff's Office and the administration. The implications of this research should show that there is a need for a carbine/patrol rifle in the urban police environment. The intended outcome or anticipated findings of the research should result in the Bastrop County Sheriff's Office and other law enforcement organizations implementing a patrol rifle program for their department. The field of law enforcement will benefit from the research or be influenced by the conclusions because extensive documented research had shown that our society is changing. Our society is becoming more lax on crime and criminals in general. As a result, the modern criminal element has less fear of tough prosecution and long prison terms. The criminal element is becoming more dangerous for citizens and law enforcement on a daily basis.

REVIEW OF LITERATURE

In the past several years there have been numerous law enforcement articles published throughout the country describing the need for law enforcement in general to be better armed in order to better respond to the increasing violence of the criminal element. Active shooter situations are becoming more common in our schools and businesses around the country. Law enforcement administrators are beginning to realize that first responders cannot always wait on SWAT to respond to a situation where men, women and children are being killed. Administrators, realizing that first responders need a new tool to even their chances against heavily armed assailants, are embracing the need for the .223/5.56mm carbine for those officers.

The researcher discovered that there are many factors to consider when searching for a rifle to be issued to police officers that may have little or no training in handling or firing such a weapon. The weapon should be dependable, easy to operate and maintain and have little recoil. The .223/5.56mm in the AR-15/M4 configuration is one of the best platforms available. One important area that has been studied extensively in the .223/5.56mm caliber is the terminal ballistic data of that round. The researcher found that many administrators were very concerned about over penetration and the long range capabilities of the .223/5.56 round. The researcher believes that the information and studies conducted by experts in the field will alleviate those concerns. The information detailed below should explain in detail why the fears of over penetration and long range hazards are more myth than fact.

TERMINAL BALLISTICS

In order to understand the .223 rifle round capability and to dispel the myths

that surround it, a basic understanding of ballistics must be reviewed and more specifically terminal ballistics. Many doctors, scientists and other researchers in this field have conducted exhaustive research in ballistics research and development. The various military branches and police agencies have conducted and continue to conduct extensive research on this topic; and after all the material is reviewed, a clear picture of the .223/ 5.56 mm caliber round and what happens when the round makes contact with a medium is presented.

Ballistics can be broken down into three segments. The first is internal ballistics, which deals with what occurs from trigger press to the time when the round exits the muzzle. Next is external ballistics, dealing with the flight of the projectile and the environmental effects on the projectile. Finally, we have the study of terminal ballistics. Which deals with what happens when the projectile strikes its intended target and continues its travel until its forward motion stops. In order to dispel the over penetration concerns, terminal ballistics will be the most discussed.

When a bullet traverses the body, it destroys tissue, blood vessels and may break bones. This creates a permanent wound cavity. This wound cavity needs to be deep enough to reach vital organs. Three different factors affect the severity of this wound.

The first factor, when a rifle round is fired and the bullet is propelled down the bore, the bores rifling induces a gyroscopic spin on the bullet. This spin is required to stabilize the bullet during flight. This spin is not perfect, and most rifle rounds tend to yaw, or deviate slightly from a perfect point-forward position during flight. Suarez (1999) emphasized, "that the round is not "tumbling" in flight. The portrayal of the .223 tumbling

end over end in flight is yet another myth” (Suarez, 1999, 36). The .223 round will yaw about 1 to 2 degrees, so that its long axis makes a slightly greater angle with the line of travel. However, when the bullet strikes a human body, the yaw also creates a greater amount of tissue contact. Only when these bullets strike the body, the yaw may be enhanced as much as 180 degrees as it travels through tissue; sometimes ending up base forward causing a greater circumference of tissue contact.

The second factor that affects the severity of the wound and the ability of a projectile to expand. Expanding projectiles tend to damage more tissue by making a larger orifice. It is important, however, not to choose a round that expands too soon or too much, as this may mitigate penetration. Penetration is vastly more important than expansion when it comes to reaching deeper vital organs. If a bullet expands too quickly, it may never reach the vital organs.

The bullet's pointed shape makes it heavier at its base than at its point, so that its center of gravity is at the rear of the bullet. When the bullet meets resistance, it attempts to rotate 180 degrees around its base to achieve a stable base-forward orientation. The stress of tissue resistance to the bullet's passage often overpowers the physical integrity of the bullet. This may cause the bullet to shed its jacket or bend at the cannelure (the point where it is crimped into the brass case), thereby enhancing the wound channel even more.

