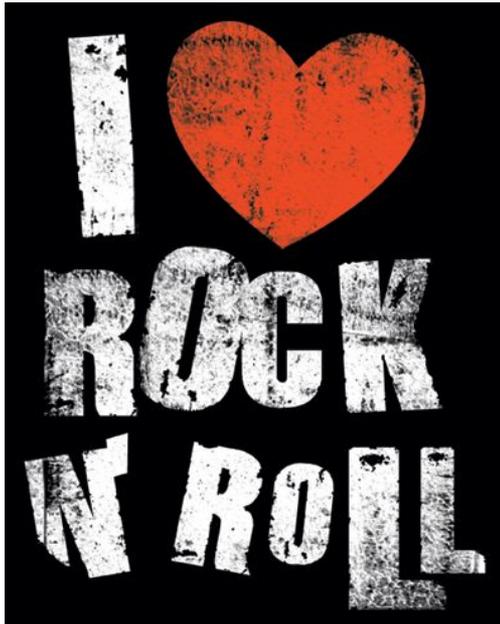


Sex, Drugs and ~~Rock 'n Roll~~



Hepatitis B

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11/22/2013

Objectives

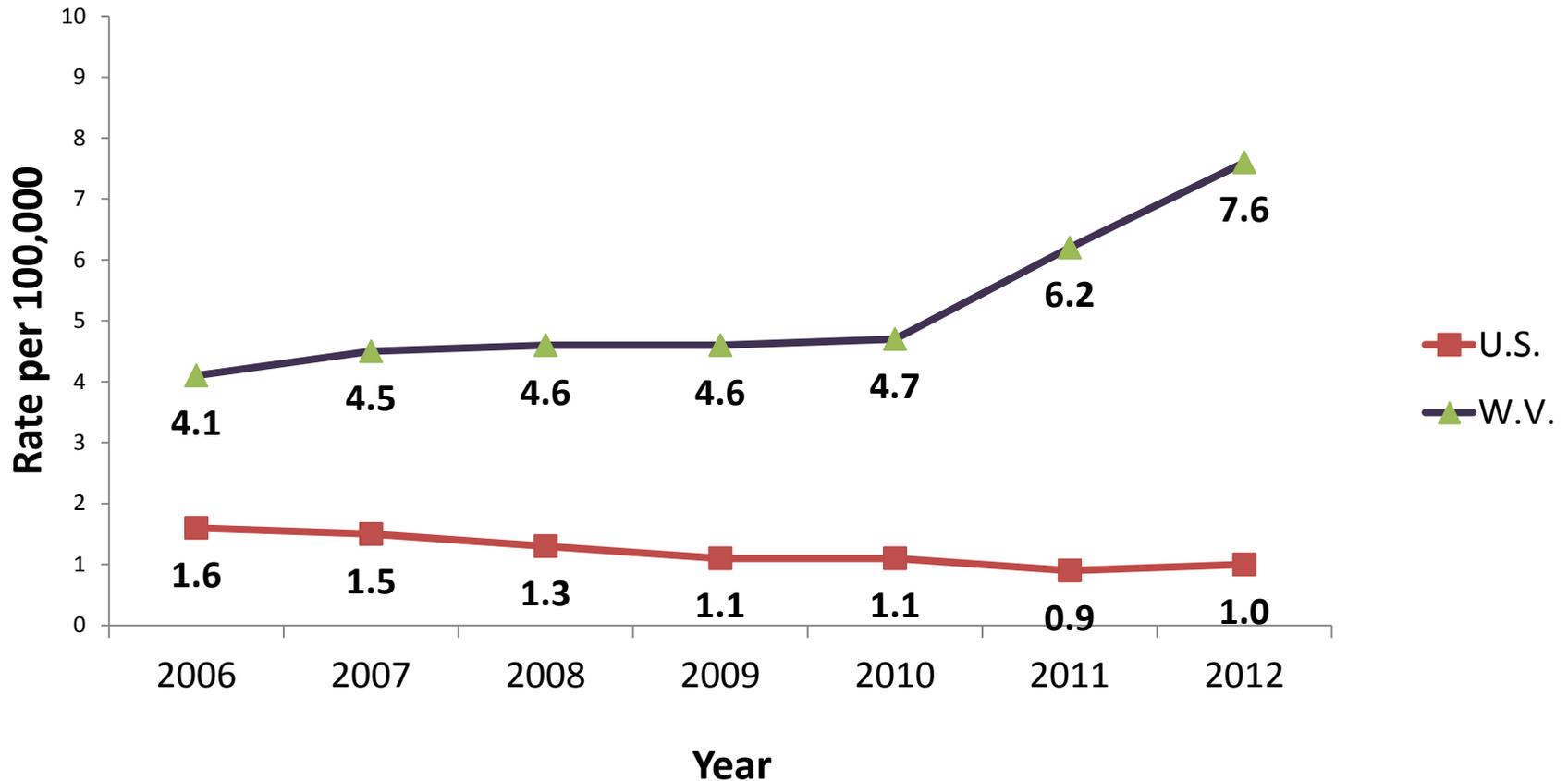
1. Describe the epidemiology of hepatitis B in West Virginia
2. Review hepatitis B investigation and reporting in the state
3. Describe prevention and control efforts

Question?

Where did West Virginia rank in 2012 for the incidence of acute hepatitis B in the United States?

