BURDEN OF ILLNESS AND INJURY (BURDEN DICTIONARY)

Background

This case definition was developed by the Armed Forces Health Surveillance Branch (AFHSB) for the purpose of epidemiological surveillance of the public health impact or "burden" attributable to various illnesses and injuries in members of the U.S. Armed Forces.[1] Reports on disease burden are based on the total number of medical encounters for a specific condition.

Description

The annual burden of disease report uses a standard disease classification system based on a modified version of the classification system developed for the Global Burden of Disease (GBD) Study.[2] The system groups all injury and illness-specific diagnoses into 142 burden of disease-related conditions and 25 main categories. In general, the GBD system groups diagnoses with common pathophysiologic or etiologic bases and/or significant international health policymaking importance. To increase the military relevance of results, AFHSB disaggregates some diagnoses that are grouped into single categories in the GBD system (e.g., the category of "mental health disorders" is divided into the following sub-categories: anxiety, substance abuse, adjustment, mood, tobacco dependence, psychotic, personality, somatoform, and all other mental disorders). Also, injuries are categorized by affected anatomic site rather than by cause because external causes of injuries are incompletely reported in military medical encounter records.

Case Definition and Incidence Rules

For the purposes of burden analyses, a medical encounter is defined as:

- *One hospitalization* or *one outpatient medical encounter* with a case defining injury or illness-specific diagnosis (see ICD9 and ICD10 code lists below), in the *first* diagnostic position.

Incidence rules:

- An individual is allowed one medical encounter with an injury or illness-specific diagnosis per condition per day.

- If an individual has a hospitalization and an outpatient medical encounter on the same day for the same condition, the hospitalization is prioritized over the outpatient encounter.

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[1] Armed Forces Health Surveillance Branch. Absolute and Relative Morbidity Burdens Attributable to Various Illnesses and Injuries, Active Component, U.S. Armed Forces, 2018. *Medical Surveillance Monthly Report (MSMR).* 2019 May; Vol.26 (5): 2-10.

[2] The global burden of disease: A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020. Murray, CJ and Lopez, AD, eds. Harvard School of Public Health (on behalf of the World Health Organization and The World Bank), 1996:120-2.

Case Definition and Incidence Rules *(continued)*

- If an individual has two or more medical encounters on the same day for different conditions, then one encounter is counted per day for each condition.

- Prevalent and incident cases are not distinguished in the burden of illness and injury analyses. Encounters may include both incident and prevalent cases.

Exclusions:

- None

Codes

The following ICD9 and ICD10 codes are included in the case definition:

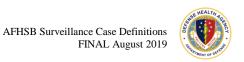| Condition	ICD-9-CM codes	ICD-10-CM codes
Injury or Illness: Burden of Disease See *Burden Appendix I: Code Set in Excel*	All codes between 001 and 999	All codes between A00 and T88
	All codes beginning with V27 (outcome of delivery)	All codes beginning with Z37 (outcome of delivery)
		All DoD unique personal history codes between DOD0101 and DOD0105 (Personal history of traumatic brain injury)

Development and Revisions

- This case definition was developed in 2001 by the *Medical Surveillance Monthly Report (MSMR)* staff for use in the AFHSB burden of disease reports.[1] The case definition was developed based on reviews of the ICD9 and ICD10 codes, the scientific literature, and previous AFHSB analyses.

Case Definition and Incidence Rule Rationale

- The burden analysis is intended to quantify the impacts of various illnesses and injuries among Military Health System (MHS) beneficiaries on an annual basis, including the total number of medical encounters, individuals affected, and hospital bed days. As a result, both incident and prevalent cases are included.

Code Set Determination and Rationale

- The 25 main categories, 142 subcategories (conditions), and the ICD9 and ICD10 codes used in the burden report are included in *Burden Appendix I: Code Set in Excel*. The burden dictionary is updated once per year.

Reports

AFHSB reports on the burden of injury of illness in the following reports:

- Annual *MSMR* report, published in May

Review

Aug 2019	Case definition reviewed and updated by the AFHSB Surveillance Methods and Standards (SMS) working group.
Apr 2001	Case definition reviewed and adopted by the AFHSC *MSMR* staff.

Comments

None