

# VIRGINIA

# EPIDEMIOLOGY BULLETIN

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## Summary of Reportable Diseases, Virginia, 1998

### Introduction

This issue of the *Virginia Epidemiology Bulletin* (VEB) summarizes the reports of notifiable diseases in Virginia for 1998. Data were compiled by the Division of Surveillance and Investigation, Office of Epidemiology, Virginia Department of Health (VDH). A notifiable disease is one that must be reported to the health department according to the provisions of the *Regulations for Disease Reporting and Control*, (amended January 1999). These are conditions for which regular, frequent, and timely information regarding individual cases is considered necessary for the prevention and control of disease. A copy of the revised regulations has been mailed to physicians, hospital administrators and infection control practitioners, nursing home administrators, and laboratory directors in Virginia.

The Office of Epidemiology is responsible for the ongoing surveillance of notifiable diseases and conditions. 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. After each reporting year, data concerning the reported occurrence of notifiable conditions are finalized and published in an annual surveillance report entitled *Reportable Disease Surveillance in Virginia*.

### Data Sources

Data in this summary were derived primarily from reports sent to the health department by physicians, directors of medical care facilities and directors of laboratories who report notifiable conditions. The current list of

reportable conditions can be found in the January 1999 issue of the VEB. Provisional data are tabulated monthly and published in each issue of the VEB.

### Trend Data

Figure 1 shows the change (increase or decrease) in the number of reports received in 1998 for selected diseases when compared to the average number of cases reported during the previous five years (5-year mean). The data are shown as a ratio of the number of cases reported in 1998 to the 5-year mean. Table 1 shows the number of reported cases for selected diseases in Virginia from 1989-1998. Table 2 provides the number of re-

ported cases for selected diseases by health planning region for 1998. Rates per 100,000 population are also presented.

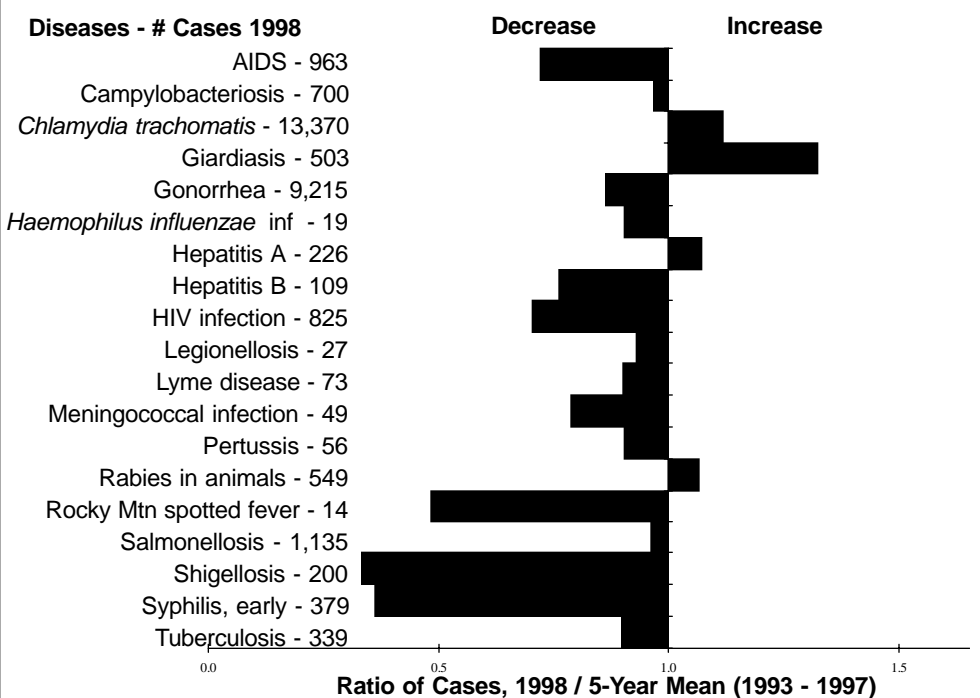
### 1998 Highlights for Selected Diseases