- a. #10
- b. #15
- c. #7
- d. #1

Incidence of Acute Hepatitis B by Year of Report — West Virginia and U.S., 2006-2012



*WV rate & U.S. rate - source: <http://www.cdc.gov/hepatitis/Statistics/2011Surveillance/Table3.1.htm>

Burden of Hepatitis B Virus (HBV) Worldwide



- 2 billion people worldwide have been infected with the HBV
- 350 million people living with lifelong, chronic infection
- HBV causes 80% of hepatocellular carcinomas

Burden of HBV in the U.S.

- 800,000 to 1.4 million people living chronic hepatitis B



- 3,000 liver disease deaths associated with viral hepatitis each year

Burden of Acute Hepatitis B in West Virginia

- From 1997 to 2012 there has been a 700% increase in acute hepatitis B cases
- 8 times the national incidence



Hepatitis B Virus

- A partially double stranded DNA virus that lives in the liver cells and causes inflammation
- Highly infectious
 - 100x more infectious than HIV
 - 10x more infectious than hepatitis C
- Environmentally stable
 - Viable up to 7 days on a surface at room temperature

Hepatitis B Epidemiology

- **Reservoir:** Humans
- **Transmission:** Blood & body fluids
- **Communicability:**
 - 1-2 months before and after onset
 - chronic carriers - indefinitely

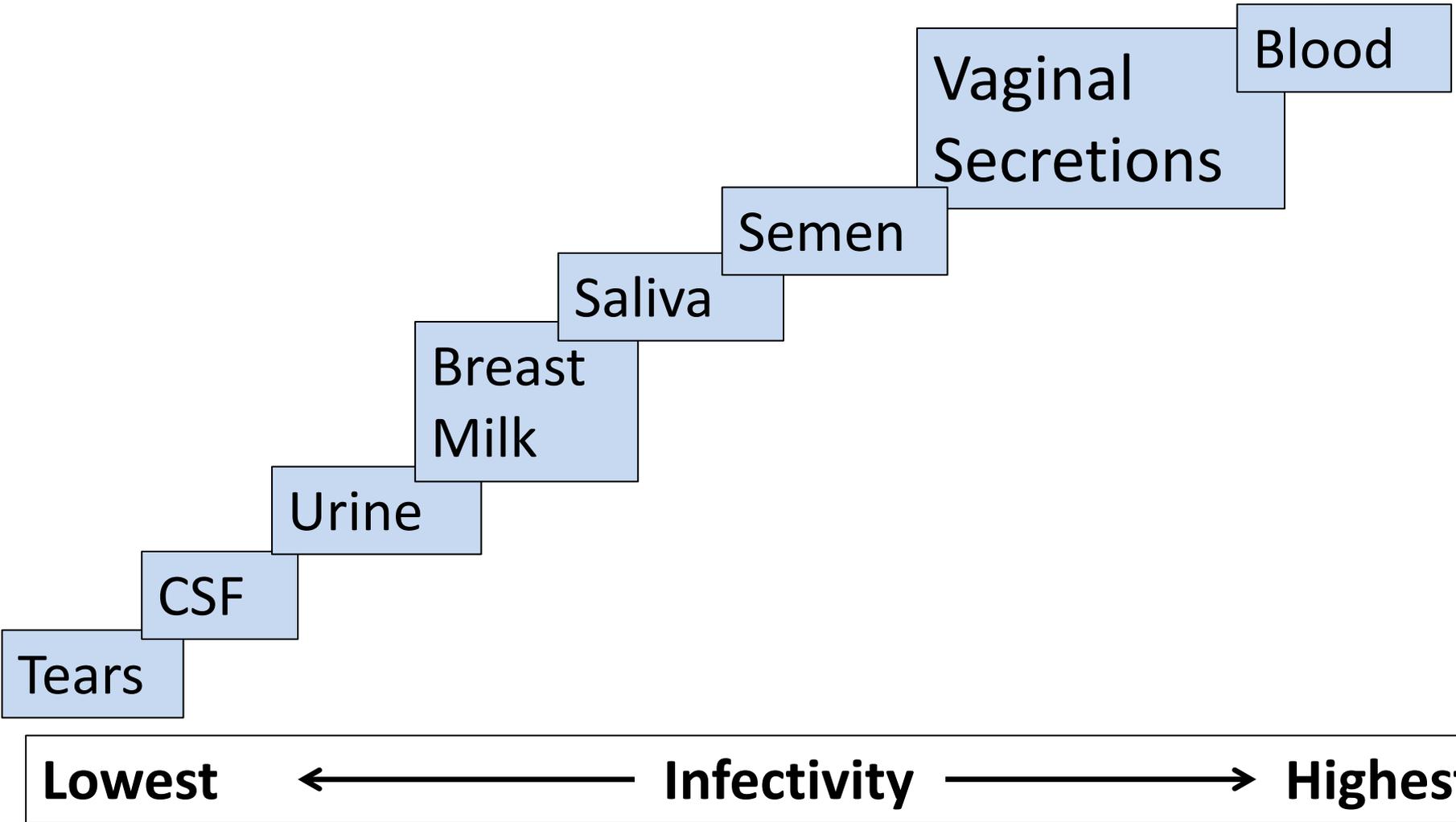
Clinical Features

- **Incubation Period:** 45 days to 180 days
 - Average 90 days
- **50%** of adults with acute infection are **asymptomatic**
- **Symptoms:** malaise, anorexia, nausea, vomiting, right upper quadrant pain, fever, headache, myalgia, dark urine, jaundice

How is HBV Transmitted?