The third factor; bullet fragments may come off the projectile itself and move radically away from the line of travel, in turn creating their own wound cavities. The .223/ 5.56 mm round creates a dramatically large permanent wound cavity due to these dynamics (Suarez, p. 37).

Suarez (1999) observed testing conducted by Bill Jeans and published in The Tactical Edge magazine NTOA, the only calibers that did not exit a "house" (as simulated for the test), were .223/ 5.56 mm soft point and hollow point bullets. Moreover, the full-metal jacket (FMJ) M-193 bullets showed no more penetration than the standard pistol bullets in service (9mm, .40 S & W, and .45 ACP).

Suarez (1999) consulted with other testing conducted by the FBI. The FBI shot heavy clothing, steel plates, wallboard, plywood, light clothing, automobile glass, interior and exterior walls, as well as body armor. Their findings indicate the following: 1.) Soft body armor is no barrier against .223/ 5.56 mm bullets. 2). With the exception of a full metal jacket bullet; it is not a good idea to select the .223/ 5.56 mm for vehicular assaults as its penetration against automobile safety glass is generally poor, and only slightly better than on sheet metal, and 3.) Common barriers found in a residence, such as wallboard, plywood, or internal/external walls, are more easily penetrated by pistol calibers or large-bore rifle calibers such as the .308 (even in cases where such barriers have been penetrated, the wounding potential of the rounds is greatly reduced when compared to pistol calibers). These tests also indicate that the high velocity .223/ 5.56 mm round may shatter if it strikes a hard object that offers strong resistance, such as concrete or brick. In such cases, since the bullets tend to break-up, ricochets are generally less hazardous. This means that concerns about over penetration and the danger to the populace presented by missing rounds have been greatly exaggerated, and that the .223/ 5.56mm is relatively safer than pistol bullets for everyone in the close-quarter battle (CQB) application (Suarez, 1999, p.37).

Moreover, further testing showed that after exiting similar walls, the .223 bullets would only penetrate 5 ½ inches of gelatin, compared to nearly 20 inches for pistol bullets! Apparently, when the .223/ 5.56 mm bullet was shot through a wall it began to break up and fragment, which reduced its penetrative characteristics (Suarez, 1999, p.38).

Chudwin (2001) noted, others argue that rifle cartridges are too dangerous in the urban environment because of distance the bullet can travel. Consider the maximum range of the following rounds as listed in the Winchester ballistics tables: .223 Remington/8300 feet, .357 mag/7100 feet, 9mm/6800 feet, 12 Ga. 00 buck and 12 Ga. 1 oz. Slug/1830 feet. While the rifle round has a potentially greater range, all projectiles fired from any type of police firearm will travel more than a third of a mile. Any stray round is a hazard, and it is illogical to claim that one type firearm is more or less dangerous than another based only on the maximum range of the round fired from it. The key issue is, what is the penetration and ricochet potential for the bullet type and caliber in a residential area? The researcher found that the .223/ 5.56 mm cartridge loaded with hollow point or soft point bullets, penetrates significantly less against residential wall construction, and poses far less ricochet problems than does typical law enforcement pistol and shotgun rounds.

Barrel length and proper ammunition is key to the amount of penetration desired. If velocity is decreased, bullet fragmentation will be reduced thereby reducing wound severity. Rifles will exhibit this performance if impact velocity is at least 2,700 feet per second (fps). If the impact velocity decreased to less than 2,700 fps the bullet may

break at the cannelure, but no fragmentation will occur. This will decrease the effectiveness of the round. Below 2,500 fps., there not be any break-up, or fragmentation, and the wound will not be as dramatic (Suarez, 1999, p.39).

Chudwin (1999) explains, there are differences of opinion as to the effectiveness of bullets that do not penetrate at least 12 inches of gelatin. This penetration depth is considered necessary by some very knowledgeable experts due to thick body mass of offenders or angle shots through the extremities into the torso. It is argued that bullets must reach sufficient depth to strike vital organs and blood vessels. When a round fails to make such depth of penetration, it is considered lacking in terminal performance. To be most effective, a bullet must retain its weight, without the jacket and core separating. However, there is no one .223 bullet that penetrates barriers and tissue, maintains weight, does not separate core and jacket, and still poses a low level of hazard due to ricochet or excess penetration. Bullets of standard construction penetrate shorter distance into gelatin, are more frangible, and generally shatter on impact with hard surfaces.

