

**Reportable Disease
Surveillance in
Virginia, 1990**



Office of Epidemiology

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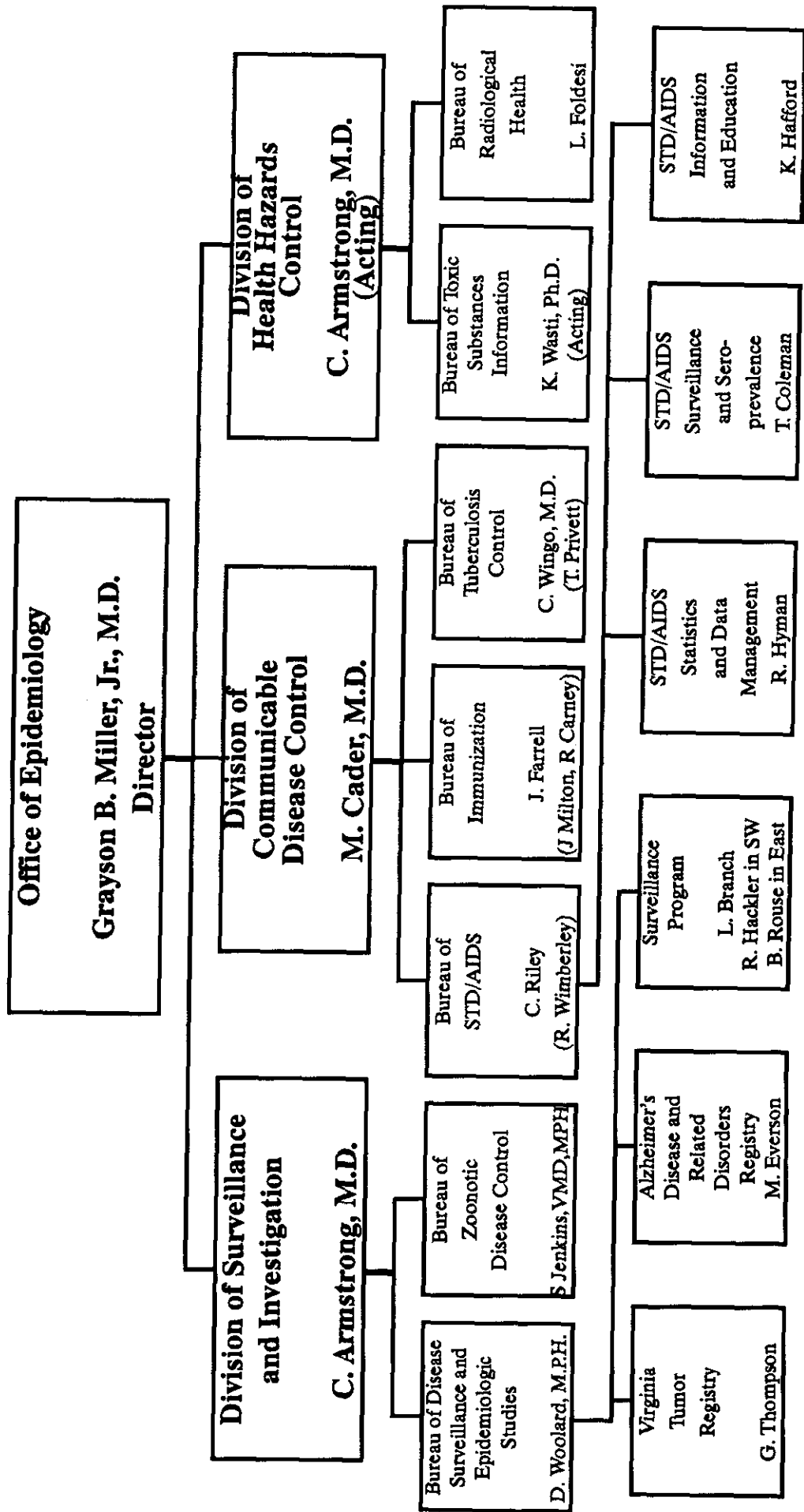
Robert B. Stroube, M.D., M.P.H.
State Health Commissioner

Grayson B. Miller, Jr., M.D.
State Epidemiologist

C. Diane Woolard, M.P.H.
Report Editor

Virginia Department of Health
P.O. Box 2448
Richmond, Virginia 23218

Virginia Department of Health Office of Epidemiology



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INTRODUCTION

AND DATA SUMMARY

Introduction

The Virginia Department of Health, Office of Epidemiology is pleased to present its third 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 during calendar year 1990. Such reporting is conducted according to the Virginia Regulations for Disease Reporting and Control, which are published by the state Board of Health. Included in the regulations are lists of diseases which must be reported by physicians, directors of medical care facilities, directors of laboratories, and others.

