Foodborne and Waterborne Disease Case Investigation Toolkit

NJHealth New Jersey Department of Health
Communicable Disease Service

This toolkit is designed to be used as a reference by disease investigators at local health departments. The toolkit is intended to guide both new and experienced investigators through the different components of case investigation and classification. This toolkit includes a variety of resources in one place.

Disease Chapters

Investigation Checklists

Case Classification Diagrams

Case Report Forms

Educational Resources

This toolkit contains information on:

- Botulism
- Campylobacteriosis *Updated in 2026*
- *Cronobacter* Infection *New in 2026*
- Cryptosporidiosis
- Cyclosporiasis
- Free-Living Amebic Infections *New in 2026*
- Giardiasis
- Hemolytic Uremic Syndrome (HUS)
- Hepatitis A
- Listeriosis
- Salmonellosis
- Shiga Toxin-producing *E. coli* (STEC)
- Shigellosis
- Trichinellosis
- Typhoid (and Paratyphoid) Fever
- Vibriosis (and Cholera)
- Yersiniosis

In addition to information contained here, refer to the following resources:

- NJDOH Food Handler Exclusion List
- NJDOH School Exclusion List
- NJDOH Disease Prioritization Document
- NJDOH Disease Reporting
- PHEL Enterics and Special Bacteriology Labs
- CDC Active Investigations of Multistate Outbreaks
- FDA Recalls and Safety Alerts

Contact the Foodborne and Waterborne Disease Unit:
cds.fwd.epi@doh.nj.gov

June 2026

Botulism

Clostridium botulinum

Priority Level
1

Foodborne Botulism

Clinically-compatible illness such as diplopia, blurred vision, bulbar weakness, and symmetric paralysis that may progress rapidly?

- NO → NOT A CASE
- YES → Confirmatory lab criteria for botulism?

Confirmatory lab criteria for botulism?

detection of botulinum toxin in stool, serum, or patient's food OR isolation of *Clostridium botulinum* from stool

- YES → CONFIRMED Foodborne
- NO → Have they eaten the same food as someone who has lab-confirmed botulism?

Have they eaten the same food as someone who has lab-confirmed botulism?

- YES → CONFIRMED Foodborne
- NO → Is there an epidemiological link (e.g., ingestion of a home-canned food within the previous 48 hours)?

Is there an epidemiological link (e.g., ingestion of a home-canned food within the previous 48 hours)?

- NO → NOT A CASE
- YES → PROBABLE Foodborne

Wound Botulism

Clinically-compatible illness such as diplopia, blurred vision, bulbar weakness, and symmetric paralysis that may progress rapidly?

- NO → NOT A CASE
- YES → Do they a have a history of a fresh, contaminated wound during the 2 weeks before onset of symptoms, or a history of injection drug use within the 2 weeks before onset of symptoms AND no suspected exposure to contaminated food?

Do they a have a history of a fresh, contaminated wound during the 2 weeks before onset of symptoms, or a history of injection drug use within the 2 weeks before onset of symptoms AND no suspected exposure to contaminated food?

- NO → NOT A CASE
- YES → Confirmatory lab criteria for botulism?

Confirmatory lab criteria for botulism?

detection of botulinum toxin in serum OR isolation of *Clostridium botulinum* from wound

- NO → PROBABLE Wound
- YES → CONFIRMED Wound

Incubation Period: 12 – 72 hours

New Case Timeframe: Not Applicable

PHEL Specimen Submission: Contact FWD Unit

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- NJDOH Disease Page
- CDC Resources

Infant Botulism

Clinically-compatible illness of infants (<1 year), characterized by constipation, poor feeding, and "failure to thrive" that may be followed by progressive weakness, impaired respiration, and death

- NO → NOT A CASE
- YES → Confirmatory lab criteria for botulism?

Confirmatory lab criteria for botulism?

detection of botulinum toxin in stool or serum OR isolation of *Clostridium botulinum* from stool

- NO → NOT A CASE
- YES → CONFIRMED Infant

Campylobacteriosis

Campylobacter spp.

Priority Level
4

Incubation Period: 2 – 5 days
New Case Timeframe: 90 days
PHEL Specimen Submission: Not Applicable

Were *Campylobacter* spp. isolated by culture from a clinical specimen?

YES → CONFIRMED

NO / UNKNOWN

Were *Campylobacter* spp. detected using a culture-independent diagnostic test (CIDT) such as a PCR/Nucleic Acid Test (NAT/NAAT/DNA) or Enzyme Immunoassay (EIA/ELISA/Antigen)?

YES → PROBABLE

NO / UNKNOWN

Does the person have clinically-compatible illness (such as diarrhea, abdominal pain, nausea and sometimes vomiting)?

YES

Does the person meet epidemiologic linkage criteria?

- A person who shares an exposure with a confirmed or probable case of campylobacteriosis
- A person who is exposed to a confirmed case of campylobacteriosis
- A person who is exposed to a probable case with presumptive laboratory evidence of campylobacteriosis

YES → PROBABLE

NO / UNKNOWN → NOT A CASE

NO / UNKNOWN → NOT A CASE

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources

Cronobacter Illness

Cronobacter spp.

Priority Level
3

Incubation Period: Variable
New Case Timeframe: 90 days
PHEL Specimen Submission: Not Applicable

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources

Does the infant (less than 12 months of age) have clinically-compatible illness (invasive infection, including but not limited to meningitis, cerebral abscess, sepsis, necrotizing entercolitis, or urinary tract infection) in the absence of a more likely diagnosis?

NO / UNKNOWN → NOT A CASE

YES → Were *Cronobacter* spp. isolated by culture in a clinical specimen from a normally sterile site (e.g., blood or cerebrospinal fluid)?

