

Tularemia 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 Disease 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: February 2025

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

Use-Cases for Definition:

- ☒ Case-finding
- ☐ Trend monitoring
- ☒ Early outbreak detection

Justification: No query definition exists for tularemia. 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 tularemia 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 as 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 tularemia chief complaint free text terms:
 - The visit is included if it contains:
 1. A chief complaint related to tularemia and its misspellings – (“tularami” or “tularni” or “tularemi” or “tulareni” or “tuleremi” or “tulereni”) **OR**
 2. A chief complaint related to *Francisella tularensis* – (“f tular” or “francesella t” OR “francisella t” or “fransesella t” or “fransisella t” or “francisela t” or “fransisela t” or “francesela” or “fransesela”) **OR**
 3. A chief complaint related to the alternative name rabbit fever – (“rabbit fever”) **OR**
 4. A chief complaint related to the alternative name deer fly fever – (“deer fly fev” or “deerfly fev”) **OR**
- Inclusion based on ICD-10 discharge diagnosis codes related to tularemia:
 - The visit is included if it contains:
 1. A discharge diagnosis related to Tularemia – (A21) **OR**
- Inclusion based on ICD-9 discharge diagnosis codes related to tularemia:
 - The visit is included if it contains:
 1. A discharge diagnosis code of Ulceroglandular tularemia – (021.0) **OR**
 2. A discharge diagnosis code of Enteric tularemia – (021.1) **OR**
 3. A discharge diagnosis code of Pulmonary tularemia – (021.2) **OR**
 4. A discharge diagnosis code of Oculoglandular tularemia – (021.3) **OR**
 5. A discharge diagnosis code of Other tularemia – (021.8) **OR**
 6. A discharge diagnosis code of Unspecified tularemia – (021.9) **OR**
- Inclusion based on SNOMED discharge diagnosis codes related to tularemia:
 - The visit is included if it contains:
 1. A discharge diagnosis code of Tularemia – (19265001) **OR**
 2. A discharge diagnosis code of Pulmonary tularemia – (45556008) **OR**
 3. A discharge diagnosis code of Glandular tularemia – (21857006) **OR**
 4. A discharge diagnosis code of Typhoidal tularemia – (398554008) **OR**
 5. A discharge diagnosis code of Oropharyngeal tularemia – (398575000) **OR**
 6. A discharge diagnosis code of Oculoglandular tularemia – (73363000) **OR**
 7. A discharge diagnosis code of Ulceroglandular tularemia – (37722001) **OR**
 8. A discharge diagnosis code related to the disease agent *Francisella tularensis* – (50255000 or 51526001 or 60502008 or 91508008)
- There are no exclusions to this query.

Detailed Definition Components

Table 1. Inclusion and exclusion terms.

Variable Type	Terms	Description
Inclusions		
Discharge Diagnosis: ICD-10-CM	A21	Tularemia
Discharge Diagnosis: ICD-9-CM	021.0	Ulceroglandular tularemia
	021.1	Enteric tularemia
	021.2	Pulmonary tularemia
	021.3	Oculoglandular tularemia
	021.8	Other specified tularemia
	021.9	Unspecified tularemia
Discharge Diagnosis: SNOMED concepts	19265001	Tularemia (disorder)
	45556008	Pulmonary tularemia (disorder)
	21857006	Glandular tularemia (disorder)
	398554008	Typhoidal tularemia (disorder)
	398575000	Oropharyngeal tularemia (disorder)
	73363000	Oculoglandular tularemia (disorder)
	37722001	Ulceroglandular tularemia (disorder)
	50255000	Genus <i>Francisella</i> (organism)
	51526001	<i>Francisella tularensis</i> (organism)
	60502008	<i>Francisella tularensis</i> subspecies <i>holarctica</i> (organism)
	91508008	<i>Francisella tularensis</i> subspecies <i>tularensis</i> (organism)
Chief Complaint Terms	“tularami” OR “tularemi” OR “tularani” OR “tulareni” or “ tuleremi” or “tulereni”	
	“f tular”	
	“francesella t” OR “francisella t” or “fransesella t” or “fransisella t” or “francisela t” or “fransisela t” or “francesela” or “fransesela”	
	“rabbit fev”	
	“deer fly fev”	
	“deerfly fev”	
	“Ohara s dise”	
	“Ohara dise”	
	“Oharas dise”	

Table 2. *ESSENCE* syntax

<p>^tul[ae]r[ae][mn]i^,OR,^f tular^,OR,^fran[cs][ei]sella t^,OR,^fran[cs][ei]sela t^,OR,^ rabbit fev^,OR,^deer fly fev^,OR,^deerfly fev^,OR,^;A21^,OR,^;021[012389];^,OR,^;19265001;^,OR,^;45556008;^,OR,^;21857006;^,OR,^;398554 008;^,OR,^;398575000;^,OR,^;73363000;^,OR,^;37722001;^,OR,^;50255000;^,OR,^;51526001;^,OR,^;6 0502008;^,OR,^;91508008;^</p>
