

BIPOLAR DISORDERS

Includes Cyclothymia and Bipolar Disorder Unspecified

Background

This case definition was developed by the Armed Forces Health Surveillance Center (AFHSC) Medical Surveillance Monthly Report (MSMR) staff for the purpose of descriptive epidemiological reports on mental disorders and mental health problems among active duty Service members.¹ The reports provide a comprehensive look at the status of mental health in the Services and provide in depth information on numbers, rates, and trends of bipolar disorders and other mental health diagnoses that fall within the range of ICD-9-CM codes 290-319 (mental disorders).

Clinical Description

Bipolar disorders is a category of mood disorders defined by the occurrence of one or more episodes of abnormally elevated mood, clinically referred to as mania or, if mood elevations are milder, hypomania. Individuals who experience manic episodes also commonly experience depressive episodes or symptoms, or mixed episodes in which features of both mania and depression are present at the same time. The disorders are subdivided into bipolar I, bipolar II, and other types, based on the nature and severity of mood episodes experienced.²

Case Definition and Incidence Rules

For surveillance purposes, a case of a bipolar disorder is defined as:

- *One hospitalization* with any of the defining diagnoses of bipolar disorder (see ICD9 and ICD10 code lists below) in the *first or second* diagnostic position; or
- *Two outpatient medical encounters, within 180 days* of each other, with any of the defining diagnoses of a bipolar disorder (see ICD9 and ICD10 code lists below) in the *first or second* diagnostic position; or
- *One outpatient medical encounter in a psychiatric or mental health care specialty setting*, defined by Medical Expense and Performance Reporting System (MEPRS) code BF, with any of the defining diagnoses of a bipolar disorder (see ICD9 and ICD10 code lists below) in the *first or second* diagnostic position.

(continued on next page)

¹ Armed Forces Health Surveillance Center. Mental Disorders and Mental Health Problems, Active Component, U.S. Armed Forces, January 2000 – December 2009. *Medical Surveillance Monthly Report (MSMR)*. 2010 November; Vol.17 (11): 6- 12.

² American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition. 1994.



Case Definition and Incidence Rules (cont.)

Incidence rules:

For individuals who meet the case definition:

- The incidence date is considered the date of the first hospitalization or outpatient medical encounter that includes a diagnosis of a bipolar disorder.
- An individual is considered an incident case *once per surveillance period*.

Exclusions:

- None

Codes

The following ICD-9 codes are included in the case definition:

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Bipolar Disorders	F30 (manic episode)	296.0 (bipolar I disorder, single manic episode)
	F30.1 (manic episode without psychotic symptoms)	--
	- F30.10 (manic episode without psychotic symptoms, unspecified)	- 296.00 (bipolar I disorder, single manic episode, unspecified) - 296.10 (manic disorder, recurrent episode, unspecified)
	- F30.11 (manic episode without psychotic symptoms, mild)	- 296.01 (bipolar I disorder, single manic episode, mild) - 296.11 (manic disorder, recurrent episode, mild)
	- F30.12 (manic episode without psychotic symptoms, moderate)	- 296.02 (bipolar I disorder, single manic episode, moderate) - 296.12 (manic disorder, recurrent episode, moderate)
	- F30.13 (manic episode, severe without psychotic symptoms)	- 296.03 (bipolar I disorder, single manic episode, severe, without mention of psychotic behavior) - 296.13 (manic disorder, recurrent episode, severe, without mention of psychotic behavior)

(continued on next page)



