



West Virginia

EPI-LOG

Rabies vaccination project marks three years

2003 marked West Virginia's 3rd year in the Oral Rabies Vaccination (ORV) Project. This multi-state project is lead by United States Department of Agriculture (USDA) Wildlife Services and has the primary goal of halting the epizootic spread of Raccoon Strain Rabies (RSR) in North America. In the late-1970s, raccoons incubating RSR were transported from Florida to the Maryland/Virginia/West Virginia border for hunting purposes. These raccoons began an outbreak of rabies in terrestrial wildlife all along the East Coast (See map below, *The Expanding Epizootic of Raccoon Rabies, Eastern United States, 1977-1996*). Although all mammals are suscep-



tible to rabies, this particular strain of rabies, RSR, is most adapted to raccoons, and most cases of RSR occur in raccoons. Since raccoon rabies was first identified within our borders in 1977, the epizootic has extended throughout the eastern panhandle, and across the continental divide. This epizootic now threatens the Ohio River valley leading to the Midwestern United States; and the New River Gorge, leading to Charleston. The Oral Rabies Vaccination Project uses an oral vaccine to immunize raccoons along the leading edge of the RSR epizootic. This vaccine is distributed in West Virginia during

(See *Rabies*, page 3)

Statewide Disease Facts & Comparisons

A quarterly publication of the West Virginia Division of Surveillance and Disease Control

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

Perinatal hepatitis B vaccine: Giving babies a shot at life

What is the status of hepatitis B in West Virginia? Nationwide efforts continue to properly identify and immunize infants against hepatitis B. West Virginia health care professionals have been proactive in encouraging hepatitis B vaccinations, beginning at birth.

The WV Bureau for Public Health, Immunization Program's Perinatal Hepatitis B Coordinator conducted a survey of the 36 birthing facilities in the state to determine areas of concern and identify focal points for education. In 2002 and 2003, facilities were surveyed regarding the birth dose of hepatitis B to infants born in 2001 and 2002. Each facility was asked to identify if a written policy or standing order was implemented to offer and administer hepatitis B vaccine to newborns before discharge. The facilities were also asked if a policy was in place to ensure that infants born to hepatitis B surface antigen (HBsAg) positive mothers were given HBIG and hepatitis B vaccine within the first 12 hours after birth. The survey asked if a written policy was in place to ensure that infants born to mothers with unknown HBsAg status received the birth dose of hepatitis B vaccine. All 36 facilities completed the survey and provided the approximated number of births in the facility each year.

The results indicated 30% of the births occurred in eight of the 36 facilities which had a written policy to administer the first dose of hepatitis B vaccine before discharge, as recommended by the ACIP. In the 2002 survey, ten of the 36 facilities had no written policy or standing order and made no routine practice of offering or administering a birth dose of hepatitis B vaccine. In 2003, there was marked improvement with only three birthing facilities that continued to have no policy or standing orders in place. The majority of facilities had no written policy or standing orders but did have physicians who gave orders for their patients. In the 2002 survey, 19% of the physicians ordered vaccinations and in 2003 the number decreased to only 10% of the physicians ordering vaccinations for patients. The most dramatic change was in facilities with standing orders that administer hepatitis B vaccine before discharge. In 2002, only five facilities had standing orders and in 2003, the number

increased to 12 facilities, which provided for more than 30% of the births in West Virginia.

The second part of the survey addressed written policy to administer HBIG to infants of hepatitis surface antigen positive mothers, within 12 hours of birth. The 2002 survey reported 56% of the facilities had a policy in place, vaccinating approximately 63% of the birth cohort; this increased to 76% in 2003. Only 41% of the facilities had a policy to vaccinate infants born to mothers with unknown hepatitis B status in 2002, but this increased to 51% in 2003.

The surveys provided awareness to the state's providers regarding the once-common use of thimerosal in vaccines. In 1999 thimerosal was removed from vaccines. The Perinatal Hepatitis B Program distributed the latest information about the

removal of thimerosal and encouraged the resumption of the birth dose of hepatitis B after the 2002 survey. The surveys also reveal that many birthing facilities were failing to provide a birth dose of hepatitis B vaccine to newborns of mothers with unknown HBsAg status. The administration of the birth dose to **all** infants continues to be an area in which West Virginia is generally lacking, but particularly in regard to infants whose mother's HBsAg status is unknown.

