



STATE OF WEST VIRGINIA ZIKA ACTION PLAN

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MESSAGE FROM THE COMMISSIONER

The West Virginia Department of Health and Human Resources, Bureau for Public Health (BPH) has created a Zika Action Plan in response to Zika virus transmission, as requested by the Centers for Disease Control and Prevention (CDC). West Virginia's Zika Action Plan is a proactive approach that defines the State's efforts to prevent and control the spread of the Zika virus.

The Zika virus is a nationally notifiable disease, which means whenever a confirmed case of the Zika virus is detected it must be immediately reported to the CDC. The Zika virus is considered an emerging threat that needs to be monitored. By preparing for the disease to occur in West Virginia, communities will understand the BPH's role in controlling disease outbreak should it occur.

West Virginia's Zika Action Plan is a collaborative effort of the Zika Task Force members, including the Department of Environmental Protection and Department of Agriculture. It identifies key areas of preparedness in order to reduce or eliminate the risk of the Zika virus. Community partners, healthcare providers and local health departments are updated on the Zika virus regularly through health advisories issued by the BPH.

Since the Zika virus is spread to people primarily through the bite of an infected mosquito (*Aedes aegypti* and *Aedes albopictus*), preventing mosquito bites and mosquito breeding areas in communities is important. Wearing insect repellent and proper clothing in areas prone to mosquitos will prevent or reduce bites; removing or emptying containers around property that may hold rain water will help reduce breeding sites.

Illness caused by the Zika virus is usually mild. However, contracting the Zika virus during pregnancy can cause severe brain defects including microcephaly, a medical condition where the head is smaller than normal because the brain has not developed properly. Pregnant women are strongly recommended to consider refraining from traveling to areas affected by the Zika virus. The Zika virus can be transmitted sexually; preventive actions such as condom use or avoiding pregnancy during or following travel to a Zika-affected area are important for a period of time. Physicians can provide additional guidance about the risks of the Zika virus.

To learn more about the Zika virus in West Virginia, please visit www.zikawv.org. The Zika Action Plan is a fluid document and could change depending on disease transmission or if new guidance is provided by the CDC.

Rahul Gupta, MD, MPH, FACP
Commissioner and State Health Officer

ZIKA Q & A

Q. What is Zika?

A. Zika is a mosquito-borne viral disease. It was first identified in Uganda in the late 1940s, but it was not until 2014 that it became a concern in North and South America. In the Americas, Zika is primarily transmitted through the bite of infected *Aedes* species mosquitoes. *Aedes aegypti* is the main species responsible for transmitting the virus. *Aedes albopictus*, a mosquito that has been found in many West Virginia counties, can also spread Zika.

Q. Are there other ways to become infected with Zika other than through the bite of an infected mosquito?

A. Yes - Zika can be transmitted from a pregnant mother to her fetus during pregnancy or around the time of birth. Sexual transmission of Zika has been documented. Blood transfusion cases have also been reported.

Q. What are the symptoms of Zika?

A. While about 80% of people who are infected with Zika do not show symptoms, those who do become ill may have any of the following symptoms: acute onset of fever, rash, joint pain, and red eyes (conjunctivitis). Body ache (myalgia) and headache are also commonly reported. Symptoms are usually mild and last for a few days.

Q. Is there a vaccine or treatment for Zika?

A. There is currently no vaccine or cure for Zika. Ill individuals should treat their symptoms by getting plenty of rest, drinking lots of fluids to prevent dehydration, and taking medicine (e.g., Tylenol) to reduce fever and/or pain.

Q. What are some complications related to Zika infection?

A. Cases of Guillain-Barré syndrome (GBS) have been reported in patients following Zika infection. GBS is an uncommon sickness of the nervous system in which a person's own immune system damages nerve cells. Symptoms of GBS include weakness of the arms and legs that is usually the same on both sides of the body. Symptoms may last a few weeks to several months. Most people fully recover; however, 1 out of 20 cases have resulted in death. The relationship between GBS and Zika is currently being studied.

