

## SCHIZOPHRENIA

*Includes schizoaffective disorders.*

### Background

This case definition was developed by the Armed Forces Health Surveillance Division (AFHSD) for the purpose of descriptive epidemiological reports on mental disorders among active-duty Service members.<sup>1</sup> The reports provide a comprehensive overview of mental health in the Services, including detailed information on the numbers, rates, and trends of schizophrenia and other mental health diagnoses. This case definition is specific for schizophrenia and differs from the standard AFHSD case definition used for surveillance of most mental health disorders.

### Clinical Description

Schizophrenia is a severe, frequently unremitting mental illness that involves symptoms of hallucinations, delusions, paranoia, disorganized speech, and other disorganized behavior. The etiology is unknown although genetic and environmental risk factors have been identified. Symptom onset is insidious, often beginning in adolescence and progressing until symptoms become severe enough to require medical attention. The syndrome usually significantly affects occupational and social interactions, and earlier age at onset is associated with greater morbidity.<sup>2</sup> Complete remission of the disorder is rare.

#### Case Definition and Incidence Rules (October 2016-present)

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

- *One hospitalization* with a case-defining diagnosis of schizophrenia (see ICD9 and ICD10 code lists below) in the *first or second* diagnostic position; or
- *Four outpatient or Theater Medical Data Store (TMDS) medical encounters* with a case-defining diagnosis of schizophrenia (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 case-defining diagnosis of schizophrenia.
- An individual is considered an incident case *once per lifetime*.

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<sup>1</sup> Armed Forces Health Surveillance Division. Mental health disorders and mental health problems, active component, U.S. Armed Forces, 2016-2020. *MSMR*. 2021; 28(8):2-9.

<sup>2</sup> Armed Forces Health Surveillance Center. Mental Health Diagnosis during the Year Prior to Schizophrenia, U.S. Armed Forces, 2001-2010. *MSMR*. 2012; 19(3):10-13.



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

#### Exclusions:

- Schizophrenia cases that remained in active service for more than two years after meeting the surveillance case definition.

### Codes

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

| Condition               | ICD-10-CM Codes                        | ICD-9-CM Codes                                                                                                                                                                                                                     |
|-------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Schizophrenic disorders | <i>F20 (schizophrenia)</i>             | <i>295 (schizophrenic disorders)</i>                                                                                                                                                                                               |
|                         | F20.0 (paranoid schizophrenia)         | 295.3 (paranoid type ...)<br>- 295.30 (unspecified)<br>- 295.31 (sub-chronic)<br>- 295.32 (chronic)<br>- 295.33 (sub-chronic with acute exacerbation)<br>- 295.34 (chronic with acute exacerbation)<br>- 295.35 (in remission)     |
|                         | F20.1 (disorganized schizophrenia)     | 295.1 (disorganized type ...)<br>- 295.10 (unspecified)<br>- 295.11 (sub-chronic)<br>- 295.12 (chronic)<br>- 295.13 (sub-chronic with acute exacerbation)<br>- 295.14 (chronic with acute exacerbation)<br>- 295.15 (in remission) |
|                         | F20.2 (catatonic schizophrenia)        | 295.2 (catatonic type ...)<br>- 295.20 (unspecified)<br>- 295.21 (sub-chronic)<br>- 295.22 (chronic)<br>- 295.23 (sub-chronic with acute exacerbation)<br>- 295.24 (chronic with acute exacerbation)<br>- 295.25 (in remission)    |
|                         | F20.3 (undifferentiated schizophrenia) | 295.90 (below)<br><i>(continued on next page)</i>                                                                                                                                                                                  |



