Reportable Disease Surveillance
Virginia, 1991

Office of Epidemiology

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Reportable Disease Surveillance in Virginia, 1991

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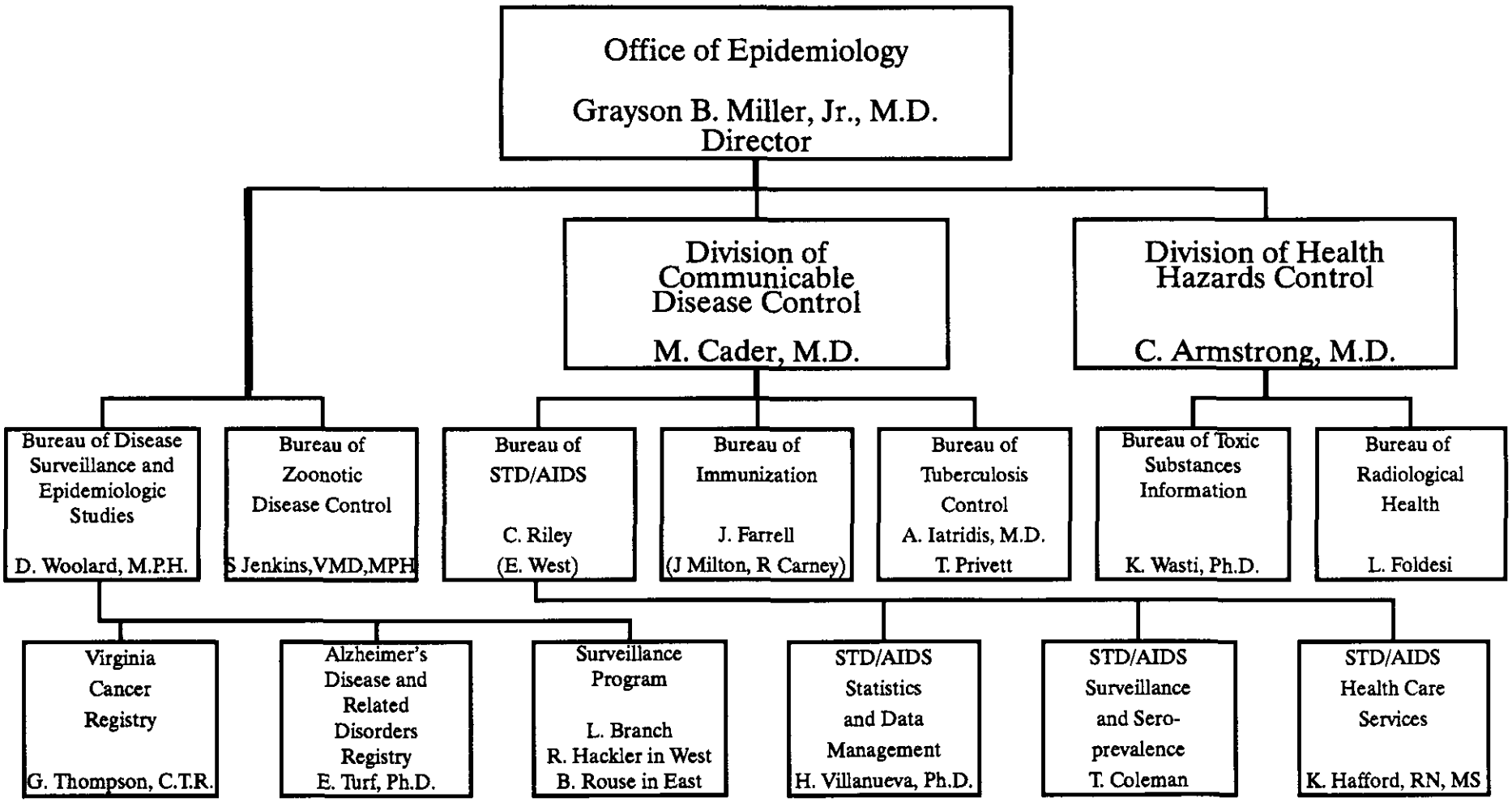

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Introduction

The Virginia Department of Health, Office of Epidemiology is pleased to present its fourth 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 1991.

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 is essential to disease prevention and control. It has been through disease surveillance (which is defined as an ongoing process of collecting, analyzing and disseminating data) that we have been able to portray long-term trends and patterns of disease occurrence at the district, regional and state levels. These data serve as background information necessary to define endemic and epidemic disease activity. Through the analysis of disease data we have been able to determine when to apply prevention measures and to define population groups at greater risk for acquiring certain diseases.

Tables summarizing 1991 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 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 diseases for each 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 Cancer 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 1991 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.

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 incidence rates should be weighed when using these tables to rank morbidity by city or county.

The third section includes maps of incidence 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 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.

