CENTERS FOR DISEASE CONTROL

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MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

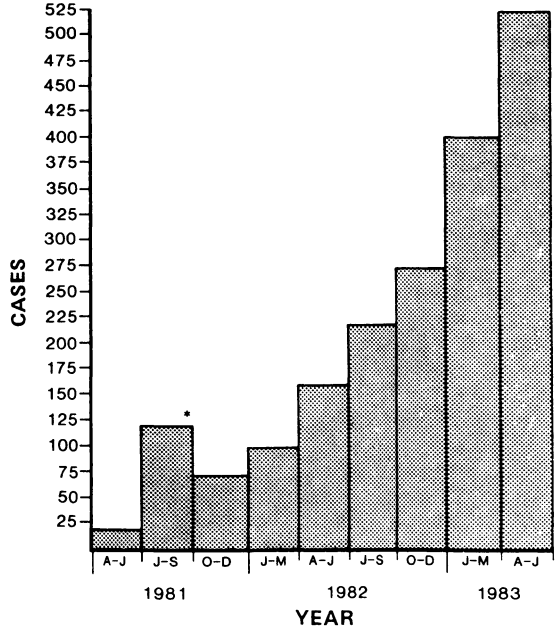
Current Trends

Update: Acquired Immunodeficiency Syndrome (AIDS) — United States

Between June 1981 and August 1, 1983, physicians and health departments in the United States and Puerto Rico reported 1,972 cases of acquired immunodeficiency syndrome (AIDS) meeting the surveillance definition*. These cases were diagnosed in patients who have Kaposi's sarcoma (KS) or an opportunistic infection suggestive of an underlying cellular immunodeficiency. Three hundred thirty-one cases (17% of the total) were reported to CDC over the last 6 weeks; the average of 53 cases reported per week during July 1983 compares

*For the limited purposes of epidemiologic surveillance, CDC defines a case of AIDS as a reliably diagnosed disease that is at least moderately indicative of an underlying cellular immunodeficiency in a person who has had no known cause of underlying cellular immunodeficiency or any other underlying reduced resistance reported to be associated with that disease.

FIGURE 1. Cases of acquired immunodeficiency syndrome (AIDS), by quarter of report — United States, second quarter 1981 — second quarter 1983



*Includes backlog of cases identified at beginning of CDC surveillance

AIDS – Continued

with an average of 11 per week in July 1982 and 24 per week in January 1983 (Figure 1). Of all patients, 759 (38%) are known to have died; the mortality rate for patients with opportunistic infections continues to be over twice that of patients with KS alone. *Pneumocystis carinii* pneumonia (PCP) is the most common life-threatening opportunistic infection in AIDS patients; many of the patients may have multiple opportunistic infections, either sequentially or simultaneously. Of the reported cases, 71% have homosexual or bisexual orientation; 95% of the patients with KS are in this group.

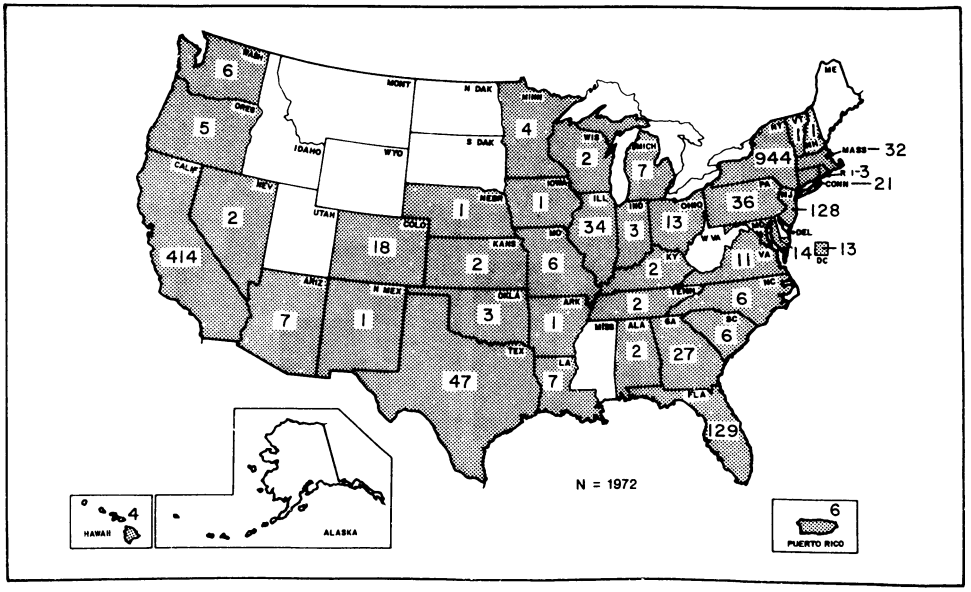
Over 90% of AIDS patients are 20-49 years old; almost 47% are 30-39 years old. Cases have occurred in all primary racial groups in the United States. One hundred twenty-nine (7%) cases have been reported in women; the ratio of male to female patients (14:1) has been almost constant over the last year. Most cases are reported among residents of large cities. New York City has reported 44% of all cases meeting the surveillance definition; San Francisco, 10% of cases; and Los Angeles, 6% of cases. Cases have been reported from 39 states, the District of Columbia, and Puerto Rico (Figure 2).

Reported by city, state, and territorial epidemiologists; AIDS Activity, Center for Infectious Diseases, CDC.

Editorial Note: To date, CDC has been notified that at least 18 states and territories have made AIDS reportable, and approximately 26 have introduced or are considering measures to make it reportable. Some states that have not taken specific action have cancer registries or already require many opportunistic infections to be reported. Physicians aware of patients fitting the case definition for AIDS are requested to report such cases through their local or state health departments. AIDS patients who do not belong to any of the recognized risk groups or who are recipients of blood or blood products (including anti-hemophiliac factors) should be reported immediately. CDC will soon make available a reporting format by which patients' names need not be sent to CDC.

