

Hepatitis C: Surveillance, Case Definition, and Investigation

Tuesday, November 14, 2017

10am-11:30am

NJ Department of Health-Communicable Disease Service



Welcome to the Webinar

- Today's webinar is being recorded and archived.
- It will be posted to the NJ Department of Health website.



Continuing Education Credits



- Credits offered for this webinar:
 - 1.5 Public Health and Nursing
- Credits provided to those who attend the webinar “live”
 - Must also be registered on Go To Webinar and NJLMN to be eligible for credits
 - NOTE: Those viewing the webinar in the archived version are not eligible to receive continuing education credits.

Have a Question During the Presentation?

- All attendee lines are in “listen-only” mode/muted.
- Please use the “Question” box to ask a question.
 - Questions will be answered at the end of the webinar, time permitting.
 - Questions not addressed during the webinar will be compiled, answered and sent to all attendees after the webinar.



▶ Audio	🗑
▶ Dashboard	🗑 ✕
▶ Attendees: 1 of 1001 (max)	🗑 ✕
▶ Polls (0/0)	🗑 ✕
▶ Questions	🗑 ✕
▶ Handouts: 0 of 5	🗑 ✕
▶ Chat	🗑 ✕

Handouts

- Handouts (slides and/or resources) may be accessed in the “Handouts” box.
 - Handouts only available during “live” webinars



After the Webinar

- You will receive a link to the evaluation after the webinar.
 - The evaluation link sent to your NJLMN email address
 - Those seeking continuing education credits **MUST** complete the evaluation within 5 days after receiving link.
 - Evaluation link closes after 5 days.
 - Once evaluation closes, certificates will be Emailed to the address listed in NJLMN (for nurses)/attendance verified in NJLMN (for PH)
 - **Individuals who do not complete the evaluation will not receive continuing education credits.**



Hepatitis C

Surveillance, Disease Investigation, Case Definitions

Fall 2017 Webinar

Presented by: Bernice Carr MS, MPH

Communicable Disease Service, New Jersey Department of Health

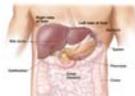


Objectives

- Discuss surveillance of hepatitis C (HCV) in New Jersey.
- Introduce NJDOH Hepatitis C Case Investigation Guidelines.
- Articulate use of 2016 standard case definitions and 2017 proposed perinatal case definition.
- Discuss examples and tips for HCV investigations.

Facts about Hepatitis C?

- Bloodborne virus, which causes liver infection
- Incubation period is 14 to 180 days; average 45 days
- Most new infections occur by sharing needles/equipment to inject drugs
- Other means of transmission are healthcare associated (dialysis, needlestick injury), born to an infected mother
- Long term/chronic infection for 70%–85% infected
- **Majority infected are not aware (asymptomatic)**
- No vaccine, but effective treatments exist



<https://www.cdc.gov>



Purpose of Hepatitis C Surveillance

- Define the burden of disease in NJ
- Identify trends in HCV infection
- Identify HCV outbreaks
- Identify new risk factors for transmission
- Develop targeted educational messaging about HCV disease and getting tested
- Work to get patients into treatment/cured



Treatment

- Primary goal - reduce HCV viral load/eradicate.
- First direct-acting antivirals (DAAs) approved in 2011.
- Advances - offer simpler dosing, less fewer side effects, shorter treatment duration, higher cure rates.
- Can cure up to 90% of individuals who adhere
- Successful HCV treatment results in sustained virologic response (SVR).
 - The continued absence of detectable HCV RNA for at least 12 weeks after completion of therapy.
- Therapy options vary by type of genotype.

<https://www.hcvguidelines.org>

CDRSS

The screenshot shows the CDRSS web application interface. At the top, it says "Communicable Disease Reporting and Surveillance System" and "NJ Health New Jersey Department of Health". The main title of the case is "HEPATITIS C - ACUTE Report for MOUSE-DONALD, MICKEY".

Navigation Menu: Outbreak/Investigation, Case Management, Search, Reports, Maps, Resources, Personalize, Log Off System.

Case Management Tabs: Patient Info, Addresses, Clinical Status, Signs/Symptoms, Risk Factors, Laboratory Eval., Contact Tracing, Case Comments, Epidemiology, Case Class.

Section: Patient Information

Disease Information: Disease: HEPATITIS C, Subgroup: ACUTE, Date Reported to State or Local Health Department: 11/08/2017, Illness Onset Date: 10/08/2017.

Section: Patient Personal Information

Prefix: [dropdown], Last Name: MOUSE-DONALD, First Name: MICKEY, Middle Name: [dropdown], Suffix: [dropdown].

Section: Primary Residence Address Information

Name: [dropdown], Address: [dropdown], Apartment: [dropdown], Street: 123 MICKEY HWY, City: PLAYHOUSE, State: NEW JERSEY, Country: MERCER, Municipality: TRENTON CITY, Zip: 00000.

Section: Demographic/Physical

Birth Date: 01/01/2001, Age at Case Onset: 16 yrs 10 mos, Gender: FEMALE, Race: OTHER/UNKNOWN, Ethnicity: OTHER/UNKNOWN, Residency: U.S. RESIDENT, Nationality: OTHER/UNKNOWN, Citizenship: AFGHANISTAN, Date arrived in USA: [dropdown], Primary Language: [dropdown], Is Insured: [dropdown], Type of Insurance: [dropdown].

Buttons: Add Patient Info, Comment, Classify Case, Cancel, Continue, Reset, Print Case, Print Page.



