



West Virginia

EPI-LOG

Chikungunya **Mosquito-borne virus makes its debut in West Virginia**

Before late 2013, many Americans had never heard of chikungunya (chik-en-gun-ye) virus, a mosquito-borne disease that was first described in Tanzania in 1952. Now, the virus is on everyone's radar as more and more imported cases are appearing in the US; over 30 states and territories have reported at least one case to CDC's ArboNET in 2014. West Virginia reported its first chikungunya case at the end of June when the person became ill after returning from Haiti.



Aedes albopictus (Asian Tiger Mosquito)

Chikungunya is derived from the Makonde people of Tanzania and Mozambique — kungunyala — which means "to become contorted," describing the stooped appearance of infected individuals suffering from one of the hallmark symptoms of the disease: debilitating joint pain. Since its first appearance in Tanzania, chikungunya has spread causing epidemics in many parts of the world; the latest CDC map shows more than 70 countries in Africa, Asia, the Americas, Europe, and the Oceania/Pacific Islands with locally-acquired cases of the disease (<http://www.cdc.gov/chikungunya/geo/>).

(See **Chikungunya**, page 2)

Statewide Disease Facts & Comparisons

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Earl Ray Tomblin, Governor
Karen L. Bowling, Cabinet Secretary

(Chikungunya, continued from page 1)

Like other arboviral diseases (such as West Nile virus, La Crosse encephalitis, and dengue fever), symptoms of chikungunya may include fever, headache, myalgia, and rash. Symptoms usually begin about 3-7 days after being bitten by an infected mosquito and usually resolve within a week; in some cases, joint pain can be severe and last for several months. There is currently no treatment for chikungunya. To alleviate symptoms, rest, drinking fluids, and taking fever and/or pain medications (e.g. ibuprofen, acetaminophen) are recommended. There is some good news about chikungunya. It is rarely fatal and once a person is infected with the virus, he or she is likely protected from future infections.

How does an American get chikungunya? Wanderlust and mosquitoes. Travel to chikungunya-endemic countries has been a unifying theme for the majority of cases of the disease in the US to date. Where are Americans getting chikungunya? Anguilla, Dominica, Dominican Republic, Guyana, Haiti, Indonesia, Martinique, Puerto Rico, Saint Barthelemy, Saint Martin, Saint Maarten, and Tonga were reported travel destinations by cases prior to illness onset. Just recently, Florida announced two cases of chikungunya with no reported travel history, representing local transmission due to the presence of competent vectors.

Mosquitoes are also a prerequisite for chikungunya. Like all mosquito-borne diseases, chikungunya is spread to people by the bite of an infected mosquito. The virus circulates in the blood of the infected person, and when a competent mosquito vector bites the person, the mosquito becomes infected, and the transmission cycle continues. Competent vectors of chikungunya include *Aedes aegypti* and *Aedes albopictus*, also vectors of dengue fever. *Ae. albopictus*, also known as the Asian tiger mosquito, has been identified in several states and in most counties in West Virginia (see map). Therefore, local transmission is possible if the right (infected) person and the right

(competent vector) mosquito come in contact with each other.

Ae. albopictus originally came from Southeast Asia, but has successfully spread to Europe, the Americas, the Caribbean, Africa, and the Middle East. Considered one of the world's worst invasive species, this mosquito has proven to be difficult to control. It can adapt to various environments, has a preference for urban habitats, seeks bloodmeal from a wide host range, and pursues human hosts. Only female Asian tiger mosquitoes bite because the blood is needed to develop their eggs. They also tend to bite a human host more than once, making them very effective at transmitting diseases.

