



# VIRGINIA

# EPIDEMIOLOGY BULLETIN

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Editor: Carl W. Armstrong, M.D., F.A.C.P.

May, 1994  
Special Surveillance Issue

Volume 94, Number 5

## Reportable Disease Statistics in Virginia, 1993\*

The Office of Epidemiology, Virginia Department of Health (VDH) compiles statistics on the statewide occurrence of notifiable diseases in Virginia. The data to be presented here are based on reports received from physicians, medical care facility directors and staff, and laboratory directors and staff. The data are used to determine trends in disease occurrence in Virginia and are analyzed in various ways in order to detect changes in different age groups, different regions of the state and different groups of citizens. By examining trends, we are able to detect unusual increases in incidence and intercede in an attempt to reverse the trend, or detect decreases in incidence which may reflect the effectiveness of preventive measures.

Monthly statistics are provided on the back page of each issue of this Bulletin and an annual report is produced by the Office.

Because of the complexity of the annual report, its production and distribution is delayed. In order to provide a more timely annual summary, this issue of the Bulletin is devoted to the presentation of a brief description of 1993 surveillance data for those who may be interested in statewide disease statistics. (See page 3 for an announcement regarding availability of the 1992 report).

### Trend Data

Figure 1 shows the diseases that demonstrated the greatest change (increase or decrease) in number of reported cases between 1992 and 1993. The number of reported cases for the diseases shown to have increased, with the exception of typhoid fever, was also higher than the mean number of cases reported for each of those

diseases during the last five years. Reported cases of aseptic meningitis, primary encephalitis, hepatitis non-A non-B, influenza, and salmonellosis also increased in 1993 compared to 1992, but the number of reported cases of these diseases was less than their respective five year means. The number of reported cases of *Chlamydia trachomatis* infection and human immunodeficiency virus (HIV) infection also increased in 1993, but because these conditions did not become reportable until July 1989, they cannot be compared to a five year mean.

Figure 2 shows six year trends for selected diseases which demonstrated notable increases in calendar year 1993 compared to 1992. The new AIDS case definition was a major contributing factor for the dramatic increase in the number of cases reported in Virginia during 1993, 886 more

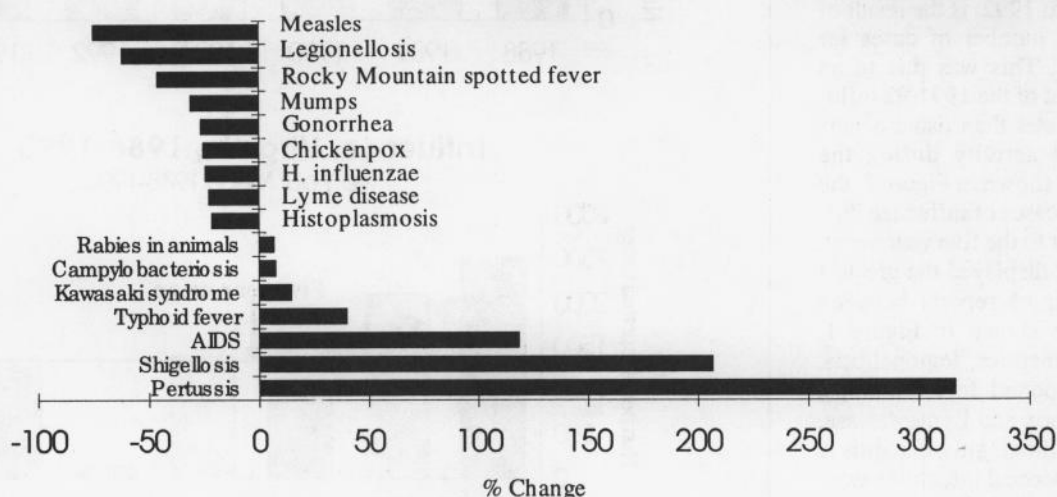


Figure 1. Percent change in number of reported cases from 1992 to 1993

than the number reported in 1992 (747), and 1,056 cases higher than the five year mean (577 cases). Fifty-five percent of the 1993 cases were reported under the new case definition.