Concern has been expressed about potential transmission of AIDS from hospitalized patients to health-care personnel (*1*). Although no instance of direct transmission has been

FIGURE 2. Acquired immunodeficiency syndrome (AIDS) cases reported to CDC, by state – United States, as of August 1, 1983



AIDS – Continued

reported (*2*), accidental needlestick injuries or similar types of accidents occasionally occur. To evaluate the possible risk of AIDS transmission after such accidents, the Hospital Infections Program, CDC, in cooperation with several state health departments, has initiated a study at selected hospitals of health-care personnel who have had documented parenteral or mucous membrane exposure to blood of definite or suspected AIDS patients. This study is being expanded to include additional hospitals. Hospital infection control staff who have been notified of these types of personnel exposures in their hospitals and wish to obtain additional information about participation in the study should contact the Hospital Infections Program, (404) 329-3406.

References

1. CDC. Acquired immune deficiency syndrome (AIDS): precautions for clinical and laboratory staffs. MMWR 1982;31:577-80.
2. CDC. An evaluation of the acquired immunodeficiency syndrome (AIDS) reported in health-care personnel—United States. MMWR 1983;32:358-60.

Epidemiologic Notes and Reports

Efficacy of Mumps Vaccine — Ohio

From February 5 through April 23, 1982, 110 cases of mumps were reported among 357 sixth-, seventh-, and eighth-grade students in a middle school in Ashtabula County, Ohio. Because the overall attack rate was 31%, the efficacy of the mumps vaccine was investigated.

Vaccine efficacy (VE) was determined using the standard formula*, and was calculated using a variety of case definitions, case surveillance systems, and vaccination-status ascertainment methods to evaluate their effects on the estimated VE. Three studies were performed. **Study 1:** Using data collected at the school for case ascertainment and vaccination status, clinical VE was initially estimated at 37% (Table 1). Mumps vaccination was not required for school entry, and vaccination-status records were incomplete. Case ascertainment relied on either the school nurse's diagnosis or a parental history of mumps illness and, therefore, lacked a uniform case definition. **Study 2:** Using a uniform case definition (parotitis

*$VE(\%) = \frac{ARU-ARV}{ARU} \times 100$, where ARU and ARV are the attack rates in the unvaccinated and vaccinated, respectively.

TABLE 1. Results of three mumps vaccine efficacy studies — Ashtabula County, Ohio, 1982

Sources of:	Study 1	Study 2	Study 3
Population	School-based	School-based	Family-based
Case-finding	School nurse	Parents	Parents
Case definition	Dx by nurse or parent	Parotitis ≥ 2 days	Parotitis ≥ 2 days
Vaccine status	School record	Parents	Provider verified
Attack rate (vaccinated)	18% (12/67)	15% (19/128)	7% (2/30)
Attack rate (unvaccinated)	28% (77/272)	49% (70/142)	43% (30/69)
Vaccine efficacy (95% confidence limits)	37% (0-63)	70% (51-81)	85% (39-94)

Mumps Vaccine — Continued

lasting 2 or more days) and only cases and vaccination status ascertained from parental questionnaires, estimated VE increased to 70% (Table 1). Ill and well children with histories of mumps disease or unknown vaccination histories or dates were excluded from the analyses.

Because the Study 2 estimate of VE was still lower than expected (*1*), a third study was conducted. Since VE depends on the assumptions that all children are equally exposed—and that exposure is more likely to be uniform among household members than among schoolmates—and that records of vaccination are valid indicators of vaccination status, a study of household members with provider-verified vaccination status was performed. **Study 3:** Of 99 household members whose vaccine status was verified, 32 secondary cases met the uniform case definition and were included in the calculation of VE†. The VE estimate was 85% (Table 1). Age at vaccination, duration of time since vaccination, type of vaccine (combined or single antigen), and provider of vaccine were not found to be significantly different in a grade- and sex-matched study comparing 17 vaccinated patients with 17 vaccinated controls.

Reported by JW Nye, Grand Valley School District, Orwell; JM Kettunen, C Hart, Ashtabula County Health Department, Jefferson; KM Sullivan, TJ Halpin, MD, State Epidemiologist, Ohio State Dept of Health. Div of Immunization, Center for Prevention Svcs, CDC.

†Coprimary cases (patients with onset within 10 days of onset in the index case) and tertiary cases (patients with onset of disease more than 30 days after index case) were excluded.

(Continued on page 397)

TABLE I. Summary—cases specified notifiable diseases, United States

Disease	30th Week Ending			Cumulative, 30th Week Ending		
	July 30, 1983	July 31, 1982	Median 1978-1982	July 30, 1983	July 31, 1982	Median 1978-1982
Aseptic meningitis	341	264	218	3,415	3,217	2,437
Encephalitis: Primary (arthropod-borne & unspec.)	39	34	32	573	599	446
Post-infectious	1	-	3	46	53	122
Gonorrhea: Civilian	18,083	20,049	20,790	502,678	540,998	550,842
Military	390	491	491	13,502	15,490	15,490
Hepatitis: Type A	358	435	550	12,286	12,727	15,728
Type B	473	411	369	12,865	12,047	9,789
Non A, Non B	64	37	N	1,927	1,305	N
Unspecified	158	170	179	4,465	4,874	5,740
Legionellosis	13	6	N	409	276	N
Leprosy	1	4	4	146	121	105
Malaria	23	29	29	427	584	584
Measles: Total	21	25	104	1,140	1,091	11,230
Indigenous	16	N	N	943	N	N
Imported*	5	N	N	197	N	N
Meningococcal infections: Total	21	38	41	1,827	1,969	1,761
Civilian	21	38	41	1,812	1,957	1,743
Military	-	-	-	15	12	12
Mumps	21	39	62	2,242	4,053	6,750
Pertussis	61	44	44	1,139	699	734
Rubella (German measles)	7	33	56	719	1,840	3,052
Syphilis (Primary & Secondary): Civilian	530	708	557	18,211	18,792	14,776
Military	5	20	10	240	244	180
Toxic-shock syndrome	12	N	N	259	N	N
Tuberculosis	516	492	577	13,300	14,512	15,408
Tularemia	13	8	7	166	128	105
Typhoid fever	9	10	10	207	221	260
Typhus fever, tick-borne (RMSF)	98	45	59	680	585	585
Rabies, animal	95	126	122	3,538	3,675	3,675