- Percutaneous or mucosal contact, including
 - Unprotected sex
 - Sharing drug paraphernalia
 - Birth to an infected mother
 - Living in a household with an infected person
 - Sharing items such as toothbrushes or razors with an infected person
 - Unsterilized needles, including tattoo or piercing needles

Estimates of HBV Infectivity



Reporting & Investigation

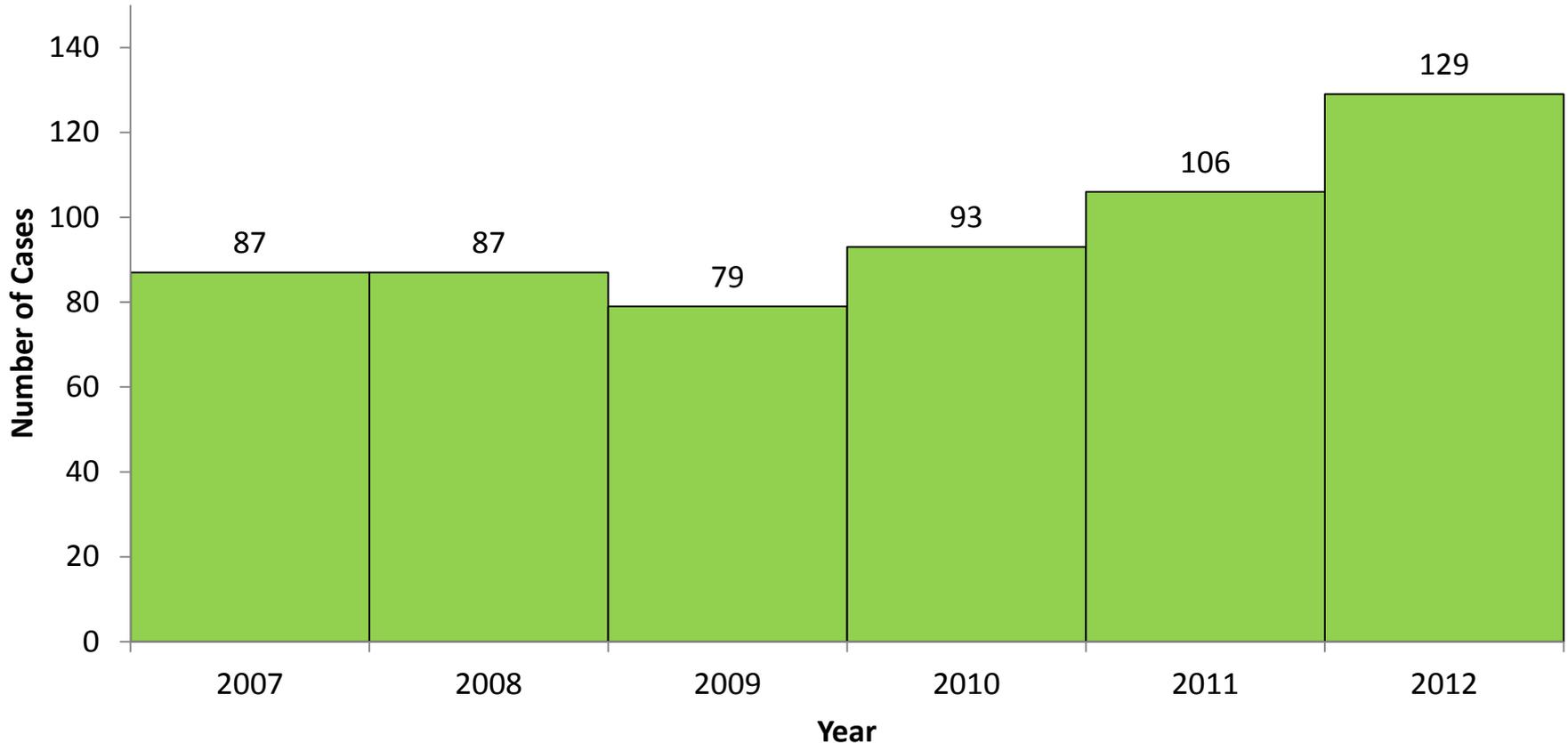
WV Reportable Disease Rule

- Hepatitis B is in category II under the WV Reportable Disease Rule (64 CSR-7)
- All acute or chronic cases must be reported to the local health department within 24 hours