Zika has also been linked to poor pregnancy outcomes. Microcephaly, a birth defect where a baby's head is smaller than expected, has been reported in babies born to mothers infected with Zika during pregnancy. Other outcomes include absent or poorly developed brain structures, defects of the eye, and impaired growth. Research is being conducted to better understand how Zika affects mothers and their children.

Q. What are some ways to prevent Zika infection?

A. The best way to prevent Zika is to prevent mosquito bites.

- Use insect repellents containing DEET, picaridin, oil of lemon eucalyptus, or IR3535
- Wear long-sleeved shirts and long pants
- Limit mosquito breeding grounds around the home (e.g., water containers, tires)
- Install and repair window screens to keep mosquitoes out of homes

Q. What about sexual transmission of Zika?

A. Zika can be spread during sex by a man infected with Zika to his sex partner(s) and has been identified in semen weeks after symptom onset. Until more is known, pregnant women with male sex partners who have lived in or traveled to an area with active Zika transmission should either use condoms for vaginal, anal, or oral sex or consider not having sex during pregnancy. Couples in which a man had confirmed Zika virus infection or clinical illness consistent with Zika virus disease should consider using condoms or abstaining from sex for at least 6 months after onset of illness. Couples in which a man traveled to an area with active Zika virus transmission, but did not develop symptoms of the Zika virus disease, should consider using condoms or abstaining from sex for at least 8 weeks after departure from the area.

Q. Where can information about countries affected by Zika be found?

- A. The CDC's Zika webpage is updated with information about Zika-affected countries. To obtain this information, visit <http://www.cdc.gov/zika/geo/index.html>. The Bureau for Public Health, Office of Epidemiology and Prevention Services, Division of Infectious Disease Epidemiology (DIDE) also has information on Zika-affected countries on its Zika webpage at www.zikawv.org.

Check with your healthcare provider before travelling abroad to learn about areas reporting Zika. More information about Zika transmission can be found at www.cdc.gov/zika/transmission/index.html.

Q. Where can information about travel-associated and locally-acquired cases in the United States and West Virginia be found?

- A. The number of reported Zika cases for the United States is updated weekly on the CDC's Zika webpage at <https://www.cdc.gov/zika/geo/united-states.html>. The number of West Virginia reported cases can also be found on the CDC's Zika webpage or by visiting the DIDE Zika webpage at www.zikawv.org. To date, all Zika cases in the United States have been travel-associated; all cases traveled to a country where Zika was being actively transmitted from mosquitoes to people. US Territories of American Samoa, Puerto Rico and the US Virgin Islands are reporting locally-acquired cases, meaning that people are being bitten by infected mosquitoes in those territories.

Q. What is the Bureau for Public Health (BPH) doing to protect West Virginians from Zika?

- A. In March 2016, BPH created the West Virginia Zika Task Force, a team of subject matter experts from a variety of state agencies. The West Virginia Zika Task Force meets regularly to discuss state response activities. One key accomplishment of the West Virginia Zika Task Force was the development of the State of West Virginia Zika Action Plan. The plan is phased and risk-based and uses human and mosquito surveillance data to implement appropriate public health interventions at the community, county, or state level. Public health interventions fall into seven categories: Preparedness, Communications, Surveillance, Mosquito Control, Laboratory Capacity, Pregnancy Outreach, and Blood Safety.

