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Assessing Homicides by and of U.S. Law-Enforcement Officers

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“Legal intervention deaths” of civilians — cases in which someone is killed by a law-enforcement or other peace officer while that officer is on duty — and occupational homicides of law-enforcement officers have garnered increasing attention in the United States, owing to numerous recent high-profile incidents. These events are not only devastating to the victims' families and the directly affected communities or neighborhoods; they also erode the relationship between law-enforcement agencies and the diverse populations they serve. Though these killings account for a small percentage of total U.S. homicides, they represent a significant public health burden and can incite further violence in which more people are killed. The most recent events have raised a number of critical questions. Among the first ones we need to answer are these: What is the true magnitude of the problem? And what are the circumstances associated with these events?

A public health approach — a comprehensive method for studying and addressing a health problem — can be applied here.¹ The first step is to systematically assess the problem in order to accurately define its scope and nature. The second is to identify risk factors and protective factors. Knowing these factors helps to clarify why the phenomenon occurs and whom it affects. Answers to those questions can help, for example, to identify specific circumstances that are particularly likely to lead to a law-enforcement officer's death, or specific communities or demographic groups in which legal intervention deaths are more common; that information can, in turn, lead to development of appropriate prevention and mitigation strategies that reduce the likelihood of fatal outcomes.

Public health tools such as surveillance systems enable researchers and public health agencies to examine data and identify patterns or associations that can inform productive actions. One relevant tool in this instance is the National Violent Death Reporting System (NVDRS), which collects data on both legal intervention deaths and homicides of law-enforcement officers. The NVDRS, administered by the Centers for Disease Control and Prevention (CDC), is a state-based surveillance system that links data from various state and local agencies and sources: medical examiners or coroners, law-enforcement agencies, and death certificates.¹ NVDRS data can provide researchers, policymakers, and law-enforcement officials with a picture of the numbers of violent deaths and the circumstances surrounding them that is more complete than any single data source.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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A recent study showed that states participating in the NVDRS could compile more complete records on legal intervention deaths than they could from the National Vital Statistics System or the Supplemental Homicide Reports of the Federal Bureau of Investigation (FBI). In these states, the NVDRS captured more than twice as many legal intervention deaths as the Supplemental Homicide Reports and 71% more than Vital Statistics.² The investigators identified 1552 police homicides in 16 states during the period 2005–2012.

Counts from Vital Statistics may underestimate the number of deaths due to legal intervention because the *International Classification of Diseases* (ICD) codes recorded on death certificates do not indicate this aspect of the cause of death. Supplemental Homicide Reports may underestimate the number of legal intervention deaths because the system is voluntary, so not all law-enforcement agencies submit these reports, and some events may not be reported until the case has been closed.

A new NVDRS surveillance summary using 2013 data found that in the 17 participating states (Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin), there were 222 legal intervention deaths.³ Most of the victims were male (93.7%) and between 20 and 54 years of age (82.9%). The rates were higher among non-Hispanic blacks (0.6 per 100,000 population) and Hispanics (0.3 per 100,000) than among non-Hispanic whites (0.1 per 100,000) (see table). Multiple factors were found to be associated with the circumstances of these events, such as a crisis (e.g., the victim had had a bad argument, had divorce papers served, was laid off, faced foreclosure on a house, or had a court date for a legal problem within 2 weeks before the death), a current mental health problem, and intimate partner violence.

Legal intervention can also result in nonfatal injuries to police officers and civilians. Data on these nonfatal events and their circumstances are important to consider, since they, too, can provide insight for prevention efforts. A study examining fatal and non-fatal injuries resulting from encounters with law-enforcement officers showed that administrative health care data sets such as the Healthcare Cost and Utilization Project's Nationwide Inpatient Sample and Nationwide Emergency Department Sample were essential for developing a comprehensive picture of the injuries.⁴

The NVDRS is not nationally representative, since data are currently available for only 17 states. The information includes demographics, the circumstances surrounding the incident, detailed narratives from the coroner or medical examiner, and information about the weapon and the suspect. The system's real richness is contained within the narratives. Some relevant information — for example, details on body armor, years of experience in law enforcement, previous perpetration of violence, and mental health treatment — would not be included, and reports may not reflect all the information about an incident, especially for cases that are still being adjudicated. And if limited information is provided in data sources such as law-enforcement, coroner, and medical examiner reports, the information in the NVDRS will also be limited.

Law-enforcement officers are exposed routinely to violent and potentially dangerous situations and are at increased risk for occupation-related homicides. According to one study, their homicide rate was the fourth-highest among all occupations, behind taxi drivers, liquor-store employees, and gas-station employees.⁵ Systems for collecting data on deaths of law-enforcement officers include the U.S. Department of Labor's Census of Fatal Occupational Injuries, the FBI's Law Enforcement Officers Killed and Assaulted reports, and the National Law Enforcement Officers Memorial Fund.⁵ There have been no rigorous studies comparing the strengths and weaknesses of these sources to the NVDRS. According to past studies, the primary circumstances associated with law-enforcement officers' being killed in the line of duty include interactions precipitated by another crime, ambushes, and traffic stops.

The value of NVDRS data lies in its linking of multiple data sources. Death certificates don't describe the circumstances of legal intervention deaths or homicides of law-enforcement officers, and law-enforcement records can miss cases. Understanding patterns of violence and the factors associated with its occurrence improves our focus on vulnerable populations and often leads to more successful prevention efforts. Participating states have used the NVDRS data in partnership with prevention-program implementers to create new initiatives and to adjust existing programs to strategically target at-risk populations, some of which had not previously been identified.

