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Current Trends

Repeat Injuries in an Inner City Population — Philadelphia, 1987–1988

Findings from the Philadelphia Injury Prevention Program (PIPP) indicate that repeat injuries account for 10% of visits to emergency rooms (ERs) for injuries. Because understanding of the epidemiology of repeat injuries is limited, data from PIPP were used to examine this problem. PIPP is a cooperative effort by the Philadelphia Department of Public Health, the University of Pennsylvania School of Medicine, and CDC. PIPP maintains surveillance of virtually all emergency-room (ER)–treated injuries sustained by 68,103 inner city residents living in 17 census tracts in Philadelphia. This report focuses on repeat injuries among this predominantly (97%) black, indigent population (estimated 1987 median household income: $11,810) (Donnelley Marketing Information Services, unpublished data).

An injury was defined as a visit to an ER in Philadelphia for care or evaluation of an injury. A repeat injury was defined as a discrete injury in the same person after an initial injury during a 1-year surveillance period (March 1, 1987, to February 29, 1988). Excluded from this definition were visits to an ER for follow-up care of an injury (e.g., suture removal, cast replacement, or wound redressings).

During the study period, the surveillance system identified 9567 injuries in 8600 persons (12.6% of the study population). Of these, 2161 (22.6%) resulted from falls, 1960 (20.5%) from interpersonal violence, 1500 (15.7%) from motor vehicle-related incidents, 965 (10.1%) from unintentional blunt trauma, and 895 (9.4%) from unintentional cuts. The remaining 2086 injuries (21.8%) resulted from other causes.

Of the 9567 injuries, 967 (10.1%) were repeat injuries to 802 (9.3%) persons. Of the repeat injuries, 268 (27.7%) resulted from interpersonal violence, 193 (20.0%) from falls, 111 (11.5%) from motor vehicle-related incidents, 93 (9.6%) from unintentional blunt trauma, and 82 (8.5%) from unintentional cuts. The remaining 220 (22.8%) resulted from other causes.

Of the 802 persons with repeat injuries, 521 (65.0%) were male. Two hundred eighty-two (35.2%) were 0–19 years of age; 499 (62.2%) were 20–64; and 21 (2.6%) were ≥65. Six hundred eighty-three (85.2%) persons were injured twice; 85 (10.6%), three times; 25 (3.1%), four times; six (0.7%), five times; and three (0.4%), six times. Seven persons died from a repeat injury.

Repeat Injuries — Continued

The cause of initial injury differed little between persons with repeat injuries and those with one injury (Figure 1). Of the 802 persons with repeat injuries, 224 (27.9%) had two or more injuries from a similar cause. Interpersonal violence was the most common cause of a repeat injury resulting from a similar cause. Of the 184 persons with repeat injuries and at least one injury from interpersonal violence, 88 (47.8%) had at least one additional injury from interpersonal violence and 15 had three or more injuries from interpersonal violence. Of the 172 persons whose first injury resulted from a fall, 67 (39.0%) fell again. Among persons ≥65 years of age with repeat injuries, 61.5% with an initial fall injury suffered a subsequent fall injury.

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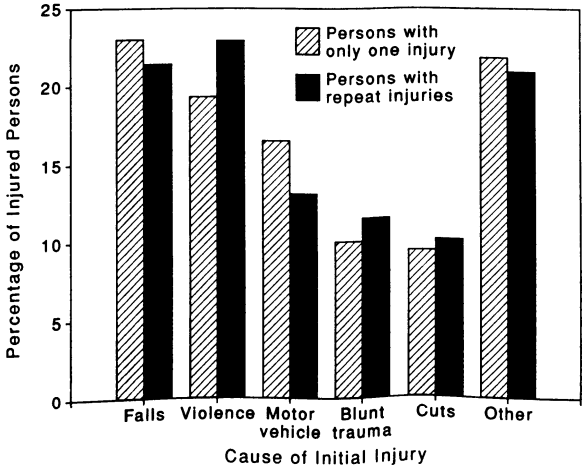
Editorial Note: Preliminary results from PIPP surveillance found that in 1 year 12.6% of the study population visited an ER for treatment of injuries caused primarily by falls, interpersonal violence, and motor vehicle incidents. The finding that 9.3% of persons who came to the ER for treatment of an injury returned within 1 year for treatment of another injury has important implications for injury prevention.

Falls and interpersonal violence were the main causes of both initial and repeat injuries. The PIPP data on repeat fall injuries are consistent with other studies that found that once an older person has fallen, the risk of falling again increases substantially (*1–3*). Accordingly, one aspect of a fall-prevention program for older persons should focus on persons with histories of previous falls.

The occurrence of repeat injuries from interpersonal violence is probably underestimated because such injuries may not have been specifically identified on the ER record as having resulted from interpersonal violence. In particular, many women and children diagnosed as having unintentional cuts, blunt trauma, or falls may have been injured intentionally.

Hospital emergency departments are an important interface between the health-care system and victims of interpersonal violence. One cause of repeat violent injury is interpersonal violence associated with family and intimate relationships (e.g.,

FIGURE 1. Cause of initial injury — Philadelphia Injury Prevention Program, March 1, 1987–February 29, 1988



Repeat Injuries — Continued

spouse and child abuse). The introduction of standard protocols in hospital emergency departments for the proper identification, treatment, and referral of victims of family violence has been advocated as a strategy for preventing repeat injury and other consequences associated with family violence (*4*). This strategy has proven useful in the identification of battered women among trauma patients in emergency departments (*5*). These strategies can lower mortality and morbidity associated with family violence but require further evaluation.

References

1. Tinetti ME, Williams TR, Mayewski R. Fall risk index for elderly patients based on number of chronic disabilities. Am J Med 1986;80:429–34.
2. Tinetti ME, Speechley M, Ginter SF. Risk factors for falls among elderly persons living in the community. N Engl J Med 1988;319:1701–7.
3. Sattin RW, Nevitt MC, Waller PF, Seiden RH. Injury prevention. In: Abdellah FG, Moore SR, eds. Background papers from the Surgeon General's Workshop on Health Promotion and Aging. Washington, DC: US Department of Health and Human Services, Public Health Service, 1988:D1–20.
4. Klingbeil KS. Interpersonal violence: a comprehensive model in a hospital setting from policy to program [Background paper]. In: Report of the Secretary's Task Force on Black and Minority Health. Vol 5. Homicide, suicide, and unintentional injuries. Washington, DC: US Department of Health and Human Services, 1986:245–63.
5. McLeer SV, Anwar R. A study of battered women in an emergency department. Am J Public Health 1989;79:65–6.