ZIKA RESPONSE PHASES

Phase One: Preparation

Aedes albopictus has been identified within West Virginia

Phase Two: Mosquito Season

Aedes albopictus are active and there is mosquito biting activity

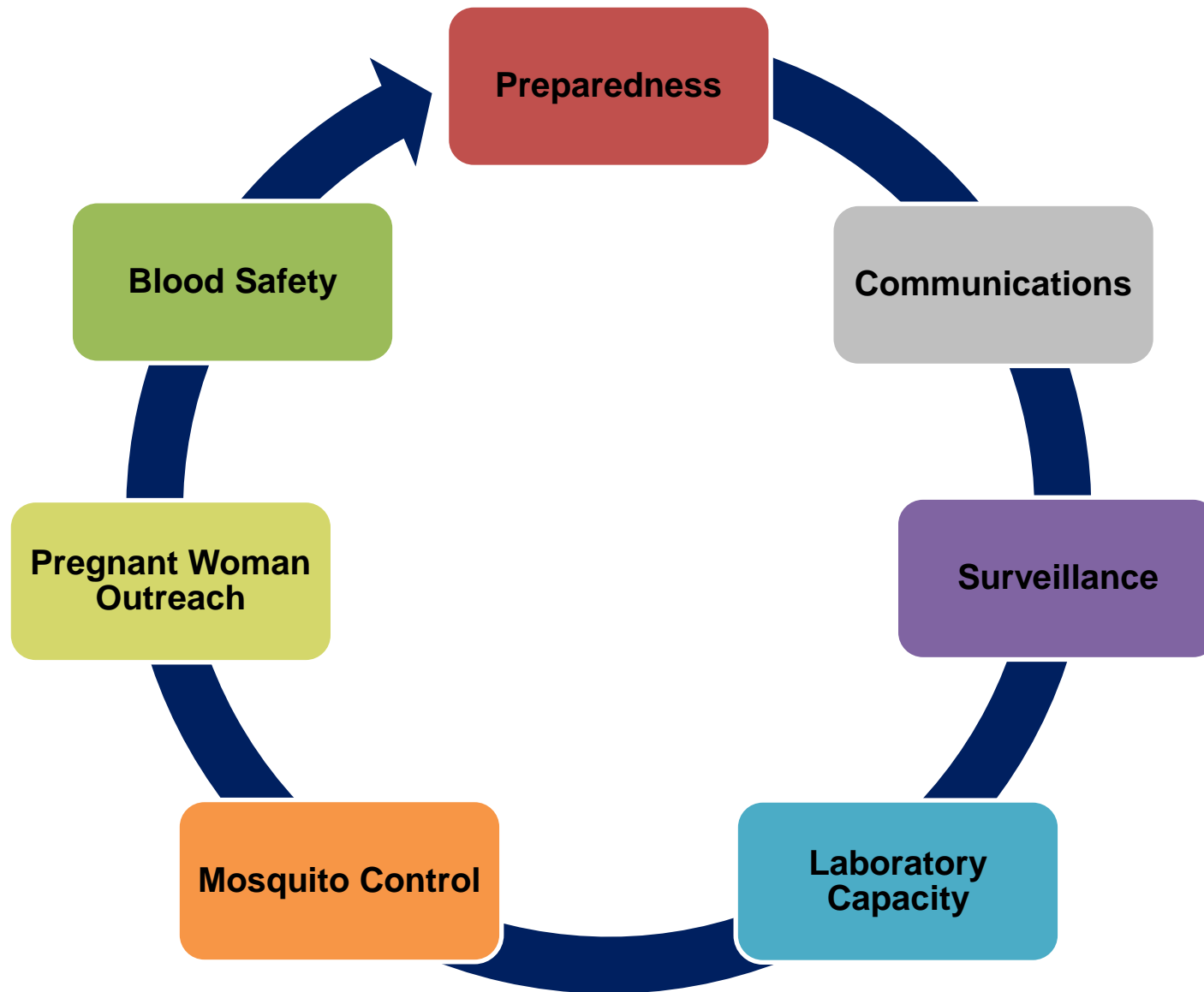
Phase Three: Confirmed Local Transmission

A Zika case or cluster of Zika cases within a household or community that acquired infection while in West Virginia has been reported

Phase Four: Widespread Local Transmission

Multiple locations within a county in West Virginia are reporting locally-acquired cases

ZIKA RESPONSE COMPONENTS



PREPAREDNESS

Preparedness is a key component of planning for, responding to, and recovering from emerging threats such as the Zika virus. The West Virginia Department of Health and Human Resources (DHHR) is the state agency charged with overseeing the coordination of Zika response activities in West Virginia. Organized within DHHR's Bureau for Public Health, the Center for Threat Preparedness (CTP) is tasked with facilitating advanced planning and preparation efforts for health and medical events across the State.

