Gonorrhea v1
Definition Factsheet & Technical Brief

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Definition Description: This definition is used to identify emergency department visits related to gonococcal infections caused by the bacteria *Neisseria gonorrhoeae*. Gonorrhea is a common sexually transmitted infection (STI) among adolescents and adults worldwide. *N. gonorrhoeae* is a common cause of genital inflammatory syndromes, including cervicitis, urethritis, and pelvic inflammatory disease (PID). However, most infections are asymptomatic. Gonorrhea is a nationally notifiable disease that is reported to the Centers for Disease Control and Prevention (CDC). The use of syndromic data to identify pre-diagnoses of gonorrhea in emergency departments can complement and enhance current STI surveillance methods. Currently, there is no syndrome definition using electronic health record data for gonorrhea available in NSSP's instance of Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE). This is the first iteration of a definition for gonorrhea; it may be further improved upon by the NSSP Community of Practice in the future. This query is intended to be narrow and capture visits with specific terms to support greater monitoring and actionable public health data. More complex and/or extensive queries may exist that more broadly capture symptoms or other terms.

Please note that the queries are developed using gonorrhea-related free-text terms from chief complaint fields; International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and Tenth Revision, Clinical Modification (ICD-10-CM) discharge diagnosis codes; and Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT) as the basis for identifying patient visits of interest, and not the Council of State and Territorial Epidemiologists (CSTE) gonorrhea surveillance case definition. The queried patient visits may or may not represent data for a case patient included in National Notifiable Diseases Surveillance System (NNDSS) case data and further public health investigation may be required.

Key Notes

This case definition is intended for surveillance and public health reporting and may not fully align with clinical diagnosis or management or disease intervention practices. This definition should not be used for individual patient management or for determining the types of partner services interventions that should be implemented.

Citations

1. CSTE. **Gonorrhea (*Neisseria gonorrhoeae* infection)**
2. **2023 Case Definition.** Available at: https://ndc.services.cdc.gov/case-definitions/gonorrhea-neisseria-gonorrhoeae-2023/
3. CDC. **About Gonorrhea**. Available at: https://www.cdc.gov/gonorrhea/about/index.html

New or Revised Definition: New Definition

Date Added to ESSENCE: October 2026

Use Cases for Definition:
Case-finding: Tertiary
Trend monitoring: Primary
Early outbreak detection: Secondary
Emergent condition: Not Intended as Use Case

Justification: There is no syndrome definition for gonorrhea currently available in ESSENCE. CDC wants to use emergency department (ED) data to monitor trends.

Data Source During Development: ED Visits. Chief Complaint Query Validation dataset (CCQV) in ESSENCE.

Validation Methods: Select members of the NSSP Community of Practice were asked to review line-level results for their jurisdictions and provide feedback to ensure the intended results of the definitions were met. New Mexico ran this query against ED visits from January through August 2024. Alaska ran the query against emergency department visits from November 2024 through February 2025 for gonorrhea.

Validation Results: In New Mexico, this query returned 198 visit records. Among these, 83% (n = 165) were classified as confirmed, 4% (n = 8) as undetermined, and 13% (n = 25) as not a visit of interest. In Alaska, this query returned 99 visit records. Among these, 82% (n = 82) were classified as confirmed and 17% (n = 17) as not a visit of interest.

Limitations:
1) Diagnosis codes Z11.3 (encounter for screening for infections with a predominantly sexual mode of transmission) and Z20.2 (contact with and suspected exposure to infections with a predominantly sexual mode of transmission) may represent screening or exposure rather than confirmed infection.

2) Chief complaint (CC) text presents interpretation challenges. For example, visits with diagnosis code A54 (gonococcal infection) included unrelated conditions such as “soft tissue injury” or “STD exposure.” The use of abbreviations (e.g., “STD”) in free-text CC fields may affect confirmed visit identification, particularly when phrases such as “STD exposure” are documented.