Epidemiologic Notes and Reports

Group A Beta-Hemolytic Streptococcal Bacteremia — Colorado, 1989

From January through August 1989, group A beta-hemolytic *Streptococcus* (GABHS) was isolated from blood cultures obtained from 19 patients who had been admitted to a hospital in metropolitan Denver, Colorado. In comparison, this organism was cultured from blood from eight patients in 1988 and three in 1987 at this hospital (Figure 1). The Colorado Department of Health was notified of this increase, and in August, the department reviewed these patients' medical charts to describe GABHS bacteremia cases and to determine whether they represented community-acquired disease, nosocomial acquisition, or laboratory artifact.

Patients ranged in age from 3 weeks to 96 years (median: 67 years); 12 were male. All but one were residents of Colorado when hospitalized; 16 patients lived in the Denver metropolitan area. Twelve patients were admitted from private residences and four from nursing homes; three were transferred from acute- or extended-care facilities.

For 13 patients, a blood specimen was obtained within 6 hours of arrival at the hospital; 12 patients had presenting manifestations consistent with bacteremia or sepsis (primarily fever, chills, rigors, and a focus of infection). In only three patients was bacteremia first documented >48 hours after hospitalization.

Seven patients had no identified source of bacteremia; four had a possible cutaneous source of infection (cellulitis, impetigo, open sores, or an abscess); seven had pneumonia, and one had both cutaneous and respiratory infections. Two of the seven without identified sources of infection developed GABHS bacteremia following

Streptococcal Bacteremia — Continued

major trauma in motor vehicle crashes. A third patient developed GABHS bacteremia following elective laser hemorrhoidectomy. Two patients developed acute respiratory distress syndrome; two developed acute renal failure; and nine (47%) died after developing GABHS bacteremia.

Eight group A *Streptococcus* blood culture isolates from this hospital were sent to CDC for typing. Three were M-type 1, T-type 1; three were M-type 3, T-type 3/13; and two were not typable.

Retrospective surveys of this and 17 other metropolitan Denver hospital microbiology laboratories identified 73 cases of GABHS bacteremia between January and August—a rate of seven cases per 100,000 per year in the general population of the Denver metropolitan area.

Active surveillance for GABHS bacteremia was established in September 1989 in metropolitan Denver. Bacterial isolates are sent to CDC for analysis, and ongoing case investigation is examining potential explanations for the increasing incidence of group A streptococcal disease and possible risk factors, such as age, underlying illnesses, socioeconomic status, and race/ethnicity.

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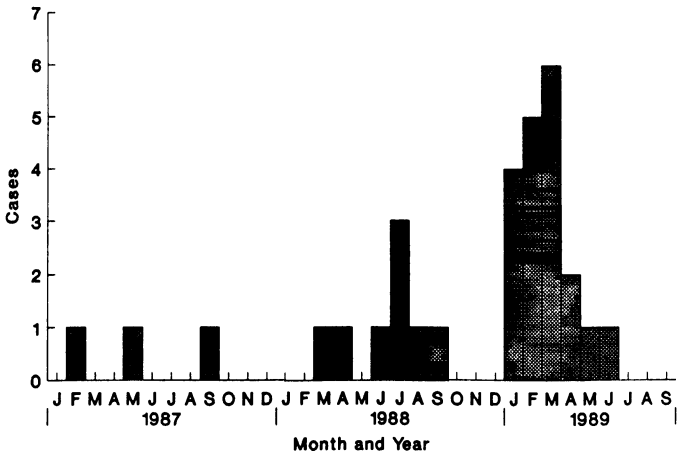
Editorial Note: During the last half century, the incidence of severe infections with group A *Streptococcus* (including bacteremia, puerperal sepsis, and scarlet fever) and nonsuppurative sequelae (such as rheumatic fever) has decreased markedly in the United States. Potential explanations for this decline may relate to antibiotic therapy, improved living conditions, and decreased virulence of the infecting organism (*1*). Recently, however, group A streptococcal infections have re-emerged as a public health problem. In 1985 and 1986, clusters of patients with rheumatic fever were reported from several areas (*2–6*), and since 1987, a severe syndrome associated with group A streptococcal infection (streptococcal toxic-shock–like syndrome) has been recognized (*7,8*).

FIGURE 1. Group A beta-hemolytic streptococcal bacteremia cases in a hospital — Denver, Colorado, January 1987–September 1989



Streptococcal Bacteremia — Continued

The findings in Denver are consistent with a trend toward increasing rates of GABHS bacteremia. While a direct comparison of the GABHS bacteremia incidence rate in Denver for 1989 and for previous years is not possible because of incomplete laboratory records, the 1989 rate is more than double the most recent population-based estimate of three cases per 100,000 persons per year from Charleston County, South Carolina (1985–1987) (CDC, unpublished data). In addition, during 1989, CDC received an increased number of reports of GABHS bacteremia from other areas in the United States and serotyped strains from several Scandinavian countries that have increased rates of GABHS bacteremia. These reports suggest widespread changes in the epidemiology of group A streptococcal disease.

The descriptive epidemiology of GABHS bacteremia in the Denver patients is similar to that in previous reports (*9,10*). Even though all age groups may be affected, disease occurs primarily in the elderly, including nursing home residents. Underlying medical conditions in affected persons may include chronic debilitating disease, immunosuppressive illness or medication, and intravenous-drug use. In addition, surgery, traumatic injury, or other disruption of the cutaneous barrier may predispose persons to invasive infection. Meningitis, endocarditis, osteomyelitis, septic arthritis, and genitourinary infections can occur in association with bacteremia. Despite appropriate therapy, illness can progress to shock, disseminated intravascular coagulation, and death; reported mortality rates range from 5% to 45% (*9*).

Streptococcal toxic-shock–like syndrome also has been reported recently from the Rocky Mountain area (*7*). This condition has been associated with pyrogenic exotoxin-producing group A streptococcal strains. Clinical features include fever, shock, localized erythema, renal failure, severe tissue injury (myositis and fasciitis), and adult respiratory distress syndrome; bacteremia may occur and illness is often fatal (*7,8*). The clinical manifestations in some of the Denver patients were compatible with this syndrome.

Factors contributing to the apparent recent increase in GABHS bacteremia are unclear. No single serotype, to suggest a common source, was found in the isolates from Denver. Serologic typing of group A streptococcal strains based on antigenic differences in the M-protein suggests that an increase in the proportion of virulent organisms may play a role. M-types 1 and 3, comprising 75% of the Denver isolates, may be more invasive and more likely to cause clusters of infection than most other streptococcal M-types (*11*). Analysis of serotyping data from isolates submitted to CDC since 1972 shows an increase in the proportion of these two M-types in the 1980s (*11*).

Efforts to prevent and control invasive group A streptococcal disease should be directed at surveillance to establish the incidence of this problem in different geographic areas; further epidemiologic studies of toxic-shock–like syndrome; and improved understanding of the roles of immune responses, exotoxin, and other virulence factors. Physicians should continue to diagnose and treat mild streptococcal infections to prevent their progression to severe invasive disease.