Chudwin (1999) conducted tests, which showed that bullets of standard construction penetrate shorter distances into gelatin, are more frangible, and generally shatter on impact with hard surfaces. The 55-grain Federal Tactical round penetrated the required 12 inches of gelatin but in respect to wall penetration, the Federal Tactical round is similar to all handgun ammunition and shotgun slugs or buckshot. This may not be the choice for officers making an entry into a residential home but may be the

answer for routine patrol duties so that barriers such as automobile glass or metal can be penetrated (Chudwin, 1999, p.38).

Chudwin (1999) also conducted tests with the Remington 55 grain pointed soft point or the Hornady Police Tactical Application Police round (TAP) which penetrated the wall board, but shattered in the process. Gelatin behind the wallboard was penetrated less than 5 inches with fragments of the bullet. Due to different penetration desire, two different bullet types may be needed for street use. The Federal Tactical round can be the primary patrol magazine with a second magazine of Remington 55 grain PSP or similar bullet is available for heavily populated operational areas or entries into residential dwellings. The REDI-MAG pouch can be attached to the left side of the firearm, which will allow for quick magazine changes.

Chudwin (1999) emphasized, "There is always a difference of opinion. My decision is based on testing and comparison. It does not fit all criteria for all purposes. Whatever ammunition an officer must choose that, decision should be based on realistic testing and evaluation" (p. 39).

Training with a rifle, as with the duty sidearm, is the one of the most important aspects of being a police officer and completion training and qualification program must be a strict requirement of all officers before a rifle is issued. Rifle shooting involves fine motor skills and to properly program students, Fairborn recommends no less than 24 hours in a basic training program. Furthermore, periodic in-service training and qualification must follow up the basic training. Periodic training four times per year with two qualification courses of fire would be a good sustainment program (Fairborn, 1994 p. 62).

Felts (2003) believed, in addition to Fairborne's recommendation, officers should attend at least one advancement school per year as well.

Suarez (1999) *The Tactical Edge-NTOA* explains, "Aimed fire, or as some call it. "Instinctive" shooting is not new. The question of which is better for combat, however, continuously surfaces" (p.57). Point shooting was around for many years up until the late 1970s. Statistically, officers did not fair well with this technique so a better method was developed. Suarez argued, "If this technique was adequate why was an alternative method designed" (p. 58). Simply put too many officers were shot by suspects due to officers missing by point and shoot methods at close range. The failure of the point and shoot method led to the adoption of the Jeff Cooper system, (sight-only system) or one of its equivalents. One such agency was the Los Angeles Police Department.

The LAPD abandoned the point and shoot technique, adopted the Cooper system and made it work. Hit rates in police shootings went up significantly. In the 70s, the percentage of hits was minimal. In 1991 after utilizing the Cooper sight-only system for several years the hit rate went up 56%. In 1996, it was 70% and continues to grow higher each year (Suarez, 1999, p.57).

Police officers can be trained to keep cool guaranteeing shots by using the sights. Training will substantially lower stress. The list of successful officers is long and distinguished. Missed shots will give the suspect a chance to kill, "who?" Only hits count. Point shooting in a dynamic environment with moving targets will inevitably lead to miss shots. Officers should seek to win by design, not by default (Suarez, 1999, p.58).

The sights must be used for all shooting, except situations where one is so close that a standard firing position would allow the adversary an opportunity to grab or deflect the gun. This doesn't mean that you spend seconds trying to acquire a perfect sight picture. The degree of precision in sight alignment and the resulting sight picture greatly depends on size of the target, distance, and the difficulty of the shot (Suarez, 1999, p.58).

Patrol rifle/carbine officers must learn during training what their limitations are. Realistic expectations are critical and must be instituted during training. Qualification courses should run parallel with the expectations of what the officer should be capable of in a real shooting incident. For example, one advantage of the patrol rifle/carbine is the ability to engage targets at extended distances. A police officer after completing a 24-hour basic user school should have the ability to engage head size targets out to 50 yards and body size targets out to 100 yards. The patrol rifle/carbine shooter has the weapon and marksmanship training to engage much further away than a shotgun-armed patrol officer. According to Fairborne 84% of command officers surveyed felt the patrol rifle officers would be able to engage head targets out to 50 yards. 11% said no and 5% were not sure. Fairborne also indicated 89% of the command officers felt the patrol rifle officer could engage body size targets out to 100 yards while 11% were not sure.