The importance of surveillance as the basis for disease control activities cannot be overestimated. Surveillance begins with timely reporting of disease occurrence by physicians and other health care providers to city and county health departments. Only then can appropriate disease intervention measures be promptly implemented. The overall goal of these efforts is to decrease morbidity among the citizens of Virginia.

Tables summarizing 1990 morbidity immediately follow this introduction. 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.

Following the Introduction and Data Summary section, this report contains four major sections: a description of the populations reported with each reportable condition; a list of the number of cases reported and rate per 100,000 population of selected reportable diseases by city/county, district, and region; maps of selected reportable conditions depicting morbidity rates per 100,000 population for each city and county; and cancer data reported to the Virginia Tumor Registry.

The first section of the report, the descriptive epidemiology of reportable diseases, includes 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 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.

Some notes on coding follow:

Race is usually coded as white or nonwhite. Nonwhite is occasionally subdivided, however, into black and other. In this instance the "other" category refers to Hispanics, Asian/Pacific Islanders, American Indians, and Alaskan Natives.

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 1990 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 Centers for Disease Control or first received in the Office of Epidemiology, rather than date of onset of symptoms. For cancers, date of admission to the reporting hospital is utilized.

Beginning with 1990 data, Virginia health districts have been combined into four regions. Prior to 1990, five region categories were used. What used to be called the Northern and Northwest Regions have been combined into one, called the Northern Region. While data have been calculated for the Northern Region as a whole, mention is often made of the northern and northwest sections of the Northern Region, referring to the previous regional designations. This will enable further analysis with respect to geographic differences and comparison with historical data.

The second section of the report lists number of cases and rates for selected diseases by locality. 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 morbidity rate should be weighed when using these tables to rank morbidity by city or county.

The third section includes maps of morbidity rates, depicting the information presented 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 a disease rate greater than zero and up to the mean for the state

Category 3 - Localities with a disease rate greater than the mean and up to one standard deviation above the mean for the state

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

Categories 2 and 3 may be combined for diseases with a small mean and standard deviation.

The fourth section includes data reported to the Virginia Tumor Registry. These data are presented in two formats: (1) all cases ever reported to the Registry from 1970-1989, and (2) cases reported in 1989. The most current year for which statistics are available, due to the acceptable lag time for reporting cancer data, is 1989. Most of the data in Section 4 are presented graphically.

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 data elements for selected diseases. Table 1 is a list of the reportable conditions in Virginia. Table 2 presents the number of cases of select 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 1989, the following diseases increased in incidence in 1990: AIDS, primary encephalitis, giardiasis, gonorrhea, malaria, measles, Rocky Mountain spotted fever (RMSF), salmonellosis, early syphilis, and tuberculosis. The number of measles cases reported in 1990 is the second highest number reported in any year this decade. The one year increase in RMSF is in contrast with the overall decline seen in that disease over the past ten years.

Decreases were observed for amebiasis, all reportable forms of meningitis (aseptic, bacterial, and meningococcal), campylobacteriosis, chickenpox, hepatitis types A, B, and non-A non-B, influenza, mumps, pertussis, rabies, and shigellosis compared to the previous year. This one year decline in chickenpox and hepatitis A is contrary to the overall increase in morbidity seen with these diseases throughout the 1980s.

REGION - The Northern and Eastern Regions were the most likely to report the highest morbidity rates. The Eastern Region had the highest morbidity rate of all regions for chickenpox, Chlamydia trachomatis infection, gonorrhea, hepatitis A, HIV infection, Lyme disease, and tuberculosis. The Northern Region experienced the highest rate of campylobacteriosis, giardiasis, malaria, measles, mumps, and shigellosis. The Northern and Central Regions had the highest, and similar, rates for AIDS.

