



West Virginia

# EPI-LOG

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## Oral rabies vaccine drop continues this fall

West Virginia continues to participate in the Oral Rabies Vaccination Project (ORV) funded by the United States Department of Agriculture (USDA) Wildlife Services. The purpose of this project is to stop the westward expansion of raccoon strain rabies (RSR). The ultimate goal is to eliminate RSR in North America.

For the past three years, West Virginia has collaborated with USDA Wildlife Services and bordering states to conduct a wildlife vaccination campaign. This campaign targets raccoons by distributing vaccine-laced baits consisting of a plastic sachet containing the vaccine surrounded by a fish-meal polymer cube. The vaccine is distributed in West Virginia during the late-summer or early-fall every year along the leading edge of the RSR epizootic. West Virginia, Pennsylvania, Ohio, Maryland, Virginia and Tennessee work together to form the Appalachian Ridge Barrier.

During 2004, the ORV drop for the Appalachian Ridge Barrier was scheduled



Bait containing oral rabies vaccine  
(dimensions 1 1/4" X 1 1/4" X 3/4")

to begin on August 9th out of Beckley, WV. Parts of WV will continue to receive baits through mid to late September. As in previous years, the vaccine-laced baits will be distributed both by plane and on the ground. This year, Dynamic Aviation, will be doing the flying for most of the Appalachian Ridge Barrier, and their planes are small and light in color. However, some portions of the drop will still use the bright yellow Canadian planes that were used in previous years.

(See *Rabies*, page 3)

## Statewide Disease Facts & Comparisons

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Division of Surveillance  
and Disease Control

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Bob Wise, Governor  
Paul L. Nusbaum, Secretary (DHHR)

**EPIDEMIOLOGY SPOTLIGHT:**

# LaCrosse encephalitis in West Virginia

LaCrosse encephalitis is an infectious disease caused by a mosquito-borne virus. Predominantly a disease of children, 75% of LaCrosse cases occur in children under 10 years of age, and only 3% occur in persons over the age of 20. Most cases are in boys, with an estimated male:female incidence of 1.8:1. As with other arboviral illness, subclinical infections are common (>95% of infections), and seroprevalence in endemic areas rises with age. Based on a large clinical series of hospitalized patients, common symptoms are as follows:

SYMPTOM	PERCENT WITH SYMPTOM	OCCURRENCE IN DAYS PRIOR TO ADMISSION
Headache and fever	80-85%	3-4 days prior to admission
Vomiting	70-75%	1-2 days prior to admission
Seizures or disorientation	40-45%	Day of admission
Focal neurological findings	16-25%	---
Focal and generalized seizures	42-62%	---
Status epilepticus	10-15%	---

LaCrosse encephalitis does not usually cause death. However, there is evidence that long-term neurological damage may result from LaCrosse infection.

The main vector for LaCrosse is the treehole mosquito (*Ochlerotatus triseriatus*). This mosquito usually breeds in treeholes or artificial containers holding water. A case-control study performed by the Centers for Disease Control and Prevention demonstrated that children with LaCrosse infection are more likely to live in homes surrounded by containers. Examples of containers include tires, flowerpots, toys, or any item that can collect rainwater and serve as a mosquito-breeding site.

Prior to the 2002 and 2003 West Nile epidemic, LaCrosse encephalitis was the most common form of arboviral encephalitis reported in the United States. According to the CDC, an average of 75 LaCrosse encephalitis cases were reported per year from 27 states between 1964 - 2000. West Virginia reported an average of 33 cases per year during 1999 - 2003; cases occurred in 17 counties.

West Virginians are most at risk for LaCrosse infection during the late summer and early fall. In West Virginia, cases generally occur between June and October each year, with the peak number of cases occurring in August (See Figure 1).