The West Virginia Zika Task Force was conceptualized and assembled in March 2016 to initiate the Zika preparation process. The group continues to meet regularly to share information and ensure state preparedness activities are being coordinated and integrated into the overall planning process.

In the event local transmission of Zika occurs in West Virginia, DHHR would activate and staff the agency's Emergency Operations Center which is known as Health Command. Comprised of public health experts, this specialty group is trained in response coordination and follows the National Incident Command System (NIMS). Health Command would support the response efforts and provide coordination of health and medical activities throughout the event.

Zika preparedness efforts in West Virginia include:

- Administration and distribution of federal grants to public health partners to support Zika response activities
- Establishment and ongoing participation in the West Virginia Zika Task Force
- Dissemination of guidance and information on best practices from CDC to the State's subject matter experts and other stakeholders
- Development of the Zika Action Plan and a comprehensive Zika Response Plan
- Pre-identification of subject matter experts to staff Health Command
- Information sharing to public health partners and the general public

For more information on preparedness and planning, visit: <http://www.dhhr.wv.gov/healthprep/>.

COMMUNICATIONS

Sharing public information about Zika must occur across federal, state and local levels, with both the medical community and the general public. Education on how Zika is spread and the presence of *Aedes* mosquitoes in West Virginia is essential for proactive public health protection. Action steps such as wearing long pants and long-sleeved shirts, using insect repellent and avoiding areas prone to mosquitoes or areas where Zika is occurring locally are important public health messages that will keep residents healthy while reducing fear and anxiety. Zika has the potential to impact travelers, pregnant women and the public at large.

The DHHR Office of Communications collaborates with the State Health Officer and BPH Commissioner to share information about ongoing monitoring for Zika. When necessary, the DHHR Office of Communications will communicate with local health departments, physicians, laboratories, and hospitals through the West Virginia Health Alert Network. These partners will share disease information in their respective communities. DHHR Office of Communications will also communicate Zika response to the media. From preparation, active response, and post-response efforts, public information is crucial to help reduce the spread of disease or serious health conditions such as microcephaly and GBS.

The DHHR's Bureau for Public Health is committed to providing public health partners and the general public with accurate, up-to-date information. Key communication activities include:

- Sharing the latest Zika guidance from the CDC through the West Virginia Health Alert Network
- Ensuring disease transmission information is shared with local health partners, general public, and media
- Ensuring Zika health education literature is available to the public
- Ensuring a Zika webpage has the latest number of West Virginia cases and disease information
- Ensuring the media has accurate information to report on Zika topics including disease information, protection measures, risk to pregnant women, and mosquito monitoring activities in West Virginia
- Assisting local communities with communication efforts when local transmission of Zika is occurring
- Ensuring Zika information is posted to DHHR social media sites

SURVEILLANCE

Surveillance for Zika consists of systematic, ongoing collection, management, analysis, and interpretation of data. This data includes clinical, epidemiologic (exposure), and laboratory information about suspected and confirmed Zika cases.

The DIDE is leading West Virginia's Zika surveillance efforts. Local health departments play a major role obtaining clinical and epidemiologic information about suspected Zika cases and ensuring specimens for Zika testing are collected and shipped appropriately.

Another important component of Zika surveillance is dissemination of data to drive public health action. It is important to provide public health partners and the general public with accurate and up-to-date information. The Zoonotic Disease Program in DIDE publishes bi-weekly vector-borne disease reports that detail ongoing human and mosquito surveillance activities.