On July 14, 1989, CDC notified state and territorial health officials of a possible increase in severe group A streptococcal infections and requested that clusters of invasive group A streptococcal infection or illness in previously healthy persons be reported through state health departments to the Respiratory Diseases Branch, Division of Bacterial Diseases, Center for Infectious Diseases, CDC; telephone (404) 639-3021.

Streptococcal Bacteremia — Continued

References

1. Quinn RW. Epidemiology of group A streptococcal infections—their changing frequency and severity. Yale J Biol Med 1982;55:265–70.
2. Veasy LG, Wiedmeier SE, Orsmond GS, et al. Resurgence of acute rheumatic fever in the intermountain area of the United States. N Engl J Med 1987;316:421–7.
3. Wald ER, Dashefsky B, Feidt C, Chiponis D, Byers C. Acute rheumatic fever in western Pennsylvania and the tristate area. Pediatrics 1987;80:371–4.
4. Hosier DM, Craenen JM, Teske DW, Wheller JJ. Resurgence of acute rheumatic fever. Am J Dis Child 1987;141:730–3.
5. CDC. Acute rheumatic fever among Army trainees—Fort Leonard Wood, Missouri, 1987–1988. MMWR 1988;37:519–22.
6. CDC. Acute rheumatic fever at a Navy training center—San Diego, California. MMWR 1988;37:101–4.
7. Stevens DL, Tanner MH, Winship J, et al. Severe group A streptococcal infections associated with a toxic shock-like syndrome and scarlet fever toxin A. N Engl J Med 1989;321:1–8.
8. Cone LA, Woodard DR, Schlievert PM, Tomory GS. Clinical and bacteriologic observations of a toxic shock-like syndrome due to *Streptococcus* pyogenes. N Engl J Med 1987; 317:146–9.

(Continued on page 11)

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

Disease	1st Week Ending			Cumulative, 1st Week Ending		
	Jan. 6, 1990	Jan. 7, 1989	Median 1985-1989	Jan. 6, 1990	Jan. 7, 1989	Median 1985-1989
Acquired Immunodeficiency Syndrome (AIDS)	1,821	U*	266	1,821	462	266
Aseptic meningitis	63	63	63	63	63	63
Encephalitis: Primary (arthropod-borne & unspec)	10	9	12	10	9	12
Post-infectious	3	1	1	3	1	1
Gonorrhea: Civilian	11,354	10,920	11,677	11,354	10,920	11,677
Military	121	145	164	121	145	164
Hepatitis: Type A	273	397	278	273	397	278
Type B	182	263	266	182	263	266
Non A, Non B	25	52	52	25	52	52
Unspecified	24	43	43	24	43	43
Legionellosis	12	10	10	12	10	10
Leprosy	-	7	1	-	7	1
Malaria	10	8	8	10	8	8
Measles: Total†	88	40	9	88	40	9
Indigenous	80	40	8	80	40	8
Imported	8	-	-	8	-	-
Meningococcal infections	20	32	32	20	32	32
Mumps	31	72	72	31	72	72
Pertussis	16	49	26	16	49	26
Rubella (German measles)	3	3	3	3	3	3
Syphilis (Primary & Secondary): Civilian	349	461	461	349	461	461
Military	-	7	2	-	7	2
Toxic Shock syndrome	3	4	4	3	4	4
Tuberculosis	233	333	141	233	333	141
Tularemia	1	2	-	1	2	-
Typhoid Fever	4	3	3	4	3	3
Typhus fever, tick-borne (RMSF)	-	2	1	-	2	1
Rabies, animal	27	47	47	27	47	47

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1990		Cum. 1990
Anthrax	-	Leptospirosis	-
Botulism: Foodborne	-	Plague	-
Infant	-	Poliomyelitis, Paralytic,§	-
Other	-	Psittacosis (N.C. 1, Ariz. 1)	2
Brucellosis (Calif. 2)	2	Rabies, human	-
Cholera	-	Tetanus	-
Congenital rubella syndrome	-	Trichinosis (N.J. 1)	1
Congenital syphilis, ages < 1 year	-		
Diphtheria	-		

*Because AIDS cases are not received weekly from all reporting areas, comparison of weekly figures may be misleading.
†Four of the 88 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.
§No cases of suspected poliomyelitis have been reported in 1990; none of the 13 suspected cases in 1989 have been confirmed to date.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending January 6, 1990 and January 7, 1989 (1st Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990
UNITED STATES	1,821	63	10	3	11,354	10,920	273	182	25	24	12	-
NEW ENGLAND	50	2	1	-	436	473	4	17	1	1	-	-
Maine	-	-	-	-	4	4	-	-	-	-	-	-
N.H.	16	1	-	-	-	-	-	-	-	-	-	-
Vt.	-	-	-	-	3	-	-	-	-	-	-	-
Mass.	1	1	1	-	91	153	4	17	1	1	-	-
R.I.	-	-	-	-	38	25	-	-	-	-	-	-
Conn.	33	-	-	-	300	291	-	-	-	-	-	-
MID. ATLANTIC	985	-	-	-	487	1,323	9	10	-	-	3	-
Upstate N.Y.	30	-	-	-	-	-	-	-	-	-	-	-
N.Y. City	790	-	-	-	-	650	-	-	-	-	-	-
N.J.	131	-	-	-	366	215	9	10	-	-	3	-
Pa.	34	-	-	-	121	458	-	-	-	-	-	-
E.N. CENTRAL	116	7	-	1	2,780	1,690	13	18	4	2	3	-
Ohio	24	3	-	1	1,019	-	5	5	3	1	3	-
Ind.	22	-	-	-	375	466	-	-	-	-	-	-
Ill.	67	-	-	-	909	480	-	-	-	-	-	-
Mich.	1	4	-	-	466	522	8	13	1	1	-	-
Wis.	2	-	-	-	11	222	-	-	-	-	-	-
W.N. CENTRAL	2	-	-	-	562	223	4	3	1	-	-	-
Minn.	-	-	-	-	89	47	-	-	-	-	-	-
Iowa	-	-	-	-	124	21	-	1	-	-	-	-
Mo.	2	-	-	-	347	149	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	2	-	-	-	-	-	-
S. Dak.	-	-	-	-	2	4	1	-	1	-	-	-
Nebr.	-	-	-	-	-	-	3	2	-	-	-	-
Kans.	-	-	-	-	-	-	-	-	-	-	-	-
S. ATLANTIC	279	17	3	-	4,074	3,275	44	47	3	1	-	-
Del.	-	1	-	-	34	43	2	-	-	-	-	-
Md.	24	5	1	-	182	-	18	9	-	1	-	-
D.C.	43	1	-	-	185	200	1	1	-	-	-	-
Va.	121	-	-	-	58	183	-	-	-	-	-	-
W. Va.	-	-	-	-	20	65	-	-	-	-	-	-
N.C.	54	4	1	-	403	636	9	13	2	-	-	-
S.C.	25	-	-	-	534	699	4	13	-	-	-	-
Ga.	8	-	1	-	897	489	-	-	-	-	-	-
Fla.	4	6	-	-	1,761	960	10	11	1	-	-	-
E.S. CENTRAL	38	6	1	-	618	1,131	7	18	1	1	4	-
Ky.	10	-	-	-	64	82	2	4	1	1	1	-
Tenn.	25	-	-	-	117	300	1	10	-	-	2	-
Ala.	3	5	1	-	238	471	4	4	-	-	1	-
Miss.	-	1	-	-	199	278	-	-	-	-	-	-
W.S. CENTRAL	40	2	-	-	778	971	16	2	-	-	1	-
Ark.	-	-	-	-	199	93	3	-	-	-	-	-
La.	26	-	-	-	150	120	-	-	-	-	-	-
Okla.	9	2	-	-	88	142	13	2	-	-	1	-
Tex.	5	-	-	-	341	616	-	-	-	-	-	-
MOUNTAIN	71	2	1	-	213	80	32	19	-	3	-	-
Mont.	-	-	-	-	3	3	1	1	-	-	-	-
Idaho	1	-	-	-	1	7	4	2	-	-	-	-
Wyo.	-	-	-	-	2	1	-	-	-	-	-	-
Colo.	22	-	-	-	-	-	-	-	-	-	-	-
N. Mex.	-	-	-	-	10	19	5	2	-	-	-	-
Ariz.	32	-	1	-	133	6	18	7	-	-	-	-
Utah	8	-	-	-	13	7	-	-	-	-	-	-
Nev.	8	2	-	-	51	37	4	7	-	3	-	-
PACIFIC	240	27	4	2	1,406	1,754	144	48	15	16	1	-
Wash.	75	-	-	-	-	102	-	-	-	-	-	-
Oreg.	14	-	-	-	57	62	5	3	-	-	-	-
Calif.	151	27	4	2	1,320	1,559	139	44	15	16	1	-
Alaska	-	-	-	-	29	29	-	1	-	-	-	-
Hawaii	-	-	-	-	-	2	-	-	-	-	-	-
Guam	-	-	-	-	-	4	-	-	-	-	-	-
P.R.	1	-	-	-	-	22	-	-	-	-	-	-
V.I.	-	-	-	-	-	7	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	1	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	1	-	-	-	-	-	-