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1983		Cum. 1983
Anthrax	-	Plague	21
Botulism: Foodborne	12	Poliomyelitis: Total	2
Infant (Calif. 1)	37	Paralytic	2
Other	-	Psittacosis (Mass. 1, Upstate N.Y. 1, N.J. 1, Calif. 2)	72
Brucellosis (Ark. 1, Okla. 1, Tex. 4)	108	Rabies, human	2
Cholera	1	Tetanus (Tex. 3)	43
Congenital rubella syndrome (Calif. 1)	16	Trichinosis	24
Diphtheria	-	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	27
Leptospirosis	27		

*Four of the 21 reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending July 30, 1983 and July 31, 1982 (30th week)

Reporting Area	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy	Malaria
		Primary	Post-infectious			A	B	NA,NB	Unspecified			
	1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1982	1983	1983	1983	1983	1983	Cum. 1983	Cum. 1983
UNITED STATES	341	573	46	502,678	540,998	358	473	64	158	13	146	427
NEW ENGLAND	8	24	-	12,751	12,893	5	30	1	13	-	3	22
Maine	-	-	-	658	613	-	-	-	-	-	-	1
N.H.	-	4	-	392	445	1	4	-	-	-	2	-
Vt.	-	1	-	242	250	-	-	-	-	-	-	1
Mass.	3	10	-	5,401	5,956	2	3	1	12	-	-	10
R.I.	1	-	-	688	858	1	1	-	-	-	-	3
Conn.	4	9	-	5,370	4,771	1	22	-	1	-	1	7
MID ATLANTIC	48	65	4	64,159	65,618	22	67	6	10	3	20	59
Upstate N.Y.	6	19	-	9,910	10,510	1	15	1	-	-	-	18
N.Y. City	-	7	-	26,290	27,734	2	13	-	-	2	19	16
N.J.	30	14	-	11,914	11,841	10	22	3	10	1	-	20
Pa.	12	25	4	16,045	15,533	9	17	2	-	-	1	5
E.N. CENTRAL	50	132	11	68,945	77,131	24	90	6	9	4	5	26
Ohio	10	52	7	18,908	21,283	9	23	1	4	1	1	3
Ind.	14	23	1	7,328	9,135	3	36	-	3	-	-	-
Ill.	-	-	-	17,002	21,764	-	9	4	1	-	2	10
Mich.	26	43	-	19,447	18,008	12	22	1	1	3	2	11
Wis.	-	14	3	6,260	6,941	-	-	-	-	-	-	2
W.N. CENTRAL	11	51	5	23,333	25,539	10	13	4	1	4	5	18
Minn.	-	18	1	3,312	3,860	4	2	1	-	-	4	6
Iowa	7	27	-	2,620	2,673	-	4	2	-	-	-	3
Mo.	2	2	-	11,240	12,074	5	7	1	1	4	-	2
N. Dak.	-	-	-	248	342	-	-	-	-	-	-	2
S. Dak.	1	-	2	640	681	1	-	-	-	-	-	-
Nebr.	1	3	-	1,485	1,541	-	-	-	-	-	-	1
Kans.	-	1	2	3,788	4,368	-	-	-	-	-	1	4
S. ATLANTIC	75	89	15	130,586	140,919	28	87	6	18	-	8	62
Del.	-	-	-	2,364	2,176	1	-	-	-	-	-	-
Md.	16	12	-	16,562	17,726	2	17	2	4	-	1	12
D.C.	-	-	-	8,855	7,737	-	2	-	-	-	-	8
Va.	14	22	2	11,403	11,427	2	6	1	1	-	1	9
W. Va.	4	4	-	1,370	1,569	1	3	1	-	-	-	1
N.C.	25	24	-	19,247	22,382	5	7	-	3	-	-	3
S.C.	3	2	-	12,396	13,678	4	10	1	-	-	-	5
Ga.	-	4	1	26,629	26,970	3	19	-	-	-	1	5
Fla.	13	21	12	31,760	37,254	10	23	1	10	-	5	19
E.S. CENTRAL	16	21	-	42,249	46,079	13	23	2	4	-	-	7
Ky.	2	-	-	4,890	6,176	8	9	-	2	-	-	-
Tenn.	4	3	-	17,305	17,935	2	5	1	2	-	-	-
Ala.	4	17	-	13,151	13,973	2	7	1	-	-	-	5
Miss.	6	1	-	6,903	7,995	1	2	-	-	-	-	2
W.S. CENTRAL	81	76	2	72,448	74,943	55	31	3	70	1	14	43
Ark.	2	6	-	5,514	6,064	-	-	-	8	-	-	1
La.	8	7	-	13,801	13,428	9	7	-	-	-	1	4
Okla.	30	17	1	8,441	8,246	14	11	3	12	1	-	8
Tex.	41	46	1	44,692	47,205	32	13	-	50	-	13	30
MOUNTAIN	19	31	4	15,756	18,586	35	20	5	6	1	12	20
Mont.	-	-	-	682	767	1	1	-	-	-	-	-
Idaho	-	-	-	702	872	1	-	-	-	-	-	2
Wyo.	-	2	-	418	530	2	2	-	-	-	-	1
Colo.	11	16	-	4,441	4,962	6	4	2	-	-	2	7
N. Mex.	-	1	-	1,949	2,356	1	2	-	-	-	-	5
Ariz.	-	4	4	4,362	5,104	19	8	3	2	-	9	3
Utah	8	8	-	778	866	3	..	-	3	1	1	2
Nev.	-	-	-	2,424	3,129	2	3	-	1	-	-	-
PACIFIC	33	84	5	72,451	79,290	166	112	31	27	-	79	170
Wash.	1	7	1	5,452	6,439	3	5	2	1	-	10	5
Oreg.	-	-	2	3,812	4,404	10	5	1	-	-	1	6
Calif.	30	72	2	59,828	65,082	152	102	25	26	-	46	159
Alaska	-	-	-	1,851	1,946	-	-	3	-	-	-	-
Hawaii	2	5	-	1,508	1,419	1	-	-	-	-	22	-
Guam	U	-	-	69	82	U	U	U	U	U	-	2
P.R.	U	-	1	1,480	1,722	U	U	U	U	U	-	1
V.I.	-	-	-	157	160	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	245	U	U	U	U	U	-	-

