

Adult Control Strategies using the Vector Index - Matt Helwig

- a) Vector Index - risk of mosquito population creating disease in people
- b) Background
 - i) Data collection
 - (1) WNV found originally in 2000
 - (2) Most cases are found where people live
 - (3) 26 counties do surveillance
 - (4) Gravid traps
 - (5) Trapping effort varies
 - ii) DEP
 - (1) ID
 - (2) Enter into database
 - (3) Test via PCR
 - iii) All control data are also loaded into the data management system
- c) The Vector Index
 - i) Components
 - (1) Species presence - vector only
 - (2) Population density - mosquitoes per trap night
 - (3) Infectivity of the population - MIR or MLE
 - ii) Results are only as good as the data
 - iii) Now what?
 - (1) Determine VI for every human case to create an action level
 - (2) In PA, a VI of 150 or greater was associated with human cases
 - (3) Multiplied VI by 1000
 - (4) What it looks like statewide: highest VI corresponded to highest number of cases
 - (a) MMWR week
 - (b) #samples
 - (c) #pools
 - (d) #specimens
 - (e) #positive pools
 - (f) MIR
 - (g) Average trap nights (??)
 - (h) VI
 - (i) $VI \times 1000$
 - (j) Human cases
 - (5) How about at the county level? Highest VI corresponded to highest human cases
 - iv) What's next?
 - (1) Select permanent surveillance sites, 5 per county
 - (2) Weekly surveillance at these sites
 - v) Conclusions
 - (1) Only works for vector species
 - (2) Can be used to prioritize control