Were *Cronobacter* spp. isolated by culture in a clinical specimen from a normally sterile site (e.g., blood or cerebrospinal fluid)?

NO / UNKNOWN → Are any of the following epidemiologic risk factors true?

YES → CONFIRMED

Are any of the following epidemiologic risk factors true?

- Consumption of powdered infant formula (PIF) implicated as the source of infection
- Exposure to a non-PIF product, such as breast milk, implicated as the source of infection
- Residing in a congregate setting (e.g., a neonatal intensive care unit) with an active *Cronobacter* spp. outbreak

NO / UNKNOWN → Were *Cronobacter* spp. isolated by culture in a clinical specimen from a non-sterile site (e.g., stool or rectum, urine, skin, respiratory secretions, or broncho-alveolar lavage, etc)?

YES → Were *Cronobacter* spp. isolated by culture in a clinical specimen from a non-sterile site (e.g., stool or rectum, urine, skin, respiratory secretions, or broncho-alveolar lavage, etc)?

Were *Cronobacter* spp. isolated by culture in a clinical specimen from a non-sterile site (e.g., stool or rectum, urine, skin, respiratory secretions, or broncho-alveolar lavage, etc)?

NO / UNKNOWN → NOT A CASE

YES → POSSIBLE

NO / UNKNOWN → POSSIBLE

YES → PROBABLE

Cryptosporidiosis

Cryptosporidium

Priority Level
4

Incubation Period: 2 – 10 days
New Case Timeframe: 180 days
PHEL Specimen Submission: Not Applicable

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources

Was *Cryptosporidium* detected using DFA (direct fluorescent antibody test), PCR (polymerase chain reaction), EIA (enzyme immunoassay) or light microscopy?

YES → CONFIRMED

NO / UNKNOWN

Was *Cryptosporidium* antigen detected using screening (immunochromatographic card, rapid test card, etc.) or another laboratory test of unknown method?

YES → PROBABLE

NO / UNKNOWN

Does the person have clinically-compatible illness (gastrointestinal illness characterized by diarrhea and one or more of the following: diarrhea duration of 72 hours or more, abdominal cramping, vomiting, or anorexia)?

YES

Does the person have an epidemiologic link to a confirmed case?

YES → PROBABLE

NO / UNKNOWN

NO / UNKNOWN

NOT A CASE

Cyclosporiasis

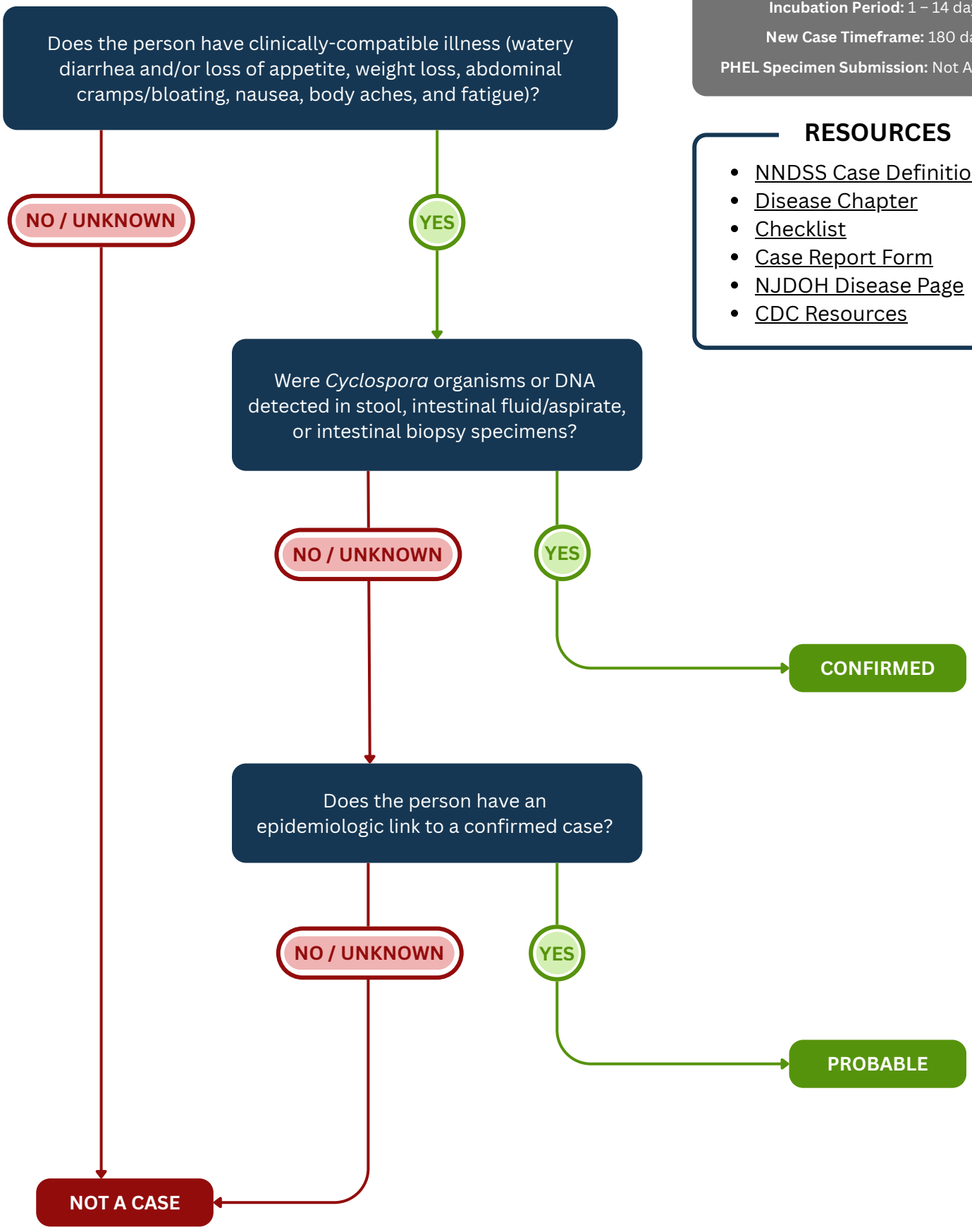
Cyclospora cayetanensis

Priority Level
3

Incubation Period: 1 – 14 days
New Case Timeframe: 180 days
PHEL Specimen Submission: Not Applicable

