New Mexico VOICES for Children

January, 2003

A Public Health Response to Youth Gun Fatalities

Firearms claim the lives of many children and adolescents throughout the United States. Each day, eight children and adolescents die from gunfire in America; about one child every three hours (Children's Defense Fund, 2000). Only children's deaths from motor vehicle crashes and cancer outnumber children's deaths from firearms (Miller, Azrael, & Hemenway, 2002). The stories and events of firearm-related deaths associated with New Mexico children are numerous and varied. A three-year old boy shot himself in the head after finding a gun under the mattress in his family's home. A little girl fatally shot herself with her father's police service weapon. A 14 year-old boy found a revolver and ammunition belonging to the parents of his friend in a desk drawer at their home. He loaded the gun, and while playing Russian Roulette, fatally shot himself in the head.

Between 1979 and 1997, gunfire killed nearly 80,000 children and adolescents in the United States (Children's Defense Fund, 1999). An additional 320,000 children during this same time period were wounded by guns (Annest, Mercy, Gibson, & Ryan, 1995).

In the last 20 years, 400,000 children have been killed or injured by guns.

Youth Homicide and Firearms, U.S. Data

Most adolescent homicide involves the use of a firearm, with 82.0% of all adolescent homicides in 1999 committed with a gun (National Center for Injury Prevention and Control, 2002a). The firearm used the majority (83.0%) of the time was a handgun (FBI Supplemental Homicide Report, as cited in American Academy of Pediatrics, 2000). Nationally, homicide continues to be among the top three leading causes of death for youth 10-19 years of age (National Center for Injury Prevention and Control, 2002b).

Nationally, homicide and suicide are two of the top three causes of death for youth 10-19 years old.

Youth Suicide and Firearms, U.S. Data

Suicide is also among the top three leading causes of death for young people 10-19 years of age (National Center for Injury Prevention and Control, 2002b). From 1980 through 1997, the national suicide rate for 15-19 year old adolescents increased by 11.0% and for youth ages 10-14 years, suicide rates increased by a staggering 109% (National Center for Health Statistics, as cited in National Center for Injury Prevention and Control, 2002c).

As with homicide, firearms are the method of choice for youth/adolescent suicide. In 1997, firearms were used in 63% of all 15-19 year old adolescent suicides (American Academy of

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Pediatrics, 2000), with handguns being used in over half of firearm suicides (Hargarten, Karlson, O'Brien, Hancock, & Quebbeman, as cited in Robinson, Teret, Vernick, & Webster, 1996).

In fact, over the last three decades, youth suicide by methods other than firearms have remained fairly constant, but youth suicide by firearms has increased dramatically (National Center for Health Statistics, as cited in National Center for Injury Prevention and Control, 2002c). And, guns are the most lethal method of suicide (Children's Defense Fund, 2000; Spicer & Miller, 2000).

Males are four times more likely to be successful at committing suicide than females, although females are more likely to attempt suicide than males (National Center for Health Statistics, as cited in National Center for Injury Prevention and Control, 2002c). This higher rate of suicide completion among males is because males are more likely to use a firearm than other methods, resulting in a high rate of male suicide-attempt fatalities (Children's Defense Fund, 1999). The lethal factor is the immediate availability of a firearm.

New Mexico Data

From 1996-2000, data were compiled for New Mexico deaths due to firearms for children ages 0-19. (The data are summarized in graphs on page 3.) The majority of youth who died from firearm-related events were males, 15-19 years of age. The majority of firearm deaths were homicides (55.0%), while over a third were suicides (38.0%).

Almost two thirds of the deaths were Hispanic, and a quarter were Anglo. One half of the time the shooting and death occurred within a residence. Forty two percent (42%) of the deaths were in Bernalillo County, which includes the city of Albuquerque.

New Mexico Youth/Adolescent Homicide

Of all youth homicides for the state of New Mexico in 2001, over half (58.0%) were committed with a firearm (Office of the Medical Investigator State of New Mexico, 2001).

In 2000, the national rate of firearm-related deaths for children 0-19 was 3.87/100,000. For New Mexico, the rate for the same age group that year was 10.21/100,000, more than two and a half times the national rate (National Center for Injury Prevention and Control, 2002a).

