



Guidelines for Epidemiological Surveillance Systems on Violence and Injuries

Executive Summary

INTRODUCTION

These guidelines were prepared in response to the need observed in various countries of the Americas where the increase in intentional and unintentional injuries has become a pressing social and public health problem.

The fundamental purpose of these guidelines is to promote and guide the creation of epidemiological surveillance systems on violence and injuries, using the definition and universally accepted concepts of epidemiological surveillance that have been applied to other types of public health problems. The ultimate goal is to support knowledge, analysis, and decision-making related to the control and prevention of these problems.

It should be emphasized that the *local level*—that is, the *municipios*—is the administrative and political arena in which the ESS and prevention projects should be carried out, and that *the two activities—surveillance and prevention—should be planned in a coordinated manner*. It is at the local level that steps should be taken to develop epidemiological surveillance systems that respond to each community's particular situation, making it possible to identify specific types of violence affecting the community's inhabitants and the ways in which this violence is expressed. This does not diminish the importance of the regional or national levels, with which these efforts must of course be linked and coordinated.

Another objective is to promote the formation of networks among those working in epidemiological surveillance systems and injury prevention. There is no doubt that *intersectoral coordination and collaboration of groups with common objectives not only improves the possibilities of success for projects such as these, but is also indispensable in dealing with such eminently social problems*. Networks are a mechanism of coordination and support that make the work more productive.

The concepts, components and issues related to ESS are discussed in the following:

EPIDEMIOLOGICAL SURVEILLANCE (ES)

Epidemiological surveillance or Public Health surveillance is defined as "the ongoing systematic collection, analysis, and interpretation of outcome-specific data for use in the planning, implementation, and evaluation of public health practice"

Types of Epidemiological Surveillance Systems (ESS)

There are several ways of setting up an ESS, depending on the coverage needed, the objectives to be met, the budgetary, human, and organizational resources of the locality, and the interest of governmental or non-governmental agencies. The various types of ESS are described below:

Universal ESS: The system will include the total number of cases occurring within a defined population. This is known as “population-based” and takes into account all the cases that occur.

ESS based on samples of cases: The information is obtained from a portion of the total number of cases or events. The sample must be representative, so that inferences can be made regarding all the possible cases occurring in the population.

ESS based on a review of institutional registries: Institutional registries are reviewed periodically in order to analyze and identify variables of interest.

ESS based on surveys: Information is obtained through questionnaires focused on a specific topic, within a predefined period of time, and at predefined intervals.

Sentinel ESS: One or more institutions are chosen to determine the trend, target surveillance activities, and suggest preventive interventions. In general, surveillance systems of this type are not representative of the population, but they are useful for calling special attention to risk situations and thus fulfill a key function for decision-making.

Other Types of ESS

- *ESS using a laboratory:* This can yield information about, for example, blood alcohol levels in victims of injuries or homicides, or toxicological information in case of suicides or injuries. This is used to confirm diagnoses or to show additional risk factors.
- *ESS based on absenteeism* or on repeated events is regarded as a sentinel measure to call attention to cases of school or workplace absenteeism, when the frequency of the absence or the excuses offered leave doubts about the real causes.
- *Data collection:* In the types of ESS mentioned above, data are collected in two principal ways: *passive and/or active collection:*
 1. *Passive* collection is carried out when the staff of the ESS collects data based on cases that institutions record routinely.
 2. In *active* collection, those in charge of the ESS contact the persons who record the information and request data directly from them; or they may go to the primary source of the data, either initially or later to verify doubtful or incomplete data.

- *Sentinel* ESS systems have a special characteristic. Depending on the magnitude, scope, and importance of the problem, their design can involve either passive and/or active acquisition.

Objectives of an ESS

1. Produce reliable and timely information
2. Monitor changes
3. Identify patterns of violence
4. Generate causal hypotheses
5. Support decision-making
6. Evaluate programs and interventions
7. Promote the formation of working groups

The ESS by itself does not produce changes; it is only a working tool.

Design and Steps for Setting Up an ESS

Basic points in setting up an effective ESS:

1. *Definition of objectives*: Define the problem to study, ways of addressing the problem, and the institutions able to provide relevant information.
2. *Reach agreement on operational definitions*: Formation of a working group or technical committee. Decide what information will be obtained, who will provide it, how, and with what frequency.
3. *Identification of existing sources of information*: Identify the specific data sources that are available in each institution.
4. *Determination of strengths and limitations of each source*: Determine which information variables are useful and which are not, avoiding repetition of information.
5. *Preliminary data analysis*: Evaluate, on a preliminary basis, the quality of the variables in the data collected, the ease of collection, percentage of information obtained, period of delay in collecting the data, quality of the data, and attributes of the ESS.
6. *Consideration of integration of data from multiple sources*: It is frequently necessary to combine existing sources of information to obtain more complete data on a type of event or injury.
7. *Plan for dissemination of the information*: Determine who will receive the information and the frequency and level of detail with which it will be provided.
8. *Association of the ESS with preventive actions and sources of financing*: Suggest or design possible preventive actions. Ensure sources of financing from the participating institutions.

Evaluation of an ESS

The process for evaluation of an ESS follows methodical steps necessary for reaching a complete and useful analysis. The general purpose of the evaluation process is to *confirm that the objectives are being met and ensure that the collection and reporting of data are reliable and timely*. Once an ESS is created and begins to function, its objectives, attributes, and purposes should be evaluated for the purpose of verifying its correct operation.

How to Evaluate an ESS

- 1) Usefulness of the ESS
 - a) Achievement of the objectives
 - b) Flow chart
 - c) Components and operation
- 2) Evaluation of attributes
- 3) Resources used
- 4) Conclusions and recommendations

Recommendations for Reporting Information on Injuries

Our system proposes using the codification and tabulation mortality set by the World Health Organization, in the Ninth and Tenth International Classification of Diseases (ICD-9 and ICD-10)

The Guidelines also include a description of the magnitude of the problem in the Americas, attributes of ESS, case studies from countries or cities in Latin America, and a glossary of terms as well as references.