



West Virginia EPI-LOG

A quarter-century of HIV/AIDS

WV World AIDS Day observances serve as reasons for reflection

December 1, 2005, marked the 17th annual observance of World AIDS Day, a time to refocus our attention and strengthen our commitment to fighting AIDS. Community-based organizations (CBOs) across West Virginia observed World AIDS Day with a variety of memorials and information displays.

At Concord College in Athens and at Bluefield State College in Bluefield, information tables and displays were set up in student union buildings.

In Beckley a candlelight vigil and march took place at Mountain State University, and a section of the [NAMES Project](#) AIDS Memorial Quilt was also on display.

In Charleston a candlelight memorial and reading of names took place at the [Living AIDS Memorial Garden](#).



Candlelight memorials, like this one in Daytona Beach, Florida, were held in thousands of locations around the world on World AIDS Day, 2005

(See AIDS, page 6)

Statewide Disease Facts & Comparisons

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Division of Surveillance
and Disease Control

IN THIS ISSUE:

- COVER STORY:
World AIDS Day
retrospective
- Oral rabies
vaccination project
update (page 2)
- 2005 year-end
HIV/AIDS surveill-
ance data (page 4)

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Joe Manchin III, Governor
Martha Walker, Secretary (DHHR)

UPDATE:

West Virginia's Oral Rabies Vaccination project

Rabies is a preventable viral disease of mammals most often transmitted through saliva from the bite of a rabid animal. In the United States and other developed nations, rabies is primarily a disease of wildlife (figure 1). Domestic animals account for less than 10% of the reported rabies cases, with cats, cattle, and dogs most often reported rabid. Raccoons have been recognized as a reservoir for rabies in West Virginia since the late 1970's, when an outbreak (epizootic) on the West Virginia/Virginia border occurred due to the translocation of raccoons for hunting purposes from the southeast. Since that time, raccoon-strain rabies (RSR) has accounted for a large proportion of the animal rabies cases in West Virginia reported to the Centers for Disease Control and Prevention (CDC) annually.

Since the fall of 2000, West Virginia has participated in a multi-state Oral Rabies Vaccination (ORV) project which is led by the United States Department of Agriculture (USDA) Wildlife Services. This project has the primary goal of halting the epizootic spread of RSR in North America.

West Virginia conducts active and passive rabies surveillance to track the progress of rabies in the state, as well as to evaluate and support the ORV project. Although all counties in West Virginia conduct passive surveillance by submitting suspect rabid animals to the state lab for rabies testing if there has been a human or domestic animal exposure, 29 counties conduct active surveillance along the leading edge of the RSR epizootic. These

counties submit a brainstem sample of raccoons, skunks, foxes, and coyotes exhibiting unusual behavior such as rabies symptoms or those animals that are found dead. These samples were tested using the direct fluorescent antibody method at the Office of Laboratory Services (OLS). With each animal submitted, the counties also provided the GPS coordinates of the location and county where the animal was found, and the species of the animal. With this information, the distribution of RSR in West Virginia can be tracked by species and location.

West Virginia tested 1,373 animals at OLS in 2005, resulting in 75 positives reported to the CDC for 2005. Of the 75 positive animals, there were 34 (45%) raccoons, 18 (24%) skunks, 6 (8%) foxes, 6 (8%) bats, 1 (1%) bobcat, 1 (1%) deer, 6 (8%) cats, 2 (3%) dogs, and 1 (1%) sheep. Through the passive surveillance system, 625 samples were submitted for testing. Of the 455 submitted for human exposures, 19 (4.2%) were reported positive and of the 170 submitted for animal exposures, 36 (21.2%) were reported positive. Active surveillance accounted for 748 of the submissions in 2005 with 20 (2.7%) reported positive. Wild animals accounted for 66 (88%) of the 75 reported cases of rabies in 2005. Animals tested for RSR are raccoons, skunks, foxes and coyotes. Figure 2 shows the number of surveillance animals tested by county with the number of positive results.