Reported cases of shigellosis increased by 207% in 1993 (776 cases) compared to 1992 (253 cases) and were 128% higher than the five year mean. Although spread of this disease can occur through contamination of food and water, the predominant mode of transmission is by direct contact with an infected person. Heightened surveillance and intensive investigations of reported cases identified several clusters of cases in day care centers. These clusters were determined to be the result of person-to-person transmission, and not due to contamination of a food or water supply. Local Health Department staff worked with personnel involved to implement control measures in order to interrupt the spread of disease. Personal hygiene, *i.e.* hand washing, remains the most effective method of prevention.

Seventy-five cases of pertussis were reported in Virginia in 1993 compared to 18 cases in 1992. This increase follows a three year annual decrease in reports of this vaccine-preventable disease. The increase in Virginia coincided with an increase nationally and further analysis is being completed to determine possible areas for intervention. A future issue of this Bulletin will report on the results of this investigation.

The number of reported cases of influenza is reflective of the temporal occurrence of the influenza season in two different calendar years. The influenza season in Virginia typically runs from the fourth quarter (October - December) of one year through the first quarter (January - March) of the following year. The considerable difference in the number of influenza cases in 1993, compared to 1992, is the result of an abnormally low number of cases for calendar year 1992. This was due to an unusually early onset of the 1991/92 influenza season and a later than usual occurrence of influenza activity during the 1992/93 season. As shown in Figure 2, the number of reported cases of influenza during 1993 was similar to the five year mean.

The diseases that displayed the greatest decrease in number of reports between 1992 and 1993 are shown in Figure 1. Reported cases of measles, legionellosis, Rocky Mountain spotted fever, mumps, gonorrhea, chickenpox and Lyme disease, along with bacterial meningitis, hepatitis A and B, and meningococcal infections were also fewer in number than their respective five year means. The diseases shown in Figure 3 are ones that have demonstrated