Monitoring and surveillance are important to preventing the spread and

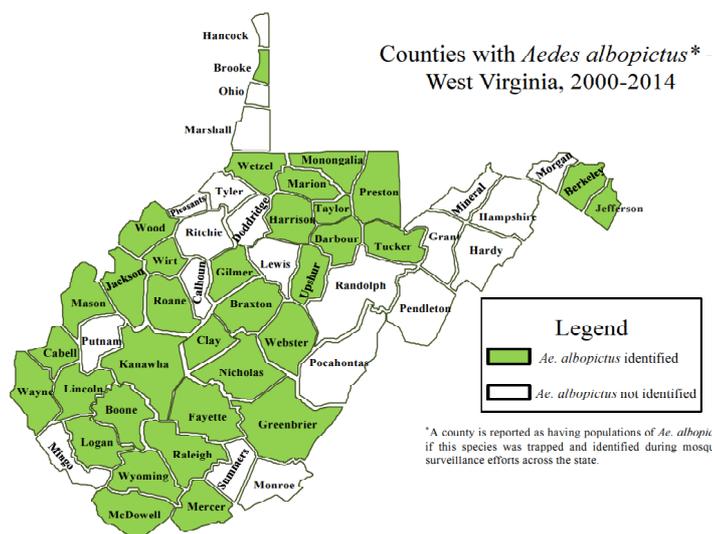
establishment of *Ae. albopictus*. This mosquito species deposits eggs along the inner edges of both natural (e.g. tree holes) and artificial (e.g. tires, rain barrels, buckets, wading pools) water-containing receptacles, so it is important to remove potential breeding sites near places where people live, work, and play.

The best way to prevent the chikungunya virus is to prevent getting bitten by mosquitoes. Whether you travel abroad or not, the mosquito bite prevention recommendations are the same:

- Use insect repellents containing DEET, picaridin, IR3535, or oil of eucalyptus.
- The mosquitoes that spread chikungunya are most active during the day, so wear long-sleeved shirts and long pants (weather permitting).
- Use air conditioning (if possible) and make sure that door and window screens are in good condition to keep mosquitoes outside.
- Reduce the number of mosquitoes that surround you by emptying standing water from containers (e.g. tires, flower pots, water barrels).

People who think they may have chikungunya

(See Chikungunya, page 7)



Parents of school children reminded of childhood vaccine requirements

While many of us are rolling out those lazy, hazy crazy days of summer (with apologies to Nat King Cole), students entering 7th and 12th grades in West Virginia are busy rolling up their sleeves for shots required before starting the new school year.

This school requirement is a State law that was implemented in the 2012-2013 school year and it's keeping VFC (Vaccines for Children) - enrolled physicians and other providers of immunizations very busy this summer as they tackle the increase in requests for appointments and immunization documentation from parents and guardians of students.

The school requirement states that all students entering the 7th and 12th grades in West Virginia must show proof of certain age-appropriate shots:

- 7th graders must show proof they received a dose of Tdap vaccine, which protects against tetanus, diphtheria, and pertussis (whooping cough) and a dose of the meningitis vaccine.

- 12th graders also must show proof of a dose of Tdap and a second dose of the meningitis vaccine if the first dose of meningitis vaccine was given before the child's 16th birthday. If the first dose was given after the 16th birthday, then a second dose of meningitis vaccine is not required.

These requirements adopt the most current recommendations from the CDC Advisory Committee on Immunization Practices and are part of the Immunization Requirements and Recommendations for New School Entrers rule (64CSR95) which was amended in 2011.

In addition to administering shots to incoming 7th and 12th graders this summer, VFC providers will also assess their patients entering West Virginia schools for the first

time in other grade levels. Of course, there are a significant number of first time enterers enrolling in pre-K, kindergarten and other grade levels as transfers from out of state.

These school entry immunization requirements not only lengthen the time for which immunized students are protected from vaccine-preventable diseases, but also lower their chances of passing diseases to classmates with weakened immune systems, pre-school aged children and infants, the elderly and others.

The Division of Immunization Services urges providers to be proactive in assessing their young patients' immunization records and bringing them up to date if they are behind. Providers should use the functionality of the

West Virginia Statewide Immunization Information System to determine whether patients are missing any of the immunizations for which they are indicated and the vaccine forecasting tool to determine the schedule of needed vaccinations to bring them up to date. Most importantly however, providers should use the reminder/recall system to notify the parents of children who

are overdue for an immunization appointment so the children will not miss school days getting the vaccinations required for school entry.

As a reminder, children with insurance that are not eligible for the VFC program are also not eligible for free vaccines at most local health departments. These families rely on their primary care provider to provide them immunization services.