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources



Free-Living Amebic Infections

Acanthamoeba spp., *B. mandrillaris*, *N. fowleri*

Priority Level 1

Incubation Period: Variable

New Case Timeframe: Not applicable

PHEL Specimen Submission: Contact FWD Unit

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources

Acanthamoeba spp.

Does the case have clinically-compatible illness (an infection presenting as meningoencephalitis or encephalitis, disseminated disease (affecting multiple organ systems), or cutaneous disease)?

- NO → NOT A CASE
- YES → Detection of *Acanthamoeba* spp. antigen or nucleic acid or nucleic acid (e.g.,immunohistochemistry or PCR) from a clinical specimen (e.g., tissue) or culture
  - NO → NOT A CASE
  - YES → CONFIRMED

Balamuthia mandrillaris

Does the case have clinically-compatible illness (an infection presenting as meningoencephalitis or encephalitis, disseminated disease (affecting multiple organ systems), or cutaneous disease)?

- NO → NOT A CASE
- YES → Detection of *B. mandrillaris* antigen or nucleic acid or nucleic acid (e.g.,immunohistochemistry or PCR) from a clinical specimen (e.g., tissue) or culture
  - NO → NOT A CASE
  - YES → CONFIRMED

Naegleria fowleri

Does the case have clinically-compatible illness (an infection presenting as meningoencephalitis or encephalitis)?

- NO → NOT A CASE
- YES → Detection of *N. fowleri* antigen or nucleic acid from a clinical specimen (e.g.,immuno-histochemistry or PCR)
  - NO → Visualization of motile amebae in a wet mount of CSF **OR** isolation of *N. fowleri* in culture from a clinical specimen
    - NO → NOT A CASE
    - YES → PROBABLE
  - YES → CONFIRMED

