

# Utah Department of Health Guidelines for Hepatitis B Surveillance- 2013

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## Introduction

This report will define the purposes and methods for the updated hepatitis B surveillance guidelines in Utah. These guidelines have been updated to maximize the use of public health personnel time and public health resources in investigating and analyzing acute and chronic hepatitis B data.

## Background

Hepatitis B surveillance in Utah for both acute and chronic cases of disease over the past several years has not proffered much in characterizing the burden of disease in Utah. The Centers for Disease Control and Prevention (CDC) requires states to report numbers of acute cases of hepatitis B, and is interested in chronic numbers if they are collected. Nationwide, hepatitis data collection is a challenge due to many factors, including volume of reports and lack of resources available to handle the case load. Other states have various methods of surveillance, but there are no standard guidelines established for chronic hepatitis B surveillance.

In order to better understand the burden of disease in Utah of hepatitis B, data needs to be collected in a more consistent, standardized way. This report details methods for data collection and analysis to better characterize the data. This data will be used for intervention, education and disease prevention purposes. Perinatal hepatitis B surveillance is of particular concern. This streamlined system will assist to identify and ensure proper care of mothers with hepatitis B and their infants so that transmission of the virus to the child can be mitigated.

The purpose of these updated guidelines is to ensure that hepatitis B surveillance is being monitored efficiently and effectively. The goal of these guidelines is to organize data collection and streamline data analysis to improve quality and usefulness of the data collected.

## Methods

Purpose of surveillance system. This surveillance system will streamline data collection and provide specifics for which cases warrant further investigation. Data analysis will be oriented towards providing information for public health partners for use in prevention efforts.

Objectives of surveillance system. This surveillance system will allow public health to better fulfill the responsibilities associated with hepatitis B identification, education and prevention which include:

- Identification of clusters or outbreaks of hepatitis B
- Identification of sources of exposure and stop further transmission
- Ensure identification of infected pregnant women, and prevent perinatal transmission to their babies

- Collection of surveillance data in order to assess specific groups and geographic areas where public health intervention should be targeted

Planned use of data. Data will be collected and categorized into two different event types in UT-NEDSS. Those meeting the criteria of a morbidity event are those that will be investigated by public health. Those categorized as a surveillance event\* are those who don't meet the criteria for further investigation. Surveillance event\* data, combined with morbidity report data for hepatitis B cases will be analyzed by geographic location (geocoding) to determine areas of greatest prevalence in order to target public health intervention strategies. Data will also be analyzed by demographics, including: age, race, sex and other factors to determine if specific populations warrant public health interventions. These data will be shared with public health partners in order to focus prevention efforts to areas and specific populations to assist in decreasing the hepatitis B disease burden in Utah.

Case definitions.

**Hepatitis B, acute:**

Clinical Case Definition

An acute illness with:

- Discrete onset of symptoms, and
- Jaundice or elevated serum aminotransferase levels.

Laboratory Criteria

- IgM antibody to hepatitis B core antigen (anti-HBc) positive

**OR**

- hepatitis B surface antigen (HBsAg) positive
- IgM anti-HAV negative (if done)

Case Classification

*Confirmed:* a case that meets the clinical case definition and is laboratory confirmed.

**Hepatitis B, chronic:**

Clinical Description

Persons with chronic HBV infection may have no evidence of liver disease or may have a spectrum of disease ranging from chronic hepatitis to cirrhosis or liver cancer. Persons with chronic infection may be asymptomatic.

Laboratory Criteria

- IgM antibodies to hepatitis B core antigen (anti-HBc) negative, and
- A positive result on one of the following tests:
  - Hepatitis B surface antigen (HBsAg)
  - Hepatitis B e antigen (HBeAg)
  - Hepatitis B virus (HBV) DNA

**OR**

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\* **NOTE:** SURVEILLANCE EVENTS in UT-NEDSS are currently not operational. This functionality will be used when electronic laboratory reporting (ELR) is implemented. In the interim, cases should be entered as CMRs and routed through to state, with no investigation needed.

- HBsAg positive or HBV DNA positive or HBeAg positive two times at least 6 months apart (Any combination of these tests performed 6 months apart is acceptable.)

#### Case Classification

*Probable:* a case with a single HBsAg positive or HBV DNA positive or HBeAg positive lab result when no IgM anti-HBc results are available.