To learn more about what shots your child needs for school entry, go online at <http://www.dhhr.wv.gov/oeps/immunization/requirements/Pages/default.aspx>. ☒



**West Virginia AIDS and HIV Infection Cases Diagnosed by
Age Group, Gender, Race and Exposure Category
Cumulative through June 30, 2014**

Characteristic	HIV/AIDS †		HIV-NA ‡		AIDS †	
	No.	%	No.	%	No.	%
Age at Diagnosis §						
< 13 years	23	1	12	1	11	1
13 - 24 years	346	12	228	24	118	6
25 - 44 years	1,804	65	580	60	1,224	67
45 - 64 years	579	21	130	14	449	24
65 + years	41	1	7	1	34	2
Gender						
Males	2,263	81	722	75	1,541	84
Females	532	19	237	25	295	16
Race/Ethnicity						
White	2,053	73	633	66	1,420	77
Black	632	23	279	29	353	19
Other*	110	4	47	5	63	3
Exposure Category						
Male-to-male sex (MSM)	1,482	53	474	49	1,008	55
Injection drug use (IDU)	403	14	141	15	262	14
MSM/IDU	124	4	28	3	96	5
Heterosexual contact	386	14	151	16	235	13
Perinatal	24	1	13	1	11	1
Other/Unknown†	376	13	152	16	224	12
Total	2,795	100	959	100	1,836	100

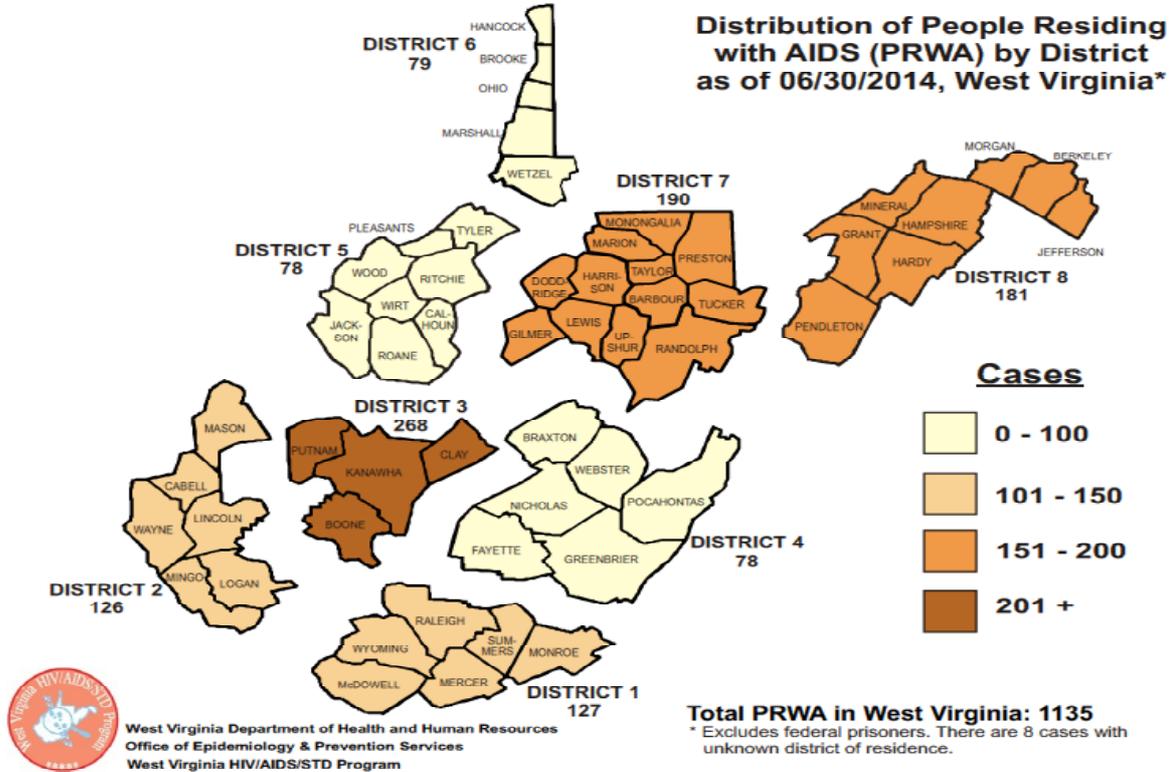
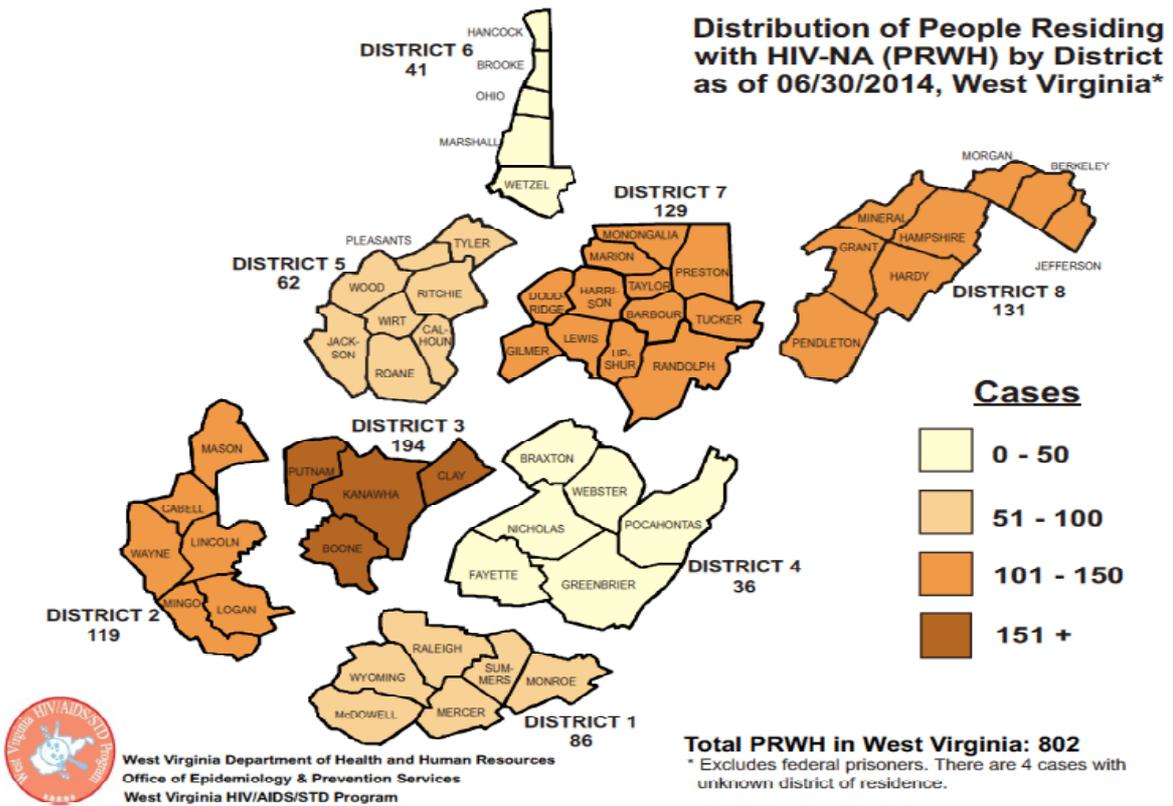
Notes: These are actual numbers of cases of HIV/AIDS that were reported to the WV Department of Health and Human Resources as of June 30, 2014. No adjustments were made for reporting delays. AIDS data includes reports from April 1984 through June 30, 2014; HIV data includes reports from January 1989 through June 30, 2014. Current federal prisoners are excluded. Percentages may not add to 100% due to rounding.

