

Campylobacteriosis v1
Definition Factsheet & Technical Brief

Authors: Andzelika Rzucidlo, MPH^{1,2}, Patrick Rekieta^{1,3}, Anna Frick, MPH⁴, Brittany Yarnell, MPH⁵, Megan Montoya, MPH⁶, Katharina L. van Santen, MSPH^{1,3}

¹ CDC Office of Public Health Data, Surveillance, and Technology (OPHDST), Detect and Monitor Division (DMD), Integrated Monitoring Branch

² InductiveHealth

³ ICF

⁴ Alaska Division of Public Health

⁵ Nebraska Department of Health and Human Services

⁶ Florida Department of Health

Points of contact:

nssp@cdc.gov

Definition Purpose: Created by the CDC National Syndromic Surveillance Program (NSSP) for use with emergency department data to develop queries for all National Notifiable Diseases defined by the National Notifiable Diseases Surveillance System (NNDSS). Please note that while the disease queries are developed using the NNDSS case definition as the basis for identifying patient visits of interest, the queried patient visits themselves may or may not represent a case patient in NNDSS and further public health investigation will most often be required. This query is intended to be a version 1 and 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 broader queries may exist that more broadly capture symptoms or travel-based terms.

New or Revised Definition: New Definition

Date Added to ESSENCE: April 2026

Definition Description: Designed to capture emergency department visits with a diagnostic code or textual indicator of possible campylobacteriosis.

Use-Cases for Definition:

Case-finding: Tertiary

Trend monitoring: Primary

Early outbreak detection: Secondary

Emergent Condition: Not Intended as Use Case

Justification: No query definition exists for Campylobacter infections. CDC wants to use emergency department data to monitor trends.

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

Development Methods:

1. The CDC team used the NNDSS case definition of campylobacteriosis to identify diagnostic codes (International Classification of Diseases, 9th & 10th Revision (ICD-9-CM, ICD-10-CM), SNOMED Clinical Terms (CT)) and chief complaint free-text for syndrome development.

2. The codes and free text were then categorized as inclusion or exclusion terms. These terms were formatted for querying in ESSENCE.
3. Text analysis was conducted on the initial query to find additional inclusion or exclusion terms.
4. The query was cross-checked internally by NSSP and by CDC subject matter experts as needed.

Validation Methods: This definition is part of the collection of definitions created by CDC NSSP for the rapid reportables project. The rapid reportables project is led by the CDC NSSP team to create definitions for all nationally reportable diseases. These definitions focus on chief complaint text and diagnostic codes of the disease or its causative agents with no mention of symptoms. Select members of the Community of Practice were then asked to review line-level results for their jurisdictions and provide feedback to ensure the intended results of the definitions were met.

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 campylobacteriosis complaint free text terms:
 - The visit is included if it contains:
 1. A chief complaint for campylobacteriosis – (“campy”) **OR**
- Inclusion based on ICD-10 discharge diagnosis codes related to campylobacteriosis:
 - The visit is included if it contains:
 1. A discharge diagnosis code for Campylobacter enteritis – (A04.5) **OR**
- Inclusion based on ICD-9 discharge diagnosis codes related to campylobacteriosis:
 - The visit is included if it contains:
 - A discharge diagnosis code for Intestinal infection due to campylobacter (008.43) **OR**
- Inclusion based on SNOMED discharge diagnosis codes related to campylobacteriosis:
 - The visit is included if it contains:
 1. A discharge diagnosis code related to the disease – (86500004 or 18081009) **OR**
 2. A discharge diagnosis code mentioning disease agent – (1163143005 or 1176987009 or 111835002 or 446122002 or 447354007 or 35408001) **ANDNOT**
- All of the above must exclude:
 - Chief complaint term for recheck – (“recheck”)

Detailed Definition Components

Table 1. Inclusion and exclusion terms.

Terms	Description
Inclusion	
International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)	
A04.5	Campylobacter enteritis
International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)	
008.43	Intestinal infection due to campylobacter
SNOMED Concepts	
86500004	Campylobacteriosis (disorder)
1163143005	Colitis caused by Campylobacter (disorder)
18081009	Enteric campylobacteriosis (disorder)
1176987009	Periodontitis caused by Campylobacter (disorder)
111835002	Infection caused by Campylobacter fetus (disorder)
446122002	Intestinal infection caused by Campylobacter coli (disorder)
447354007	Intestinal infection caused by Campylobacter jejuni
35408001	Genus Campylobacter (organism)
Chief Complaint	
"campy"	
Exclusion	
Chief Complaint	
"recheck"	

Table 2. ESSENCE syntax for the CCDD parsed field

```
(,^campy^,OR,^;A045^,OR,^;00843;^,OR,^;86500004;^,OR,^;1163143005;^,OR,^;18081009;^,OR,^;1176987009;^,OR,^;111835002;^,OR,^;446122002;^,OR,^;447354007;^,OR,^;35408001;^,^),ANDNOT,^recheck^
```

Use the following URL and click Configuration Options to see the query setup:

[https://essence2.syndromicsurveillance.org/nssp_essence/servlet/TemporalTimeSeriesViewer?datasource=va_hosp&startDate=7Dec2025&medicalGroupingSystem=essencesyndromes&userId=5024&endDate=28Feb2026&percentParam=noPercent&agtTarget=TimeSeries&geographySystem=hospital&detector=notdetector&CCDDParsedFreeText=\(,%5Ecampy%5E,OR,%5E;A045%5E,OR,%5E;00843;%5E,OR,%5E;86500004;%5E,OR,%5E;1163143005;%5E,OR,%5E;18081009;%5E,OR,%5E;1176987009;%5E,OR,%5E;111835002;%5E,OR,%5E;446122002;%5E,OR,%5E;447354007;%5E,OR,%5E;35408001;%5E,^\),ANDNOT,%5Erecheck%5E%20%20&timeResolution=weekly](https://essence2.syndromicsurveillance.org/nssp_essence/servlet/TemporalTimeSeriesViewer?datasource=va_hosp&startDate=7Dec2025&medicalGroupingSystem=essencesyndromes&userId=5024&endDate=28Feb2026&percentParam=noPercent&agtTarget=TimeSeries&geographySystem=hospital&detector=notdetector&CCDDParsedFreeText=(,%5Ecampy%5E,OR,%5E;A045%5E,OR,%5E;00843;%5E,OR,%5E;86500004;%5E,OR,%5E;1163143005;%5E,OR,%5E;18081009;%5E,OR,%5E;1176987009;%5E,OR,%5E;111835002;%5E,OR,%5E;446122002;%5E,OR,%5E;447354007;%5E,OR,%5E;35408001;%5E,^),ANDNOT,%5Erecheck%5E%20%20&timeResolution=weekly)

Syntax 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 disease by its discharge diagnosis code (in at least one of the following: ICD-10-CM, ICD-9-CM, SNOMED diagnostic codes), or by the disease or pathogen name listed in the chief complaint text. Therefore, the campylobacteriosis syndromic surveillance definition includes ICD-10-CM, ICD-9-CM, and SNOMED diagnostic codes for campylobacteriosis, along with direct mentions of campylobacteriosis using "campy" in chief complaint text. To ensure that only acute campylobacter infections were captured, chief complaint indicating a "recheck" were excluded since a recheck for campylobacteriosis typically involves a follow-up stool test after an initial positive result to determine if the infection has cleared.