

EPILEPSY

Background

This case definition was developed in 2013 by the Armed Forces Health Surveillance Center (AFHSC) for the purpose of epidemiological surveillance of a condition important to military associated populations.

Clinical Description

Epilepsy is defined as a disorder of the brain characterized by an enduring predisposition to generate epileptic seizures without any immediate identified cause. An epileptic seizure is a transient disruption of normal brain function due to abnormal excessive or synchronous neuronal activity in the brain. Epileptic seizures are classified into partial (i.e., localized to one area of the brain) and generalized seizures (i.e., affecting the entire brain) and range in intensity from benign (i.e., no alteration of consciousness or brief absences) to severe (i.e., loss of consciousness and/or full body muscle spasm).^{1,2} The etiology is multifactorial and often unknown.

Case Definition and Incidence Rules

For surveillance purposes, a case of epilepsy is defined as:

- *One hospitalization* with any of the defining diagnoses of epilepsy (see ICD9 code list below) in the *primary or secondary* diagnostic position; or
- *Two outpatient medical encounters* with any of the case defining diagnoses of epilepsy (see ICD9 code list below) in the *primary* diagnostic position.

Incidence rules:

For individuals who meet the case definition:

- The incidence date is considered the date of the first hospitalization or outpatient medical encounter with a defining diagnosis of epilepsy; or
- If the epilepsy case had a previous hospitalization or outpatient encounter with ICD9 code 780.39 (other convulsions) prior to the case defining encounters, the date of the first “other convulsions” encounter is considered the incident date.
- An individual is considered an incident case only *once per lifetime*.

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¹ Commission on Classification and Terminology of the International League against Epilepsy (ILAE). Guidelines for epidemiologic studies on epilepsy: Commission on Epidemiology and Prognosis. *Epilepsia*. 1993; 34(4): 592-596.

² Fisher RS, van Emde Boas W, Blume W, et al. Epileptic seizures and epilepsy; definitions proposed by the International League Against Epilepsy (ILAE) and the International Bureau for Epilepsy (IBE). *Epilepsia*. 2005;46(4):470-472.



Case Definition and Incidence Rules *(continued)***Exclusions:**

- None

Codes

The following ICD9 codes are included in the case definition:

Fifth-digit subclassification for use with categories 345.0, 1, 4-9.

- 0 without mention of intractable epilepsy
- 1 with intractable epilepsy

Fifth-digit subclassification for use with categories 640-649

- 0 unspecified as to episode of care or not applicable
- 1 delivered, with or without mention of antepartum condition
- 2 delivered, with mention of postpartum complication
- 3 antepartum condition or complication
- 4 postpartum condition or complication

Condition	ICD-9-CM Codes	CPT Codes
Epilepsy	<p>345 Epilepsy and recurrent seizures</p> <ul style="list-style-type: none"> - 345.0x (generalized nonconvulsive epilepsy) [0-1] - 345.1x (generalized convulsive epilepsy) [0-1] - 345.2 (petit mal status) - 345.3 (grand mal status) - 345.4 (localization-related (focal) (partial) epilepsy and epileptic syndromes with complex partial seizures) [0-1] - 345.5 (localization-related (focal) (partial) epilepsy and epileptic syndromes with simple partial seizures) [0-1] - 345.7 (epilepsia partialis continua) [0,1] - 345.8 (other forms of epilepsy and recurrent seizures) [0-1] - 345.9 (epilepsy, unspecified) [0-1] <p>649.4x (epilepsy complicating pregnancy, child-birth, or the puerperium) [0-4]</p>	NA



Development and Revisions

- This case definition was developed based on reviews of the ICD9 codes, the scientific literature, and previous AFHSC analyses. The definition was developed by the AFHSC Medical Surveillance Monthly Report (MSMR) staff for a May 2013 article on epilepsy.³

Case Definition and Incidence Rule Rationale

- This case definition is designed for epilepsy surveillance only; not for seizures of other etiologies. Accordingly, the code set, exclusions, and incidence rules are established to optimize the sensitivity and specificity for cases of epilepsy to the exclusion of other causes of seizures, including one time instances of seizures of either unknown etiology or due to a transient, known cause.
- *Incidence date determination:* ICD9 code 780.39 (other convulsions; includes convulsive disorder NOS, fits NOS, recurrent convulsions NOS, and seizure NOS) is used in this case definition only to assign an incidence date. If an epilepsy case has an encounter with ICD9 code 780.39 prior to any of the case defining encounters, the date of the first “other convulsions” encounter is considered the incidence date of the patient’s epilepsy. An individual does not qualify as an epilepsy case if the health record contains only the ICD9 code 780.39.

This determination is based on coding practices that are standard for coding seizures and epilepsy. Epilepsy is generally coded when seizures occur on more than one occasion (e.g., after a first seizure episode generally coded by ICD-9: 780.39).⁴

- This case definition specifies no time interval within which the two outpatient encounters with an epilepsy code must occur. Investigators who use this case definition should consider whether or not to specify such a time interval when planning surveillance studies.

Reports

- None

Review

July 2013	Case definition reviewed and adopted by the AFHSC Surveillance Methods and Standards (SMS) working group.
May 2013	Case definition reviewed and adopted by the AFHSC MSMR staff.

Comments

None

³ Armed Forces Health Surveillance Center. Epilepsy in Active Component Service Members, 1998-2012. *Medical Surveillance Monthly Report (MSMR)*. 2013 May; 20(5): 19-22.

⁴ Barkley GL. New inclusion terms for 345.7 and posttraumatic seizure code. ICD-9-CM Coordination and Maintenance Meeting. March 12, 2009. <http://www.cdc.gov/nchs/ppt/icd9/att1BarkleyMar09.ppt>. Accessed February 28, 2013.

