

## Morbidity

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The variety of terms speakers at the International Collaborative Effort on Injury Statistics Symposium used to describe injury morbidity illustrates the problem the injury morbidity workshop participants faced in their deliberations (Table 1). At the end of the first workshop session, the participants concluded that stating simply what injury morbidity is constitutes quite a challenge.

As discussed at the first workshop session, there are many reasons for the difficulty in precisely defining injury morbidity. First, there is a lack of general agreement on the answer to the question: What is an injury? For example, is an injury always an exchange or absorption of energy or can it be the subjective sense that I am or may be injured? Another reason for why it is difficult to define injury morbidity is that the various parts of medical care systems are not common to all countries. Variation in medical care systems makes using service utilization as a surrogate for injury morbidity very tricky. A final important reason involves the number of potential manifestations or degrees of injury morbidity. In contrast to injury mortality, the many manifestations of injury morbidity makes the task of trying to account for them all nearly impossible.

Despite these "nearly impossible" odds, participants in the first workshop session attempted to define injury morbidity by filling in blanks on the so-called injury pyramid. The workshop participants started from the bottom of an "injury morbidity pyramid" (Figure 1) with the following injury morbidity indicators:

- An injury to an individual that was recorded or reported (including those sensed subjectively)
- An injury that resulted in contact with a health care provider
- An injury that resulted in a visit to any health care facility
- An injury that resulted in a visit to an emergency care facility open 24 hours a day
- Disability that requires an individual to reside in an extended care facility

The workgroup did not have a chance to complete the obvious vacuum between the top injury morbidity indicator which, like the universal measure death, focuses on outcome and the other indicators in the injury morbidity pyramid which are mainly associated with health care resource utilization. There was agreement that comparability will be better with outcome indicators. In addition, it was suggested that the use of coded incidence data of specific, targeted injuries would be a good way to account for morbidity.

Participants in the second workshop session discussed specific topics. The first discussion was about issues that affect the international comparability of injury morbidity data. The issues discussed included:

- How injury morbidity is defined
- The magnitude of injury morbidity which may range from none to permanent disability
- Coding
- Economics
- Differences in health seeking behavior
- Insurance practices
- The lack of standard or uniform case definitions

The quality of available injury morbidity data was another topic discussed. Many participants commented on the need for general norms for hospitalization that could be used for corrections when comparing length of stay. This is a significant problem since answers to the questions What is a hospital? What is a hospital stay? and What is a hospital day? will vary depending on the country. Another quality of morbidity data issue discussed were potential problems with the denominators used for evaluating the impact of injury morbidity. Concern was expressed specifically over inter-country differences in measuring and collecting census data.

The workgroup also discussed potential users of injury morbidity data. These include health care administrators, grant writers, injury control professionals, vital statistics agencies, acute care professionals and other health care providers, outcomes researchers, policy makers, hospitals, insurance companies, and those who have commercial needs such as for market research.

There was a discussion about how the personnel collecting injury data (e.g., health care providers) are usually not the people using the data and the fact that these same people who collect the data often have to buy the aggregated data back if they do want to use it for secondary purposes. This was generally condemned. The workgroup also indicated that, much to their displeasure, there is frequently a significant lack of useful feedback to local data collectors.

In terms of current sources of morbidity data that allow cross-country comparisons, the workgroup discussed population-based surveys designed for cross-country comparisons, health interview surveys that use standard definitions, hospitalizations with standard definitions, and provider-based surveys.

Finally, the injury morbidity workshop participants indicated that the following strategies should be carried out in order to facilitate the assimilation of injury morbidity data that is comparable across international borders:

- 1) Develop standard definitions for injury and injury morbidity as well as standard instruments for measuring and counting injury morbidity.
- 2) Determine core injury data elements (otherwise known as minimum or uniform data elements).
- 3) Develop injury morbidity data banks and networks.
- 4) Provide useful feedback to the collectors of injury data.
- 5) Add severity to outcome and service utilization as descriptors of morbidity and develop an injury morbidity matrix that allows the use of all three indicators simultaneously.

**Table 1. Injury morbidity terms used by ICE speakers**

Trauma center admission	Recent injury
Hospital admission	Reported condition
Hospital discharge	Placement of cast
Number of care days	Restriction of activity
Length of stay	Incidence rate
Continuous inpatient days	Mild, moderate, or severe injury
Emergency department visit	Patient outcome
Acute visit	Doctor consultation
Treated by a doctor or nurse	

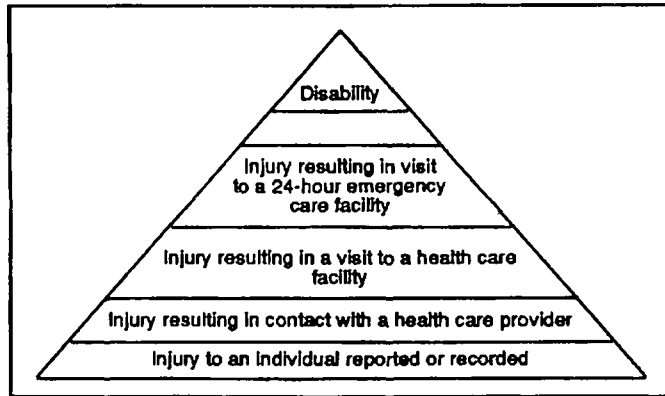


Figure 1. Injury morbidity pyramid