

2013 NCMVCA Annual Conference

Save the date! Please join us in beautiful Wrightsville Beach, NC at the Blockade Runner Hotel and Resort from November 4th– 6th 2013 for this year's annual NCMVCA meeting..

The [Blockade Runner](#) is located at 275 Waynick Blvd in Wrightsville Beach, NC. The conference room rate is \$85.00 per night. Be sure to call 1-800-541-1161 by October 7th to book your room at this incredible rate.



The Biting Times

Speakers include the AMCA Technical Advisor (Joseph Conlon), operational professionals, faculty and students from five different NC universities, representatives from state and local agencies, and others. Trade professionals from mosquito control product industries will be on hand to provide up-to-date technical information. Presenters will discuss vector biology, disease ecology, operational programs, local and international vector-borne disease history, epidemiology, field safety, local and federal policies, and other topics.

If you have a topic that you would like to present, or a speaker you'd recommend, don't hesitate to contact Dr. Brian Byrd via phone at 828-227-2607 or drop him a line a bdbyrd@wcu.edu.

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A summary of “The economics of mosquito control: Current status of mosquito control programs in North Carolina”

by K.L. Del Rosario, S.L. Richards, A. Anderson, and J.G. Balanaywill

Mosquito control is a facet of environmental health that is often underutilized, likely because, in part, its effectiveness is difficult to measure. The most successful mosquito control programs (MCPs) are those with long-term funding that allow programs to maintain records of surveillance and control activities, thereby improving risk predictions. The extent to which recent budget shortfalls in North Carolina (NC) have impacted services provided by MCPs is largely unknown. In 2011, a 50-question survey regarding the status of MCPs in NC was distributed to personnel within departments of public and environmental health, public works, and vector control in all NC counties. The survey assessed the history and current status of MCPs, surveillance and control measures utilized, and opinions regarding the disbanding of the Public Health Pest Management section of the NC Department of Environment and Natural Resources. Information regarding reportable mosquito-borne disease in humans was collected. Mosquito-borne viruses causing diseases that affect public health in NC include: Eastern equine encephalitis, La Crosse encephalitis, Saint Louis encephalitis, and West Nile viruses.

As of December 2011, there were 86 MCPs in NC, covering 39 of the 100 counties. Programs are supervised by Municipal Public Works (N=63 programs), County Environmental Health (N=16 part-time, 4 full-time programs), and County Public Works (N=1 part-time, 2 full-time programs). Twenty-eight counties in NC with no MCP and 15 counties with MCPs have reported human cases of mosquito-borne disease. Due to budget shortfalls, many county MCPs have reduced staff, thereby reducing surveillance and control conducted. This study provides a snapshot that assesses the current status of NC MCPs; however, further changes could affect the status of this dynamic issue. Cost effectiveness studies could help streamline MCPs by ensuring that resources are used efficiently. Human illness resulting from mosquito borne disease is more expensive than a preventative mosquito control approach. Lack of sustained surveillance activities may result in less effective, reactive, rather than proactive MCPs. It is likely that recent MCP budget cuts have suppressed mosquito borne disease prevention capabilities in NC. Future studies should investigate cost-effective control strategies for MCPs as a component of risk assessment. There remains much important work for MCPs in NC, especially with regard to economic evaluations of risk. The disparities in mosquito control budgets across NC may reveal, in part, differences in value placed on mosquito control. More work is needed to assess the relationship between public health and mosquito control. It remains uncertain what future role MCPs will play in NC.

Katie Del Rosario is a Master of Science candidate in Environmental Health at East Carolina University. Check out the Journal of Environmental Health, April 2014 issue for the full article.

History of the Vector-borne Disease Work Group State of North Carolina

State Public Health’s quarterly meetings of the Vector-borne Disease Work Group (VBDWG) are run by Carl Williams, DVM, State Public Health Veterinarian, North Carolina Division of Public Health. The purpose is to foster communication and keep abreast of vector-borne disease in North Carolina. Attendance changes somewhat depending on topics and interest. The group is not legislatively mandated and has no designated powers.

