Reportable Disease Surveillance in Virginia, 1992

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Office of Epidemiology

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Introduction

The Office of Epidemiology is responsible for the ongoing statewide surveillance of diseases reported according to the provisions of the *Regulations for Disease Reporting and Control.* 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.

The immediate use of surveillance data is for disease control. The long-term use is for the assessment of trends and patterns in morbidity. The goal of surveillance, both immediate and long-term, is to reduce morbidity in the population. Surveillance data may be 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. This document may assist with the planning and evaluation of public health measures to decrease morbidity rates in the Commonwealth.

The Virginia Department of Health, Office of Epidemiology is pleased to present its fifth annual report of disease surveillance activities. This report summarizes morbidity data reported by the Virginia Department of Health, Office of Epidemiology to the federal Centers for Disease Control and Prevention (CDC) during calendar year 1992. The report is divided into five sections, each of which is described below.

Introduction and Data Summary: Tables summarizing 1992 morbidity are included in this introductory section. These tables include the list of reportable diseases, ten year trend of disease reports, number of reports and rate per 100,000 population for selected diseases by region, age, race, sex, and number and percent of reports by quarter of onset. These tables apply to the officially notifiable diseases only. Similar data on chronic diseases may be found in the last section of the report.

Descriptive Epidemiology of Reportable Diseases: This section consists of narrative and graphics summarizing the populations reported with each reportable condition. Included are information on the total number of cases reported, the ten year trend in reported cases, the demographics of cases in terms of their age, race, and sex, and the distribution of cases by date of onset and health planning region of the state. Mortality, species, and other attributes of diseases are also presented when applicable. Population rates are often presented as a more valid measure of disease risk than percent of the total. In calculating rates, the modified, age, race, and sex population data from the 1990 Census were used for the population at risk. Some additional notes on coding are listed below.

Race is usually coded as black, white or other. The "other" race category refers to Hispanics, Asian/Pacific Islanders, American Indians, and Alaskan Natives. To ensure consistency of the coding of rates in the case and the population data, white and black Hispanics were removed from the white and black population totals and added to the "other" population.

Date of onset is used whenever it is available. Onset is defined as either month or quarter of the year in which symptoms first occurred. Some cases reported in 1992 experienced onset prior to the year of report. Statistics on some diseases are only available by date of report, meaning date the

information was furnished to the CDC or first received in the Office of Epidemiology, rather than date of onset of symptoms.

Numbers and Rates by Locality: In this section of the report are tables containing the number of cases and rates per 100,000 population for selected diseases by locality, district, and health planning region. Cities and counties that have separate health departments are listed individually; those that share one health department are combined. Caution is urged in interpreting the data listed in this section as well as in the following section. Localities with small populations may have large disease rates but only a few reported cases of disease. Both number of cases and incidence rates should be weighed when using these tables to rank morbidity by city or county.

Maps of Incidence Rates: Maps are presented which depict the information listed in the previous section. For each map, the rates have been divided into four categories using the following process:

Category 1 - Localities reporting zero cases of the disease.

Category 2 - Localities with an incidence rate greater than zero and up to the mean for the state.

Category 3 - Localities with an incidence rate greater than the mean and up to one standard deviation above the mean for the state.

Category 4 - Localities with an incidence rate greater than one standard deviation above the mean for the state.

Chronic Disease Surveillance: This section includes data reported to the Virginia Cancer Registry and to the Alzheimer's Disease and Related Disorders Registry. The cancer data are based on Virginia cases diagnosed in 1991 and reported to the Registry. The most current complete year for which cancer statistics are available is 1991. In that year, reporting to the registry was a requirement for all hospitals and independent pathology laboratories in Virginia. This report includes information on the annual total of cancer data as well as on the ten most commonly reported major body sites.

The Alzheimer's Disease and Related Disorders Registry collects data on persons with memory loss disorders in Virginia. Physicians, hospitals, and long-term care facilities are the primary sources of these data. This report includes data on persons reported with dementia in Virginia during the first three years that the Registry was operating, from July 1, 1989 through June 30, 1992. Reporting was voluntary during this period.

The Office of Epidemiology hopes that the readers of this report will find it to be a valuable resource for understanding the epidemiology of reportable diseases in Virginia. Any questions or suggestions about this report may be directed to Diane Woolard, Virginia Department of Health, Office of Epidemiology, P.O. Box 2448, Richmond, Virginia 23218.

Data Summary

Tables 1-7, on the following pages, present a summary of the primary epidemiologic data elements for selected diseases. Table 1 is a list of the reportable conditions in Virginia. Table 2 presents the number of cases of selected diseases reported annually during the past ten years. Table 3 presents number of cases and rate per 100,000 population by region. Table 4 presents the same data by age; Table 5 by race; and Table 6 by sex. In Table 7, number and percent of cases by quarter of the year in which onset occurred is provided. A brief description of the major findings presented in these tables follows.

TREND - Compared to 1991, the following diseases increased in incidence in 1992: AIDS, amebiasis, campylobacteriosis, chickenpox, hepatitis non-A non-B, histoplasmosis, Kawasaki syndrome, legionellosis, meningococcal infection, rabies in animals, Rocky Mountain spotted fever (RMSF) and tuberculosis.

Decreases were observed for aseptic meningitis, bacterial meningitis, *Chlamydia trachomatis* infection, primary encephalitis, giardiasis, gonorrhea, *Haemophilus influenzae* infection, hepatitis A and B, HIV infection, influenza, Lyme disease, malaria, measles, mumps, occupational illnesses, pertussis, salmonellosis, shigellosis, early syphilis and typhoid fever.

