



West Virginia

EPI-LOG

2012 sees record number of West Nile cases in WV

West Nile virus (WNV) is transmitted by the bite of infected mosquitoes and generally affects people during the summer and early fall. Approximately 80% of people infected with West Nile virus do not actually develop symptoms. Up to 20% of infected people may have a mild, febrile illness and an even smaller percentage of infected people may develop severe symptoms including encephalitis. Elderly persons and persons with underlying medical conditions are at higher risk for developing severe symptoms of the disease.

In West Virginia, few cases of WNV have historically been reported each year. In 2011, for example, two cases of WNV were reported; in the previous year, 2010, no WNV cases were reported. However, as of October 31, 2012, seven cases of WNV have been identified and reported among West Virginia residents. Of these seven cases illness onsets ranged from July to September 2012; 5 cases (71%) had illness onset in August 2012. Six of the seven (86%) WNV cases were male.

The age range for cases was 5-82 years of age; mean (median) age was 55 (63) years old. Cases were reported from multiple counties including Kanawha, Tyler, Fayette, Monroe, and Berkeley.

Nationwide, 2012 has proven to be a historic year for WNV. As of October 30, 2012, over 4,000 human cases of WNV have been reported to CDC from 48 states. Over 200 deaths have been reported. The number of cases reported to CDC for this year is the highest number to be reported since 2003 at the same point in the year.

(See *West Nile*, page 8)



Statewide Disease Facts & Comparisons

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IN THIS ISSUE:

- Seven cases of West Nile Virus reported in WV
- Mid-year progress report on immunization surveillance
- Hepatitis C: What you need to know

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Earl Ray Tomblin, Governor
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Immunization Grant Surveillance Indicator Mid-Year Progress Report

The Centers for Disease Control and Prevention (CDC)-funded Immunization and Vaccines for Children Grant provides goals for vaccine-preventable disease (VPD) surveillance for the state of West Virginia. CDC requests a mid-year and end-of-year report on our progress on the surveillance Objectives and Performance Measures listed in Appendix A. Two of the three Performance Measures address the timeliness of submission and data completeness, based on surveillance indicators. The purpose of vaccine-preventable disease surveillance indicators in the United States is to ensure adequate performance of the essential components of surveillance and case investigation, and to identify components of each that need improvement, which is why it is so important to complete as much information as possible when investigating VPDs. This document contains the results of the 2012 mid-year progress report.

From January 1 – June 30, 2012, we have not done as well as in our reporting efforts as we did during 2011. We have met 12/16 individual surveillance indicator targets (as opposed to 14/16 during all of 2011):

Performance Measure	2012 Objective
70%	Percent of case reports with complete information submitted to CDC within one month of diagnosis for the following: Congenital Rubella Syndrome (CRS), diphtheria, haemophilus influenzae, measles, meningococcal disease, mumps, pertussis, polio, invasive pneumococcal disease, rubella, tetanus, pediatric (<18 years of age) influenza deaths, and varicella.
70%	Percent of case reports with complete information submitted electronically to CDC within one month of diagnosis for the following: Congenital Rubella Syndrome (CRS), diphtheria, haemophilus influenzae, measles, meningococcal disease, mumps, pertussis, polio, invasive pneumococcal disease, rubella, tetanus, pediatric (<18 years of age) influenza deaths, and varicella.
90%	The proportion of haemophilus influenzae invasive disease cases among children under 5 years of age with complete vaccination history.
90%	The proportion of haemophilus influenzae isolates from cases under 5 years of age that were serotyped.
100%	The proportion of measles cases with complete vaccination history.
100%	The proportion of measles cases or chains of transmission that have an imported source.
90%	The proportion of meningococcal cases with complete vaccination history.
90%	The proportion of meningococcal cases with known serogroup.
80%	The proportion of mumps cases for which appropriate clinical specimens were obtained and submitted to the laboratory.
90%	The proportion of mumps cases with complete vaccination history.
60%	The proportion of pertussis cases from which clinical specimens are obtained.
70%	The proportion of probable and confirmed pertussis cases meeting the clinical case definition that are laboratory confirmed.
2%	The proportion of cases confirmed by isolation of B. pertussis by culture.
50%	The proportion of probable and confirmed pertussis cases with a complete vaccination history.
90%	The proportion of pneumococcal invasive disease cases among children under 5 years of age with complete vaccination history.
80%	The proportion of pneumococcal isolates from cases of invasive disease under 5 years of age that are serotyped and tested for antibiotic resistance.
100%	The proportion of confirmed rubella cases among women of child-bearing age with known pregnancy status.

