

VIRGINIA EPIDEMIOLOGY BULLETIN

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Summary of Reportable Diseases, Virginia, 1997

Introduction

This issue of the *Virginia Epidemiology Bulletin* (VEB) summarizes the reports of selected diseases in Virginia for 1997. Data were compiled by the Office of Epidemiology, Virginia Department of Health. 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*. These are conditions for which regular, frequent, and timely information regarding individual cases is considered necessary for the prevention and control of the disease.

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 listed in the *Regulations for Disease Reporting and Control*. The current list of reportable conditions can be found on page 3. Provisional data for selected diseases 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 1997 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 1997 to the 5-year mean. Table 1 shows the number of reported cases for selected diseases in Virginia from 1988-1997. Table 2 shows the number of reported cases for selected diseases by health planning region for 1997. Rates per 100,000 population are also presented.

1997 HIGHLIGHTS FOR SELECTED DISEASES

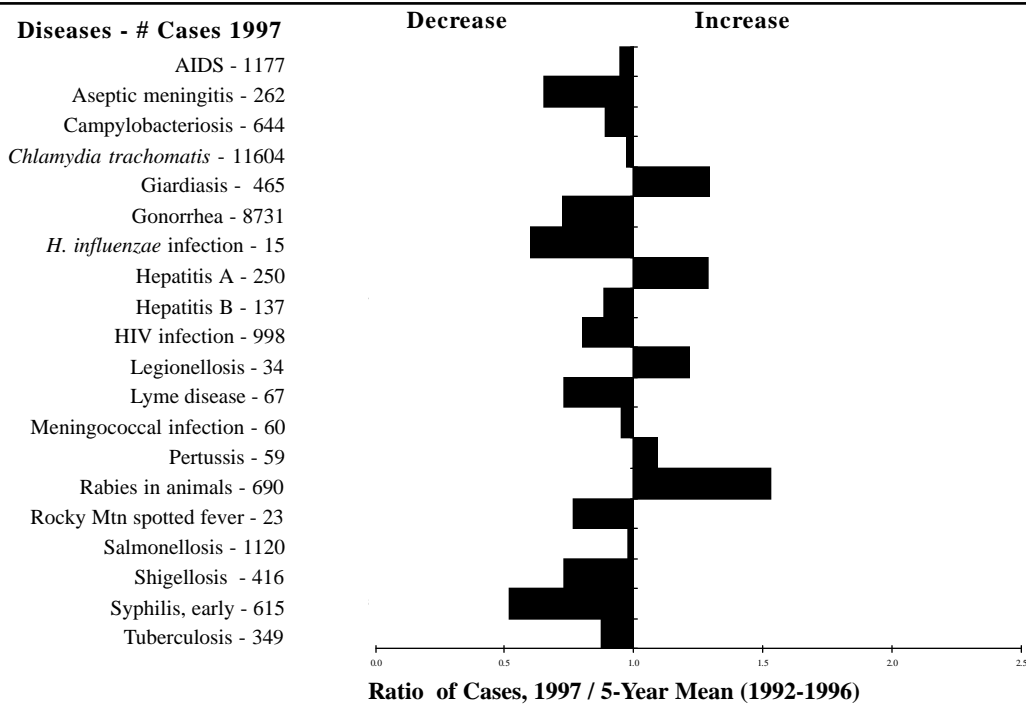
AIDS/HIV

In 1997, the number of reported AIDS cases decreased for the second consecutive year. The number (1,177) of cases reported in 1997 is 3% less than the 1,211 cases reported in 1996 and 19% less than the 1,461 cases reported in 1995.

Beginning in 1989, the first year that HIV infection became reportable in Virginia, the annual number of newly reported cases has fluctuated an average of 18%. However, there was only a 1% difference in the newly reported cases in 1997 when compared to 1996.



Figure 1. Change in Disease Incidence in 1997 When Compared to Five Year Mean



Arboviral Disease

Seven laboratory-confirmed arboviral disease cases were reported in 1997. Six cases were reported from the southwest region of the state and one from the central region. An investigation of a cluster of illnesses in children in Wise County identified five cases of LaCrosse (LAC) encephalitis. LAC is a mosquito-transmitted disease that primarily affects children under 15 years of age. An additional unrelated case of LaCrosse encephalitis in a child was reported from the southwest region and a single case of St. Louis encephalitis was reported in an adult who had recently visited Florida prior to the onset of illness.

