Hepatitis C, Chronic and Acute

Tips were provided by Dr. Kim Kirkey, 517-335-8165.

Tip 1: Hepatitis C Unknown No Longer Available
- With the next release of the MDSS Hepatitis C Unknown will no longer be an option for new cases. You will still be able to search and do reports using the term, but it will no longer be an assignable option.
- The most up-to-date Hepatitis C case status determination flowchart is available at the end of this document.

Tip 2: Confusion with Confirmed and Probable
- Only Chronic Hepatitis C can be reported as confirmed or probable.
- An Acute case of Hepatitis C can only be reported as confirmed.
- Cases are to be classified at time of completion as
  - Acute: Confirmed or Not a Case
  - Chronic: Confirmed, Probable or Not a Case
- If a case of either condition is determined to not meet case definition criteria it must be reported as Not a Case.

Refer to the available flow chart below and the CDC case definitions at http://www.cdc.gov/ncphi/disss/nndss/casedef/case_definitions.htm#h

Tip 3: Further Information
- If additional information regarding a confirmed case in MDSS shows that it is not a true case or that it does not meet case definition criteria, the Case Status in MDSS must be changed to Not a Case.
Hepatitis C Reporting Flowchart

Evidence of acute illness with a discrete onset of any sign or symptom consistent with acute viral hepatitis (e.g., anorexia, abdominal discomfort, nausea, vomiting)?

YES

Jaundice OR ALT>400 IU/L

YES

IgM anti-HAV negative AND IgM anti-HBc negative AND Not known to have chronic hepatitis C

YES

HCV RIBA positive OR HCV RNA positive OR Anti-HCV positive with a signal to cut-off ratio predictive of a true positive?

YES

Confirmed Hep C, Acute

NO

NOT A CASE of Hep C, Acute

Consider Hep C, Chronic

NO

Acute Hepatitis C Track

Chronic Hepatitis C Track

Anti-HCV positive by EIA?

NO

HCV RIBA Positive or Nucleic acid test for HCV RNA positive or Report of HCV Genotype?

YES

Verified by a more specific assay such as nucleic acid testing or RIBA?

NO

Confirmed Hep C, Chronic

YES

Anti-HCV screening-test-positive with a signal to cut-off ratio predictive of a true positive?

NO

ALT levels above the upper limit of normal

YES

Probable Hep C, Chronic

NO

Not A Case

Michigan Department of Community Health – Revised 04/07
**Acronyms**

**ALT** – Serum Alanine Aminotransferase, also called **SGPT**

**SGPT** – Serum Glutamic Pyruvic Transaminase

**AST** – Aspartate Aminotransferase, also called **SGOT**

**SGOT** – Serum glutamic oxaloacetic transaminase

**Anti-HCV** – Antibodies to Hepatitis C Virus

**EIA** – Enzyme Immunoassay

**HCV** – Hepatitis C Virus

**HCV-RNA** – Hepatitis C Virus Ribonucleic Acid (genetic material)

**IU/L** – International Units per Liter

**IgM Anti-HAV** – IgM Antibody to Hepatitis A Virus

**IgM Anti-HBc** – IgM Antibody to Hepatitis B Core Antigen

**NAT** – Nucleic Acid Test

**PCR** – Polymerase Chain Reaction

**RIBA** – Recombinant Immunoblot Assay

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**Clarification**

**ALT/SGPT and AST/SGOT levels**: Enzymes produced by the liver that when elevated indicates liver damage. AST/SGOT results are not part of the hepatitis C case definitions.

**Jaundice**: condition in which the whites of the eyes go yellow and in more severe cases the skin also turns yellow; caused by the yellow pigment, bilirubin that is normally disposed of by the liver; often a symptom of viral hepatitis infection.

**Signal to cut-off ratio predictive of a true positive**: Signal-to-cut-off ratios are calculated by dividing the optical density (OD) value of the sample being tested by the OD value of the assay cut-off for that run. A specific s/co ratio can be identified for each test that would predict a true antibody-positive result (as defined by the results of supplemental testing) ≥95% of the time, regardless of the anti-HCV prevalence or characteristics of the population being tested. Synonymous phrases include "high signal to cut-off ratio" and "serum to cut-off". The chart below, provided by the CDC, describes the signal-to-cut off ratio of some commercially available assays.

<table>
<thead>
<tr>
<th>Screening test kit</th>
<th>Signal-to-cut—off ratio predictive of a true positive ≥ 95% of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ortho HCV Version 3.0 ELISA Test System</td>
<td>3.8</td>
</tr>
<tr>
<td>Abbott HCV EIA 2.0</td>
<td>3.8</td>
</tr>
<tr>
<td>Ortho Vitros Anti-HCV Assay</td>
<td>8.0</td>
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<tr>
<td>Abbott Axsym Antibody to HCV</td>
<td>10.0</td>
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<tr>
<td>Bayer Advia Centaur HCV Assay</td>
<td>Not Yet Available</td>
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