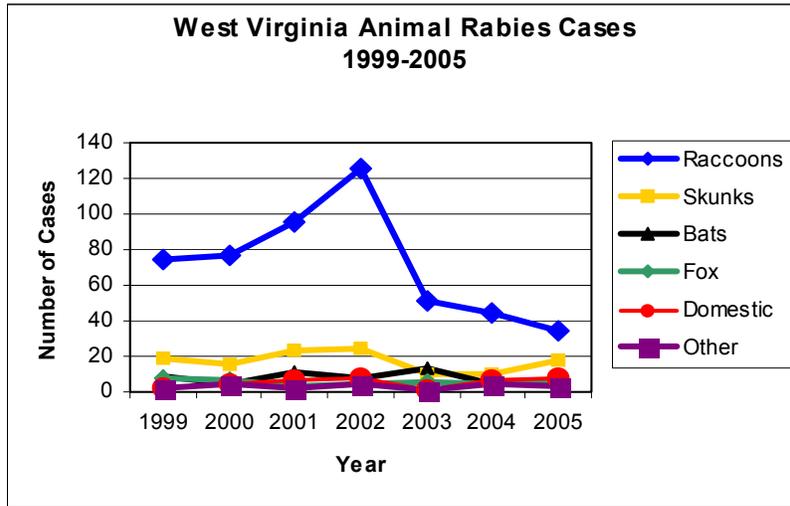


Figure 1

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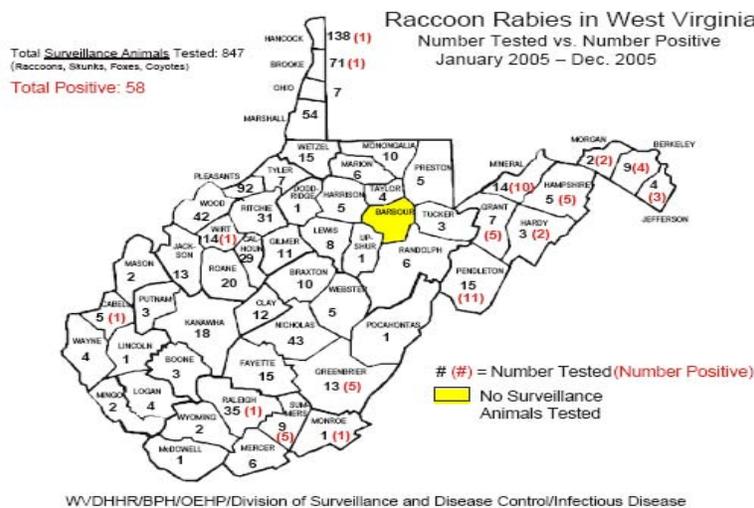


Figure 2

(See Rabies, page 3)

(*Rabies, continued from page 2*)

Figure 3 shows the number of animal rabies cases over the last 7 years. There has been a significant drop in the number of cases starting in 2003. This surveillance data can be broken into three areas of the state: 1) the active surveillance counties (29 counties in the middle of the state); 2) the eastern counties (20 counties east of the surveillance zone); 3) and the western counties (6 counties west of the ORV zone that have not identified RSR within their borders). Tables 1a, 1b, and 1c below display the three areas over a three year period. The active surveillance zone shows a significant decrease in the percent positive during the three year period, with a chi square for trend of 5.555 (p=0.01842). Raccoons showed a significant decrease over the three years with a chi square for trend of 6.670 (p=0.00980). The area with the highest percentage of positive rabies animals is located east of the ORV or active surveillance zone. The western counties have no RSR positives for the three years shown (the two positive were both bat strain rabies).

Local epizootology is an important factor in the handling of human or domestic animal exposures. Analyzing the rabies data by zones may help the local health departments manage exposures more effectively in their area.

The number of animals submitted for testing over the three year period was comparable in all zones, but the percentage of positive cases declined only in the active surveillance zone. This could be an indication that the ORV drop may have had some effect on RSR in that area; however, other factors could have influenced

these results, such as surveillance practices or raccoon population density.