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 30, 1983 and July 31, 1982 (30th week)

Reporting Area	Measles (Rubeola)					Menin-gococcal Infections	Mumps			Pertussis			Rubella		
	Indigenous		Imported*		Total										
	1983	Cum. 1983	1983	Cum. 1983	Cum. 1982	Cum. 1983	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982
UNITED STATES	16	943	5	197	1,091	1,827	21	2,242	4,053	61	1,139	699	7	719	1,840
NEW ENGLAND	-	2	-	13	10	94	-	86	151	2	39	33	-	10	13
Maine	-	-	-	-	-	8	-	15	35	-	4	3	-	-	-
N.H.	-	-	-	3	2	3	-	16	13	-	5	4	-	2	8
Vt.	-	-	-	-	2	7	-	12	6	-	7	1	-	3	-
Mass.	-	2	-	2	2	31	-	20	67	2	19	13	-	5	1
R.I.	-	-	-	-	-	7	-	11	14	-	4	10	-	-	1
Conn.	-	-	-	8	4	38	-	12	16	-	-	2	-	-	3
MID ATLANTIC	2	60	2	22	149	308	4	170	254	3	255	115	-	126	88
Upstate N.Y.	-	-	1 †	7	104	97	-	64	57	3	83	64	-	23	43
N.Y. City	2	34	1 †	11	37	55	1	24	42	-	39	20	-	86	31
N.J.	-	26	-	1	4	53	2	31	36	-	15	13	-	3	14
Pa.	-	-	-	3	4	103	1	51	119	-	118	18	-	14	-
E.N. CENTRAL	8	553	-	56	66	336	2	1,151	2,215	5	245	175	-	102	169
Ohio	7	72	-	13	1	106	-	529	1,552	1	81	44	-	1	-
Ind.	-	379	-	4	2	41	-	28	36	2	28	12	-	22	26
Ill.	1	102	-	33	23	93	1	117	241	1	93	76	-	42	63
Mich.	-	-	-	5	40	64	1	417	290	1	16	11	-	15	46
Wis.	-	-	-	1	-	32	-	60	96	-	27	32	-	22	34
W.N. CENTRAL	-	-	-	-	49	103	1	133	531	3	68	34	-	30	55
Minn.	-	-	-	-	-	16	-	25	412	3	29	11	-	6	5
Iowa	-	-	-	-	-	12	-	35	29	-	5	5	-	-	-
Mo.	-	-	-	-	2	52	1	21	8	-	9	10	-	-	38
N. Dak.	-	-	-	-	-	2	-	-	-	-	1	-	-	-	-
S. Dak.	-	-	-	-	-	4	-	-	1	-	3	4	-	-	1
Nebr.	-	-	-	-	3	1	-	2	-	-	-	1	-	-	-
Kans.	-	-	-	-	44	16	-	50	81	-	21	3	-	24	11
S. ATLANTIC	1	155	1	26	34	371	3	141	223	11	157	123	2	88	67
Del.	-	-	-	-	-	-	1	8	10	-	2	4	-	-	1
Md.	1	2	-	4	2	39	1	23	22	-	14	22	-	1	33
D.C.	-	-	-	-	1	4	-	-	-	-	-	1	-	-	-
Va.	-	10	-	13	14	56	-	25	31	1	45	17	-	1	12
W. Va.	-	-	-	-	2	3	1	31	81	-	5	4	-	-	1
N.C.	-	-	1 †	1	-	79	-	6	11	-	18	13	1	10	1
S.C.	-	-	-	4	-	40	-	8	13	-	13	14	-	1	1
Ga.	-	8	-	-	-	58	-	40	12	9	39	23	-	11	6
Fla.	-	135	-	4	15	92	-	-	43	1	21	25	1	64	12
E.S. CENTRAL	-	1	-	5	7	113	-	42	37	3	17	24	-	10	40
Ky.	-	-	-	1	1	23	-	18	12	2	5	4	-	9	22
Tenn.	-	-	-	-	6	40	-	19	14	1	5	10	-	-	2
Ala.	-	1	-	4	-	34	-	2	5	-	3	1	-	1	-
Miss.	-	-	-	-	-	16	-	3	6	-	4	9	-	-	16
W.S. CENTRAL	-	34	1	40	13	205	1	148	152	18	189	48	2	100	85
Ark.	-	-	-	13	-	17	-	2	6	-	14	2	-	-	1
La.	-	-	-	25	2	41	-	-	5	1	5	9	-	9	1
Okla.	-	1	-	-	-	25	-	-	-	13	131	3	-	-	3
Tex.	-	33	1 †	2	11	122	1	146	141	4	39	34	2	91	80
MOUNTAIN	-	1	-	3	8	66	-	94	73	12	117	45	-	29	72
Mont.	-	-	-	-	-	6	-	2	3	-	1	1	-	5	5
Idaho	-	-	-	-	-	6	-	6	3	-	3	7	-	8	6
Wyo.	-	-	-	-	1	2	-	-	2	1	5	2	-	2	7
Colo.	-	-	-	2	6	25	-	10	13	5	79	14	-	-	6
N. Mex.	-	-	-	-	-	5	-	-	-	-	7	4	-	-	6
Ariz.	-	-	-	1	1	13	-	66	33	5	14	16	-	6	12
Utah	-	-	-	-	-	8	-	6	14	1	8	1	-	7	20
Nev.	-	1	-	-	-	1	-	4	5	-	-	-	-	1	10
PACIFIC	5	137	1	32	755	231	10	277	417	4	52	102	3	224	1,251
Wash.	-	1	-	3	36	32	-	38	61	-	8	18	-	9	35
Oreg.	-	5	-	2	6	35	-	-	-	-	6	23	-	13	6
Calif.	5	130	1 §	27	709	158	9	215	342	4	37	61	2	201	1,202
Alaska	-	-	-	-	1	-	-	10	6	-	-	-	1	1	1
Hawaii	-	1	-	-	3	6	1	14	8	-	1	-	-	-	7
Guam	U	1	U	1	6	1	U	-	3	U	-	-	U	-	2
P.R.	U	82	U	-	82	11	U	102	49	U	7	13	U	3	8
V.I.	-	-	-	5	-	-	-	-	-	-	-	-	-	2	-
Pac. Trust Terr.	U	-	U	-	-	-	U	-	4	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations. U: Unavailable †International §Out-of-state