VBDWG is an outgrowth of the West Nile Virus (WNV) Core Team which was formed by the state health director in 2001 in response to the emergent WNV outbreak. From 2001-2003 the group, with around \$300,000 yearly funding split between Public Health Pest Management (PHPM) and the State Lab, met almost on a weekly basis. As the outbreak declined, so did the funding and frequency of meetings. In 2010, PHPM was abolished by the state legislature.

Dr. Jeffrey Engel ran the meetings until 2008 when Dr. Williams was given that responsibility. Originally members, including representatives from state and local agencies, oversaw the CDC grant monies and provided guidance on control measures to pertinent agencies.

In 2004, the name was changed to the Vector-borne Disease Task Force to reflect the growing concerns about other vector-borne diseases in North Carolina, especially La Crosse encephalitis and Rocky Mountain spotted fever. Meetings, not open to the public, were held two to three times a year. In 2006, the Tick-borne Infections Council of North Carolina, Inc. (TIC-NC), a state-wide non-profit formed in 2005 to respond to growing risk of tick-borne infections, began dialogs with DPH and PHPM to encourage an enhanced response to the growing tick problem. Dr. Marcia E. Herman-Giddens from TIC-NC was appointed to the Task Force by Dr. Leah Devlin, then director of State Public Health. At TIC-NC's request the meetings became open to the public.

By 2008, under the direction of Dr. Williams, agendas and minutes for the two hour meetings began to be distributed to the list of members. Around 2011, the name was changed to the Vector-borne Disease Work Group. Meetings comprise state reports and issues until the last 15 minutes when the public can ask to speak.

By: Marcia E. Herman-Giddens, DrPH
Tick-borne Infections Council of North Carolina, Inc.
www.tic-ng.org

Note: The Vector-Borne Disease Work Group, attended by representatives from the Division of Public Health, the State Lab of Public Health, Department of Agriculture, County Health Department and other interested parties, is a forum to discuss issues relating to mosquito and tick borne illness across the state. Attendance is open and if you would like to attend, please contact Dr. Williams at carl.williams@dhhs.nc.gov

Website Update

Be sure to check out our new and improved website. <http://www.ncmvca.org>

Newsletters come out a few times a year, but Marcée Toliver tries to keep the information on the website current with upcoming events, and rundowns on past conferences. If you missed the last conference like I did, be sure to check out the Knowledge Base on the NCMVCA website. It won't make up for the missed meals, networking with professional colleagues, or getting away from the office for a few days, but it will provide you with PowerPoint presentations for most of the talks. Even if you did make it to the conference, but maybe lost your notes, all hope may not be lost. While you are checking out the website, make sure to join the NCMVCA contact list located on the [Membership Page](#). This will allow the NCMVCA to email you a copy of the newsletter when it comes out, as well as various updates on what's going on in mosquito and vector control.

Results of Communications Assessment Survey by Marcée Toliver

First of all, many thanks to those attendees at the fall 2012 Conference that filled out the multi-page communications assessment survey. This survey asked respondents for information on how best to communicate with the membership and other interested parties. The information gained from the survey has been very helpful, guiding the Executive Board as they evaluate the various options available. A quick summary of the information is detailed below and the full analysis can be found on the website at: <http://www.ncmvca.org/index.html>

The survey has revealed that about 90% of the respondents use personal email and report accessing the internet daily (26%) or monthly (53%) for information on vector or control related content. The survey respondents prefer to get their information from e-mail, first and foremost, followed by the website, a list serve, or newsletter. Social media, phone calls and texting were not preferred methods of communication for business use, although most of the respondents report using these methods of communication in their personal lives.

Roughly half the respondents prefer the website as their method to acquire information about the annual conference, training, best practices, and educational outreach materials. The newsletter was a preferred secondary source for the above categories, with the exception of the 'best practices' category. Roughly 90% of the respondents would like more contact with other vector control professionals as well as information on upcoming events (~80%), current conditions (~70%), research on vectors (~75%) and products or vendors (~50%).