Giardiasis

Giardia lamblia

Priority Level
4

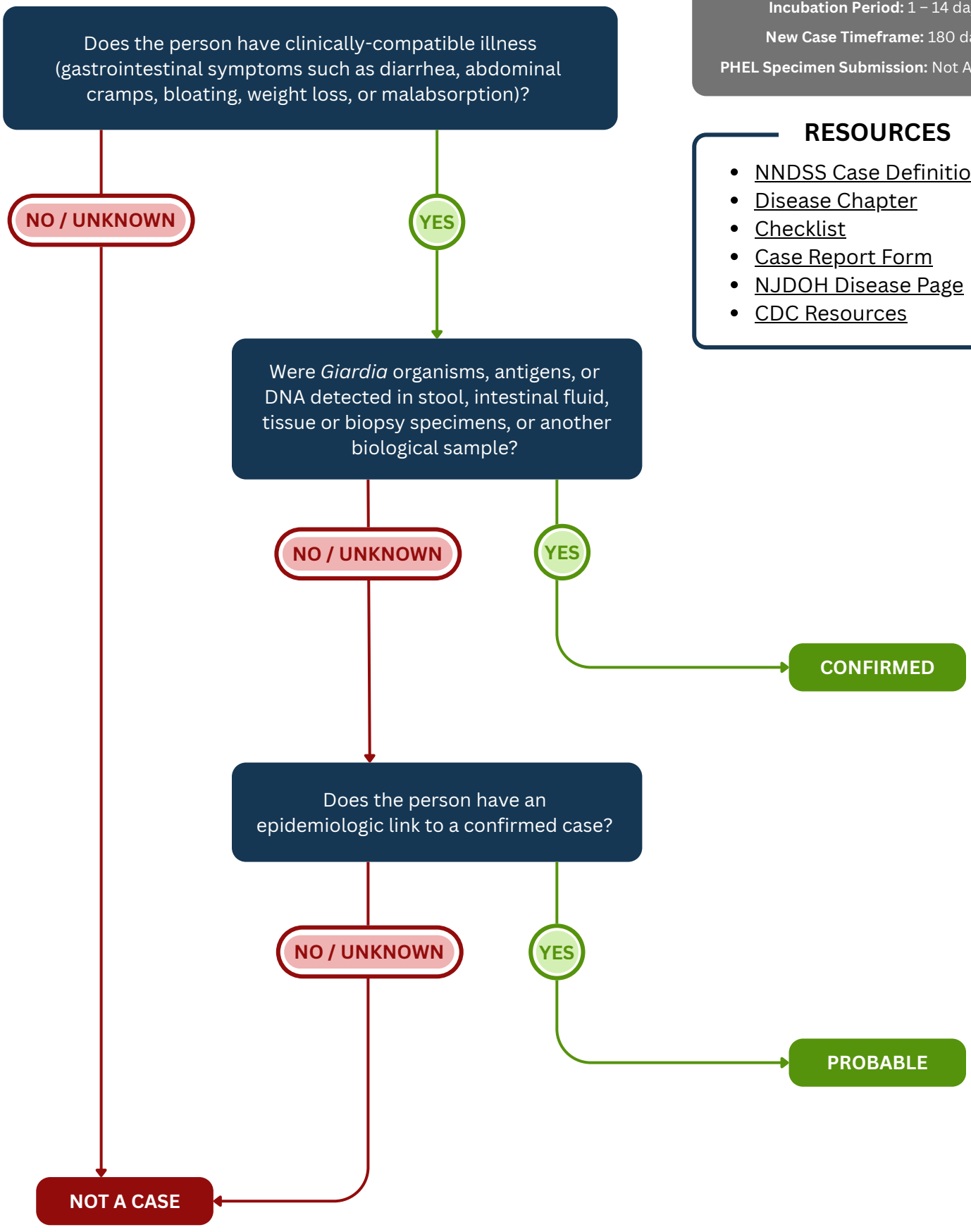
Incubation Period: 1 – 14 days

New Case Timeframe: 180 days

PHEL Specimen Submission: Not Applicable

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources



Hemolytic Uremic Syndrome (HUS)

Post-diarrheal

Priority Level 3

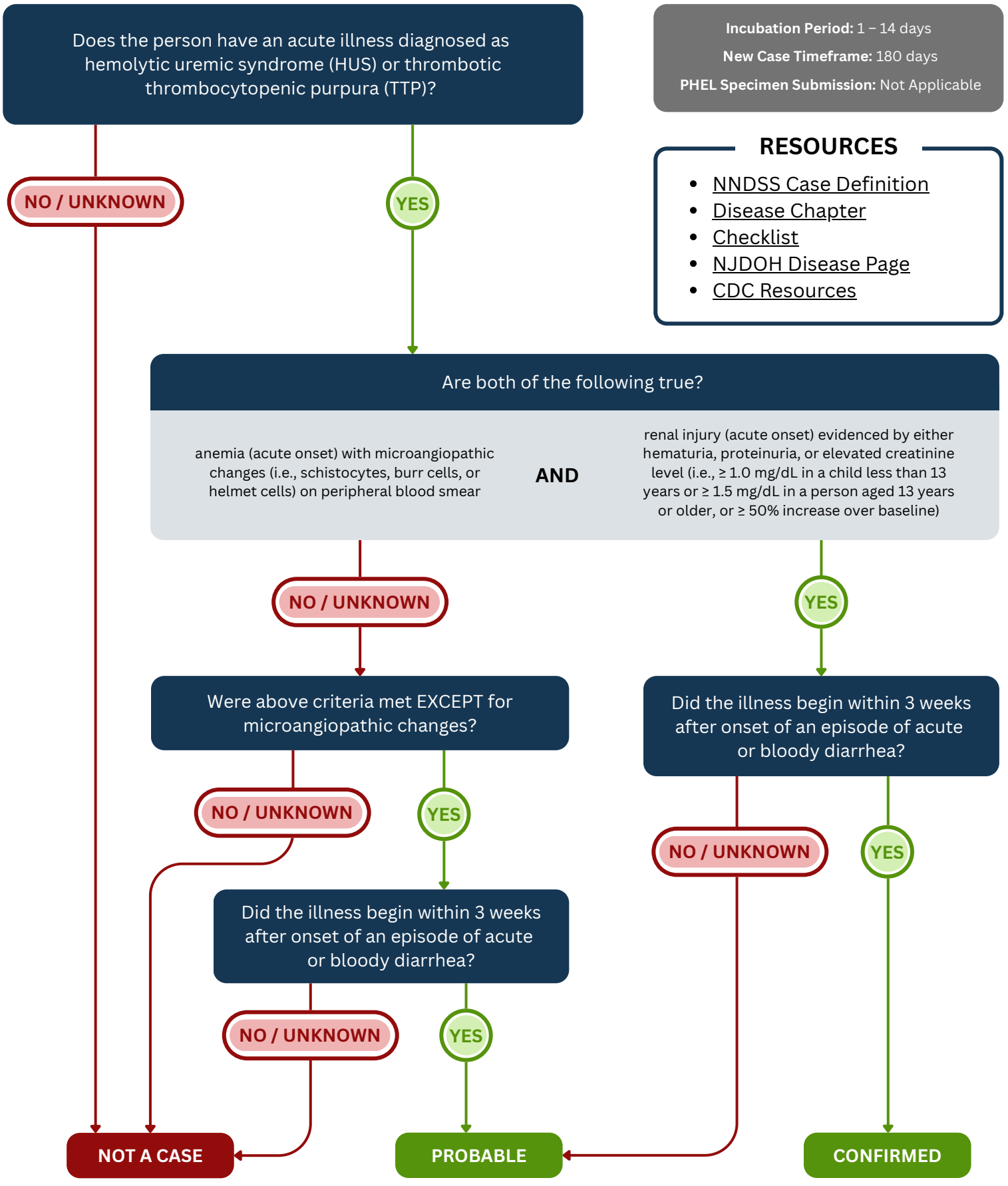
Incubation Period: 1 – 14 days

New Case Timeframe: 180 days

PHEL Specimen Submission: Not Applicable

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- NJDOH Disease Page
- CDC Resources



Hepatitis A

Hepatitis A virus

Priority Level
2

Is the individual positive for hepatitis A virus RNA using a culture-independent diagnostic test (CIDT) such as a PCR/Nucleic Acid Test (NAT/NAAT/DNA)?

