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United States General Accounting Office
Washington, DC 20548

September 30, 2003

The Honorable Edolphus Towns
House of Representatives

Subject: *Information Generally Not Available on Toy Gun Issues Related to Crime, Injuries or Deaths, and Long-Term Impact*

Dear Mr. Towns:

This report responds to your request that we provide you with information on several issues related to the use of toy guns. Specifically, you asked that we (1) examine crime statistics showing the prevalence of crimes that involved toy guns in some capacity; (2) gather any available information on incidents involving toy guns that have resulted in injuries or deaths, whether or not related to criminal activity; and (3) determine from available literature whether there are any studies examining the long-term impacts that can be attributed to toy gun play by children.

As agreed with your office, we focused our study on imitation or look-alike toy guns and excluded toy guns that fire projectiles, for example, BB guns, paintball guns, and pellet guns. To obtain relevant information, we conducted an extensive literature search using the Internet and other electronic resources to identify applicable statistics, reports, studies, articles, or other publications. In addition, we contacted federal officials at various agencies, including the Department of Justice's Bureau of Justice Statistics (BJS), the Department of Health and Human Services' Centers for Disease Control and Prevention (CDC), and the Consumer Product Safety Commission (CPSC). Furthermore, we interviewed university researchers or academicians and contacted the counsel for the Toy Industry Association. We performed our work from May to August 2003 in accordance with generally accepted government auditing standards. Enclosure I presents more details on our objectives, scope, and methodology.

Results in Brief

Our study disclosed that scant data exist on the incidence of crimes, injuries, or deaths involving toy guns and on the long-term effects that childhood play with toy guns may have on individuals. Available data on crimes involving toy guns are dated and insufficient for providing a national perspective. Also, databases that collect information from hospital emergency rooms and other sources regarding product-related injuries and deaths generally are not designed to capture information about incidents involving toy guns. Thus, the relatively few cases of such incidents that were recorded in these databases probably do not represent an accurate or

comprehensive reporting. Finally, our literature search found no publications or studies specifically addressing the long-term effects of childhood play with toy guns.

Crimes Involving the Use of Toy Guns

In response to our inquiries, officials at three of the Department of Justice components we contacted—the Bureau of Alcohol, Tobacco, Firearms and Explosives; the National Institute of Justice; and the Federal Bureau of Investigation—said they had no information about crimes involving the use of toy guns. Generally, the only data we found regarding the use of toy guns in crimes are presented in a June 1990 report—*Toy Guns: Involvement in Crime & Encounters With Police*—prepared by the Police Executive Research Forum (PERF), under a cooperative agreement with BJS.¹ In response to our inquiry, in June 2003, BJS informed us the agency has no current plans to sponsor or undertake a follow-up study to update the 1990 report.

In conducting its study, PERF surveyed 699 state and local law enforcement agencies and received 458 usable responses (a response rate of 66 percent). PERF's report does not include information on whether the nonrespondents differed in significant ways from the respondents. Without such information, it is not possible to determine if the lack of response from 34 percent of the agencies distorted the findings.

Among other questions, the survey solicited information on the number of robberies and assaults that involved the use of toy guns during the period January 1, 1985, to September 1, 1989. According to PERF, police department reporting systems typically are not coded to identify the involvement of imitation or toy guns in crimes. As a result, most responding agencies provided information from either a manual records check or a solicitation of information from officers. Relying on officers' memories may have resulted in either an under- or over-reporting of incidents involving toy guns. For the period January 1, 1985, to September 1, 1989,

- 148 law enforcement agencies (32 percent of the 458 usable responses) reported a total of 2,796 robberies committed with the use of toy guns and
- 121 law enforcement agencies (26 percent of the 458 usable responses) reported a total of 3,104 assaults committed with the use of toy guns.

As a collateral issue, PERF also reported that—for the period January 1, 1985, to September 1, 1989—law enforcement agencies seized a total of 10,065 toy guns. According to PERF, this total does not include guns that were stolen property. Rather, the total consists only of those toy guns that were directly or indirectly involved in an incident—such as robbery, assault, domestic disturbance, suspicious person, etc.—where the police took some form of action.

