VIRGINIA
EPIDEMIOLOGY BULLETIN

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April 2004 Volume 104, No. 4

Rabies Exposures in Animals

*For information about rabies exposures in **humans**, see the March 2004 Virginia Epidemiology Bulletin.*

Rabies is an acute and deadly infection of the central nervous system caused by a virus present in the saliva and nervous system tissue of infected mammals. Rabies is transmitted between animals only when the virus is introduced into bite wounds, open cuts in skin, or onto mucous membranes. Managing rabies exposures in animals can be even more complicated than in humans, since it depends on the species involved, the animals' vaccination histories and the circumstances of the exposure. As a result, this article will clarify some of the finer points of assessing and managing rabies exposures in animals for Virginia practitioners.

Guidance and Authority

The *Code of Virginia* and the Virginia Department of Health (VDH) Rabies Control Guidelines (http://www.vdh.virginia.gov/epi/rabguide.doc) each specify aspects of the strategies to be used for the management of rabies in Virginia. In addition, the National Association of State Public Health Veterinarians, Inc. (NASPHV) produces the *Compendium of Animal Rabies Prevention and Control* each year. While the compendium can be used as a resource for decision-making, if there is a conflict between the Compendium and the *Code of Virginia* or the VDH Guidelines, the *Code* or the Guidelines should be followed.

The Health Director for each district has the authority to determine how exposures to or from animals are managed. Therefore, coordinating care with the local health department staff is critical to ensuring that the appropriate actions are taken following a potential rabies exposure.

Strategies for Protecting Animals

The risk of rabies in animals can be reduced dramatically through vaccination, as well as by preventing exposures to wild (potentially rabid) animals through animal control. For example, dog-to-dog transmission has been virtually eliminated and laboratory-confirmed cases of rabies in dogs for Virginia have dropped from 137 cases in 1947, to just 4 cases in 2002 (comparable US figures: 6,949 in 1947; 99 in 2002).

Preexposure Prophylaxis

Rabies vaccines are licensed by the US Department of Agriculture (USDA) for each individual species after fulfilling a number of criteria including successfully completing challenge testing. Annual and triennial vaccines must each pass challenge testing for the respective time periods. To date, injectable rabies vaccines have only been approved for dogs, cats, ferrets, horses, cattle and sheep.

Dogs, Cats, Ferrets, and Livestock

The *Code of Virginia* specifies that all dogs and domesticated cats must receive rabies vaccine prior to attaining 4 months of age. However, most vaccines are licensed for use in dogs and cats as early as 3 months of age—one monovalent and several combination vaccines can be used in cats as early as 8 weeks of age. Vaccinating at an early age may be an important consideration for circumstances (e.g., outdoor puppies and kittens) where there is a high risk for exposure.

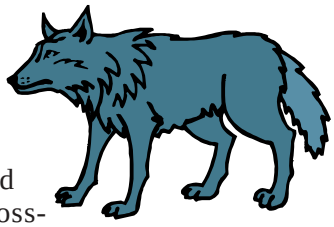
For all rabies vaccines, a peak rabies antibody titer is reached within twenty-eight (28) days after primary vaccination and the animal can then be considered immunized. A booster vaccination should be administered one year later, followed by booster vaccinations annually or every 3 years thereafter (depending on the specific rabies vaccine). If a previously vaccinated animal is overdue for a booster, it should be revaccinated with a single dose of vaccine. Because a rapid anamnestic response is expected, an animal that had previously received rabies vaccine at any time can be considered currently vaccinated immediately after a booster vaccination.

In This Issue:

Rabies antibody titers are indicative of an animal's response to vaccine or infection. But titers are not indicators of protection. Therefore, evidence of circulating rabies virus antibodies should **not** be used as a substitute for current vaccination in managing rabies exposures or determining the need for booster vaccinations.

Although the *Code of Virginia* does not require that ferrets be vaccinated, two vaccines are labeled by the USDA for use in ferrets and their use should be encouraged. Consideration should be given to vaccinating livestock that are particularly valuable or that might have frequent contact with humans, such as animals at petting zoos, fairs, and other public exhibitions. Horses traveling interstate should also be currently vaccinated against rabies.