#### AIDS/HIV

In 1998, the number of reported AIDS cases decreased for the third consecutive year. The number (963) of cases reported in 1998 is 18% less than the 1,175 cases reported in 1997. Cases nationally were down 20%. Virginia observed a peak of 1,629 reported cases in 1993. The number of newly reported cases



**Figure 1. Change in Disease Incidence in 1998 When Compared to Five-Year Mean**



Disease	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
AIDS†	444	647	662	745	1,629	1,194	1,459	1,212	1,175	963
Amebiasis	24	18	31	36	34	39	16	28	30	31
Aseptic meningitis	417	386	463	310	343	337	780	234	262	240
Bacterial meningitis	191	144	135	124	105	83	130	77	97	57
Campylobacteriosis	689	598	640	656	706	824	648	790	644	700
Chickenpox	3,492	2,677	2,942	3,911	2,917	2,844	2,667	1,778	1,760	1,115
<i>Chlamydia trachomatis</i> inf.	6,002	13,391	16,717	11,305	11,389	12,976	12,287	11,755	11,604	13,370
Encephalitis, primary	47	58	48	43	44	34	40	26	30	17
Giardiasis	304	359	459	366	373	337	318	405	465	503
Gonorrhea	15,993	17,652	17,256	15,773	11,620	13,414	10,342	9,292	8,731	9,215
<i>Haemophilus influenzae</i> inf	50	60	62	37	28	22	28	11	15	19
Hepatitis A	334	302	191	164	156	193	238	218	250	226
Hepatitis B	321	279	219	193	157	142	118	163	137	109
Hepatitis Non-A Non-B	70	46	37	48	54	26	21	17	27	13
Histoplasmosis	11	6	5	14	11	180	4	1	4	6
HIV infection†	198	1,143	1,644	1,370	1,496	1,109	1,254	980	996	825
Influenza	2,108	937	1,392	148	1,363	957	1,484	957	517	1,160
Kawasaki syndrome	23	24	24	27	31	27	32	19	27	36
Legionellosis	13	13	17	29	11	17	28	54	34	27
Lyme disease	54	129	151	123	95	131	55	57	67	73
Malaria	47	54	52	47	41	37	55	60	73	61
Measles	22	86	30	16	4	3	0	3	1	2
Meningococcal infection	73	58	39	61	52	69	64	67	60	49
Mumps	125	108	70	58	40	48	28	19	21	13
Pertussis	37	25	24	18	75	37	31	108	59	56
Rabies in animals	262	202	253	362	387	428	459	612	690	549
Rocky Mtn spotted fever	18	25	21	26	14	22	34	54	23	14
Salmonellosis	1,452	1,491	1,312	957	1,055	1,135	1,358	1,229	1,120	1,135
Shigellosis	410	158	384	253	776	656	412	746	416	200
Syphilis, early	1,088	1,551	1,622	1,347	1,268	1,409	1,144	798	615	379
Tuberculosis	380	410	379	456	458	372	359	349	349	339
Typhoid fever	7	6	11	5	7	9	10	11	5	7

†Some numbers have changed from those previously reported due to a reassessment of the data.

of HIV infection has been declining since 1991 when 1,644 cases were reported as seen in Figure 2. There was a 17% decrease in newly reported HIV cases in 1998 when compared to 1997.

**Arboviral Disease**

Overall the number of reported cases of arboviral disease was down in 1998 compared to 1997; however, Virginia had its first human case of Eastern Equine Encephalitis (EEE) reported since 1990 (Table 3). This fatal case of arboviral disease occurred in the eastern region of Virginia. EEE is relatively rare and only three other human cases are known to have occurred in Virginia. Fewer than ten cases are reported each year in the United States. Three cases of LaCrosse encephalitis also were reported in 1998. These

cases occurred in the southwest region of Virginia where six cases of LaCrosse were reported in 1997.