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending January 6, 1990 and January 7, 1989 (1st Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1990	1990	Cum. 1990	1990	Cum. 1990	Cum. 1989	Cum. 1990	1990	Cum. 1990	1990	Cum. 1990	Cum. 1989	1990	Cum. 1990	Cum. 1989
UNITED STATES	10	80	80	8	8	40	20	31	31	16	16	49	3	3	3
NEW ENGLAND	2	-	-	-	-	-	2	-	-	-	-	6	-	-	-
Maine	-	-	-	-	-	-	1	-	-	-	-	2	-	-	-
N.H.	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
Vt.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mass.	2	-	-	-	-	-	1	-	-	-	-	-	-	-	-
R.I.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Conn.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MID. ATLANTIC	-	11	11	4	4	-	2	1	1	2	2	12	-	-	-
Upstate N.Y.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.Y. City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.J.	-	-	-	-	-	-	2	-	-	-	-	11	-	-	-
Pa.	-	11	11	4§	4	-	-	1	1	2	2	1	-	-	-
E.N. CENTRAL	-	-	-	-	-	-	3	3	3	1	1	6	-	-	-
Ohio	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-
Ind.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ill.	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-
Mich.	-	-	-	-	-	-	1	3	3	1	1	-	-	-	-
Wis.	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-
W.N. CENTRAL	-	10	10	-	-	30	1	-	-	-	-	2	-	-	-
Minn.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	10	10	-	-	-	-	-	-	-	-	2	-	-	-
Mo.	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kans.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. ATLANTIC	4	1	1	3	3	-	3	14	14	1	1	1	-	-	-
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	2	1	1	2†	2	-	-	5	5	-	-	-	-	-	-
D.C.	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	-	-	-	1†	1	-	-	2	2	1	1	1	-	-	-
W. Va.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.C.	-	-	-	-	-	-	1	4	4	-	-	-	-	-	-
S.C.	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-
Ga.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fla.	1	-	-	-	-	-	1	2	2	-	-	-	-	-	-
E.S. CENTRAL	1	-	-	-	-	-	-	-	-	3	3	1	-	-	-
Ky.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tenn.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ala.	1	-	-	-	-	-	-	-	-	3	3	1	-	-	-
Miss.	-	-	-	-	-	-	-	N	N	-	-	-	-	-	-
W.S. CENTRAL	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Ark.	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
La.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Okla.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tex.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOUNTAIN	-	-	-	-	-	1	-	3	3	1	1	2	-	-	-
Mont.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colo.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
N. Mex.	-	-	-	-	-	-	-	N	N	-	-	-	-	-	-
Ariz.	-	-	-	-	-	1	-	1	1	1	1	1	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nev.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC	3	58	58	1	1	9	9	9	9	8	8	19	3	3	3
Wash.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oreg.	-	-	-	-	-	-	1	N	N	1	1	-	-	-	-
Calif.	3	58	58	1†	1	9	8	9	9	7	7	19	3	3	3
Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
Guam	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
P.R.	-	-	-	-	-	23	-	2	2	-	-	-	-	-	-
V.I.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
Amer. Samoa	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
C.N.M.I.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations.
N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending January 6, 1990 and January 7, 1989 (1st Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990
UNITED STATES	349	461	3	233	333	1	4	-	27
NEW ENGLAND	20	12	1	-	2	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-
N.H.	-	-	-	-	-	-	-	-	-
Vt.	-	-	-	-	-	-	-	-	-
Mass.	6	12	1	-	-	-	-	-	-
R.I.	-	-	-	-	-	-	-	-	-
Conn.	14	-	-	-	2	-	-	-	-
MID. ATLANTIC	40	82	-	87	54	1	1	-	9
Upstate N.Y.	-	-	-	-	-	-	-	-	-
N.Y. City	-	8	-	77	35	-	-	-	-
N.J.	40	29	-	-	10	1	1	-	9
Pa.	-	45	-	10	9	-	-	-	-
E.N. CENTRAL	33	15	-	27	12	-	-	-	-
Ohio	12	-	-	-	4	-	-	-	-
Ind.	1	2	-	-	1	-	-	-	-
Ill.	16	8	-	22	6	-	-	-	-
Mich.	3	3	-	-	-	-	-	-	-
Wis.	1	2	-	5	1	-	-	-	-
W.N. CENTRAL	5	1	1	9	3	-	-	-	5
Minn.	1	-	-	4	1	-	-	-	4
Iowa	-	1	-	1	1	-	-	-	-
Mo.	4	-	-	-	-	-	-	-	-
N. Dak.	-	-	-	1	1	-	-	-	-
S. Dak.	-	-	-	1	-	-	-	-	-
Nebr.	-	-	1	2	-	-	-	-	-
Kans.	-	-	-	-	-	-	-	-	1
S. ATLANTIC	127	208	-	18	40	-	-	-	6
Del.	5	1	-	1	-	-	-	-	-
Md.	9	23	-	7	-	-	-	-	-
D.C.	-	18	-	-	4	-	-	-	-
Va.	28	7	-	-	11	-	-	-	2
W. Va.	-	-	-	2	1	-	-	-	-
N.C.	14	15	-	-	10	-	-	-	-
S.C.	28	4	-	8	14	-	-	-	2
Ga.	-	38	-	-	-	-	-	-	2
Fla.	43	102	-	-	-	-	-	-	-
E.S. CENTRAL	28	46	1	8	13	-	-	-	2
Ky.	-	-	-	4	5	-	-	-	1
Tenn.	-	-	-	-	-	-	-	-	-
Ala.	17	34	1	4	7	-	-	-	1
Miss.	11	12	-	-	1	-	-	-	-
W.S. CENTRAL	35	19	-	12	-	-	-	-	3
Ark.	4	-	-	9	-	-	-	-	1
La.	21	11	-	-	-	-	-	-	-
Okla.	-	-	-	3	-	-	-	-	-
Tex.	10	8	-	-	-	-	-	-	2
MOUNTAIN	5	2	-	2	-	-	-	-	1
Mont.	-	-	-	-	-	-	-	-	-
Idaho	1	-	-	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-
Colo.	-	-	-	-	-	-	-	-	-
N. Mex.	-	-	-	1	-	-	-	-	1