¹ PERF is a national membership organization of police executives from the largest city, county, and state law enforcement agencies.

The PERF researchers concluded that insufficient data were available to clearly determine whether the use of toy guns to commit crimes was a serious problem, particularly in comparison to all crimes of violence and police-involved shootings throughout the nation. As noted above, two factors—response rate issues and concerns about the reliability of information based to some extent on officers' recall of incidents—result in reservations about the findings. Enclosure II presents more details about PERF's report.

Injuries or Deaths Involving Toy Guns

One way an injury or death could occur is for a police officer to mistake a toy gun for a real firearm. As part of PERF's survey, researchers asked law enforcement agencies to report the number of incidents where officers had used actual force (deadly or less than deadly) based on the belief that a toy gun was real. For the study period (Jan. 1, 1985, to Sep. 1, 1989), 31 law enforcement agencies (7 percent of the 458 usable responses) reported a total of 105 applicable incidents where officers had used actual force, either deadly or less than deadly (see table 3 in enc. II). PERF's report did not specify how many of the 105 incidents resulted in injuries nor how many resulted in deaths.

To further determine the availability of information on incidents involving toy guns that have resulted in injuries or deaths, whether or not related to criminal activity, we contacted two federal agencies—CPSC and CDC—that have databases with information on health and/or safety issues. At our request, CPSC officials reviewed the agency's three major databases that provide information on product-related hazards, and the officials reported the following to us:

- **National Electronic Injury Surveillance System.** This system collects information and provides national estimates on the number of victims treated in hospital emergency rooms for product-related injuries. The entire system includes 98 hospitals reporting almost 700,000 cases each year. For the period January 2000 to July 2003, the database showed 301 incidents of injuries that resulted from many hazard patterns involving toy guns, including children swinging or throwing toy guns. According to CPSC, the 301 incidents encompass the broad category of toy guns—not just the limited category of replica guns. CPSC's review of about 100 of these incidents that involved victims aged 10 years or older disclosed no injury incidents in which police officers mistook toy guns for real firearms.
- **Death Certificate System.** This database contains records of death certificates for product-related deaths from each of the 50 states. The database excludes data on firearm-related deaths but may record deaths involving toy guns not caused by a firearm. For the most recent 10 years (1993 through 2002), the database showed no cases of deaths involving toy guns or situations where police officers mistook toy guns for real firearms.

- **Incident Data Base.** This data file contains records of cases received from news clips, medical examiner reports, consumer complaints, and reports from other sources. For the most recent 10 years (1993 through 2002), the data file showed four cases of individuals being fatally shot by police officers who mistook toy guns for real firearms.

CPSC officials told us that these statistics on police shootings involving toy guns likely represent an undercounting of such incidents. The officials explained that CPSC would not generally collect data on police shootings because the agency's focus is on consumer product issues rather than firearms.

CDC is a data contributor and has inquiry access to CPSC's National Electronic Injury Surveillance System. At our request, CDC officials reviewed the system's database. For the 1 year reviewed (2001), the officials reported identifying 66 incidents involving toy guns. Of these 66 incidents, the majority (62) involved individuals 0 to 19 years of age, and the remaining 4 incidents occurred among the over-19 age group.

According to the CDC officials, of the 62 incidents among individuals 0 to 19 years old, 57 incidents involved unintentional injuries, such as choking on a toy gun part or being hit with toy gun or projectile part. The other 5 incidents apparently were reported to the police as being assaults and involved children hitting other children with a toy gun while fighting or engaging in rough play. CDC officials described these 5 incidents as follows:

- A 13-year old child was hit on head with a plastic gun.
- A 12-year old female was hit on the elbow by a toy gun.
- A 12-year old male was injured in a fight involving a toy gun.
- A 7-year old was poked in the right eye with a plastic gun.
- An individual was struck on the head by a toy gun.