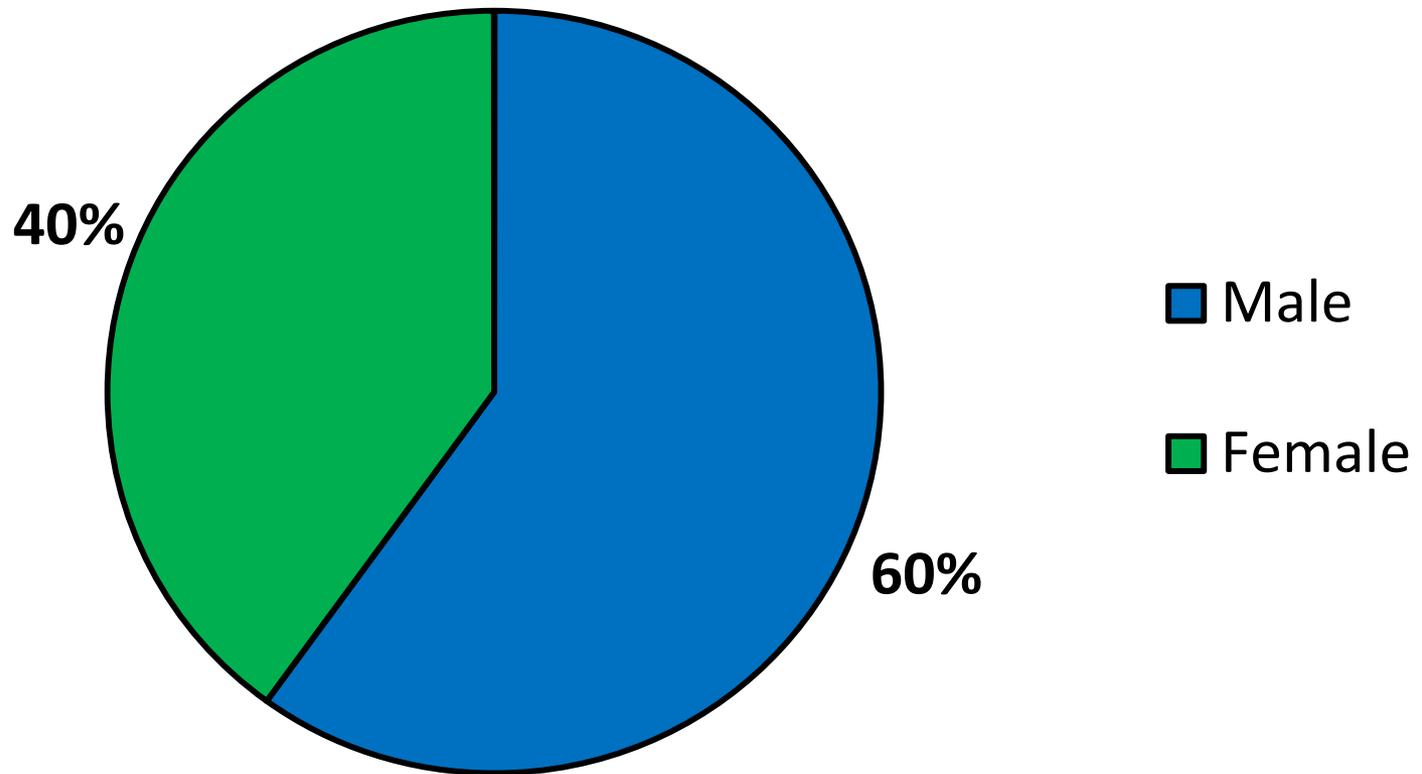
Investigation

- Who?
- What?
- Why?
- How?

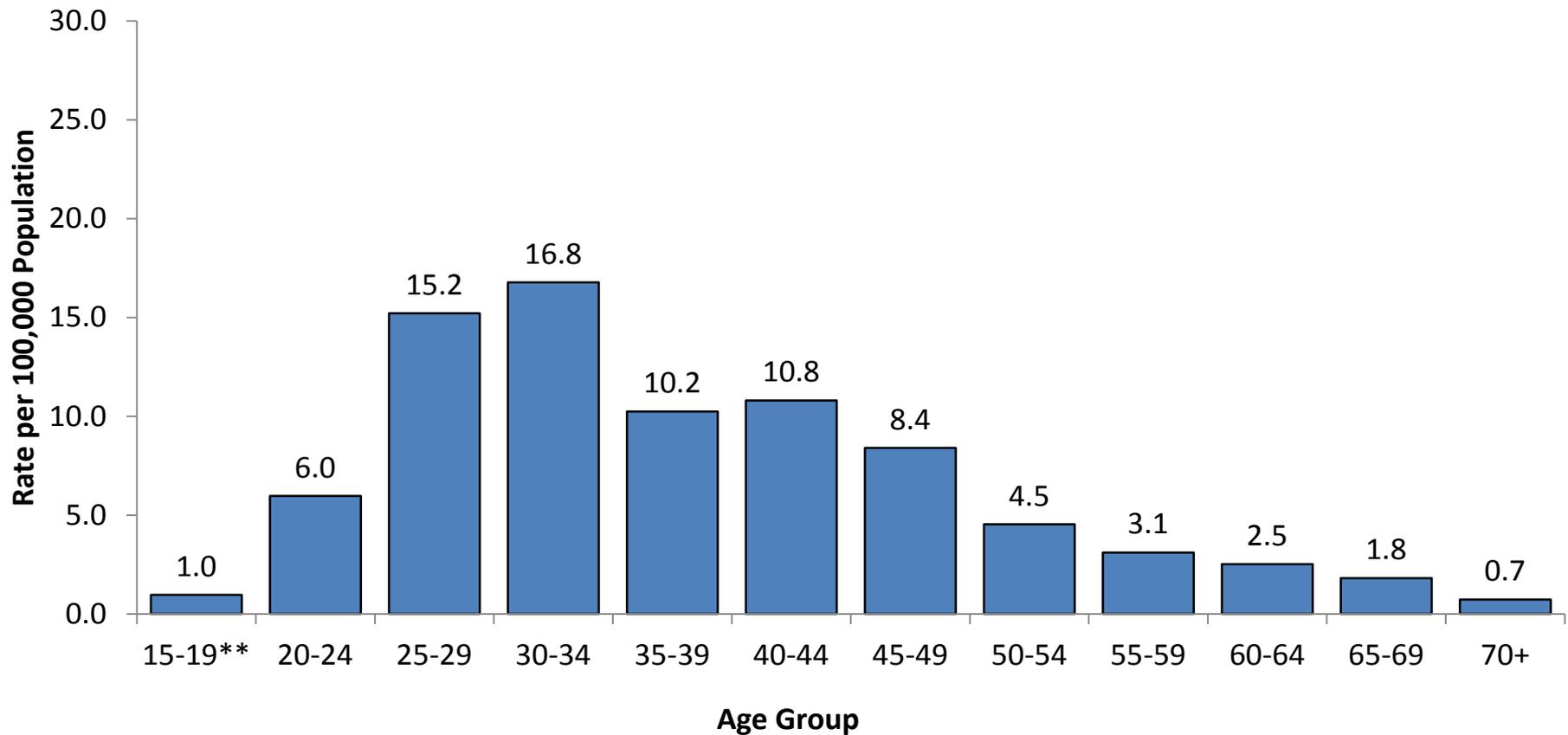
Number of Acute Hepatitis B Cases by Year of Onset — West Virginia, 2007-2012 (N=581)



