BIPOLAR DISORDERS

Includes Manic Episode, Cyclothymia, and Bipolar Disorder Unspecified

Background

This case definition was developed by the Armed Forces Health Surveillance Branch (AFHSB) 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.

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.

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.

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[1] Armed Forces Health Surveillance Branch. Mental health disorders and mental health problems, active component, U.S. Armed Forces, 2007-2016. *Medical Surveillance Monthly Report (MSMR).* March 2018; Vol.25 (3): 2- 11.
[2] American Psychiatric Association. Bipolar Disorders. In: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Arlington, VA: 2013.

Case Definition and Incidence Rules *(continued)*

- An individual is considered an incident case *once per surveillance period*.

Exclusions:

- None

Codes

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

Condition	ICD-10-CM Codes	ICD-9-CM Codes
Manic episode	*F30 (manic episode)*	296.0 (bipolar I disorder, *single* manic episode) 296.1 (manic disorder, *recurrent* episode)
	F30.1 (manic episode without psychotic symptoms…)	--
	- F30.10 (unspecified)	- 296.00 (bipolar I disorder, single manic episode, unspecified) - 296.10 (manic disorder, recurrent episode, unspecified)
	- F30.11 (mild)	- 296.01 (bipolar I disorder, single manic episode, mild) - 296.11 (manic disorder, recurrent episode, mild)
	- F30.12 (moderate)	- 296.02 (bipolar I disorder, single manic episode, moderate) - 296.12 (manic disorder, recurrent episode, moderate)
	- F30.13 (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)
	F30.2 (manic episode, severe with psychotic symptoms)	- 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) *(continued on next page)*

	F30.3 (manic episode in partial remission)	- 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)	- 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)
Bipolar disorder	*F31 (bipolar disorder)*	- 296.4 (bipolar I disorder, most recent episode, or current, manic…)
	F31.0 (bipolar disorder, current episode hypomanic)	- 296.40 (unspecified)
	F31.1 (bipolar disorder, current episode manic without psychotic features…)	
	- F31.10 (unspecified)	
	- F31.11 (mild)	- 296.41 (mild)
	- F31.12 (moderate)	- 296.42 (moderate)
	- F31.13 (severe)	- 296.43 (severe, without mention of psychotic behavior)
	F31.2 (bipolar disorder, current episode manic, severe with psychotic features)	- 296.44 (severe, specified as with psychotic behavior)
	F31.3 (bipolar disorder, current episode depressed, mild, or moderate severity…)	296.5 (bipolar I disorder, most recent episode, or current, depressed…)
	- F31.30 (unspecified)	- 296.50 (unspecified)
	- F31.31 (mild)	- 296.51 (mild)
	- F31.32 (moderate)	- 296.52 (moderate)
	F31.4 (severe, without psychotic features)	- 296.53 (severe, without mention of psychotic behavior)
	F31.5 (bipolar disorder, current episode depressed, severe, with psychotic features)	- 296.54 (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 (unspecified)	- 296.60 (unspecified)