Campylobacteriosis

Reported cases of campylobacteriosis decreased by 18% in 1997 when compared to the 790 cases reported in 1996. Table 1 shows the 644 cases reported in 1997 to be the lowest number of cases reported since 1991.

Cyclospora Infection

A large outbreak of cyclosporiasis occurred in the northern Virginia-Washington, D.C.-Baltimore, Maryland, metropolitan area in the summer of 1997. This outbreak was linked to fresh basil foods prepared by a single

food vendor. This was the first time fresh basil had been implicated as a vehicle of infection for an outbreak of cyclosporiasis. Previous investigations of *Cyclospora* foodborne outbreaks have implicated fresh imported raspberries and mesclun lettuce.

Escherichia coli O157:H7

Voluntary reporting of *Escherichia coli* O157:H7 infections increased by 66% in 1997. Eighty-eight cases were reported in 1997 compared to 53 cases in 1996. A sharp increase in the number of reported cases of *E. coli* O157:H7 during June-July 1997 prompted an investigation by the health department to

determine if there was a common exposure among cases. Consumption of alfalfa sprouts was statistically significantly associated with illness. This outbreak, along with a concurrent outbreak in Michigan, represented the first *E. coli* O157:H7 outbreaks linked to alfalfa sprouts.

Haemophilus influenzae Infection, invasive

The annual number of reported cases of invasive infections due to all types of *Haemophilus influenzae* increased in 1997 when compared to 1996. However, the 15 cases reported in 1997 were still considerably fewer than the 5-year mean of 25 cases. Four of the fifteen persons reported with invasive *H. influenzae* infection in 1997 were children <5 years of age compared to three of the eleven reported in 1996. Since the introduction of effective vaccines against *H. influenzae* type b (Hib), reported cases of *H. influenzae* infection have declined dramatically.

Hepatitis A

The number (250) of reported hepatitis A cases increased by 15% in 1997 when compared to the 218 cases reported in 1996. The increase in the number of reported cases in 1997 occurred in all but the eastern health planning region. The largest increases by health planning region occurred in the northwest and southwest regions (50% and 67% respectively). The increase in cases in these two regions can be attributed to outbreaks. One hepatitis A out-

Table 1. Ten Year Trend in Number of Reported Cases of Selected Diseases, Virginia, 1988-1997

DISEASE	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
AIDS*	377	445	649	670	748	1638	1200	1461	1211	1177
Amebiasis	19	24	18	31	36	34	39	16	28	30
Aseptic meningitis	210	417	386	463	310	343	337	780	234	262
Bacterial meningitis	187	191	144	135	124	105	83	130	77	97
Campylobacteriosis	731	689	598	640	656	706	824	648	790	644
Chickenpox	1733	3492	2677	2942	3911	2917	2844	2667	1778	1760
<i>Chlamydia trachomatis</i> inf.	--	6002	13391	16717	11305	11389	12976	12287	11755	11604
Encephalitis, primary	41	47	58	48	43	44	34	40	26	30
Giardiasis	250	304	359	459	366	373	337	318	405	465
Gonorrhea	14464	15993	17652	17256	15773	11620	13414	10342	9292	8731
<i>H. influenzae</i> infection	--	50	60	62	37	28	22	28	11	15
Hepatitis A	362	334	302	191	164	156	193	238	218	250
Hepatitis B	343	321	279	219	193	157	142	118	163	137
Hepatitis Non-A Non-B	77	70	46	37	48	54	26	21	17	27
Histoplasmosis	7	11	6	5	14	11	180	4	1	4
HIV infection*	--	195	1143	1644	1372	1484	1124	1268	987	998
Influenza	2524	2108	937	1392	148	1363	957	1484	957	517
Kawasaki syndrome	14	23	24	24	27	31	27	32	19	27
Legionellosis	11	13	13	17	29	11	17	28	54	34
Lyme disease	--	54	129	151	123	95	131	55	57	67
Malaria	23	47	54	52	47	41	37	55	60	73
Measles	239	22	86	30	16	4	3	0	3	1
Meningococcal infection	59	73	58	39	61	52	69	64	67	60
Mumps	139	125	108	70	58	40	48	28	19	21
Pertussis	29	37	25	24	18	75	37	31	108	59
Rabies in animals	366	262	202	253	362	387	428	459	612	690
Rocky Mtn spotted fever	17	18	25	21	26	14	22	34	54	23
Salmonellosis	1733	1452	1491	1312	957	1055	1135	1358	1229	1120
Shigellosis	497	410	158	384	253	776	656	412	746	416
Syphilis, early	822	1088	1551	1622	1347	1268	1409	1144	798	615
Tuberculosis	406	380	410	379	456	458	372	359	349	349
Typhoid fever	13	7	6	11	5	7	9	10	11	5