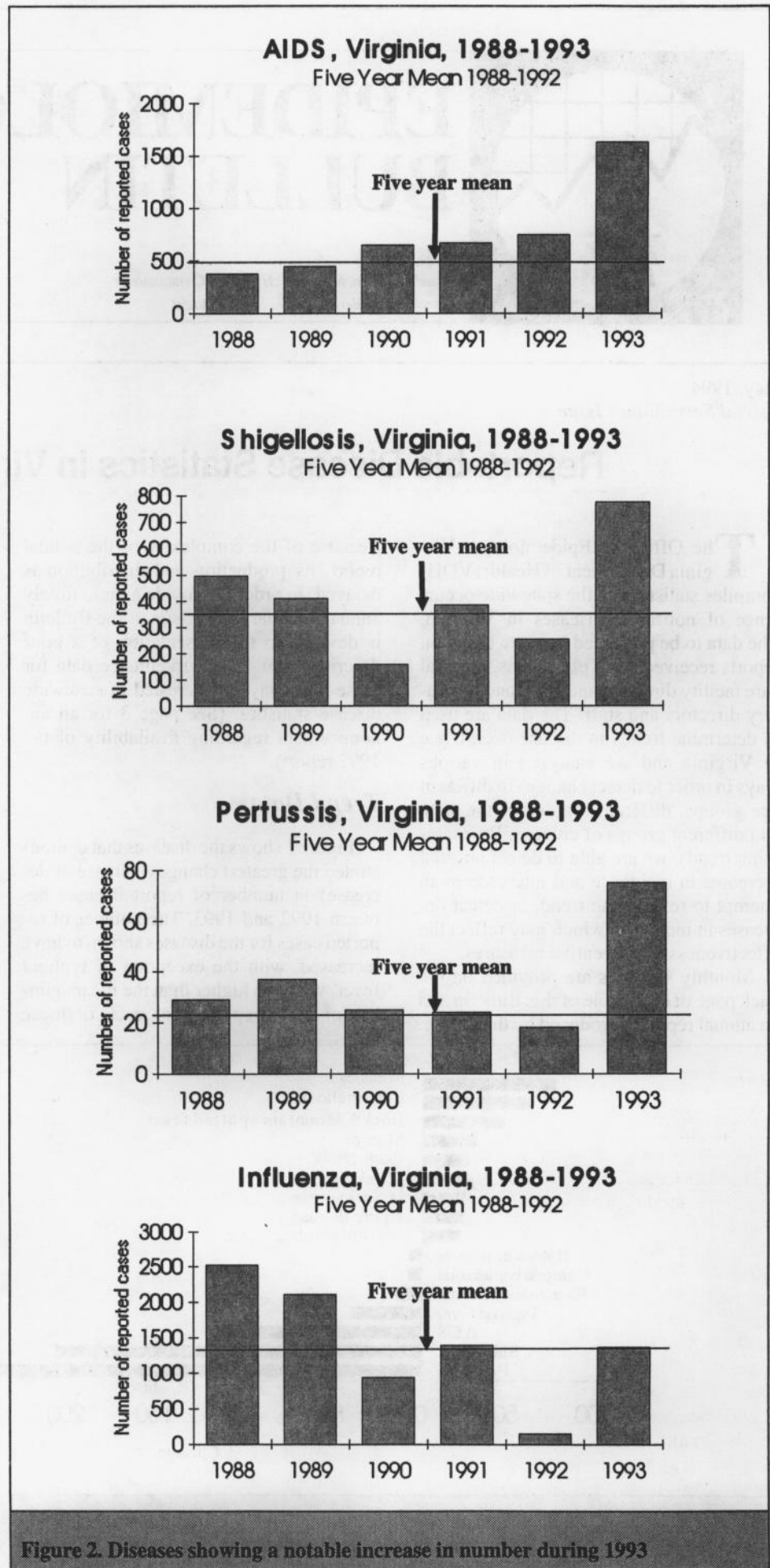


Figure 2. Diseases showing a notable increase in number during 1993

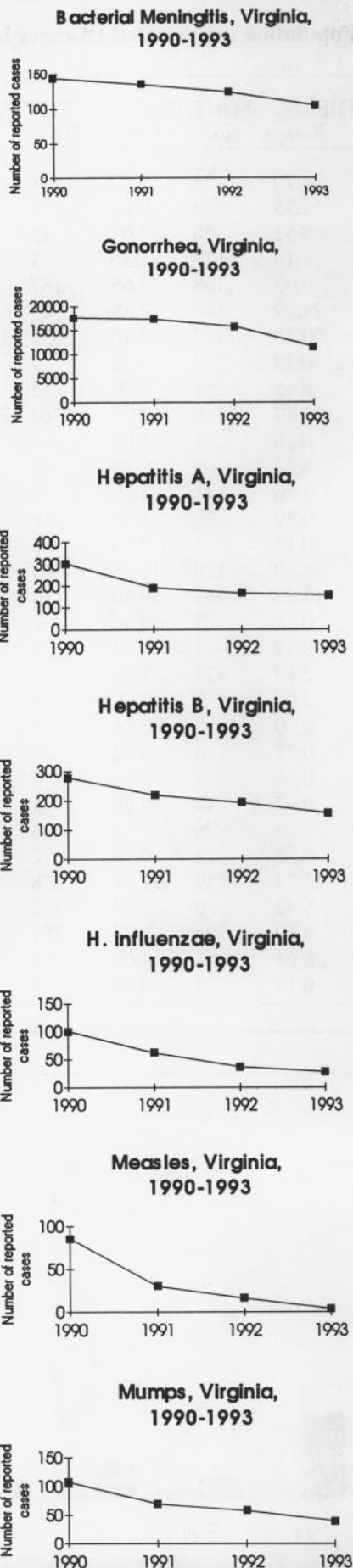


Figure 3. Diseases for which a three year decreasing trend is seen

three or more consecutive yearly decreases in the number of reported cases.

### Geographic Distribution

Table 1 shows the number of cases and incidence rates† per 100,000 population for selected diseases reported to the Office of Epidemiology during 1993 by health planning region. The eastern health planning region was most likely to experience the highest incidence rates overall and the northwest the lowest. The eastern health planning region had the highest incidence rates for bacterial meningitis, chickenpox, *Chlamydia trachomatis* infection, primary encephalitis, gonorrhea, invasive *Haemophilus influenzae* infection, mumps, and early syphilis.

The central health planning region experienced the highest incidence rates for AIDS, histoplasmosis, HIV infection, invasive meningococcal infection, salmonellosis, shigellosis, and tuberculosis.

