OSHA Worker Safety and Health Activities and the Ongoing Zika Virus Outbreak

Updated: June 3, 2016
This document is not a standard or regulation, and it creates no new legal obligations. It contains recommendations as well as descriptions of mandatory safety and health standards. The recommendations are advisory in nature, informational in content, and are intended to assist employers in providing a safe and healthful workplace. The Occupational Safety and Health Act requires employers to comply with safety and health standards and regulations promulgated by OSHA or by a state with an OSHA-approved state plan. In addition, the Act’s General Duty Clause, Section 5(a)(1), requires employers to provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm.
Zika virus background

• Viral disease mainly transmitted by mosquitoes
  – Various *Aedes* species (*aegypti* and *albopictus*)

- *A. aegypti*
- *A. albopictus*

• In some instances, may be also spread via
  – Bloodborne (contact) transmission
  – Aerosol exposure (in labs, based on animal models)
  – Sexual transmission (male to partner)

Zika virus background

• Zika virus first described in 1964\(^1\)
  – Laboratory-acquired case in Uganda
• Other cases have been associated with outbreaks in Africa, Asia, and Pacific Islands over the last ~50 years
• Some occupational cases
  – 1972 - Lab worker\(^2\)
  – 2008 - Scientists exposed to mosquitoes\(^3\)

Current outbreak

• Affecting countries throughout Central and South America and Pacific Islands (especially Brazil)
• Active transmission in U.S. territories
  – 1,072 cases in Puerto Rico (plus 3 travel-acquired)
  – 21 cases in USVI (plus 25 travel-acquired)
  – 17 cases in American Samoa
• No active transmission in U.S. states
  – 618 travel-associated cases + 11 sexually transmitted
• No occupational cases reported

Signs and Symptoms

• Approximately **1 in 5** infected people develop **signs and symptoms**
  – Usually mild
  – Typically begin 2-7 days after exposure
  – Generally last 2-7 days
• Generally include **fever, rash, joint pain and red or pink eyes**¹
• **Muscle pain and headache**, in some cases²
• **No specific treatment or vaccine** (yet)

Reproductive effects

• **Microcephaly**¹
  – Linked to Zika virus infection preceding or during pregnancy
  – Developmental disorder characterized by *smaller-than-expected head size, brain underdevelopment, and neurocognitive problems* in newborns


Photo credit: CDC
Other health effects

- **Guillain-Barré syndrome (GBS)**¹
  - Autoimmune disorder often marked by weakness, paralysis, and respiratory impairment

- **Thrombocytopenia**²
  - Low platelet count in blood
  - Bleeding into the tissues, bruising, slow blood clotting after injury

- **Death** (in extreme circumstances)
  - Associated with bleeding from severe thrombocytopenia

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What is OSHA doing?

• **Technical support and assistance**, as requested, to federal, state, local and other levels of government

• Other federal interagency coordination

• **Direct support to private sector employers’ and worker groups’ questions**

• Coordinating with OSHA NY regional office (including R2 staff in Puerto Rico) to ensure guidance materials available in Spanish
What is OSHA doing?

- Published joint recommendations with NIOSH
  - Available as an OSHA-NIOSH FactSheet
  - English and Spanish
  - Webpage format at www.osha.gov/zika

- Guidance covers outdoor, healthcare, laboratory, and traveling workers

- Advisory in nature, but OSHA standards still apply
General recommendations

• If requested by a worker and if feasible, employers may **consider reassigning** anyone who indicates she is or may become pregnant, or who is male and has a sexual partner who is or may become pregnant, to indoor tasks to reduce their risk of mosquito bites.
  – Buildings with screened windows and doors
  – Air conditioning

• If job functions preclude reassignment, may be possible to **rotate workers between job duties**
  – Lessen time each worker spends outdoors
General recommendations

• May not always be possible to re-assign workers, especially if job is outside:
  – Construction and agriculture industries together make up about 5.5 percent of total U.S. employment.¹
  – Other outdoor workers may include:
    • public works and services
    • public safety
    • oil and gas extraction (excluding off-shore drilling operations)
    • amusement parks
    • travel and transportation operations
    • many others