|  |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | F20.5 (residual schizophrenia)       | 295.6 (residual type ...) <ul style="list-style-type: none"> <li>- 295.60 (unspecified)</li> <li>- 295.61 (sub-chronic)</li> <li>- 295.62 (chronic)</li> <li>- 295.63 (sub-chronic with acute exacerbation)</li> <li>- 295.64 (chronic with acute exacerbation)</li> <li>- 295.65 (in remission)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|  | F20.8 (other schizophrenia)          | 295.4 (schizophreniform disorder ...) <ul style="list-style-type: none"> <li>- 295.40 (unspecified)</li> <li>- 295.41 (sub-chronic)</li> <li>- 295.42 (chronic)</li> <li>- 295.43 (sub-chronic with acute exacerbation)</li> <li>- 295.44 (chronic with acute exacerbation)</li> <li>- 295.45 (in remission)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|  | - F20.81 (schizophreniform disorder) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|  | - F20.89 (other schizophrenia)       | 295.0 (simple type ...) <ul style="list-style-type: none"> <li>- 295.00 (unspecified)</li> <li>- 295.01 (sub-chronic)</li> <li>- 295.02 (chronic)</li> <li>- 295.03 (sub-chronic with acute exacerbation)</li> <li>- 295.04 (chronic with acute exacerbation)</li> <li>- 295.05 (in remission)</li> </ul> 295.8 (other specified types of schizophrenia...) <ul style="list-style-type: none"> <li>- 295.80 (unspecified)</li> <li>- 295.81 (sub-chronic)</li> <li>- 295.82 (chronic)</li> <li>- 295.83 (sub-chronic with acute exacerbation)</li> <li>- 295.84 (chronic with acute exacerbation)</li> <li>- 295.85 (in remission)</li> </ul> 295.5 (latent schizophrenia ...) <ul style="list-style-type: none"> <li>- 295.50 (unspecified)</li> <li>- 295.51 (sub-chronic)</li> <li>- 295.52 (chronic)</li> <li>- 295.53 (sub-chronic with acute exacerbation)</li> <li>- 295.54 (chronic with acute exacerbation)</li> <li>- 295.55 (in remission)</li> </ul> <p style="text-align: right;"><i>(continued on next page)</i></p> |



|                           |                                           |                                                                                                                                                                                                                                            |
|---------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | F20.9 (schizophrenia, unspecified)        | 295.9 (unspecified schizophrenia ...)<br>- 295.90 (unspecified)<br>- 295.91 (sub-chronic)<br>- 295.92 (chronic)<br>- 295.93 (sub-chronic with acute exacerbation)<br>- 295.94 (chronic with acute exacerbation)<br>- 295.95 (in remission) |
| Schizoaffective disorders | <i>F25 (schizoaffective disorders...)</i> | 295.7 (schizoaffective disorder ...)                                                                                                                                                                                                       |
|                           | - F25.0 (bipolar type)                    | - 295.70 (unspecified)                                                                                                                                                                                                                     |
|                           | - F25.1 (depressive type)                 | - 295.71 (sub-chronic)                                                                                                                                                                                                                     |
|                           | - F25.8 (other schizoaffective disorders) | - 295.72 (chronic)                                                                                                                                                                                                                         |
|                           | - F25.9 (unspecified)                     | - 295.73 (sub-chronic with acute exacerbation)<br>- 295.74 (chronic with acute exacerbation)<br>- 295.75 (in remission)                                                                                                                    |

### Development and Revisions

- In January 2015 the case definition was updated to include ICD10 codes.
- The original case definition was developed in November of 2010 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 component service members<sup>1</sup>.
- The case definition was developed based on reviews of the ICD9 and ICD10 codes, the scientific literature, and previous AFHSD analyses.

### Case Definition and Incidence Rule Rationale

- For schizophrenia, AFHSD uses a condition-specific case definition that differs from the standard AFHSD case definition used for surveillance of most mental health disorders. A case is defined by *one hospitalization or four outpatient medical encounters* with a case-defining diagnosis in the *first or second* diagnostic position. The requirement of four outpatient encounters was based on an exploratory analysis of Defense Medical Surveillance System (DMSS) data comparing follow-up care patterns among individuals diagnosed with schizophrenia in outpatient and inpatient settings. Hospitalized individuals served as the reference group because their diagnoses were presumed to have greater diagnostic certainty. Individuals with four or more outpatient encounters demonstrated follow-up patterns similar to those of most hospitalized individuals, supporting the use of four outpatient encounters to optimize specificity.<sup>3</sup>
- In October 2016, the Armed Forces Health Surveillance Branch (AFHSB) revised the case-finding criteria to align with other mental health case definitions. Under the revised criteria, a case-defining diagnosis was required to appear in the *first or second* diagnostic position, rather than in