**Campylobacteriosis**

The total number of reported enteric infections in Virginia caused by *Campylobacter* is second only to that caused by *Salmonella*. The 700 cases reported in 1998 were 56 more than the 644 cases reported in 1997 but less than the 5-year mean.

***Escherichia coli* O157:H7**

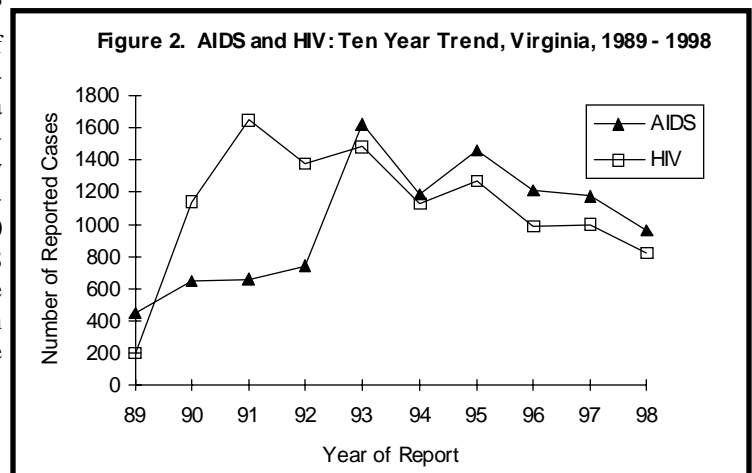
*Escherichia coli* O157:H7 infection became a notifiable condition in Virginia this year; however, the Office of Epidemiology has been maintaining statistical data from voluntary reporting of this disease since 1992 (Figure 3). The number of these reports decreased by 22% in 1998. Sixty-nine cases were reported in 1998 compared to 88 cases in 1997 and 53 cases in 1996. In general, the annual number of reported cases of *E. coli* O157:H7 infection has been increasing.

***Haemophilus influenzae* infection, invasive**

The annual number of reported cases of invasive infections due to all types of *Haemophilus influenzae* increased for the second consecutive year. Nineteen cases were reported in 1998 compared to 15 in 1997 and 11 in 1996; however, the 19 cases reported in 1998 were less than the 5-year mean. Four cases of meningitis and 15 cases of bacteremia were reported. Only two of the nineteen persons reported with invasive *H. influenzae* infection in 1998 were children less than five years of age compared to five of the fifteen reported in 1997. Since the introduction of effective vaccines against *H. influenzae* type b (Hib), reported cases of *H. influenzae* infection among children have declined dramatically.

**Hepatitis A**

Despite a ten percent decrease in the annual number of reported viral hepatitis A cases in 1998 compared to 1997, the 226 cases reported were higher than the 5-year annual mean of 211 cases. Fewer cases



**Table 2. Number of Reported Cases and Rate per 100,000 Population for Selected Diseases by Health Planning Region, Virginia, 1998**

