Classification of Death and Injury Resulting from Terrorism

Introduction
The events of September 11 have had many repercussions especially in the health area. The Centers for Disease Control and Prevention (CDC) responded to the emergency with a number of immediate actions (1).
For health data, the September 11 events present challenges, in particular, the urgent need for a classification that can be used to characterize and statistically classify, report, and analyze injuries, sequelae of injuries, and deaths associated with those events.

Categories of codes specifically for terrorism are absent from the two major classification systems used for mortality and morbidity statistics in the United States, respectively the World Health Organization’s (WHO) International Classification of Diseases (ICD) and the United States' Clinical Modification of the ICD, Ninth Revision (ICD-9-CM). Without these additional codes, injuries and deaths associated with terrorism cannot be separately identified, making statistical assessment extremely difficult.

The National Center for Health Statistics (NCHS), the Department of Health and Human Services’ lead statistical agency, recognizes the public health importance of maintaining accurate statistical classification and presentation of data. In light of the events of September 11, NCHS felt the need to evaluate the adequacy of the statistical classifications in terms of its ability to characterize deaths and illnesses associated with acts of terrorism. Concurrently, NCHS began to receive requests from the affected States for a system for classifying injuries and deaths resulting from events on September 11. States are contacting NCHS for guidance on how to code and classify deaths, and hospitals are contacting NCHS for direction on how to code and classify injuries. In the absence of guidance from NCHS, a study undertaken by the New York Health Information Management Association (NYHIMA) identified no fewer than 15 different external cause of injury codes used by several New York City hospitals that treated victims of the disaster (2).

In response to these requests and in recognition of the NCHS mission, NCHS formed an Ad Hoc Workgroup on the Classification of Death and Injury Resulting from Terrorism. NCHS has taken the initiative on this task because classification of injuries and deaths is within the purview of NCHS’s leadership in national vital statistics as well as because of its leading role in developing and maintaining the ICD-9-CM. Further, the WHO’s Collaborating Center for the Classification of Diseases for North America is housed in and staffed by NCHS.

Based on the efforts of the Ad Hoc Workgroup, NCHS has developed a set of new codes within the framework of the ICD and the ICD-9-CM that will allow the identification of deaths from terrorism reported on death certificates through the National Vital Statistics System as well as for injuries and illnesses from terrorism reported on medical records used for statistical purposes and for reimbursement. Presented herein is the process that produced the codes and a set of guidelines related to the codes. The codes are presented in Appendix I.
The definition of terrorism was one of the first issues addressed by the Ad Hoc Workgroup. Recognizing that investigation and tracking of terrorism is in the domain of the U.S. Federal Bureau of Investigation (FBI), the Ad Hoc Workgroup agreed to use its definition (View/download PDF 3.17 MB). As guidance to the user of the classifications, the definition is found in what is called an “inclusion note,” which states that the category includes:

“Injuries resulting from the unlawful use of force or violence against persons or property to intimidate or coerce a Government, the civilian population, or any segment thereof, in furtherance of political or social objectives." (3)

An early draft of this document was circulated among the Centers within CDC as well as to several individuals responsible for developing the National Violent Death Reporting System. In addition, a meeting was held at NCHS to which key staff attended from the Department of Justice’s Bureau of Justice Statistics and the FBI. The draft was discussed at the annual meetings of the Injury Control and Emergency Health Services Section of the American Public Health Association and the heads of WHO Collaborating Centers for the Classification of Diseases, both of which took place in October 2001. Discussions also were held by the WHO Mortality Reference Group and the WHO Update Reference Committee. Finally, the draft was given to the President of the National Association of Medical Examiners. The newly developed terrorism codes as presented in Appendix I are based on comments and recommendations made by each of these groups.

The terrorism codes are designed to fit within the framework of the classifications presently used for mortality and morbidity, that is, ICD-10 for mortality and ICD-9-CM for morbidity. In structure, the classifications for mortality and morbidity parallel, to a large extent, the categories of the ICD-10 category, “Operations of War” in "Chapter XX, External Causes of Morbidity and Mortality." The asterisk (*) preceding the four-digit alphanumeric codes for mortality indicates that the code was introduced by the United States, but is not officially part of the WHO’s ICD.

**Classifying a death or injury as associated with terrorism**

To classify a death or an injury as terrorist-related, it is necessary for the incident to be designated as such by the Federal Government. Neither a medical examiner nor a coroner who would be completing/certifying the death certificate, nor the nosologist coding the death certificate, nor the health information staff at the hospital would determine that an incident is an act of terrorism. If an incident or event is labeled as such before the completion of the death certificate or the filing of the medical record, it may be so described on the certificate or discharge record. If the incident is described as terrorism after the death
For nonfatal injuries, this is a more complex and problematic scenario. The coding of a hospital stay (or emergency department or physician office visit) is performed shortly after the discharge of the patient and is based on information documented in the medical record by a physician. The coded information is used not only for statistical purposes but also is submitted to insurance companies for reimbursement purposes and to Statewide hospital discharge data systems. However, unlike the death certificate, recoding the health care record is unlikely to occur later and data previously submitted to Statewide hospital discharge systems and to insurers would not be updated. Health care records of victims of the September 11 tragedy may be identified at individual hospitals using an internal flagging system; however, the data cannot be readily linked with data from other hospitals that also treated victims.