Percent of Acute Hepatitis B Cases by Gender — West Virginia, 2007-2012 (N=581)



Incidence* of Acute Hepatitis B Cases by Age Group — West Virginia, 2007-2012 (N=581)



*U.S. Census 2010 data used for calculations:
<http://quickfacts.census.gov/qfd/states/54000.ht>

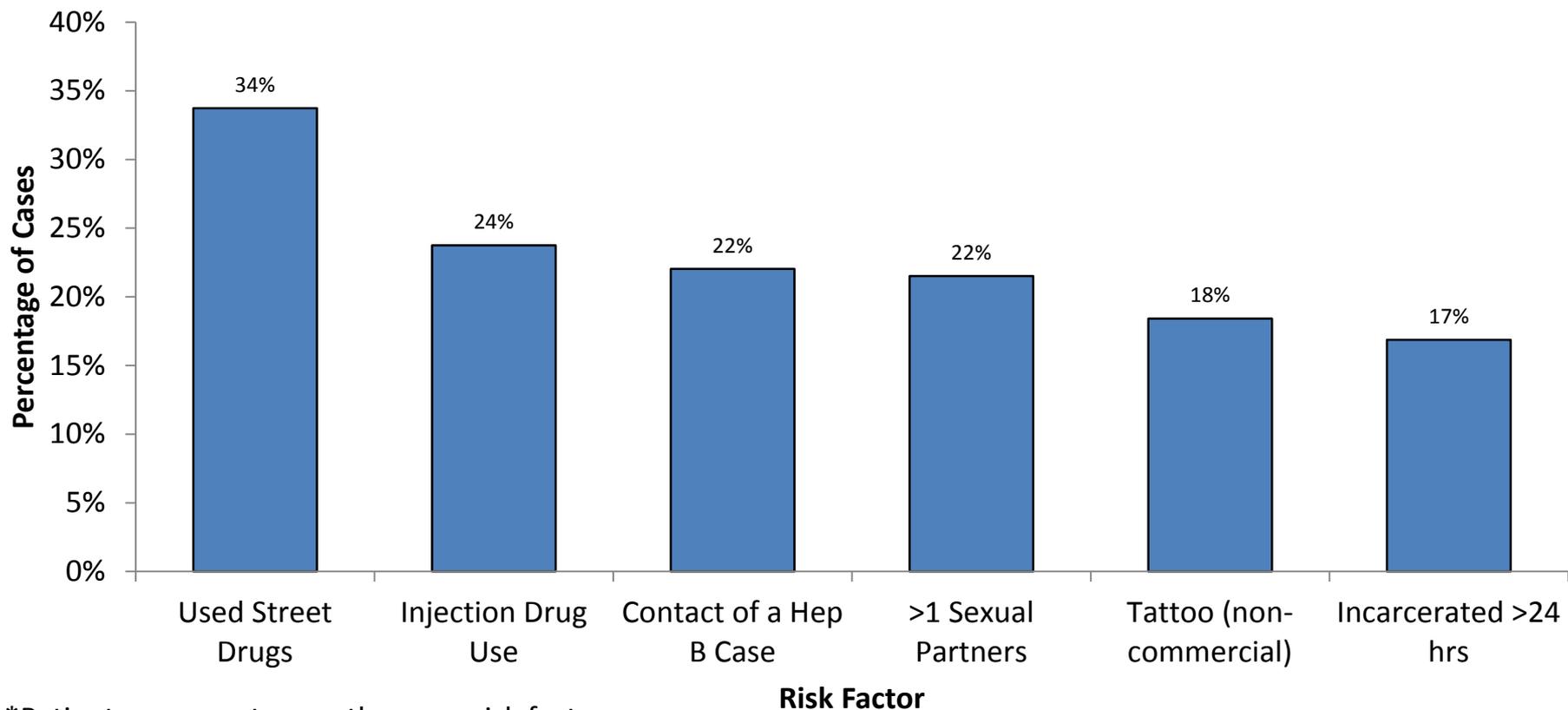
**There were no reported cases of acute hepatitis B in WV, younger than age 15, between 2007-2012.

Question?

What is the most common risk factor/exposure reported by people with acute hepatitis B infection in West Virginia?

- a. Incarcerated > 24 hours
- b. Used street drugs
- c. Multiple sexual partners
- d. Injection drug use

Top 6 Risk Factors* Reported Among Acute Hepatitis B Cases — West Virginia, 2007-2012 (N=581)