(See *Surveillance*, page 3)

(Surveillance, continued from page 2)

Targets we have missed during the first half of 2012 include:

- 3/4 meningococcal (75% as opposed to the target of 90%) cases had complete vaccination history.
- 3/4 meningococcal (75% as opposed to the target of 90%) cases had known serogroup.
- 1/2 mumps patients had complete vaccine history (50% as opposed to the target of 90%).
- 6/9 invasive pneumococcal disease cases had serotyping and resistance testing done (67% as opposed to the target of 80%).

CDC also requests that 70% of certain VPD cases be submitted with complete surveillance indicator information within one month of diagnosis. This target has been lowered in 2012 from 90% during previous years due to anticipated issues with the new WVEDSS. Even so, we did not meet this goal in the first half of 2012.

- 32/57 (56%) of VPDs monitored by CDC for the Immunization grant had complete surveillance indicator information.
- 12/57 (21%) were submitted to CDC within one month of diagnosis.
- 5/57 (8.8%) were submitted with complete information within one month of diagnosis.

Missing surveillance indicator information is outlined in the tables at the end of this document. While the transition to the new WVEDSS system is largely responsible for the delay in reporting to CDC, it should not have a large impact on our ability to submit complete information about VPDs to the CDC.

While no single surveillance indicator stands out as the cause of incomplete data, West Virginia has a relatively low incidence rate of VPDs and small numbers of missing surveillance indicators add up over time and lower our data completion rate. Please see the next page for some tips on increasing our surveillance indicator completion rate in the future.

Tables of missing surveillance indicator information can be seen on pages 4-6.

Race and Ethnicity

Most people will not be offended by questions about race and/or ethnicity. However, if someone asks why you need

that information, explain that CDC uses it to identify groups who are at higher risk for disease so appropriate prevention efforts can be made. It is better to ask and have a case refuse to answer than leave it blank because you did not want to offend someone. If you are concerned that asking for this information may jeopardize your ability to complete your interview, ask these questions last.

Some people may not know what you are talking about if you ask them what their "ethnicity" is. You can simplify this question by *asking whether or not they are Hispanic*. There are many more ethnicities in simply "Hispanic or Latino" or not, but CDC is interested in this distinction since Hispanic and non-Hispanic Caucasians have different risks for different conditions.

Outbreak Information

If there is no identified outbreak occurring in your county/region at the time, do not mark "Unknown" to reflect the fact that an outbreak may exist. If an outbreak situation evolves, it is very easy to go back in and change a "NO" response to a "YES".

Epi-linked Cases

If a case (or their parent/guardian) cannot identify another epi-linked case, do not mark "Unknown" to reflect the fact that one must exist somewhere. With the exception of tetanus and influenza, VPDs are human diseases and are contracted from another person in some manner. This question refers to known individuals from whom the case may have contracted their disease.

Vaccine History

Use available resources to obtain vaccination records for cases. If the information is not available in WVSIS, these records may be obtained from a case's physician and/or school records. The state VPD epidemiologist is happy to assist in the effort to find vaccination records for VPD cases and can be reached at 304-558-5358.

If you have problems obtaining records on laboratory testing performed in another state, the VPD epidemiologist may be able to help and can be reached at 304-558-5358. ☒

A list of surveillance indicators for selected VPDs likely to be seen in West Virginia can be found on the Division of Infectious Disease Epidemiology's Vaccine-Preventable Disease webpage at http://www.dhhr.wv.gov/oeps/disease/IBD_VPD/VPD/Documents/Surveillance%20Indicators%20for%20Selected%20Vaccine-Preventable%20Diseases.pdf and in the CDC's "Manual for the Surveillance of Vaccine-Preventable Diseases" at <http://www.cdc.gov/vaccines/pubs/surv-manual/index.html>.

In the future, VPD investigations submitted for state review with incomplete surveillance indicator information will be returned to the submitter(s) for completion. If there is a valid reason for missing data, please indicate the reason(s) in the notes section of the WVEDSS form. ☒

Missing Surveillance Indicator Information

Surveillance Indicators for Confirmed/Probable Pertussis Cases (n=43)	Percent complete Jan 1 – Jun 30, 2012	Missing data
Demographics (Name, address, gender, race, ethnicity, date of birth)	93%	3 missing race and ethnicity
Clinical Case Definition	100%	
Date of Symptom Onset	95%	Missing for 2 cases
Date of Report to Public Health	77%	No date of report to county or state for 10 cases
Vaccination History	91%	Missing for 4 cases – only 1 was an adult
Complications (including information on hospitalization, presence of whoop, post-tussive vomiting, and paroxysmal cough, apnea, chest x-rays for pneumonia, seizures and encephalopathy)	93%	At least one indicator missing or unknown for 3 cases
Antibiotic Treatment	100%	
Laboratory Testing	100%	Not all cases were tested, but forms indicated testing was not done where appropriate
Epidemiologic Data – Outbreak Related	63%	4 left blank, 12 marked “Unknown”
Epidemiologic Data – Epi-linked to Another Case	88%	Missing/ “Unknown” for 5 cases