--These diseases became reportable in 1989.
*Some numbers have changed from those previously reported due to a reassessment of data.

break was reported from each of these two regions in 1997.

Legionellosis

Thirty-four cases of legionellosis were reported state-wide in 1997 compared to the 54 cases reported in 1996 when an usually high number of cases were reported due to an outbreak in southwest Virginia in the fall of 1996. The 34 cases reported in 1997 is the second highest number ever recorded and is six cases above the 5-year mean of 28 cases. No outbreaks were reported in 1997; therefore, the increase in the annual number of cases reported in 1997 over the 5-year mean is more likely due to heightened disease surveillance and an increase in the use of urine antigen detection tests for diagnosis.

Lyme Disease

Lyme disease continues to be the most frequently reported tickborne illness, as it has been since becoming a notifiable condition in Virginia in 1989. Sixty-seven cases were reported in 1997 compared to 57 cases in 1996. Reported cases of Lyme disease outnumbered reported cases of Rocky Mountain spotted fever (23 cases) by a ratio of 2.9:1.

Measles

Virginia, like the rest of the country, has seen a significant decrease in the number of measles cases reported in recent years. One case of imported measles was reported in Virginia in 1997 compared to three cases in 1996 and zero cases in 1995. In 1997, the United States reported its lowest number (138) of measles cases which was 55% fewer than the previous record low of 309 cases reported in 1995.

Meningococcal Disease

The reported number of cases of meningococcal disease decreased in 1997 when compared to 1996 and was less than the 5-year mean of 63 cases. Serogroups identified in specimens from 1997 included *Neisseria meningitidis* serogroup Y (16), serogroup B (10), serogroup C (4); the serogroup was unknown for 28 cases. Six deaths resulted from meningococcal disease during 1997. The ages of persons who died ranged from 14 to 94 years.

Pertussis

Pertussis has re-emerged as one of the most frequently reported vaccine preventable diseases in Virginia. Fifty-nine cases of pertussis were reported in 1997 compared to 108 cases in 1996 and 31 cases in 1995. Thirty (51%) of the reported cases occurred in the

Reportable Diseases in Virginia

Acquired immunodeficiency syndrome	Lyme disease
Amebiasis	Lymphogranuloma venereum
ANTHRAX*	Malaria*
Arboviral infection	MEASLES (RUBEOLA)
Aseptic meningitis	MENINGOCOCCAL INFECTION*
Bacterial meningitis (specify etiology)	Mumps
BOTULISM	Nosocomial outbreak
Brucellosis	Occupational illness
<i>Campylobacter</i> infection* (excluding <i>C. pylori</i>)	Ophthalmia neonatorum
Chancroid	Pertussis (Whooping cough)*
Chickenpox	Phenylketonuria (PKU)
<i>Chlamydia trachomatis</i> infection*	PLAGUE*
Congenital rubella syndrome	POLIOMYELITIS*
DIPHTHERIA*	PSITTACOSIS
Encephalitis primary (specify etiology) 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)
Hepatitis B	Salmonellosis*
Hepatitis non-A non-B	Shigellosis*
Hepatitis unspecified	SMALLPOX
Histoplasmosis	Syphilis, all stages* PRIMARY AND SECONDARY
Human immunodeficiency virus (HIV) infection*	Tetanus
Influenza *¶	Toxic shock syndrome
Kawasaki syndrome	Toxic substance related illness
Lead - elevated levels in children * ~	Trichinosis*
Legionellosis*	TUBERCULOSIS (Mycobacteria*)
Leprosy	Tularemia
Leptospirosis	Typhoid fever
Listeriosis*	Typhus, flea-borne
	<i>Vibrio</i> infection, including CHOLERA*
	WATERBORNE OUTBREAK
	YELLOW FEVER

UPPER CASE indicates conditions that must be reported by physicians and directors of medical care facilities by rapid reporting to the local health director via telecommunication. Report all other diseases within seven days.