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending July 30, 1983 and July 31, 1982 (30th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1983	Cum. 1982	1983	1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1983
UNITED STATES	18,211	18,792	12	516	13,300	166	207	680	3,538
NEW ENGLAND	403	319	-	23	380	2	10	4	13
Maine	10	1	-	2	24	-	-	-	3
N.H.	14	3	-	-	27	-	-	1	2
Vt.	2	1	-	1	8	-	-	-	-
Mass.	252	212	-	13	191	1	8	2	5
R.I.	13	18	-	-	27	1	-	-	-
Conn.	112	84	-	7	103	-	2	1	3
MID ATLANTIC	2,267	2,578	2	88	2,387	-	37	13	127
Upstate N.Y.	128	279	-	7	389	-	6	-	45
N.Y. City	1,384	1,534	-	32	956	-	15	1	-
N.J.	440	346	-	18	506	-	11	5	3
Pa.	315	419	2	31	536	-	5	7	79
E.N. CENTRAL	885	1,158	1	76	1,778	2	31	48	311
Ohio	258	173	1	11	269	-	6	33	36
Ind.	74	116	-	8	170	-	1	4	23
Ill.	387	653	-	31	791	1	15	7	168
Mich.	121	158	-	24	459	1	9	4	6
Wis.	45	58	-	2	89	-	-	-	78
W.N. CENTRAL	218	337	1	20	427	52	13	31	542
Minn.	91	65	-	-	83	-	2	-	99
Iowa	9	18	1	2	36	-	-	-	141
Mo.	79	204	-	12	226	41	6	18	79
N. Dak.	1	4	-	-	5	-	-	1	53
S. Dak.	9	-	-	2	30	3	-	4	72
Nebr.	11	11	-	2	16	4	-	1	50
Kans.	18	35	-	2	31	4	5	7	48
S. ATLANTIC	4,813	5,048	1	111	2,700	13	26	279	1,216
Del.	20	9	-	4	27	-	-	2	1
Md.	300	277	-	9	218	5	5	30	503
D.C.	210	279	1	4	104	-	1	-	1
Va.	339	355	-	6	268	1	5	37	439
W. Va.	15	20	-	2	85	-	2	10	89
N.C.	445	365	-	47	385	6	1	102	14
S.C.	305	278	-	2	244	-	1	48	17
Ga.	882	1,041	-	10	513	1	1	47	134
Fla.	2,297	2,424	-	27	856	-	10	3	18
E.S. CENTRAL	1,248	1,294	-	40	1,203	10	4	47	254
Ky.	85	71	-	12	296	-	1	3	59
Tenn.	346	346	-	10	361	8	1	27	158
Ala.	498	476	-	10	315	-	1	14	37
Miss.	319	401	-	8	231	2	1	3	-
W.S. CENTRAL	4,873	4,861	1	65	1,543	74	26	252	723
Ark.	117	121	-	14	181	51	1	19	120
La.	1,034	1,069	-	18	242	2	3	-	20
Okla.	130	109	1	-	126	18	2	170	79
Tex.	3,592	3,562	-	33	994	3	20	63	504
MOUNTAIN	391	481	2	13	359	9	7	4	118
Mont.	5	3	1	-	34	2	1	1	66
Idaho	6	22	-	2	19	2	-	1	3
Wyo.	7	11	-	-	8	2	-	2	3
Colo.	96	132	-	8	45	-	1	-	11
N. Mex.	120	113	-	-	76	1	-	-	6
Ariz.	91	107	-	1	141	1	3	-	27
Utah	13	13	1	2	24	1	1	-	1
Nev.	53	80	-	-	12	-	1	-	1
PACIFIC	3,113	2,716	4	80	2,523	4	53	2	234
Wash.	95	96	-	5	130	2	3	-	2
Oreg.	73	67	1	2	112	1	3	-	-
Calif.	2,898	2,472	3	69	2,102	1	45	2	217
Alaska	8	8	-	-	33	-	-	-	15
Hawaii	39	73	-	4	146	-	2	-	-
Guam	-	1	U	U	2	-	-	-	-
P.R.	400	369	U	U	263	-	-	-	29
V.I.	11	20	-	-	1	-	-	-	-
Pac. Trust Terr.	-	-	U	U	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending July 30, 1983 (30th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	568	391	113	32	17	15	44
Boston, Mass.	178	113	41	13	6	5	16
Bridgeport, Conn.	39	26	6	6	1	-	2
Cambridge, Mass.	33	23	6	2	2	-	6
Fall River, Mass.	24	20	4	-	-	-	-
Hartford, Conn.	52	27	15	3	2	5	1
Lowell, Mass.	15	11	4	-	-	-	1
Lynn, Mass.	12	9	3	-	-	-	-
New Bedford, Mass.	27	21	6	-	-	-	1
New Haven, Conn.	49	38	8	1	1	1	3
Providence, R.I.§	28	16	6	2	2	2	1
Somerville, Mass.	5	5	-	-	-	-	1
Springfield, Mass.	30	22	5	1	1	1	3
Waterbury, Conn.	32	28	1	1	1	1	3
Worcester, Mass.	44	32	8	3	1	-	6
MID. ATLANTIC	2,247	1,487	502	178	44	34	86
Albany, N.Y.	42	29	8	3	1	1	-
Allentown, Pa.	26	18	8	-	-	-	-
Buffalo, N.Y.	117	78	28	6	3	2	6
Camden, N.J.	37	23	8	2	1	1	1
Elizabeth, N.J.	29	25	4	-	-	-	-
Erie, Pa.†	32	24	4	2	1	1	3
Jersey City, N.J.	46	32	10	2	1	1	1
N.Y. City, N.Y.	1,332	881	279	132	26	14	43
Newark, N.J.	48	23	14	6	2	3	2
Paterson, N.J.	30	22	6	2	-	-	1
Philadelphia, Pa.†	106	55	38	7	3	3	4
Pittsburgh, Pa.†	58	39	16	2	1	-	2
Reading, Pa.	25	17	5	1	1	1	2