Hepatitis C



November 08, 2017

Case Investigation Guidelines

Contents

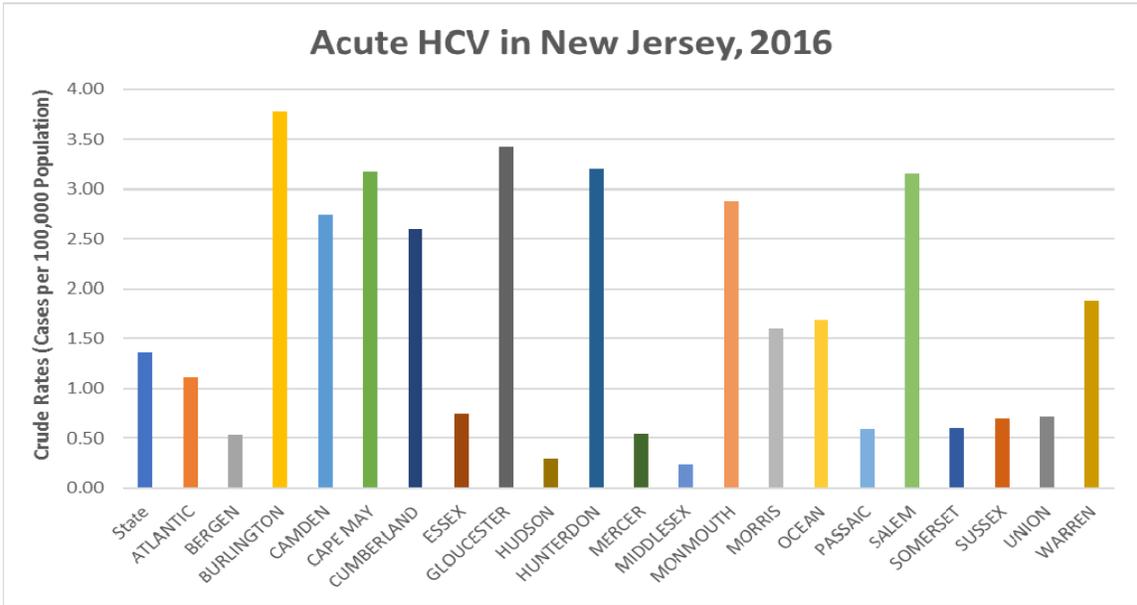
- A. Purpose..... 2
- B. Case Definitions..... 2
 - a. Acute Hepatitis C (2016)..... 2
 - b. Chronic Hepatitis C (2016)..... 3
 - c. Perinatal Hepatitis C (2017 CSTE Proposed Definition)..... 3
- C. Local Health Jurisdiction Standard Investigation Responsibility..... 4
 - a. Cases 31 to 69 years of age..... 4
 - b. Cases ≤ 30 or ≥ 70 years of age..... 5
 - c. Schematic of information needed in CDRSS..... 5
- D. Public Health Control Measures for Newly Identified Cases..... 6
- E. HCV Laboratory Tests..... 6
 - a. HCV Antibody Test..... 6
 - b. HCV RNA NAT for Qualitative or Quantitative Test..... 6
 - c. Genotype Test..... 6
- Note: Reference materials for Interpreting and Communicating HCV Test Results..... 7
- F. Hepatitis C Case Classification..... 7
 - a. HCV Antibody as Only Test..... 7
 - b. Manual Entry of HCV Antibody..... 7
 - c. Case final classification after Standard Investigation..... 7
- G. Perinatal Hepatitis C Investigation..... 8
- H. Healthcare-Associated Infection (HAI)..... 9
 - a. Dialysis..... 9
 - b. Injection Safety/Drug Diversion..... 10
- I. Correctional Facilities..... 10
- Appendices..... 11
 - Appendix A: Hepatitis C Case Investigation Form..... 11
 - Appendix B: HCV Case Classification Algorithm..... 12
 - Appendix C: HCV Letter..... 13
 - Appendix D: Perinatal Hepatitis C Case Classification Algorithm..... 14
 - Appendix E: Interpretation of Laboratory Test Names used for Case Classification in CDRSS..... 15

- HCV Risk Factors

- Patient ever have contact with person known to have HCV?
 - Patient ever injected drugs not prescribed by a doctor?
 - Patient ever received a blood transfusion? before 1992?
 - Patient ever exposed to someone else’s blood, e.g. medical worker?
 - Patient ever undergone hemodialysis?
 - Patient ever incarcerated?

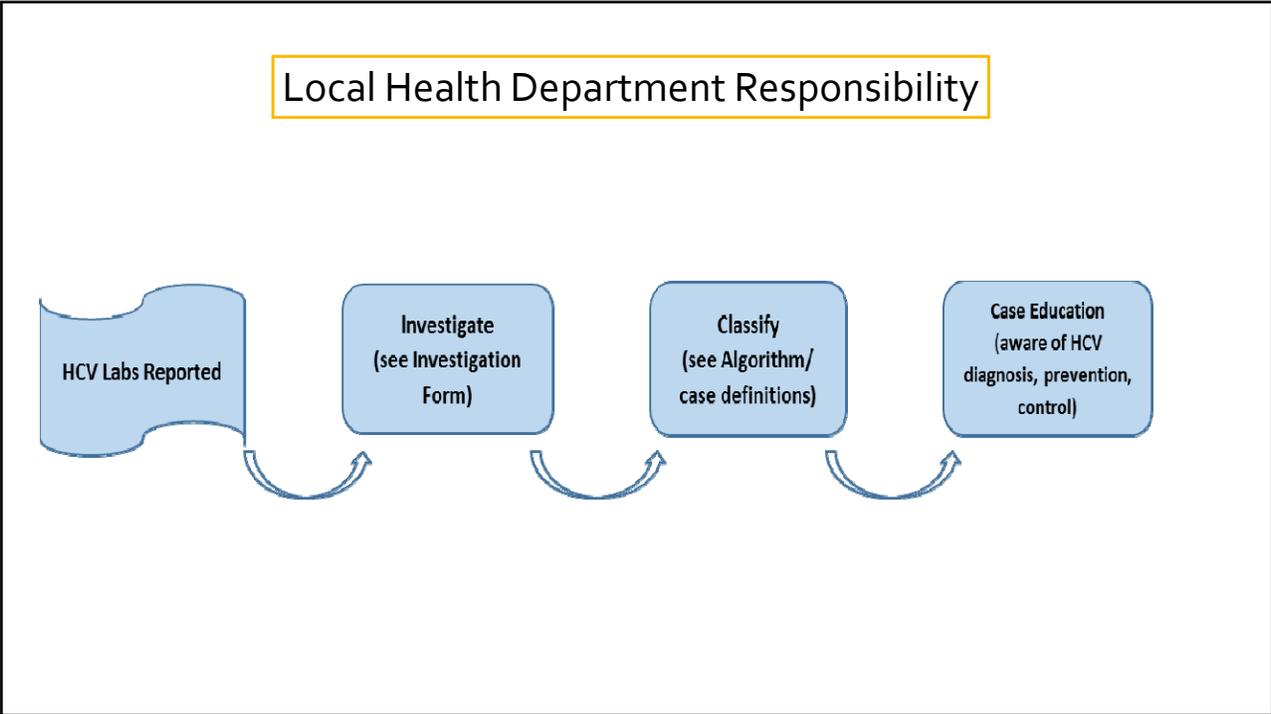
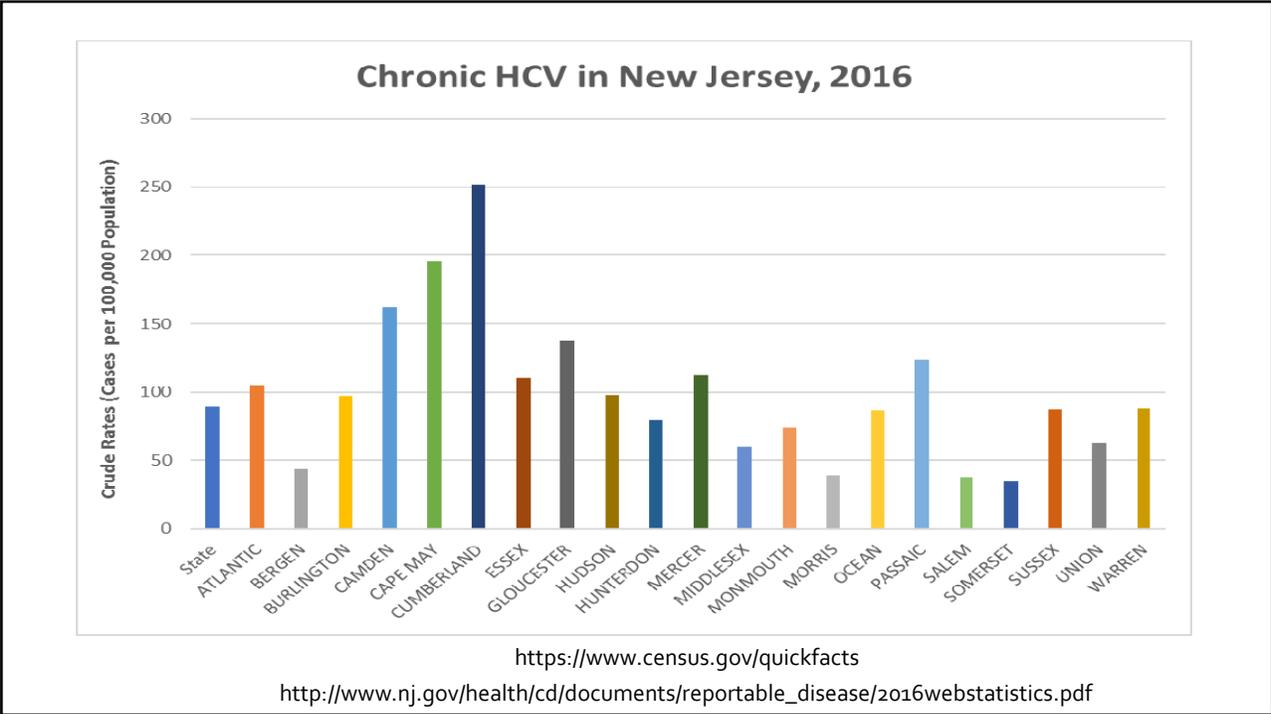
NJDOH Priority Populations