With any type of weapon system deployed, understanding limitations and capabilities are critical and should be thoroughly covered in training. Due to the capabilities of the patrol rifle/carbine, officers are able to learn advanced techniques. Techniques that would save lives immediately versus waiting for an advanced tactical

team to arrive. The patrol rifle/carbine can be used for dynamic emergency rescues. The purpose of a downed victim rescue is to move an injured victim from a hostile environment to a safe location where medical aid can be rendered. In addition, it may be necessary to remove a victim who is not injured but in a location where he/she is vulnerable to hostile gunfire. A team of patrol rifle/carbine officers could deliver suppression fire towards the suspect while moving into position to extract the victim. Furthermore, training in various movement formations should be covered in detail. When officers have to advance into hostile territory to rescue victims or stop an active shooter all angles must be covered. Hubbs (P. 64)

As with any weapon system, regular training and training relevance is critical. The earlier an officer receives training in his/her career the better he/she will be in weapons marksmanship, understanding what is capable with the chosen weapon system, and knowing what their own strengths and limitations are. This explains why police recruits receive training with the handgun and shotgun in the police academy. Fairborne (1994) observed, "While all agencies or academies train with side arms and shotguns, very few teach the rifle to recruits." Fairborne (1994) states that 85% of command officers surveyed felt that if new police recruits were trained with the patrol rifle from the beginning (academy) of their careers, it would simply become another piece of equipment they would be efficient and competent with.

Conley (2000) explains, active shooter incidents have been stereotyped and repeated excessively in both rural and urban environments. As a result of this, law enforcement administrators must accept the possibility of an active shooter incident occurring in their jurisdiction, and be prepared to respond.

It is the responsibility of the agency to train and equip their officers to succeed, especially in their most important function, which is to protect life (Fairborne, 1994, p.10).

Many police departments are adopting policies and training to deal with active shooter incidents. The failure to respond appropriately and within a reasonable time may subject police departments and their administrators to civil liability and negative criticism. The purpose of the policy is to provide officers with guidelines in dealing with an active shooter situation. It should be noted that these policies do not mention the SWAT team as the first responders for several reasons: 1.) Most active shooter situations are concluded prior to the arrival of SWAT. Though, the SWAT team should be immediately summoned at the onset of such an incident. 2.) Many small agencies do not have their own SWAT. 3.) Waiting for the arrival of SWAT could result in the loss of more lives. **Conley (p. 11)**

Officers are now being trained to immediately establish an Emergency Response Team (ERT) when an active shooter situation occurs. Such training is nothing new; SWAT teams have considered this as “contingency planning”. The idea is to have a team of officers ready and prepared to take immediate action if citizens or hostages are being murdered. The ERT can exist with 3 members but 5 are optimum if effective equipment and officers are available. **Shaver.**

Hubbs (2000) insisted, “If there exist within our community a post office, public school, library, office building, fast food restaurant, or any other location where people come together, an active shooter incident could occur within your area” (p. 64).

In order to be successful in responding to an active shooter situation, officers must receive training on how an ERT deploys and functions as a team unit. The officers must have immediate access to firearms capable of delivering accurate fire at greater distances. Schools have long hallways, large auditoriums and gymnasiums. Factories have long corridors and large open areas. Furthermore, any of these people populated areas could turn into hostage rescue situations where accuracy will be critical. Many active shooters deploy assault rifles and some have had fully automatic weapons. When police arrive on scene they should always have one up on an assailant or in other words a bigger gun (Chudwin & Kulovitz, p. 12).

Police officers responding in vehicles carrying patrol rifles can arrive sooner and prepare quicker. Most all police officers will already have a vest on and a helmet can be carried in the trunk of every police vehicle. When citizens are being murdered, officers must strike a balance between waiting for specialized equipment verses an immediate response to save as many lives as possible. The .223/5.56 mm patrol rifle has distinct advantages over the shotgun and handgun in the patrol setting. This semi-automatic rifle is capable of serving as a short, intermediate and long range (100+ yards) weapon, giving the patrol officer the ability to confront most threats in which he is faced.

METHODOLOGY

The research question to be examined considers whether or not patrol rifles/carbines will be a useful and viable tool for the modern law enforcement community. The researcher hypothesizes that extensive research by numerous agencies and experts in the field will show that the .223/5.56 mm patrol rifle has distinct advantages over the shotgun and handgun in the patrol setting. This semi-automatic

rifle is capable of serving as a short, intermediate and long range (100+ yards) weapon, giving the patrol officer the ability to confront most threats in which he is faced. A patrol rifle program initiated by law enforcement agencies will prove to be a beneficial and lifesaving tool. A better equipped, better trained patrol officer will mean less danger to citizens, bystanders and patrol officers in the event of a violent confrontation involving heavily armed suspects.

