ESP CASE DETECTION ALGORITHM
ACUTE HEPATITIS A

Document Version 3.0

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Modification History

Version	Date	Modification	By
3.0	3/1/2019	Add new reportable provider fields	DPM
2.22	10/11/2017	Added ESP Logo and MDPH branding	DPM
2.21	7/5/2017	Updated documentation format	DPM
2.2	5/23/2017	Removed hepatitis B labs from data included in case reports to DPH.	DPH/DPM
2.1	3/23/2017	Removed hepatitis C labs from data included in case reports to DPH.	DPH/DPM
2.0	3/6/2017	• Updated algorithm format. • Added appropriate ICD-10-CM diagnosis codes.	DPM
1.0	8/17/2014	Original circulated version.	DPM

Section 1. *Overview*

The purpose of this document is to describe the criteria used to identify new ACUTE HEPATITIS A cases from electronic medical records (EMR) using ESP and report them to the Massachusetts Department of Public Health (MDPH).

Section 2. *Criteria used to identify cases using ESP data*

  I. **CASE TYPES**

This document includes algorithms to identify acute hepatitis A.

  II. **TIME WINDOW**

There is no recurrence window for hepatitis A. A case is considered incident if it is the first time the criteria is met and it has not been previously reported.

  III. **CASE CRITERIA**

  A. **CASE COMPONENTS***

  1. Diagnosis code for jaundice, not of newborn
  2. Alanine aminotransferase (ALT) >2x upper limit of normal
  3. Aspartate aminotransferase (AST) >2x upper limit of normal
  4. IgM antibody to Hepatitis A = "REACTIVE"

  See Section 4 for codes used to define each component.

  B. **CASE CRITERIA**

Classify patient as having acute hepatitis A if the following conditions is true:
  a) (#1 or #2 or #3) *and* #4 within 14-day period

Section 3. *Specifications for reporting diseases/conditions to the Massachusetts Department of Public Health*

  I. **INITIAL CASE REPORTING CRITERIA**

All cases should be immediately reported to MDPH upon initial detection. A patient should only be reported if it is the first time he or she meets the case definition.

  II. **CASE REPORT UPDATE CRITERIA**

None.

III. DATA TO INCLUDE IN REPORTS TO MDPH

A. Demographic

Name	Last, first, middle
Date of birth	yyyy/mm/dd
Age	
Social security number	
Gender	Male / Female
Race	American Indian / Asian / Black / White / Other / Unknown
Ethnicity	Hispanic / Non-Hispanic / Unknown
Marital Status	Single / Married / Other, Unknown
Address	Line 1, line 2, city, state, zip, country
Phone	xxx-xxx-xxxx
Language spoken	
Medical record number	
PCP	Name, office address, phone number, email

B. Lab Ordering Facility Information

Facility name	
Facility address	Line 1, line 2, city, state, zip
Facility contact person	
Contact person email	
Contact person phone	xxx-xxx-xxxx
Facility phone	xxx-xxx-xxxx
Facility NPI	

C. Encounter Data

See Table 4 below for NA codes to send provider fields in HL7 messages

Lab test ordering provider	Name and NPI
Prescribing provider	Name and NPI
Primary care provider	Name and NPI
Managing treatment provider	Name and NPI
Treatment encounter facility name	
Treatment encounter facility address	Line 1, line 2, city, state, zip
Treatment encounter facility NPI	

D. Laboratory Results

Most recent result within 14-day period of day on which case was established. See Table 3 for LOINCs.

Hep A IgM antibody	
ALT	
AST	

E. Pregnancy

Pregnancy flag active	Yes or Unknown
Expected Date of Delivery (EDD)	

F. Symptoms

If any of the following diagnosis codes (see Table 2, below) or vital sign findings are present 14 days before or after case established then report the following symptoms:

Fever	Diagnosis code or measured temperature >100.4 degrees Fahrenheit
Jaundice	
Abdominal pain	
Nausea and Vomiting	
Diarrhea	

IV. CRITERIA TO REVOKE A CASE

None.

Section 4. *Codes, laboratory tests, and medications used to identify criteria listed in Section 2 and supplementary reporting information in Section 3.*

I. DIAGNOSIS CODES

Table 1. Diagnosis Codes Used to Identify Case Components

Component Name	Code Type	Code	Description
Jaundice (#1)	ICD-9-CM	782.4	Jaundice, not of newborn
	ICD-10-CM	R17	Unspecified jaundice

Table 2. Diagnosis Codes Used to Identify Symptoms

Symptom	Code Type	Code	Description
Fever	N/A	Temperature >100.4	Measured temperature if available, ELSE "fever".
	ICD-9-CM	780.60	Fever
	ICD-10-CM	R50.9	Fever, unspecified
Jaundice	ICD-9-CM	782.4	Jaundice
	ICD-10-CM	R17	Unspecified jaundice
Anorexia	ICD-9-CM	783.0	Anorexia
	ICD-10-CM	R63.0	Anorexia
Fatigue	ICD-9-CM	780.79	Other malaise and fatigue
	ICD-10-CM	R53.1	Weakness
	ICD-10-CM	R53.81	Other malaise
	ICD-10-CM	R53.83	Other fatigue
Abdominal pain	ICD-9-CM	789*	Abdominal pain
	ICD-10-CM	R10*	Abdominal and pelvic pain
Nausea & Vomiting	ICD-9-CM	787.01	Nausea and vomiting
	ICD-10-CM	R11.2	Nausea with vomiting, unspecified
	ICD-9-CM	787.02	Nausea alone
	ICD-10-CM	R11.0	Nausea
	ICD-9-CM	787.03	Vomiting alone
	ICD-10-CM	R11.10	Vomiting, unspecified
	ICD-10-CM	R11.11	Vomiting without nausea

	ICD-10-CM	R11.12	Projectile vomiting
Diarrhea	ICD-9-CM	787.91	Diarrhea
	ICD-10-CM	R19.7	Diarrhea, unspecified

II.   MEDICATIONS

N/A

III.   LAB TESTS LOINCS

Table 3. Laboratory Test LOINC Mapping

Component Name	LOINC	LOINC Name
ALANINE AMINOTRANSFERASE (ALT)	1742-6	ALT SerPl-cCnc
ASPARTATE AMINOTRANSFERASE (AST)	1920-8	AST SerPl-cCnc
IGM ANTIBODY TO HEPATITIS A	22314-9	Hepatitis A virus Ab.IgM : ACnc : Pt : Ser : Ord :

IV.   NA CODES

Table 4. NA Codes for provider reporting fields

NA code	Description
NA-1746	Prescribing provider name
NA-1747	Prescribing provider NPI
NA-1748	Treatment encounter facility name
NA-1749	Treatment encounter facility address
NA-1750	Treatment encounter facility city
NA-1751	Treatment encounter facility state
NA-1752	Treatment encounter facility NPI
NA-1753	Primary care provider name
NA-1754	Primary care provider NPI
NA-1755	Ordering provider name
NA-1756	Ordering provider NPI
NA-1757	Lab ordering facility name
NA-1758	Lab ordering facility address
NA-1759	Lab ordering facility city
NA-1760	Lab ordering facility state
NA-1761	Lab ordering facility NPI
NA-1762	Managing treatment provider name
NA-1763	Managing treatment provider NPI

V.   CODE MAINTENANCE STRATEGY

Continuously screen all incoming Lx_Component_Name fields for the text strings: "HEP" or "HAV" or "ALT" or "SGPT" or "AST" or "SGOT" or "AMINOTRANS" not "CAST" not "FASTING" not "YEAST"