A forthcoming report using NVDRS data provides more details about the circumstances of these types of deaths,^{1,5} but more research is needed. The CDC is striving to make NVDRS data more accessible for analysis and use by researchers, prevention-program implementers, and policymakers; improved access will also allow more complete and objective information to be disseminated to the public. Researchers at government agencies, research organizations, or institutions of higher education can request access to case-level data from the NVDRS Restricted Access Database (<https://www.cdc.gov/ViolencePrevention/NVDRS/RAD.html>).

The CDC is working with agencies and organizations including the National Association of Medical Examiners, the National Association for Public Health Statistics and Information Systems, the Department of Justice, and the International Association of Chiefs of Police to reduce the amount of missing or incomplete data, increase timeliness of reporting, improve toxicology data, and otherwise enhance data quality. In addition, the NVDRS has received appropriations to expand from 17 states; 32 states are now included, and another expansion will occur later this year. Ultimately, a better understanding of the magnitude of these problems and the key risk factors and protective factors should lead to improved prevention strategies that are based on data rather than on conjecture.

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Table 1

Legal Intervention Deaths in 17 U.S. States, 2013*

| Characteristic | Male Decedent | | Female Decedent | | Total | |
|-----------------------------------|-------------------|-----------------------------|-------------------|-----------------------------|-------------------|-----------------------------|
| | no. of deaths (%) | rate per 100,000 population | no. of deaths (%) | rate per 100,000 population | no. of deaths (%) | rate per 100,000 population |
| Age | | | | | | |
| <1 yr | 0 (0.0) | NR | 0 (0.0) | NR | 0 (0.0) | NR |
| 1–4 yr | 0 (0.0) | NR | 0 (0.0) | NR | 0 (0.0) | NR |
| 5–9 yr | 0 (0.0) | NR | 0 (0.0) | NR | 0 (0.0) | NR |
| 10–14 yr | 0 (0.0) | NR | 0 (0.0) | NR | 0 (0.0) | NR |
| 15–19 yr | 12 (5.8) | NR | 0 (0.0) | NR | 12 (5.4) | NR |
| 20–24 yr | 35 (16.8) | 1.0 | 2 (14.3) | NR | 37 (16.7) | 0.5 |
| 25–29 yr | 23 (11.1) | 0.7 | 0 (0.0) | NR | 23 (10.4) | 0.4 |
| 30–34 yr | 35 (16.8) | 1.1 | 3 (21.4) | NR | 38 (17.1) | 0.6 |
| 35–44 yr | 46 (22.1) | 0.7 | 5 (35.7) | NR | 51 (23.0) | 0.4 |
| 45–54 yr | 32 (15.4) | 0.5 | 3 (21.4) | NR | 35 (15.8) | 0.3 |
| 55–64 yr | 20 (9.6) | 0.3 | 1 (7.1) | NR | 21 (9.5) | 0.2 |
| 65–74 yr | 3 (1.4) | NR | 0 (0.0) | NR | 3 (1.4) | NR |
| 75–84 yr | 2 (1.0) | NR | 0 (0.0) | NR | 2 (0.9) | NR |
| 85 yr | 0 (0.0) | NR | 0 (0.0) | NR | 0 (0.0) | NR |
| Unknown | 0 (0.0) | NR | 0 (0.0) | NR | 0 (0.0) | NR |
| Total | 208 (100.0) | 0.4 | 14 (100.0) | NR | 222 (100.0) | 0.2 |
| Race or ethnic background | | | | | | |
| White, non-Hispanic | 91 (43.8) | 0.3 | 7 (50.0) | NR | 98 (44.1) | 0.1 |
| Black, non-Hispanic | 81 (38.9) | 1.2 | 4 (28.6) | NR | 85 (38.3) | 0.6 |
| American Indian or Alaskan Native | 6 (2.9) | NR | 0 (0.0) | NR | 6 (2.7) | NR |
| Asian or Pacific Islander | 0 (0.0) | NR | 1 (7.1) | NR | 1 (0.5) | NR |
| Hispanic | 28 (13.5) | 0.5 | 2 (14.3) | NR | 30 (13.5) | 0.3 |
| Other | 2 (1.0) | NR | 0 (0.0) | NR | 2 (0.9) | NR |
| Unknown | 0 (0.0) | NR | 0 (0.0) | NR | 0 (0.0) | NR |

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| Characteristic | Male Decedent | | Female Decedent | | Total | |
|----------------|-------------------|-----------------------------|-------------------|-----------------------------|-------------------|-----------------------------|
| | no. of deaths (%) | rate per 100,000 population | no. of deaths (%) | rate per 100,000 population | no. of deaths (%) | rate per 100,000 population |
| Total | 208 (100.0) | 0.4 | 14 (100.0) | NR | 222 (100.0) | 0.2 |

* The term "legal intervention" does not indicate the lawfulness or legality of the circumstances surrounding the death. The 17 states included in the analysis are Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, North Carolina, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin. Rates are not reported (NR) when the number of decedents is less than 20 or when the age, race, or ethnic background is "other" or "unknown." Percentages may not total 100 because of rounding. Data are from the National Violent Death Reporting System.