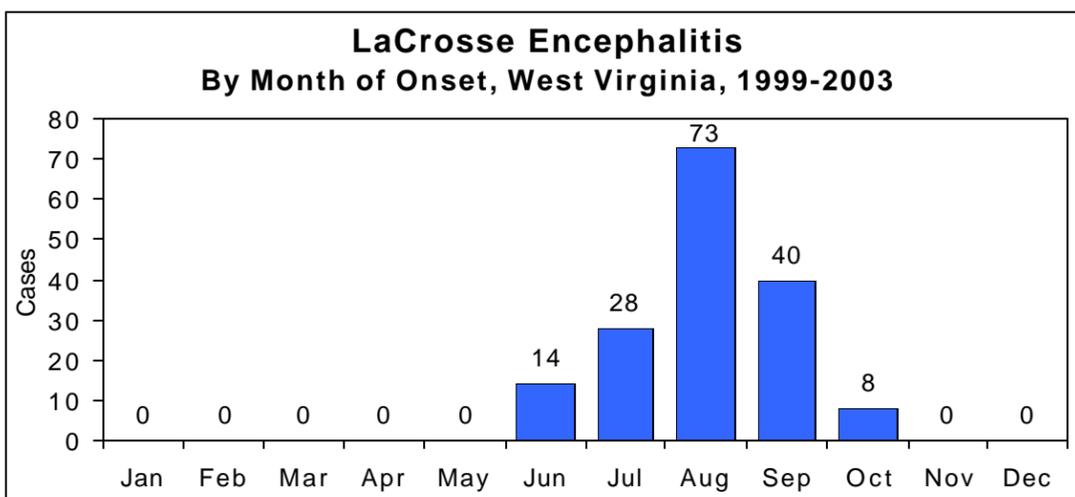


Figure 1

In addition to having a well-defined transmission season, LaCrosse also displays a distinct geographic pattern in West Virginia. Most cases occur in the southern portion of the state with a focus of cases in Mercer, Raleigh and Fayette counties (See Figure 2 on page 6).

(See *LaCrosse*, page 6)

## WV Immunization Program working in conjunction with WV-CHIP Program

On August 1, 2004, the Bureau for Public Health Immunization Program will begin a collaborative agreement between the West Virginia Vaccines for Children Program (VFC) and the West Virginia Children's Health Insurance Program (WVCHIP). Under this agreement, providers are directed to order vaccines for administration to their CHIP-enrolled patients in addition to their VFC-eligible patients from the Immunization Program. New VFC Ordering Forms and Screening Eligibility Forms will be created and distributed to all providers of CHIP and Immunization Programs. Providers will report all doses administered and vaccine on hand from both vaccine sources on single reports each month. Those forms were not revised as a part of this agreement.

This agreement provides a cost savings for the CHIP Program and will further reduce cost as a barrier to childhood immunizations. CHIP providers can direct their patients to a nearby participating provider if they do not wish to participate in the Immunization Program's VFC program. The Immunization Program is committed to the best possible service for participating providers and to West Virginia children who qualify for the VFC and CHIP programs. ☒

## Arboviral surveillance improving in West Virginia

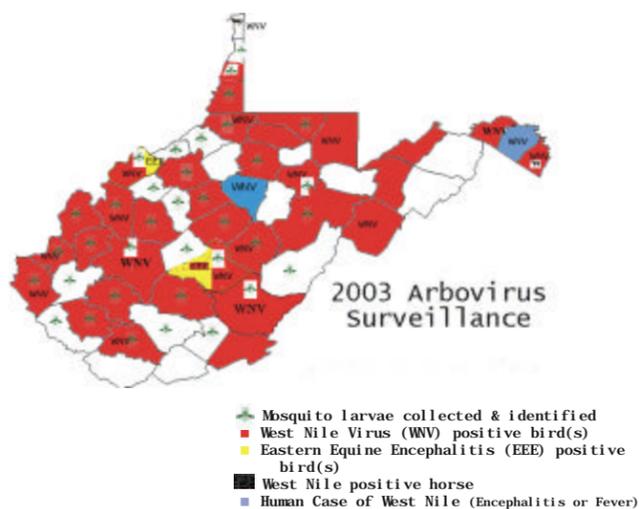
Each year from May to November, West Virginia enhances surveillance for arboviral activity. In 2004, this surveillance includes human, avian, mosquito and equine testing all performed at the West Virginia Office of Laboratory Services (OLS). This is the first year OLS is offering avian, mosquito and equine testing.

In addition to enhancing the state's capacity for arbovirus testing, West Virginia is also working to enhance mosquito surveillance throughout the state. A new entomologist was hired in January of this year, giving the state two public health entomologists. In addition, mosquito surveillance training is ongoing for six local health departments around the state. These counties will assist in training the surrounding counties in mosquito surveillance techniques. The goal is to establish mosquito surveillance capacity at the local level, so that the information gathered can be used to recommend and implement mosquito control plans that are appropriate for the area.

Another change in arboviral surveillance for 2004 involves the dead bird testing strategy. In previous years, counties submitted all species of birds for arboviral testing until one bird within the county was positive, and then stopped submitting birds. This strategy allowed for determining the geographic distribution of West Nile across the state. However, it was not very useful in

pinpointing areas of high West Nile activity. Therefore, it is recommended that counties focus testing on species of birds that are most predictive of West Nile infection in West Virginia (crows, ravens, blue jays and birds of prey), and that testing continue, even after a positive has been identified, until November 30th.