*Confirmed:* a case that meets either laboratory criteria for diagnosis.

### **Hepatitis B, perinatal:**

#### Clinical Description

Perinatal hepatitis B in the newborn may range from asymptomatic to fulminant hepatitis.

#### Laboratory Criteria

Hepatitis B surface antigen (HBsAg) positive

#### Case Classification

*Confirmed:* HBsAg positivity in any infant aged 1-24 months who was born in the United States or in US territories to an HBsAg-positive mother.

Legal authority. Utah public health has the authority under the Communicable Disease Rule in the Utah Administrative Code. Rule R386-702-9: Special measures to prevent perinatal and person to person transmission of hepatitis B infection.

Surveillance to be done by UDOH. The data that is collected and entered into the UT-NEDSS system will be combined between the surveillance events\* (those not investigated) with the morbidity events (those investigated). This data will be analyzed through geocoding software which will plot on a map the cases reported. Data will be analyzed by demographics to further characterize populations at risk. This data will be shared with local health departments and other partners to provide prevention and education to populations at most risk.

#### Components of surveillance system.

##### 1. Population

The following groups are to be investigated when a positive hepatitis B lab report or report of disease in a Utah resident is given to public health:

- Infants born to HBsAg positive mothers who were not given prenatal care and/or no vaccine was administered to the infant.
- Mothers with unknown HBsAg status, whose infant has been reported as receiving HBIG within 7 days of birth.
- Women of child bearing age (12-50 years of age)
- Suspect acute cases
- Individuals who are co-infected with one of the following: hepatitis C, hepatitis D, HIV or AIDS.

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These cases will be entered into UT-NEDSS as a morbidity event and investigated by the local health departments.

## 2. How data is collected

For individuals who meet the population criteria above, data will be entered initially as a confidential morbidity report (CMR) into UT-NEDSS as a ‘Hepatitis B, Chronic’ (investigation will determine if this needs to be changed later to an acute case classification). These cases will be investigated by local health department investigators and data will be entered into the CMR in UT-NEDSS.

Individuals who are reported who do not meet the criteria above will be entered into UT-NEDSS as a surveillance event\*, which will not be investigated. These cases will be included into the geocoding and epidemiologic analysis on all hepatitis B cases.

## 3. Reporting

Reports of hepatitis B will be through current routine laboratory notification and notification from health care providers in Utah. Electronic laboratory reporting (ELR) will also be utilized once that reporting capability is operational. Reporting is ongoing and it is required that laboratory results and/or health care providers notify public health within three business days after a positive result or diagnosis of hepatitis B.

## 4. Data management

Data will be entered and managed in UT-NEDSS.

## 5. Data analysis

The data that is collected and entered into UT-NEDSS will be analyzed through geocoding software which will plot reported cases on a map. Epidemiologic analysis will also be done looking at demographics. These data will be shared with local health departments and other partners to provide prevention and education to populations at risk.

Both surveillance and morbidity events will be analyzed on a regular basis by UDOH to determine if any cases of hepatitis B are known to have a co-infection of one of the diseases mentioned previously. This will be done by comparing those entered as hepatitis B cases to any cases entered as one of the diseases mentioned previously. If cases are found to have co infections, and have not previously been investigated, they will be routed to the appropriate local health department for follow up.