Amebiasis, aseptic meningitis, giardiasis, hepatitis A, Lyme disease, and malaria were more likely to be reported from the northern health planning region. A possible explanation for the higher rates of some of these diseases is importation from other countries where they are endemic.

The highest incidence rates for hepatitis B and non-A non-B, influenza, legionellosis, and measles were observed in the southwest health planning region.

## Surveillance Report Available

The Virginia Department of Health's annual surveillance report entitled *Reportable Disease Surveillance in Virginia, 1992* is available. This document summarizes morbidity information reported in Virginia during calendar year 1992. In it you will find statistics on reportable diseases by year, region, age, race, sex, and time of onset. Through the report, information is presented in the form of narratives, graphs, tables, and maps. Chronic disease data from the Virginia Cancer Registry and the Alzheimer's Disease and Related Disorders Registry are also included. If you are interested in receiving a copy of this report, please call the Office of Epidemiology at (804) 786-6261. This publication is distributed free of charge.

**Table 1. Number of Reported Cases and Rates per 100,000 Population for Selected Diseases by Health Planning Region, Virginia, 1993**

Disease	TOTAL		NORTHWEST		NORTHERN		SOUTHWEST		CENTRAL		EASTERN	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
AIDS	1633	25.51	126	14.42	538	34.70	125	10.02	478	43.74	366	22.36
Amebiasis	34	0.53	0	0.00	24	1.55	2	0.16	2	0.18	6	0.37
Aseptic meningitis	343	5.36	33	3.78	132	8.51	38	3.05	15	1.37	125	7.64
Bacterial meningitis	105	1.64	18	2.06	18	1.16	17	1.36	11	1.01	41	2.50
Campylobacteriosis	706	11.03	153	17.51	154	9.93	108	8.66	187	17.11	104	6.35
Chickenpox	2917	45.57	43	4.92	341	21.99	180	14.43	63	5.77	2290	139.88
Chlamydia trachomatis <sup>^</sup>	11389	177.91	1362	155.87	1407	90.75	1777	142.46	2035	186.22	4808	293.69
Encephalitis, primary	44	0.69	9	1.03	6	0.39	7	0.56	4	0.37	18	1.10
Giardiasis	373	5.83	39	4.46	131	8.45	51	4.09	41	3.75	111	6.78
Gonorrhea <sup>^</sup>	11620	181.52	578	66.15	860	55.47	1120	89.79	2763	252.84	6299	384.76
H. influenzae infection	28	0.44	3	0.34	9	0.58	1	0.08	4	0.37	11	0.67
Hepatitis A	156	2.44	7	0.80	81	5.22	9	0.72	18	1.65	41	2.50
Hepatitis B	157	2.45	11	1.26	35	2.26	41	3.29	27	2.47	43	2.63
Hepatitis Non-A Non-B	54	0.84	4	0.46	5	0.32	20	1.60	16	1.46	9	0.55
Histoplasmosis	11	0.17	2	0.23	2	0.13	1	0.08	5	0.46	1	0.06
HIV infection	1484	23.18	59	6.75	369	23.80	128	10.26	401	36.70	527	32.19
Influenza	1363	21.29	71	8.13	205	13.22	741	59.40	115	10.52	231	14.11
Kawasaki syndrome	31	0.48	1	0.11	11	0.71	7	0.56	0	0.00	12	0.73
Legionellosis	11	0.17	1	0.11	3	0.19	3	0.24	1	0.09	3	0.18
Lyme disease	95	1.48	9	1.03	34	2.19	22	1.76	13	1.19	17	1.04
Malaria	41	0.64	1	0.11	31	2.00	1	0.08	3	0.27	5	0.31
Measles	4	0.06	0	0.00	0	0.00	3	0.24	1	0.09	0	0.00
Meningococcal inf.	52	0.81	8	0.92	12	0.77	4	0.32	12	1.10	16	0.98
Mumps	40	0.62	3	0.34	13	0.84	4	0.32	4	0.37	16	0.98
Pertussis	75	1.17	34	3.89	15	0.97	12	0.96	5	0.46	9	0.55
Rabies in animals	387	-	140	--	58	--	76	--	66	--	47	--
Rocky Mtn spot. fever	14	0.22	5	0.57	4	0.26	2	0.16	2	0.18	1	0.06
Salmonellosis	1055	16.48	175	20.03	244	15.74	149	11.94	238	21.78	249	15.21
Shigellosis	776	12.12	58	6.64	84	5.42	9	0.72	422	38.62	203	12.40
Syphilis, early <sup>^</sup>	1268	19.81	30	3.43	65	4.19	104	8.34	259	23.70	810	49.48
Tuberculosis	458	7.15	41	4.69	134	8.64	51	4.09	105	9.61	127	7.76
Typhoid fever	7	0.11	0	0.00	3	0.19	3	0.24	1	0.09	0	0.00