The open comment area at the end of the survey had many helpful suggestions that are being evaluated by the Executive Board for adoption. If you have any other comments or suggestions, please contact a member of the Executive Board. We are always looking for ways to improve and ideas for meeting the needs of the membership! Officers and their contact information can be found at: <http://www.ncmvca.org/sitebuildercontent/sitebuilderfiles/2013officers.pdf>

Surveillance and Reporting of Arboviral Disease in North Carolina by Carl Williams State Public Health Veterinarian, NC Division of Public Health

Mosquito control personnel monitor mosquitoes and other animals for evidence of arboviral transmission and often look to human case information for evidence of transmission in their area. **In order to fully utilize this information, it may help to understand how and why this data is generated and reported.** Surveillance for human cases of disease, like other data, is designed to monitor the spread of disease and identify patterns in order to anticipate and detect future cases with the ultimate goal of minimizing or preventing disease.

North Carolina State Administrative Code defines which diseases must be reported and the time frame they must be reported in. While other states may track and report cases that do not cause neurological symptoms, North Carolina has elected to require reporting, within 7 days of testing, only those cases that show evidence of encephalitis, meningitis or other neurological disease (aka neuroinvasive disease).

It is important to distinguish between a clinical diagnosis and a surveillance case. Not all cases that are diagnosed in the doctor's office will meet the guidelines that define them as a 'case' for surveillance purposes. This does not mean that the doctor's diagnosis is not accurate or legitimate. The goal of Public Health disease surveillance is the ongoing, systematic collection, analysis and interpretation of the who, what, where, when and how of disease case occurrence in a population. Therefore, it is necessary to have stringent criteria applied to cases to ensure specificity and that the rate of their occurrence can be compared between states and over time nationally.

North Carolina has an electronic system of data reporting, the Electronic Data Surveillance System (EDSS) which connects laboratories, local health departments and the Division of Public Health. When a physician suspects a case of arboviral disease, the appropriate tests are performed and results are reported to the physician. Other laboratories are connected to the EDSS system and electronically upload positive test information overnight. Laboratories that are not connected electronically are required to send reports to the local or state health department so they can be manually entered into the system.

Once the results are in the system, it is the responsibility of the local health department to investigate cases, obtaining demographic, clinical and risk history information that may be needed on the case. This investigation can take time, depending on the number of cases the health department needs to investigate and the ease of acquiring information from the patient's provider. Once all information has been gathered, the State Division of Public Health reviews the information and classifies the case as confirmed or probable, depending on how well it meets the criteria established by the case definition.

Cases can also be classified as 'suspect' or 'does not meet criteria', which are not reported within the state or to the Centers for Disease Control (CDC). Since it is impossible to determine exactly where the infected mosquito bite occurred, cases are reported by county of residence since that is the most accurate information available. The patient's travel history is also part of the investigation and cases may be reported as possibly travel-related, if the patient left the state for any length of time in the 30 days before becoming ill.

Reporting to the CDC is accomplished via an electronic database, ArboNet which publishes maps, updated weekly to the internet website at: http://www.cdc.gov/ncidod/dvbid/westnile/usgs_frame.html. This database provides information on several arboviral diseases that occur in the United States across several surveillance categories: human, wild birds, mosquito, sentinel animal and veterinary data. Local programs can access data for the US, adjacent states or North Carolina that will bring up a listing of that category by county. In order to protect patient's rights as mandated under HIPPA, starting in 2013, North Carolina county of residence information on human cases will not be included on publicly available sites until after the end of the year. In the event of a confirmed or probable mosquito transmitted disease case in a person, the County Health Director will be notified individually so the appropriate response can be initiated at the local level.

Public health surveillance data from human cases is not timely enough to guide local mosquito control program actions. Local mosquito control programs should work closely with their local health department to respond to suspected human cases of mosquito borne disease that are under investigation. Additionally, local mosquito program personnel should develop and refine other surveillance data sources for immediate and timely information on the occurrence of arboviral transmission in their locale. Veterinary data, sentinel flock data, where available, and mosquito monitoring and testing can provide the fastest indicators of the potential risk of arboviral transmission. Positive data in any of these categories should trigger further monitoring and prevention measures as well as the opportunity to evaluate the effectiveness of control measures that are in place to reduce mosquito populations.