	Total		Northwest Region		Northern Region		Southwest Region		Central Region		Eastern Region	
Population	6,758,567		937,825		1,691,821		1,251,636		1,144,047		1,733,238	
Disease	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
AIDS	963	14.25	100	10.66	172	10.17	82	6.55	250	21.85	359	20.71
Amebiasis	31	0.46	0	0.00	23	1.36	2	0.16	4	0.35	2	0.12
Aseptic meningitis	240	3.55	34	3.63	77	4.55	48	3.83	6	0.52	75	4.33
Bacterial meningitis	57	0.84	13	1.39	8	0.47	11	0.88	4	0.35	21	1.21
Campylobacteriosis	700	10.36	177	18.87	163	9.63	143	11.43	123	10.75	94	5.42
Chickenpox	1,115	16.50	66	7.04	302	17.85	116	9.27	24	2.10	607	35.02
<i>Chlamydia trachomatis</i> infection	13,370	197.82	1,481	157.92	1,734	102.49	1,799	143.73	3,584	313.27	4,772	275.32
Encephalitis, primary	17	0.25	1	0.11	3	0.18	5	0.40	0	0.00	8	0.46
Giardiasis	503	7.44	71	7.57	201	11.88	58	4.63	83	7.25	90	5.19
Gonorrhea	9,215	136.35	482	51.40	812	48.00	1,230	98.27	2,475	216.34	4,216	243.24
<i>Haemophilus influenzae</i> infection	19	0.28	4	0.43	4	0.24	2	0.16	5	0.44	4	0.23
Hepatitis A	226	3.34	36	3.84	113	6.68	20	1.60	23	2.01	34	1.96
Hepatitis B	109	1.61	9	0.96	25	1.48	14	1.12	18	1.57	43	2.48
Hepatitis Non-A Non-B	13	0.19	4	0.43	1	0.06	2	0.16	1	0.09	5	0.29
Histoplasmosis	6	0.09	0	0.00	2	0.12	2	0.16	1	0.09	1	0.06
HIV infection	825	12.21	51	5.44	199	11.76	51	4.07	233	20.37	291	16.79
Influenza	1,160	17.16	181	19.30	34	2.01	758	60.56	33	2.88	154	8.89
Kawasaki syndrome	36	0.53	0	0.00	23	1.36	6	0.48	1	0.09	6	0.35
Legionellosis	27	0.40	8	0.85	3	0.18	12	0.96	0	0.00	4	0.23
Lyme disease	73	1.08	15	1.60	24	1.42	7	0.56	8	0.70	19	1.10
Malaria	61	0.90	4	0.43	44	2.60	2	0.16	5	0.44	6	0.35
Measles	2	0.03	0	0.00	2	0.12	0	0.00	0	0.00	0	0.00
Meningococcal infection	49	0.73	11	1.17	11	0.65	9	0.72	5	0.44	13	0.75
Mumps	13	0.19	1	0.11	4	0.24	1	0.08	1	0.09	6	0.35
Pertussis	56	0.83	32	3.41	6	0.35	3	0.24	6	0.52	9	0.52
Rabies in animals	549	--	178	--	127	--	85	--	79	--	80	--
Rocky Mountain spotted fever	14	0.21	3	0.32	6	0.35	1	0.08	0	0.00	4	0.23
Salmonellosis	1,135	16.79	146	15.57	272	16.08	186	14.86	309	27.01	222	12.81
Shigellosis	200	2.96	24	2.56	110	6.50	9	0.72	15	1.31	42	2.42
Syphilis, early	379	5.61	11	1.17	27	1.60	74	5.91	101	8.83	166	9.58
Tuberculosis	339	5.02	27	2.88	132	7.80	39	3.12	54	4.72	87	5.02
Typhoid fever	7	0.10	0	0.00	5	0.30	0	0.00	1	0.09	1	0.06

Year Reported	Cases	St. Louis	EEE	LaCrosse
<i>Location</i>				
1975	3	Rockingham	Accomack Accomack	
1976	3	Henrico Richmond City Richmond City		
1977	1	Richmond City		
1987	1			Hanover
1990	2	Arlington County	Henrico	
1994	1			Tazewell
1995	1			Tazewell
1996	2			Tazewell Tazewell
1997	7	Colonial Heights		Tazewell Wise Wise Wise Wise Wise
1998	4		Portsmouth	Buchanan Wise Wise

an antigenic drift variant of the H3N2 strain that was in the 1997-1998 vaccine. Forty-three adult residential facilities, including 32 licensed nursing homes, reported outbreaks of influenza-like illness compared to no reports during the previous five influenza seasons.

### Legionellosis

Twenty-seven cases of legionellosis were reported in 1998 compared to 34 cases reported in 1997. The 27 cases reported in 1998 are comparable to the 5-year mean of 29 cases.