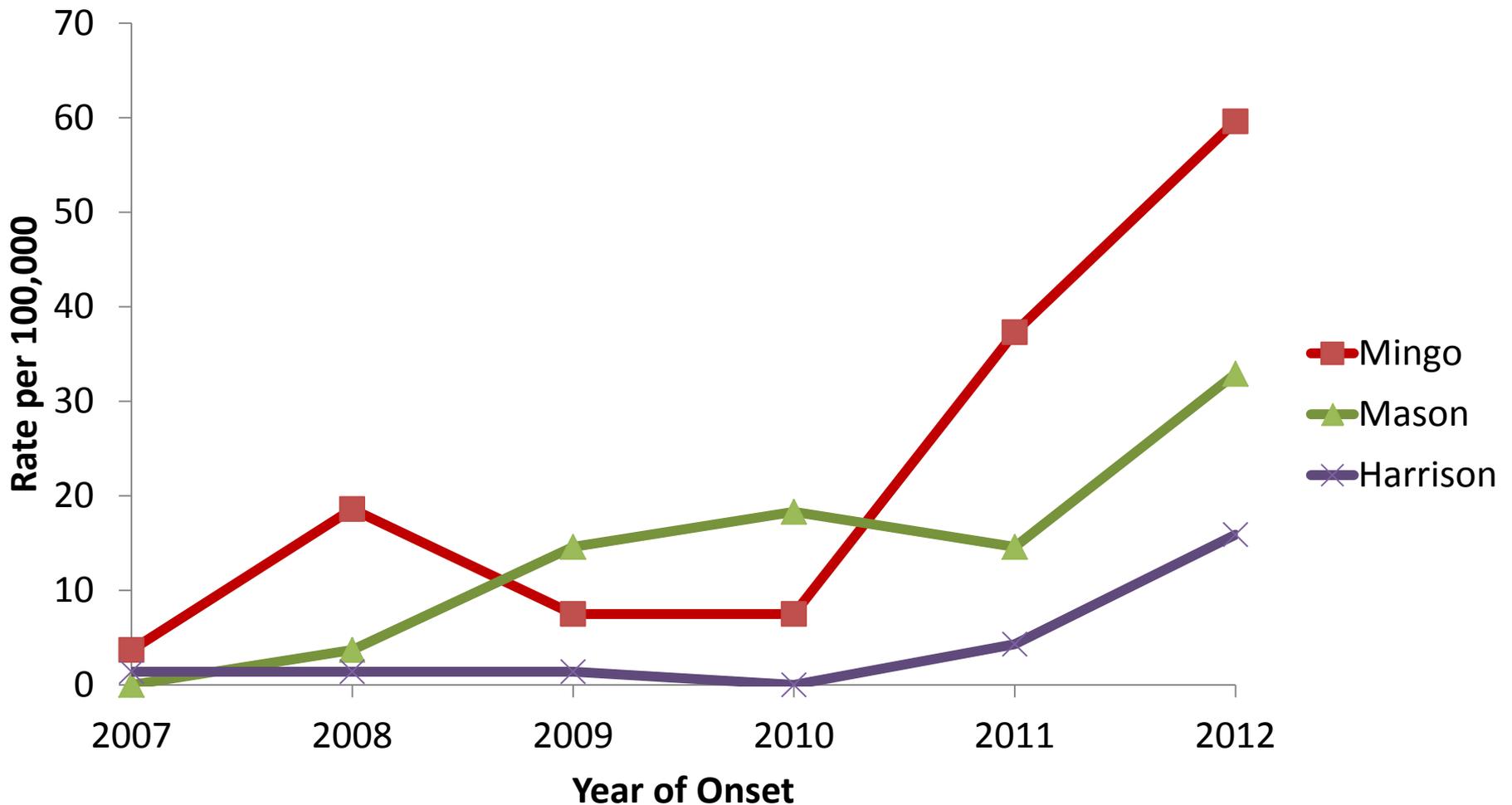
*Patient can report more than one risk factor.

Drug Overdose Mortality in WV

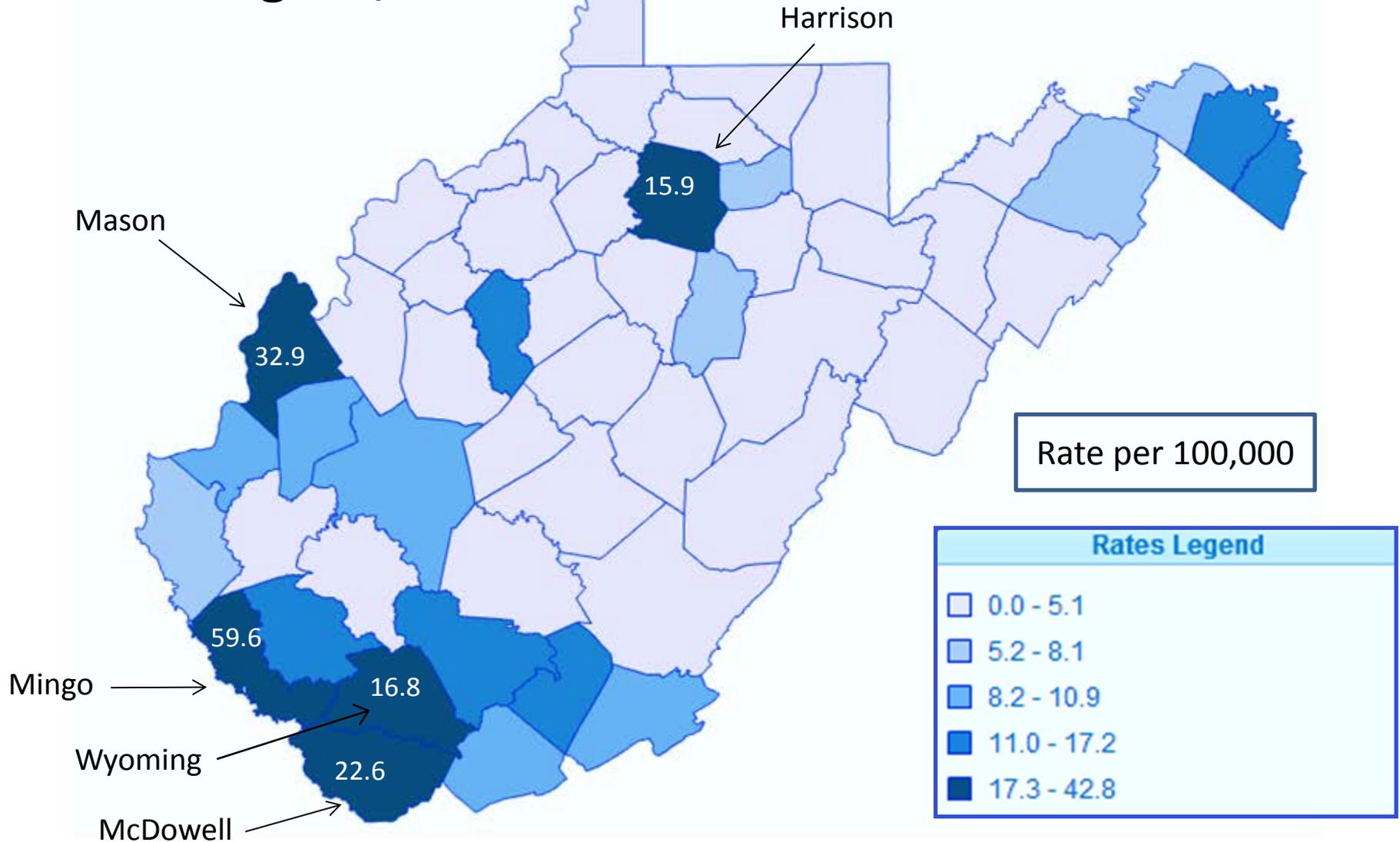
- 2010, Drug Overdose Mortality:
 - Highest mortality rate in the United States
 - Rate increased 605% from **4.1** per 100,000 in 1999 to **28.9** in 2010