Hybrid Animals



Hybrids are the offspring of wild animals cross-bred to domestic animals—for example wolves and dogs. The efficacy of injectable rabies vaccination for hybrids has not been established, and no vaccine is licensed for use in these animals. Veterinarians who choose to vaccinate hybrids should be aware of their liability insurance carrier's requirements regarding 'extra label' use. The owner should be informed that appropriate studies have not been done to show the effectiveness of the vaccine and that public health officials likely will not recognize the animal as vaccinated if it is exposed to rabies or it bites a human. This information should be noted in the animal's record and initialed by the owner.

Other Wild Animals

An oral vaccine is licensed for raccoons and coyotes. However, the vaccine is not available to individual providers—it can only be used by government officials for mass immunization programs. Raboral VR-G®, (Merial, Ltd.) is made of live vaccinia virus that has been genetically altered to carry the rabies glycoprotein, a surface protein that stimulates immunity. The vaccine is formulated as a red liquid contained in a plastic packet inside a block of bait made of fish meal and fish oil. Baits are primarily dropped by plane in areas where animals will find and eat the bait containing the vaccine. When a raccoon breaks the vaccine packet in its mouth the vaccinia virus infects the animal, stimulating an immune response to the rabies virus surface protein. In Virginia this strategy has been used briefly in a small area of Fairfax County and twice in Southwest Virginia as part of a USDA program to create a vaccinated barrier from the Great Lakes to the Gulf Coast and thereby prevent the westward expansion of raccoon rabies. The southwest program will continue in 2004 with baiting scheduled for early August. Healthcare providers should be aware that animals and humans could come into contact with the bait and possibly with the vaccine itself.

The oral rabies vaccine is not harmful to wild animals or pets—the vaccine cannot cause rabies. Although the exposure risk to humans is very slight, people with certain medical conditions, such as an immunodeficiency problem, may be prone to infection from the live vaccinia virus if the vaccine were to get into an open wound. Therefore, people should **not** try to retrieve the bait from a pet that has found a bait packet. A person who is exposed to the vaccine should use soap and water to wash any skin area exposed to the vaccine and contact the local health department.

Postexposure Management

Domestic animals that bite other domestic animals are not usually considered rabies suspects unless the exposing animal shows signs compatible with the disease. Any animal **potentially** exposed to rabies virus by a wild carnivorous mammal or a bat that is not available for testing should be regarded as having been exposed to rabies. Note that actually witnessing a bite or attack by a potentially rabid animal is NOT required to consider that an exposure has occurred. This is because infection could have occurred through mouth-to-mouth contact, or small wounds that are difficult to see.

Dogs, Cats, and Ferrets

Although rabies vaccines are among the most effective vaccines on the market, they do not provide 100% pre-exposure protection. Therefore, following an exposure, dogs, cats, and ferrets that are currently vaccinated should receive a booster dose of rabies vaccine immediately, and should be kept under the owner's control (i.e., under responsible supervision and not allowed to run loose) and observed for 45 days. Although extremely unlikely, if signs of rabies develop the animal should be evaluated by a veterinarian and the local health department should be notified immediately.

Unvaccinated dogs and cats potentially exposed to a rabid animal should be euthanized. If the owner is unwilling to have this done, Virginia law states that the animal must be placed in **strict** isolation (**NO human or animal contact**) for 6 months and vaccinated 1 month before release. **Six months isolation is required since this is the extent of the known incubation period for rabies in domestic animals.** The isolation facility must be approved by the local health department—plans for constructing a double-walled, roofed isolation pen can be found in the VDH Guidelines. Similar guidance is followed for unvaccinated ferrets. These precautions are required since protocols for the postexposure vaccination of previously unvaccinated domestic animals have not been validated, and there is evi-

dence that the use of vaccine alone will not prevent the disease.

Any dog, cat or ferret (vaccinated or unvaccinated) that bites a person must be confined for 10 days of observation. **The 10 day observation period is used because if virus is in the animal's saliva the animal will become symptomatic well within that time period—this provides ample time to start rabies postexposure prophylaxis, if necessary.** If the animal appeared ill at the time of the bite, or if it becomes ill during the 10-day observation period, it should be evaluated by a veterinarian for signs of rabies and reported immediately to the local health department. Because a vaccine reaction could be confused with early signs of rabies, rabies vaccination of the animal during confinement is not recommended.