Nationally, firearm homicides, ages 0-19, have been dropping steadily since 1992. From 1993 - 1998, firearm homicide rates for children aged 0-19 dropped by 46% but rose by 21% in New Mexico. In 1999, New Mexico had one of the five highest state rates for adolescent homicide (Annie E. Casey Foundation, 2002).

New Mexico Youth/Adolescent Suicide

Even though the rate of adolescent suicide in New Mexico decreased from 1990 to 1999 by 0.5%, the rate of youth suicide in New Mexico has consistently been among the highest in the nation in the past several years. In 1999, the rate was two and a half times the national rate for adolescent suicide: New Mexico's adolescent suicide rate was 20.0/100,000 for 15-19 year olds, while the national rate was 8.0/100,000 for 15-19 year olds.

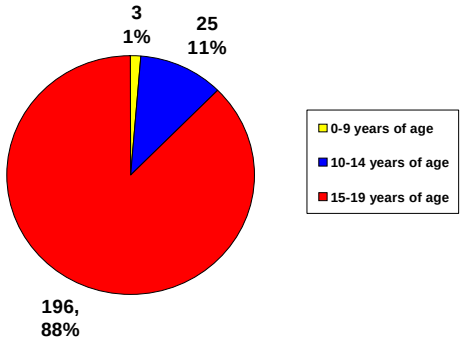
Firearm accessibility increases the risk of youth/adolescent suicide, homicide, and unintentional firearm deaths

Numerous studies have found a significant relationship between the presence of a firearm in the home and increased risk of youth/adolescent suicide (Brent, et al., 1991; Brent, et al., 1993; Shah, Hoffman, Wake, & Marine, 2000). Brent et al., (1991) studied forty-seven adolescent suicide victims compared to two adolescent control groups. The study found that firearms were more than twice as likely to be found in the home of suicide victims than in the home of suicide attempters or non-suicide attempters. In an extensive review of the research, Brent (2001) concluded that one of the strongest predictors of adolescent suicide is the presence of a gun in the home. Brent et al. (1991) cited a study conducted to determine the ratio of benefit

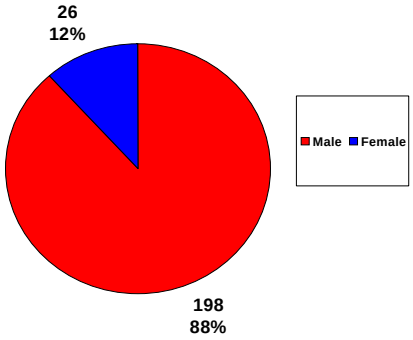
New Mexico Firearm Deaths by Selected Sociodemographic Characteristics, Ages 0-19 Years, 1996 - 2000

Data Sources: Child Fatality Review Board, New Mexico Department of Health, 1996-2000; Office of the Medical Investigator, New Mexico Department of Health, 1996-2000

