



Massachusetts Department of Public Health

Review of Key Variables in Viral Hepatitis Case Investigations

May 13, 2025

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Quick review of hepatitis A, B, and C

	Hepatitis A	Hepatitis B	Hepatitis C
Transmission	Fecal-oral	Bloodborne	Bloodborne
Acute or chronic infection	Acute only	Acute and chronic	Acute and chronic
Vaccine preventable?	Yes	Yes	No
Treatment?	Supportive measures only	Some chronic cases need treatment Treatment not curative	All chronic cases need treatment Treatment curative!
Cases newly reported each year in MA	~40	~30 acute ~1600 chronic	~150 acute ~3000 chronic (trending down)

Hepatitis D and E are also reportable, but are rare in Massachusetts, and not covered in today's presentation.

Who investigates what?

Acute infection: Detection of a NEW infection, rather than new diagnosis of an existing (perhaps years-long!) chronic infection

- Hepatitis A
 - Immediate, all cases investigated
 - BOHs lead investigations, with support from DPH Epis (EODs assigned)
- Hepatitis B
 - Suspect *acute* cases prioritized
 - DPH Viral Hepatitis Team (VHT) Epis lead investigations (except for Boston cases)
 - Case management provided for *pregnant* cases
 - DPH Immunization Nurses provide case management (except for Boston cases)
 - BOHs conduct contact investigations
- Hepatitis C
 - Suspect *acute* cases prioritized
 - BOHs lead investigations, with support from VHT Epis
 - Please make use of Shared Services arrangements!

Existing resources for BOHs









Presentations and tip sheets available in [MAVEN Help](#):

- Hep A case investigations
- Acute hep C case investigations
- Hep B contact investigations (pregnant cases)
- How to have sensitive conversations about sex and drug use (“Sex and Drug Talk”)




This presentation is not meant to replace existing resources!

[Viral Hepatitis Resources](#)

[Presentations](#)

-  [Acute Hepatitis C Investigations Webinar for LBOHs_20230912 Presentation](#)
-  [Acute Hepatitis C Investigations Webinar for LBOHs_20230912 Recording_\(100:21\)](#)
-  [2023 Introduction to Hepatitis A Case Investigations - LBOH Webinar Presentation ^{NEW}](#)
-  [2023 Introduction to Hepatitis A Case Investigations - LBOH Webinar Recording_\(36:52\) ^{NEW}](#)
-  [February 2020 - Sex and Drug Talk for HCV Investigations webinar \(35:25\)](#)
-  [February 2020 - Sex and Drug Talk for HCV Investigations webinar slides](#)
-  [February 2020 - Sex and Drug Talk for HCV Investigations webinar Script](#)
-  [February 2020 - SAMPLE Introduction for case follow-up](#)

[Tip Sheets](#)

-  [TEMPLATE - Educational letter for providers about appropriate use of hepatitis A IgM test \(false positives\)_July2022 ^{UPDATED}](#)
-  [Tip Sheet for Acute Hepatitis C Investigations_Sept2023_Ver. 2.0 ^{NEW}](#)
-  [How to Investigate Suspect Hepatitis A Cases ^{UPDATED}](#)
-  [Hepatitis B Contact Investigation Tip Sheet for LBOH_July 2024 ^{UPDATED}](#)

What's new today?