Additional Zika surveillance activities include:

- Conducting enhanced surveillance for travel-associated, sexually-transmitted, and congenital Zika cases
- Investigating, identifying, and reporting of suspected and confirmed Zika cases
- Collaborating with the Office of Maternal, Child and Family Health (OMCFH) to enroll Zika-infected pregnant women into the US Zika Pregnancy Registry
- Providing outreach to healthcare providers and travelers to Zika-affected areas
- Educating the public on prevention and control of Zika and mosquito bite prevention
- Providing around the clock on-call consultation for Zika-related inquiries
- Preparing for the possibility of local transmission of Zika through outbreak response
- Generating distribution maps for *Aedes albopictus* and *Aedes aegypti*, the mosquito vectors known to transmit Zika

For information on Zika surveillance in West Virginia, visit www.zikawv.org.

LABORATORY CAPACITY

The West Virginia Office of Laboratory Services (OLS) coordinates the testing of human specimens for Zika. OLS provides guidance on specimen collection and transport to healthcare providers and local health departments so specimens can be received and tested promptly. OLS became one of many state laboratories approved to conduct human diagnostic testing for Zika in July 2016. The main test used for Zika testing is called the Trioplex Real-Time RT-PCR assay; it will detect Zika, dengue and chikungunya RNA from positive specimens. OLS will test serum and cerebrospinal fluid for Zika, chikungunya and dengue; urine and amniotic fluid are only tested for Zika. Because some specimens require additional confirmatory testing, OLS coordinates the shipment of these specimens to the CDC.

OLS contributes to Zika response through:

- Providing around the clock on-call service for Zika-related testing inquiries
- Performing diagnostic testing for Zika
- Forwarding specimens to CDC for confirmatory testing
- Providing DIDE with laboratory information that is needed for surveillance
- Educating healthcare providers and local health departments on appropriate collection and shipping methods of Zika specimens
- Recognizing Ohio State Laboratory for testing surge capacity

For more information on OLS, visit <https://www.wvdhhr.org/labservices/>.

MOSQUITO CONTROL

Of the two mosquito species associated with transmitting Zika, only one, *Aedes albopictus*, has been identified in West Virginia. This mosquito is an aggressive biter and likes to live near people's homes. *Aedes albopictus* is active throughout the day but most active at dawn and dusk. It lays eggs in natural water containers such as tree holes and artificial, manmade water containers such as discarded tires, plastic buckets, water barrels, and children's wading pools. *Aedes albopictus* adults can often be found near where eggs are laid.

Many agencies are involved with mosquito control activities in West Virginia. The West Virginia Department of Environmental Protection's (DEP) *Rehabilitation Environmental Action Plan* reduces the number of tires that have accumulated and serve as ideal breeding sites on public land. The West Virginia Division of Natural Resources has authority to investigate mosquito-breeding sites on private property. Litter Control Officers have authority to control mosquito-breeding sites on both private and public land. DIDE conducts mosquito surveillance annually in many West Virginia counties. Local health departments conduct environmental assessments to determine what steps can be taken to reduce mosquito-breeding around the homes of mosquito-borne disease (i.e., Zika) cases to reduce the potential spread of disease within an area.

Key mosquito control activities include:

- Conducting mosquito surveillance to monitor mosquito and mosquito-borne disease activity
- Working to eliminate open tire dumps conducive to mosquito-breeding by the DEP
- Arranging annual tire disposal events in each county by the DEP
- Assisting property owners and businesses to control mosquito-breeding containers
- Educating the public about reducing or eliminating larval habitats for mosquitoes
- Managing and eliminating mosquitoes and their breeding habitats

PREGNANT WOMEN OUTREACH

Zika virus infection during pregnancy can cause microcephaly and other severe fetal brain defects. Infection during pregnancy has also been linked to adverse outcomes including pregnancy loss, eye defects, hearing loss, and impaired growth in infants.