The main disadvantage to implementing a patrol rifle program in any law enforcement agency will be the initial costs for equipment and training for officers. But, the researcher feels that the advantages will far outweigh the disadvantages of the initial costs. The misconception of a patrol rifle having too much firepower, penetration and range has been proven false by numerous studies and tests involving ballistics of commonly used pistol rounds and the .223 / 5.56 rifle rounds.

The method of inquiry will include: a review of magazine articles, books, professional journals and various Internet sources, a survey was also distributed to 24 participants. The research consisted of numerous trips to the library and internet sites where police journals, periodicals and studies were reviewed. A survey was also completed by numerous agencies in several areas of Texas.

The instrument that will be used to measure the researcher's findings regarding the subject of implementing a patrol rifle program will include a survey. The size of the survey will consist of 18 questions, distributed to 24 survey participants from different areas of the State of Texas. The response rate to the survey instrument resulted in receiving a response from 18 of those persons that received the survey. The information obtained from the survey will be analyzed by the researcher.

FINDINGS

Patrol rifles have been and integral part of law enforcement for many years. But due to the rise in school shooting, terrorism and other active shooter situations, the patrol rifle is rapidly becoming a required piece of equipment for patrol officers. Patrol rifles are no longer for just specialized units in law enforcement.

Research has shown that current trends and escalating violence in our schools, businesses and terrorism in general, are being committed by suspects with high powered weapons. To have a chance against confrontations with individuals using high powered weapons, police officers and police administrators must be prepared. New policies and training guidelines must be implemented and acted upon. Many departments, large and small are becoming more involved with multi agency response teams and combining resources to allow for a full response team to be available in the event an a situation of this type arises. Patrol officers must have the means and training to respond to an active shooter situation and isolate or eliminate the shooter(s). The present day weapon of choice is the AR-15 in the .223 / 5.56 caliber.

“The sight of a patrol rifle in the hands of a patrol cop, the citizens of a community seem to adapt quickly, especially if those rifles contribute to a safer environment for their community” (Huntington, 1997, p.39). Contrary to popular misconception, the .223/ 5.56 mm caliber does not over penetrate in human adversaries. The .223/ 5.56 mm usually penetrates less than 10 inches, but causes a virtual instantaneous cessation of hostilities.

The .223/ 5.56 mm patrol rifle will allow a patrol officer to engage a hostile situation a greater distances and be far more accurate, which greatly reduces the safety

risk if it were to become necessary for the officer to open fire. The .223/ 5.56 mm caliber soft point bullet also has virtually no over penetration factors to consider compared to the most popular pistol rounds.

The 3 most popular rounds of handgun ammunition carried by law enforcement officers are the 9mm, .40 S&W, and the .45 ACP. The following report was published in the Law Enforcement Management Institute of Texas (LEMIT) research paper titled Implementing The .223 Carbine for Patrol: Benefits and Issues written by Jerry Compton (1996):

In 1994, members of the training staff at the Gunsite Center conducted penetration tests to compare the penetration characteristics of the .223 Remington cartridge with those of various handgun bullets (9mm, .40 S&W, .45 ACP). Bullets were fired into test barriers representing indoor and outdoor walls. The tests were designed to mimic shots fired from inside a building, through the internal rooms, out the exterior wall, and into another similar building nearby. In these tests, the 9mm and the .40 S&W penetrated more walls than the .223 Remington, in either the 55-grain hollow point or the 55-grain soft point. The pistol bullets exited the exterior wall where the .223 bullets were captured in the exterior wall (Gunsite, p.61).