**How are external cause of injury codes assigned?**

When a death or injury is the result of an external cause, the assigned ICD or ICD-9-CM external cause code is defined as a combination of the manner of the death or injury and the mechanism of the event. Manner is defined as: Unintentional or accidental, suicide or self-inflicted, homicide or assault, intent not able to be determined, or legal intervention or act of war. Examples of the mechanism of the event would be firearm injury or motor vehicle crash. Thus, for the purposes of this new set of codes, (See **Appendix I**.) homicide/assault (or suicide/intentional self-harm) is the manner of death or injury and terrorism by a specified means is the mechanism.

The primary difference between the assignment of codes for mortality and morbidity is that for mortality, the external cause is the underlying cause of death (The event that led to the chain of events resulting in death.) and for morbidity, the external cause of the injury is the event that was related to the patient’s admission to the hospital. For example, if a person fell down the stairs and struck his head on a metal door, the resulting head injury would be the principal diagnosis (and the reason for admission). The external cause of the injury, in this instance, “struck against an object,” would be listed as an additional code. Had the patient died, the “fall” would be the underlying cause of death.

**Limitations for terrorism certification**

The primary limitation for classifying a death (or injury) to “homicide (assault), terrorism” or “suicide, terrorism” is the failure of the incident to be labeled as such. In addition, assuming an underlying cause of death code for terrorism can be applied, it may not be possible to assign specific codes as the necessary information may not be on the death certificate. For example, in the September 11 incident, because so few
of the bodies have been recovered, the death certificates will likely be coded to “homicide, terrorism by destruction of aircraft” (See Appendix I.) or to “suicide, terrorism involving explosions and fragments.” For cases where an autopsy was performed, however, the death certificate will likely list the physical conditions (e.g., burns, head injuries, etc.) in addition to the underlying cause (homicide, terrorism) that resulted in the death.

There are other limitations for nonfatal injuries. Because the new codes will not be in place for many months after September 11, it will be difficult if not impossible to recode medical records. In addition, many illnesses and symptoms may appear months or even years later. If the patient cannot associate them with September 11 or with another terrorist-incident, the medical record will not be coded to terrorism.

The mortality and morbidity data systems depend on what medical examiners and other medical personnel report on the respective data collection instruments. Further, it is not likely that medical examiners will write down—because they may not have the detail—the level of detail some might think relevant for classification, such as the type of weapon, actual location of the episode, etc.

### Changing the ICD classification

Under normal circumstances, proposals for changing the ICD classification as it affects the United States go through two separate and parallel processes, one for mortality and one for morbidity. Mortality coding and classification are guided by the classification and coding rules of the ICD, now in its Tenth Revision (ICD-10), which is maintained by the WHO. In contrast, morbidity classification and coding are carried out according to provisions of the ICD-9-CM under the maintenance of the United States through the ICD-9-CM Coordination and Maintenance Committee, jointly chaired by NCHS and Centers for Medicare and Medicaid Services. For mortality, under normal circumstances changes to the ICD would entail a lengthy international deliberative process sanctioned by WHO, a process that can take several years from conception to approval. For morbidity, proposals to modify the ICD-9-CM are presented at the two annual meetings (in April and November) of the ICD-9-CM Coordination and Maintenance Committee; if approved, changes are implemented October 1 of the following Federal fiscal year. No mechanism is available to update the ICD-9-CM outside of the October 1 time frame. Thus, under the established process for updating the ICD-9-CM, morbidity codes for terrorism would be available to hospitals and other health care providers no earlier than October 1, 2002.

In conclusion, changes to the mortality and morbidity classifications under normal circumstances would take at least one and possibly more years. However, in emergency situations such as the September 11 aftermath, these processes can be circumvented based on past

http://www.cdc.gov/nchs/about/otheract/icd9/terrorism_code.htm (5 of 10) [10/10/2003 10:45:42 AM]
experience. (See next section.) It is desirable, nevertheless, to apprise official bodies that maintain the classification internationally and within the United States of the proposed changes to the classifications.

**Historical precedence for changing the classification**

Emergency procedures for introducing new categories for disease classification have been used before, most recently when the classification for human immunodeficiency virus (HIV) infection/acquired immunodeficiency syndrome was developed by CDC’s NCHS and Center for Infectious Diseases in the mid-1980s (*4,5,6,7*). At that time, NCHS—through the WHO Collaborating Center for the Classification of Diseases for North America—informed WHO of the structure and content of the proposed classification before implementation by the United States. As has been customary, the U.S. codes were distinguished by an asterisk preceding the codes to distinguish them from the official ICD codes, which are without asterisks. Thus, the HIV codes under ICD-9 were *042-*044. Later, WHO incorporated the structure of the U.S. classification into the Tenth Revision of the ICD (*8*). The HIV codes for morbidity were disseminated for the ICD-9-CM through a special publication (*4,7*); for mortality, through an NCHS instruction manual that was distributed to all States (*5*).