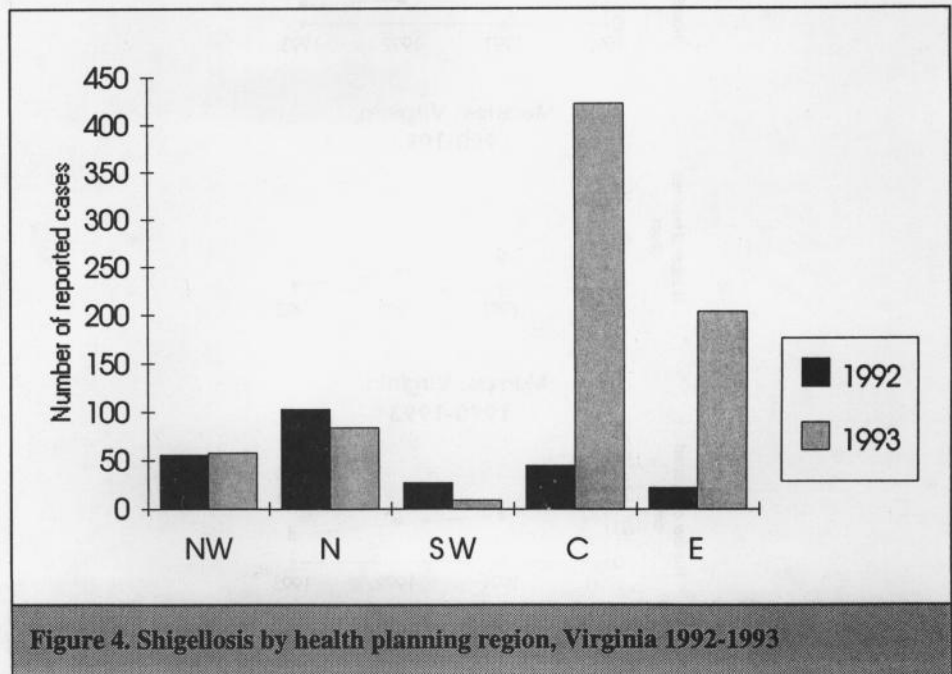
<sup>^</sup>Civilian population only

The northwest health planning region experienced the highest incidence rates for pertussis and Rocky Mountain spotted fever.

As shown in Figure 4, the geographic distribution of reported cases of shigellosis was particularly notable. During 1993, the central and eastern health planning regions reported approximately 80% of the 776 cases of shigellosis in Virginia (54.4% and 26.2%, respectively) compared to a combined total of 26% in 1992.

**Age, Race, and Sex Distributions**

Figure 5 shows the incidence rate per 100,000 population for selected diseases by age groups for 1993 in Virginia. The seven diseases selected for each age group represent those reported most frequently.