‡ HIV/AIDS provides information on the person's earliest diagnosis of HIV or AIDS in WV. HIV-NA provides information on individuals diagnosed with HIV but not AIDS in WV. These individuals may have been diagnosed with AIDS in another state. Individuals with AIDS may or may not have been diagnosed with HIV in WV.

*Other race categories include Hispanic, Asian, Native Hawaiian, Pacific Islander, American Indian, Alaskan Native, Multiple Races, and Unknown race.

†Other/Unknown risk categories include hemophilia, blood transfusion, and risk not reported or not identified.

§ Total includes two persons with unknown age at diagnosis.



Don't spoil your summer fun with foodborne illnesses!

During the warm summer months, grills are being fired up everywhere for cookouts, picnics, ballgames and other outdoor activities. One of the most important things you can do to keep your family safe from foodborne illnesses is to make sure you store and handle foods properly when eating outside and cooking all meat and poultry thoroughly.

Proper handling starts as soon as you return home from the store. Be sure to quickly refrigerate or freeze meat and poultry products. The refrigerator should be 40°F or lower and the freezer 0°F or lower.

There are several things you can do before actually cooking that will help ensure the safety of your food. Raw meat and poultry should be thawed in the refrigerator and should be done one or two days before you will cook the food. If you use the microwave, be sure to use the "defrost" setting and then cook the food right away. Always wash your hands for at least 20 seconds before and after you touch food and be sure to use warm water and soap. Keep the juices from raw meat and poultry away from other foods. If you use cutting boards, it's best to set one aside to use only for raw meat, poultry and seafood. If you only have one cutting board, be sure to wash it with hot, soapy water before you go on to the next food.