F30.2 (manic episode, severe with psychotic symptoms)	<ul style="list-style-type: none"> - 296.04 (bipolar I disorder, single manic episode, severe, specified as with psychotic behavior) - 296.14 (manic disorder, recurrent episode, severe, specified as with psychotic behavior)
F30.3 (manic episode in partial remission)	<ul style="list-style-type: none"> - 296.05 (bipolar I disorder, single manic episode, severe, in partial or unspecified remission) - 296.15 (manic disorder, recurrent episode, severe, in partial or unspecified remission)
F30.4 (manic episode in full remission)	<ul style="list-style-type: none"> - 296.06 (bipolar I disorder, single manic episode, in full remission) - 296.16 (manic disorder, recurrent episode, severe, in full remission)
F30.8 (other manic episodes)	296.81 (other and unspecified bipolar disorders; atypical manic disorder)
F30.9 (manic episode, unspecified)	296.00 (above)
--	296.1 (manic disorder, recurrent episode)
--	296.4 (bipolar I disorder, most recent episode, or current, manic)
F31 (bipolar disorder)	--
F31.0 (bipolar disorder, current episode hypomanic)	--
F31.1 (bipolar disorder, current episode manic without psychotic features)	--
- F31.10 (bipolar disorder, current episode manic without psychotic features, unspecified)	- 296.40 (bipolar I disorder, most recent episode, or current, manic, unspecified)
- F31.11 (bipolar disorder, current episode manic without psychotic features, mild)	- 296.41 (bipolar I disorder, most recent episode, or current, manic; mild)
- F31.12 (bipolar disorder, current episode manic without psychotic features, moderate)	- 296.42 (bipolar I disorder, most recent episode, or current, manic; moderate)
- F31.13 (bipolar disorder, current episode manic without psychotic features, severe)	- 296.43 (bipolar I disorder, most recent episode, or current, manic; severe, without mention of psychotic behavior)
F31.2 (bipolar disorder, current episode manic, severe with psychotic features)	- 296.44 (bipolar I disorder, most recent episode, or current, manic; severe, specified as with psychotic behavior)

(continued on next page)



--	296.5 (bipolar I disorder, most recent episode, or current, depressed)
F31.3 (bipolar disorder, current episode depressed, mild, or moderate severity)	-
- F31.30 (bipolar disorder, current episode depressed, mild or moderate severity, unspecified)	- 296.50 (bipolar I disorder, most recent episode, or current, depressed; unspecified)
- F31.31 (bipolar disorder, current episode depressed, mild)	- 296.51 (bipolar I disorder, most recent episode, or current, depressed; mild)
- F31.32 (bipolar disorder, current episode depressed, moderate)	- 296.52 (bipolar I disorder, most recent episode, or current, depressed; moderate)
F31.4 (bipolar disorder, current episode depressed, severe, without psychotic features)	- 296.53 (bipolar I disorder, most recent episode, or current, depressed; severe, without mention of psychotic behavior)
F31.5 (bipolar disorder, current episode depressed, severe, with psychotic features)	- 296.54 (bipolar I disorder, most recent episode, or current, depressed; severe, specified as with psychotic behavior)
F31.6 (bipolar disorder, current episode, mixed)	296.6 (bipolar I disorder, most recent, or current, mixed)
- F31.60 (bipolar disorder, current episode mixed, unspecified)	- 296.60 (bipolar I disorder, most recent, or current, mixed; unspecified)
- F31.61 (bipolar disorder, current episode mixed, mild)	- 296.61 (bipolar I disorder, most recent, or current, mixed; mild)
- F31.62 (bipolar disorder, current episode mixed, moderate)	- 296.62 (bipolar I disorder, most recent, or current, mixed; moderate)
- F31.63 (bipolar disorder, current episode mixed, severe, without psychotic features)	- 296.63 (bipolar I disorder, most recent, or current, mixed; severe, without mention of psychotic behavior)
- F31.64 (bipolar disorder, current episode mixed, severe, with psychotic features)	- 296.64 (bipolar I disorder, most recent, or current, mixed; severe, specified as with psychotic behavior)
F31.7 (bipolar disorder, currently in remission)	--
- F31.70 (bipolar disorder, currently in remission, most recent episode unspecified)	296.7 (bipolar I disorder, most recent episode, or current, unspecified)
- F31.71 (bipolar disorder, in partial remission, most recent episode hypomanic)	296.7 (above)
- F31.72 (bipolar disorder, in full remission, most recent episode hypomanic)	296.7 (above)

