

Appendix

Sampling Error, Standards of Precision and Reliability, and Case Definitions

Each survey, surveillance and vital statistics system referenced in this report has slightly different procedures for analyzing, interpreting, and presenting results. These procedures are described in detail by each system in the published references cited in the report. A brief summary is provided below regarding certain key issues related to sampling error, standards of precision and reliability, and case definitions.

Sampling Error

The three surveys included in this report (the National Survey of Family Growth [NSFG], the National Health and Nutrition Examination Survey [NHANES], and the Youth Risk Behavior Survey [YRBS]) use slightly different ways to represent sampling error:

- YRBS and NHANES: sampling error is represented by displaying the prevalence estimate and the 95% confidence interval.
- NSFG: Information and data on sampling error is described in published source documents, which are listed in the references and at the bottom of each table that contains estimates from NSFG.

Standards of Precision and Reliability

Each system also has established its own standards for determining if an estimate is sufficiently precise and valid. Below is a brief description of the criteria used by each system included in this report.

- HIV/AIDS Reporting System: Estimates within table cells for HIV/AIDS data were considered unstable if case numbers (or numerators) were fewer than five.
- NHANES: Data do not meet standards of precision or reliability whenever relative standard errors (RSE) are >30%.
- NSFG: Estimates were considered not to meet standards of precision and reliability if the denominator was <75 cases or if the numerator was fewer than five cases.
- National Vital Statistics System: Estimates within table cells for births were considered unstable if the number of births in the numerator was <20. A cell in which a "0" appears might represent a quantity more than zero but <0.05.
- National Electronic Injury Surveillance System--All Injury Program: National estimates are considered unstable if they are based on <20 cases (unweighted data) or on <1,200 (weighted data), or if the coefficient of variation of the estimate is >30%. Many estimates for males by age and age and race/ethnicity are not reported because of the instability of the numbers. In addition, rates by race/ethnicity for both females and males are not reported because of the high percentage of missing race/ethnicity data (i.e., >20%). Data are weighted by the inverse of the probability of selection to provide national estimates. Available data underestimate the true rate of sexual assault because reported data represents only cases that are clearly documented in the ED record and many victims do not visit an ED.
- National Youth Risk Behavior Survey: The national report includes 95% confidence intervals.

Case Definitions for Sexually Transmitted Diseases (STDs)

Chlamydia trachomatis

Chlamydia trachomatis, Genital Infections (case definition revised in September 1996).

Clinical description: Infection with *C. trachomatis* can result in urethritis, epididymitis, cervicitis, acute salpingitis, or other syndromes when sexually transmitted; however, the infection is often asymptomatic in women. Perinatal infections can result in inclusion conjunctivitis and pneumonia in newborns. Other syndromes caused by *C. trachomatis* include lymphogranuloma venereum (see *Lymphogranuloma Venereum*) and trachoma.

Laboratory criteria for diagnosis: Isolation of *C. trachomatis* by culture or demonstration of *C. trachomatis* in a clinical specimen by detection of antigen or nucleic acid.

Case classification: Confirmed: a case that is laboratory confirmed.

Gonorrhea

Clinical description: a sexually transmitted infection commonly manifested by urethritis, cervicitis, or salpingitis. Infection might be asymptomatic.

Laboratory criteria for diagnosis: isolation of typical gram-negative, oxidase-positive diplococci (presumptive *Neisseria gonorrhoeae*) from a clinical specimen, or demonstration of *N. gonorrhoeae* in a clinical specimen by detection of antigen or nucleic acid, or observation of gram-negative intracellular diplococci in a urethral smear obtained from a male.

Case classification: Probable: 1) demonstration of gram-negative intracellular diplococci in an endocervical smear obtained from a female or 2) a written morbidity report of gonorrhea submitted by a physician. Confirmed: a case that is laboratory confirmed

Syphilis

Syphilis is a complex sexually transmitted disease that has a highly variable clinical course. All case definitions were revised in September 1996. Classification by a clinician with expertise in syphilis might take precedence over the following case definitions developed for surveillance purposes.

Syphilis, primary

Clinical description: a stage of infection with *Treponema pallidum* characterized by one or more chancres (ulcers); chancres might differ considerably in clinical appearance.

Laboratory criteria for diagnosis: demonstration of *T. pallidum* in clinical specimens by darkfield microscopy, direct fluorescent antibody (DFA-TP), or equivalent methods.

Case classification: Probable: a clinically compatible case with one or more ulcers (chancres) consistent with primary syphilis and a reactive serologic test (nontreponemal: Venereal Disease Research Laboratory [VDRL] or rapid plasma reagin [RPR]; treponemal: fluorescent treponemal antibody absorbed [FTA-ABS] or microhemagglutination assay for antibody to *T. pallidum* [MHA-TP]). Confirmed: a clinically compatible case that is laboratory confirmed.

Syphilis, secondary

Clinical description: a stage of infection caused by *T. pallidum* and characterized by localized or diffuse mucocutaneous lesions, often with generalized lymphadenopathy. The primary chancre may still be present.

Laboratory criteria for diagnosis: demonstration of *T. pallidum* in clinical specimens by darkfield microscopy, DFATP, or equivalent methods.

Case classification: Probable: a clinically compatible case with a nontreponemal (VDRL or RPR) titer ≥ 4 . Confirmed: a clinically compatible case that is laboratory confirmed.

Case Definition for HIV/AIDS

Since the beginning of the human immunodeficiency virus (HIV) epidemic, CDC, in collaboration with the Council of State and Territorial Epidemiologists, has revised case definitions for HIV infection and acquired immunodeficiency syndrome (AIDS) in adults and children (1-5). The case definition that was in place in 2006, when the data reported here was collected, includes revised surveillance criteria for HIV infection and incorporates the surveillance criteria for AIDS (6). For adults and children aged ≥ 18 months, the HIV surveillance case definition included laboratory and clinical evidence specifically indicative of HIV infection and severe HIV disease (AIDS). The revised surveillance case definitions for adults and children became effective January 1, 2000.

References

1. [CDC. Revision of the CDC surveillance case definition for acquired immunodeficiency syndrome. MMWR 1987;36\(Suppl 1\):1--15.](#)
2. [CDC. Classification system for human immunodeficiency virus \(HIV\) infection in children under 13 years of age. MMWR 1987; 36:225--36.](#)
3. [CDC. 1993 revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. MMWR 1992;41\(No. RR-17\).](#)
4. [CDC. Guidelines for national human immunodeficiency virus case surveillance, including monitoring for human immunodeficiency virus infection and acquired immunodeficiency syndrome. MMWR 1999;48\(No. RR-13\).](#)
5. [CDC. 1994 revised classification system for human immunodeficiency virus infection in children less than 13 years of age. MMWR 1994;43\(No. RR-12\).](#)
6. [CDC. Appendix: revised surveillance case definition for HIV infection. MMWR 1999; 48 \(No. RR13\):29--31.](#)

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