Also, CDC officials told us that the agency's National Violent Death Reporting System (NVDRS)—being designed to collect information on all violent deaths, including those involving toy guns—was not yet operational. The officials referred us to Harvard University's National Violent Injury Statistics System (NVISS), which is a pilot program for CDC's NVDRS and encompasses 12 sites nationwide.² The co-director of the pilot program told us that the NVISS database contained information for 2 years (2000 and 2001) but does not include a variable to facilitate an electronic search for injuries or deaths involving toy gun incidents. Nevertheless, the co-director responded to our questions based on her knowledge of the database and her review of the more recent year's (2001) data for 7 sites—Connecticut, Maine, Wisconsin, Utah, San Francisco, Miami-Dade County, and Allegany County. For the 2001 data, the co-director reported finding no deaths involving toy guns. In addition, the

²The 12 sites consist of 6 states (Connecticut, Kentucky, Maine, Maryland, Wisconsin, and Utah); 5 metropolitan areas or counties—Atlanta (Ga.), Detroit (Mich.), Miami-Dade County (Fla.), Allegany County (Pa.), and San Francisco (Cal.)—and 1 pilot (conducted by the University of Pennsylvania) collectively covering three metropolitan areas—Bethlehem (Pa.), Youngstown (Ohio), and Iowa City (Iowa).

co-director did not recall seeing any toy gun-related deaths in the first year's (2000) data.

Our literature search found that, in 1987, the American Academy of Pediatrics' Committee on Accident and Poison Prevention issued a policy statement, which said that, "The main hazard presented by nonprojectile toy guns is that children who play with them may inadvertently be drawn to playing with real weapons which they mistake for toys."³ The policy statement recommended that pediatricians counsel parents concerning the hazards of having toy guns in the house.

Long-Term Effects of Childhood Play with Toy Guns

Our literature search of social science, scientific, educational, crime and justice, and other journals and publications disclosed no authoritative study on the possible long-term effects on individuals of childhood play with toy guns. Generally, the literature discussed numerous possible causes of aggressive behavior, including exposure to violence in video games and television, and did not focus specifically on childhood play with toy guns.

One exception we found was a 1992 Brandeis University study, entitled "The Relation Between Toy Gun Play and Children's Aggressive Behavior."⁴ The study was based on a small number of preschoolers in one daycare center and found limited evidence that toy gun play was associated with increased real aggression and with decreased pretend aggression in free-play settings. However, due to the small number of children involved, all from one location and in one setting, the results are not generalizable to other children. Further, the analytical method used may have overstated the significance of the association between toy gun play and aggression. In addition, the study did not examine whether longer-term associations between toy gun play and future aggression are likely.

Furthermore, we contacted the senior scientific editor of a 2001 report—*Youth Violence: A Report of the Surgeon General*—to discuss the extent, if any, that the study addressed or considered the long-term impacts attributable to toy gun play by children.⁵ This individual said that the Surgeon General's study focused on violence involving real firearms and did not consider toy gun issues. He expressed unawareness of any research on the long-term effects of childhood play with toy guns.

Agency Comments

We provided a draft of this report for comment to the Department of Justice, the Department of Health and Human Services, and CPSC. During the period September 17-25, 2003, we received written or oral comments from these agencies. The

³American Academy of Pediatrics, "Injuries Related to 'Toy' Firearms" (RE7085), *Pediatrics*, Volume 79, Number 3 (Mar. 1987).

⁴Malcolm W. Watson and Ying Peng, Brandeis University, "The Relation Between Toy Gun Play and Children's Aggressive Behavior," *Early Education and Development*, Volume 3, Number 4 (Oct. 1992).

⁵*Youth Violence: A Report of the Surgeon General*, U.S. Public Health Service (Washington, D.C.: Jan. 2001).

comments indicated that the draft accurately presented the information that we had obtained from the respective agency. Also, the Department of Health and Human Services (including CDC) and CPSC provided technical clarifications, which we incorporated in this report where appropriate.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after its issue date. At that time, we will provide copies to the Attorney General, the Secretary of Health and Human Services, and the Executive Director of CPSC. We will also make copies available to others on request.