NO / UNKNOWN

YES

CONFIRMED

Incubation Period: 15 – 50 days

New Case Timeframe: 180 days

PHEL Specimen Submission: Not Applicable

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- NJDOH Disease Page
- CDC Resources

Does the individual have clinically-compatible illness?

acute illness with a discrete onset of any sign or symptom consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, abdominal pain, or dark urine)

AND

jaundice or elevated total bilirubin levels ≥ 3.0 mg/dL

OR

elevated serum alanine aminotransferase (ALT) levels >200 IU/L

AND

absence of a more likely diagnosis

NO / UNKNOWN

YES

Is the individual IgM anti-HAV positive (immunoglobulin M (IgM) antibody to hepatitis A virus (anti-HAV) positive)?

NO / UNKNOWN

YES

Has the individual had contact (e.g., household or sexual) with a laboratory-confirmed hepatitis A case 15 – 50 days prior to onset of symptoms?

NO / UNKNOWN

YES

CONFIRMED

NOT A CASE

Listeriosis

Listeria monocytogenes

Priority Level 3

Illness is not associated with pregnancy or neonate

Isolation by culture of *Listeria monocytogenes* from a specimen collected from a normally sterile site

NO → Detection by a culture-independent diagnostic test (CIDT) of *L. monocytogenes* from a specimen collected from a normally sterile site

YES → **CONFIRMED** Systemic Infection

NO → Isolation by culture of *L. monocytogenes* from a non-invasive clinical specimen

YES → **PROBABLE** Systemic Infection

NO → **NOT A CASE**

YES → **POSSIBLE**

Illness is in an infant within 28 days of birth

Isolation by culture of *Listeria monocytogenes* from a specimen collected from a normally sterile site OR a non-sterile neonatal site collected within 48 hours of delivery

YES → **CONFIRMED** Neonatal

NO → Are any of the following true?

- Detection by culture-independent diagnostic testing (CIDT) of *Listeria monocytogenes* from a specimen collected from a normally sterile site OR a non-sterile neonatal site collected within 48 hours of delivery
- Laboratory detection (culture or CIDT) of *L. monocytogenes* from products of conception collected at time of delivery
- Neonate has illness characterized by bacteremia, CNS infection, and/or pneumonia **AND** Laboratory detection (culture or CIDT) of *L. monocytogenes* from a clinical specimen of the birthing parent collected from a normally sterile site

NO → Isolation by culture of *L. monocytogenes* from a non-invasive clinical specimen

YES → **PROBABLE** Neonatal

YES → **POSSIBLE**

NO → **NOT A CASE**

Incubation Period: 3 – 70 days

New Case Timeframe: Not applicable

PHEL Specimen Submission: Isolates Required

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources

Illness is in a pregnant person or associated with pregnancy loss, intrauterine fetal death, preterm labor, or neonatal infection

Isolation by culture of *Listeria monocytogenes* from a specimen collected from a normally sterile site OR from products of conception collected at the time of delivery

NO → Are any of the following true?

YES → **CONFIRMED** Pregnancy-Associated

- Detection by culture-independent diagnostic testing (CIDT) of *Listeria monocytogenes* from a specimen collected from a normally sterile site OR from products of conception collected at time of delivery
- Laboratory detection (culture or CIDT) of *L. monocytogenes* from neonatal specimen collected within 28 days of birth

NO → Isolation by culture of *L. monocytogenes* from a non-invasive clinical specimen

YES → **PROBABLE** Pregnancy-Associated

Salmonellosis

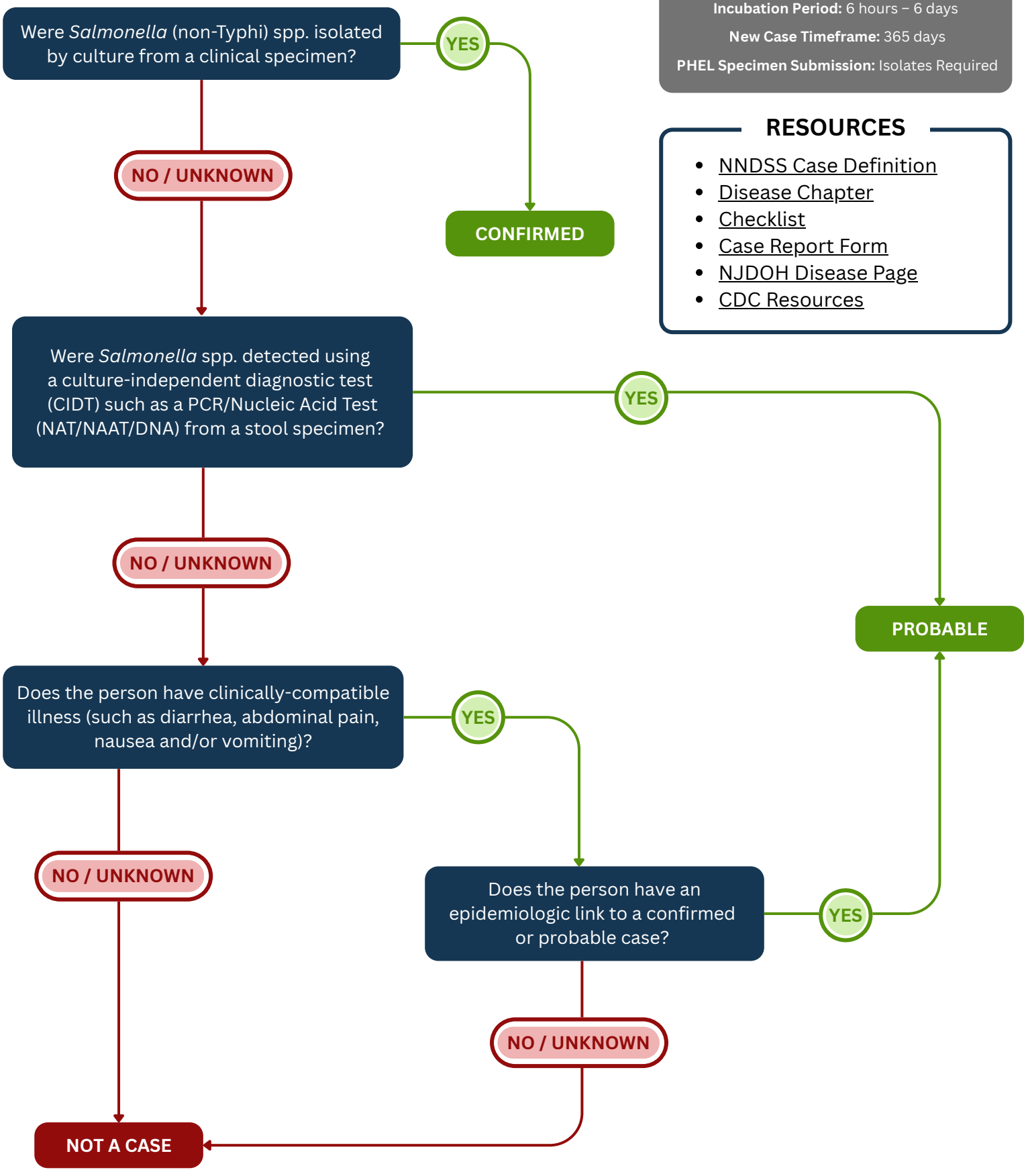
Salmonella spp.