**These are the only conditions reportable by directors of laboratories. These and all other conditions are reportable by physicians and directors of medical care facilities as well.*

¶Physicians and directors of medical care facilities should report influenza by number of cases only (and type of influenza, if available).

~A blood lead level of 15 µg/dL or higher in children age 0-15.

Table 2. Number of Reported Cases and Rate/100,000 Population for Selected Diseases by Health Planning Region, 1997

DISEASE	TOTAL			NORTHWEST REGION			NORTHERN REGION			SOUTHWEST REGION			CENTRAL REGION			EASTERN REGION			
	No.	Rate	Population	No.	Rate	916,768	No.	Rate	1,664,471	No.	Rate	1,250,812	No.	Rate	1,134,146	No.	Rate	1,723,372	
AIDS	1177	17.59	6,689,569	71	7.74	916,768	254	15.26	1,664,471	123	9.83	1,250,812	279	24.60	1,134,146	450	26.11	1,723,372	26.11
Amebiasis	30	0.45		2	0.22		18	1.08		3	0.24		3	0.26		4	0.23		0.23
Aseptic meningitis	262	3.92		38	4.14		69	4.15		34	2.72		7	0.62		114	6.61		6.61
Bacterial meningitis	97	1.45		23	2.51		24	1.44		19	1.52		10	0.88		21	1.22		1.22
Campylobacteriosis	644	9.63		157	17.13		138	8.29		138	11.03		141	12.43		70	4.06		4.06
Chickenpox	1760	26.31		95	10.36		335	20.13		140	11.19		54	4.76		1136	65.92		65.92
<i>Chlamydia trachomatis</i> inf.	11604	173.46		1262	137.66		1736	104.30		1617	129.28		3637	320.68		3352	194.50		194.50
Encephalitis, primary	30	0.45		5	0.55		7	0.42		8	0.64		3	0.26		7	0.41		0.41
Giardiasis	465	6.95		56	6.11		171	10.27		67	5.36		80	7.05		91	5.28		5.28
Gonorrhea	8731	130.52		507	55.30		933	56.05		1165	93.14		2253	198.65		3873	224.73		224.73
<i>H. influenzae</i> infection	15	0.22		2	0.22		3	0.18		3	0.24		5	0.44		2	0.12		0.12
Hepatitis A	250	3.74		33	3.60		118	7.09		30	2.40		39	3.44		30	1.74		1.74
Hepatitis B	137	2.05		9	0.98		44	2.64		22	1.76		17	1.50		45	2.61		2.61
Hepatitis Non-A Non-B	27	0.40		3	0.33		7	0.42		3	0.24		6	0.53		8	0.46		0.46
Histoplasmosis	4	0.06		0	0.00		2	0.12		1	0.08		0	0.00		1	0.06		0.06
HIV infection	998	14.92		62	6.76		224	13.46		94	7.52		230	20.28		388	22.51		22.51
Influenza	517	7.73		116	12.65		22	1.32		310	24.78		1	0.09		68	3.95		3.95
Kawasaki syndrome	27	0.40		1	0.11		14	0.84		8	0.64		0	0.00		4	0.23		0.23
Legionellosis	34	0.51		10	1.09		1	0.06		10	0.80		3	0.26		10	0.58		0.58
Lyme disease	67	1.00		12	1.31		22	1.32		9	0.72		12	1.06		12	0.70		0.70
Malaria	73	1.09		9	0.98		51	3.06		1	0.08		3	0.26		9	0.52		0.52
Measles	1	0.01		0	0.00		1	0.06		0	0.00		0	0.00		0	0.00		0.00
Meningococcal infection	60	0.90		11	1.20		13	0.78		13	1.04		8	0.71		15	0.87		0.87
Mumps	21	0.31		2	0.22		7	0.42		3	0.24		6	0.53		3	0.17		0.17
Pertussis	59	0.88		30	3.27		11	0.66		2	0.16		6	0.53		10	0.58		0.58
Rabies in animals	690	--		186	--		203	--		119	--		110	--		72	--		--
Rocky Mtn. spotted fever	23	0.34		5	0.55		4	0.24		5	0.40		1	0.09		8	0.46		0.46
Salmonellosis	1120	16.74		191	20.83		243	14.60		182	14.55		229	20.19		275	15.96		15.96
Shigellosis	416	6.22		41	4.47		132	7.93		172	13.75		28	2.47		43	2.50		2.50
Syphilis, early	615	9.19		12	1.31		42	2.52		63	5.04		195	17.19		303	17.58		17.58
Tuberculosis	349	5.22		19	2.07		133	7.99		37	2.96		61	5.38		99	5.74		5.74
Typhoid fever	5	0.07		0	0.00		3	0.18		1	0.08		1	0.09		0	0.00		0.00