The fourth section includes data reported to the Virginia Cancer Registry. This section contains information on all cases diagnosed between 1970 and 1990 and reported to the Registry, all Virginia cancer cases diagnosed in 1990, and a summary of two studies conducted by the Registry on cancer in major body sites. The most current year for which statistics are available, due to the acceptable lag time in reporting cancer data, is 1990. Much 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, Room 113, 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 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 1990, the following diseases increased in incidence in 1991: AIDS, amebiasis, aseptic meningitis, campylobacteriosis, chickenpox, *Chlamydia trachomatis* infection, giardiasis, invasive *Haemophilus influenzae* infection, HIV infection, influenza, legionellosis, Lyme disease, occupational illnesses, rabies in animals, shigellosis, early syphilis, and typhoid fever.

Decreases were observed for bacterial meningitis, primary encephalitis, gonorrhea, hepatitis A, B, and non-A non-B, histoplasmosis, malaria, measles, meningococcal infection, mumps, pertussis, Rocky Mountain spotted fever (RMSF), salmonellosis, and tuberculosis.

REGION - Areas referred to in previous annual reports as regions are now called health planning regions due to a restructuring of the Virginia Department of Health. The northern health planning region had a higher incidence rate for more diseases than any other area of the state. Those diseases included AIDS, amebiasis, aseptic meningitis, primary encephalitis, giardiasis, hepatitis A, hepatitis non-A non-B, Kawasaki syndrome, Lyme disease, malaria, measles, mumps, pertussis, salmonellosis, tuberculosis, and typhoid fever.

The northwest health planning region experienced the highest rate of bacterial meningitis, campylobacteriosis, invasive *Haemophilus influenzae* infection, and legionellosis. The highest rates for influenza, meningococcal infection, RMSF, and shigellosis were reported

in the southwest health planning region. The central health planning region had the highest rates for histoplasmosis, HIV infection, and early syphilis. Incidence rates were highest for chickenpox, *Chlamydia trachomatis* infection, gonorrhea, and hepatitis B in the eastern health planning region.

AGE - Infants had the highest incidence rates for aseptic meningitis, bacterial meningitis, campylobacteriosis, primary encephalitis, invasive *H. influenzae* infection, measles, pertussis, and salmonellosis. Incidence rates in young children (age 1-9) were highest for amebiasis, giardiasis, mumps, RMSF, and shigellosis. The malaria incidence rate for this age group was second only to the 40-49 year olds. Older children (age 10-19) had the highest incidence rate for *Chlamydia trachomatis* infection, the second highest gonorrhea rate, and the third highest early syphilis rate.

Incidence rates were highest in young adults (age 20-29) for gonorrhea, hepatitis A and B, early syphilis, and typhoid fever. The 30-39 year olds had the highest incidence rates for AIDS, hepatitis non-A non-B, histoplasmosis, and HIV infection. They (30-39 year olds) had the second highest rates for hepatitis A and B. Cancer, legionellosis, Lyme disease, and tuberculosis rates were highest in those age 50 or older.

RACE - Compared to whites, incidence rates in nonwhites were generally higher, as shown in Table 5. Differences in incidence rates by race were particularly notable for *Chlamydia trachomatis* infection, gonorrhea, hepatitis B, HIV infection, and early syphilis.

SEX - Higher incidence rates by sex for males compared to females were noted for AIDS, amebiasis, gonorrhea, hepatitis A and B, invasive *Haemophilis influenzae* infection, histoplasmosis, HIV infection, Kawasaki syndrome, legionellosis, RMSF, early syphilis, tuberculosis, and typhoid fever. Incidence rates were noticeably higher for females for *Chlamydia trachomatis* infection and shigellosis. No major differences were noted between incidence rates for males and females for the following diseases: aseptic meningitis, bacterial meningitis, campylobacteriosis, primary encephalitis, giardiasis, hepatitis non-A

non-B, Lyme disease, malaria, measles, meningococcal infection, mumps, pertussis, and salmonellosis.

ONSET - Kawasaki syndrome and measles were most likely to occur during the first quarter of the reporting year. Cases of chickenpox, meningococcal infection, mumps, and shigellosis occurred most often during the second quarter. The third quarter of the year was the most frequent time of onset for aseptic meningitis, campylobacteriosis, primary encephalitis, giardiasis, histoplasmosis, legionellosis, malaria, and salmonellosis. Due to an earlier than expected 1990-91 influenza season, the fourth quarter accounted for the highest number of influenza cases. Lyme disease and RMSF each had a comparable number of cases to occur during the second and third quarters.

The following diseases were not found to demonstrate a clear seasonal trend: amebiasis, bacterial meningitis, hepatitis A, B, and non-A non-B, invasive *Haemophilus influenzae* infection, pertussis, and typhoid fever.

Table 1.

REPORTABLE DISEASES IN VIRGINIA

- Acquired immunodeficiency syndrome
- Amebiasis
- Anthrax
- Arboviral infection
- Aseptic meningitis
- Bacterial meningitis (specify etiology)
- Botulism
- Brucellosis
- *Campylobacter* infection
- Chancroid
- Chickenpox
- *Chlamydia trachomatis* infection
- Congenital rubella syndrome
- Diphtheria
- Encephalitis
  - primary (specify etiology)
  - 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
- Legionellosis
- Leprosy
- 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