Source: <http://healthyamericans.org/reports/drugabuse2013/>

Incidence of Acute Hepatitis B, Selected Counties — West Virginia, 2007-2012 (n=76)



Incidence of Acute Hepatitis B — West Virginia, 2012

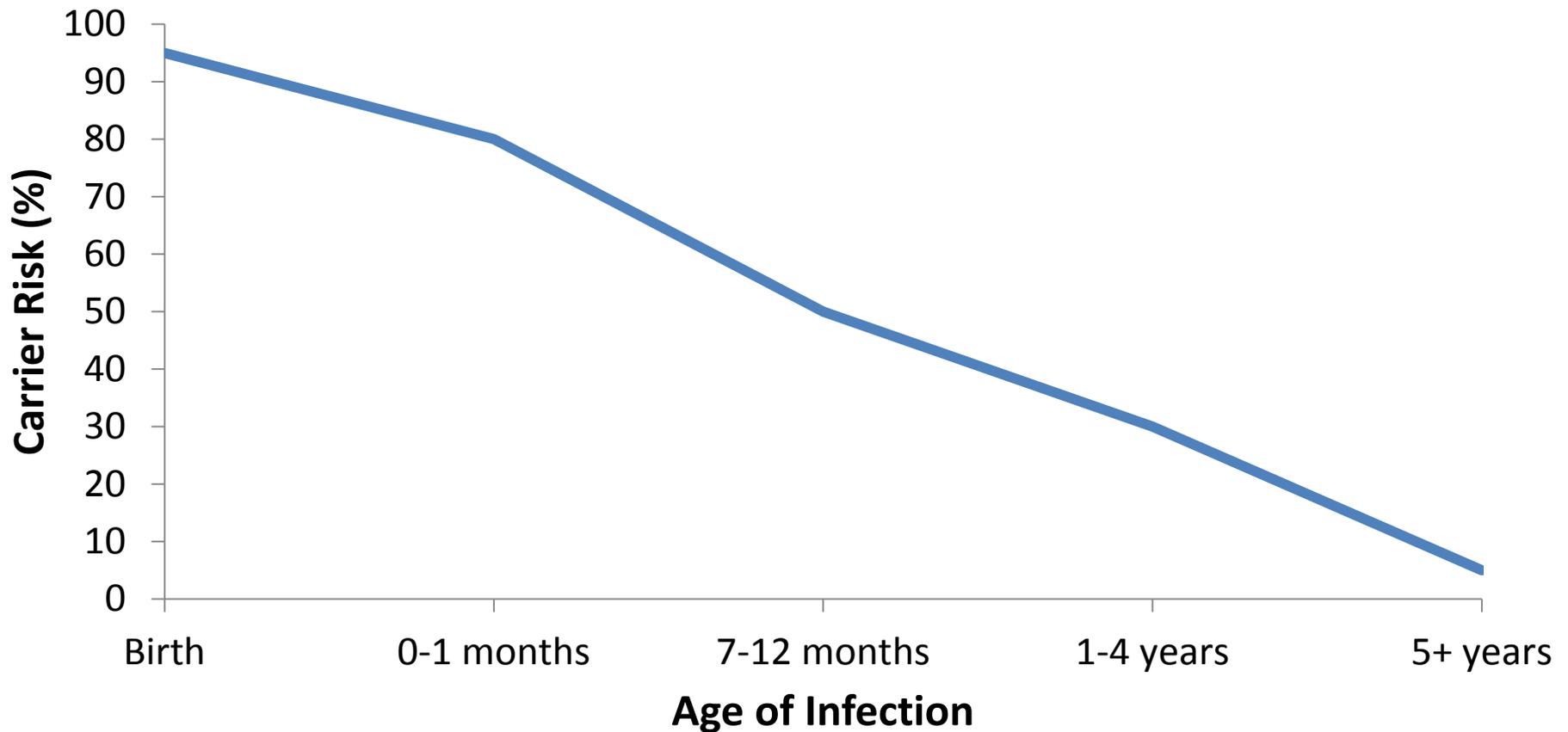


Challenges to Conducting an Investigation

- Passive surveillance
- Patients can be difficult to locate
- Sensitive information
- Limited public health resources
- Cooperation of providers