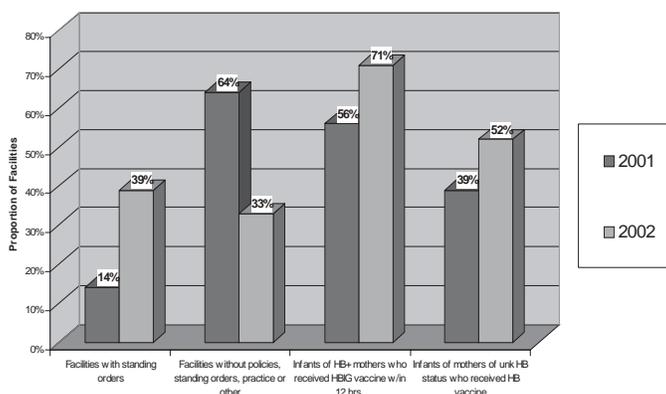
The Immunization

Program's perinatal hepatitis B efforts continue to focus on providing education to birthing facilities and physicians. Prenatal screening remains one of the most challenging activities in the prevention of the spread of hepatitis B. The program is currently preparing for the 2004 survey and the added concern of prenatal screening will be addressed.

West Virginia physicians and birthing facilities are improving the perinatal hepatitis B coverage levels but much work still needs to be done. The Bureau for Public Health, Immunization Program strives to assist providers in West Virginia in preventing the spread of hepatitis B to children, to identify HBsAg positive mothers, and to strongly encourage hepatitis B vaccinations at birth.

Give all babies a shot at life! ☒

Perinatal Hepatitis B Birth Survey Report 2003



Conducted by the West Virginia Department of Health and Human Resources, Bureau for Public Health, Division of

(*Rabies, continued from page 1*)

the late-summer or early-fall every year in the form of a plastic, vaccine-filled sachet surrounded by fishmeal bait that attracts raccoons. The strategy is to place an immune barrier between areas to the east that do have RSR and areas to the west that do not have RSR, thereby halting the westward expansion of RSR. West Virginia works in coordination with the USDA Wildlife Services and the states of Pennsylvania, Ohio, Maryland, Virginia and Tennessee to form the Appalachian Ridge Barrier. The illustration to the right shows a map of the 2003 Appalachian Ridge Barrier completed on October 7, 2003. This year's vaccine distribution is scheduled to begin out of West Virginia on August 9, 2004.

In addition to assisting with oral rabies vaccine distribution, West Virginia conducts both active and passive rabies surveillance to track the progress of rabies in the state and to evaluate the ORV barrier intervention. All counties in West Virginia conduct passive surveillance, submitting suspect animals for rabies testing if there has been a human or domestic animal exposure. This not only provides data on rabies activity in the state but also helps to insure that people and domestic animals exposed to rabid animals get

RSR. These counties submit raccoons, skunks, foxes and coyotes exhibiting signs of rabies or unusual behavior, and those that are found dead. This allows for a more comprehensive picture of the RSR epizootic and helps to track movement of the leading epizootic front.

Active surveillance during the year 2001 revealed 7 rabies positive raccoons in 4 counties where rabies had not been known previously (3 Raleigh, 2 Webster, 1 each in Fayette and Nicholas). In 2002, for the first time, a positive raccoon was found in Braxton County through passive surveillance. RSR did not increase its expansion into any new counties in West Virginia during 2003, and there was a significant decrease in positive animals tested at the West Virginia State Office of Laboratory Services (OLS). The figure below is a graph of animal rabies in West Virginia from 1999 through 2003. This graph illustrates that only 82 positive animals were identified in West Virginia during 2003 year. This number is compared with 175 positive animals in 2002 and 142 positive animals in 2001.

A drop in animal rabies cases can be due to many factors. One possible explanation is that natural factors, such as an epizootic of distemper or a recent decrease in food supply, caused a decrease in 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. Another possibility is that the ORV campaign in West Virginia is beginning to take a toll on RSR. Our data supports that both of these factors could have worked together to

decrease rabies positives in 2003.

2003 was also an important year for RSR on a national scale, because the first documented human case of rabies attributable to RSR occurred in Virginia during 2003. The case was not diagnosed as RSR until 3 months after the patient's death. The patient was a previously

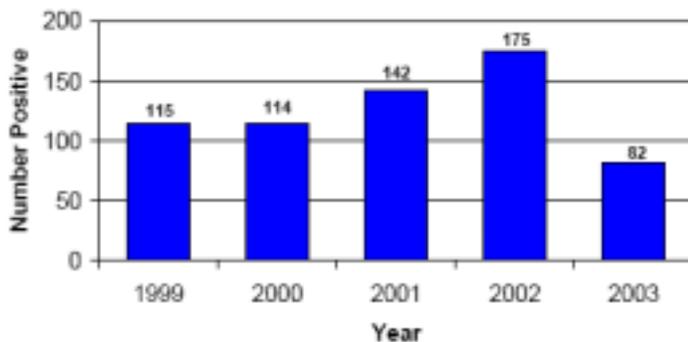


healthy man in his mid-twenties with no known risk factors for exposure to rabies. An extensive investigation, conducted by the Virginia Department of Health, going back 6 years found no known exposure to raccoons or other animals. The case did not work outdoors and did not like animals. This case underscores the importance of educating providers to report possible human rabies exposures/animal bites to their local health departments so that appropriate post-exposure prophylaxis and animal testing can be initiated in a timely manner. In addition, it gives even more importance to RSR as a serious public health threat.