Animals with expired vaccinations need to be evaluated on a case-by-case basis by the local health department in consultation with the Office of Epidemiology. Actions taken will depend on whether or not the exposing animal was observed, the types of injuries sustained, and the animal's vaccination history including the time since its most recent rabies vaccination. If not euthanized, these animals should receive a booster immediately.

The debate continues about whether wolves and wolf hybrids are closely related enough to dogs to manage them like dogs following a rabies exposure. Each situation will have to be evaluated individually and decisions made on the likelihood that the animal is part wolf, the degree of risk that an exposure took place, and in the case of bites to humans, the concurrence of the **victim** to have the animal euthanized and tested.

Livestock

All species of livestock are susceptible to rabies; cattle and horses are among the most frequently infected livestock. However, livestock are not usually at high risk for transmitting rabies. Livestock exposed to a rabid animal and currently vaccinated with a vaccine approved by the USDA for that species should receive a booster immediately and should be observed for 45 days. Unvaccinated livestock can be slaughtered immediately. Otherwise, the animal should be closely observed for 6 months. Any sale or translocation of livestock under observation would have to be approved by the local health department and the Virginia Department of Agriculture and Consumer Services (VDACS).

Other Animals

Wild carnivorous animals that expose a person or a domestic animal should be euthanized immediately. Confinement periods are not applicable for wild animals because the incubation periods and lengths of time that wild animals can transmit rabies prior to developing recognizable signs are not known. Animals maintained in USDA-licensed research facilities or accredited zoological parks should be evaluated on a case-by-case basis.

Diagnosis

When a rabies-suspect animal exposes a person or a domestic animal, transfer of the specimen (e.g., the animal's head) to a qualified laboratory for testing is a high priority. Since the Health Director for the district has authority for postexposure management, the local health department should always be notified of the need to submit specimens. In addition, the health department can speed testing since the Division of Consolidated Laboratory Services (DCLS) has a courier service that picks up specimens from many local health departments.

Euthanasia should be accomplished so as to maintain the integrity of the brain. Except in the case of very small animals such as bats, only the head or brain (including brain stem) should be submitted to the laboratory. Any animal or animal part being submitted for testing should be kept under **refrigeration** (not frozen or chemically fixed) during storage and shipping. Frozen brains can be tested, but it may take longer due to the time required for thawing the specimen.

Due to limited resources for testing, submitting animals that have not exposed a person or domestic animal for rabies testing should only be done under special circumstances, such as surveillance in the oral rabies vaccine area. Veterinarians who would like diagnostic testing done in the absence of a human or domestic animal exposure (e.g., to confirm a diagnosis) need to coordinate the submission through their nearest VDACS Animal Health Laboratory.

Testing for rabies in animal specimens involves a Direct Fluorescent Antibody (DFA) procedure. These tests should be done by a qualified laboratory, designated by the local or state health department in accordance with the established national standardized protocol for rabies testing. There are currently 4 laboratories in Virginia that can test animals for rabies:

- DCLS-Central
- DCLS-Southwest
- Fairfax District Health Department, and
- Norfolk District Health Department

Turn-around time for laboratory results is generally 24 hours. When the victim is a human, testing is done 7 days a week; when the victim is a domestic animal, testing is performed Monday through Saturday.

Accidental Human Exposure to Vaccine

All injectable rabies vaccines are made from inactivated virus. Therefore, human exposure to injectable animal rabies vaccines does not constitute a risk for rabies infection. Human exposure to vaccinia-vectored oral rabies vaccines should be reported to local health officials (see Other Wild Animals above).

Conclusions

Rabies is an acute and almost invariably fatal viral infection of the brain, and all mammals, including humans, are susceptible. Fortunately, effective methods for controlling rabies in domestic animals exist. If an animal is suspected of rabies it should be reported to the local health department. For further information about rabies in animals, consult the VDH website at http://www.vdh.virginia.gov/epi/rabies.asp, as well as the CDC rabies website http://www.cdc.gov/ncidod/dvrd/rabies/.