Surveillance is not sufficiently specific; for example, if nuisance animals are submitted, the denominator increases, thus lowering the percent positive. The last factor to consider is the effect of a lower raccoon population density. Since raccoons are the main reservoir of rabies in West Virginia, a decrease in the population density of raccoons would result in decreased rabies transmission.

There are several things local health departments in the active surveillance zone can do to improve surveillance data quality. One is to submit 8 suspect rabies specimens to OLS every month for rabies testing. These submissions should be animals that have odd behavior indicative of rabies or animals that are found already dead. Animals that are put down due to nuisance calls or those that are trapped for sport should not be submitted to OLS for testing, unless there has been an exposure. If there is an exposure, the animal's head should be submitted rather than a brainstem specimen. With each submission, the county should provide the species, the county, and GPS coordinates where the animal is found. These practices help in the evaluation of the efficacy of the ORV drop on RSR in West Virginia.

The Division of Surveillance and Disease Control will continue to monitor animal rabies cases in West Virginia as well as participate in the 2006 ORV drop in the fall.

Other rabies resources including surveillance data and brochures on ORV can be found at the Infectious Disease Epidemiology Program rabies website: <http://www.wvdhhr.org/idep/a-z/a-z-rabies.asp>. 

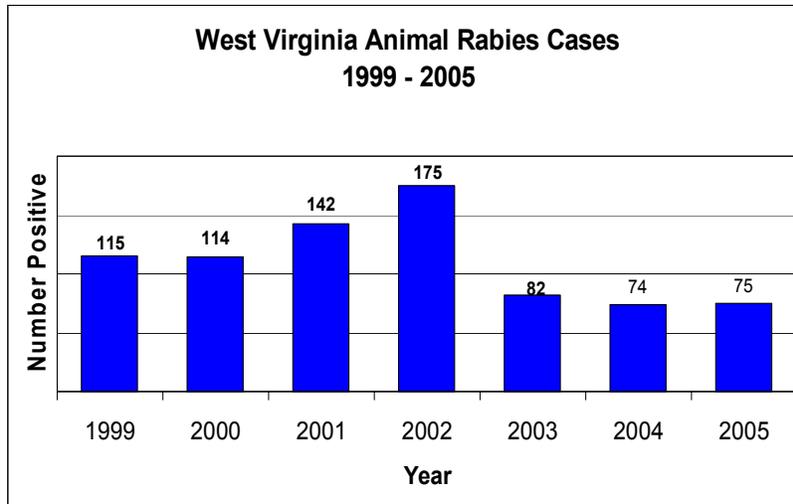


Figure 3

Table 1a. Summary of January-December 2005 Rabies Surveillance Data

	Active Surveillance Counties		Eastern Counties		Western Counties		Total	
	# Tested	# Positive (%)	# Tested	# Positive (%)	# Tested	# Positive (%)	# Tested	# Positive (%)
Raccoons	647	3 (0.5)	84	31 (37)	25	0 (0)	756	34 (4)
Skunks	17	0 (0)	24	18 (75)	0	0 (0)	41	18 (44)
Fox	30	1 (3)	10	4 (40)	3	1 (33)	43	6 (14)
Covote	7	0 (0)	0	0 (0)	0	0 (0)	7	0 (0)
Bat	44	4 (9)	58	2 (3)	12	0 (0)	114	6 (5)
Other	177	0 (0)	187	11 (6)	48	0 (0)	412	11 (3)
Total	922	8 (1)	363	66 (18)	88	1 (1)	1373	75 (5)

Table 1b. Summary of January-December 2004 Rabies Surveillance Data

	Active Surveillance Counties		Eastern Counties		Western Counties		Total	
	# Tested	# Positive (%)	# Tested	# Positive (%)	# Tested	# Positive (%)	# Tested	# Positive (%)
Raccoons	695	13 (2%)	84	32 (38%)	27	0 (0%)	806	45 (6%)
Skunks	25	1 (4%)	16	9 (56%)	2	0 (0%)	43	10 (23%)
Fox	46	0 (0%)	15	4 (27%)	5	0 (0%)	66	4 (6%)
Covote	8	0 (0%)	1	0 (0%)	0	0 (0%)	9	0 (0%)
Bat	70	4 (6%)	34	0 (0%)	13	0 (0%)	117	4 (3%)
Other	201	3 (1%)	276	8 (3%)	44	0 (0%)	521	11 (2%)
Total	1045	21 (2%)	426	53 (12%)	91	0 (0%)	1562	74 (5%)

