

## SYNCOPE

*Includes Post-Vaccination Syncope*

### Background

This case definition was developed by the Armed Forces Health Surveillance Branch (AFHSB) for the purpose of epidemiological surveillance of syncope and “syncopal events” in military-associated populations.

### Clinical Description

Syncope (fainting) is a transient, self-limited loss of consciousness due to a sudden reduction of blood flow to the brain. The episode is usually accompanied by an individual’s inability to maintain postural tone followed by spontaneous recovery. Most cases of syncope are benign; however, the symptom may suggest a cardiac or vascular etiology or foreshadow a life-threatening event in a small subset of patients.<sup>1</sup> Syncope is primarily evaluated with history and physical exam; no laboratory tests are absolutely indicated. Syncope is relatively common, even among young, healthy adults such as military members. Situations that are associated with syncope in members of the U.S. Armed Forces include invasive medical procedures (such as blood donations, other venipunctures, and immunizations), standing for long periods (such as in military formations or waiting lines), and physically demanding training or exercise, especially in hot environments.<sup>2</sup>

### Case Definition and Incidence Rules

For surveillance purposes, a case of a “syncopal event” is defined as:

- *One hospitalization or one outpatient medical encounter* with a case defining diagnosis of syncope (see ICD9 and ICD10 code lists below) in *any* diagnostic position.

For surveillance purposes, a case of a *post-vaccination* “syncopal event” is defined as:

- *One hospitalization or one outpatient medical encounter* with a case defining diagnosis of a syncopal event” (see ICD9 and ICD10 code lists below) in *any* diagnostic position; AND *one or more* immunization encounters on the same day.

#### **Incidence rules:**

For individuals who meet the case definition of a” syncopal event”:

- The incidence date for a case of “syncope” is considered the date of the individuals first ever “syncopal event, (i.e., the date of the first hospitalization or outpatient medical encounter that includes a case defining diagnosis of a” syncopal event”).

*(continued on next page)*

<sup>1</sup> Walsh K, Hoffmayer K, Hamdan MH. Syncope: diagnosis and management. *Curr Probl Cardiol.* 2015 Feb. 40 (2):51-86.

<sup>2</sup> Armed Forces Health Surveillance Center. Syncope, active and reserve components, U.S. Armed Forces, 1998-2012. *Medical Surveillance Monthly Report (MSMR)*; 2013 Nov; Vol 20(11): 5-9.



### Case Definition and Incidence Rules *(continued)*

- For a *case of syncope*, an individual may be considered an incident case only *once per surveillance period*.
- For a “*syncopal event*” case an individual may be considered a case only *one time per day*.
- For a *case of post-vaccination syncope*, an individual may be considered a case *one time per day*, regardless of the number of immunizations given.

#### **Exclusions:**

- Immunization encounters for orally administered vaccines (e.g., adenovirus vaccine) and nasally administered vaccines (e.g., FluMist® influenza vaccine) and encounters for the administration of tuberculin skin tests only are not counted in identifying post-vaccination syncopal events.

### Codes

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

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Syncope ( <i>Syncopal Event</i> )	R55 (syncope and collapse)	780.2 (syncope and collapse)

### Development and Revisions

- In July of 2016 the case definition was updated to include ICD10 codes.
- This case definition was developed in November of 2013 by the *Medical Surveillance Monthly Report (MSMR)* staff for use in a MSMR article on syncope.<sup>1</sup> The case definition was developed based on reviews of the ICD9 codes, the scientific literature, and previous AFHSC analyses.

#### *Case Definition and Incidence Rule Rationale*

- Rates of post-vaccination syncopal events are calculated by dividing the number of post-vaccination syncopal events by the number of immunization medical encounters in a population during the time period of interest.
- Immunizations given by injection are those most frequently associated with syncope risk. Therefore, vaccines administered orally and nasally and tuberculin skin tests are not included in this case definition.



*Code Set Determination and Rational*

- The intent of this case definition is to capture cases of nonspecific syncope, (i.e., syncopal events with an undefined etiology). The codes below are not included in the code set because they specify a specific etiology for the condition.

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Syncope	F48.8 (psychogenic syncope)	300.89 (other somatoform disorders)
	G90.01 (carotid sinus syncope)	337.01 (carotid sinus syndrome; carotid sinus syncope)
	T67.1 (heat syncope)	992.1 (heat syncope)
	- T67.1XXA (heat syncope, initial encounter)	

**Reports**

AFHSB reports on syncope the following reports:

- None

**Review**

Jul 2016 Case definition reviewed and adopted by the AFHSB Surveillance Methods and Standards (SMS) working group.

Feb 2014 Case definition developed by AFHSC MSMR staff.

**Comments**

None

