NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

07-10

STATEMENT OF POLICY
Mosquito Control

Policy

The National Association of County and City Health Officials (NACCHO) recognizes the need for successful, coordinated mosquito management programs at the local level. NACCHO supports the provision of funds and research to create, integrate, and coordinate local mosquito control plans with existing district and state plans.[1] These plans should incorporate the vector management framework outlined by the World Health Organization (WHO),[2] integrate "One Health" approaches to address environmental sources of emerging infectious diseases,[3] and build on the work of the Mosquito Control Collaborative to disseminate recommendations for addressing funding and research needs for local mosquito control programs.[1]

Recognizing that mosquito control activities are decentralized and localized,[4] NACCHO calls for sustained funding for mosquito control programs, policies, and education efforts from the local, state, and federal level. NACCHO urges Congress, state, local, governing and administrative agencies to fully fund and maintain sustained funding to provide technical assistance, education, and research for local health departments and mosquito control programs to do the following:

- Improve their capability and capacity to predict and prevent new mosquito-borne diseases.
- Support emergency management actions for mosquito-borne disease outbreaks.[5]
- Address resident, businesses, and resident's behavior and practices relating to mosquitoes.
- Implement integrated mosquito management programs designed to benefit and cause minimal harm to people, domestic animals, wildlife, and the environment.[2]
- Support the development and application of policies to address social injustices that contribute to the disproportionate burden of vector-borne or collateral disease on affected populations.[6]

NACCHO and its members will continue to work with partners such as public works, mosquito and vector control districts, natural resources, and other agencies[7] to further enhance the effectiveness of mosquito and vector control activities. NACCHO also has broader, related recommendations for Vector-Borne Disease as well as Climate Change, which contributes to the global change in mosquito distribution and the corresponding spread of mosquito-borne diseases.[8-10]

Justification

Mosquito-borne diseases affect millions of people worldwide each year and will continue to be an ongoing challenge in the United States (U.S.) 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 circulates in all 48 contiguous states, with 96% of counties reporting evidence of transmission in humans, mosquitoes, birds, horses, and other mammals.[11,12] Mosquito-borne diseases affect millions of people worldwide each year and will

be an ongoing challenge in the U.S. for the foreseeable future. *Aedes aegypti*, an invasive species, can spread chikungunya, dengue, Mayaro, yellow fever, Zika viruses, and dog heartworm diseases. Eastern Equine Encephalitis virus (EEE), which is also endemic in the U.S., can result in a rare but serious neuroinvasive disease. While not common— usually fewer than 10 cases are reported each year—the mortality rate is incredibly high at around 33%.[13] Both WNV and EEE also cause illness and death in wildlife and domestic animals.

To combat mosquitoes and the public health hazards they present, many states and localities have established mosquito and vector 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.[14-16] A 2017 survey of all 50 state health departments, 4 territories, and 29 local health departments assessed the current surveillance, prevention, and control capacity for VBDs.[17] The authors credit increases in staffing levels, as compared to 2012, to federal funding; only 11% of respondents had at least one full-time employee not funded through federal programs.[17] The same report noted that 61% of states utilize active surveillance of mosquito vectors.[17] Vector surveillance and control capacity at the local level has been measured three times by NACCHO.[18-20] The most recent 2023 Vector Assessment revealed that some capacity gains observed following Zika had decreased since 2020.[20] Findings consistently show a lack of capacity to perform pesticide resistance testing. Sustainable funding for vector control staff training, surveillance activities, equipment, and supplies for mosquito control will be necessary to address these gaps in meeting core competencies.

The expanding presence of *Aedes* mosquitoes (e.g., *Ae. aegypti*, *Ae. albopictus*) in the U.S. could sustain local transmission of several emerging or tropical diseases (e.g., chikungunya, dengue, Zika), under the right circumstances. In 2016, CDC activated its Incident Management System and, working through the Emergency Operations Center, centralized its response to the outbreaks of Zika virus occurring in the Americas. The increasing prevalence and changing distribution of mosquito-borne diseases, as demonstrated by the Zika virus, can be partially attributed to climate change and increasing immigration and global travel.[9]

WNV, EEE, Chikungunya, and Zika virus are examples of endemic and emerging mosquito-borne diseases in the U.S. that pose threats to the public's health, but they are not the only ones. In 2024, Dengue was responsible for over 12 million cases reported across North, South, Central Americas and the Caribbean which includes U.S. territories Puerto Rico and U.S. Virgin Islands.[21] At the same time, Oropouche virus was emerging rapidly with over 10,000 cases reported in South America and Caribbean, contributing over 90 travel-associated cases in the U.S.[22] Changes to the environment (both built and natural), increased globalization, and other shifts make current mosquito control challenges ongoing and new threats and circumstances inevitable. In the third iteration of NACCHO's Are We Ready Assessment, the authors found that most local public health officials are not prepared to address the health risks of climate change such as WNV. [23] Limited funding for the latest public health threats without sustained infrastructure and support has resulted in a vector control system that needs improvement, as well as gaps in mosquito control, which have direct ramifications for human health. Therefore, local health departments and mosquito control programs have a pressing need for sustained funding and support for vector-borne disease surveillance programs, vector control policies, and legislation to enhance the development of integrated mosquito management programs throughout the U.S. and aid in the overall protection of public health.

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Record of Action

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