Table 1c. Summary of January-December 2003 Rabies Surveillance Data

	Active Surveillance Counties		Eastern Counties		Western Counties		Total	
	# Tested	# Positive (%)	# Tested	# Positive (%)	# Tested	# Positive (%)	# Tested	# Positive (%)
Raccoons	676	15 (2.2%)	71	36 (51%)	7	0 (0%)	754	51 (7%)
Skunks	22	0 (0%)	17	10 (59%)	0	0 (0%)	39	10 (26%)
Fox	51	2 (4%)	8	4 (50%)	1	0 (0%)	60	6 (10%)
Covote	3	0 (0%)	1	0 (0%)	0	0 (0%)	4	0 (0%)
Bat	82	7 (8.5%)	32	5 (16%)	16	1 (6%)	130	13 (10%)
Other	217	0 (0%)	230	2 (1%)	49	0 (0%)	496	2 (0.4%)
Total	1051	24 (2.3%)	359	57 (16%)	73	1 (1.4%)	1483	82 (5.5%)

West Virginia AIDS and HIV Infection Cases by Age Group, Gender, Race and Risk Behavior Cumulative through December 31, 2005*						
Characteristic	AIDS		HIV		Total	
Age Group~	#	%	#	%	#	%
Under 5	9	1	4	1	13	1
5-12	2	<1	0	0	2	<1
13-19	12	1	38	5	50	2
20-29	229	16	247	35	476	23
30-39	596	43	247	35	843	40
40-49	392	28	119	17	511	24
50 and Over	155	11	42	6	197	9
Total	1395	100	697	100	2092	100
Gender						
Male	1173	84	484	69	1657	79
Female	222	16	213	31	435	21
Total	1395	100	697	100	2092	100
Race						
White	1105	79	398	57	1503	72
Black	267	19	276	40	543	26
Other/Unknown	23	2	23	3	46	2
Total	1395	100	697	100	2092	100
Risk Behavior						
Adult						
MSM	764	55	292	42	1056	51
IDU	211	15	142	20	353	17
MSM/IDU	75	5	17	2	92	4
Coagulation Disorder	41	3	5	1	46	2
Heterosexual Contact with Known Risk	152	11	120	17	272	13
Heterosexual Contact with Unknown Risk	35	3	34	5	69	3
Transfusion/Transplant	35	3	6	1	41	2
No Identified Risk/Other**	71	5	77	11	148	7
Subtotal	1384	100	693	100	2077	100
Pediatric						
Coagulation Disorder	1	9	0	0	1	7
Mother HIV Positive	10	91	4	100	14	93
Subtotal	11	100	4	100	15	100
Total Adults & Pediatrics	1395	100	697	100	2092	100

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

* AIDS data includes April 1984 through December 31, 2005;

HIV data includes January 1989 through December 31, 2005.

** Other risk behavior includes cases reported with no risk identified due to death or person moving away. These cases are closed due to inability to follow-up.

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

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

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

(See county-by-county data, next page)

(AIDS, continued from page 1)

And in the eastern panhandle, free HIV testing was offered at Shepherd College, and displays were set up at several local health care facilities.

No one can say for certain when the HIV/AIDS epidemic began. We may select different places on a [timeline](#) and say, "This is when the first known AIDS-related deaths occurred," or, "This is when researchers identified the virus that causes AIDS." We have a natural desire to pin down such dates.