REGION - Overall, the northern and eastern health planning regions experienced the highest incidence rates. The northern health planning region had the highest incidence rates of all regions for AIDS, amebiasis, aseptic meningitis, giardiasis, hepatitis A, Lyme disease, malaria, measles, shigellosis and typhoid fever. The eastern health planning region experienced the highest incidence rates of bacterial meningitis, chickenpox, *Chlamydia trachomatis* infection, primary encephalitis, gonorrhea, hepatitis B and non-A non-B, mumps and early syphilis. These two regions had similar rates for Kawasaki syndrome.

The northwest health planning region had the highest incidence rates for campylobacteriosis, *Haemophilus influenzae* infection, legionellosis, pertussis and Rocky Mountain spotted fever. The largest number of rabid animals also came from the northwest region. Incidence rates were highest for HIV infection, salmonellosis and tuberculosis in the central health planning region. The northwest and central health planning regions experienced the highest, and similar, rates of histoplasmosis. The southwest health planning region had the highest rates for influenza and meningococcal infection. Cancer rates were generally lower in the southwest region compared to the other regions, with the exception of cancer of the uterine cervix. This is probably the result of residents of southwest Virginia seeking cancer care outside the state.

AGE - Infants were at the greatest risk for aseptic meningitis, bacterial meningitis, campylobacteriosis, primary encephalitis, invasive *H. influenzae* infection, measles, meningococcal infection,

pertussis, and salmonellosis. Young children (age 1-9) experienced the highest incidence rates of giardiasis, Kawasaki syndrome, mumps and shigellosis. Older children (age 10-19) were most likely to be reported with *Chlamydia trachomatis* infection, hepatitis A, malaria, and typhoid fever.

Young adults (age 20-29) experienced the highest incidence rates for amebiasis, gonorrhea, hepatitis B and early syphilis. The 30-39 year olds had higher incidence rates for AIDS, hepatitis non-A non-B and HIV infection. Histoplasmosis and Lyme disease were most often reported in 40-49 year olds; legionellosis, RMSF, and tuberculosis in those age 50 or older. Conditions discussed in the Chronic Disease Surveillance section of this report, cancer and memory loss disorders, are most prevalent in older individuals.

RACE - The highest incidence rates were generally more likely to be in blacks, as shown in Table 5. Compared to the other two race categories, incidence rates in blacks were especially high for AIDS, bacterial meningitis, *Chlamydia trachomatis* infection, gonorrhea, hepatitis B, HIV infection, salmonellosis, and early syphilis. Amebiasis, giardiasis, hepatitis A, Kawasaki syndrome, malaria, measles, and tuberculosis were most likely to be reported in the other race category. Whites, however, had higher rates for campylobacteriosis, histoplasmosis, legionellosis, and Lyme disease. Persons in the other race category were almost as likely to be reported with mumps as whites.

SEX - Compared to females, males were at a greater risk for more diseases (see Table 6). Major differences in incidence rates by sex were particularly notable for AIDS, *Chlamydia trachomatis* infection, gonorrhea, HIV infection, Kawasaki syndrome, malaria, measles and tuberculosis. Of these, rates were higher for females for only *Chlamydia trachomatis* infection and measles.

ONSET - Bacterial meningitis, *H. influenzae* infection, histoplasmosis and influenza were most likely to occur during the first quarter of the reporting year. During the second quarter of the year, chickenpox, legionellosis and Lyme disease were most likely to occur. The third quarter of the year was the most frequent onset time for aseptic meningitis, giardiasis, malaria, salmonellosis and shigellosis. Comparable numbers of cases of campylobacteriosis and RMSF occurred during the second and third quarters; typhoid during the third and fourth quarters.

The following diseases were not found to demonstrate a clear trend when assessed by quarter of onset: amebiasis, primary encephalitis, hepatitis B and non-A non-B, Kawasaki syndrome, measles, meningococcal infection, mumps and pertussis.

Table 1. Reportable Diseases in Virginia

Acquired immunodeficiency syndrome (AIDS)
Amebiasis
Anthrax
Arboviral infection
Aseptic meningitis
Bacterial meningitis
Botulism
Brucellosis
Campylobacter infection
Chancroid
Chickenpox
Chlamydia trachomatis infection
Congenital rubella syndrome
Diphtheria
Encephalitis - primary and post-infectious
Foodborne outbreak
Giardiasis
Gonorrhea
Granuloma inguinale
Haemophilus influenzae infection, invasive
Hepatitis A
    B
    Non-A, Non-B
    Unspecified
Histoplasmosis
Human immunodeficiency virus (HIV) infection
Influenza
Kawasaki syndrome
Lead - elevated levels in children (1993)
Legionellosis
Leprosy (Hansen's disease)
Leptospirosis
Listeriosis
Lyme disease
Lymphogranuloma venereum
Malaria
Measles (Rubeola)
Meningococcal infection
Mumps
Nosocomial outbreak
Occupational illness
Ophthalmia neonatorum
Pertussis (Whooping cough)
Phenylketonuria (PKU)
Plague
Poliomyelitis
Psittacosis
Q fever
Rabies in animals
Rabies in man
Rabies treatment, post-exposure
Reye syndrome
Rocky Mountain spotted fever
Rubella (German measles)
Salmonellosis
Shigellosis
Smallpox
Syphilis
Tetanus
Toxic shock syndrome
Toxic substance related illness
Trichinosis
Tuberculosis
Tularemia
Typhoid fever
Typhus, flea-borne
Vibrio infection, including cholera
Waterborne outbreak
Yellow fever