

07-10

STATEMENT OF POLICY

Mosquito Control

Policy

Incorporating the vector management framework outlined by the World Health Organization (WHO),¹ integrating “One Health” approaches to address environmental sources of emerging infectious diseases,² and building on the work of its Mosquito Control Collaborative to disseminate recommendations for addressing funding and research needs for local mosquito control programs,³ the National Association of County and City Health Officials (NACCHO) (1) supports the need for successful coordinated mosquito management programs at the local level through the provision of additional funds and research to create, integrate, and coordinate local mosquito control plans with existing district and state plans;³ and (2) urges Congress to enact, fully fund, and maintain sustained funding for mosquito control programs, policies, and education efforts.

NACCHO supports federal, state, and local funding for local health departments and mosquito control agencies to provide technical assistance, education, and research to do the following:

- Improve their capability to predict and avoid new vector-borne diseases;
- Support emergency management actions for mosquito-borne disease outbreaks;⁴
- Address consumers’ behavior and practices relating to mosquitoes;
- Advocate for policies that address climate change, which contributes to the global change in mosquito distribution and the corresponding spread of mosquito-borne diseases;⁵⁻⁸
- Support integrated mosquito management programs designed to benefit or cause minimal harm to people, domestic animals, wildlife, and the environment;^{1,9,10} and
- Support the development of policies that address social injustices that contribute to the disproportionate burden of vector-borne or collateral disease on vulnerable populations.¹¹

NACCHO and its members will continue to work with partners such as public works, mosquito control districts, Natural Resources, and other agencies¹² to further enhance the effectiveness of mosquito and vector control activities.

Justification

Mosquito-borne diseases affect millions of people worldwide each year and will be an ongoing challenge in the United States for the foreseeable future. West Nile virus (WNV), introduced to the United States in 1999, has since become an endemic health problem, afflicting citizens on a yearly basis; the disease is currently circulating in all 48 contiguous United States, with 96% of counties reporting evidence of transmission in humans, mosquitoes, birds, horses, and other mammals.¹³ Some of the same mosquito species that transmit endemic diseases (WNV and several encephalitic diseases) are also able to transmit more exotic diseases including dengue,



malaria and Chikungunya virus to humans, and a variety of diseases to wildlife and domestic animals.

To combat mosquitoes and the public health hazards they present, many states and localities have established mosquito control programs. These programs can include gathering surveillance data for medical and environmental networks to detect possible outbreaks and managing prevention, public education, and vector control.^{10,14,15} A 2012 survey of all 50 state health departments and 30 large city and county health departments assessed the collective capacity for mosquito-borne disease surveillance, funding for essential personnel, and if and how that funding has changed since 2004.¹⁶ The survey revealed a decrease in mosquito-borne virus surveillance since 2004. Citing budget cuts, respondents indicated a 41% reduction in staff for surveillance, a 58% reduction in mosquito trapping activities, and a 68% decrease in mosquito testing.¹⁶ Eighteen states confirmed the presence of *Aedes aegypti* mosquitoes, the primary vector for dengue; only five (28%) of those states reported active dengue surveillance and control plans.¹⁶ The expanding range of several *Aedes* mosquito species,¹⁷ including those capable of transmitting viral diseases to humans (*Ae. aegypti* and *Ae. albopictus*), coupled with the lowered capacity for mosquito surveillance in the United States,¹⁶ is of great public health concern.

Zika virus is a mosquito-borne disease transmitted by the *Aedes* mosquitoes, mainly *Ae. aegypti*; the same mosquito transmits dengue, chikungunya, and yellow fever. On Jan. 22, 2016, the Centers for Disease Control and Prevention (CDC) activated its Incident Management System and, working through the Emergency Operations Center,¹⁸ centralized its response to the outbreaks of Zika virus occurring in the Americas. On Feb. 8, 2016, the CDC elevated its response efforts to a Level 1 activation, the highest response level at the agency. The WHO has declared a public health emergency as a result of the Zika virus, which has spread to more than 60 countries and territories since it was first confirmed in Brazil in May 2015.¹⁹ The increasing prevalence and changing distribution of mosquito-borne diseases can be partially attributed to climate change and increasing immigration and global travel.^{6,7,20} The expanding presence of *Aedes* mosquitoes in the United States could sustain local transmission of Zika virus, along with other diseases, under the right circumstances. Therefore, local health departments have a pressing need for funding and support for mosquito-borne disease surveillance programs, vector control policies, and legislation to enhance the development of integrated mosquito management programs throughout the United States and aid in the overall protection of public health.

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Record of Action

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Adopted by NACCHO Board of Directors

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