- Suspected acute HCV cases, irrespective of age
- Individuals ≤ 30 and ≥ 70 years of age
- Perinatal; children less than 36 months old, born to an infected mother
- Individuals who are patients of a healthcare setting, for example hemodialysis



<https://www.census.gov/quickfacts>

http://www.nj.gov/health/cd/documents/reportable_disease/2016webstatistics.pdf



Interpretation of Laboratory Test Names (Appendix E)

CDRSS Test Name	Test Type
Hepatitis C Virus Antibody (Anti-HCV)	Antibody test
Hepatitis C Virus Antibody Signal to Cut Off Ratio (S/CO)	Antibody test
Hepatitis C Virus Genotype	Nucleic Acid Test (NAT)
Hepatitis C Virus RNA (PCR – Qualitative)	Nucleic Acid Test (NAT)
Hepatitis C Virus RNA (PCR – Quantitative)	Nucleic Acid Test (NAT)
Alanine Aminotransferase (ALT) <i>Serum glutamic pyruvic transaminase (SGPT)</i>	Liver function
Alkaline Phosphatase (Alk Phos)	Liver function
Aspartate Aminotransferase (AST) <i>Serum glutamic-oxaloacetic transaminase (SGOT)</i>	Liver function
Bilirubin Total – Bili (total)	Liver function

Hepatitis C Antibody (Ab) Serology

Assays

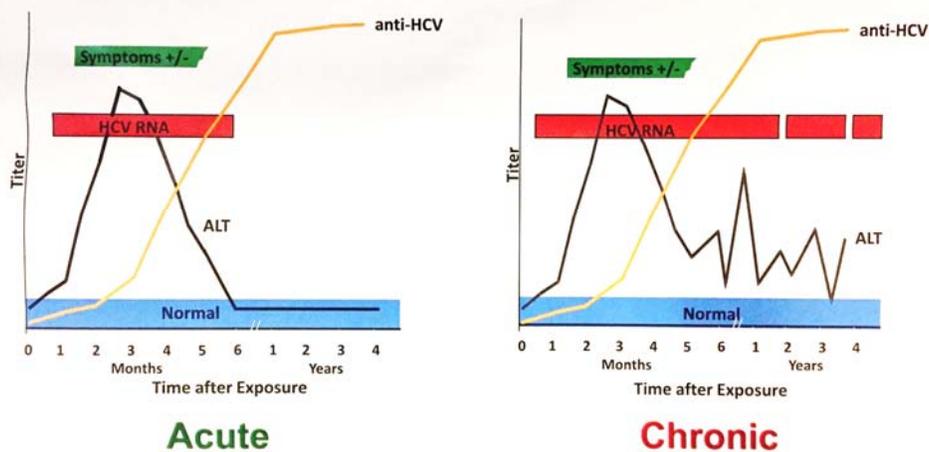
- Enzyme Immunoassay (EIA)
- Chemiluminescence Immunoassay (CIA)
- Point-of-Care Rapid Immunoassay

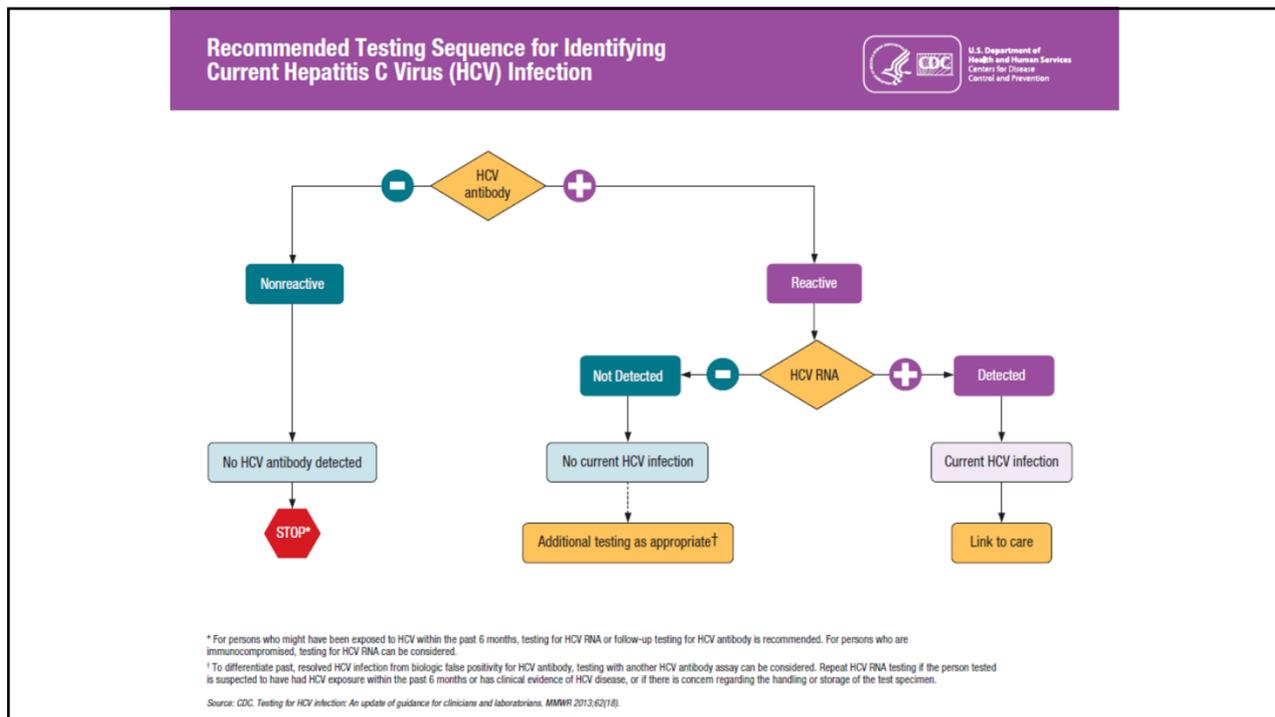
- All positive Ab results reportable, irrespective of a reactive or s/co result.
- All seroconversion reportable (documented negative Ab followed by positive Ab/RNA)

