Anaplasmosis v1
Definition Factsheet & Technical Brief

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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: July 2025

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

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

Justification: No query definition exists for anaplasmosis 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 anaplasmosis 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 at 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.

<u>Definition Fields and Structure</u>:
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 anaplasmosis chief complaint free text terms:
    - The visit is included if it contains:'
        1. A chief complaint related to Anaplasmosis – ("anaplasm") **OR**
- Inclusion based on ICD-10 discharge diagnosis codes related to Anaplasmosis:
    - The visit is included if it contains:
        1. A discharge diagnosis code for Anaplasmosis – (A79.82) **OR**
- Inclusion based on SNOMED discharge diagnosis codes related to Anaplasmosis:
    - The visit is included if it contains:
        1. A discharge diagnosis code for Anaplasmosis – (85708001 or 13906002) **ANDNOT**
- All the above must exclude:
    - A chief complaint related to history of disease – ("history of anaplasm" or "history anaplasm") **OR**
    - A chief complaint related to follow up visits – ("follow up")

<u>Detailed Definition Components</u>
Table 1. *Inclusion and exclusion terms.*

Terms	Description
Inclusion	
International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)	
A79.82	Anaplasmosis
SNOMED Concepts	
13906002	Anaplasmosis (disorder)
85708001	Human anaplasmosis caused by *Anaplasma phagocytophilum* (disorder)
Chief Complaint	
"anaplasm"	
Exclusion	
Chief Complaint	
"history of anaplasm"	
"history anaplasm"	
"follow up"	

Table 2. *ESSENCE syntax for the CCDD parsed field*

(,^anaplasm^,OR,^;A7982^,OR,^;85708001;^,OR,^;13906002;^,),ANDNOT,(,^history of anaplasm^,OR,^history anaplasm^,OR,^follow up^,)

Use the following URL and click Configuration Options to see the query setup:
https://essence2.syndromicsurveillance.org/nssp_essence/servlet/TemporalTimeSeriesViewer?datasourc e=va_hosp&startDate=6Apr2025&medicalGroupingSystem=essencesyndromes&userId=5024&endDate= 12Jul2025&percentParam=noPercent&aqtTarget=TimeSeries&geographySystem=hospital&detector=nod etectordetector&CCDDParsedFreeText=(,%5Eanaplasm%5E,OR,%5E;A7982%5E,OR,%5E;85708001;% 5E,OR,%5E;13906002;%5E,),ANDNOT,(,%5Ehistory%20of%20anaplasm%5E,OR,%5Ehistory%20anapl asm%5E,OR,%5Efollow%20up%5E,)%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, SNOMED diagnostic codes), or by the disease or pathogen name listed in the chief complaint text. Therefore, the anaplasmosis syndromic surveillance definition includes ICD-10-CM, and SNOMED diagnostic codes for anaplasmosis, along with direct mentions of anaplasmosis using "anaplasm" in chief complaint text. To ensure that only acute anaplasmosis infections were captured, we excluded records with chief complaint text that includes disease history: 'history of anaplasm', 'history anaplasm', 'follow up'.