(continued on next page)



	- F31.73 (bipolar disorder, in partial remission, most recent episode manic)	- 296.45 (bipolar I disorder, most recent episode, or current, manic, severe, in partial or unspecified remission)
	- F31.74 (bipolar disorder, in full remission, most recent episode manic)	- 296.46 (bipolar I disorder, most recent episode, or current, manic; severe, in full remission)
	- F31.75 (bipolar disorder, in partial remission, most recent episode depressed)	- 296.55 (bipolar I disorder, most recent episode, or current, depressed; severe, in partial or unspecified remission)
	- F31.76 (bipolar disorder, in full remission, most recent episode depressed)	- 296.56 (bipolar I disorder, most recent episode, or current, depressed; severe, in full remission)
	- F31.77 (bipolar disorder, in partial remission, most recent episode mixed)	- 296.65 (bipolar I disorder, most recent, or current, mixed; severe, in partial or unspecified remission)
	- F31.78 (bipolar disorder, in full remission, most recent episode mixed)	- 296.66 (bipolar I disorder, most recent, or current, mixed; severe, in full remission)
	F31.8 (other bipolar disorders)	296.8 (other and unspecified bipolar disorders)
	- F31.81 (bipolar II disorder)	- 286.89 (other bipolar disorders; includes bipolar II)
	- F31.89 (other bipolar disorder)	296.40 (above)
	- F31.9 (bipolar disorder, unspecified)	296.7 (above) 296.80 (bipolar disorder, unspecified)
	F34.0 (cyclothymic disorder)	301.13 (cyclothymic disorder)

Development and Revisions

- In July of 2014 the case definition was updated to include ICD10 codes.
- This case definition was developed in November of 2010 by AFHSC MSMR staff for a MSMR article on mental disorders and mental health problems among active duty Service members.¹ 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

- To increase the specificity of the case definition for outpatient encounters, two such encounters with the defining diagnoses are required. The period of 180 days was established to allow for the likelihood that “true” cases of a bipolar disorder would have a second encounter within that interval.



Code Set Determination and Rationale

- Based on review of the existing ICD9 and new ICD10 codes sets, the SMS workgroup recommends adding ICD9 code 296.81 (other and unspecified bipolar disorders; atypical manic disorder) and ICD9 code 301.13 (cyclothymic disorder). Cyclothymia, a mood disorder associated with emotional ups and downs; not as extreme as those experienced with Bipolar I and II Disorders. Cyclothymia is included to be consistent with the AFHSC *Depressive Disorders* case definition in which dysthymia, a mood disorder associated with chronic depressive symptoms that are not as severe as those found in Major Depressive, is included.
- The code set and groupings of mental health disorder-specific diagnoses used in this case definition are based on code sets developed by Garvey *et al.*³ and Seal *et al.*⁴ The final code set was selected after a review of the scientific literature and of the relevant codes in the International Classification of Diseases, 9th Revision.
- ICD9 codes 296.05-296.06 (bipolar I disorder, partial or full remission) and ICD9 codes 296.10-296.16 (manic disorder, recurrent episode) are included in the code set. AFHSC recognizes that inclusion of these codes may result in overestimation of the incidence of illness in the population by counting some cases for which the onset of illness preceded a person's military service period; on the other hand, exclusion of these codes would underestimate the prevalence of illness in the population (e.g., an individual with two outpatient diagnoses within 180 days where the latter diagnosis has a fifth digit of 6 would be excluded if these codes were not included).
- ICD9 code 296.80 (bipolar disorder, unspecified) is included in the code set due to an AFHSC interest in maintaining a broad definition of bipolar disorder. AFHSC recognizes this is a category that may lack specificity for the diagnosis that meets the standard DMS-IV clinical criteria.