Hepatitis C nucleic Acid Test (NAT)

- Confirmatory (1-2 weeks after initial infection)
- Hepatitis C RNA PCR Qualitative (Yes or No)
- Hepatitis C RNA PCR Quantitative
 - Numerical value IU/mL result (for baseline levels/monitoring response to therapy)
- Hepatitis C RNA Genotype
 - Test kit assay specific minimum viral load for detection
 - Genotype 1 thru 6 - Subtyping a,b

Serologic Pattern of HCV Infection





Supporting Labs/Liver Function test

- ★ Alanine Aminotransferase – **ALT**, *Serum glutamic pyruvic transaminase (SGPT) ≥200 U/L*
- Aspartate Aminotransferase – **AST**, *Serum glutamic-oxaloacetic transaminase (SGOT)*
- ★ Bilirubin - level greater than 2.5 mg/dL suspect for jaundice (aafp.org)
- Alkaline Phosphatase (Alk Phos) – enzyme made in liver cells.

Case Definition (Revised)

To be fully implemented in January 2018

New Probable Classification
Reactive Anti HCV, No Signal-to-Cut off
necessary

Acute
Hepatitis C
(2016 CSTE
definition)

Clinical criteria

- An illness with discrete onset of any sign or symptom consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, or abdominal pain,) **AND**
- Jaundice, **OR**
- Peak elevated serum alanine aminotransferase (ALT) level >200 IU/L during the acute illness

<https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-acute/case-definition/2016/>

Acute Hepatitis C (2016 CSTE definition)

Laboratory criteria for diagnosis

- A positive test for antibodies to hepatitis C virus (anti-HCV) **OR**
- Hepatitis C virus detection test:
 - Nucleic acid test (NAT) for HCV RNA positive (including qualitative, quantitative or genotype testing), **OR**
 - A positive test indicating presence of hepatitis C viral antigen(s) when available*

*When and if a test for HCV antigen(s) is approved by the FDA and available

Acute Hepatitis C

Case
Classification
Status:

Confirmed

Acute Confirmed

- A case that meets the clinical case definition and has a positive hepatitis C virus detection test (HCV NAT) or HCV antigen
- OR**
- A case with a documented negative HCV antibody, HCV antigen or NAT laboratory test result followed within 12 months by a positive result of HCV antigen or NAT (regardless of signs symptoms or LFTs).

Seroconversion

Acute Hepatitis C

Case
Classification
Status:
Probable

Acute Probable

- A case that meets the clinical case definition and has a positive anti-HCV antibody test, but has no report of a positive HCV NAT or positive HCV antigen test.

AND

- Does not have a documented negative HCV antibody, HCV antigen or NAT laboratory test result followed within 12 months by a positive result of any of these tests (test conversion) or has no report of test conversion.

Chronic Hepatitis C (2016 CSTE definition)

Clinical criteria

- No available evidence of clinical and relevant laboratory information indicative of acute infection.
- Most hepatitis C virus (HCV)-infected persons are asymptomatic; however, many have chronic liver disease, which can range from mild to severe.

<https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-chronic/case-definition/2016/>

Chronic Hepatitis C (2016 CSTE definition)

Laboratory Criteria for Diagnosis

- A positive test for antibodies to hepatitis C virus (anti-HCV) **OR**
- Hepatitis C virus detection test:
 - Nucleic acid test (NAT) for HCV RNA positive (including qualitative, quantitative or genotype testing), **OR**
 - A positive test indicating presence of hepatitis C viral antigen(s)*

*When and if a test for HCV antigen(s) is approved by the FDA and available

Chronic Hepatitis C

Case Classification Status:
Confirmed

Chronic Confirmed

- A case that does not meet the clinical criteria or has no report of clinical criteria **AND**
- Does not have a documented negative HCV antibody, HCV antigen or NAT laboratory test result followed within 12 months by a positive result of any of these tests (test conversion) or has not report of test conversion **AND**
- Has a positive HCV NAT or HCV antigen test (may have any anti-HCV antibody test result).

Chronic Hepatitis C

Case Classification Status: Probable

Chronic Probable

- A case that does not meet the clinical criteria or has no report of clinical criteria **AND**
- Does not have a documented negative HCV antibody, HCV antigen or NAT laboratory test result followed within 12 months by a positive result of any of these tests (test conversion) or has no report of test conversion **AND**
- Has a positive anti-HCV antibody test, but no report of a positive HCV NAT or positive HCV antigen test.

LHD Investigation Priority

Cases ≤ 30 and ≥ 70 y/o
(population of prime concern)

- LHD makes **two (2)** attempts for information from the provider who ordered the test.
- Two attempts to collect information directly from the patient if unable to get from provider
- A final letter is sent to the patient if neither provider or patient can be reached.
- Enter all information in CDRSS to include risk factors, treatment
- Use, Appendix B: HCV Case Classification Algorithm, for classification and closing of cases.
- If no response to ANY attempt within 30 days of sending letter, indicate in CDRSS, under "Case Comments" and close per Algorithm.

Letter to HCV
positive case
to request
follow up

Appendix C: HCV Letter
(Local Health Department Letter)

Date

Patient Name

Patient Address

Dear Mr./Ms. X,

The _____ Health Department has made several attempts to contact you regarding a positive laboratory result that was received. New Jersey Administrative Code (NJAC 8:57) requires physicians, laboratories and institutions (e.g., prisons, long term care, rehabilitation) to report certain communicable diseases to state and local health departments for follow up and investigation. Please contact our office at the phone number below so we may discuss this matter with you. If you are not aware of recent positive laboratory result, you may want to contact your health care provider prior to contacting our office.

Thank you,

_____ Health Department

Phone:

Fax:

Email:

LHD
Investigation
Responsibility

Cases 31-69 y/o

- LHD/investigator makes a single (1) attempt to collect information from the provider who ordered the test.
- Enter all information in CDRSS to include risk factors, treatment
- Use Appendix B: HCV Case Classification Algorithm, to assist in classification and closing of the case.
- If no response to investigation indicate in CDRSS, under Case Comments and close per Algorithm.