### Lyme Disease

Lyme disease is the most frequently reported tickborne illness in Virginia. Seventy-three cases were reported in 1998 compared to 67 cases in 1997. Cases were reported from all regions of the state but were more frequently reported from the northern (24 cases), eastern (19 cases) and northwest regions (15 cases). The Food and Drug Administration approved the first vaccine (LYMERix) against Lyme disease in 1998. The vaccine is licensed for persons aged 15 years to 70 years and is recommended for those who work or recreate in high risk areas, such as East Coast states north of Virginia.

### Malaria

Malaria was diagnosed in a Virginia resident who had not traveled outside of the United States and had no other risk factors usually associated with contracting malaria. Malaria is usually diagnosed in persons returning from trips or just arriving from countries in Africa, Asia, or Central or South America where malaria transmission is endemic. The last time malaria was transmitted within the United States was in 1996.

### Measles

The number of reported cases of measles remains low; two cases were reported in 1998 as shown in Figure 5. Zero cases were reported in 1995 and the annual number of reported cases has not been more than four cases in the past six years.

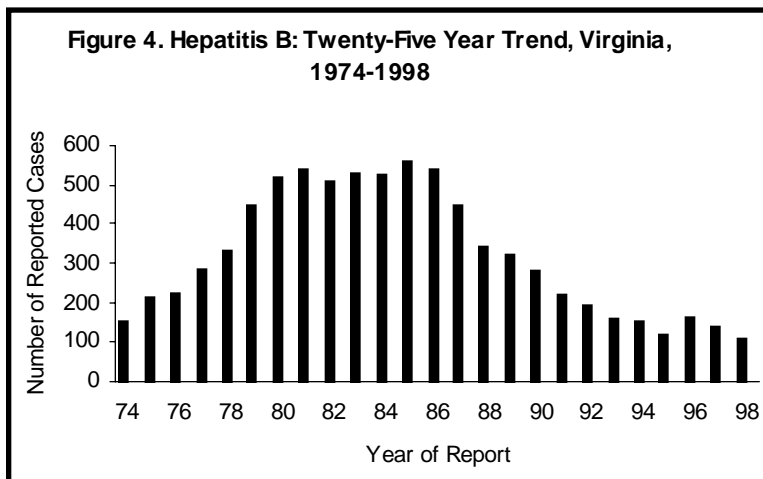
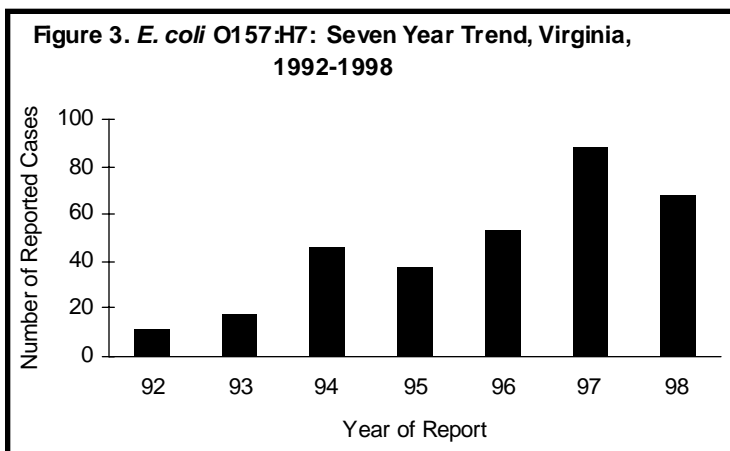
of viral hepatitis A were reported in three of the five health planning regions (northern, southwest and central). An outbreak of viral hepatitis A in Shenandoah County contributed to the increase in the number of cases reported from the northwest region.