General recommendations

- Mosquitoes lay eggs in standing water, including around worksites
- Whenever possible, get rid of standing water
  - Buckets
  - Bottles
  - Barrels
  - Tires
  - Drain pipes
  - Gutters
General recommendations

• Provide **insect repellent** to workers who may be bitten by mosquitoes
  – Use according to manufacturer instructions
  – Also follow OSHA/NIOSH guidance for reapplication and use with sun screens
  – Choose repellent with EPA-registered active ingredient (e.g., DEET, picaridin)
  – The more active ingredient, the longer the protection time (up to a point)
  – Only apply permethrin to clothing, not directly to skin
Other controls…

- Follow the **hierarchy of controls** to help reduce or eliminate worker exposures to Zika virus
  - In conjunction with preventive actions, and especially when preventive actions (like reassignment) are not possible

- Focus on preventing mosquito bites and other potential sources of exposure
Engineering controls

• Built into a worker’s physical environment
• Provide protection without the worker having to do anything specific
• Examples:
  – Enclosures (operator booth of amusement park ride, cab of construction or agricultural equipment)
  – In healthcare: needles/syringes, IV administration kits, etc. with engineered sharps injury protection
  – In laboratories: biosafety cabinets
Admin Controls / Work Practices

• Require an employer or worker to do something in order to achieve the intended protection

• Examples:
  – Implementing hand hygiene protocols, and providing facilities for workers to wash up after removing PPE, after using bug spray
  – In healthcare and labs: implementing **universal and standard precautions**
  – In healthcare and labs: avoiding work tasks that contribute to the generation of bioaerosols or droplet sprays

Strictly speaking, reassignment / rotating duties are also administrative controls.
PPE

• Worker has to wear or use a garment or piece of equipment to achieve protection

• Examples:
  – When outdoors, **clothing to cover exposed skin**: Long pants, sleeves, hats with mosquito netting
    • Clothing treated with repellent (e.g., permethrin)
  – For workers with potential bloodborne exposures: Gloves, gowns, masks, face shields
  – Certain healthcare and lab tasks may require enhanced precautions.
Additional guidance for specific worker groups

• Laboratory workers
  – Follow HHS “Biosafety in Microbiological and Biomedical Laboratories” guidance for arboviruses

• Workers conducting mosquito control operations
  – Consult EPA Worker Protection Standards that apply to insecticides
  – Implement controls appropriate for hazardous chemicals or areas with dense mosquito populations (e.g., respiratory protection, other enhanced PPE)
Additional information

• The OSHA/NIOSH guidance also presents CDC public health information in the context of workplace hazard prevention and control:
  – Recognizing and reporting symptoms of Zika
  – What to do if sick
  – Travel guidelines and warnings
  – Information about pregnancy and birth defects

• For more information:
  www.cdc.gov/zika
  www.cdc.gov/niosh
Other recommended employer actions

• Conduct **hazard assessment**, select **appropriate controls**
  – May be required by some OSHA standards
• Consider offering **flexible sick leave** and **flexible travel policies**
• Provide **worker training**
  – On protective measures, PPE, insect repellent use, workplace flexibilities, etc.
  – May be required by some OSHA standards
Applicable Standards (29 CFR)

- 1910.132 – PPE General Requirements
- 1910.133 – Eye and Face Protection
- 1910.134 – Respiratory Protection
- 1910.138 – Hand Protection
- 1910.1030 – Bloodborne Pathogens
- 1910.1200 – Hazard Communication

Other requirements may apply in certain situations.
Emergency Preparedness and Response Resources

- Click on “A to Z Index”
- Scroll to emergency topics in the list.

Visit OSHA’s web site for additional information. The OSHA page links to many emergency preparedness and response resources.

Questions?

Chris Brown
Office of Emergency Management and Preparedness
Occupational Safety and Health Administration (OSHA)
U.S. Department of Labor
Phone: (202) 693-2368
brown.christopher.k@dol.gov