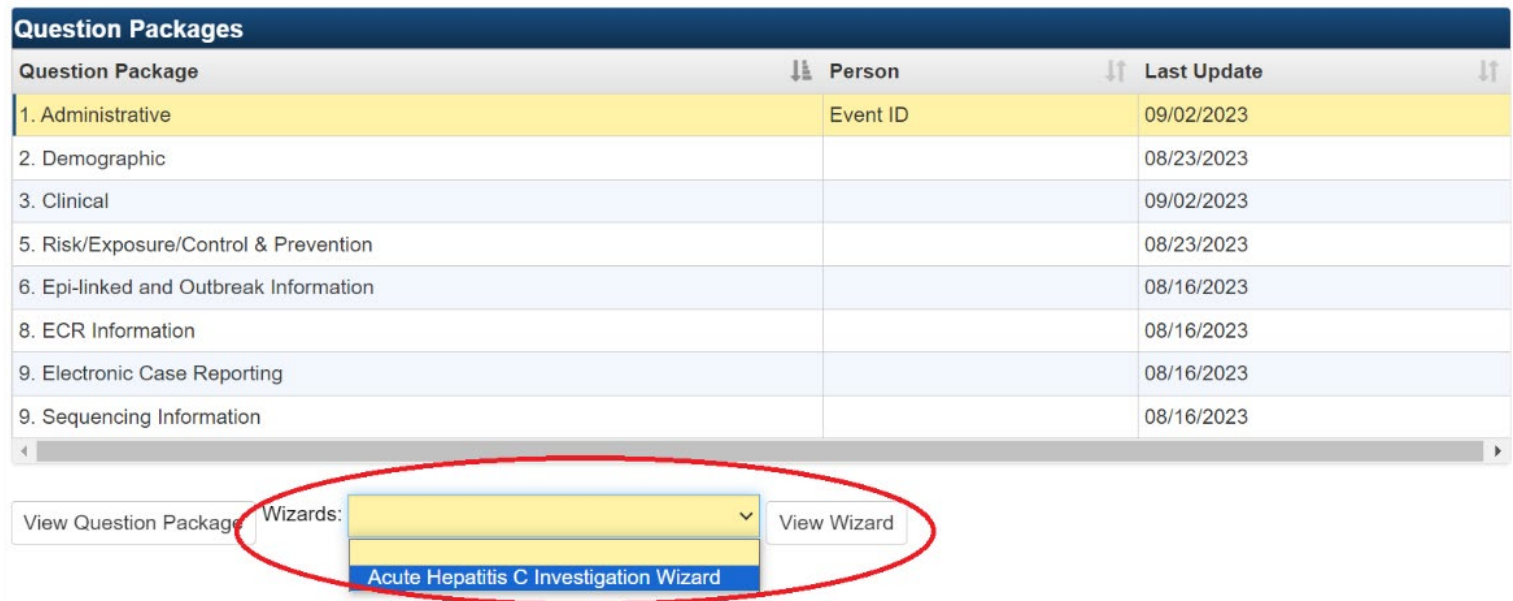
- VHT recently analyzed data completeness from before and after MAVEN H release (July 2023)
 - MAVEN H release included significant changes to viral hepatitis events, especially in risk question packages (QPs)
- Analysis had mixed findings!
- Today, we will review priority variables with identified completeness gaps
 - First, we will review issues that affect all three diseases
 - Then, we will provide some disease-specific reminders

General case investigation tips

- Become familiar with the data collection tool
- Always contact the ordering provider first.
 - If you can't reach the provider, and the case was tested at a hospital, infection preventionists can be helpful ([contact list](#) available in MAVEN Help section).
- Ensure that the provider has notified the case of the diagnosis. Encourage the provider to tell the patient that someone from the BOH or DPH will be contacting them.
- *Some information may already be present from automated sources (provider reporting form, medical record linkage for participating facilities). Please fill in gaps by contacting the provider and case.*

A reminder about wizards!

- MAVEN wizards added to hep B and hep C events in H release
- Meant to streamline case interviews:
 - Priority variables identified, reordered to improve flow of interview
 - Easier than completing individual QPs



The screenshot displays the MAVEN Question Packages interface. At the top, there is a table titled "Question Packages" with columns for "Question Package", "Person", and "Last Update". The table lists several question packages, with the first one, "1. Administrative", highlighted in yellow. Below the table, there is a "View Question Package" button and a "Wizards:" dropdown menu. The dropdown menu is open, showing a list of wizards, with "Acute Hepatitis C Investigation Wizard" selected and highlighted in blue. A red circle is drawn around the "Wizards:" dropdown and the "View Wizard" button.

Question Package	Person	Last Update
1. Administrative	Event ID	09/02/2023
2. Demographic		08/23/2023
3. Clinical		09/02/2023
5. Risk/Exposure/Control & Prevention		08/23/2023
6. Epi-linked and Outbreak Information		08/16/2023
8. ECR Information		08/16/2023
9. Electronic Case Reporting		08/16/2023
9. Sequencing Information		08/16/2023

View Question Package Wizards: Acute Hepatitis C Investigation Wizard View Wizard

SOGIE variables

- SOGIE = Sexual Orientation, Gender Identity & Expression
- Variables added across *all* MAVEN events in 2021 & 2022
- Key to identifying disparities, targeting services

Assigned Sex at Birth

Assigned Sex at Birth

▼

Male

Female

Intersex

Refused

Did not ask

Transgender Experience

Transgender Experience

▼

Yes

No

I am not sure

I don't understand what this question is asking

Prefer not to answer

Unable to collect

Sexual orientation

Sexual orientation

Straight or heterosexual ▼

Bisexual and/or Pansexual

Lesbian, gay, or homosexual

Straight or heterosexual

Something else/Other not listed above (e.g. queer, asexual)

Don't know

New contact variable (risk QP)

- Prior to MAVEN H release, we asked about possible contact with another case differently across disease types
- Now, we have a consistent variable:

Was the patient a contact of a person with confirmed or suspected hepatitis B virus infection?