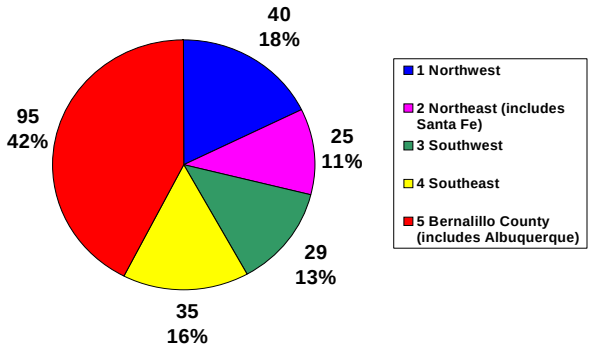
Age Range



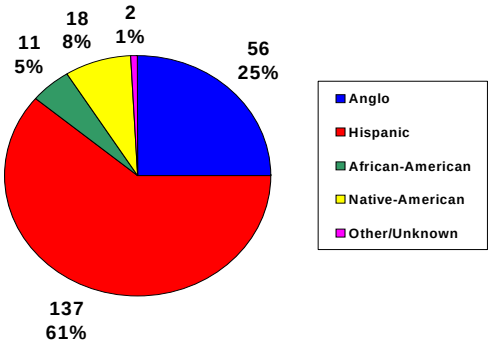
Gender



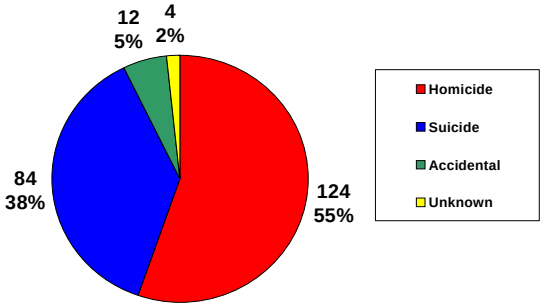
Region of New Mexico



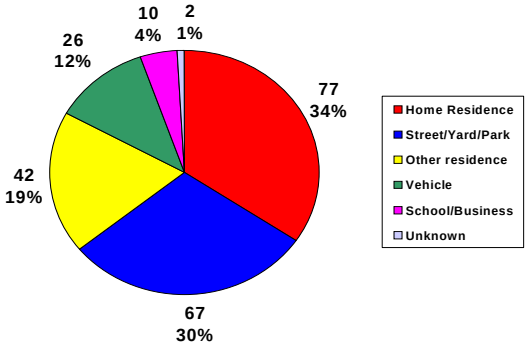
Ethnicity



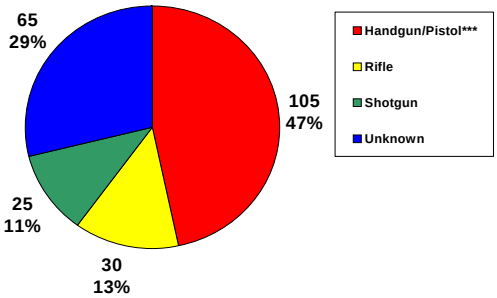
Manner of Death *



Location of Event



Gun Type **



*An accidental shooting by one child may be classified as a homicide or as accidental, and an accidental shooting of a child by him/herself may be classified as a suicide.
**One homicide event included a handgun and a shotgun, resulting in a sample of 225 guns.
***Includes revolvers.

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The risk of adolescent suicide when there is a gun in the home far outweighs the benefit of having a gun for self-protection.

to having a firearm in the home for protection as compared to the risk of suicide and other firearm-related injury/death. Findings were that for each homicide that took place using a firearm for self-protection, there were thirty-seven events of using an in-home firearm for suicide. (Kellerman & Reay, as cited in Brent, 1991).

A 13 year old girl whose father had committed suicide when she was young followed in his footsteps, killing herself with the .357 handgun her father had purchased for protection. The gun was kept unloaded in a closet, and ammunition was also stored in an unlocked container.

She had recently been grounded, and was prone to depression. While her family visited downstairs, she locked herself in her bedroom and shot herself in the head. Her suicide note said she was sorry.

Accessibility of Firearms

In a study to determine the prevalence and storage patterns of firearms in United States homes, data from the 1994 National Health Interview Survey and the year 2000 Objectives Supplement were analyzed. Conclusions were about one in three, or 35.0%, of homes with children 18 years of age and younger reported having at least one firearm present in the home. These homes represented more than 22 million children among 11 million homes. Almost half of these homes (43.0%) reported having at least one firearm stored unlocked (Schuster,Franke, Bastian, Sinaroth, & Halfon, 2000).

In a study conducted to determine the source of the firearm in firearm-related injury/death among children 0-19 years of age, 90.0% of the firearms used in suicide attempts and 72.0% of firearms involved in unintentional injury were firearms from the home of the victim, a relative, or a friend (Grossman, Reay, & Baker, as cited in John Hopkins Center for Gun Policy and Research, 2002a).