For more information on arboviral surveillance, LaCrosse Encephalitis and West Nile Virus, please visit the Infectious Disease Epidemiology Program (IDEP) website (<http://www.wvdhhr.org/idep>) or contact IDEP at 558-5358. ☒



*(Rabies, continued from page 1)*

Public health officials should keep in mind the following safety tips and share these with the public during the bait drop:

- Know what the bait looks like. They are 1.25 x 1.25 x .75 inches in size, brown and square in shape. The vaccine packet is inside a hard fishmeal polymer shell.
- Instruct children to leave the baits alone.
- Keep dogs and cats inside or on leashes at least a week after your area is baited. It is important that raccoons have every opportunity to eat the baits.
- Do not attempt to take a bait away from your pet; you may be bitten.
- If baits are found in areas frequented by pets or children, toss them into deeper cover. Damaged baits can be disposed of in trash. It is recommended that anyone handling baits wear gloves.
- If a person is exposed to the actual vaccine (red liquid), wash with soap and water any areas of the skin that came into contact with the vaccine.

For more information on ORV, RSR active surveillance, and rabies visit the IDEP rabies webpage at <http://www.wvdhhr.org/bph/oehp/sdc/a-z/a-z-rabies.htm>, or call 304-558-5358. ☒

**West Virginia Bureau for Public Health  
Division of Surveillance and Disease Control**

## Mid-Year 2004 HIV/AIDS Surveillance Update

See county by  
county distribution  
of HIV and AIDS  
cases on page 5.

West Virginia AIDS and HIV Infection Cases by Age Group, Gender, Race and Risk Behavior Cumulative through June 30, 2004*						
Characteristic	AIDS		HIV		Total	
	#	%	#	%	#	%
<b>Age Group~</b>						
Under 5	9	1	2	<1	11	1
5-12	2	<1	0	0	2	<1
13-19	11	1	35	5	46	2
20-29	230	17	262	36	492	24
30-39	589	43	269	37	858	41
40-49	376	28	125	17	501	24
50 and Over	142	10	33	5	175	8
<b>Total</b>	<b>1359</b>	<b>100</b>	<b>726</b>	<b>100</b>	<b>2085</b>	<b>100</b>
<b>Gender</b>						
Male	1151	85	504	69	1655	79
Female	208	15	222	31	430	21
<b>Total</b>	<b>1359</b>	<b>100</b>	<b>726</b>	<b>100</b>	<b>2085</b>	<b>100</b>
<b>Race</b>						
White	1071	81	411	59	1482	71
Black	269	18	288	37	557	27
Other/Unknown	19	1	27	4	46	2
<b>Total</b>	<b>1359</b>	<b>100</b>	<b>726</b>	<b>100</b>	<b>2085</b>	<b>100</b>
<b>Risk Behavior</b>						
<b>Adult</b>						
MSM	739	55	295	41	1034	50
IDU	212	16	149	21	361	17
MSM/IDU	74	5	20	3	94	5
Coagulation Disorder	40	3	7	1	47	2
Heterosexual Contact	146	11	130	18	276	13
Transfusion/Transplant	35	3	6	1	41	2
No Identified Risk/Other^	102	8	117	16	219	11
<b>Subtotal</b>	<b>1348</b>	<b>100</b>	<b>724</b>	<b>100</b>	<b>2072</b>	<b>100</b>
<b>Pediatric</b>						
Coagulation Disorder	1	11	0	0	1	8
Mother HIV Positive	10	89	2	100	12	92
<b>Subtotal</b>	<b>11</b>	<b>100</b>	<b>2</b>	<b>100</b>	<b>13</b>	<b>100</b>
<b>Total Adults &amp; Pediatrics</b>	<b>1359</b>	<b>100</b>	<b>726</b>	<b>100</b>	<b>2085</b>	<b>100</b>

**MSM = Men having Sex With Men; IDU = Injecting Drug User**

\* AIDS data includes April 1984 through June 30, 2004, and  
HIV data includes January 1989 through June 30, 2004.

^ Other risk behavior includes cases reported with no risk  
identified that have been closed to follow-up.

~ Age group intervals depicted in the table above may not be uniform due to:

- a) Small number of cases in the under 13 age groups.
- b) Cases twelve years of age and under are pediatric cases.
- c) 13-19 being the adolescent age group.

**Note:** Percent in columns may not add up to 100% due to rounding.



(LaCrosse, continued from page 2)

23 cases of LaCrosse encephalitis were reported in West Virginia in 2003. This is below that average number of cases reported from 1999-2003. However, LaCrosse tends to cycle over a period of years displaying peaks and troughs (See Figure 3). Therefore, there is an urgent need to educate the public about the danger of LaCrosse encephalitis and remain vigilant for indications of increasing cases of LaCrosse encephalitis in West Virginia.