### Hepatitis B

The 108 reported cases of viral hepatitis B in 1998 were the lowest number recorded in 25 years in Virginia (Figure 4). The incidence of viral hepatitis B has varied from an annual average of 215 cases in the 1970s to a high of 482 cases in the 1980s to the current low of 169 cases in the 1990s. The decrease in the number of reported cases of viral hepatitis B follows a national trend.

### Influenza

The influenza season in Virginia generally runs from the fourth quarter (October - December) of one year through the first quarter (January - March) of the following year. The 1997-98 influenza season was notable because the predominant circulating strain, A/Sydney/H3N2, was



### Meningococcal infection

The number of reported meningococcal infections decreased in 1998 when compared to 1997. Forty-nine cases were reported in 1998 compared to 60 cases in 1997. The 49 cases reported in 1998 were also below the 5-year mean of 62 cases. Serogroup was reported for 19 (39%) of the cases: 9 group B, 6 group C, 3 group Y, and 1 group W-135.

### Pertussis

In 1998, 56 confirmed cases of pertussis were reported, a 5% decrease from the 59 cases reported in 1997 and a 48% decrease from the 108 cases reported in 1996 (Figure 6). Pertussis has been the most frequently reported childhood vaccine-preventable disease in Vir-

ginia in recent years. Thirty-two (57%) of the reported cases occurred in the northwest health planning region; 51% had occurred in this region in 1997.

### Rabies in Animals

The number of laboratory confirmed rabid animals decreased in 1998, reversing a seven year trend which began in 1991 (Figure 7). The 549 cases reported in 1998 were 20% less than the 690 cases reported in 1997 but were still higher than the 5-year mean of 515 cases. Raccoons (326 cases) continued to be the most commonly reported species (domestic and wildlife) while rabid cats (21 cases) were the most commonly reported domestic species. Other frequently reported rabid animals included skunks (112 cases), foxes (48 cases), and bats (20 cases).