**Guidelines**

1. Classify terrorism with new ICD-10 codes for mortality and tabulate as an underlying cause of death within the categories of homicide or suicide, as appropriate.

2. Place terrorism-related ICD-10 codes for mortality in the “U” Chapter of ICD-10, which has been reserved for “future additions and changes and for possible interim classifications to solve difficulties arising at the national and international levels between revisions.” (*9*)

3. Use the following new ICD-10 terrorism codes for mortality: *U01.0-*U01.9, *U02,* U03.1, and *U03.9. Codes *U01 (.0-.9) and *U02 are to be tabulated for statistical purposes within the category of homicide, thus expanding the current codes from X85-Y09, Y87.1 to include *U01 and *U02. Codes *U03.1 and *U03.9 are to be tabulated for statistical purposes within the category of suicide, expanding the current codes from X60-X84, Y87.0 to include *U03.

4. Use ICD-10 code(s) Y08- Assault by other specified means, or Y09-Assault (homicide) by unspecified means, or X83 or X84, Intentional self-harm (suicide) by other specified or unspecified means, respectively for deaths for which terrorism has not been established at the time the death certificate is initially filed.
5. Include the "U" codes for terrorism with the respective residual categories for Assault (homicide) by other means and Intentional self-harm (suicide) by other means in the NCHS cause-of-death tabulation lists (both for the 113 and 358 causes).

6. Place terrorism codes for morbidity within the framework of ICD-9-CM. Unlike the placement of the mortality codes, which are in a new chapter ("U"), the codes for morbidity are within the existing chapter for External Causes of Morbidity.

7. Use the new ICD-9-CM codes E979.0-E979.9 and E999.0-E999.1 for nonfatal injuries resulting from terrorism. For statistical purposes these codes will be tabulated within the category for assault, expanding the current category from E960-E969 to include E979 and E999. At this time, NCHS/CDC is not recommending a parallel category for self-inflicted injury.

Rationale

Having the separately identifiable codes for terrorism within the homicide and suicide categories will allow the United States to document the number of such deaths for any given period or geographic locale. Further, this new framework will facilitate international comparisons. Creating the new codes as subsets of all homicide and suicide categories means that the aggregate numbers for homicide and suicide will be comparable across countries that do not code terrorism separately.

The codes for terrorism are not a substitute for codes for “Operations of war.” Codes exist for war operations, and they are generally used during a declared state of war. Although deaths overseas to U.S. military are not included in the U.S. National Vital Statistics System, they are tabulated independently by the U.S. Department of Defense.

Implementation Process

Mortality: NCHS — through its Division of Vital Statistics — would promulgate the classification, along with guidelines for use, to State vital statistics offices for immediate implementation through an addendum to its vital statistics instruction manuals. For those September 11 records not coded and classified by the States using the new classification, NCHS would recode the records so that they could be identified for statistical tabulation and analysis in reports for data year 2001.

Morbidity: NCHS — through its Data Policy and Standards Staff — would publish a notice in the Federal Register to announce the availability of the new codes to the health care community. Information about the new codes and guidelines for their use would also be posted on the NCHS Web site and disseminated to the American Hospital Association, the American Health Information Management Association, State health information professional organizations, book publishers,
and data system vendors.

**Conclusion**
Because identification and tracking of terrorism is in the FBI’s domain, this new set of codes is not intended to be a refined classification encompassing all aspects of terrorism. This report addresses the need to capture the detail that there was a terrorist element to the death or injury.

There is support for such a refinement of the classification systems. In recognition of the importance of the public health aspects of terrorism, the American Public Health Association adopted, as part of its "Guiding Principles for a Public Health Response to Terrorism", a statement that recognizes the need to develop uniform definitions and a standardized data classification system of death and injury resulting from terrorism and other disasters.

NCHS/CDC also recognize the political sensitivity of a terrorism classification. However, there are precedents for it. Other countries identify deaths from terrorist activity. NCHS/CDC will try to work with their its statistics staff to harmonize the approaches.

The events of September 11 drew attention to a limitation for the United States of the ICD and the ICD-9-CM, which are widely used for coding cause of death and cause of injury. ICD currently has no explicit categories for terrorism that are required to facilitate coding, processing, dissemination, and analysis of these and similar future events. NCHS/CDC has developed a classification within the framework of ICD that can be used by State vital statistics programs, hospitals, and other health providers to identify deaths and injuries associated with terrorism. Expeditious implementation of this classification will contribute to the public health efforts to assess the impact of this tragedy.

**References**


3. *Terrorism in the United States 1999*, Counterterrorism, Threat Assessment and Warning Unit, Counterterrorism Division

4. World Health Organization Collaborating Center for Classification of


