



VIRGINIA EPIDEMIOLOGY BULLETIN

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Disease Reporting in Virginia*

Introduction

On July 1, 1993, Amendment 5 of the Regulations for Disease Reporting and Control went into effect. A copy of the regulations will be mailed by September to every physician, hospital administrator and infection control practitioner, nursing home administrator, and laboratory director. This issue of the Virginia Epidemiology Bulletin is devoted to disease surveillance, its purposes, procedures, and effects.

Purposes of Surveillance

Disease surveillance involves the collection of pertinent data, the tabulation and evaluation of the data, and the dissemination of the information to all who need to know.¹ This process is a very important aspect of public health because the purpose of surveillance is to reduce morbidity.¹⁻³

The immediate use of surveillance data is for disease control; the long-term use is to assess trends and patterns in morbidity.⁴ According to Thacker and Berkelman,¹ "no public health surveillance system is complete without being linked to action." Surveillance data are used to implement and evaluate disease control measures, detect outbreaks, document disease transmission, quantify morbidity and estimate trends, identify risk factors for disease acquisition, and facilitate research.

Diseases must first be diagnosed and reported to the health department before case investigations and disease control can occur. Physicians and other health care providers, therefore, are key to the surveillance process.⁴ Those who report can also benefit because they will be notified when the health department detects unusual disease patterns occurring in the community, thus raising the index of suspicion when



individuals present with compatible symptoms and facilitating more rapid diagnosis and treatment.⁵

Technical Guidelines for Disease Reporting in Virginia

Legal Authority

Title 32.1, Chapter 2 of the Code of Virginia is entitled "Disease Prevention and Control." Article 1 of that chapter charges the Board of Health to promulgate a list of diseases that are required to be reported. The Board meets this requirement by promulgating the Regulations for Disease Reporting and Control.

Who is Required to Report

All physicians, directors of medical care facilities, and directors of laboratories must report persons diagnosed with any of the notifiable diseases to the local health department serving the city or county in which the practice, facility, or laboratory is

located. Persons in charge of schools are required to report outbreaks.

What Diseases are Reportable

Reportable diseases are listed in Table 1. Physicians and directors of medical care facilities are required to report all conditions on this list. Additionally, any unusual outbreaks or clusters of illness which may be of public health concern should be reported.

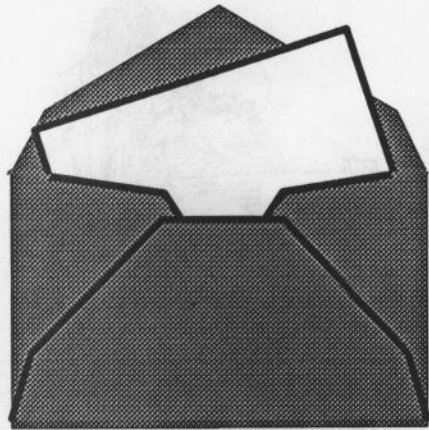
Laboratory directors are responsible for reporting the conditions contained in Table 2. If laboratory tests indicate the presence of the diseases in Table 2, using the laboratory method(s) noted, or any other confirmatory test, the results should be reported.

According to the regulations, cancer and memory loss disorders must also be reported. Cancer is reported by hospitals only (either by the hospital cancer registrar or medical records personnel) and independent pathology laboratories. Memory loss disorders are reported from a variety

of sources, including physicians, hospital medical records staff, nursing home staff, public agencies, and others.

How to Report

A major change that goes into effect July 1 is the reporting form that is being used for reporting morbidity to the health department (see box). The form is called an "Epi-1" and replaces all forms previously used for reporting communicable diseases (i.e., CD-24, CD-24.1, CD-24.2, CD-24.3, VD35C, VD36). The Epi-1 form should be used by physicians, directors of medical care facilities, and laboratories (continue to use the old forms until the new ones are distributed later this summer). Physicians and facility directors may also choose to report on a computer-generated facsimile of the Epi-1 or a Centers for Disease Control and Pre-



vention (CDC) surveillance form, if one is available. Laboratories may report on their own form if it includes all necessary information.

Fields on the form that are shaded in gray represent the minimal information that should be provided to the health department. Additional information that is available at the time of reporting may also be provided and would be very beneficial to the health department. Forms should be submitted to the health department within seven days.

Certain diseases are required to be reported by the most rapid means available, eg., telephone or facsimile. These diseases are listed in Table 3. Diseases appear on this list if they have the potential for greater harm or if an intervention is available that must be implemented in a timely manner. Outbreaks should be reported rapidly.