If you have any questions about this report, please contact me at (202) 512-8777 or Assistant Director, Danny R. Burton, at (214) 777-5600. Other key contributors to this report were Fredrick D. Berry, Ann H. Finley, SaraAnn W. Moessbauer, Julia A. Rachiele, Miguel A. Salas, and Susan B. Wallace.

Sincerely yours,

A handwritten signature in black ink, reading "Laurie E. Ekstrand". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Laurie E. Ekstrand
Director, Homeland Security and Justice Issues

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Enclosure I

Objectives, Scope, and Methodology

Objectives

Representative Edolphus Towns asked us to (1) examine crime statistics showing the prevalence of crimes that involved toy guns in some capacity; (2) gather any available information on incidents involving toy guns that have resulted in injuries or deaths, whether or not related to criminal activity; and (3) determine from available literature whether there are any studies examining the long-term impacts that can be attributed to toy gun play by children.

Scope and Methodology

As agreed with the requester's office, we focused our study on imitation or look-alike toy guns and excluded toy guns that fire projectiles, for example, BB guns, paintball guns, and pellet guns. To obtain relevant information, we conducted a literature search using the Internet and other electronic resources to identify applicable statistics, reports, studies, articles, or other publications. Specifically, we used keywords/key phrases to search the following three major sources:

- **Dialog.** Dialog provides access to over 800 databases covering scientific and technical literature, trade journals, and newswires. Our search covered the period January 1, 1990, to July 10, 2003.
- **Nexis.** Nexis provides access to news stories in major U.S. newspapers. Our search covered the period January 1, 2000, to July 11, 2003.
- **Nexis' Statistical Universe.** This source provides access to three data files—(1) the American Statistics Index, which covers statistical publications of the U.S. government; (2) the Statistical Reference Index, which covers statistical publications from sources other than the U.S. government; and (3) the Index to International Statistics, which covers international publications. Our search of these three data files covered the periods beginning in 1973, 1980, and 1983, respectively, to July 31, 2003.

In addition to the literature search, we contacted various federal agencies, university researchers or academicians, and a representative of the Toy Industry Association (see table 1).

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Table 1: Federal Agencies, Universities, and the Trade Association GAO Contacted

Federal agencies	Position of person contacted
Bureau of Alcohol, Tobacco, Firearms and Explosives	Audit Liaison
Bureau of Justice Statistics	Statistical Policy Advisor for Bureau of Justice Statistics
Centers for Disease Control and Prevention— National Center for Injury Prevention and Control	Director, Office of Statistics and Programming
	Deputy Director; Office of Policy, Evaluation, and Legislation
	Medical Epidemiologist, Division of Violence Prevention
Consumer Product Safety Commission	Executive Director
	Deputy Executive Director
	Assistant Executive Director for Hazard Identification and Reduction
	Program Manager, Hazard Identification and Reduction
	Director, Data Systems - Epidemiology
Federal Bureau of Investigation	Attorney Liaison
National Institute of Justice	Audit Liaison, Office of Justice Programs
Universities^a	
University of California, Davis (Davis, Cal.)	Director, Violence Prevention Research Program (Sacramento, Cal.)
University of Central Florida (Orlando, Fla.)	Provost Distinguished Research Professor, Department of Sociology and Anthropology
University of Colorado (Boulder, Colo.)	Director, Center for the Study and Prevention of Violence, Institute of Behavioral Science ^b
Harvard University (Boston, Mass.)	Co-Director, National Violent Injury Statistics System
University of Georgia (Athens, Ga.)	Associate Professor, Department of Health Promotion and Behavior
New York University School of Law (New York, N.Y.)	Director, Center for Research in Crime and Justice
Trade association	
Toy Industry Association (New York, N.Y.)	Counsel

Source: GAO.

^aOur contacts with universities were based on suggestions made by federal agency officials and the results of our literature search.

