

B. Collection of Information Employing Statistical Methods

1. Respondent Universe and Sampling Methods

A complete census of violent deaths within a given state is sought, so no sampling methods will be employed. Approximately 50,000 violent deaths occur annually in the United States.

2. Procedures for the Collection of Information

The system will be coordinated and funded at the federal level but is dependent on separate data collection efforts in each state managed by the state health departments or their bona fide agents. In accordance with the system's design principles, the data is incident-based rather than victim-based. The record for an incident includes information about all the victims and suspects in each incident and their relationships.

To fully characterize the incidents, states collect information about each incident from four primary data sources: death certificates, medical examiner/coroner records, law enforcement records, and crime lab records. Most states find it easiest to begin data collection with death certificates because the state health department itself collects death certificates. Over 250 data elements are collected on each incident from these four principal sources. See attached list of data elements (attachment 5).

Data collection can be done either by manual abstraction from the primary data sources or by electronic transfer or importation, whichever proves to be the more timely way to acquire the necessary detail. Data collection is staged so that basic demographic information can be published early and more detailed information about potential causal factors can be published later. Death certificate most often provides the earliest information, but this is not the case in every state. Death certificate information is available to most health department and entered into the system within 6 months. Police and ME/C data is most often available within 18 months of the occurrence of the death.

Estimation Procedures

No estimation procedures will be employed.

Degree of Accuracy

This issue does not apply to this methodology.

Unusual Problems

Violent death surveillance faces challenges that are in some ways unique among public health surveillance systems. First, there is a fundamental difficulty with the use of different case definitions: the same death may be called unintentional on a police record, homicide by a medical examiner, and undetermined on the death certificate. Different case definitions may be used even within one professional community, such as that of medical examiners. [1] To address this problem, NVDRS abstractors will be trained to use standard conceptual definitions for different types of violent death.

There are also more legal issues associated with violent deaths than with deaths from natural causes. The integrity of a death investigation is important, and access to police and medical examiner/coroner files may be restricted or delayed while investigations are still under way.

In addition, the sources of information on violent deaths are not traditional ones for public health surveillance systems. The sources of information for maternal mortality surveillance, for example, are almost exclusively health care institutions, organizations with which health departments typically have well-established relationships. In contrast, although the situation is improving gradually, health departments typically have little experience working with police departments or medical examiners/coroners. The lack of such relationships may make data access more difficult or less timely.

An additional barrier is that many of the sources of information on violent deaths are non-centralized. Only 19 states have statewide medical examiner systems with centralized records; the remainder have county medical examiners and/or coroners.^[ii] A given state may have dozens of local police departments with which to set up data-sharing agreements. Moreover, ME/C and police information is not standardized and may not be computerized. Time consuming abstraction from primary sources by trained abstractors will probably therefore be required. Eventually efforts to develop an electronic death certificate and efforts by the Department of Justice to develop the National Incident Based Reporting System for police information may dramatically reduce the need for data abstraction.

3. Methods to Maximize Response Rates and Deal with Non-response

This issue is not relevant with this methodology.

4. Tests of Procedures or Methods to be Undertaken

States began collecting data for NVDRS in 2003. Funded states are currently finalizing data collection for 2007 and continuing to input data for 2008 and 2009. The software has gone through one major version update and several patches to increase the practicality and functionality of the system.

5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

There are no statistical aspects related to this surveillance system.

The data will be collected by state health department staff. Data will be transmitted to an IT contractor, Ace Info Solutions, the contractor for the system and then to CDC. Key personnel include Carrie Schori - Project Manager; Andrew Younkman and Maurice Ray - Programmers.

i. Goodin J, Hanzlick R. Mind your manners: part II: general results from the National Association of Medical Examiners Manner of Death Questionnaire, 1995. *Am J Foren Med Path* 1997;18:224-227.

ii. www.cdc.gov/epo/dphsi/mecisp/index.htm. Accessed on 2/25/2003.