Case
Investigation
Form (CDS-17)

Appendix A

<http://www.nj.gov/health/forms/cds-17.pdf>
<http://www.nj.gov/health/forms/cds-17.docx>

NJ DEPARTMENT OF HEALTH COMMUNICABLE DISEASE SERVICES
HEPATITIS C CASE INVESTIGATION FORM

CDRSS #: [click here to enter text.](#)

PATIENT INFORMATION																						
Name Last <input type="text"/> First <input type="text"/> Middle <input type="text"/> Address Street <input type="text"/> Apt. <input type="text"/> City <input type="text"/> County <input type="text"/> State <input type="text"/> Zip <input type="text"/> Phone # <input type="text"/> - <input type="text"/> - <input type="text"/> Email <input type="text"/> DOB <input type="text"/> Age <input type="text"/> Select	Ethnicity <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic <input type="checkbox"/> Other/Unknown Race <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Asian <input type="checkbox"/> American Indian or Alaskan Native <input type="checkbox"/> Native Hawaiian/Hawaiian / Pacific Islander <input type="checkbox"/> Other/Unknown Sex <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other / Unknown																					
DIAGNOSIS																						
Has patient been diagnosed with hepatitis C at any time in the past? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If "Yes" - Dates of PREVIOUS diagnosis and illness onset: ↳ Diagnosis: Select ↳ Onset: Select	If "No" - Date of illness onset for NEW diagnosis: Select Date ↳ Patient informed of NEW diagnosis? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown ↳ Disease information provided? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown ↳ Did this include information about prevention and control? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> N/A																					
CLINICAL SYMPTOMS																						
Did the patient have any symptoms? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If "Yes", provide onset date and symptoms that apply:	<input type="checkbox"/> Fever <input type="checkbox"/> Malaise <input type="checkbox"/> Date of earliest symptom onset: Select date. <input type="checkbox"/> Anorexia <input type="checkbox"/> Nausea <input type="checkbox"/> Diarrhea <input type="checkbox"/> Jaundice <input type="checkbox"/> Abdominal Pain <input type="checkbox"/> Other Symptom:																					
LABORATORY INFORMATION																						
Reason for current hep C testing: <input type="checkbox"/> Symptoms <input type="checkbox"/> Routine testing <input type="checkbox"/> Reported Risk Factors <input type="checkbox"/> Prenatal Screening <input type="checkbox"/> Other:	Most recent lab tests: <input type="checkbox"/> No Tests Performed <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <thead> <tr> <th>Test</th> <th>Anti-HCV</th> <th>HCV RNA PCR</th> <th>HCV Genotype</th> <th>ALT (SGPT)</th> <th>AST (SGOT)</th> <th>Bilirubin</th> </tr> </thead> <tbody> <tr> <td>Result</td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>Date</td> <td>Select</td> <td>Select</td> <td>Select</td> <td>Select</td> <td>Select</td> <td>Select</td> </tr> </tbody> </table>	Test	Anti-HCV	HCV RNA PCR	HCV Genotype	ALT (SGPT)	AST (SGOT)	Bilirubin	Result	<input type="text"/>	Date	Select	Select	Select	Select	Select	Select					
Test	Anti-HCV	HCV RNA PCR	HCV Genotype	ALT (SGPT)	AST (SGOT)	Bilirubin																
Result	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																
Date	Select	Select	Select	Select	Select	Select																
RISK FACTORS																						
Patient ever have contact with person known to have hep C? (indicate type of contact) <input type="checkbox"/> Sex Partner <input type="checkbox"/> Other: <input type="text"/> <input type="checkbox"/> Household Member (non-sexual)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Lifetime number of sexual partners? (indicate number) # male: <input type="text"/> # female: <input type="text"/>	<input type="checkbox"/> Unknown																					
Patient ever incarcerated for more than 24 hours? Type of facility:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Patient ever received a blood transfusion? <input type="checkbox"/> Yes (before 1992) <input type="checkbox"/> Yes (after 1992)	<input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Patient ever accidentally punctured with a needle or other object soiled with blood?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Was patient ever treated for a sexually transmitted disease?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Patient ever had a tattoo?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Patient ever had a body piercing?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Patient ever exposed to someone else's blood? (medical, dental, public safety, blood worker)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Patient ever undergone hemodialysis?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Patient ever injected drugs not prescribed by a doctor?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Patient had dental work or oral surgery within the last 6 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Patient currently a resident of a long-term care facility? General comments or other risk factors:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																					
Is there anything in patient's history that warrants further public health investigation? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown → Please explain:	Please return the completed form to: Local Health Department Name Address, P.O. Box, City, State, Zip Contact Name (First, Last), Contact Title Contact Email Address Phone # Fax #																					
Name of Clinical Contact: First, Last Email: ubcdcfj@waxy.com Date Sent (to LHD): Select date.																						

Case
Investigation
Form (CDS-17)

PATIENT INFORMATION	
Name Last <input type="text"/> First <input type="text"/> Middle <input type="text"/> Address Street <input type="text"/> Apt. <input type="text"/> City <input type="text"/> County <input type="text"/> State <input type="text"/> Zip <input type="text"/> Phone # <input type="text"/> - <input type="text"/> - <input type="text"/> Email <input type="text"/> DOB <input type="text"/> Age <input type="text"/> Select	Ethnicity <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic <input type="checkbox"/> Other/Unknown Race <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Asian <input type="checkbox"/> American Indian or Alaskan Native <input type="checkbox"/> Native Hawaiian/Hawaiian / Pacific Islander <input type="checkbox"/> Other/Unknown Sex <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other / Unknown
DIAGNOSIS	
Has patient been diagnosed with hepatitis C at any time in the past? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If "Yes" - Dates of PREVIOUS diagnosis and illness onset: ↳ Diagnosis: Select ↳ Onset: Select	If "No" - Date of illness onset for NEW diagnosis: Select Date ↳ Patient informed of NEW diagnosis? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown ↳ Disease information provided? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown ↳ Did this include information about prevention and control? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> N/A

Case Investigation Form (CDS-17)

CLINICAL SYMPTOMS									
Did the patient have any symptoms? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			<input type="checkbox"/> Fever	<input type="checkbox"/> Malaise	Date of earliest symptom onset: Select date.				
If "Yes", provide onset date and symptoms that apply →			<input type="checkbox"/> Anorexia	<input type="checkbox"/> Nausea	<input type="checkbox"/> Other Symptom: _____				
			<input type="checkbox"/> Diarrhea	<input type="checkbox"/> Jaundice					
			<input type="checkbox"/> Abdominal Pain						
LABORATORY INFORMATION									
Reason for current hep C testing: <input type="checkbox"/> Symptoms <input type="checkbox"/> Routine testing <input type="checkbox"/> Reported Risk Factors <input type="checkbox"/> Prenatal Screening <input type="checkbox"/> Other: _____			Most recent lab tests: <input type="checkbox"/> No Tests Performed						
In the past 12 months, did patient have a negative Hep C test result? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown			Test	Anti-HCV	HCV RNA PCR	HCV Genotype	ALT (SGPT)	AST (SGOT)	Bilirubin
			Result	_____	_____	_____	_____	_____	_____
			Date	Select	Select	Select	Select	Select	Select