Ariz.	3	-	-	-	-	-	-	-	-
Utah	1	2	-	-	-	-	-	-	-
Nev.	-	-	-	1	-	-	-	-	-
PACIFIC	56	76	-	70	209	-	3	-	1
Wash.	-	6	-	3	-	-	-	-	-
Oreg.	1	3	-	2	-	-	-	-	-
Calif.	55	67	-	65	209	-	3	-	-
Alaska	-	-	-	-	-	-	-	-	1
Hawaii	-	-	-	-	-	-	-	-	-
Guam	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	-	-	9
V.I.	-	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending January 6, 1990 (1st Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	782	575	128	40	22	17	67
Boston, Mass.	189	141	30	8	6	4	23
Bridgeport, Conn.	59	38	13	6	1	1	4
Cambridge, Mass.	31	26	3	1	-	1	7
Fall River, Mass.	43	33	9	1	-	-	-
Hartford, Conn.	79	49	18	5	5	2	4
Lowell, Mass.	43	34	7	2	-	-	5
Lynn, Mass.	20	15	4	1	-	-	1
New Bedford, Mass.	34	29	1	4	-	-	-
New Haven, Conn.	49	34	7	3	3	2	6
Providence, R.I.	58	39	12	4	1	2	1
Somerville, Mass.	8	4	2	1	1	-	-
Springfield, Mass.	61	44	8	3	2	4	2
Waterbury, Conn.	38	29	5	1	2	1	7
Worcester, Mass.	70	60	9	-	1	-	7
MID. ATLANTIC	2,877	1,939	525	293	69	49	196
Albany, N.Y.	33	23	7	2	-	1	3
Allentown, Pa.	13	11	1	1	-	-	-
Buffalo, N.Y.	112	73	24	7	5	3	4
Camden, N.J.	38	28	7	3	-	-	-
Elizabeth, N.J.	28	19	3	4	-	1	4
Erie, Pa.†	51	41	8	2	-	-	-
Jersey City, N.J.§	62	41	11	7	1	2	-
N.Y. City, N.Y.	1,698	1,087	323	211	50	27	97
Newark, N.J.	83	43	18	14	3	4	9
Paterson, N.J.	33	22	6	3	2	-	3
Philadelphia, Pa.	295	218	50	16	5	6	24
Pittsburgh, Pa.†	82	62	15	3	1	1	8
Reading, Pa.	33	25	7	-	-	1	5
Rochester, N.Y.	128	103	13	9	2	1	28
Schenectady, N.Y.	22	14	6	2	-	-	-
Scranton, Pa.†	39	35	3	1	-	-	5
Syracuse, N.Y.	38	27	8	2	-	1	-
Trenton, N.J.	33	22	7	4	-	-	-
Utica, N.Y.	26	20	3	2	-	1	3
Yonkers, N.Y.	30	25	5	-	-	-	3
E.N. CENTRAL	2,533	1,731	513	152	58	79	138
Akron, Ohio	72	52	15	2	2	1	-
Canton, Ohio	57	46	5	4	1	1	7
Chicago, Ill.§	564	362	125	45	10	22	16
Cincinnati, Ohio	83	56	21	3	3	-	16
Cleveland, Ohio	163	112	27	11	2	11	6
Columbus, Ohio	144	97	30	7	5	5	4
Dayton, Ohio	126	85	30	6	4	1	7
Detroit, Mich.	332	197	72	31	14	18	3
Evansville, Ind.	39	28	8	1	2	-	4
Fort Wayne, Ind.	73	51	15	3	3	1	4
Gary, Ind.	26	12	6	5	1	2	1
Grand Rapids, Mich.	73	58	9	4	-	2	10
Indianapolis, Ind.	176	126	30	8	4	8	8
Madison, Wis.	44	26	8	7	2	1	2
Milwaukee, Wis.	222	177	39	4	1	1	11
Peoria, Ill.	50	34	11	2	1	2	5
Rockford, Ill.	59	46	13	-	-	-	9
South Bend, Ind.	39	26	8	3	2	-	5
Toledo, Ohio	116	86	23	4	-	3	10
Youngstown, Ohio	75	54	18	2	1	-	10
W.N. CENTRAL	874	627	154	55	14	24	44
Des Moines, Iowa	70	49	14	4	2	1	4
Duluth, Minn.	31	21	7	2	-	1	3
Kansas City, Kans.	31	26	3	1	1	-	3
Kansas City, Mo.	127	97	20	8	1	1	4
Lincoln, Nebr.	38	26	6	1	1	4	4
Minneapolis, Minn.	241	158	50	19	5	9	17
Omaha, Nebr.	99	66	21	5	2	5	5
St. Louis, Mo.	145	114	22	7	1	1	-
St. Paul, Minn.	57	45	7	5	-	-	2
Wichita, Kans.	35	25	4	3	1	2	2
S. ATLANTIC	1,324	869	250	122	44	37	88
Atlanta, Ga.	158	89	39	26	2	2	8
Baltimore, Md.	265	180	45	22	10	8	18
Charlotte, N.C.	84	58	16	6	2	2	6
Jacksonville, Fla.	166	108	36	12	6	4	14
Miami, Fla.	126	76	24	13	10	3	1
Norfolk, Va.	55	40	7	1	4	3	2
Richmond, Va.	82	58	14	4	3	3	5
Savannah, Ga.	49	34	10	2	2	1	7
St. Petersburg, Fla.	95	71	13	5	1	5	9
Tampa, Fla.	94	59	18	11	2	4	7
Washington, D.C.	112	60	27	19	2	2	5
Wilmington, Del.	38	36	1	1	-	-	6
E.S. CENTRAL	702	468	158	45	18	13	57
Birmingham, Ala.	83	58	15	3	4	3	1
Chattanooga, Tenn.	72	51	12	5	3	1	9
Knoxville, Tenn.	47	34	10	2	1	-	12
Louisville, Ky.	134	95	31	6	1	1	9
Memphis, Tenn.	143	91	35	12	3	2	11
Mobile, Ala.	34	23	9	1	1	-	1
Montgomery, Ala.	49	38	5	2	2	2	2
Nashville, Tenn.	140	78	41	14	3	4	12
W.S. CENTRAL	1,868	1,180	402	180	57	49	100
Austin, Tex.	49	32	8	6	1	2	9
Baton Rouge, La.	20	17	2	1	-	-	-
Corpus Christi, Tex.§	43	32	8	3	-	-	2
Dallas, Tex.	287	166	59	40	14	8	19
El Paso, Tex.	90	66	15	3	3	3	11
Fort Worth, Tex	112	76	21	4	3	8	6
Houston, Tex.§	734	436	169	89	24	16	18
Little Rock, Ark.	57	39	15	2	-	1	3
New Orleans, La.	136	78	37	16	5	-	-
San Antonio, Tex.	184	123	42	9	4	6	22
Shreveport, La.	43	34	5	2	1	1	1
Tulsa, Okla.	113	81	21	5	2	4	9
MOUNTAIN	794	528	139	68	30	29	62
Albuquerque, N. Mex.	121	74	17	11	14	5	9
Colo. Springs, Colo.	66	47	12	4	1	2	12
Denver, Colo.	53	37	6	5	-	5	-
Las Vegas, Nev.	92	69	14	7	1	1	8
Ogden, Utah	31	20	4	2	3	2	4
Phoenix, Ariz.	203	122	51	20	4	6	9
Pueblo, Colo.	30	25	5	-	-	-	8
Salt Lake City, Utah	53	34	6	7	3	3	1
Tucson, Ariz.	145	100	24	12	4	5	11
PACIFIC	1,930	1,298	353	175	54	42	139
Berkeley, Calif.	24	18	3	3	-	-	4
Fresno, Calif.	121	80	24	8	5	4	12
Glendale, Calif.	25	21	3	1	-	-	1
Honolulu, Hawaii	65	47	14	3	-	1	13
Long Beach, Calif.§	86	58	16	6	3	3	8
Los Angeles Calif.	504	320	92	63	19	4	13
Oakland, Calif.	61	39	10	6	1	4	3
Pasadena, Calif.	52	42	7	2	-	1	7
Portland, Oreg.	65	47	15	3	-	-	4
Sacramento, Calif.	176	128	32	7	7	2	23
San Diego, Calif.	129	79	23	8	14	4	19
San Francisco, Calif.	172	100	31	35	-	6	4
San Jose, Calif.	226	164	36	15	3	8	15
Seattle, Wash.	165	109	38	12	2	4	8
Spokane, Wash.	25	22	2	1	-	-	3
Tacoma, Wash.	34	24	7	2	-	1	2
TOTAL	13,684††	9,215	2,622	1,130	366	339	891