Submitted by: Suzanne Jenkins, VMD, MPH
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Virginia Public Health Week – Reducing Health Disparities

In celebration of National Public Health Week, Virginia declared April 5-11, 2004 **Virginia Public Health Week**. As part of its celebrations, the Virginia Department of Health (VDH) highlighted projects and interventions that work to reduce health disparities in communities.

Health disparities are differences that occur by gender, race and ethnicity, education level, income level, disability, geographic location and/or sexual orientation. Some health disparities are unavoidable, such as health problems related to a person's genetic structure. However, other health disparities are potentially avoidable, especially when they are related to socio-economic factors or access to medical care and information.

Just a few of the many VDH programs that work to reduce health disparities in our communities include those that focus on breast cancer and women's health, cardiovascular disease, diabetes, HIV and sexually transmitted diseases, and refugee/immigrant health.

Breast Cancer and Women's Health

Although African-American women in Virginia have a lower breast cancer incidence rate than white women (116/100,000 and 130/100,000, respectively), they have a higher death rate than white women (38/100,000 compared to 27/100,000). The Every Woman's Life program is a collaborative effort between the American Cancer Society, VDH and the Carilion Health System. This program is offered year round, and provides a network of over 200 healthcare providers to perform clinical breast exams, mammograms, pelvic exams, Pap tests and diagnostic tests for women enrolled in the program. Since 1997, the program has screened over 12,000 women. More than half of the women screened though the program have been members of a racial or ethnic minority. The program also partners with community-based organizations and employs outreach workers to provide grass roots education about the need for regular breast and cervical cancer screening. For example, through a partnership with Boat People S.O.S., the Every Woman's Life program is able to promote the message of early cancer detection to Vietnamese refugees and immigrants.

For more information about the Every Woman's Life program visit www.vahealth.org/breastcancer/factsheet.pdf.

Cardiovascular Disease

African-Americans have the highest cardiovascular (CV) mortality rate in the state: in 2001, CV mortality was 418.5/100,000 for African-Americans, compared to 309.8/100,000 for whites. One example of VDH's efforts to reach high-risk populations is its partnership with the Prospect Empowerment Center. Through the program, VDH provides grant funding to this statewide African-American faith-based organization, which reaches 300 churches and approximately 50,000 people.

As a result of this effort, many churches have started to provide healthy snacks instead of fried foods at church functions and have implemented physical activity programs for their members. This year the Center is expanding activities to address other cardiovascular risk factors including high blood pressure, high cholesterol and diabetes.

For more information on the VDH's Cardiovascular Health Project, visit www.vahealth.org/cvd.

Diabetes

In 2002, the mortality rate from diabetes in African-Americans was 48/100,000, compared to 19/100,000 for whites. VDH's Diabetes Prevention and Control Project provides training and funds to develop local coalitions and partnerships with communities. Since 1996, the project has provided funds for an effort on the Eastern Shore to reduce the burden of diabetes by implementing healthy living and foot care classes in African-American churches and by coordinating educational seminars for healthcare professionals. In the spring of 2002, VDH launched a pilot project with the University of Virginia in the Charlottesville area to decrease the impact of diabetes and other chronic diseases on Hispanics. This program involves *promotoros*, or trained non-professionals, to promote the importance of regular health screening to neighbors and workmates and make referrals to healthcare providers. They also help the health agencies understand community needs and help community residents learn how to access services effectively.

To learn more about diabetes in Virginia and for links to national diabetes organizations visit www.vahealth.org/diabetes.

HIV/STD

The Division of HIV/STD provides grant funding to community-based organizations to make oral HIV testing available to high risk populations in non-traditional settings. The program, called OraSure Testing and Intensive Outreach Service, brings testing to people who may

not otherwise have access to a public health clinic. In addition, four Minority AIDS Initiative providers in Northern Virginia and Hampton Roads receive grant funding to help identify HIV-positive persons and provide outreach, HIV assessments and linkages to care. The goal of the providers is to increase access and education in local communities to reduce disparities among racial/ethnic minorities in HIV care and services. In 2003, 132 newly diagnosed individuals with HIV were brought into care through those providers. National studies have shown that earlier testing and care significantly increase the quality and length of life for those diagnosed with HIV.