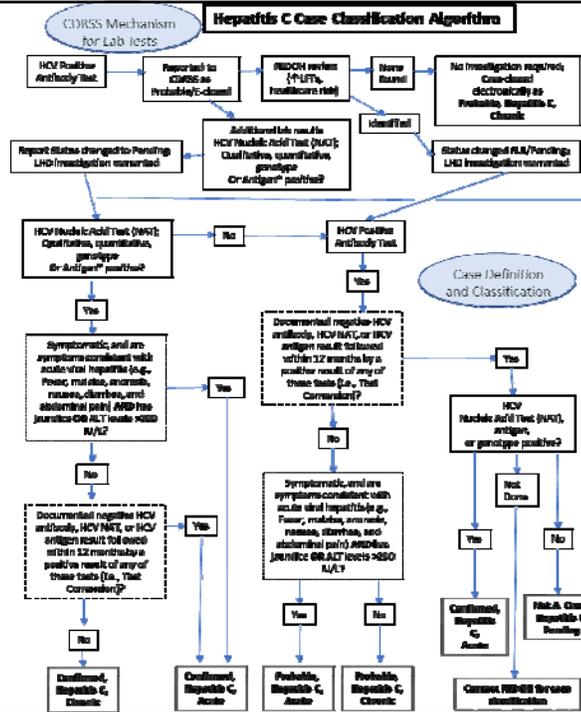
Case Investigation Form (CDS-17)

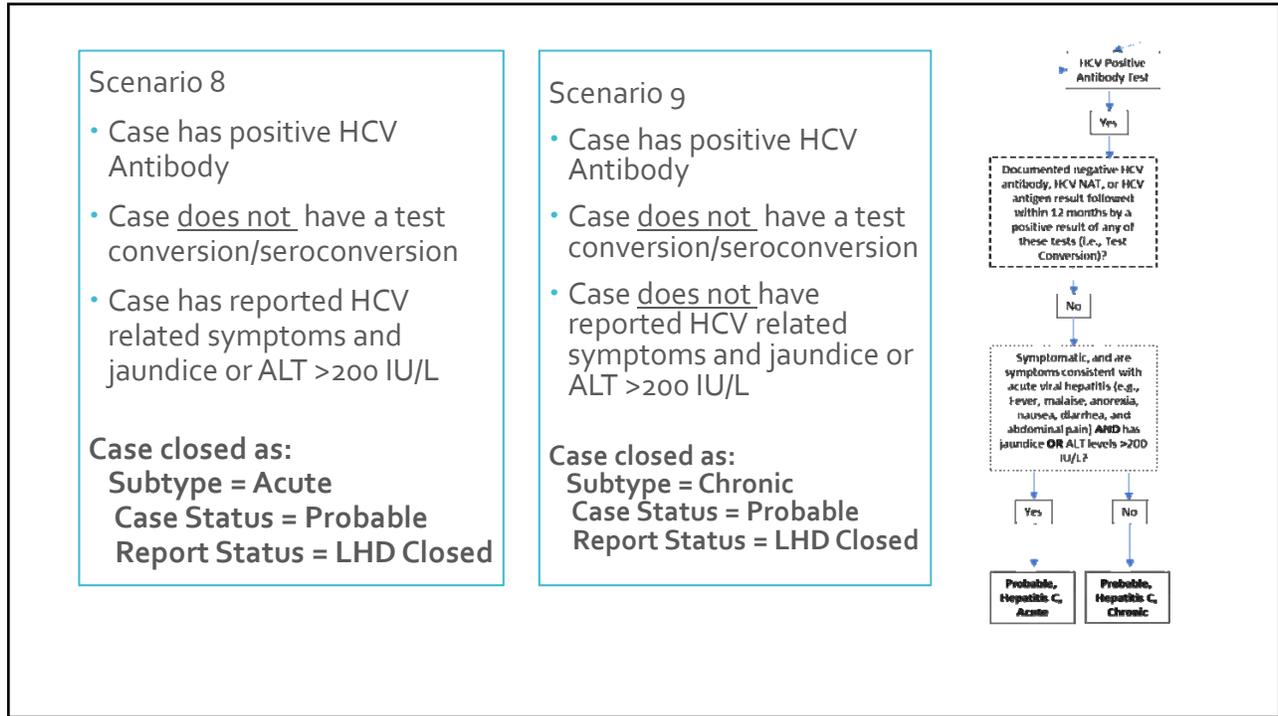
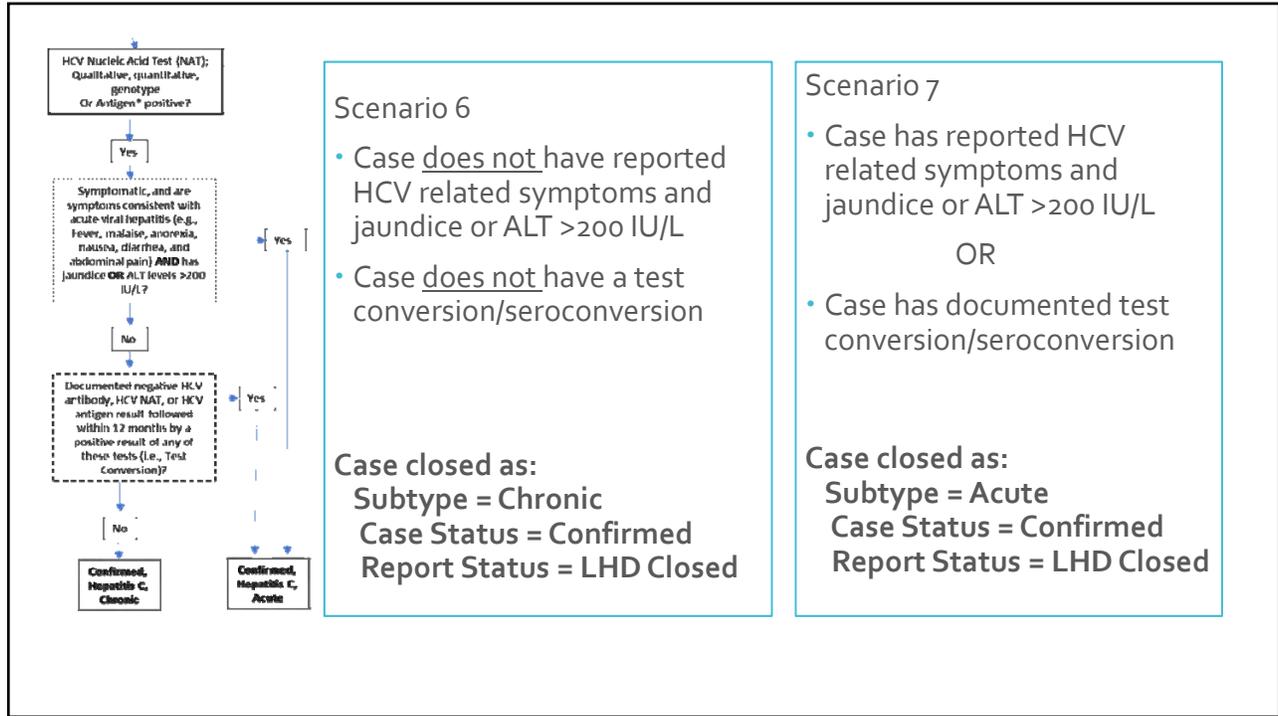
RISK FACTORS			
Patient ever have contact with person known to have hep C? <i>(indicate type of contact)</i>	<input type="checkbox"/> Sex Partner <input type="checkbox"/> Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Lifetime number of sexual partners? <i>(indicate number)</i>	# male: _____ # female: _____	<input type="checkbox"/> Unknown	
Patient ever incarcerated for more than 24 hours?	Type of facility: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient ever received a blood transfusion?	<input type="checkbox"/> Yes (before 1992) <input type="checkbox"/> Yes (after 1992)	<input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient ever accidentally punctured with a needle or other object soiled with blood?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Was patient ever treated for a sexually transmitted disease?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient ever had a tattoo?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient ever had a body piercing?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient ever exposed to someone else's blood? <i>(medical, dental, public safety, blood worker)</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient ever undergone hemodialysis?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient ever injected drugs not prescribed by a doctor?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient had dental work or oral surgery within the last 6 months?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Patient currently a resident of a long-term care facility?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
General comments or other risk factors: _____		Please return the completed form to: Local Health Department Name Address, P.O. Box, City, State, Zip Contact Name (First, Last), Contact Title Contact Email Address Phone # Fax #	
Is there anything in patient's history that warrants further public health investigation? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown → Please explain: _____			
Name of Clinical Contact: First, Last		Email: abcdefg@wxzy.com	
		Date Sent (to LHD): Select date.	