Educating Children about Firearms is not Effective

One of the more popular programs for educating youth about guns is the National Rifle Association's (NRA) Eddie Eagle Gun Safety Program. The program teaches youth, kindergarten through grade 6 that if they see a gun, they are to "Stop! Don't touch. Leave the area. Tell an adult". The program does not tell children that guns are dangerous, emphasizing only that real guns are not toys. To date, there has been no research on the effectiveness of the Eddie Eagle program. But, research on "just say no" programs has found these types of programs to be ineffective for impacting youth behaviors (Hardy, Armstrong, Martin, & Strawn, as cited in Hardy, 2002). Studies have also shown that children who received this type of educational intervention were as likely to play with guns in a controlled setting than as were children who had not received the intervention (Hardy et al., as cited in Vernick & Teret, 2000).

Firearm safety training is very ineffective at keeping guns out of hands of children.

Another study was designed to determine how boys would react when they found a handgun. Researchers observed in a controlled setting twenty-nine groups of boys (64 boys in total, in groups of two or three), ages eight to twelve years old, many of whom had received gun safety education. Each group of boys was placed in a room with a one-way mirror to allow for observation of their behavior. Two toy water pistols and an actual .380 caliber handgun were placed in separate drawers. A radio transmitter placed in the handgun was set to send a signal if the trigger of the handgun was depressed with sufficient force to fire the weapon.

The results demonstrated the ineffectiveness of gun safety education. Of the 48 boys who found the gun, 30 boys, or nearly two thirds, handled the gun. Sixteen boys -- one third of the number who found the gun -- pulled the trigger. Of the thirty boys who handled the gun, 27 had had gun safety education telling them to not handle a gun.

According to undercover interviews conducted by the Violence Policy Center and the Global Survival Network with NRA staff, the Eddie Eagle program is actually a marketing tool. The NRA Foundation, an NRA affiliate that accepts donations and then funds the Eddie Eagle program, distributed a promotional flyer stating that the program cultivates the next generation of shooters, or "… future customers" for the firearm industry (Violence Policy Center, 1998).

Jake was 14 years-old. He was an excellent student, excelled at sports, and enjoyed hunting trips with his father. Prior to being allowed on hunting trips, Jake's parents required him to take a gun safety class. During a hunting trip, Jake checked his father's gun to see if it was loaded, jokingly pointed the gun at his father, and pulled the trigger. The gun fired and Jake killed his father.

Reducing Gun Violence Through Consumer Product Safety

A 1997 national survey on gun ownership estimated that there were 192 million privately owned firearms in the United States. Of these, about 65 million were handguns (Philip, Cook, & Ludwig, as cited in Vernick, & Teret, 2000). In 1998, United States gun manufacturers produced approximately 1.2 million handguns, while an additional 532,000 were imported (Bureau of Alcohol, Tobacco, and Firearms, as cited in Vernick, & Teret, 2000). However, unlike other consumer products routinely found in households, firearms are designed to kill.

States and the federal government have failed to regulate firearms for consumer safety while regulating all other household and consumer products. The Consumer Product Safety Commission (CPSC) is the federal agency responsible for protecting the public from unreasonable risk of death or injury associated with consumer products. The CPSC is prohibited by Congress from regulating firearms or ammunition (Vernick & Teret, 2000), and there is no federal agency with authority to establish and enforce safety design standards for firearms.

Consumer product safety standards have resulted in decreases in accidental death of children, such as childproof designs for cigarette lighters (U.S. Consumer Product Safety Commission, as cited in Robinson, Teret, Vernick, & Webster, 1996), and safety caps on medication bottles (Rodgers, as cited in Robinson et al., 1996). Since the 1960s, motor vehicles have been subject to design safety standards which have played a key role in the reduction of motor vehicle related fatalities (Robertosn, as cited in Vernick & Teret, 2000). Toy guns and teddy bears have stricter consumer product safety controls than do firearms.

Firearms are so dangerous to children that they should be subject to product safety regulations. Safety standards for handgun design and manufacture, like those imposed on toys, medicine bottles and cars, could reduce gun deaths and injuries to children.

Design standards would not only protect children and adolescents from numerous firearm deaths, they would also protect the consumer from defective manufacturing or design. Federal courts have found that regulating firearms never violates the Second Amendment of the U.S. Constitution, despite arguments to the contrary. (John Hopkins Center for Gun Policy and Research, 2002b).