The Division of HIV/STD also works with the African American/Hispanic Faith Initiative Program to encourage faith-based organizations to incorporate HIV prevention as part of their educational ministries. This program uses faith-based models to provide youths and adults with information on sex, sexuality, STDs and prevention methods. The program has been in operation for five years and has served over 3,425 Virginians.

Refugee and Immigrant Health

Refugees and immigrants encounter a number of challenges when entering the US, including difficulties obtaining health care. Communication barriers and a history of inadequate health care and trauma stand in the way of a productive, healthy future. VDH's Refugee and Immigrant Health Program (RIHP) assists immigrants and refugees in overcoming health disparities. RIHP coordinates culturally competent health services around the state and works with the Department of Social Service's Office of Newcomer Services, local health departments and local voluntary refugee resettlement agencies to enable refugees to receive comprehensive health care services. Thorough evaluations identify acute and chronic diseases, such as tuberculosis, diabetes, heart disease, cancer, HIV, and post-traumatic stress disorder. Referrals for follow-up services can be made, and practitioners within the local community provide the necessary services. In 2003, RIHP completed 903 health assessments resulting in 2,504 follow-up referrals.

To learn more about the Refugee and Immigrant Health Program go to http://www.vdh.virginia.gov/epi/rihp/index.htm.

Conclusions

Efforts are being made at local, state and national levels to eliminate health disparities. If you are interested in learning more about health disparities that may exist in your community, go to the Virginia Atlas of Community Health, available at www.vahealthycommunities.com. The Atlas contains county and ZIP code level data for indicators of health, population, housing, economy, public safety, and ambulatory sensitive conditions. This can help planners to identify the health needs for specific communities.

For more details about Virginia Public Health Week, go to the VDH website at www.vdh.virginia.gov.

Submitted by: Trina Lee
Public Relations Manager,
Office of the Commissioner

Want More CME Opportunities?

The Centers for Disease Control and Prevention (CDC) provides the Morbidity and Mortality Weekly Report (MMWR) Continuing Medical Education (CME) Program so that healthcare providers can stay current on the latest clinical and public health issues. Learning activities cover a wide range of subjects, from the diagnosis of gastrointestinal illnesses to tuberculosis management to vaccine preventable diseases.

The program is available in both paper and electronic formats. Each program is certified by the Accreditation Council for Continuing Medical Education (ACCME) for Category 1 CME credits toward the American Medical Association's Physician's Recognition Award. In addition, these activities can provide Continuing Education Units (CEU) and Continuing Nursing Education units (CNE). Some activities can also provide Certified Health Education Specialist (CHES) credit. For your convenience, responses to claim credit can be completed on-line or through a mail-in paper evaluation form.

To find out more, go to http://www.cdc.gov/mmwr/cme/conted_info.html. To view the available activities, click on the "Register and Take Exam" option.

MMWR™
Morbidity and Mortality Weekly Report

The Virginia Epidemiology Bulletin: The People Who Make It Possible

The goal of the Virginia Epidemiology Bulletin (VEB) is to provide healthcare workers in the Commonwealth with Virginia-specific information on current programs, issues, or opportunities related to public health and preventive medicine. As a result, each month's issue of the VEB draws on the talents of many people. This includes everyone from the provider who reports the diseases that are counted in the notifiable diseases section, to local and state health department personnel who contribute articles, to the editorial and production staff who work to put the ink on the page.

Angelique Delonde, Julie Plagenhoef, Leslie Branch, Paula Vest, and Lesliann Helmus

Since there are so many people who play a role in producing the VEB, it is impossible to make sure that everyone's contributions are adequately recognized. However, in this issue of the VEB we would like to take the opportunity to thank just a few of the people who have made a regular contribution to the VEB in the past year.