Priority Level
4

Incubation Period: 6 hours – 6 days
New Case Timeframe: 365 days
PHEL Specimen Submission: Isolates Required

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources



Shiga toxin-producing *E. coli* (STEC)

Escherichia coli

Priority Level
3

Was *E. coli* O157:H7 OR *E. coli* with detection of Shiga toxin or Shiga toxin genes isolated by culture from a clinical specimen?

YES → CONFIRMED

NO / UNKNOWN

Does the person have clinically-compatible illness (diarrhea and/or abdominal cramps)?

YES

NO / UNKNOWN

Was *E. coli* O157 isolated from a clinical specimen without confirmation of H antigen, detection of Shiga toxin, or detection of Shiga toxin genes?

YES

NO / UNKNOWN

Are any of the following true?

- Identification of an elevated antibody titer against a known Shiga toxin-producing serogroup of *E. coli* in a person with no known clinical compatibility
- Detection of Shiga toxin or Shiga toxin genes in a clinical specimen using a CIDT and no known isolation of *Shigella* from a clinical specimen in a person with no known clinical compatibility
- Detection of *E. coli* O157 or STEC/EHEC in a clinical specimen using a CIDT in a person with no known clinical compatibility
- Diagnosis of post-diarrheal HUS/TTP

YES → POSSIBLE

NO / UNKNOWN → NOT A CASE

Are any of the following true?

- Identification of an elevated antibody titer against a known Shiga toxin-producing serogroup of *E. coli*
- Detection of Shiga toxin or Shiga toxin genes in a clinical specimen using a CIDT and no known isolation of *Shigella* from a clinical specimen
- Detection of *E. coli* O157 or STEC/EHEC from a clinical specimen using a CIDT
- Epidemiologic linkage to a confirmed or probable case with laboratory evidence
- The individual is a member of a risk group as defined by public health authorities during an outbreak

YES → PROBABLE

NO / UNKNOWN → NOT A CASE

Incubation Period: 1 – 10 days

New Case Timeframe: 180 days

PHEL Specimen Submission:
Isolates OR Shiga toxin-positive stools in Cary-Blair media or Gram-negative broth

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources

Shigellosis

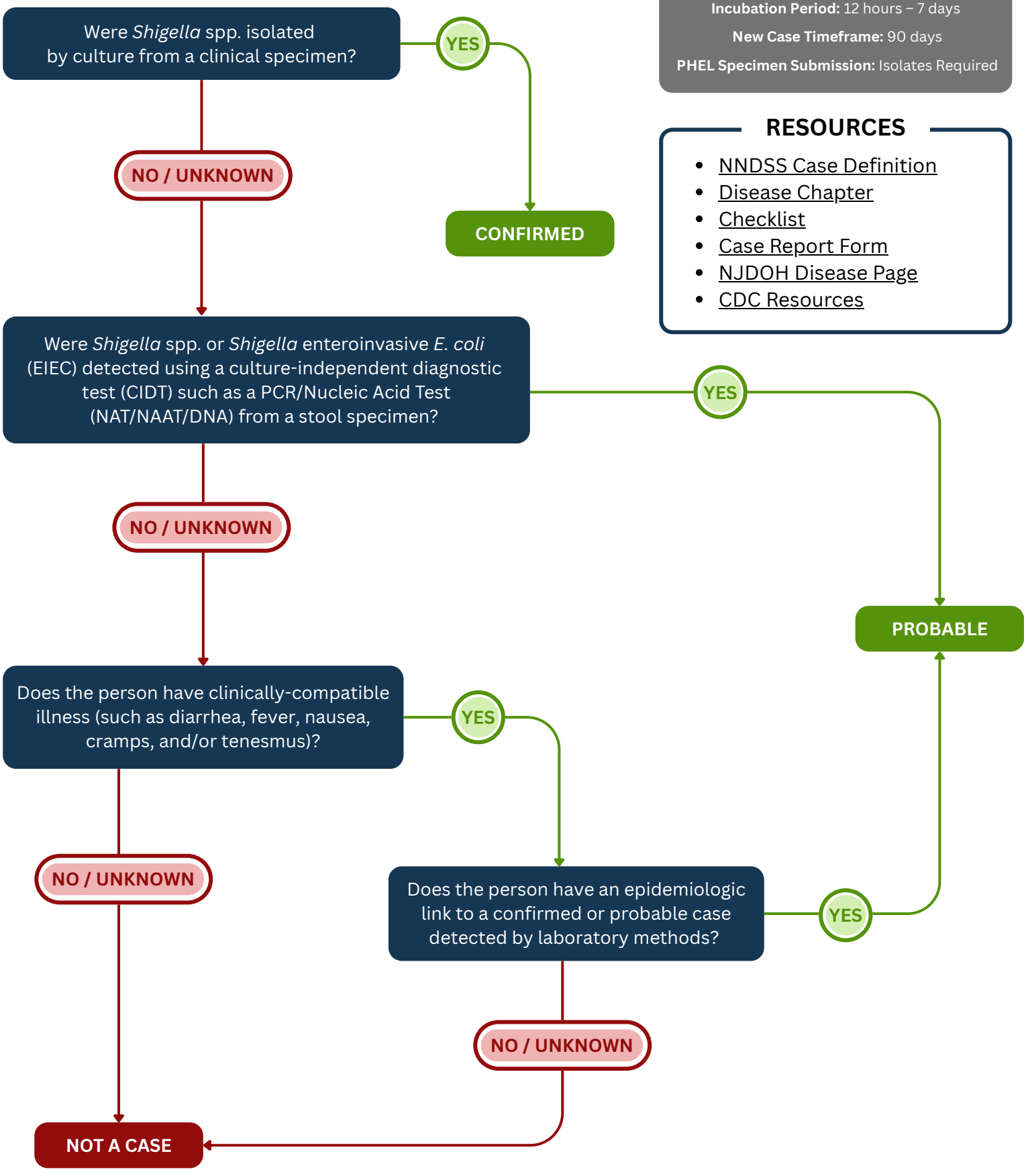
Shigella spp.