- If answered as “Yes,” child questions populate to distinguish the type of contact: sexual partner, household contact (nonsexual), drug sharing partner, or other

New sexual activity variable

- Also introduced in MAVEN H release, consistent across all three diseases:

During the incubation period, did the patient report any sexual activity?

- If answered as “Yes,” child questions populate to specify:
 - Is the patient a man who had sex with men?
 - Did the patient have multiple sexual partners?

Audience poll

If you conduct viral hepatitis case investigations, we want to know:

Why do you think SOGIE, contact, and sexual activity variables are often not completed?

- A. These are sensitive topics and I feel uncomfortable asking*
- B. These are sensitive topics and cases refuse to answer*
- C. These questions aren't very relevant to transmission*
- D. All of the above*
- E. Other*

How to ask about sensitive topics

- Completeness gaps for SOGIE, contact, and sexual activity variables may indicate investigators' discomfort
- General guidelines:
 - Be familiar with case report form questions ahead of time
 - Be aware of your biases and assumptions
 - Use non-judgmental terminology
 - Tell case that questions are asked of everyone
 - Remind case of confidentiality

How to ask about sensitive topics, cont.

We've got some great resources!

- “Sex and Drug Talk” on MAVEN Help:

-  [February 2020 - Sex and Drug Talk for HCV Investigations webinar \(35:25\)](#)

-  [February 2020 - Sex and Drug Talk for HCV Investigations webinar slides](#)

-  [February 2020 - Sex and Drug Talk for HCV Investigations webinar Script](#)

- CSTE Learn Training: [Engaging with Sensitivity: Techniques for Interviewing Persons Experiencing Homelessness, Disability, and Substance Use Disorders](#)
 - Designed specifically for health officials who conduct case investigations and need to ask questions about sensitive topics such as housing, disability, drug use, and sex
 - Examples include hep C, Shigella, and mumps investigations
 - Self-paced, consists of several modules that total less than 3 hours
 - *Anyone can create a free account on CSTE Learn and access this training!*

Clinical data

- Completeness very good overall for symptoms and other clinical data
- Room for improvement with *liver-specific* symptoms
- Jaundice and jaundice onset date key for case classifications and for defining incubation and infectious periods

Hep A – food history questions

- Please remember to complete food history questions for confirmed cases!
 - Questions do not need to be completed if case had international travel or contact with another case during incubation period. (It's likely we have already identified the source of the infection!)
- Critical to identifying potential restaurant outbreaks or contaminated food items
- As of H release, questions conveniently located in Risk QP

Hep B – pilot project, summer 2025

- Currently no routine follow-up for chronic cases unless pregnant
- VHT working with MGH collaborators on a new project to conduct outreach to high priority chronic cases
- Using MAVEN lab data to identify patients who have stopped receiving recommended monitoring (viral loads)
- Work with summer intern to contact cases and encourage re-engagement in care
- Please contact me (Lindsay) if you have any questions about or input for this project

Hep C – how cases are assigned

Criteria for assignment:

- A case first reported within the last year with a positive hepatitis C laboratory result and *at least one* of the following, suggestive of acute infection:
 - Jaundice
 - Seroconversion (e.g. a negative hepatitis C antibody result, followed within 12 months by a positive hepatitis C antibody result, or a positive hepatitis C RNA result)
 - **New:** With negative hepatitis C results now freely flowing into MAVEN (K-release), this will become more common, and the number of case investigations will increase
 - Elevated ALT values (≥ 200 U/L)
 - Elevated total bilirubin (≥ 3.0 mg/dL)
 - Reported as having been tested specifically due to signs or symptoms of acute hepatitis C infection
 - Evidence from medical record reporting of acute hepatitis C infection (applies to participating facilities)

New: Cases first reported within the last year for which there is evidence of a healthcare exposure that could be a risk factor for infection may also be assigned for investigation, even without the criteria above.

Hepatitis C events requiring investigation will appear in the “LBOH Notification for Routine Disease Workflow”

Hep C – providing health education

- In addition to completing the wizard, provide health education to confirmed cases on hep C transmission, prevention, and how they can protect their liver.
 - An important part of this is getting vaccinated for hep A and hep B. Discuss with the individual where they can get vaccinated locally.
 - Remind them that hep C can be cured with highly effective and well tolerated antivirals.
 - DPH supports [Integrated Testing and Linkage Services sites](#), which provide an array of services including testing, treatment, syringe services, and overdose prevention.

THANK YOU!

- Please reach out with any questions
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