northwest health planning region; the fewest (2 cases, 3%) were reported from the northern region.

Rabies in Animals

The annual number of animal rabies cases increased in 1997 for the seventh consecutive year, a trend which began in 1991 (Table 3). The 690 rabies cases reported in 1997 are 240 cases more than the 5-year mean and the second highest number ever recorded. Raccoons (429 cases) continued to be the most commonly reported species (domestic and wildlife) while cats (33 cases) were the most commonly reported domestic species. Other frequently reported rabid animals included skunks (142 cases), foxes (46 cases), and bats (22 cases). Five or fewer rabid animals were reported for all other species. Rabid cats (33 cases) outnumbered rabid dogs (2 cases) in 1997 by a ratio of 16.1:1.

Shigellosis

The number of reported cases of shigellosis showed a substantial decline in 1997. The 416 cases reported in 1997 represented a 44% decrease from the 746 cases reported in 1996,

but were comparable to the 412 cases reported in 1995.

Sexually Transmitted Diseases

The annual number of cases of the most frequently reported sexually transmitted diseases decreased for the third consecutive year in 1997. *Chlamydia trachomatis* infections (11,604 cases) were down by 1%, gonorrhea infections (8,731 cases) by 6%, and early (includes primary, secondary, and early latent stages) syphilis (615 cases) by 23% when compared to 1996. The 615 cases of early syphilis reported in 1997 represented the lowest number of cases reported since 1987. The eastern health planning region continues to report the highest number of early syphilis cases. This region reported 49% (303 cases) of Virginia's calendar year 1997 early syphilis cases; however, when compared to 1996, the eastern health planning region experienced a 40% (204 cases) decrease in the number of reported cases.

Tuberculosis

Tuberculosis remained essentially unchanged at 349 cases in 1997 when compared

to the number of cases reported 1996. The major site of disease was pulmonary (79% of cases). Nineteen drug resistant cases were reported in 1997 compared to 31 in 1996.

Directly observed therapy (DOT) was a strategy used in the treatment of 198 (60%) patients compared to 52% in 1996. The increasing use of DOT has led to the third consecutive year of improvement in the completion of therapy. In 1997, 85% of patients completed therapy within 12 months. The Virginia goal for completion of therapy within 12 months is 90%.

EPIDEMIOLOGIC NOTES

This report presents final surveillance statistics for selected diseases reported during calendar year 1997. These data may differ from the provisional data published in 1997 issues of the VEB. Incidence rates were based on 1997 Virginia population projections from the Virginia Employment Commission.

Submitted by: Leslie M. Branch and Mary Jean Linn, Surveillance and Investigation, Office of Epidemiology

Table 3. Ten Year Trend in Number of Laboratory Confirmed Rabies Cases, Virginia, 1988-1997