The Statewide Alzheimer's Disease and Related Disorders Registry has a separate form that is used for disease reporting (see related article, p5).

Virginia Department of Health Office of Epidemiology Confidential Morbidity Report			
Patient's Name (Last, First):		Telephone Numbers: Home () _____ - _____ Work () _____ - _____	
Patient's Address (Street, City or Town, State, Zip Code):		City or County of Residence:	
Date of Birth:	Age:	Race: <input type="checkbox"/> Asian <input type="checkbox"/> White <input type="checkbox"/> Hispanic: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Black <input type="checkbox"/> Other (Specify):	Sex: <input type="checkbox"/> F <input type="checkbox"/> M
Disease or Condition:		Case Status: <input type="checkbox"/> Confirmed <input type="checkbox"/> Suspected	
Date of Onset:	Date of Diagnosis:	Influenza: (Report # and type only. No patient identification). Number of Cases: Type, if known:	
Physician Name: Address:		Phone: () _____ - _____	
Hospital Admission? <input type="checkbox"/> Yes <input type="checkbox"/> No		Hospital Name:	
Date of Admission:		Chart ID No.:	
Laboratory Information and Results			
Source of Specimen:		Date Collected:	
Laboratory Test:			
Results:			
Name/Address of Lab:			
Other Information			
Comments: (Risk Situation [Foodhandling, Patient Care, Day Care], STD/HIV Treatment, Immunization Status, Signs/Symptoms, Date of Death, Exposure, Social Security Number, etc.)			
Reported by:		Date Reported:	
Address and Phone:		Check Here if You Need More of These Forms. <input type="checkbox"/>	
For Health Department Use:		Date Received:	

Shaded fields indicate minimum information necessary (ignore for reports of influenza).
Mail the top two copies to your local health department. Retain the third copy for your files. Thank you.

Form Epi-1, 1993

Confidentiality and Liability

The health department is required by law to protect the confidentiality of the information received. Patient and physician identities are kept anonymous. No information that may lead to the identification of an individual patient or physician may be released to the public. Health department employees are trained on the issues of confidentiality, what it means, how

to protect it, and what the ramifications would be of a breach of confidentiality.

Confidential information may only be released in the absence of patient permission if the Commissioner of Health personally approves the release for a research study. The Commissioner only approves bona fide research studies in which the researcher assures that the confidentiality of the information will be strictly maintained.



Persons making reports according to the requirements of the regulations are immune from liability for so reporting.

What the Health Department Does with Reports

The most important immediate response to a report is for the health department to assess whether public health action may be necessary to interrupt the spread of disease. Examples of interventions that may be appropriate include providing prophylaxis or testing of contacts of persons with certain diseases (eg., hepatitis A, meningococcal meningitis, sexually transmitted diseases, tuberculosis), removing a child from a day care situation, removing a foodhandler from a restaurant, or simply providing education or counseling about disease transmission and risky behaviors. All interventions follow nationally recognized recommendations.

Health departments also use morbidity reports to assess the risk of disease in the community. Patterns of disease occurrence are noted by looking at populations affected by each disease and comparing the number of cases occurring within a given time period with other time periods for the same geographic area. Outbreaks may be identified by compiling information from morbidity reports.

Local health departments determine if the patient reported to them is a resident of their jurisdiction. If not, the report is forwarded to the health district in which the patient resides. Morbidity is assigned based on the usual place of residence of the person with disease, regardless of where the person was at the time of diagnosis. Official morbidity reports are forwarded by local health departments to the state health department within one week of receiving the report.

The state health department reviews each report to determine if it meets a predetermined case definition. If so, the case is counted as official morbidity. This process ensures the consistency of morbidity data across the state and over time. The Office of Epidemiology compiles statistics on statewide disease occurrence and disseminates the data through the publication of statistics in the *Virginia Epidemiology Bulletin* and an annual report of surveillance data. Epidemiologists also review the data to detect unusual patterns of disease occurrence and report unusual findings back to the local health department. The Office of Epidemiology is responsible for notifying other states of situations that may affect their residents and for reporting weekly to the Centers for Disease Control and Prevention (CDC).

Upon receiving reports of certain diseases, the local or state health department may mail a follow-up surveillance form to

the reporting physician or request a discharge summary from the hospital. These requests for additional information are made to help define the epidemiology of selected diseases.