**Figure 4. Shigellosis by health planning region, Virginia 1992-1993**

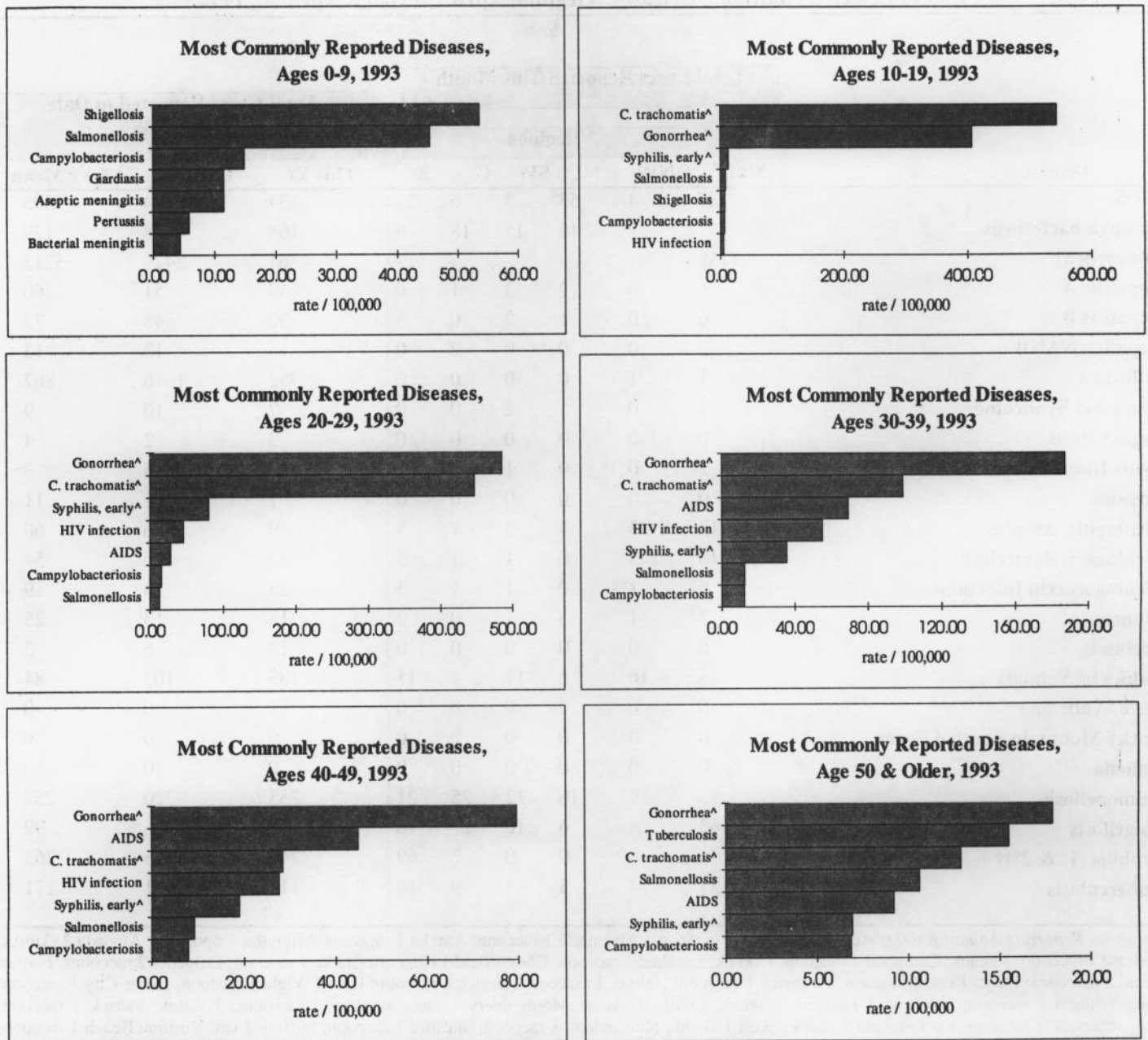


Figure 5. Incidence rates for the most commonly reported diseases by age group

<sup>^</sup>Civilian population only

Diseases for which young children (age 0-9) were at the greatest risk included shigellosis, salmonellosis, campylobacteriosis, giardiasis, pertussis, aseptic and bacterial meningitis. Compared to the other age groups, young children were also at the greatest risk for primary encephalitis, invasive *Haemophilus influenzae* infection, Kawasaki syndrome, meningococcal infection, and mumps.

Older children (age 10-19) were at a much greater risk for *Chlamydia trachomatis* and gonorrhea infections. This age group also had the highest number of cases (3) and incidence rate for measles reported in 1993.

Incidence rates for persons between the ages of 20 and 49 were consistently high for sexually transmitted diseases, including gonorrhea, *Chlamydia trachomatis* infection, early syphilis, HIV infection and AIDS compared to the other groups.

Unlike any other age group, persons aged 50 and over were at a greater risk for tuberculosis. The incidence of salmonellosis and campylobacteriosis was high in all age groups.