*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 3 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 available 4 weeks.

Streptococcal Bacteremia — Continued

9. Bibler MR, Rouan GW. Cryptogenic group A streptococcal bacteremia: experience at an urban general hospital and review of the literature. Rev Infect Dis 1986;8:941–51.
10. Duma RJ, Weinberg AN, Medrek TF, Kunz LJ. Streptococcal infections: a bacteriologic and clinical study of streptococcal bacteremia. Medicine 1969;48:87–127.
11. Schwartz B, Facklam RR, Elliott J, Bosley G, Franklin R, Pigott N. Trends in group A streptococcal types, 1972 to 1988: the increasing proportion of rheumatogenic and invasive strains [Abstract]. Presented at the Lancefield Society Meeting, Houston, Texas, Sept. 22, 1989.

Group A Beta-Hemolytic Streptococcal Pharyngitis Among U.S. Air Force Trainees — Texas, 1988–89

In December 1988 and January 1989, an outbreak of pharyngitis caused by group A beta-hemolytic *Streptococcus* (GABHS) occurred among military trainees at Lackland Air Force Base, Texas. From January through November 1988, the incidence of culture-positive GABHS pharyngitis was 2.1 cases per 1000 trainees per month. By comparison, in December and January, the rates were 9.5 per 1000 and 18.7 per 1000, respectively. The outbreak prompted the administration of penicillin prophylaxis to all trainees (>6000)—the first time in at least 15 years that a mass prophylaxis program was implemented at this Air Force base.

Between December 23 and January 10, GABHS was isolated from throat swabs of 186 trainees from 13 flights (one flight = approximately 50 trainees) in four of eight squadrons (one squadron = 16–20 flights). Each flight occupies a single open-bay sleeping area; each squadron occupies a single dormitory building. The outbreak was detected by a surveillance system for streptococcal pharyngitis: when streptococcal pharyngitis is detected in three or more trainees in a flight within a 7-day period, throat cultures are obtained from all members of that flight. If GABHS is isolated from >10% of throat cultures, all persons in the flight who are not allergic to penicillin are given penicillin prophylaxis.

In the last week of December and first 2 weeks of January, 11 flights from three squadrons exceeded the threshold for prophylaxis. Six additional flights with less than three trainees with streptococcal pharyngitis were screened; two of those flights exceeded the threshold. Throat cultures were positive for 17% (17/101) of a sample of male trainees in the first half of their 4-week training course, compared with 31% (101/330) of a sample of trainees in the second half (relative risk = 1.8; 95% confidence interval = 1.1–2.9). All women were in the second half of their training.

In the second week of January, benzathine penicillin G (1.2 million units IM) was administered to >6000 trainees already on the base. In addition, penicillin prophylaxis was initiated for all nonallergic, incoming personnel during their second week of training. During the third week of January, no flights exceeded the threshold. However, after two flights had three or more positive throat cultures in the fourth week of January, timing of prophylaxis was changed to the first week of training; subsequently, incidence rates of GABHS pharyngitis decreased markedly (Figure 1).

