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Zika Virus Presents an Ongoing Occupational Health Hazard for Laboratory and Biomedical Research Workers

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Dear Editors,

Since 2015, the most recent Zika virus (ZIKV) epidemic has spread to more than 80 countries and territories.[1-3] More than 42,000 cases have been identified in the United States to date, including at least 37,000 in the US territories (mostly in Puerto Rico and attributable to local transmission).[4] As the frequency of new cases has decreased, concern over the situation has waned. However, laboratory and biomedical research workers remain at risk of infection.

The Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) within the Centers for Disease Control and Prevention (CDC) received reports of 3 ZIKV exposure incidents among such workers, each with clear links to work tasks, during the recent epidemic. However, we are not aware that they have been described in the literature yet.

The exposures include the following:

1. In Pennsylvania in 2016, a needlestick injury to a woman who was manipulating ZIKV samples as part of a vaccine trial. She developed symptoms of illness approximately 1 week after exposure, and infection was confirmed through laboratory testing.
2. In New York in 2016, a bite from a ZIKV-infected mouse to 36-year-old man's finger as he was injecting an experimental drug into the mouse. Molecular and serologic ZIKV tests were negative and the worker remained asymptomatic.
3. In Pennsylvania in 2017, a scalpel laceration to a 22-year-old female researcher who was harvesting chickens experimentally infected with ZIKV. She tested negative for ZIKV infection and remained asymptomatic.

While only one exposure resulted in infection, the reports underscore the continued need for good infection prevention practices in laboratories and other biomedical research facilities manipulating ZIKV. Effective engineering controls, including sharps engineered to prevent injuries, combined with administrative controls, proper personal protective equipment, and adequate training, help protect workers in laboratories and similar workplaces.

Authors' Note

The opinions expressed in this article are those of the authors and do not necessarily represent the views of the US Department of Labor/OSHA or CDC/NIOSH.

Declaration of Conflicting Interests

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