But perhaps the year 2006 is significant in that it marks a quarter-century since the following item appeared in a 1981 issue of *Morbidity and Mortality Weekly Report (MMWR)*:

"In the period October 1980-May 1981, 5 young men, all active homosexuals, were treated for biopsy confirmed *Pneumocystis carinii* [PC] pneumonia at 3 different hospitals in Los Angeles, California. Two of the patients died. All 5 patients had laboratory-confirmed previous or current cytomegalovirus infection and candidal mucosal infection..."

Another issue of MMWR, barely a month later, noted the following:

"During the past 30 months, Kaposi's sarcoma (KS), an uncommonly reported malignancy in the United States, has been diagnosed in 26 homosexual men." The article also indicated that "physicians should be alert for Kaposi's sarcoma, PC pneumonia, and other opportunistic infections associated with immunosuppression in homosexual men."

In the 25 years since those first dryly-written reports, the HIV/AIDS epidemic's impact on our global culture cannot be underestimated. Whereas many persons involved in AIDS awareness and prevention can remember when the crisis first began, an entire generation of younger people has grown up in a world in which HIV/AIDS has always been a grim reality.

Perhaps it is fitting, then, that many of these same young people have become involved in what is commonly called Peer Education. In West Virginia, the HIV/AIDS and STD Program's [Peer Education Project](#) is an informal educational method used as a preventive strategy to limit the spread of HIV/AIDS and other sexually transmitted diseases. It enables one peer to educate his or her fellow peers, providing important prevention messages and education. It enables peers to build and develop skills for public speaking, teamwork, leadership and the ability to make positive changes in behaviors and attitudes. This is part of the good news.

Another positive development is that opportunities for HIV antibody testing in high-risk populations are expanding across West Virginia. For many years HIV tests could only be done with blood samples taken by trained phlebotomists. But the advent of the [OraSure](#) oral fluid collection device in 1994, the HIV testing process can be far less painful and invasive than before, and licensed doctors, nurses, and social workers in West Virginia are now being

trained how to provide [counseling and testing](#) outside of health care facilities. At some point in the foreseeable future we also anticipate the debut of the [OraQuick](#) rapid antibody test in West Virginia; this would allow clients to learn their HIV status within half an hour.

A quarter-century of AIDS-related medical research has contributed immeasurably to our knowledge of virology, epidemiology and other scientific disciplines. The current state of HIV/AIDS treatment and care is also better than ever. At present there are 24 brand-name antiretroviral drugs on the market; these in turn are being used in over 40 differing combinations for the treatment of persons living with advanced HIV infection, and the mortality rate of AIDS has fallen. This also is part of the good news.

The downside of this progress can be summed up in one word: APATHY. While the AIDS mortality rate has declined due to advances in treatment, the rate of new HIV infections in the United States remains steady at roughly 40,000 cases per year. As HIV/AIDS has become a more chronic, manageable condition, the epidemic no longer makes news headlines as it once did, and too many people underestimate the threat that still exists.

Perhaps this is why the theme for the 17th annual observance of World AIDS Day on December 1 was "Keep the Promise." This theme is intended as an appeal to governments around the world to keep the promises and targets set forth during the UNGASS Declaration of Commitment, signed by the 189 member nations of the United Nations in June 2001. These governments committed themselves to taking action on HIV and AIDS in the fields of leadership, prevention, care and support, treatment, and human rights. The targets set for the end of 2005 include:

- Reduce HIV prevalence by 25% among men and women aged 15-24 in the most affected countries.
- Ensure that at least 90% of young people aged 15 to 24 have access to the information, education and services necessary to develop the life skills required to reduce their vulnerability to HIV infection.
- Reduce the proportion of infants infected with HIV by 20% by increasing access to services which prevent mother-to-child transmission.
- Increase annual spending on HIV and AIDS to \$7-10 billion in low and middle-income countries and those countries experiencing or at risk of experiencing rapid expansion of HIV epidemics.
- Provide access to antiretroviral treatment to 3 million people living with HIV in developing and transitional countries by the end of 2005.

As one HIV prevention specialist with the West Virginia Bureau for Public Health Division of Surveillance & Disease Control puts it: "Our work is cut out for us." 

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.