Reports

AFHSC reports on bipolar disorders in the following reports:

- Periodic MSMR articles on mental disorders and associated hospitalizations, outpatient medical encounters, and post-deployment illnesses.
- Annually: MSMR article on the “Absolute and relative morbidity burdens attributable to various illnesses and injuries U.S. Armed Forces” (see *Comments* section below).

Review

July 2014	Case definition reviewed and updated by the AFHSC Surveillance Methods and Standards (SMS) working group.
July 2012	Case definition reviewed and adopted by AFHSC Surveillance Methods and Standards working group.
Nov 2010	Case definition developed and reviewed by AFHSC MSMR staff.

³ Garvey Wilson A, Messer S, Hoge C. U.S. military mental health care utilization and attrition prior to the wars in Iraq and Afghanistan. *Soc Psychiatry Psychiatr Epidemiol.* 2009;44(6):473-481.

⁴ Seal KH, Bertenthal D, Miner CR, Sen S, Marmar C. Bringing the War Back Home: Mental Health Disorders Among 103 788 US Veterans Returning From Iraq and Afghanistan Seen at Department of Veterans Affairs Facilities. *Arch Intern Med.* March 12, 2007;167(5):476-482.



Comments

Burden of Disease Reports: AFHSC articles and reports on the “burden” of illness and injury in the U.S. Armed Forces group all illness and injury-specific diagnoses, defined by ICD-9-CM codes, into 139 burden of disease-related conditions and 25 categories based on a modified version of the classification system developed for the Global Burden of Disease (GBD) Study.⁵ In general, the GBD system groups diagnoses with common pathophysiologic or etiologic bases and/or significant international health policymaking importance.

The AFHSC disaggregates some diagnoses that are grouped into single categories in the GBD system (e.g., mental disorders) to increase the military relevance of the results. The category of mental health disorders is separated into the following sub-categories of “disorders”: anxiety, substance abuse, adjustment, mood, tobacco dependence, psychotic, personality, somatoform, and all other mental disorders.⁶

Because reports on disease burden are based on the total number of medical encounters for a specific condition, a slightly different case definition is used for these analyses. The case definition requires only “one inpatient or outpatient medical encounter with any defining ICD9 codes between 001 and 999” and uses the diagnosis in the *primary* diagnostic position only. An individual is allowed one medical encounter per condition per day.

Comprehensive AFHSC Mental Health Reports: For analyses and reports requiring data on *all* mental disorders, AFHSC includes all mental health diagnoses that fall within the range of ICD-9-CM codes 290-319 (mental disorders) with a few exceptions.

- ICD9 code 305.1 (tobacco use disorder) is not included as tobacco-cessation efforts are widespread within primary care clinics in the military and this diagnosis is not treated as a mental health disorder.
- ICD9 codes 299.xx (pervasive developmental disorders) and ICD9 codes 317.xx -319.xx (mild, other, and unspecified intellectual disabilities) are not included as these conditions do not represent mental health disorders that AFHSC is trying to track with these reports.

*AFHSC Mental Health Report for the Department of Defense (Office of the Assistant Secretary of Defense for Health Affairs):*⁷ This report describes the incidence rates of, and proportions of the population affected by major depression, bipolar disorder, alcohol dependence, substance dependence and post-traumatic stress disorder. The case definition and ICD9 code set used for this report differ slightly from the AFHSC case definition bipolar disorders documented here.

⁵ 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.

⁶ Armed Forces Health Surveillance Center. Absolute and Relative Morbidity Burdens Attributable to Various Illnesses and Injuries, U.S. Armed Forces, 2011. *Medical Surveillance Monthly Report (MSMR)*. 2012 April; Vol.19 (4): 4-9.

⁷ Armed Forces Health Surveillance Center. Selected mental health disorders among active component members, U.S. Armed Forces, 2007-2010. *Medical Surveillance Monthly Report (MSMR)*. 2010 November; 17(11): 2-5.