To learn more about Zika virus infection in pregnant women, the CDC established the US Zika Pregnancy Registry and collaborates with state, tribal, local, and territorial health departments to collect information about pregnancy and infant outcomes following laboratory evidence of Zika virus infection during pregnancy. Data collected through this registry will be used to update recommendations for clinical care, plan for services for pregnant women and families affected by the Zika virus, and improve prevention of Zika virus infection during pregnancy. BPH's Office of Maternal, Child and Family Health (OMCFH) is leading West Virginia's pregnant women outreach efforts.

Outreach to pregnant women will include education and resources for pregnant women, maternity care providers and pediatricians. Key outreach activities include:

- Providing the latest CDC recommended guidelines for prevention, identification, treatment and follow-up of the Zika virus to pregnant women, maternity care providers and pediatricians
- Advising pregnant women on the risks of traveling to Zika-affected areas
- Providing Zika prevention kits to low-income pregnant women, if needed
- Collecting data on all pregnant women identified as being infected with the Zika virus and their infant according to CDC established timelines
- Coordinating care to the pregnant woman testing positive for the Zika virus or mother of infant with identifiable birth defects
- Providing an around the clock phone line to speak with a nurse about Zika questions, concerns and resources

For more information on OMCFH and pregnant women outreach activities, visit: <https://www.wvdhhr.org/mcfh/>.

BLOOD SAFETY

The Zika virus currently poses a low risk to the blood supply in the continental United States, but as more and more people become infected, there is a need to ensure that measures are in place to prevent blood transfusion associated infections.

The DIDE is leading blood safety response activities. Some key activities include:

- Compiling a list of contacts and back-up contacts for all blood collection centers in West Virginia
- Making phone and email contact with all blood collection centers in West Virginia
- Providing blood centers with the Food and Drug Administration's (FDA) "*Recommendations for Donor Screening, Deferral, and Product Management to Reduce the Risk of Transfusion-Transmission of Zika Virus*"
- Corresponding with blood centers to provide situational awareness on mosquito and mosquito-borne disease activity in West Virginia
- Contacting blood centers and notifying them of the revised FDA guidance and need for universal testing of all donated whole blood and blood components for the Zika virus in the United States and its territories
- Preparing to notify blood centers of local transmission using the Council of State and Territorial Epidemiologists' "*Proposal for Blood Bank Notification of Zika Transmission Areas*" for guidance
- Drafting a call script to notify blood collection centers in the event of local transmission of Zika in West Virginia

ZIKA RESOURCES

CDC RESOURCES

- CDC Zika Webpage www.cdc.gov/zika/index.html
- Zika: The Basics of the Virus and How to Protect Against It www.cdc.gov/zika/pdfs/fs-zika-basics.pdf
- Areas with Zika www.cdc.gov/zika/geo/index.html
- Mosquito Bite Prevention for Travelers
www.cdc.gov/chikungunya/pdfs/fs_mosquito_bite_prevention_travelers.pdf
- Zika and Sexual Transmission www.cdc.gov/zika/transmission/sexual-transmission.html
- Zika and Pregnancy www.cdc.gov/zika/pregnancy/index.html
- Zika Information for Healthcare Providers www.cdc.gov/zika/hc-providers/index.html

DHHR RESOURCES

- Division of Infectious Disease Epidemiology Zika Webpage www.zikawv.org
- Center for Threat Preparedness <http://www.dhhr.wv.gov/healthprep/>
- Office of Maternal, Child and Family Health <https://www.wvdhhr.org/mcfh/>
- Office of Environmental Health Services <http://www.wvdhhr.org/oehs/>
- Office of Laboratory Services <https://www.wvdhhr.org/labservices/>

FOR QUESTIONS ABOUT ZIKA

Contact the DIDE at 1 (800) 423-1271, ext. 1 or (304) 558-8726 ext. 1, or the answering service at (304) 925-9946. Epidemiologists are available for consultation 24/7/365.