^bThis university official served as the senior scientific editor for the Surgeon General's 2001 report on youth violence.

Crime Statistics Involving Toy Guns

To determine the availability of statistics regarding the prevalence of crimes that involved toy guns in some capacity, we contacted the following Department of Justice components:

- **Bureau of Justice Statistics (BJS).** We followed-up on the results of our literature search, which identified a June 1990 report (*Toy Guns: Involvement in Crime & Encounters with Police*) prepared by the Police Executive Research Forum, under a cooperative agreement with BJS (see enc. II).

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- **National Institute of Justice (NIJ).** NIJ is the research, development, and evaluation agency of the Department of Justice.
- **Federal Bureau of Investigation (FBI).** We inquired whether the Uniform Crime Reporting Program collected any information involving toy gun incidents.
- **Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF).** We inquired whether the agency's "Youth Crime Interdiction Initiative" collected any information involving toy gun incidents.

Toy Gun Incidents Resulting in Injuries or Deaths

To determine the availability of information on incidents involving toy guns that have resulted in injuries or deaths, whether or not related to criminal activity, we contacted two federal agencies—the Consumer Product Safety Commission (CPSC) and the Department of Health and Human Services' Centers for Disease Control and Prevention (CDC). These agencies collect data on health and safety issues in several databases.

At our request, CPSC officials reviewed the agency's three major surveillance databases that provide information on product-related hazards:

- **National Electronic Injury Surveillance System.** This system collects information and provides national estimates on the number of victims treated in hospital emergency rooms for product-related injuries. From this database, CPSC officials reviewed cases from January 2000 to July 2003.
- **Death Certificate System.** This database contains records of death certificates for product-related deaths from each of the 50 states. CPSC officials reviewed cases reported during the previous 10 years (1993 through 2002).
- **Incident Data Base.** This data file contains records of cases received from news clips, medical examiner reports, consumer complaints, and reports from other sources. CPSC officials reviewed cases reported during the previous 10 years (1993 through 2002).

Regarding these databases, CPSC officials noted that statistics on police shootings involving toy guns likely represent an undercounting of such incidents. The officials explained that CPSC would not generally collect data on police shootings because the agency's focus is on consumer product issues rather than firearms.

We contacted CDC to inquire whether its National Violent Death Reporting System (NVDRS) had relevant information. Officials at CDC's National Center for Injury

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Prevention and Control told us that the system was not yet operational but eventually would collect national information on all violent deaths, including firearms-related deaths and those involving toy guns.

The CDC officials referred us to Harvard University's National Violent Injury Statistics System (NVISS), which is a pilot program for CDC's NVDRS and encompasses 12 sites nationwide.⁶ The co-director of the pilot program told us that the NVISS database contains information for 2 years (2000 and 2001) but does not include a variable to facilitate an electronic search for injuries or deaths involving toy gun incidents. Nevertheless, the co-director responded to our questions based on her knowledge of the database and her review of data for 7 sites for 2001.⁷

Long-Term Impacts Attributed to Toy Gun Play by Children

As previously indicated, to determine the availability of studies examining the long-term impacts that can be attributed to toy gun play by children, we conducted a literature search and contacted various federal agencies, university researchers or academicians, and a representative of the Toy Industry Association. We focused our analysis on the following potentially relevant study that we identified:

- Watson, Malcolm W., and Ying Peng. Brandeis University. "The Relation Between Toy Gun Play and Children's Aggressive Behavior." *Early Education and Development* (Volume 3, Number 4, Oct. 1992): 370-389.

Two of our social scientists examined the study to assess the adequacy of samples and measures employed, the reasonableness and rigor of the statistical techniques used to analyze them, and the validity of the results and conclusions.