Routine prophylaxis was discontinued on April 30. In July, one flight exceeded the threshold for prophylaxis. No cases of acute rheumatic fever or other sequelae have been reported from Lackland Air Force Base or secondary training bases.

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Streptococcal Pharyngitis — Continued

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Editorial Note: During World Wars I and II, GABHS disease caused substantial morbidity among recruits (*1*), probably because of the introduction of large numbers of susceptible persons into crowded environments. A marked decrease in the incidence of GABHS disease and sequelae in military recruits occurred from 1965 to 1985 (*1*). This coincided with penicillin prophylaxis programs to prevent GABHS disease in military trainees and with a nationwide decrease in the incidence of rheumatic fever (*2*). By 1979, most military training centers had discontinued year-round prophylaxis of incoming recruits against GABHS disease (*1*).

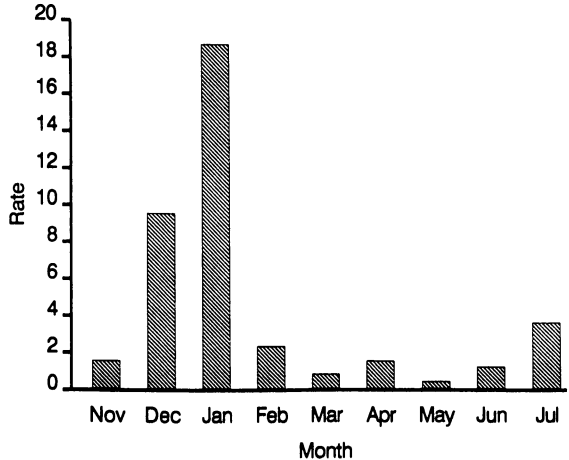
This investigation and other recent reports demonstrate that military training centers remain at risk for outbreaks of GABHS-related disease and underscore the importance of surveillance in these settings (*3,4*). Although outbreaks of GABHS infections can be seasonal and self-limited, the abrupt decrease in incidence after January suggests that surveillance and antibiotic prophylaxis were important in limiting this outbreak. During other outbreaks of GABHS pharyngitis in military recruits, mass prophylaxis has been used successfully (*5,6*).

Some military training centers have policies for use of penicillin prophylaxis when the incidence of GABHS infections exceeds a specified threshold. The Armed Forces Epidemiological Board has suggested that when the incidence of GABHS disease exceeds 10 cases per 1000 trainees per week, epidemics of acute rheumatic fever may occur (*7*). The appropriateness of such policies for other institutional settings requires evaluation. State health departments are requested to notify CDC's Respiratory Diseases Branch, Division of Bacterial Diseases, Center for Infectious Diseases, at (404) 639-3021 about outbreaks of GABHS infections and/or their sequelae in such settings.

References

1. Thomas, RJ, Conwill DE, Morton DE, Brooks TJ, Holmes CK, Mahaffey WB. Penicillin prophylaxis for streptococcal infections in United States Navy and Marine Corps recruit camps, 1951–85. J Infect Dis 1988;10:125–30.

FIGURE 1. Rate of group A beta-hemolytic streptococcal pharyngitis per 1000 trainees per month — Lackland Air Force Base, Texas, November 1988–July 1989



Streptococcal Pharyngitis — Continued

2. CDC. Acute rheumatic fever—Utah. MMWR 1987;36:108–10,115.
3. CDC. Acute rheumatic fever among Army trainees—Fort Leonard Wood, Missouri, 1987–1988. MMWR 1988;37:519–22.
4. Wallace MR, Garst PD, Papadimos TJ, Oldfield EC III. The return of acute rheumatic fever in young adults. JAMA 1989;262:2557–61.
5. Wannamaker LW, Denny FW, Perry WD, et al. The effect of penicillin prophylaxis on streptococcal disease rates and the carrier state. N Engl J Med 1953;249:1–7.
6. Davis J, Schmidt WD. Benzathine penicillin G: its effectiveness in the prevention of streptococcal infections in a heavily exposed population. N Engl J Med 1957;256:339–42.
7. Armed Forces Epidemiological Board. Recommendations of the Ad Hoc Committee on Prophylaxis of Streptococcal Infections of the Commission on Streptococcal Disease. Washington, DC: Armed Forces Epidemiological Board, 1959.

International Notes

Epidemic Meningococcal Disease — Kenya and Tanzania: Recommendations for Travelers, 1990

Epidemic meningococcal disease has occurred in Nairobi, Kenya, and the Arusha area of northern Tanzania. From April through October 1989, approximately 4000 cases of meningitis due to *Neisseria meningitidis* serogroup A were reported in Nairobi, an attack rate of 267 per 100,000 during this period. Cases have also been reported in other regions of Kenya. Attack rates in Nairobi were equally distributed by sex; the highest rate occurred among children 0–4 years of age. Control measures in Nairobi included a vaccination program directed at persons in areas most affected by disease; the incidence appears to be decreasing.

In Tanzania, from July through November 1989, 1249 cases of meningococcal disease were reported in four northern districts, including the Arusha area—an attack rate of 172 per 100,000. The Tanzanian Ministry of Health has implemented control measures and has reported a decrease in meningococcal disease. No cases of meningococcal disease have been reported in U.S. travelers returning from Kenya or Tanzania.

Reported by: FE Onyango, MD, Dept of Pediatrics, Univ of Nairobi, NN Agata, MD, Kenyatta National Hospital, Nairobi; JS Oliech, MD, Kenya Ministry of Health. PR Hiza, MD, Chief Medical Officer, Ministry of Health, Tanzania. Div of Immunization, Div of Quarantine, Center for Prevention Svcs; Meningitis and Special Pathogens Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: Epidemic meningococcal disease in Kenya and Tanzania is uncommon. These outbreaks may be caused by the same III-1 clonal group of *N. meningitidis* serogroup A responsible for recent major epidemics in Nepal (1983–1984), Saudi Arabia (1987), and Chad (1988) (*1*).

Because of the potential risk for exposure in Kenya and northern Tanzania, CDC recommends that U.S. travelers to these areas receive the meningococcal polysaccharide vaccine. The serogroup A meningococcal vaccine is 85%–95% effective for at least 1 year in persons ≥4 years of age (*2,3*). Vaccine efficacy data for children <4 years of age are limited. However, vaccine immunogenicity increases progressively with age from 3 months to 4 years. Adverse reactions to the meningococcal vaccine are mild and infrequent, consisting primarily of localized erythema lasting 1–2 days (*2*). Protective immunity is achieved 10–14 days after vaccination. Quadrivalent

Meningococcal Disease — Continued

polysaccharide vaccine containing serogroups A, C, Y, and W135 is available to physicians from local distributors or Connaught Laboratories at (800) 822-2463.