(Missing Surveillance Indicator Information continued on page 5)

(Missing Surveillance Indicator Information, continued from page 4)

Surveillance Indicators for Confirmed Invasive <i>S. pneumoniae</i> Cases (n=9 in children < 5 years of age*)	Percent complete Jan 1 – Jun 30, 2012	Missing data
Demographics (Name, address, gender, race, ethnicity, date of birth)	78%	Missing race & ethnicity for 2 cases
Clinical Case Definition	100%	
Date of Symptom Onset	100%	
Date of Report to Public Health	44%	No date of report to county or state for 5
Vaccination History	89%	Blank for 1 case
Type of Infection	100%	
Specimen Source	100%	
Underlying Medical Conditions	100%	
Antibiotic Sensitivity Profile	89%	Not done for 1 case
Capsular Type	78%	Not done for 2 cases

*Even though CDC only monitors completeness of data for children < 5 years of age, this information should be complete for all cases, regardless of age.

Surveillance Indicators for Confirmed/Probable H. flu Cases (n=1 in children < 5 years of age*)	Percent complete Jan 1 – Jun 30, 2012	Missing data
Demographics (Name, address, gender, race, ethnicity, date of birth)	100%	
Clinical Case Definition	100%	
Date of Symptom Onset	100%	
Date of Report to Public Health	100%	
Vaccination History	100%	
Serotype	100%	
Specimen Source	100%	
Type of Infection	100%	

*Even though CDC only monitors completeness of data for children < 5 years of age, this information should be complete for all cases, regardless of age.

(Missing Surveillance Indicator Information continued on page 5)

(Missing Surveillance Indicator Information, continued from page 5)

Surveillance Indicators for Confirmed/Probable* Mumps Cases (n=2)	Percent complete Jan 1 – Jun 30, 2012	Missing data
Demographics (Name, address, gender, race, ethnicity, date of birth)	100%	
Clinical Case Definition	100%	
Date of Symptom Onset	100%	
Date of Report to Public Health	100%	
Vaccination History	100%	
Hospitalization	100%	
Laboratory Testing	100%	
Transmission Setting	100%	
Epidemiologic Data – Outbreak Related	100%	
Epidemiologic Data – Epi-linked to Another Case	50%	Left blank
Epidemiologic Data – Contact Tracing Complete	100%	

*Suspected cases should also include all above listed information.

Surveillance Indicators for Confirmed/Probable Meningococcal Cases (n=4)	Percent complete Jan 1 – Jun 30, 2012	Missing data
Demographics (Name, address, gender, race, ethnicity, date of birth)	100%	
Clinical Case Definition	100%	
Date of Symptom Onset	100%	
Date of Report to Public Health	100%	
Vaccination History	75%	Missing for 76 yr old
Serogroup	75%	Unable to serotype
Type of Infection	100%	

What You Need to Know About Hepatitis C

What are the basics about chronic hepatitis C?

Hepatitis C is a serious liver disease that results from infection with the hepatitis C virus (HCV).

About 75% of people who get infected with HCV develop a chronic or long-term infection.

Approximately 3.2 million people in the United States have chronic hepatitis C, but most don't know they are infected.

People with hepatitis C often have no symptoms. Many people can live with an infection for decades without feeling sick.

Chronic Hepatitis C can cause serious health problems including liver damage, cirrhosis, liver cancer, and even death.

Although there is no vaccine for HCV, new antiviral medications are available for hepatitis C that can get rid of the virus.

How is HCV spread?

HCV is most often spread when blood from a person infected with HCV enters the body of someone who is not infected.

Most people become infected with HCV by sharing needles or other equipment to inject drugs. It is possible to have gotten HCV from injecting drugs, even if just once or many years ago. HCV can also be spread when getting tattoos and body piercings in unlicensed facilities or with non-sterile instruments.

Before widespread screening of the blood supply began in 1992, HCV was commonly spread through blood transfusions and organ transplants.

While uncommon, poor infection control has resulted in outbreaks in outpatient health care and residential care facilities.

The sexual transmission of HCV is possible, although it appears to be uncommon. Having a sexually transmitted disease or HIV, sex with multiple partners, or rough sex appears to increase a person's risk for HCV infection.

Approximately 5% of infants born to infected mothers will get hepatitis C.

Some people do not know how or when they got infected.

While millions of Americans have chronic hepatitis C, most do not know they are infected with the virus.

What are the symptoms of chronic hepatitis C?