One design standard available today is the technology of a personalized gun or "smart gun." A personalized gun can only be fired by an authorized user. Personalization utilizes technology such as magnetic devices, radio

frequency transponders, a personal code key-pad, or finger print identification. One type of personalization designed by SigArms is a built-in key-pad that requires the user to enter a personal code in order for the gun to be fired. A timer can be programmed to relock the gun after a certain time period has elapsed (Vernick & Teret, 2000).

Other technologies for increased consumer product safety include load indicators, which tell the user if the gun contains ammunition ready to be fired; safety locking mechanisms, which are built in mechanisms that prevent pistols from firing after the magazine has been removed, even if one round remains in the firing chamber; trigger pulls strong enough so that a child cannot pull the trigger and firearms designed and tested to ensure that the firearm will not fire when dropped.

For firearms currently on the market, a safety lock can be fitted to the grip of the firearm, which can be deactivated by entering three numbers on a touch pad. One company manufacturers a lock that can be activated in less than three seconds, even in total darkness (Tequesta, as cited in Robinson, et al., 1996).

The High Cost of Firearm Injuries

Data from the University of New Mexico hospital indicates that in 1997 the hospital treated 161 patients for firearm injuries at a total cost of $3.2 million for hospital and physician charges. About 75% of those charges were paid from county, state, or federal tax dollars. The average cost of a firearm injury-related hospital admission was $29,217, compared to the average hospital admission charge of $5,880.

In New Mexico, the cost of hospitalization for firearm related injuries is 5 times the cost of average hospital admissions. Most of the costs are paid with public dollars.

These high costs do not include any out of hospital charges such as emergency response, follow up physician care, later surgeries, rehabilitation, medical equipment, home health care, or prescription drugs. Nor do they include the cost associated with temporary or permanent disability, lost work, quality of life costs, treatment of the emotional effects of a gunshot wound, or the costs incurred by public safety, or the judicial and correctional systems (original research by New Mexico Voices for Children, in collaboration with University of New Mexico Hospital, 1998).

Max and Rice (1993) provided estimates of firearm injury costs in the United States. For 1990, the estimated total cost of firearm injuries was $20.4 billion dollars, including $1.4 billion for direct health care and goods, $1.6 billion in lost productivity due to illness and disability, and $17.4 billion in lost productivity due to premature death. Miller and Cohen (1996) estimated medical spending per gun-shot victim to be an average of $25,000.

Conclusions

Firearms are designed to kill. They are lethal weapons. In the hands of children and adolescents, firearms dramatically increase the risk of unintentional injury. Firearms are generally present in homes throughout America. For a child or adolescent, firearms in the home pose an increased risk of suicide because of the immediate availability of the firearm, impulsivity of youth behavior, and the lethality of firearms.

Both homicide and suicide remain among the top three leading causes of death for children and adolescents, 10-19 years of age. The rate of firearm related homicide has increased alarmingly among 15-19 year olds. Suicide rates among youth and adolescents have also increased, with suicide rates increasing over 100% for children 10-14 years of age.

Education has not been shown to be effective at preventing children from touching a firearm when they encounter it. Personalized technology and other firearm safety devices would greatly reduce the risk of injury and death to children and adolescents due to firearms. These technologies are available today and would not prevent the consumer from using his/her firearm.

Recommendations

Short Term:
All firearms sold by a licensed gun dealer should be sold with a child safety-locking device or other locking mechanism or lock box. Gun owners should be responsible for assuring that their firearms are unloaded and locked whenever children might gain access to them.

Long Term:
All newly manufactured firearms should be required to:

- ✔ **meet certain minimum product safety standards so as not to pose an unreasonable risk of injury to the public**
- ✔ **be designed with personalized gun technology so that the firearm cannot be fired by an unauthorized user**

Among the minimum safety standards that all handguns should meet include:

- ✔ **load indicators to clearly indicate that the firearm is loaded**
- ✔ **trigger pull strong enough that a child cannot pull the trigger**
- ✔ **ability to pass a drop test so that the firearm does not discharge when dropped**
- ✔ **built in safety locking mechanism or personalized gun technology**

Sources for this paper can be found online at www.nmvoices.org.

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