During 2004, West Virginia will continue to monitor Raccoon Strain Rabies and participate in the Oral Rabies Vaccination Project. We hope that the number of animal rabies cases will remain low again this year and to see a continued halt of RSR expansion in the years to come.

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/bph/oehp/sdc/a-z/a-z-rabies.htm>. ☒

West Virginia Animal Rabies Cases
1999-2003



proper post-exposure prophylaxis. In addition to passive surveillance, 29 counties near the leading edge of the RSR epizootic conduct active surveillance for

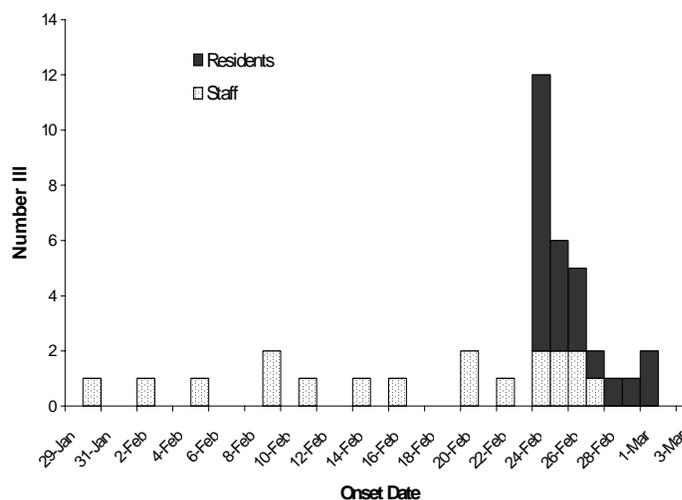
Gastroenteritis outbreak sickens staff, residents at Mason County facility

On February 25, 2004, the Infectious Disease Epidemiology Program (IDEP) received a report of an outbreak of gastrointestinal illness. The outbreak was identified at a long-term care facility in Mason County, and reported by the Mason County Health Department. The illness was characterized by vomiting and diarrhea among staff and residents. Healthcare facility and health department staff constructed a line list of ill persons. Onset of illness began in late January 2004 (Figure 1), among staff. The epidemic curve shows typical person-to-person transmission from January 30 – February 24, 2004, at which time it exploded in the patient population. The dramatic rise in the number of cases is consistent with a single source of exposure, which may have been spread by person-to-person transmission, contamination of a food item, or contamination of the environment.

Stool specimens collected from ill persons were sent to the Centers for Disease Control and Prevention (CDC) to test for viral pathogens. Two of 10 specimens tested at CDC were positive for Norovirus, a common cause of gastroenteritis outbreaks that is easily transmitted between persons. IDEP and the Mason County Health Department recommended that ill

residents be placed in the same rooms, ill staff stay at home until symptoms had resolved, all staff be reminded of proper hand washing procedures, and all surfaces in the facility be cleaned with a 10% bleach solution. The healthcare facility staff followed the recommendations given, and no further cases were observed after March 1, 2004. ☒

Onset of Gastroenteritis by Day, Long-Term Care Facility, Mason County 2004 (N=40)



Highlights from the 2003 West Virginia Conference on Infectious Diseases, October 30-31, 2003, Charleston Area Medical Center, Memorial Division



National Public Radio medical correspondent Laurie Garrett spoke of her experiences covering the SARS epidemic in China.



Ram Nambiar (left) moderated a panel discussion of food borne illness with Bala Swaminathan (middle) and Alicia Fry (right).

Highlights from the 2003 West Virginia Conference on Infectious Diseases, October 30-31, 2003, Charleston Area Medical Center, Memorial Division



The threat of zoonotic diseases was the topic of a panel discussion that included (L-R) Dr. Jane Rooney, David Wray, Dr. Jeff Bender, Dr. James McJunkin, Mickey Plymale, and Dr. Joe Starcher.



A rapt audience fills the auditorium of the Robert C. Byrd Health Sciences Center of West Virginia University/Charleston Division, at CAMC Memorial.



Dr. Jerry Bouquot (Maxillofacial Center for Education and Research, Morgantown, WV) talked about human papillomavirus and its role in oral cancers.



A panel discussion about infectious diseases and the public health infrastructure included (L-R) Dr. Cathy Slemp, Laurie Garrett, Dr. Carl Taylor, Dr. Rosemarie Cannarella, Kay Shamblin, RN, and Dr. Henry Taylor.

*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**