HCV Case Closeout Scenarios – in CDRSS

Interpreting Test Results – Algorithm
Serology Examples

Standard HCV Algorithm
(Appendix B: Investigation Guideline)





Scenario 10

- Case has positive HCV Antibody
- Yes test conversion
- Case HCV RNA NAT test done and RNA is positive

Case closed as:
 Subtype = Acute
 Case Status = Confirmed
 Report Status = LHD Closed

Scenario 11

- Case has positive HCV Antibody
- Yes test conversion
- Case HCV RNA NAT test done and RNA not detected/negative

Case closed as:
 Subtype = Pending
 Case Status = Not a Case
 Report Status = LHD Closed

Case Definition and Classification

```

                graph TD
                A([Case Definition and Classification]) --> B{HCV Nucleic Acid Test (NAT), antigen, or genotype positive?}
                B -- Yes --> C[Confirmed, Hepatitis C, Acute]
                B -- Not Done --> C
                B -- No --> D[Not A Case, Hepatitis C, Pending]
                C --> E[Contact NJDOH for case classification]
                D --> E
                
```

Genotype Test
-Insufficient virus/sample

Example 1
With positive antibody

Case Closeout

- Subtype: Chronic
- Case Status: Probable
- Report Status: LHD Closed

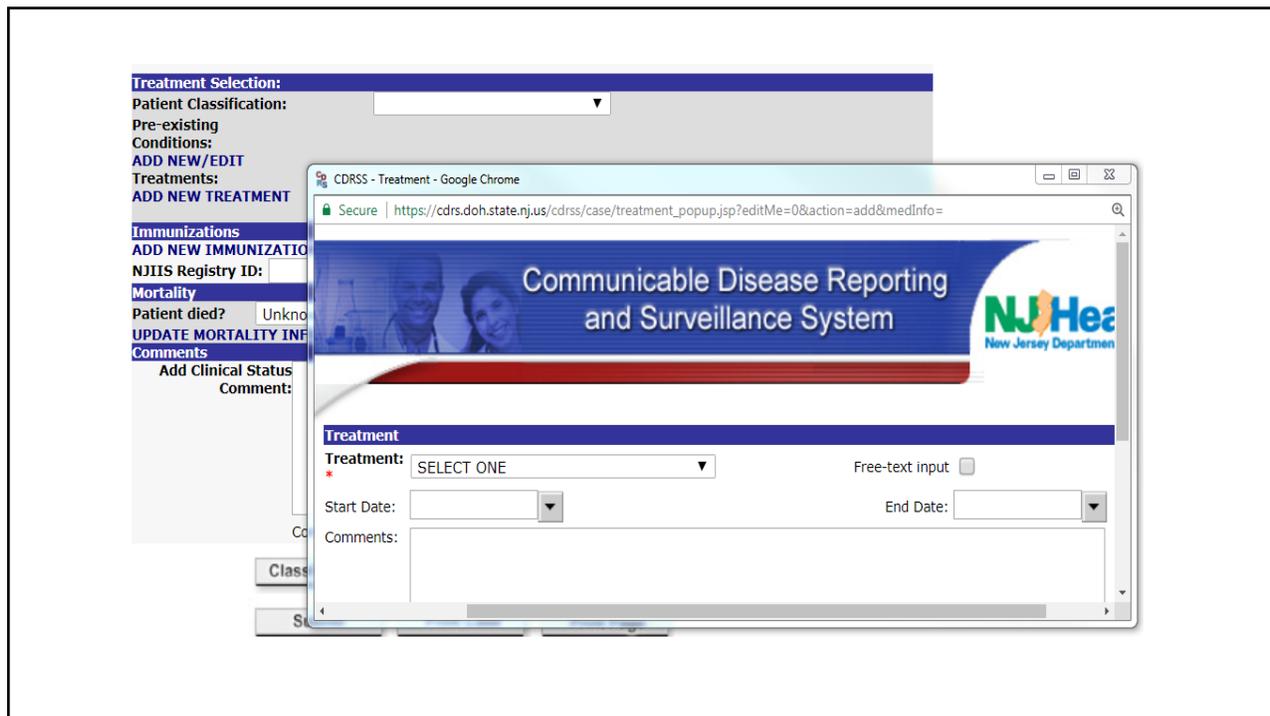
Example 2
As only test

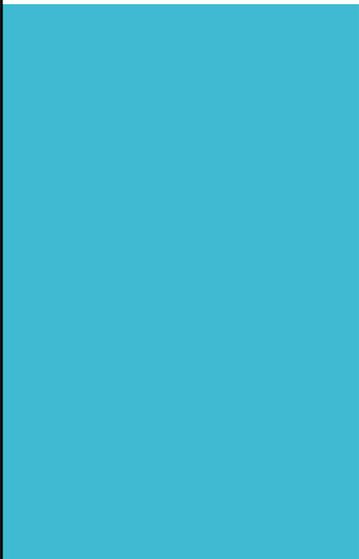
Case Closeout

- Subtype: Pending
- Case Status: Not a Case
- Report Status: LHD Closed

Treatment and Linkage to Care

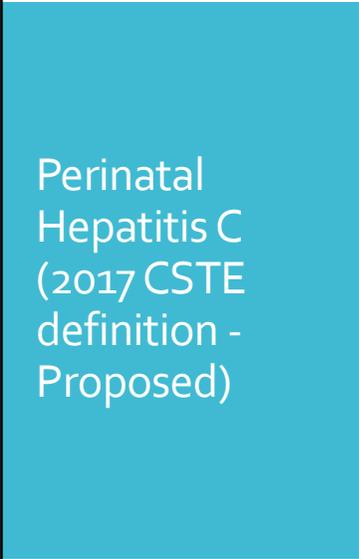
- If therapy information is collected select the type of treatment, as follows
Clinical Status → **Treatment Selection** → **Add New Treatment** → **Treatment (drop down)**
- Add any other information related to linkage to care in the Comments section under 'Treatment'