Rochester, N.Y.	100	71	20	6	2	1	8
Schenectady, N.Y.	26	18	7	1	-	-	1
Scranton, Pa.†	32	24	6	1	1	-	3
Syracuse, N.Y.	71	47	15	3	1	5	1
Trenton, N.J.	37	23	13	1	-	-	1
Utica, N.Y.	31	23	7	1	-	-	4
Yonkers, N.Y.	22	15	6	-	-	1	3
E.N. CENTRAL	2,405	1,576	546	141	72	69	79
Akron, Ohio	79	51	20	4	2	1	-
Canton, Ohio	42	25	14	2	1	-	3
Chicago, Ill.	561	368	118	39	15	21	12
Cincinnati, Ohio	116	77	32	3	3	1	11
Cleveland, Ohio	176	110	42	11	6	7	3
Columbus, Ohio	182	109	47	10	11	5	3
Dayton, Ohio	114	65	34	9	3	3	4
Detroit, Mich.	272	173	57	25	6	11	8
Evansville, Ind.	50	34	13	2	1	-	2
Fort Wayne, Ind.	55	36	13	1	4	1	3
Gary, Ind.§	16	16	-	-	-	-	-
Grand Rapids, Mich.	87	65	16	1	1	4	3
Indianapolis, Ind.	152	93	36	11	7	5	3
Madison, Wis.	38	27	7	1	2	1	2
Milwaukee, Wis.	128	89	28	7	2	2	3
Peoria, Ill.	74	56	9	5	3	1	6
Rockford, Ill.	42	32	6	1	2	1	5
South Bend, Ind.	66	48	14	2	1	1	5
Toledo, Ohio	100	68	24	4	2	2	3
Youngstown, Ohio	55	34	16	3	-	2	-
W.N. CENTRAL	777	510	169	40	27	28	23
Des Moines, Iowa	80	49	22	2	4	3	5
Duluth, Minn.	35	24	8	1	1	1	-
Kansas City, Kans.§	31	29	-	1	-	1	-
Kansas City, Mo.	105	64	24	6	6	2	3
Lincoln, Nebr.	33	28	3	2	-	-	5
Minneapolis, Minn.	99	63	20	4	3	9	3
Omaha, Nebr.	74	47	18	4	3	2	2
St. Louis, Mo.	194	128	45	10	4	7	-
St. Paul, Minn.	65	43	16	4	2	-	-
Wichita, Kans.	61	35	13	6	4	3	5
S. ATLANTIC	1,077	641	293	74	29	40	41
Atlanta, Ga.	132	76	39	8	6	3	2
Baltimore, Md.	127	69	39	13	1	5	2
Charlotte, N.C.	81	47	23	5	5	1	2
Jacksonville, Fla.	91	57	24	3	2	5	7
Miami, Fla.	97	58	24	6	5	4	1
Norfolk, Va.	57	29	17	7	1	3	8
Richmond, Va.	72	42	23	7	-	-	4
Savannah, Ga.	53	33	12	5	-	3	4
St. Petersburg, Fla.	98	73	16	3	2	4	3
Tampa, Fla.	67	38	22	3	1	3	3
Washington, D.C.	156	91	46	10	5	4	2
Wilmington, Del.	46	28	8	4	1	5	3
E.S. CENTRAL	740	460	190	45	24	21	33
Birmingham, Ala.	95	63	23	4	2	3	3
Chattanooga, Tenn.	61	42	14	3	2	-	5
Knoxville, Tenn.	45	33	12	-	-	-	-
Louisville, Ky.	135	86	29	6	9	5	9
Memphis, Tenn.	183	101	53	15	5	9	7
Mobile, Ala.	93	63	16	8	5	1	5
Montgomery, Ala.	44	29	10	3	-	2	3
Nashville, Tenn.	84	43	33	6	1	1	1
W.S. CENTRAL	1,167	678	289	101	52	47	37
Austin, Tex.	39	23	9	3	2	2	3
Baton Rouge, La.	41	20	11	8	1	1	2
Corpus Christi, Tex.	41	24	7	5	3	2	-
Dallas, Tex.	188	110	53	15	7	3	3
El Paso, Tex.	59	39	9	2	5	4	1
Fort Worth, Tex.	77	46	12	6	2	11	6
Houston, Tex.	251	133	63	30	16	9	6
Little Rock, Ark.	53	32	16	3	1	1	1
New Orleans, La.	113	67	31	8	6	1	2
San Antonio, Tex.	166	98	44	14	6	4	6
Shreveport, La.	47	28	11	2	-	6	1
Tulsa, Okla.	92	58	23	5	3	3	6
MOUNTAIN	531	313	130	44	19	25	19
Albuquerque, N.Mex.	61	38	9	5	2	7	-
Colo. Springs, Colo.	25	7	13	4	1	-	2
Denver, Colo.	103	69	23	8	1	2	1
Las Vegas, Nev.	56	34	15	3	1	3	3
Ogden, Utah	21	9	8	2	1	1	3
Phoenix, Ariz.	130	74	28	13	6	9	2
Pueblo, Colo.	13	10	2	1	-	-	1
Salt Lake City, Utah	40	23	9	2	4	2	2
Tucson, Ariz.	82	49	23	6	3	1	5
PACIFIC	1,678	1,106	346	116	59	50	91
Berkeley, Calif.	21	17	3	1	-	-	1
Fresno, Calif.	68	45	15	3	3	2	8
Glendale, Calif.	19	16	2	1	-	-	1
Honolulu, Hawaii	72	39	20	7	3	3	5
Long Beach, Calif.	102	63	24	7	5	3	3
Los Angeles, Calif.	503	339	102	37	14	11	20
Oakland, Calif.	55	42	6	4	2	1	1
Pasadena, Calif.	29	24	1	2	1	1	3
Portland, Oreg.	113	88	14	4	5	2	7
Sacramento, Calif.	56	36	13	4	2	1	3
San Diego, Calif.	106	66	26	5	5	4	8
San Francisco, Calif.	142	77	37	16	-	12	3
San Jose, Calif.	169	99	46	15	8	1	15
Seattle, Wash.	131	89	23	4	9	6	6
Spokane, Wash.	46	35	6	3	-	1	5
Tacoma, Wash.	46	31	8	3	2	2	2
TOTAL	11,190††	7,162	2,578	771	343	329	453