Priority Level
4

Incubation Period: 12 hours – 7 days
New Case Timeframe: 90 days
PHEL Specimen Submission: Isolates Required

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources



Trichinellosis

Trichinella spp.

Priority Level
4

Did the individual have clinically-compatible illness (eosinophilia, fever, myalgia, and periorbital edema)?

NO / UNKNOWN

YES

Incubation Period: 8 – 15 days

New Case Timeframe: 180 days

PHEL Specimen Submission: Not Applicable

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources

Are any of the following true?

individual shared an epidemiologically implicated meal

OR

individual ate an epidemiologically implicated meat product

OR

individual has a positive serologic test for trichinellosis (no prior history of *Trichinella* infection)

NO / UNKNOWN

YES

NOT A CASE

POSSIBLE

Are laboratory criteria met?

Demonstration of *Trichinella* larvae in tissue obtained by biopsy

OR

Positive serologic test for *Trichinella*

NO / UNKNOWN

YES

CONFIRMED

Was *Trichinella* larvae demonstrated in the food item?

NO / UNKNOWN

YES

PROBABLE

Does the individual meet epidemiologic linkage criteria (shared an epidemiologically implicated meal or ate an epidemiologically implicated meat product)?

NO / UNKNOWN

YES

Typhoid and Paratyphoid Fever

Salmonella enterica serotypes Typhi and Paratyphi

Priority Level
3

Was *Salmonella* Typhi or Paratyphi isolated by culture from a clinical specimen?

YES → CONFIRMED

NO / UNKNOWN

Does the person have clinically-compatible illness (onset of sustained fever, diarrhea, abdominal pain, constipation, anorexia, or relative bradycardia)?

NO / UNKNOWN → NOT A CASE

YES

Was *Salmonella* Typhi or Paratyphi isolated using a culture-independent diagnostic test (CIDT) such as a PCR/Nucleic Acid Test (NAT/NAAT/DNA)?

YES → PROBABLE

NO / UNKNOWN

Does the person meet epidemiologic linkage criteria:

- epidemiologic linkage to a confirmed *S.* Typhi or *S.* Paratyphi case
- OR
- epidemiologic linkage to a probable *S.* Typhi or *S.* Paratyphi case with lab evidence
- OR
- member of a risk group as defined by public health authorities during an outbreak

YES → PROBABLE

NO / UNKNOWN → NOT A CASE

Typhoid Incubation Period: 6 – 30 days
Paratyphoid Incubation Period: 1 – 10 days