### Rabies in Man

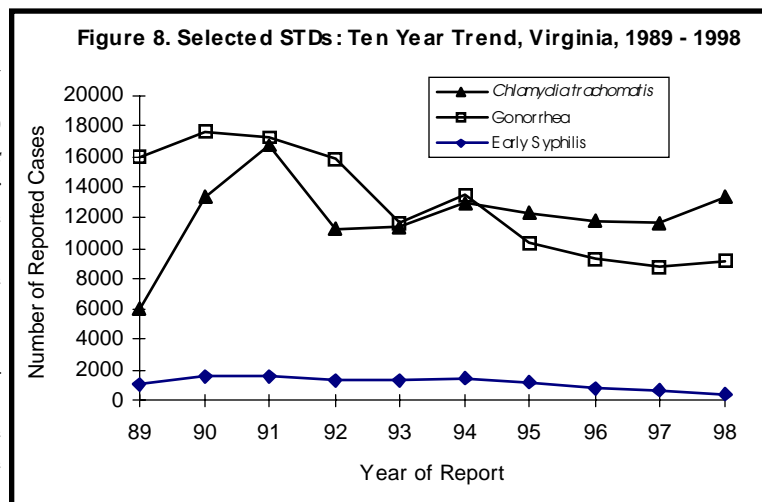
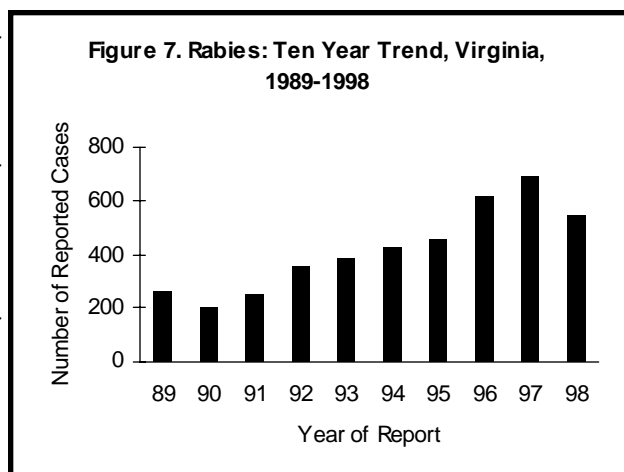
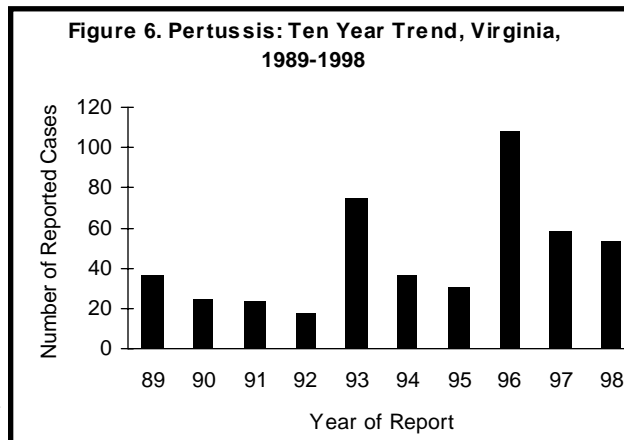
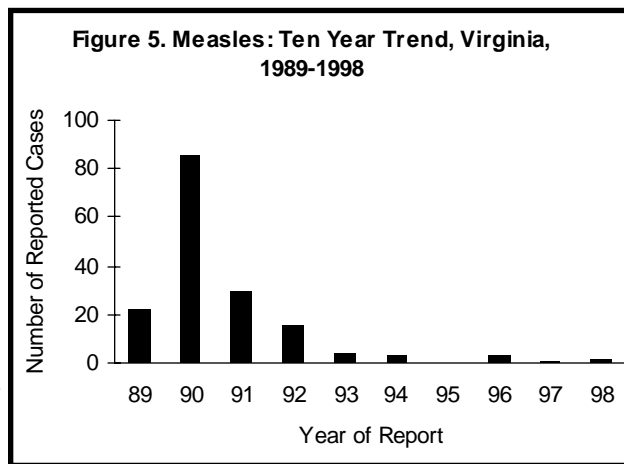
The first case of human rabies in Virginia since 1953 was reported in 1998. The patient had been incarcerated for over three years and there was no history of exposure to animals, or of being bitten or scratched during this time period. Although the rabies was identified as a bat strain, the source of exposure was not determined.

### Shigellosis

The number of reported cases of shigellosis showed a sizeable decline in 1998. The 200 cases reported in 1998 represented a 52% decline from the 416 cases reported in 1997 and were 67% less than the 5-year mean of 601 cases.

### Sexually Transmitted Diseases

Two of the most frequently reported sexually transmitted diseases (*Chlamydia trachomatis* infection and gonorrhea) increased for the first time since 1995 as shown in Figure 8. The 13,370 cases of *Chlamydia trachomatis* infection exceeded the 5-year mean of 12,003 cases. The 9,215 reported cases of gonorrhea, however, were below the 5-year mean of 10,680 cases. Early syphilis (379 cases), which includes primary, secondary and early latent stages of syphilis, decreased for the fourth consecutive year. The



379 cases reported in 1998 were the lowest number reported since 1959.

### Tuberculosis

The 339 cases of TB reported in 1998 represented a 2.9% decline in morbidity when compared to the 349 cases reported in 1997. The major site of disease was pulmonary (78.2% of cases). Twenty-six cases (7.7%) of drug-resistant disease were reported in 1998 compared to 19 reported in 1997. Virginia reported one case of multi-drug resistant TB in 1998.

Of the 326 patients starting anti-TB therapy in 1998, 199 (61%) were on Directly Observed Therapy (DOT). Seventy-four percent of cases managed by VDH were on DOT, but only 51% of those managed by sources other than VDH were on DOT. DOT is the standard of care for treating pulmonary tuberculosis in Virginia.