Also, we contacted the senior scientific editor of a 2001 report—*Youth Violence: A Report of the Surgeon General*—to discuss the extent, if any, that the study addressed or considered the long-term impacts attributable to toy gun play by children.⁸

⁶The 12 NVISS sites consist of 6 states (Connecticut, Kentucky, Maine, Maryland, Wisconsin, and Utah); 5 metropolitan areas or counties—Atlanta (Ga.), Detroit (Mich.), Miami-Dade County (Fla.), Allegany County (Pa.), and San Francisco (Cal.)—and 1 pilot (conducted by the University of Pennsylvania) collectively covering three metropolitan areas—Bethlehem (Pa.), Youngstown (Ohio), and Iowa City (Iowa).

⁷The co-director's review covered the following 7 sites: Connecticut, Maine, Wisconsin, Utah, San Francisco, Miami-Dade County, and Allegany County.

⁸Youth Violence: A Report of the Surgeon General, U.S. Public Health Service (Washington, D.C.: Jan. 2001). The report is available on the Surgeon General's Web site at <http://surgeongeneral.gov/library/youthviolence/>.

Enclosure II

June 1990 Report on Toy Guns, Crime, and Police Encounters

Public Law 100-615 (Nov. 5, 1988) required that toy guns have a “blaze orange plug inserted in the barrel” to minimize the probability of such guns being mistaken for real firearms. Also, the federal legislation required that the Department of Justice’s Bureau of Justice Statistics (BJS) conduct a study of the criminal misuse of toy guns, including studying police reports of such incidents. Effective June 1, 1989, BJS awarded a cooperative agreement to the Police Executive Research Forum (PERF) to conduct the study.⁹ In June 1990, PERF reported on the results of its study—*Toy Guns: Involvement In Crime & Encounters With Police*.

Regarding the overall significance of toy guns and crime, PERF reported that there is no clear answer to the question, “How serious is the problem?” The report noted that:

- “The response is a value judgment based upon one’s ideology and experiences.”
- “In comparison to all crimes of violence and police-involved shootings throughout the United States, the proportion of cases involving imitation guns is small. The nagging element of the ‘toy gun’ problem is that many of the incidents seem particularly tragic—a child is involved, a mentally disturbed person does not recognize the gravity of his/her actions, or a person simply used poor judgment.”

In response to our inquiry, in June 2003, BJS officials told us that BJS had no current plans to sponsor or undertake a follow-up study to update the information.

Scope and Methodology of PERF’s Study

Initially, to ascertain issues and trends, PERF conducted a Lexis/Nexis computer search for news stories reporting any imitation gun incidents. PERF reported that its research methods also included developing and sending a survey instrument to 699 agencies in the study population—that is, all municipal police and consolidated police departments serving populations of 50,000 or more, all sheriff’s departments with 100 or more sworn employees, and all primary state police agencies.¹⁰ According to PERF, the usable response rate was 65.5 percent (458 responses). The PERF report does not include information on whether the nonrespondents differed in significant ways from the respondents. Without such information, it is not possible to determine if the lack of response from 34 percent of the agencies distorted the findings.

⁹ PERF is a national membership organization of police executives from the largest city, county, and state law enforcement agencies. Incorporated in 1977, PERF’s objectives are to improve policing and advance professionalism through research and involvement in public policy debate.

¹⁰ Also, according to PERF, site visits were made to 27 agencies, which were selected based partly on news reports and/or self-reports indicating experiences with imitation gun incidents.

Enclosure II

Questions in the survey instrument solicited information on (1) robberies and assaults that involved the use of imitation guns and (2) experiences of officers using deadly force and less than deadly force against individuals with imitation guns.¹¹

Data Limitations Acknowledged by PERF

In its report, PERF acknowledged that quantitative data were difficult to obtain. Specifically, PERF reported that:

“The questions for this survey were extraordinarily difficult for the law enforcement agencies to answer simply because police departments typically do not maintain data stratified by the identifying character of ‘toy gun’ (or similar notation). As a result, most agencies resorted to some form of manual records check and/or solicitation of information from officers.”

“The data presented in this report were not easily generated by the responding departments. Many police agencies conducted manual searches of their incident reports, others physically searched property room records, while others went through the laborious process of surveying their officers and then developing responses to our questions. Thus, while the data in this report may not be as robust as we initially hoped, it represents the most comprehensive information available on the subject.”