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Mumps Vaccine — Continued

Editorial Note: The methods used to ascertain cases and determine vaccination status greatly affect estimates of VE. Studies relying solely on school records for case-finding and determination of immunization status may provide misleadingly low estimates of efficacy. In this study, the calculated VE improved with progressively more rigorous methods of case-finding, application of a uniform case definition, better documentation of vaccine history, and use of a setting with presumed more uniform exposure.

Serologic studies have generally shown that mumps vaccine induces antibodies—which have been correlated with protection—in greater than 90% of individuals. Clinical evaluations have noted VE ranging from 75% to 90% (*1*). Estimates of clinical VE in this study are consistent with these earlier studies. Efficacy calculations could have been affected by lack of serologic confirmation of prior immune status and by inapparent mumps disease. Field trials of the vaccine noted that protective efficacy dropped from 97% using laboratory-proven mumps cases to 88% using clinically diagnosed cases (*2*).

Although mumps vaccine is considered one of the safest of the childhood immunizing agents and is efficacious (*1*), 19 states, including Ohio, do not require proof of mumps immunity as a condition for school entry. From 1967, the first year of licensure, through 1982, approximately 59 million doses of vaccine were distributed, and the number of reported mumps cases dropped from 152,209 in 1968 to 5,196 in 1982 (a 97% decrease). The 1982-1983 school-enterers survey indicated a nationwide mumps vaccine coverage rate of 95% (range 69-99%). Older students, such as those involved in this outbreak, may have substantially lower levels of vaccine coverage. Recent increases in mumps vaccine coverage, even in states that do not require mumps vaccine as a condition for school entry, is attributed to the use of combined measles-mumps-rubella vaccine—the vaccine of choice for the routine immunization of children 15 months of age or older.

An evaluation of the costs of the outbreak in case families is shown in Table 2. Sixteen percent of persons with mumps visited a physician at least once. The one hospitalization was for an adverse reaction to drug treatment to control vomiting reportedly due to mumps. The total direct cost of the outbreak for the middle-school students and their families was estimated at $900. However, if indirect costs, such as loss of time from work, are included, the estimate would exceed $20,000 (*3*).

As indicated in this outbreak and in a recent study of benefit-cost analysis of mumps vaccine (*3*), the considerable medical and economic costs associated with mumps morbidity can best be averted by including mumps immunization as part of state compulsory school immuni-

TABLE 2. Cost of mumps illness in a middle school — Ashtabula County, Ohio, 1982

Indices	Units	Costs
Total number of illnesses	160	— —
Calls to physicians	69	No direct cost to patient
Physician visits	35	$ 700*
Days of hospitalization	1	$ 200†
School absentee days	1,018	$19,546§
Total costs		$20,446

*Based on $20 per physician visit.

†Based on $200 per day hospital stay.

§Assuming 1-parent day of work lost for each school absentee day and based on $4 per hour for 8 hours per day in an estimated 60% of families with two working parents (*3*).

Mumps Vaccine — Continued

zation laws. CDC has previously documented that comprehensive and strictly enforced school immunization laws can result in lower incidence of vaccine-preventable diseases (*4*). Provisional 1982 mumps-incidence data demonstrate that the incidence of mumps disease in states without a compulsory school mumps immunization law (34.7 per million population) was twice as high as in states that have such a law (17.5 per million population).

References

1. Immunization Practices Advisory Committee. Mumps vaccine. MMWR 1982;31:617-20,625.
2. Hilleman MR, Weibel RE, Buynak EB, et al. Live attenuated mumps-virus vaccine. IV. Protective efficacy as measured in a field evaluation. N Engl J Med 1967;276:252-8.
3. Koplan JP, Preblud SR. A benefit-cost analysis of mumps vaccine. Am J Dis Child 1982;136:362-4.
4. Robbins KB, Brandling-Bennett AD, Hinman AR. Low measles incidence: association with enforcement of school immunization laws. Am J Public Health 1981;71:270-4.

Current Trends

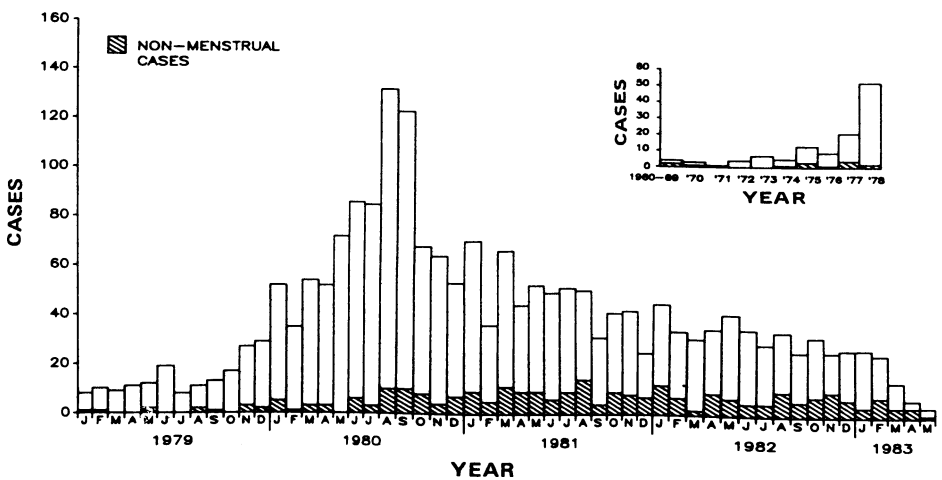
Update: Toxic-Shock Syndrome — United States

As of June 15, 1983, 2,204 cases of toxic-shock syndrome (TSS) meeting CDC's case criteria (*1*) have been reported to CDC. Of these, 2,108 (96%) were in females, and 96 were in males. Of the 2,023 cases in females in which menstrual status at the time of onset could be determined, 1,824 (90%) were associated with menstruation. Of the menstruation-associated cases, information on the type of sanitary product used was available for 1,535: 1,517 (99%) occurred in tampon-users; 17 (1%), in users of napkins and minipads exclusively; and one (< 1%), in a sea-sponge user.