Further:

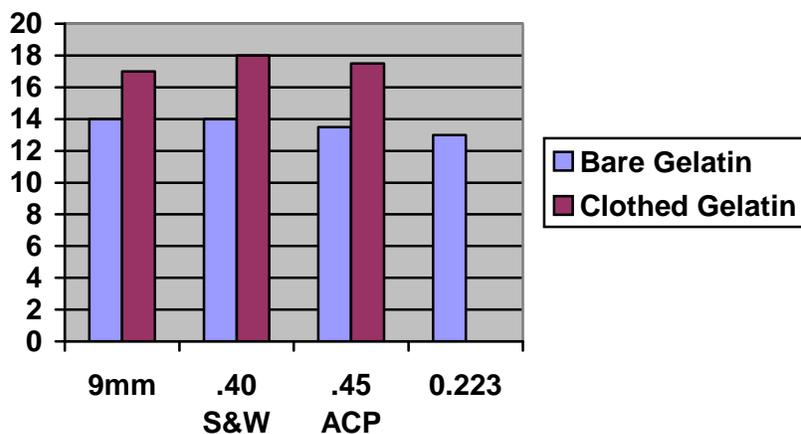
They offer dramatically better terminal performance than any handgun cartridge, yet they do not show over penetration in the ballistic gelatin testing. All four .223 / 5.56mm cartridges tested, will defeat Level IIIA ballistic body armor with little effect on the bullets performance (Hornady, 1998).

In 10% ballistic gelatin, when shot from an AR-15 with a 16" barrel, the .223 gave the following in penetration (Hornady 1998); [40 grain = 5.13"], [55 grain = 8"], [60 grain = 10"], [75 grain = 13.68"]

In December of 1991, penetration tests were conducted by the Mesa, Arizona Police Department's Firearms Training Unit. Three .223 Remington loadings by Federal were tested along with 9mm Winchester 147 grain hollow point. Following are penetration tests results in 10% ballistic gelatin; [.223 Federal 55 grain hollow point = 10.5"] [.223 Federal 40 grain hollow point "Blitz" = 5"] [.223 Federal 69 grain hollow point = 12"] [9mm Winchester 147 grain hollow point = 17"]. Other tests were conducted in exterior walls constructed for testing purposes at the Mesa Police Firing Range. The conclusion was that

the 9mm has greater potential for penetration through walls than does the .223. (p. 5-6)

Research was taken from the Firearms Tactical website which has compiled data from the Federal Bureau of Investigations (FBI) firearms testing. This information included several tests of Remington, Winchester, Federal, PMC and Speer. These tests were conducted using a block of bare gelatin and one of clothed gelatin. The clothed test simulated rounds fired through clothes and into a human body. The bare gelatin simulated a round that was fired into a human body. The firing tests included many different types of points, different bullet grains and different bullet types such as jacketed hollow point, Talons and full metal jacketed.



This research, found that in today's market, the major manufacturers of ammunition produce / load the .223 Remington round in more than 35 different bullet weights and types. Many studies have been done to produce the perfect round. This

determination should only be obtained through evaluation of your department's needs and setting. The .223 has been proven as a suitable round for all types of patrol officers. A recent article divided the .223 rifle ammunition into three categories. They are lightweight, which contains the 40 – 52 grain bullets. These bullets have very minimal penetration of 6 to 9 inches. The second category is the medium weight, which includes the 55 to 60 grain soft point, hollow point and full metal jacketed. These bullets penetrate approximately 9.5 to 11 inches. This particular bullet is best suited to allow for adequate penetration and less likely to penetrate through walls. The third and final category is the heavy weight, which includes the 62 to 77 grain SP, HP, and FMJ bullets. The penetration for these bullets is 10 to 18 inches. These rounds are designed specifically for long ranges up to 300 yards (Kelly, 2003).

A survey was conducted with the students that attended Module II of the LEMIT program. The survey was distributed to 24 students representing 22 different law enforcement agencies across the State of Texas. The researcher received 18 responses to the survey.

The survey revealed several findings. Out of the 22 law enforcement agencies represented, 10 agencies had policies in place and allowed officers to carry patrol rifles in their patrol vehicles. In 3 agencies, only shotguns were allowed to be carried in patrol vehicles and in 5 agencies neither shotguns or rifles were allowed to be carried.

Of the 10 agencies that allowed the use of patrol rifles, the vast majority required that the rifles be carried in the trunk of the vehicle while the agencies that allowed shotguns to be in use, all allowed the shotguns to be carried in the passenger compartment of the patrol vehicle.

As a result of the survey and speaking with the officers, it appears that the most popular patrol rifle of choice would be in the AR-15 configuration. Most departments preferred the M-4 style weapon manufactured by Bushmaster with several preferring other manufacturers such as Colt and DPMS. The majority of departments surveyed stated that the patrol rifles were not equipped with fixed lighting systems nor electronic type sights.