What Providers Can Do to Facilitate Disease Control

Reporting disease is the first step in controlling the spread of disease. Routine reporting in a timely manner is very important to disease intervention. Failure to report may lead to an increase in the number of cases of a disease that occur in the population.

The patient's name, address, and demographic data should be supplied to the laboratory with all specimens so that laboratory directors can report complete and accurate information necessary for appropriate public health follow-up.

Providers can also help control disease by thinking of their patients in the context

Table 1. Reportable Diseases in Virginia

Acquired immunodeficiency syndrome	Listeriosis
Amebiasis	Lyme disease
Anthrax	Lymphogranuloma venereum
Arboviral infection	Malaria
Aseptic meningitis	Measles (Rubeola)
Bacterial meningitis (specify etiology)	Meningococcal infection
Botulism	Mumps
Brucellosis	Nosocomial outbreak
<i>Campylobacter</i> infection	Occupational illness
Chancroid	Ophthalmia neonatorum
Chickenpox	Pertussis (Whooping cough)
<i>Chlamydia trachomatis</i> infection	Phenylketonuria (PKU)
Congenital rubella syndrome	Plague
Diphtheria	Poliomyelitis
Encephalitis	Psittacosis
- primary (specify etiology)	Q fever
- post-infectious	Rabies in animals
Foodborne outbreak	Rabies in man
Giardiasis	Rabies treatment, post-exposure
Gonorrhea	Reye syndrome
Granuloma inguinale	Rocky Mountain spotted fever
<i>Haemophilus influenzae</i> infection, invasive	Rubella (German measles)
Hepatitis	Salmonellosis
- A	Shigellosis
- B	Smallpox
- Non-A Non-B	Syphilis
- Unspecified	Tetanus
Histoplasmosis	Toxic shock syndrome
Human immunodeficiency virus (HIV) infection	Toxic substance related illness
Influenza	Trichinosis
Kawasaki syndrome	Tuberculosis
Lead -- elevated levels in children	Tularemia
Legionellosis	Typhoid fever
Leprosy	Typhus, flea-borne
Leptospirosis	<i>Vibrio</i> infection, including cholera
	Waterborne outbreak
	Yellow fever

Table 2. Conditions Reportable by Directors of Laboratories

- Anthrax - by culture
- *Campylobacter* infections - by culture
- *Chlamydia trachomatis* infections - by culture or antigen detection methods
- Cholera - by culture
- Diphtheria - by culture
- Gonococcal infections - by culture or microscopic examination
- *Haemophilus influenzae* infections - by culture or antigen detection assay of blood or cerebrospinal fluid
- Hepatitis A - by serology specific for IgM antibodies
- Human immunodeficiency virus (HIV) infection - by positive blood tests for HIV antibodies as demonstrated by at least two enzyme-linked immunosorbent assays (done in duplicate at the same time or singly at different times), and a supplemental test such as the western blot
- Influenza - by culture or serology
- Lead - elevated levels in children - venous blood lead level greater than or equal to 15 µg/dl in children age 0-15
- Legionellosis - by culture or serology
- Listeriosis - by culture
- Malaria - by microscopic examination
- Meningococcal infections - by culture of blood or cerebrospinal fluid
- Mycobacterial diseases - by culture
- Pertussis - by culture or direct fluorescent antibody test
- Plague - by culture or direct fluorescent antibody test
- Poliomyelitis - by culture or serology
- Rabies in animals - by microscopic or immunologic examination
- *Salmonella* infections - by culture
- *Shigella* infections - by culture
- Trichinosis - by microscopic examination of a muscle biopsy



of their families and communities. This includes asking about close contacts, occupations, high risk situations (eg., household contacts of a patient with TB, daycare contacts of a patient with *H. flu* meningitis, shigellosis in a health care worker or food-handler) in which further transmission of disease may occur. Reporting that information, when known, to the health department would help accelerate the disease control process.

How the Health Department Can Help Providers

The health department is available to discuss and implement disease control measures. Staff can assist local providers with public health follow-up of individuals with disease and their contacts and with investigation of unusual outbreaks or clusters of disease. The health department provides feedback to physicians and other care providers about current disease trends, especially outbreaks. This information may be useful in heightening the index of suspicion for a particular infectious disease and help guide the diagnostic work of common presenting symptoms like diarrhea. We can also provide, on request, specific disease statistics to providers, the media, and the general public.