When it is time to cook your meat or poultry, the most important thing you can do to keep food safe is to use a food thermometer. That is the only way to be sure that the meat is cooked to a temperature high

enough to kill harmful bacteria. Color is NOT a reliable indicator. Just because a hamburger or piece of chicken looks "done" does not mean that it was cooked properly. You should only eat ground beef patties that have been cooked to an internal temperature of 160°F, and poultry needs to be cooked to 165°F. Cooked to these temperatures, hamburgers and poultry can be safe and juicy, regardless of color.

The final step in keeping away foodborne illness this grilling season is to correctly take care of those leftovers! Food left out for two or more hours can begin to grow bacteria. Bring leftovers inside to the refrigerator or freezer or put them back in the cooler as soon as you finish eating.

Grilling and enjoying food during outside events is one of the most integral parts of summer activities. Following these few food handling and preparation guidelines will help keep you and your guests enjoying them all season long!

Further information can be found at the following websites:

- <http://www.foodsafety.gov>
- <http://www.fsis.usda.gov>
- <http://www.fda.gov> ☒



Clean your hands,
utensils and kitchen



Cook food properly



Chill food promptly



Separate raw and
cooked foods

WV Cancer Registry awarded Gold Standard Certification

The West Virginia Cancer Registry (WVCR) has attained the prestigious Gold Standard for Registry Certification, the highest possible standard for completeness, timeliness, and quality of data as evaluated by the North American Association of Central Cancer Registries (NAACCR). WVCR data was certified at the Silver Standard in 1998 and 1999 but has consistently attained the Gold Standard for the last 15 years.

To achieve Gold Certification, the data from a cancer registry must meet all of the following criteria:

- Case ascertainment has achieved 95% or higher completeness.
- A death certificate is the only source for identification of fewer than 3% of reported cancer cases.
- Fewer than 0.1% duplicate case reports are in the file.
- All data variables used to create incidence statistics by cancer type, sex, race, age, and county are 100% error-free.



- Less than 2% of the case reports in the file are missing meaningful information on age, sex, and county.
- Less than 3% of the cases in the file are missing meaningful information on race.
- The file is submitted to NAACCR for evaluation within 23 months of the close of the diagnosis year under review.

WVCR began collecting data in 1993 on all cancers diagnosed in the State except basal and squamous cell cancer of the skin and early (in situ) cancer of the cervix. WVCR also began collecting data on non-malignant brain and central nervous system tumors in 2002. Approximately 11,000 cases of invasive cancer (including early bladder cancer) are reported to WVCR each year by hospital-based registrars and

physician office staff. Attaining the Gold Standard Certification reflects the hard work and dedication by these reporters as well as WVCR's surveillance and data quality staff.

The award shows a commitment to the people of West Virginia to accurately and professionally track the burden of cancer in the State. Accurate data allows organizations to plan, implement, and evaluate cancer prevention and control activities that are conducted in order to reduce the burden of cancer on our citizens. ☒

(Chikungunya, continued from page 2)

should see a healthcare provider quickly and mention any recent travel out of the US. Suspected cases are to be reported to the local health department within 24 hours to facilitate diagnosis and testing, and to mitigate the risk of local transmission. Local health departments will send human samples to the West Virginia Office of Laboratory Services (WVOLS), and WVOLS will send them onto CDC for arboviral disease testing. Information for healthcare providers and laboratorians can be found at: <http://www.cdc.gov/chikungunya/hc/index.html>.

With recent outbreaks in the Caribbean and the Pacific and local transmission in Florida, the number of chikungunya cases among travelers visiting or returning to the US from affected countries will likely increase, and imported cases could result in continued spread of the virus

in the continental US. Puerto Rico and the US Virgin Islands have already reported locally-transmitted chikungunya cases.

Just as humans and mosquitoes know no borders, neither do diseases. A species of mosquito from Asia is widely-spread across West Virginia. A disease first seen in Africa has traveled the globe and can be found locally in popular Caribbean destinations. A person from West Virginia traveled to Haiti and returned with a mosquito-borne disease. Chikungunya is on US soil (in the form of infected travelers) and waiting to make its new home in your backyard (inside invasive Aedes mosquitoes). To find out more about chikungunya, visit the West Virginia Division of Infectious Disease Epidemiology's chikungunya homepage at: <http://www.dhhr.wv.gov/oeps/disease/zoonosis/mosquito/pages/chikungunya.aspx>. ☒

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