Among persons with drug-sensitive TB who started therapy in 1997, 82.5% completed therapy within 12 months (excluding those who died or moved during treatment). Ninety-three percent completed therapy within 18 months. The Virginia goal for completion of therapy within 12 months is 90%.

### Epidemiologic Notes

This report presents a portion of disease surveillance statistics for 1998 and includes cases reported during the 1998 calendar year. These data may differ from the provisional data published in 1998 issues of the VEB. Incidence rates were based on 1998 Virginia population projections from the Virginia Employment Commission. For additional information about disease surveillance in Virginia, see our web site at [www.vdh.state.va.us/epi/newhome.htm](http://www.vdh.state.va.us/epi/newhome.htm).

Submitted by: Les Branch, Director, and Mary Jean Linn, RN, MURP, Epi Consultant Sr., Reportable Disease Surveillance.

**Cases of Selected Notifiable Diseases Reported in Virginia\***

Total Cases Reported, April 1999

Regions

Total Cases Reported Statewide,  
January through April

Disease	State	Regions					Total Cases Reported Statewide, January through April		
		NW	N	SW	C	E	This Year	Last Year	5 Yr Avg
AIDS	65	5	26	3	10	21	239	285	367
Campylobacteriosis	22	7	7	2	2	4	103	137	138
<i>E. coli</i> O157:H7	3	1	1	0	1	0	9	7	5
Giardiasis	21	4	10	1	0	6	96	101	91
Gonorrhea	711	27	73	28	263	320	3117	2101	3156
Hepatitis A	10	1	5	2	2	0	41	86	59
B, acute	6	2	3	0	1	0	29	30	36
C/NANB, acute	0	0	0	0	0	0	6	1	6
HIV Infection	57	3	19	5	15	15	209	305	332
Lead in Children <sup>†</sup>	26	0	0	4	14	8	107	154	181
Legionellosis	2	0	0	1	1	0	6	6	5
Lyme Disease	3	0	2	0	0	1	3	5	4
Measles	3	0	3	0	0	0	3	2	1
Meningococcal Infection	4	1	0	2	1	0	19	17	22
Mumps	5	2	0	1	1	1	7	4	7
Pertussis	5	2	1	1	1	0	12	6	9
Rabies in Animals	37	7	13	6	8	3	135	200	166
Rocky Mountain Spotted Fever	0	0	0	0	0	0	0	0	0
Rubella	0	0	0	0	0	0	0	0	0
Salmonellosis	41	2	14	6	9	10	167	210	236
Shigellosis	3	0	3	0	0	0	21	37	116
Syphilis, Early <sup>§</sup>	43	1	2	9	11	20	141	174	334
Tuberculosis	35	3	8	2	11	11	83	91	102

*Localities Reporting Animal Rabies This Month:* Accomack 1 raccoon; Amherst 1 cow; Appomattox 1 skunk; Buckingham 1 raccoon; Campbell 1 raccoon; Charlotte 1 raccoon; Chesterfield 1 raccoon; Culpeper 1 raccoon; Fairfax 4 raccoons; Greene 1 cat; King William 1 raccoon; Loudoun 1 fox, 4 raccoons, 1 skunk; Mecklenburg 1 raccoon; Middlesex 1 raccoon; Page 1 skunk; Pittsylvania 1 skunk; Prince Edward 1 raccoon; Prince George 2 raccoons, 1 skunk; Prince William 3 raccoons; Rockingham 1 skunk; Scott 2 skunks; Shenandoah 1 raccoon; Stafford 1 raccoon; Waynesboro 1 raccoon.

*Occupational Illnesses:* Asbestosis 16; Carpal Tunnel Syndrome 62; Contact Dermatitis 1; De Quervain's Syndrome 3; Hearing Loss 36; Lead Exposure 4; Mesothelioma 1; Pneumoconiosis 17.

\*Data for 1999 are provisional. †Elevated blood lead levels  $\geq 10\mu\text{g/dL}$ .

§Includes primary, secondary, and early latent.

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