Although group A meningococcal disease is rare in the United States, carriage of group A meningococcus has been reported in travelers returning from countries with epidemics (*4*). Physicians are encouraged to report all cases of meningococcal disease to their local and state health departments and to forward meningococcal isolates to CDC through their state public health laboratories.

References

1. Moore PS, Reeves M, Schwartz B, Gellin BG, Broome CV. Intercontinental spread of an epidemic group A *Neisseria meningitidis* strain. Lancet 1989;2:260–3.
2. ACIP. Meningococcal vaccines. MMWR 1985;34:255–9.
3. Reingold AL, Broome CV, Hightower AW, et al. Age-specific differences in duration of clinical protection after vaccination with meningococcal polysaccharide A vaccine. Lancet 1985; 2:114–8.
4. Moore PS, Harrison LH, Telzak EE, Ajello GW, Broome CV. Group A meningococcal carriage in travelers returning from Saudi Arabia. JAMA 1988;260:2686–9.

Epidemiologic Notes and Reports

Update: Eosinophilia-Myalgia Syndrome Associated with Ingestion of L-Tryptophan — United States, as of January 9, 1990

As of January 9, 1046 eosinophilia-myalgia syndrome (EMS) cases have been reported to CDC from 49 states, the District of Columbia, and Puerto Rico (Figure 1) (*1–3*). Only Alaska has reported no cases (Figure 1). Seven deaths have been reported in patients who met the surveillance case definition and who used L-tryptophan (LT).

As of January 9, CDC has received completed report forms from 38 states and Puerto Rico with information about 429 cases fitting the case definition. Ages of these patients ranged from 11 years to 84 years (median: 48 years); 96% of patients were non-Hispanic white, 2% were Hispanic, and 1% were black. Three hundred sixty (84%) were female. Four hundred nineteen (98%) had histories of LT ingestion preceding onset of symptoms; dosage ranged from 26 mg to 15,000 mg per day (median: 1500 mg per day). Three hundred seventy-two (87%) reported onset of symptoms during or after July 1989 (Figure 2). Of the EMS patients reported thus far, 139 (32%) have required hospitalization.

Physicians report suspected cases to state and local health departments, and information is recorded on a standardized case-report form. Total numbers of EMS cases are telephoned weekly to CDC by health departments, and case-report forms mailed when completed; this results in a timely accumulation of total numbers but a lag in availability of detailed data.

Reported by: State and territorial health departments. Div of Environmental Hazards and Health Effects, Center for Environmental Health and Injury Control, CDC.

Update: EMS — Continued

References

1. CDC. Eosinophilia-myalgia syndrome—New Mexico. MMWR 1989;38:765–7.
2. CDC. Eosinophilia-myalgia syndrome and L-tryptophan–containing products—New Mexico, Minnesota, Oregon, and New York, 1989. MMWR 1989;38:785–8.
3. CDC. Update: eosinophilia-myalgia syndrome associated with ingestion of L-tryptophan—United States. MMWR 1989;38:842–3.

FIGURE 1. Eosinophilia-myalgia syndrome cases, by area — United States, as of January 9, 1990

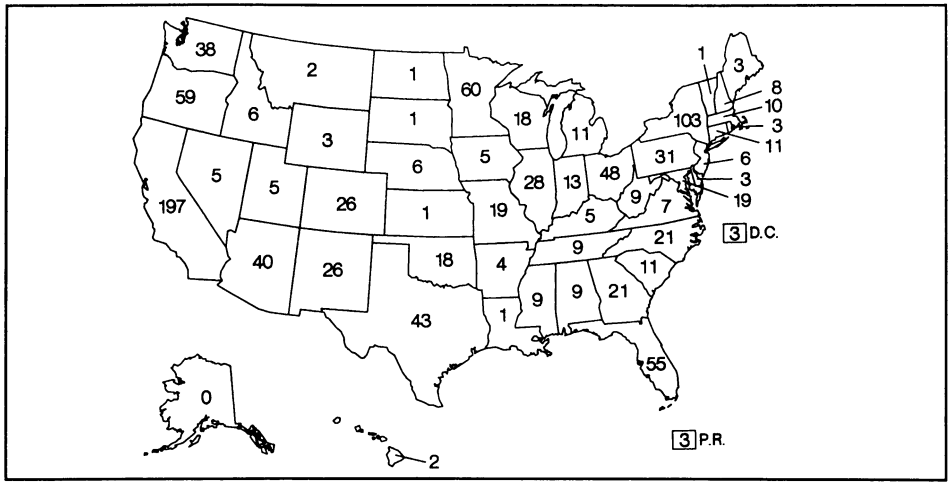
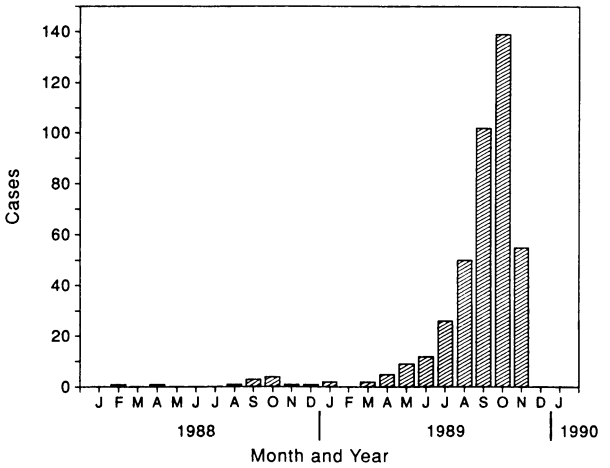


FIGURE 2. Eosinophilia-myalgia syndrome (EMS) cases, by month of onset* — United States, January 1, 1988–January 9, 1990†



*Nine reports did not specify month of onset and are not included here.
†Six persons had EMS onset before 1988; one case each occurred in August 1982, March 1983, September 1986, and February, July, and November 1987.

Notices to Readers

Epidemiology in Action Course

CDC and Emory University will cosponsor a course designed for practicing state and local health department professionals. This course, "Epidemiology in Action," will be held at CDC May 14–25, 1990. It emphasizes the practical application of epidemiology to public health problems and will consist of lectures, workshops, classroom exercises (including actual epidemiologic problems), discussions, and an on-site community survey. Applications are due March 1. For further information or an application form, contact Department PSB, Division of Public Health, Emory University, 1599 Clifton Road, N.E., Atlanta, GA 30329; telephone (404) 727-0199; FAX (404) 727-8744; TELEX (810) 751-8512.

Nonpublication of *MMWR* on December 29, 1989

Because of the holidays, the *MMWR* was not published on December 29, 1989. Issues 51 and 52 of volume 38 were published together on January 5, 1990.

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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: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555.

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