What is New in Amendment 5 of the Regulations

Elevated lead levels in children (defined as venous blood lead levels of 15 µg/dl or higher in children age 0-15) was added to the list of reportable conditions; a new form for reporting morbidity was instituted; *E. coli* O157:H7 was added to conditions constituting a foodborne outbreak; and other minor changes were made to

bring the regulations in compliance with recent changes to the Code of Virginia.

Common MYTHS about Surveillance

Myth #1. I don't need to report because someone else will.

While multiple health care professionals are responsible for reporting the same information, the health department does not receive very many duplicate reports. Computer systems are in place to weed out duplicate reports. Therefore, if all who are

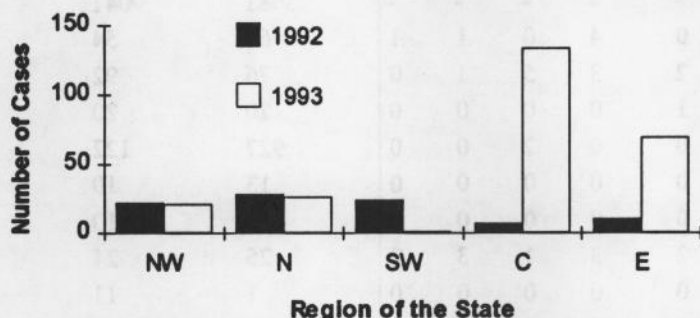
Table 3. Reportable Diseases Requiring Rapid Communication

- Anthrax
- Botulism
- Cholera
- Diphtheria
- Foodborne outbreaks
- *Haemophilus influenzae* infections, invasive
- Hepatitis A
- Measles (Rubeola)
- Meningococcal infections
- Plague
- Poliomyelitis
- Psittacosis
- Rabies in man
- Smallpox
- Syphilis, primary and secondary
- Tuberculosis
- Waterborne outbreaks
- Yellow fever

Shigellosis Reports Continue to Increase

From January through June, 250 cases of shigellosis have been reported in Virginia, compared with 91 cases reported for the same time period in 1992. The increase is occurring primarily in the central and eastern regions of the Commonwealth. An article describing the epidemiology and control of shigellosis appeared in the May issue of the *Bulletin*.

Shigellosis by Region, Virginia,
Jan-Jun, 1992 vs. 1993



required to report complied with the regulations, an overinflation of morbidity statistics would be avoided.

Myth #2. The health department does not need to know the names of persons with disease.

For many diseases, the health department needs to contact the patient, his family, or other close contacts to provide health education or institute disease control measures in order to interrupt the disease transmission cycle. Names are also useful for identifying duplicate reports received on the same individual. The identities of patients and physicians are kept strictly confidential by the health department, as required by law.

Myth #3. The health department does not do anything with the information they receive.

Morbidity reports contain very important information on which the health department acts. Each case is assessed to determine what disease control measures can be put in place to stop the spread of disease. Compiling statistics from case reports received is useful in determining patterns of disease in a community so that disease control activities can be planned and evaluated.

Myth #4. I should not report until the diagnosis is confirmed.

The regulations require physicians to report "any person who is suffering from or who is suspected of having a reportable disease..." Some diseases, notably tuberculosis, should be reported based on a pre-

sumptive diagnosis. This gives the health department an opportunity to assess the need for control measures to minimize the risk to the public.

Myth #5. Only conditions listed on the reportable disease list should be reported to the health department.

Any circumstance in which an individual or group experiences an illness deemed to be of public health significance should be reported to the health department.

Myth #6. Diseases which occur in military personnel or their dependents should not be reported.

All cases of reportable diseases diagnosed in Virginia should be reported. Notifying the health department of a reportable disease, whether the person is in the military or civilian population, is vital to our disease control efforts.

For More Information...

For more information on disease reporting and control, please contact your local health department or the Office of Epidemiology (P.O. Box 2448, Richmond, VA. 23218; telephone (804) 786-6261).

References

1. Thacker SB, Berkelman RL. Public health surveillance in the United States. *Epidemiol Rev.* 1988;10:164-190.
2. Langmuir AD. The surveillance of communicable diseases of national importance. *N Engl J Med* 1963;268:182-192.
3. Langmuir AD. William Farr: founder of modern concepts of surveillance. *Internat J Epidemiol* 1976;5:13-18.