Many people with chronic hepatitis C do not have symptoms. Symptoms can take decades to develop, although

damage to the liver can silently occur during this time.

When or if symptoms do appear, they are often a sign of serious damage to the liver. Those symptoms can include fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, grey-colored stools, joint pain, and jaundice.

How is chronic hepatitis C diagnosed?

Hepatitis C is diagnosed with different blood tests. Usually people are first tested for HCV antibodies. Antibodies are proteins released into the bloodstream in response to viral and bacterial infections. HCV antibodies remain in the bloodstream, even if the person clears the virus.

If the HCV antibody test is reactive or positive, a follow-up test is needed to look for the presence of HCV itself. If the additional test is positive, this means a person currently has the virus in his or her blood.

If both blood tests are positive, additional tests are needed to confirm that a person is chronically infected.

Who should get tested for chronic hepatitis C?

- People who were born from 1945 through 1965
- Anyone who received donated blood or organs before 1992
- People who have ever injected drugs, even if it was just once many years ago
- Anyone with certain medical conditions, such as chronic liver disease or HIV/AIDS

How is chronic hepatitis C treated?

Antiviral medications can be used to treat some people with chronic hepatitis C, although not everyone needs or can benefit from treatment.

For many people, treatment can be successful and results in the virus no longer being detected in their blood.

People with chronic hepatitis C should be monitored regularly for signs of liver disease by a doctor experienced in treating the disease.

Why should baby boomers get tested for hepatitis C?

More than 75% of adults with hepatitis C are baby boomers. Baby boomers are people born from 1945 through 1965. Although baby boomers are five times more likely to be

*(See **Hepatitis C**, page 8)*

(West Nile, continued from page 1)

Over 70 percent of cases have been reported from 10 states (Texas, California, Louisiana, Mississippi, Illinois, South Dakota, Michigan, Oklahoma, Nebraska, and Colorado) and over a third of all cases have been reported from Texas. While the number of WNV cases reported from West Virginia in 2012 remains relatively low, particularly in comparison to other states, it is the highest number of cases to be reported in the state in any particular year.

As part of WNV surveillance in West Virginia, mosquito trapping and testing are conducted in various parts of the state. During 2012, 281 of 760 (37%) mosquito pools tested positive for WNV. Positive pools were identified in Boone, Braxton, Brooke, Cabell, Clay, Fayette, Hardy, Harrison, Jefferson, Kanawha, Mercer, Nicholas, Putnam, Raleigh, Roane, Wayne, Webster, and Wood counties. An increase in WNV activity among mosquitoes was noted in July. In response to this, the Division of Infectious Disease Epidemiology (DIDE) released a Health Alert Network (HAN) message alerting local health departments and healthcare providers to this increase and reminding them to be vigilant for cases.

Surveillance data and other information for WNV in West Virginia can be found at: <http://www.dhr.wv.gov/oeps/disease/Zoonosis/Mosquito/Pages/WNE.aspx>. In addition, DIDE provides current surveillance data for WNV and other arboviruses weekly to bi-weekly from July through October. These reports can be found at the website listed above. ☒

(Hepatitis C, continued from page 6)

infected with HCV, most of them do not know they are infected.

Liver disease, liver cancer, and deaths from hepatitis C are on the rise.

As baby boomers age, there is a greater chance that they will develop serious, life-threatening liver disease from hepatitis C.

Testing people in this generation will help them learn if they are infected and get them into lifesaving care and treatment.

Early diagnosis and treatment can help prevent liver damage, cirrhosis, and even liver cancer.

Why do baby boomers have such high rates of HCV?

The reason for this is not completely understood. Most boomers are believed to have become infected in the 1970s and 1980s when rates of HCV infection were the highest. Since chronic hepatitis C can go unnoticed for up to several decades, baby boomers could be living with an infection that occurred many years ago.

HCV is primarily spread through contact with blood from an infected person. Many baby boomers could have gotten infected from contaminated blood and blood products before widespread screening of the blood supply began in 1992 and universal precautions were adopted. Others may have become infected from injecting drugs, even if only once in the past. Still, many baby boomers do not know how or when they were infected.

For more information about your risk for chronic hepatitis C, talk to your health professional, call your health department, or visit www.cdc.gov/knowmorehepatitis. ☒

The West Virginia EPI-LOG is published quarterly by the West Virginia Department of Health and Human Resources, Bureau for Public Health, Office of Epidemiology & Prevention Services. Graphic layout by Chuck Anziulewicz. Please call the Office of Epidemiology & Prevention Services at (304) 558-5358 if you need additional information regarding any article or information in this issue. If you have ideas or contributions you would like to make in a future issue, contact editor Loretta Haddy.