It was also discovered that many departments still have concerns about the long range and over penetration capabilities of the .223 / 5.56 platform. But all of the officers that responded to the survey felt that these concerns were misconceptions on the part of administration personnel. Another concern of many departments is the overall cost of the equipment and training necessary to have a safe and effective patrol rifle program. Even though officers felt that the costs associated with the program is insignificant if it saves the lives and promotes the safety and well being of citizens and police officers.

DISCUSSION

Historically, the rifle was the primary fighting weapon of Sheriffs, Marshals, and other law enforcement officials. Early western pictures show these crime fighters holding their lever action rifles. Chudwin (2001) writes, "Given his choice, a knowing man didn't go into harms way armed with a handgun" (p. 18).

The law enforcement force continuum is based on good old fashion common sense. Even the earliest law enforcement officials of the country had enough sense to use the proper tools to win.

The United States constitution affords citizens the right to bear arms. This right extends to everything from handguns to rifles. Though recent legislative law have made

it more difficult to purchase weapons, it is still relatively easy for an adult to purchase a gun. To not have rifle systems available for patrol officers goes against the force continuum model. To achieve a successful outcome, police officers need to have the right and ability to escalate to a higher degree of force when necessary. Since all types of guns are so easily attainable within this country, rifles and high training standards will afford officers a higher probability to save innocent citizens and go home at the end of the day.

Exchanging rounds at close distances is not tactically desired. Rifle trained officers have the option to not only use distance to their advantage but can also get into a different shooting platform such as kneeling or even prone. These different platforms not only increase accuracy but also make for a smaller target.

In reviewing this study, the researcher has discovered current training standards show that minimum sustainment training with those utilizing the patrol rifle/carbine is lower than what the experts recommend. In addition, it was found that most departments with rifles don't have fixed mounted light systems. Even though research results show that the patrol rifle/carbine have a low percentage of fixed light systems, the patrol rifle with its ingrained marksmanship for accuracy in utilization of the sights will yield better results than the shotguns point and shoot method. This will help to change the current unconscious reaction to get within 25 yards of the threat in order to return fire.

Due to constant advancements in technology, societies and behavior will change. Police agencies must accept new technology and change as well. Most all police agencies have a mission statement, which asserts the commitment to be proactive. To

be proactive, police administrators must teach their personnel to understand that the equipment and training used today may not be the same tomorrow.

The patrol rifle/carbine is the equipment of today. It provides tactical advantages and contrary to popular belief it will also reduce liability.

The researcher discovered that a valid concern of law enforcement executives and the public alike is the likelihood of over penetration of the round and concerns that innocent bystanders may be struck by the over penetration of that round. Research has shown that with the right type ammunition, over penetration is very unlikely and is thus of no real concern. Research had also shown that, in tests using wallboard and 10% ballistic gelatin, many of the commonly used police handgun ammunition would penetrate a much greater distance than the .223/5.56 mm round. Due to the design of the .223/5.56 mm round, it has much more superior terminal ballistics that will consistently penetrate body armor when handgun caliber ammunition and shotgun ammunition will not. Additionally, due to the design of the bullet, it more likely to break up and fragment upon striking a hard surface, thus eliminating the concern of over penetration or ricochet. Research has also shown that just the opposite is true for the handgun ammunition and shotgun ammunition commonly used by law enforcement where these rounds are likely to ricochet or over penetrate.

The researcher, agreeing with many experts in the field, has come to the conclusion that .223/5.56 mm caliber carbine has characteristics that will give law enforcement officers distinct advantages in the field. It is the recommendation of the researcher that departments considering the use of a carbine should research and

implement the necessary policies that will govern officer's training and qualifications before issuing the patrol rifle/carbine to officers.

This research and many others around the country have shown that patrol rifles can exist and be accepted in any environment. The public may be hesitant at first but studies conducted in the United States and Europe have shown that the public will accept the patrol rifle once they realize that this valuable piece of equipment is being used to facilitate their safety and well being. The safety and security of our communities will undoubtedly improve with the addition of better tools that will allow the law enforcement community to quickly and efficiently end heavily armed confrontations in our communities.

Police administrators should move to obtain patrol rifle/carbines for street use as soon as possible. Ideally, every patrol officer would be assigned a patrol rifle/carbine just as they are assigned a handgun. Officers that are assigned their own patrol rifles will be able to make fine adjustments (tweak) allowing for more accuracy.