Form Changed for Reporting Memory Loss Disorders

Reporting of individuals with Memory Loss Disorders became mandatory in July 1992. Since that time the Alzheimer's Disease and Related Disorders Registry (ADRDR) has received a number of phone calls and letters expressing various concerns. One issue that came up often was that of confidentiality. All provisions for confidentiality are followed for ADRDR reports as for all reportable diseases, as required by the Code of Virginia.

The other commonly expressed concern regarded the amount of information requested. In response to this, the ADRDR, in cooperation with members of the Medical Society of Virginia, has modified the reporting form. The new form is two-sided with Side 2 being optional. We encourage physicians and staff of nursing homes, homes for adults, and other agencies to complete Side 1 of the form with the cooperation of the family of the ADRD patient. In fact, the form could be filled out by the family with the physician's (or other health care provider's) assistance.

One of the important areas of Side 1 gives the family an opportunity to request information regarding services for the elderly in their area, as well as information about the state-funded autopsy program. This autopsy program is available only to those who have been registered with the ADRDR prior to death.

We hope the revised Dementia Reporting Form is less cumbersome for individual practitioners and others to use so that we may better meet the service needs of persons with dementia and their families. For information about reporting to the Registry, call (804) 786-6263.

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6. Benenson AS (ed). Control of communicable diseases in man (15th ed). American Public Health Association, Washington, DC, 1990.

*Submitted by C. Diane Woolard, MPH, Director, Bureau of Disease Surveillance and Epidemiologic Studies, Office of Epidemiology, VDH.

Cases of Selected Notifiable Diseases, Virginia, June 1 through June 30, 1993.*

Disease	Total Cases Reported This Month						Total Cases Reported to Date in Virginia		
	State	Regions					This Yr	Last Yr	5 Yr Avg
		NW	N	SW	C	E			
AIDS	79	5	18	3	24	29	901	324	278
Campylobacteriosis	90	29	11	17	23	10	241	267	238
Gonorrhea†	868	-	-	-	-	-	5681	9041	8049
Hepatitis A	6	0	4	0	1	1	67	54	134
Hepatitis B	11	2	3	5	1	0	76	92	119
Hepatitis NANB	1	1	0	0	0	0	20	20	26
Influenza	2	0	0	2	0	0	927	122	1155
Kawasaki Syndrome	0	0	0	0	0	0	13	10	12
Legionellosis	0	0	0	0	0	0	2	10	6
Lyme Disease	9	2	3	1	3	0	25	24	26
Measles	0	0	0	0	0	0	1	11	51
Meningitis, Aseptic	8	0	5	1	0	2	81	87	82
Meningitis, Bacterial‡	6	0	1	1	2	2	49	71	81
Meningococcal Infections	6	5	0	0	1	0	25	36	31
Mumps	2	0	0	0	0	2	16	33	60
Pertussis	4	3	1	0	0	0	13	4	10
Rabies in Animals	34	15	5	6	5	3	189	151	146
Reye Syndrome	0	0	0	0	0	0	0	0	1
Rocky Mountain Spotted Fever	1	0	1	0	0	0	2	1	3
Rubella	0	0	0	0	0	0	0	0	2
Salmonellosis	67	12	11	17	17	10	365	362	470
Shigellosis	75	1	4	1	52	17	232	85	153
Syphilis (1° & 2°)†	56	0	3	3	8	42	304	395	370
Tuberculosis	53	6	9	9	11	18	229	145	177

Localities Reporting Animal Rabies: Albermarle 1 raccoon, 1 skunk; Arlington 1 raccoon; Augusta 1 skunk; Bath 1 raccoon; Chesterfield 1 raccoon; Clarke 1 cow; Cumberland 1 raccoon; Fauquier 1 raccoon; Floyd 1 raccoon; Franklin 1 raccoon; King William 1 groundhog; Loudoun 4 raccoons; Montgomery 1 skunk; Orange 1 raccoon; Page 1 raccoon; Prince George 2 raccoons; Pulaski 2 raccoons; Richmond City 1 bat; Roanoke City 1 raccoon; Rockbridge 1 raccoon; Rockingham 1 dog, 2 raccoons, 1 skunk; Stafford 1 raccoon; Virginia Beach 1 cat, 1 raccoon; Warren 1 raccoon.

Occupational Illnesses: Asbestosis 16; Carpal Tunnel Syndrome 86; Coal Workers' Pneumoconiosis 16; Loss of Hearing 16; Repetitive Motion Disorder 6; Silicosis 2.

*Data for 1993 are provisional.

†Total now includes military cases to make the data consistent with reports of the other diseases.

‡Other than meningococcal.

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