Of the 1,827 cases in which race was specified, 1,774 (97%) occurred in white, non-Hispanics; 22 (1%), in black, non-Hispanics; 15 (< 1%), in Asians; 12 (< 1%), in Hispanics; and four (< 1%), in American Indians. Patients' ages ranged from 1 to 80 years, with 36% of cases occurring in individuals 15-19 years of age. Race and age distributions remained constant when examined by year of onset.

Of the 2,107 cases in which outcome was specified, 103 (5%) resulted in death. The case-

FIGURE 3. Confirmed cases of toxic-shock syndrome — United States, 1970-1983*



*Reported as of June 15, 1983.

Toxic-Shock Syndrome — Continued

fatality rates by year were: pre-1980—10%; 1980—5%; 1981—3%; 1982—3%; and 1983—5%.

The number of cases reported per year decreased in 1982 relative to 1980 and 1981 (Figure 3). At the same time, the proportion of cases not associated with menstruation increased. Non-menstrual TSS accounted for 7% of cases with onset in 1980, 18% in 1981, and 22% in 1982.

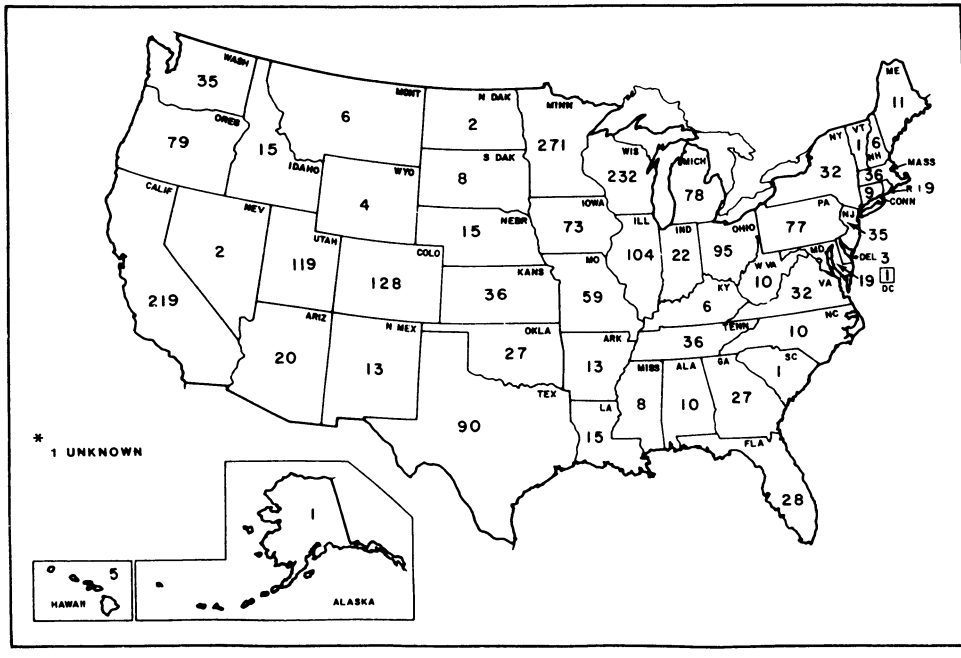
Cases have been reported from all 50 states and the District of Columbia (Figure 4). However, coincident with increases and decreases in the activity of case-finding in certain states, the distribution of cases by state has changed. For example, the proportion of 1982 cases reported by California, Minnesota, and Wisconsin was 26%, down from 35% of cases reported as of April 9, 1982. Utah and Colorado, both of which had active case-finding throughout 1980-1982, each noted a sharp decline in cases reported in 1981 relative to 1980, followed by an increase in cases in 1982, compared with 1981. (Utah: 1980—40 cases, 1981—21 cases, 1982—32 cases; Colorado: 1980—38 cases, 1981—19 cases, 1982—27 cases).

Reported by Special Pathogens Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: Trends in the distribution of reported TSS cases, which were becoming apparent at the time of the last report on TSS surveillance, have continued (*1*). The number of new case reports received monthly has declined to approximately 35, and the proportion of cases not associated with menstruation has continued to increase.

While the activity of TSS case-finding has declined in some states, it has increased in others. Retrospective studies employing uniform case-finding methods will be required to determine to what extent the observed temporal trends in TSS reporting in these states reflect changes in the incidence of TSS rather than changes in reporting. However, in two states with

FIGURE 4. Distribution of definite cases* of toxic-shock syndrome, reported by June 15, 1983 — United States



Toxic Shock Syndrome — Continued

active case-finding and unchanged surveillance methods for 1980 through 1982, the number of reported cases increased in 1982 after having fallen substantially in 1981, although the level reached was still below that of 1980.

TSS continues to be reported predominantly in young, white women who are menstruating at the time of onset. Almost 80% of cases with onset in 1982 were menstruation-associated, and of these, 99% were in tampon-users. Thus, it is important that medical professionals and the general public recognize that TSS continues to occur in association with menstruation and tampon use and in other circumstances. All suspected cases should be reported promptly to the appropriate local or state health department.

Reference

1. CDC. Toxic-shock syndrome, United States, 1970-1982. MMWR 1982;31:201-4.

Erratum: Vol. 32, No. 29

p. 378. In the article, "Respiratory Illness Associated with Carpet Cleaning at a Hospital Clinic—Virginia," the last three sentences of the second full paragraph on p. 383 should read: At floor level, the dust concentration was 0.016 mg/m^3 of air. The dust contained a total of 6.5 μg sulfate or 56% of the total weight. At breathing level, the measurements were: dust—0.076 mg/m^3; sulfate—5.2 μg or 8% of total weight.

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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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