Nonetheless, relying solely on officers’ memories in some instances may have resulted in either an under- or over-reporting of incidents involving imitation guns.

Study Results Reported by PERF

As mentioned previously, questions in PERF’s survey instrument solicited information on (1) robberies and assaults that involved use of imitation guns and (2) experiences of officers using deadly force and less than deadly force against individuals with imitation guns.

Robberies and Assaults Using Toy Guns

PERF’s report presented data for 4-2/3 years—1985 through 8 months of 1989—on the numbers of robberies and assaults involving toy guns. As table 2 shows, the reported number of robberies totaled 2,796 during this period.

¹¹ PERF reported results separately for three categories of imitation guns—toy guns (intended for playing), pneumatic guns (such as BB and pellet guns), and replica guns (inoperable reproductions of actual weapons). The data presented in tables 2 and 3 in this enclosure cover toy guns only.

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Table 2: Number of Robberies and Assaults Committed Involving Toy Guns (Jan. 1, 1985 to Sep. 1, 1989)

Calendar year	Number of robberies and assaults committed involving toy guns	
	Robberies ^a	Assaults ^b
1985	453	635
1986	482	615
1987	665	601
1988	753	686
1989 (8 months)	443	567
Total	2,796	3,104

Source: Police Executive Research Forum, *Toy Guns: Involvement in Crime & Encounters with Police*, June 1990, pp. 29 and 32.

^aBased on 148 police agencies reporting robberies known to have been committed with a toy gun.

^bBased on 121 police agencies reporting assaults known to have been committed with a toy gun.

Based partly on these data, PERF reported that survey results “show that robberies by imitation guns are occurring on a daily basis in the United States ...”. Also, PERF reported that:

“Because of poor record keeping on imitation gun robberies, the fact that the estimates of investigators are experiential rather than empirical, and the inherent methodological differences between the UCR [Uniform Crime Reporting Program] and this study, the authors feel that estimating the number of imitation gun robberies from those reported in the UCR would have limited value.”

Also, table 2 shows that the reported number of assaults committed with toy guns totaled 3,104 during the period. PERF reported that:

“While it is conceivable that a person could be physically assailed with an imitation gun, the more likely crime is the ‘simple assault’ where a person is threatened and in fear of injury. ... No meaningful comparisons can be made between these findings and the Uniform Crime Report assault data since the UCR statistics reflect only aggravated assaults.”

Use of Force Incidents Involving Toy Guns

As part of PERF’s survey, researchers also asked law enforcement agencies to report the number of incidents where officers had warned, threatened, or actually used force in a confrontation where an imitation gun had been mistaken for a real gun. As table 3 shows, for the period January 1, 1985, to September 1, 1989:

- The number of incidents totaled 385 where an officer warned or threatened the use of force based on the belief that a toy gun was real.
- The number of incidents totaled 105 where an officer used actual force based on the belief that a toy gun was real.

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Table 3: Number of Incidents Where Police Officers Warned of Using or Actually Used Force Based on the Belief That a Toy Gun Was Real (Jan. 1, 1985 to Sep. 1, 1989)

Calendar year	Number of incidents where an officer warned or threatened the use of force based on the belief that a toy gun was real^a	Number of incidents where an officer used actual force (deadly or less than deadly) based on the belief that a toy gun was real^b
1985	55	6
1986	61	7
1987	72	45
1988	106	31
1989 (8 months)	91	16
Total	385	105

Source: Police Executive Research Forum, *Toy Guns: Involvement in Crime & Encounters with Police*, June 1990, pp. 34 and 35.

^aBased on 82 agencies reporting incidents known to have been committed with a toy gun.

^bBased on 31 agencies reporting incidents known to have been committed with a toy gun.

Regarding the 105 incidents involving actual use of force, PERF reported that "... it is probable that the data are more accurate since internal investigations typically follow the use of force."

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