The purchase of patrol rifle/carbines for all patrol officers can be a huge expense, severely straining a police budget. Although some agencies will allow individual offices to purchase and carry their personal patrol rifles, this is often to great of an expense and burden on the individual officer. Police administrators that are unable to bear the burden of such an expense will need to be creative in finding the monies. It is possible to make the purchase over a period of years with a planned deadline to achieve total transition. Police departments can begin by deploying patrol rifles and equipment needed to address an active shooter confrontation to supervisors. The supervisor vehicles should be available 24/7 to rapidly respond to situations that arise. As more money is obtained,

patrol rifles can begin to move into the passenger compartment of patrol vehicles. With a timed deadline all patrol officers can have an assigned patrol rifle/carbine.

Those departments that initially cannot make the total transition for all patrol officers to have their own patrol rifle/carbines must develop a system where trained patrol rifle officers will qualify with certain rifles and deploy those same rifles in the field. Police academies that institute a patrol rifle/carbine curriculum and certification program would be providing an invaluable service to the law enforcement profession. Officers certified in patrol rifle use within the academy would develop an instinctive mindset to utilize distance and accuracy (when appropriate and possible) early within their career. Additionally, recruits hired by police departments would be able to deploy the patrol rifle/carbine without the department being burdened with initial orientation training.

The addition of patrol rifles to the tools used by patrol officers will not eliminate the need for SWAT assistance by any means but it will allow patrol officers to confront heavily armed individuals and more readily protect those whom we are sworn to protect, until SWAT teams can arrive. Thus patrol rifles are and will be a vital part of a patrol officers tools to be used when that level of force is necessary.

CONCLUSION

Police administrators should move to obtain patrol rifle/carbines for street use as soon as possible. Ideally, every patrol officer would be assigned a patrol rifle/carbine just as they are assigned a handgun. Officers that are assigned their own patrol rifles will be able to make fine adjustments (tweak) allowing for more accuracy.

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burden of such an expense will need to be creative in finding the monies. It is possible to make the purchase over a period of years with a planned deadline to achieve total transition. Police departments can begin by deploying a 24/7 rapid response vehicle (equipment vehicle) containing patrol rifles. As more money is obtained, patrol rifles can begin to move into the passenger compartment of patrol vehicles. With a timed deadline all patrol officers can have an assigned patrol rifle/carbine.

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REFERENCES

- Campbell, R. (2007, January). *Fighting with a carbine, Police Magazine. In response to active shooters. The Tactical Edge, 12-15.*
- Compton, J. (1996). *Implementing The .223 Carbine for Patrol: Benefits and Issues.*
- Chudwin, J. (1999, Summer). .223 for the street. *ITOA News*, pp. 37-39.
- Chudwin, J., & Kulovitz A. (2000, Spring). Rapid response training and firearms selection. *ITOA News*, pp. 12-13.

Chudwin, J. (2001, Spring). Establishing a police rifle/carbine program. *ITOA News* pp. 18-21.

Chudwin, J. (2006). *Tactical ops: The long guns, part 1*, Police One.com

Chudwin, J. (2006). *Tactical ops: The long guns, part 2*, Police One.com

Police Magazine. (2006). Pistol versus Rifle Caliber Ammunition, Web Extra.

Conley J. (2000,Summer) Active Shooter incidents. *ITOA News* pp. 10-16.

Fairburn, R. (1994). Police Rifles-Selecting the right rifle for street patrol and special tactical Situations. Boulder, Colorado: Paladin Press

Felts, J. (2003). Law Enforcement Patrol Rifle/Carbine-Policy, training & operational considerations, 150.

Felts, J. (2003,June). Law Enforcement patrol rifle seminar. 1-7.

Hornady Manufacturing. (September). Hornady Tactical Application Police (TAP), Ammunition Test Report and Application Guide.

Hubbs, K. (2000,Summer). Dynamic Emergency Rescues-some thoughts after Littleton. *The Tactical Edge*, 62-66.

McCarthy, R. (2000,Spring). Special Feature-Procedures and tactics for patrol and swat

Mohn, E. (Fall,2000). The patrol tactical support officer. *ITOA News*. pp. 4-5.

Parker, R. (2003,Summer). Counter measures. *The Tactical Edge* pp. 66-68.

Shaver, T. (2000,Summer). Waiting for SWAT- a patrolman's duties. *The Tactical Edge*.

Suarez, G. (1999).The tactical edge-the precision tool for urban police operations. Boulder, Colorado: Paladin Press.

Suarez, G. (2000,Winter). Point shoot or use the sights. *The Tactical Edge*, 57-59.