The Central Region was the most likely region to report rabies, RMSF, salmonellosis, and early syphilis. The Southwest Region was the most frequent location for cases of influenza and legionellosis.

Differences were observed within the two sections of the Northern Region. The northwest section had higher rates of campylobacteriosis, Chlamydia trachomatis infection, influenza, and Lyme disease than the northern section. On the other hand, the northern section experienced higher rates of AIDS, chickenpox, hepatitis A, HIV infection, shigellosis, early syphilis, tuberculosis, and measles than the other section of the Northern Region.

AGE - Compared to the other age groups, infants were at the greatest risk for all three reportable forms of meningitis, campylobacteriosis, primary encephalitis, invasive H. influenzae infection, measles, and salmonellosis. Young children (age 1-9) were at the greatest risk for giardiasis, Kawasaki syndrome, mumps, and shigellosis. Older children (age 10-19) were the most likely to be reported with Chlamydia trachomatis infection. They were also at increased risk for mumps, only slightly less than were younger children.

Young adults (age 20-29) experienced more gonorrhea, hepatitis A, hepatitis B, HIV infection, malaria, and early syphilis than the other age groups. AIDS and Lyme disease were most often found in 30-39 year olds; RMSF in 40-49 year olds; and hepatitis non-A non-B, legionellosis, and tuberculosis in those age 50 or older.

RACE - Nonwhites were generally found to be at increased risk for disease compared to the white population, as shown in Table 5. The only exceptions to this were campylobacteriosis, hepatitis non-A non-B, legionellosis, Lyme disease, measles, mumps, and RMSF, which were more common in whites.

The differences in morbidity rates by race were particularly notable for Chlamydia trachomatis infection, gonorrhea, AIDS, hepatitis B, HIV infections, shigellosis, early syphilis, and tuberculosis. Nonwhites were reported to have these diseases much more often than whites.

SEX - Females were reported to have Chlamydia trachomatis infection and pertussis more often than males. Conversely, males were at greater risk for AIDS, gonorrhea, hepatitis A, hepatitis B, HIV infection, meningococcal infection, mumps, RMSF, and tuberculosis. No major differences were noted between morbidity rates for males and females for the following diseases: amebiasis, aseptic and bacterial meningitis, campylobacteriosis, primary encephalitis, giardiasis, invasive H. influenzae infection, Kawasaki syndrome, legionellosis, Lyme disease, measles, salmonellosis, shigellosis, and early syphilis.

ONSET - Bacterial meningitis and influenza were most likely to be reported between January and March of 1990. The second quarter of the year was the most frequent onset time for many diseases, including amebiasis, chickenpox, hepatitis non-A non-B, Lyme disease, malaria, measles, mumps, and RMSF. During the third quarter, aseptic meningitis, campylobacteriosis, salmonellosis, and shigellosis were the most likely to occur. The fourth quarter of the year was a relatively quiet time for disease onset.

The following diseases were not found to demonstrate a clear seasonal trend: primary encephalitis, hepatitis A, hepatitis B, invasive H. influenzae infection, and Kawasaki syndrome.

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
Campylobacter infection	Occupational illness
Chancroid	Ophthalmia neonatorum
Chickenpox	Pertussis (Whooping cough)
Chlamydia trachomatis infection	Phenylketonuria (PKU)
Congenital rubella syndrome	Plague
Diphtheria	Poliomyelitis
Encephalitis primary (specify etiology)	Psittacosis
post-infectious	Q fever
Foodborne outbreak	Rabies in animals
Giardiasis	Rabies in man
Gonorrhea	Rabies treatment, post-exposure
Granuloma inguinale	Reye syndrome
Haemophilus influenzae infection, invasive	Rocky Mountain spotted fever
Hepatitis A	Rubella (German measles)
B	Salmonellosis
Non-A Non-B	Shigellosis
Unspecified	Smallpox
Histoplasmosis	Syphilis
Human immunodeficiency virus (HIV) infection	Tetanus
Influenza	Toxic shock syndrome
Kawasaki syndrome	Toxic substance related illness
Legionellosis	Trichinosis
Leprosy	Tuberculosis
Leptospirosis	Tularemia
	Typhoid fever
	Typhus, flea-borne
	Vibrio infection, including cholera
	Waterborne outbreak
	Yellow fever