Donna Asby-Green, Tim Epps, Suzanne Keller, and William White (Wendy Heirendt not available)

Tanya Bobo, David Gaines, Marshall Brooks, and Jessie Hamlin

Notifiable Diseases

Every month, on top of all of their other responsibilities, staff at the Virginia Department of Health's (VDH) Office of Epidemiology compile the reports from across Virginia on notifiable diseases. The deceptively simple table of selected notifiable disease at the back of each issue of the VEB actually requires hours of work to verify and format. Staff within the Office of Epidemiology who contribute to the notifiable disease table include:

- Lala Wilson (Division of Health Hazards Control), who provides data for occupational diseases and lead poisoning.
- Lashonda Johnson and Susan Lau (Division of HIV/STDs) who provide data on HIV and sexually transmitted diseases.
- Laura Ann Nicolai and Sandra Sommer (Division of Immunization) who provide data on vaccine preventable diseases.
- Les Branch, Angelique Delonde (lead), Julie Plagenhoef, Lesliann Helmus, and Paula Vest (Division of Surveillance and Investigation) who

Susan Lau and LaShonda Johnson

Lala Wilson

Sandra Sommer and Laura Ann Nicolai

collect data on a wide variety of reportable diseases, and format the table.

- Wendy Heirendt (lead), Suzanne Keller, Tim Eps, Bill White, and Donna Asby-Green (Division of TB Control), who provide data on tuberculosis in Virginia.
- Jessie Hamlin, David Gaines, Tanya Bobo, and Marshall Brooks (Division of Zoonotic and Environmental Epidemiology) who provide data on zoonotic diseases.

Together, their contributions give healthcare providers in Virginia a timely, accurate picture of current reportable disease statistics. In addition, at the end of each year the Division of Surveillance and Investigation staff put all of these data together to create a comprehensive analysis of reportable diseases in Virginia for the previous year. The results of this analysis are printed in the VEB in May.

Vickie O'Dell

Layout Design

Getting accurate and useful information together is one thing—presenting it in an attractive and easy-to-read format is something entirely different. Fortunately, the VEB has a talented layout editor to make it happen. Vickie O'Dell has been doing the graphics design for the VEB for almost 10 years, and even in her 'retirement' she continues to contribute to the VEB. In addition to the layout, Ms. O'Dell oversees the printing process and ensures the highest possible production quality.

Mailing

Making sure that the VEB reaches its 20,000+ readers is a serious task. The VEB staff would like to thank Cliff Shoaf and his staff at the Virginia Industries for the Blind, who ensure that the VEB is appropriately packaged and labeled for mailing each month.

Overall, many people contribute to the *Virginia Epidemiology Bulletin*. The diversity of skills that is available helps to create a newsletter that enables providers across Virginia to better care for their patients. And even though we can't thank every individual who deserves it, hopefully all know how much their work is truly appreciated.

If you would like to contribute an article to the VEB and help keep its tradition of excellence going, or if you have any suggestions or comments, including how we could make the VEB more useful to you, please contact us at the VDH Office of Epidemiology (804-864-8141).

Varicella Disease Reporting

Chicken pox/Varicella © 2001-04, Johns Hopkins University School of Medicine: Dermatlas.org

In the last 10 years the epidemiology of varicella has changed dramatically, in large part due to the use of the varicella vaccine. Varicella vaccine is moderately effective in preventing all disease (80-90%) and highly protective in preventing severe disease (85-95%). Immunity due to vaccination appears to be long lasting, and is probably permanent in the majority of vaccinees. Based on year 2002 National Immunization Survey data, 83.0% of all Virginia children 19-35 months of age received a dose of varicella vaccine, compared to 80.6% nationally (way to go, providers!!).

However, varicella still occurs in Virginia (525 cases were reported last year). Some of these cases are breakthrough infections (*i.e.*, varicella occurring more than 42 days after immunization). Breakthrough infection is significantly milder, with fewer lesions (generally less than 50), many of which are maculopapular rather than vesicular. **Investigation of the changing epidemiology of varicella is necessary to develop future interventions.** Unfortunately, some healthcare workers have not considered timely case reporting a priority.

Remember: **All** cases of varicella must be reported to the local health department, not just cases of varicella among vaccine recipients. Individuals required to report varicella include: physicians, persons in charge of medical care facilities (hospitals and nursing homes), and (coming soon) laboratories.