Species	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total	% of Total
Bat	11	14	6	8	12	12	9	8	17	22	119	3.0
Beaver	0	1	0	0	0	0	0	0	0	1	2	<0.1
Bobcat	1	0	1	1	0	0	0	1	1	1	6	0.1
Cat	13	12	11	7	21	19	25	27	29	33	197	4.9
Cow	2	7	3	1	11	11	9	8	4	5	61	1.5
Dog	1	1	1	2	7	4	4	4	5	2	31	0.8
Ferret	0	0	0	0	1	1	0	0	0	0	2	<0.1
Fox	24	15	8	13	23	23	17	21	38	46	228	5.7
Goat	1	0	0	0	1	0	0	0	0	0	2	<0.1
Groundhog	2	1	0	2	1	6	5	3	6	5	31	0.8
Horse	1	2	1	1	2	3	1	1	2	2	16	0.4
Mink	0	0	0	0	1	0	0	0	1	0	2	<0.1
Opossum	0	3	0	0	0	0	1	0	1	0	5	0.1
Otter	0	0	0	0	0	1	1	0	1	1	4	0.1
Raccoon	220	148	129	167	203	213	251	271	383	429	2414	60.0
Sheep	1	0	0	0	2	0	0	0	0	1	4	0.1
Skunk	89	58	42	51	77	94	105	114	124	142	896	22.3
Squirrel	0	0	0	0	0	0	0	1	0	0	1	<0.1
Total	366	262	202	253	362	387	428	459	612	690	4021	100.0

Cases of Selected Notifiable Diseases Reported in Virginia*

Disease	Total Cases Reported, April 1998						Total Cases Reported Statewide, January through April		
	State	Regions					This Year	Last Year	5 Yr Avg
		NW	N	SW	C	E			
AIDS	47	7	8	3	12	17	277	369	451
Campylobacteriosis	35	13	6	7	7	2	137	109	133
Giardiasis	36	4	18	5	3	6	101	124	88
Gonorrhea	268	6	3	31	154	74	2095	2736	3386
Hepatitis A	26	1	21	0	3	1	86	58	52
Hepatitis B	5	0	4	0	0	1	30	37	40
Hepatitis NANB	0	0	0	0	0	0	1	7	8
HIV Infection	68	2	14	6	23	23	314	324	284
Influenza	0	0	0	0	0	0	971	437	619
Legionellosis	1	0	0	1	0	0	4	4	4
Lyme Disease	3	2	1	0	0	0	4	0	4
Measles	0	0	0	0	0	0	2	0	0
Meningitis, Aseptic	9	0	6	3	0	0	34	57	51
Meningitis, Bacterial†	4	2	0	0	2	0	20	29	32
Meningococcal Infections	3	2	0	0	0	1	17	23	21
Mumps	2	0	0	0	1	1	4	2	9
Pertussis	6	1	2	1	0	2	6	17	9
Rabies in Animals	49	21	9	5	7	7	200	198	146
Rocky Mountain Spotted Fever	0	0	0	0	0	0	0	1	0
Rubella	0	0	0	0	0	0	0	1	0
Salmonellosis	81	11	14	31	16	9	210	207	238
Shigellosis	9	4	3	0	1	1	37	178	128
Syphilis, Early‡	48	1	2	7	11	27	174	238	387
Tuberculosis	31	3	8	2	7	11	89	111	101

Localities Reporting Animal Rabies This Month: Accomack 2 foxes, 2 raccoons; Albemarle 1 raccoon, 1 skunk; Amelia 1 raccoon; Amherst 1 raccoon; Charles City 1 raccoon; Chesterfield 2 raccoons; Fairfax 1 fox, 2 raccoons; Fauquier 1 skunk; Fluvanna 1 skunk; Giles 1 raccoon; Grayson 1 raccoon; Hanover 1 raccoon; James City 1 skunk; Loudoun 1 groundhog, 2 raccoons, 1 skunk; Louisa 2 raccoons; Nelson 4 raccoons; Newport News 1 raccoon; Page 2 skunks; Prince Edward 1 raccoon; Prince William 1 fox, 1 raccoon; Roanoke County 1 bobcat; Rockbridge 1 fox; Rockingham 1 raccoon; Russell 1 raccoon; Spotsylvania 1 raccoon, 1 skunk; Stafford 2 raccoons, 1 skunk; Sussex 1 skunk; Virginia Beach 1 raccoon; Warren 1 raccoon, 1 skunk.

Occupational Illnesses: Asbestosis 14; Carpal Tunnel Syndrome 58; Hearing Loss 26; Lead Poisoning 2; Mercury Exposure 2; Pneumoconiosis 10.

*Data for 1998 are provisional. †Other than meningococcal. ‡Includes primary, secondary, and early latent.

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