New Case Timeframe: 365 days

PHEL Specimen Submission: Isolates Required

RESOURCES

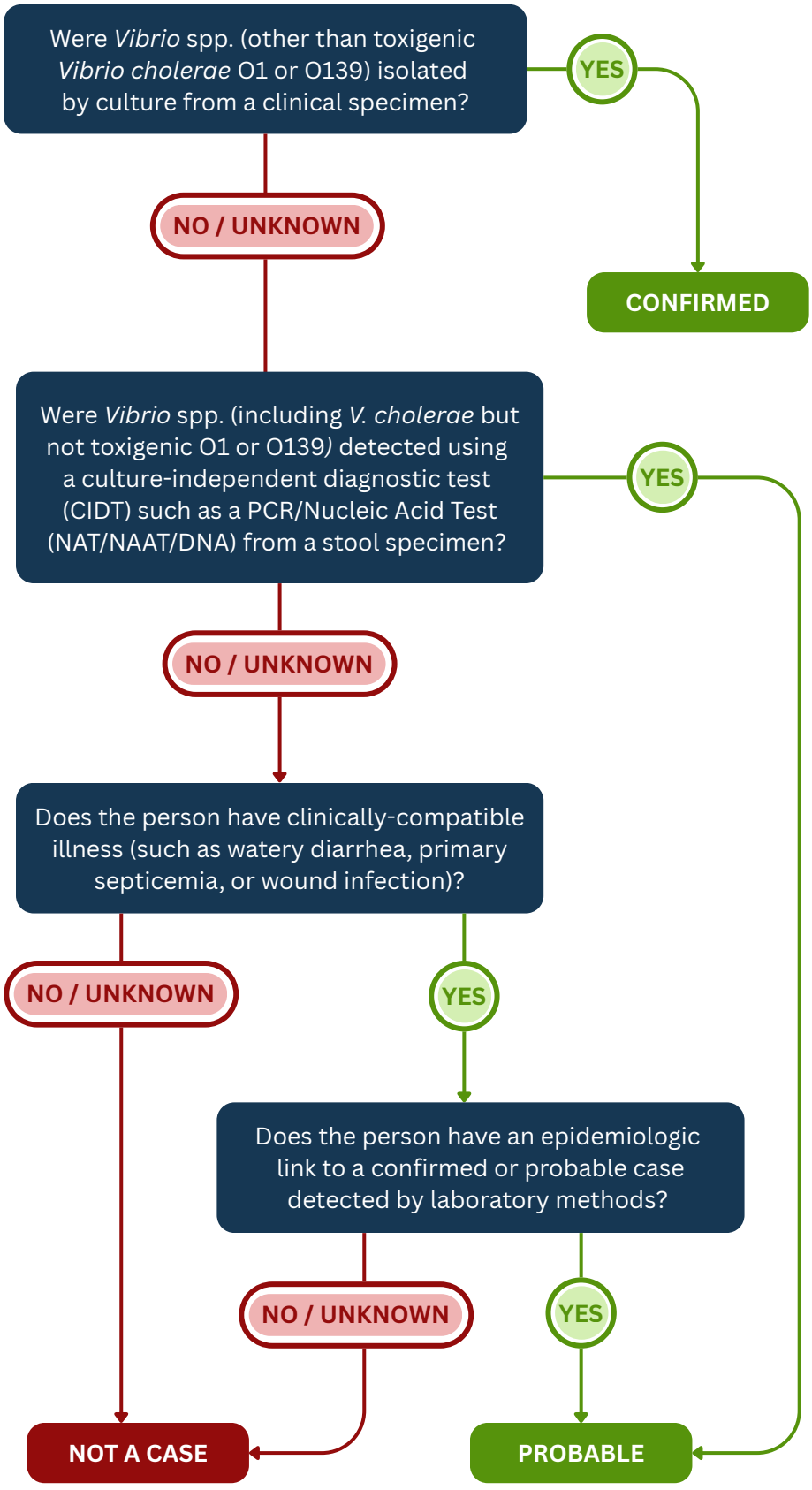
- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources

Paratyphoid fever is characterized by illness caused by *Salmonella* Paratyphi A, B (tartrate-negative), and C. Paratyphi B (tartrate-positive) is categorized as salmonellosis instead of an *S.* Paratyphi Infection.

Vibriosis and Cholera

Vibrio spp. and *V. cholerae* 01/O139

Priority Level
3



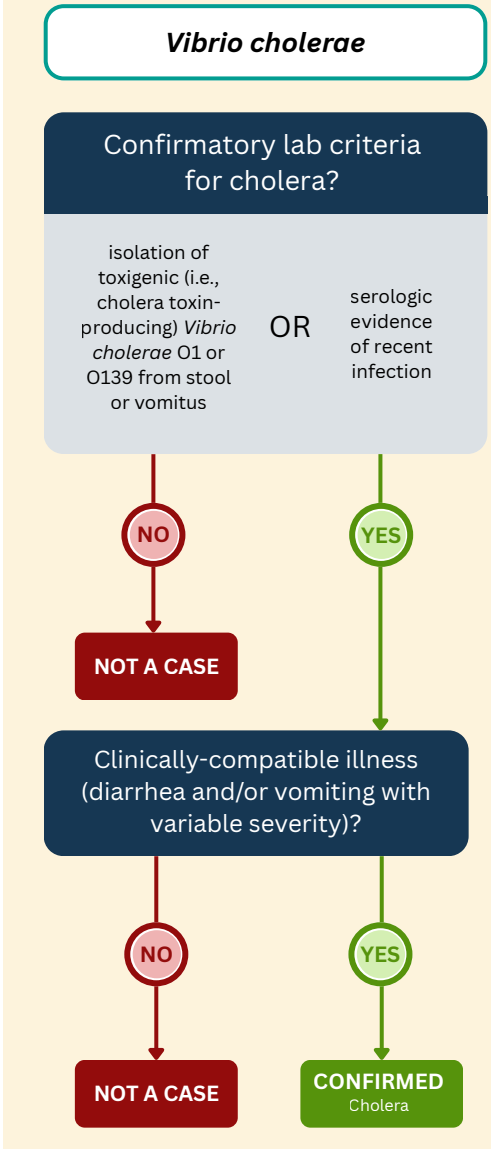
Incubation Period: 1 – 7 days

New Case Timeframe:
30 days (not *V. cholerae*) | 180 days (*V. cholerae*)

PHEL Specimen Submission: Isolates Requested

RESOURCES

- NNDSS Case Definition
- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources



Yersiniosis

Yersinia spp. (non-*pestis*)

Priority Level
4

Incubation Period: 1 – 14 days
New Case Timeframe: 365 days
PHEL Specimen Submission: Not Applicable

RESOURCES

- Disease Chapter
- Checklist
- Case Report Form
- NJDOH Disease Page
- CDC Resources