3) Additionally, CC updates sometimes include “STD check,” which may appear as an initial complaint before being revised, potentially leading to misclassification. Visits may also represent patients returning for treatment. Some visits also reflect follow-up care for recent gonorrhea diagnoses (e.g., “screening last week, told to return” or “gonorrhea won’t go away”). These repeat encounters may result in multiple visits for the same underlying infection and could overestimate visit counts.

Definition Fields and Structure:
The Chief Complaint Discharge Diagnosis (CCDD) parsed field is used to query both the discharge diagnosis codes and chief complaint free text, and exclusions are incorporated as necessary.

- Inclusion based on chief complaint free text terms:
    - The visit is included if it contains:
        1. A chief complaint related to gonococcal infection – ("Gonorrh[iea][iea]" or "Gonorrho[iea][iea][iea]" or "gonorh[iea][iea]" or "gonorrh[iae]" or "gonorh[iae]a" or "gonor[iae]a" or "gonococcal" or "gonococal“ or dgi or "gonor" or "history of gono" or "n[ei][ei]sser[ei]a" or "pelvic inflammatory disease" or pid) ***AND***
- Exclusion based on chief complaint free text terms:
    - A chief complaint is not included if it contains:
        1. A chief complaint denying infection or requesting evaluation without a positive diagnostic code – (“does not” or ”negative for” or ”d[en][en]ie[sd] gonor” or ”deny gonor” or ”vaccine” or ”screen” or ”sexually transmitted disease check” or ”sti check” or ”wellness check” or ”wants to be test” or ”wants to be check” or ”wants test” or ”wants check” or ”wants to get test” or ”wellness visit” or ”establish care” or ”well visit” or ”sexually transmitted disease testing” or ”sexually transmitted disease shot” or ”sexually transmitted disease screening” or ”exposure to sexually transmitted” or ”sexually transmitted disease evaluation” or ”sexually transmitted disease exposure” or “possible exposure” or ”med eval” or ”medical eval” or ”sexually transmitted

disease concern” or ”sexually transmitted disease test” or ”soft tissue injury test” or ”soft tissue injury check” or ”soft tissue injury screen” or ”exposure to soft tissue injury” or ”soft tissue injury exposure” or ”soft tissue injury concern” or ”soft tissue injury anxiety” or ”soft tissue injury came for shot” or ”soft tissue injury” or ”exposed to soft tissue injury” or ”deep soft tissue injury”) **OR**

- Inclusion based on ICD-9 discharge diagnosis codes related to gonococcal infection:
    - The visit is included if it contains:
        1. A discharge diagnosis code related to gonococcal infection – (098) ***OR***
- Inclusion based on ICD-10 discharge diagnosis codes related to gonococcal infection:
    - The visit is included if it contains:
        1. A discharge diagnosis code related gonococcal infection – (A54) ***OR***
- Inclusion based on SNOMED discharge diagnosis codes related to gonococcal infection:
    - The visit is included if it contains:
        1. A discharge diagnosis code related to *Neisseria gonorrhoeae* (organism) - (68704007)
- There are no exclusions in this query applied to diagnostic codes. Exclusion terms mentioned above apply only to chief complaint terms, and an encounter is included if it contains any of the above-mentioned diagnostic codes.

Plain Language Description

The definition uses discharge diagnosis codes and free-text chief complaint terms. The definition requires that an emergency department visit contains a reference to the condition by its discharge diagnosis code (in at least one of the following: ICD-9-CM, ICD-10-CM, SNOMED diagnostic codes), or by the condition name listed in the chief complaint text. Therefore, the Gonorrhea v1 syndromic surveillance definition includes ICD-9-CM, ICD-10-CM, and SNOMED diagnostic codes for infection with *Neisseria gonorrhoeae*, along with direct mentions of gonorrhea (including misspellings) in chief complaint text.