In an effort to better define varicella in Virginia, the Virginia Department of Health (VDH) is collecting additional information on varicella cases. Varicella cases should be reported to **local** health departments on the VDH Confidential Morbidity Report (Epi-1). This form can be found on the VDH web page at: http://www.vdh.virginia.gov/epi/epi1.pdf, or mailed to you (contact your local health department). Local health department staff may then follow up to collect additional information. This will allow VDH to assess who is getting varicella and the proportion and severity of breakthrough cases.

Continued diligence in varicella vaccination efforts and disease reporting will help insure the decline of this once common childhood disease in Virginia. Reducing varicella disease will also decrease the sequelae, such as cutaneous pits and keloids, pneumonia, cerebellar ataxia, encephalitis and hemorrhagic complications. However, this effort requires everyone's cooperation.

Questions concerning varicella disease reporting should be addressed to Laura Ann Nicolai, Division Epidemiologist, at the Division of Immunization (804-864-8055).

Cases of Selected Notifiable Diseases Reported in Virginia*

Disease	Total Cases Reported, March 2004: State	Regions: NW	N	SW	C	E	Total Cases Reported Statewide, January - March: This Year	Last Year	5 Yr Avg
AIDS	45	6	13	6	9	11	107	227	207
Campylobacteriosis	36	8	2	6	16	4	88	83	72
***E. coli* O157:H7**	0	0	0	0	0	0	0	3	5
Giardiasis	28	3	12	7	2	4	71	50	72
Gonorrhea	970	64	79	92	290	445	2,326	1,982	2,345
Hepatitis, viral									
A, acute	11	4	2	1	1	3	22	28	31
B, acute	24	3	2	4	4	11	37	33	32
C, acute	5	0	0	3	0	2	8	0	1
HIV Infection	86	7	25	8	20	26	191	197	186
Lead in Children†	44	2	2	13	20	7	113	109	99
Legionellosis	1	0	0	0	0	1	4	5	3
Lyme Disease	3	1	0	0	0	2	3	10	4
Measles	0	0	0	0	0	0	0	0	1
Meningococcal Infection	1	1	0	0	0	0	3	6	13
Mumps	1	0	0	0	0	1	1	1	1
Pertussis	16	5	1	1	1	8	26	28	15
Rabies in Animals	30	11	9	3	3	4	88	145	117
Rocky Mountain Spotted Fever	0	0	0	0	0	0	0	1	<1
Rubella	0	0	0	0	0	0	0	0	0
Salmonellosis	39	4	9	9	11	6	135	115	123
Shigellosis	8	3	2	1	1	1	22	60	76
Syphilis, Early§	15	0	1	5	5	4	23	48	69
Tuberculosis	17	0	11	2	4	0	28	43	47

Localities Reporting Animal Rabies This Month: Albemarle 1 fox; Amherst 2 raccoons; Augusta 1 cat, 1 raccoon, 1 skunk; Botetourt 1 raccoon; Fairfax 5 raccoons; Fauquier 1 skunk; King George 1 fox; Loudoun 1 raccoon; Madison 1 raccoon; Mecklenburg 1 raccoon; Norfolk 2 raccoons; Northampton 1 raccoon; Nottoway 1 skunk; Prince William 1 fox, 2 raccoons; Rappahannock 1 raccoon; Richmond City 1 raccoon; Rockingham 1 skunk; Spotsylvania 1 skunk; Stafford 1 skunk; Suffolk 1 raccoon.

Toxic Substance-related Illnesses: Asbestosis 5; Cadmium Exposure 1; Lead Exposure 4; Mercury Exposure 1; Mesothelioma 1; Pneumoconiosis 10.

*Data for 2004 are provisional. †Elevated blood lead levels ≥10µg/dL. §Includes primary, secondary, and early latent.

Erratum: The Selected Notifiable Diseases table in the March 2004 issue (Vol 104, No. 3) was incorrect. Please go to http://www.vdh.virginia.gov/epi_news/vebmar04.pdf for the corrected data.

Published monthly by the
VIRGINIA DEPARTMENT OF HEALTH
Office of Epidemiology
P.O. Box 2448
Richmond, Virginia 23218
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VDH VIRGINIA DEPARTMENT OF HEALTH
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