LaCrosse encephalitis is a serious problem in West Virginia with potential for life-long effects in previously healthy children, but it is preventable. The public should be educated with the following messages:

- Get rid of mosquito breeding sites, including old tires and any containers that can collect water.
  - Fill in ditches, or make sure the water drains freely.
  - Inspect property for treeholes, and consult an arborist about filling those holes.
  - Drain birdbaths at least once a week.
  - Clean gutters regularly.
  - Use mosquito repellants containing DEET, and follow the label's instructions.
- Wear long sleeved shirts and long pants when you are outdoors.
- Make sure doors and screens are bug tight.
- Contact your doctor if you feel ill. ☒

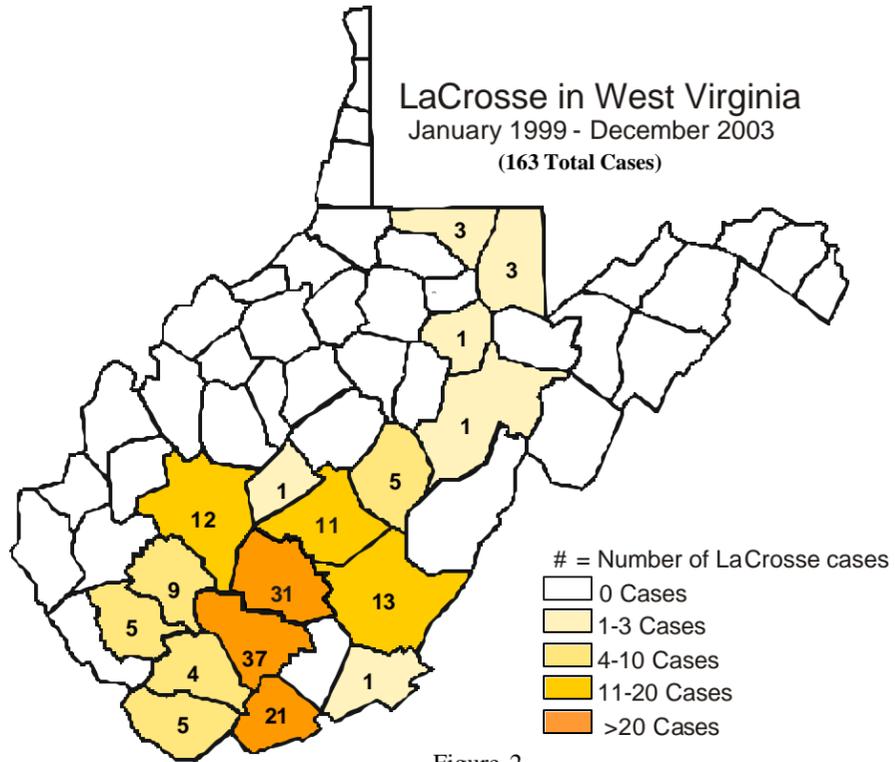


Figure 2

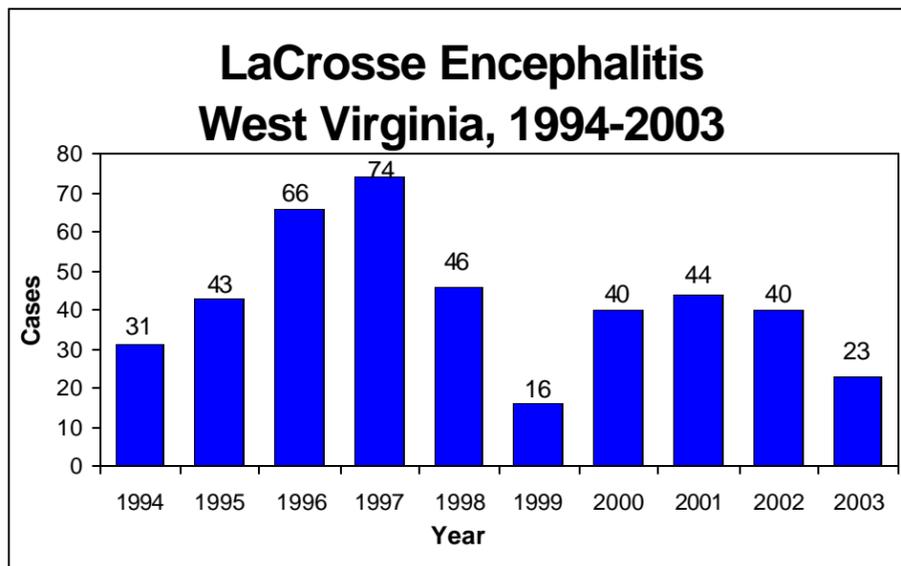


Figure 3

The **West Virginia EPI-LOG** is published quarterly by the West Virginia Department of Health and Human Resources, Bureau for Public Health, Office of Epidemiology & Health Promotion, Division of Surveillance and Disease Control. Graphic layout by Chuck Anziulewicz. Please call the Division of Surveillance & Disease Control at (304) 558-5358 if you need additional information regarding any article or information in this issue, or if you have suggested ideas you would like to contribute for a future issue.

**West Virginia Bureau for Public Health**  
**Division of Surveillance and Disease Control**