## 6. Policies to ensure patient privacy, confidentiality and security.

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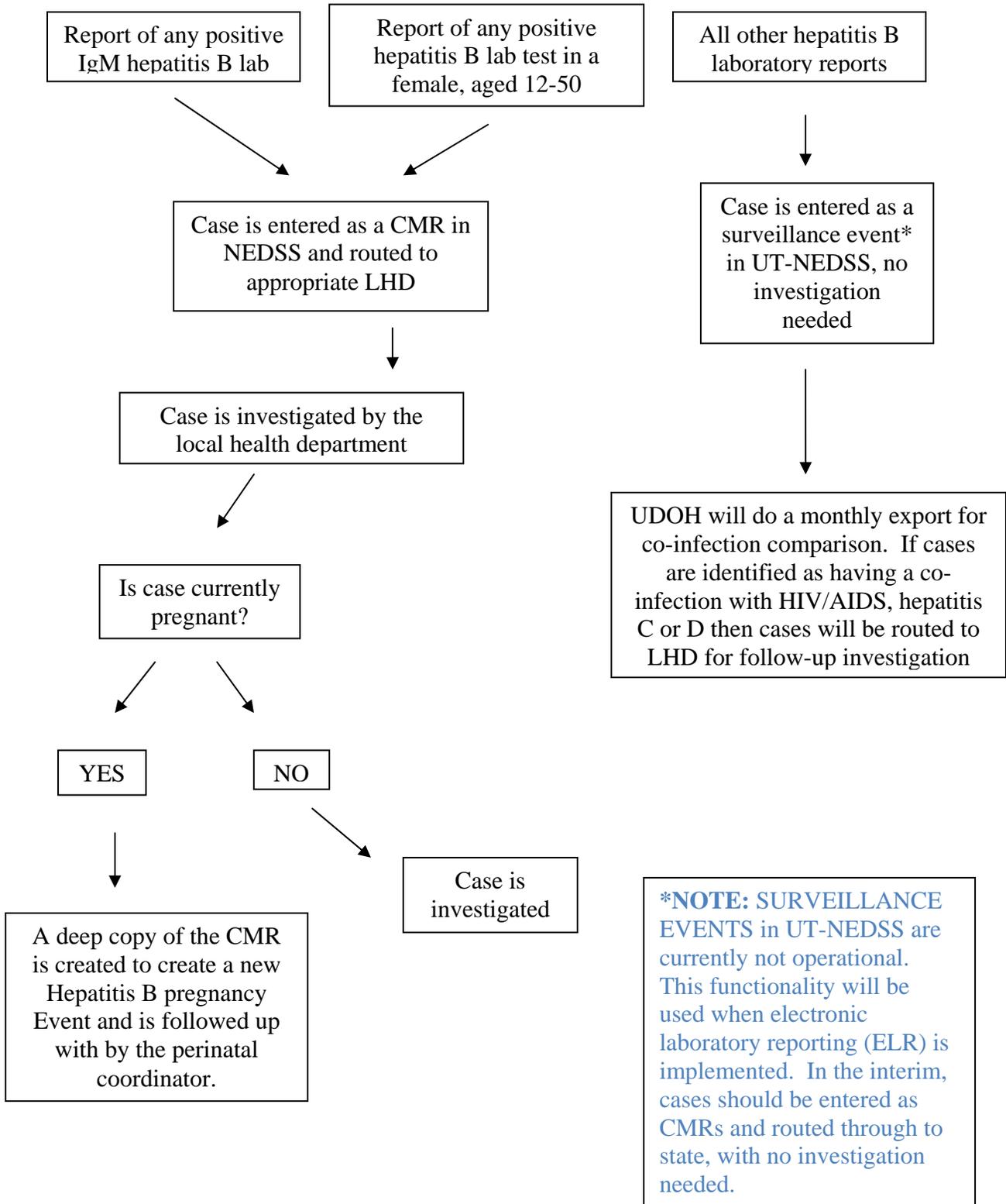
\* **NOTE:** SURVEILLANCE EVENTS in UT-NEDSS are currently not operational. This functionality will be used when electronic laboratory reporting (ELR) is implemented. In the interim, cases should be entered as CMRs and routed through to state, with no investigation needed.

Will adhere to the policies as prescribed by HIPPA.

7. Policy of releasing data

Data will be shared with local health departments and will be made available to interested parties as needed. No identifiers will be released to those who are not authorized.

Data flow Chart. All cases/positive laboratory reports reported to public health will follow the following algorithm:



## Discussion

The purpose of this surveillance system is to ensure that that hepatitis B surveillance is being conducted efficiently and effectively. By having specific guidelines in place, public health resources can be more appropriately managed in order to collect and analyze hepatitis B data. Focusing investigative efforts on specific populations will assist public health in educating those groups who are considered high risk. Epidemiologic and geographic data will be instrumental for prevention programs to know where their efforts in prevention and education will have the most effect.

The goal of these guidelines is to organize data collection and streamline data analysis to improve quality and usefulness of data. These guidelines will assist public health efforts in identifying clusters or outbreaks of hepatitis B, identify sources of exposure and stop further transmission, ensure identification of infected pregnant women, prevent perinatal transmission to their babies, and will ensure that surveillance data is collected in order to assess groups and areas where public health intervention may be needed.