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American Mosquito Control Association Washington Day 2013

by Dennis Salmen, REHS
AMCA Mid-Atlantic Regional Director

The American Mosquito Control Association (AMCA) sponsors a legislative/advocacy conference every year in the Washington, DC area to identify mosquito control issues or concerns that can best be examined and resolved at the national level. This year's conference was held May 6-8, 2013, in Arlington, VA, and included two, half day sessions of educational presentations and one full day of visits to elected congressional representative offices by attendees. The educational sessions were presented by federal government (CDC, EPA, etc.), legal, and other interested professionals on key current issues in the mosquito control profession. The focused issues this year were the Clean Water Act NPDES permitting system program impacts; federal funding to states for the CDC's Laboratory Capacity Grants for Mosquito-borne Disease Surveillance; Mosquito Control on Federal Lands (e.g. national wildlife refuges); and Endangered Species Act impacts on local mosquito control programs. The congressional visits consisted of attendees visiting targeted congressional offices of elected officials from their home state. The visits to the Capitol offices were normally pre-arranged and allowed attendees to confer with the staff of that representative on the impact of the above issues on mosquito control and public health in their state. When a staff person wasn't available to meet, conference attendees would leave an informational brochure from AMCA on the aforementioned issues.

Over 100 people registered for and/or attended this year's conference including 6 representatives from North Carolina and 4 representatives from Virginia. The two states with the highest representation were Florida and California. I am happy to add that the Mid-Atlantic Region of the US was well represented by persons from NC, VA, MD, GA, PA, and DE, all of which are member states of the Mid-Atlantic Mosquito Control Association. The conference itself is free to AMCA members, although attendees are responsible for their travel and stay costs. For the last several years, AMCA has received financial sponsorship from AMCA Sustaining Member Central Life Sciences to award travel scholarships/stipends to a limited number of applicants to attend the conference at a greatly reduced or no cost.

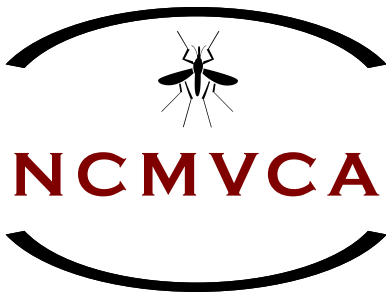
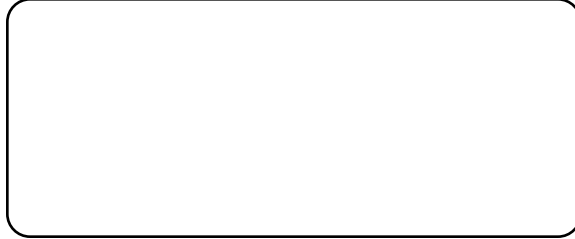
A few quick highlights to the conference: North Carolina's congressional offices were visited by NCMVCA members Joe Strickhouser, Robert Collins, and Nolan Newton. Offices they visited during the conference included the following: Rep. W. Jones, Sen. R. Burr, Sen. K. Hagan, Rep. V. Foxx, Rep. G. Butterfield, and Rep. D. Price (if any names were missed, I apologize as the final visit list was not available at the time of this printing). Joe, Robert, and Nolan are 'vets' so to speak of attending Washington Day while this was my first time ever, even with having worked in the mosquito control profession for 24+ years before retirement. I accompanied another attendee Mike Cantwell, Director of the Maryland Mosquito Control Program, on his visits since it was also his first time at Washington Day and he was the only attendee from his state. My overall experience from the congressional visits was that **EVERY CITIZEN** should get the opportunity to participate in this process to really get a view of how our representative system works; it is eye-opening. While Mike and I were a bit apprehensive at first in approaching these legislative aides, we eventually developed a comfort level after a couple of visits. We found some of these legislative liaisons to be very knowledgeable on the subjects addressed while others were minimally aware of the concerns. All were courteous and willing to give us time to state our reason for the visit, ask support from their 'boss' on the issues, and perked up when we used the phrase "a public health issue".

In the future, I hope that more of our profession will be able to take the opportunity to attend this conference. Information on Washington Day can be found at <http://www.mosquito.org/washington-conference>.

2013 Sustaining Members

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New Membership Application and Membership Renewal Form N.C. Mosquito and Vector Control Association

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