<sup>3</sup> Detailed information on this analysis is available through AFHSC MSMR staff; reference DMSS Request# R120079 (schizophrenia among active component—case definition update), 2012.



any diagnostic position. Analyses comparing the two criteria found that the more restrictive criterion identified 181 fewer cases over a 10-year period.

- In March 2012, the case definition was updated to require *one hospitalization or four outpatient medical encounters* with a case-defining diagnosis of schizophrenia in *any* diagnostic position. This update replaced the prior criteria of *two outpatient medical encounters, within 180 days* of each other, with a case-defining diagnosis 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 a case-defining diagnoses in the *first or second* diagnostic position.
- *Exclusions:* Cases were excluded if the service member remained on active duty for more than two years after meeting the schizophrenia case definition criteria, based on the assumption that these cases were likely misdiagnosed. Subject-matter experts from the Department of Psychiatry at the Uniformed Services University of Health Sciences (USUHS) advised that individuals with schizophrenia would be unable to remain on active duty and would ultimately be separated. Consistent with this advice, Millikan and colleagues reported a median of 1.6 years from schizophrenia diagnosis to medical evaluation board (MEB) and an additional 4 months from MEB to separation.<sup>4</sup> Therefore, a two-year exclusion period was applied.

#### *Code Set Determination and Rationale*

- The code set and groupings of mental health disorder-specific diagnoses used in this case definition are based on code sets developed by the Agency for Healthcare Research and Quality (AHRQ).<sup>5</sup>

## **Reports**

The AFHSD reports on schizophrenia 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**

|          |                                                                                                                           |
|----------|---------------------------------------------------------------------------------------------------------------------------|
| Sep 2026 | Case definition reviewed by the AFHSD Surveillance Methods and Standards (SMS) working group.                             |
| May 2022 | Case definition reviewed and updated by the AFHSD SMS working group.                                                      |
| May 2019 | Case definition reviewed and updated by the AFHSD SMS working group.                                                      |
| Jan 2016 | Case definition reviewed and updated by the AFHSD SMS working group.                                                      |
| Nov 2010 | Case definition developed by the AFHSD <i>MSMR</i> staff; reviewed and adopted by the AFHSD SMS working group (Sep 2012). |

<sup>4</sup> Millikan AM, Weber NS, Niebuhr DW, et al. Evaluation of data obtained from military disability medical administrative databases for service members with schizophrenia or bipolar disorder. *Mil Med.* Oct 2007. 172(10):1032-1038.

<sup>5</sup> Agency for Healthcare Research and Quality website. <http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp>; accessed September 2026.



## Comments

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### *Burden of Disease Reports:*

The AFHSD 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.<sup>6</sup> In general, the GBD system groups diagnoses with common pathophysiologic or etiologic bases and/or significant international health policymaking importance.

The AFHSD 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.<sup>7</sup>

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.

### *Comprehensive AFHSD Mental Health Reports:*

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

- ICD10 F07.81 / ICD9 310.2 (post-concussion syndrome)
- ICD10 F17\* / ICD9 305.1 (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.
- ICD10 F70-F79 / ICD9 317\*-319\* (mental retardation)
- ICD10 F80\*-F82\*, F88-F89 / ICD9 315\* (specific delays in development)
- ICD10 F84\* / ICD9 299\* (pervasive developmental disorders)

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<sup>6</sup> 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.

<sup>7</sup> Armed Forces Health Surveillance Division. Absolute and relative morbidity burdens attributable to various illnesses and injuries, active component. *MSMR*. 2021;28(5): 2-9.