### Conclusion

The data provided here represent a portion of disease surveillance statistics for

1993. The full annual report for the year 1993 will be compiled and distributed in a separate document entitled *Reportable Disease Surveillance in Virginia, 1993*. In addition, surveillance staff will continue to analyze disease occurrence and report on the findings in future issues of this Bulletin.

<sup>\*</sup>Submitted by Leslie M. Branch and Mary Jean Linn, RN, Bureau of Disease Surveillance and Epidemiologic Studies, Office of Epidemiology, Virginia Department of Health.

<sup>†</sup>With the exception of tuberculosis, rates were calculated using 1993 population projections from the Virginia Employment Commission. Tuberculosis rates, however, were calculated using 1990 Census data.

Cases of Selected Notifiable Diseases, Virginia, April 1 through April 30, 1994.\*

Disease	Total Cases Reported This Month						Total Cases Reported to Date in Virginia		
	State	Regions					This Yr	Last Yr	5 Yr Mean
		NW	N	SW	C	E			
AIDS	87	4	53	3	6	21	434	724	305
Campylobacteriosis	61	7	15	15	18	6	168	108	129
Gonorrhea†	1138	-	-	-	-	-	4361	3426	5213
Hepatitis A	6	0	2	3	1	0	39	51	60
Hepatitis B	6	0	1	2	0	3	32	48	73
Hepatitis NANB	2	0	0	0	2	0	15	12	13
Influenza	1	1	0	0	0	0	752	1016	867
Kawasaki Syndrome	3	0	1	2	0	0	7	10	9
Legionellosis	0	0	0	0	0	0	2	2	4
Lyme Disease	2	0	0	1	0	1	13	5	9
Measles	0	0	0	0	0	0	1	1	11
Meningitis, Aseptic	13	3	1	3	1	5	49	56	60
Meningitis, Bacterial‡	10	3	0	1	1	5	27	26	54
Meningococcal Infections	6	1	0	1	1	3	25	13	19
Mumps	7	1	3	1	0	2	18	13	25
Pertussis	0	0	0	0	0	0	13	6	5
Rabies in Animals	48	16	6	11	4	11	133	103	84
Reye Syndrome	0	0	0	0	0	0	1	0	0
Rocky Mountain Spotted Fever	0	0	0	0	0	0	0	0	0
Rubella	0	0	0	0	0	0	0	0	0
Salmonellosis	93	19	16	12	25	21	255	220	259
Shigellosis	63	4	6	10	27	16	196	96	99
Syphilis (1° & 2°)†	76	0	0	0	7	69	242	208	263
Tuberculosis	31	4	5	3	9	10	119	141	111

*Localities Reporting Animal Rabies:* Accomack 1 fox, 5 raccoons; Albemarle 1 raccoon; Amelia 1 raccoon; Arlington 1 opossum; Augusta 2 skunks; Bedford 1 raccoon, 1 skunk; Campbell 1 raccoon, 1 skunk; Caroline 1 raccoon; Chesterfield 1 raccoon; Clarke 1 raccoon; Culpeper 2 raccoons; Fairfax 1 fox, 2 raccoons; Floyd 1 cat, 1 raccoon; Frederick 1 raccoon; Halifax 1 raccoon; Henrico 1 raccoon; Isle of Wight 1 raccoon; James City 1 raccoon; King William 1 raccoon; Loudoun 1 raccoon, 1 skunk; Louisa 1 skunk; Montgomery 1 raccoon; Page 2 raccoons, 1 skunk; Patrick 1 raccoon; Rappahannock 1 raccoon; Rockingham 1 skunk; Scott 1 skunk; Shenandoah 1 raccoon; Stafford 1 raccoon; Suffolk 1 cat; Virginia Beach 1 raccoon; Wythe 1 cat, 1 raccoon.

*Occupational Illnesses:* Asbestosis 16; Carpal Tunnel Syndrome 60; Coal Workers' Pneumoconiosis 23; Loss of Hearing 15; Repetitive Motion Disorder 3.

\*Data for 1994 are provisional. †Total now includes military cases to be consistent with reports of the other diseases. ‡Other than meningococcal.

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

Telephone: (804) 786-6261

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