Perinatal HCV

36 months old or less



Perinatal
Hepatitis C
(2017 CSTE
definition -
Proposed)

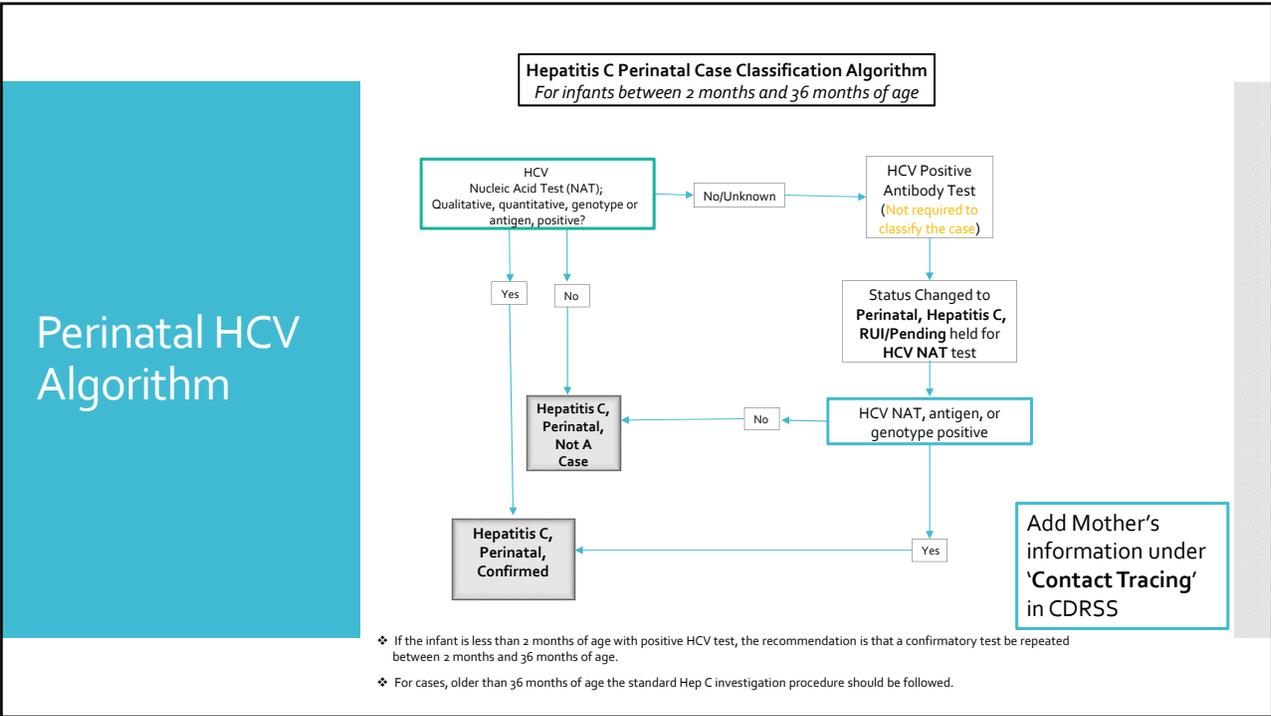
Clinical criteria

- Diagnosis of hepatitis C infection in an infant between 2 months and 36 months of age, or diagnosis of hepatitis C infection in a pregnant woman.

Laboratory criteria for diagnosis

- HCV RNA NAT positive (qual, quant or genotype) for infants 36 months of age and under.
- HCV Antibody positive and no or unknown HCV RNA NAT (qual, quant or genotype) for infants 18 to 36 months.

Note: Report perinatal hepatitis C cases by date of diagnosis (for the infant).



CDRSS Case Classification

Disease Subgroup	Case Status	Symptoms (headache, fever, nausea etc.) or ALT>200	HCV RNA NAT / Genotype	Positive HCV Antibody only
Chronic	Confirmed	No	Yes	No
Chronic	Probable	No	No	Yes
Acute	Confirmed	Yes	Yes	No
Acute	Probable	Yes	No	Yes
Perinatal	Confirmed	No	Yes	No
Pending	Not a Case	No	No*	No

* Applies to cases with HCV RNA NAT or genotype is not detected.

Special Facilities

Dialysis, Correctional

Dialysis

- Dialysis patients at high risk for infection, because:
 - Prolonged periods of vascular access.
 - Repeated opportunities exist for person-to-person transmission of infectious agents.
 - Patients are immunosuppressed.
 - Patients require frequent hospitalizations and surgery.
- Dialysis center in NJ are required by law to routinely test patients.

<https://www.cdc.gov/mmwr/PDF/rr/rr5005.pdf>

Dialysis

- If case is a current or past recipient of dialysis document in CDRSS as follows:
Clinical Status ⇒ **Treatment Selection** ⇒ **Patient Classification** and select "Longterm Dialysis".
Indicate as a risk under **Risk Factor** tab as well.
- LHD should **contact NJDOH for all seroconversions** and to determine if a thorough investigation is necessary for a HCV infected dialysis patient .

Correctional Facilities

- State institutions are required to report HCV positive results directly to NJDOH per regulation (NJAC 8:57)
- Some state institutions have been trained to use CDRSS.
- The LHD should assign to new state institution cases, **Report Status – LHD Review**.
- A case released into the LHD's jurisdiction should be investigated if necessary.
- The LHD is responsible for investigating all non state correctional facility cases.

Other tips

- Do **not** merge Acute HCV cases with other subgroups
- **Do** merge Acute HCV cases with Pending subgroup if created within 12 months of each other.
- No need to update demographic, contact or serology information for Chronic Confirmed DHSS Approved cases.

http://cdrs-train.doh.state.nj.us/manuals/help/CDRSS_HelpDesk_FAQsv3.pdf.

Hepatitis C Resources

- <https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-acute/case-definition/2016/>
- <https://wwwn.cdc.gov/nndss/conditions/hepatitis-c-chronic/case-definition/2016/>
- <https://www.cdc.gov/hepatitis/hcv/labtesting.htm>
- <https://www.cdc.gov/hepatitis/resources/professionals/pdfs/counselingandtestingpc.pdf>
- <http://www.hepatitisc.uw.edu/go/screening-diagnosis/diagnostic-testing/core-concept/all>

Thank You

New Jersey Department of Health – Communicable Disease Service
609.826.5964
Bernice.Carr@doh.nj.gov

Questions



Reminder



- Must be registered on both “Go to Webinar” and NJLMN
- Link to evaluation Emailed to NJLMN address
- Complete evaluation for continuing education credits
- Certificates for RNs Emailed after evaluation closes; Attendance verified for licensed PH professionals
- Once webinar and other documents posted to NJDOH website, we will notify via NJLMN



- **2017 Winter Communicable Disease Forum**
 - Tuesday, December 12, 2017 from 9:30-11:30am
 - Topics: C. auris, Hepatitis B/C Surveillance and Influenza
- 2.0 Public Health credits and Nursing contact hours
- Register on BOTH Go to Webinar and NJLMN (<https://njlmn.njlincs.net>)