Detailed Definition Components

Table 1: Inclusion terms: International Classification of Disease, Ninth Revision, Clinical Modification (ICD-9-CM)

Terms	Description
098	Gonococcal infections

Table 2: Inclusion and exclusion terms: International Classification of Disease, Tenth Revision, Clinical Modification (ICD-10-CM)

Terms	Description
A54	Gonococcal infection

Table 3: Inclusion terms: SNOMED Concepts

Terms	Description
68704007	*Neisseria gonorrhoeae* (organism)

Table 4: Inclusion terms: Chief Complaint

Description
"Gonorrh[iea][iea]", or, "Gonorrho[iea][iea][iea]", or, "gonorh[iea][iea]", or, "gonorrh[iae]", or, "gonorh[iae]a", or, "gonor[iae]a", or, "gonococcal", or, "gonococal“, or, !dgi!, or, "gonor", or, "history of gono", or, "n[ei][ei]sser[ei]a", or, "pelvic inflammatory disease", or, !pid!

Table 5: Exclusion terms: Chief Complaint

Chief Complaint
“does not”, or, ”negative for”, or, ”d[en][en]ie[sd] gonor”, or, ”deny gonor”, or, ”vaccine”, or, ”screen”, or, ”sexually transmitted disease check”, or, ”sti check”, or, ”wellness check”, or, ”wants to be test”, or, ”wants to be check”, or, ”wants test”, or, ”wants check”, or, ”wants to get test”, or, ”wellness visit”, or, ”establish care”, or, ”well visit”, or, ”sexually transmitted disease testing”, or, ”sexually transmitted disease shot”, or, ”sexually transmitted disease screening”, or, ”exposure to sexually transmitted”, or, ”sexually transmitted disease evaluation”, or, ”sexually transmitted disease exposure”, or, “possible exposure”, or, ”med eval”, or, ”medical eval”, or, ”sexually transmitted disease concern”, or, ”sexually transmitted disease test”, or, ”soft tissue injury test”, or, ”soft tissue injury check”, or, ”soft tissue injury screen”, or, ”exposure to soft tissue injury”, or, ”soft tissue injury exposure”, or, ”soft tissue injury concern”, or, ”soft tissue injury anxiety”, or, ”soft tissue injury came for shot”, or, ”soft tissue injury”, or, ”exposed to soft tissue injury”, or, ”deep soft tissue injury”

Table 6: ESSENCE syntax for the Gonorrhea definition

Search the CC and DD Parsed Free Text: ^;098^,or,^;A54^,or^;68704007^,or,(,^gonor^,or,^gonoc^,or,^n[ei][ei]sser[ei]a^,or,^pelvic inflammatory disease^,or,!pid!,or,!dgi!,),andnot,(,^does not^,or,^negative for^,or,^d[en][en]ie[sd]^ gonor^,or,^deny^gonor^,or,^vaccine^,or,^screen^,or,^sexually transmitted disease check^,or,^sti check^,or,^wellness check^,or,^wants to be test^,or,^wants to be check^,or,^wants test^,or,^wants check^,or,^wants to get test^,or,^wellness visit^,or,^establish care^,or,^well visit^,or,^sexually transmitted disease testing^,or,^sexually transmitted disease shot^,or,^sexually transmitted disease screening^,or,^exposure to sexually transmitted^,or,^sexually transmitted disease evaluation^,or,^sexually transmitted disease exposure^,or, ^possible exposure^,or,^med eval^,or,^medical eval^,or,^sexually transmitted disease concern^,or,^sexually transmitted disease test^,or,^soft tissue injury test^,or,^soft tissue injury check^,or,^soft tissue injury screen^,or,^exposure to soft tissue injury^,or,^soft tissue injury exposure^,or,^soft tissue injury concern^,or,^soft tissue injury anxiety^,or,^soft tissue injury came for shot^,or,^soft tissue injury^,or,^exposed to soft tissue injury^,or,^deep soft tissue injury^,)