Preventing Perinatal Transmission

Risk of Chronic HBV Infection by Age of Infection



Source: <http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/hepb.pdf>

Preventing Perinatal HBV Transmission

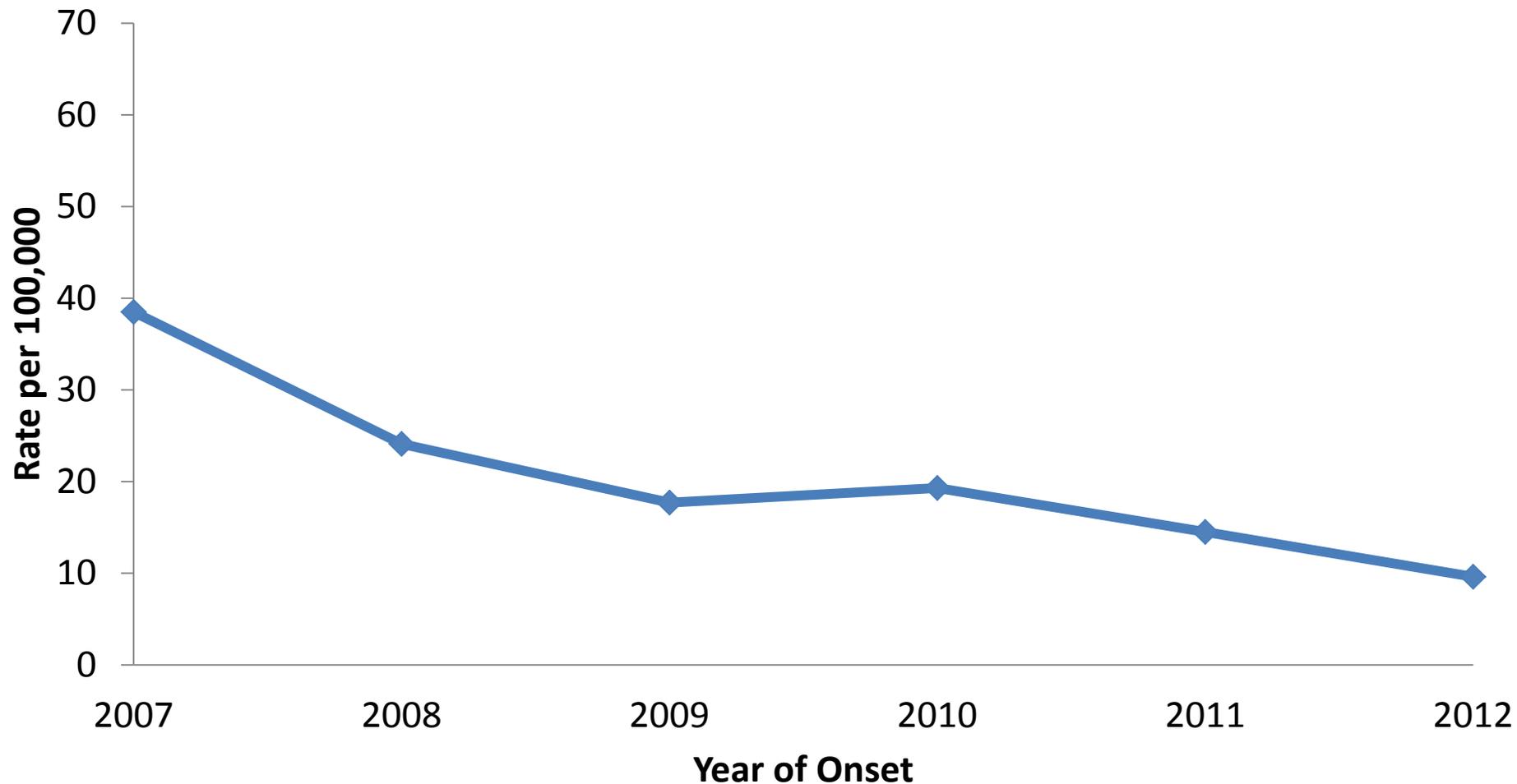
- Universal screening of pregnant women
- Case management of HBsAg positive mothers and their infants
- Post exposure prophylaxis for infants born to infected mothers
- Routine vaccination of all infants with the Hepatitis B vaccine series

Prevention & Control Efforts

Resources Available through the State Health Department

- Hepatitis B Epidemiologist
- Free hepatitis testing through OLS for contacts of cases
- Post exposure prophylaxis and vaccine for contacts
- Hepatitis B Perinatal Coordinator
- Disease Intervention Specialists
- Hepatitis Prevention Coordinator

Incidence of Acute Hepatitis B, Mercer County — West Virginia, 2007-2012 (n=77)



Hepatitis B Pilot Project

- Two year project that began in 2012
- Currently in 14 counties with a high incidence of acute hepatitis B
- Is being expanded to 3 additional counties
- Provides hepatitis B vaccine to adults who are considered to be high risk
- Local health departments are working through
 - Correctional facilities
 - Substance abuse treatment facilities

Key Messages

- Hepatitis B is a reportable condition
- West Virginia continually ranks #1 for the highest rate of hepatitis B in the nation
- Hepatitis B is a vaccine preventable disease
- Prevention and control efforts are a joint effort



rock 'n roll FOREVER