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	- F31.61 (mild)	- 296.61 (mild)
	- F31.62 (moderate)	- 296.62 (moderate)
	- F31.63 (severe, without psychotic features)	- 296.63 (severe, without mention of psychotic behavior)
	- F31.64 (severe, with psychotic features)	- 296.64 (severe, specified as with psychotic behavior)
	F31.7 (bipolar disorder, currently in remission…)	296.7 (bipolar I disorder, most recent episode, or current, unspecified)
	- F31.70 (most recent episode unspecified)	
	- F31.71 (in partial remission, most recent episode hypomanic)	
	- F31.72 (in full remission, most recent episode hypomanic)	
	- F31.73 (in partial remission, most recent episode manic)	- 296.45 (bipolar I disorder, most recent episode, or current, manic, in partial or unspecified remission)
	- F31.74 (in full remission, most recent episode manic)	- 296.46 (bipolar I disorder, most recent episode, or current, manic; in full remission)
	- F31.75 (in partial remission, most recent episode depressed)	- 296.55 (bipolar I disorder, most recent episode, or current, depressed; in partial or unspecified remission)
	- F31.76 (in full remission, most recent episode depressed)	- 296.56 (bipolar I disorder, most recent episode, or current, depressed; in full remission)
	- F31.77 (in partial remission, most recent episode mixed)	- 296.65 (bipolar I disorder, most recent, or current, mixed; in partial or unspecified remission)
	- F31.78 (in full remission, most recent episode mixed)	- 296.66 (bipolar I disorder, most recent, or current, mixed; in full remission)
	F31.8 (other bipolar disorders)	296.8 (other and unspecified bipolar disorders)
	- *Translated code included in Depressive Disorders case definition.*	- 296.82 (atypical depressive disorder)
	- F31.81 (bipolar II disorder)	- 296.89 (other bipolar disorders; includes bipolar II)
	- F31.89 (other bipolar disorder)	- 296.40 (above)
	F31.9 (bipolar disorder, unspecified)	296.80 (bipolar disorder, unspecified)
Cyclothymia	*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 in 2010 by AFHSC *Medical Surveillance Monthly Report (MSMR)* staff for an 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

- In 2015, based on review of the existing ICD9 and new ICD10 codes sets, the SMS workgroup recommended adding ICD9 code 296.81 (other and unspecified bipolar disorders; atypical manic disorder) and ICD9 code 301.13 (cyclothymic disorder) to the code set. Cyclothymia is a mood disorder associated with emotional ups and downs; not as extreme as those experienced with Bipolar I and II Disorders. Cyclothymia is included here to be consistent with the DSM-5 categorization of mental health disorders and to be consistent with the AFHSB *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 depression, is included.

- Codes ICD9 296.05-296.06 (bipolar I disorder, partial or full remission) / ICD10 F30.3-4 (manic episode in partial or full remission, and codes ICD9 296.10-296.16 (manic disorder, recurrent episode) / ICD10 (translation does not specify recurrence) are included in the code set. AFHSB 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 AFHSB interest in maintaining a broad definition of bipolar disorder. AFHSB recognizes this is a category that may lack specificity for the diagnosis that meets the standard DMS-IV clinical criteria.

- 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.

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[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.

Reports

AFHSB reports on adjustment disorders in the following reports:

- Periodic *MSMR* articles

- 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

Dec 2018	Case definition reviewed and updated by the AFHSB Surveillance Methods and Standards (SMS) working group.
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.

Comments

Burden of Disease Reports:

AFHSB 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 ICD9 and ICD10 codes, into 142 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 AFHSB 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 numbers of medical encounters for specific conditions, a slightly different case definition is used for burden analyses. The case definition requires capturing only the diagnosis in the primary (first) diagnostic position of each record of an inpatient or outpatient medical encounter. Each individual is allowed only one medical encounter per condition per day, and inpatient encounters are prioritized over outpatient encounters on the same day. Case defining codes are any ICD9 codes between 001 and 999, any ICD10 codes between A00 and T88, ICD10 codes beginning with Z37 (outcome of delivery), and DoD unique personal history codes DoD 0101-0105.

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[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 Branch. Absolute and relative morbidity burdens attributable to various illnesses and injuries, active component, *Medical Surveillance Monthly Report (MSMR).* May 2018; Vol.25 (5): 2-9.

Comprehensive AFHSB Mental Health Reports:

    For analyses and reports requiring data on *all* mental disorders, AFHSB includes *all* mental health diagnoses that fall within the range of ICD9 codes 290-319 / ICD10 codes F01-F99 (mental disorders) in the first or second diagnostic positon. The following diagnoses are excluded from the analysis.

- Codes ICD9 310.2 / ICD10 F07.81 (post-concussion syndrome)

- Codes ICD9 305.1 / ICD10 F17* (tobacco use disorder / nicotine dependence) 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.

- Codes ICD9 317*-319* / ICD10 F70-F79 (mental retardation)

- Codes ICD9 315* / ICD10 F80*-F82*, F88-F89 (specific delays in development)

- Codes ICD9 299*/ ICD10 F84* (pervasive developmental disorders)