

# M M W R

## MORBIDITY AND MORTALITY WEEKLY REPORT

---

- 285 Fireworks-Related Injuries — Washington
- 287 Epidemic Psychogenic Illness in an Industrial Setting — Pennsylvania
- 294 Staphylococcal Food Poisoning on a Cruise Ship

### Current Trends

#### Fireworks-Related Injuries — Washington

To make certain fireworks legally available outside American Indian reservations, in 1982 Washington State changed its law governing the sale of fireworks during the July 4 holiday period (1). Previously, only non-explosive ground display devices were so available, while explosive ground display devices, aerial devices, and exploding firecrackers containing less than 50 mg of gunpowder were available only on American Indian reservations. In 1982, all three types, except sky rockets and missile rockets, were made available throughout the state. To determine whether the change in law was accompanied by a change in fireworks-related injuries, 15 hospitals in nine counties were contacted for the number of fireworks-related visits to emergency rooms between June 28 and July 6, 1982, the dates for legal sale of fireworks. For comparison, the number of fireworks-related visits during the same interval in 1981 was obtained from the same emergency rooms. Injuries were divided into five types: eye injuries, burns, lacerations, amputations, and other injuries. In addition, one large wholesaler of fireworks was asked to estimate the effect of the law change on sales.

Fourteen of the 15 hospitals contacted responded, and 11 provided the total number of fireworks-related visits for both years. Ten of these provided a breakdown into the five categories. All but one hospital reported an increase in 1982; this hospital reported no fireworks-related visits in either year. The total number of visits increased significantly from 39 in 1981 to 88 in 1982 ( $p < 0.001$ ). Burns, which increased from 17 to 46 ( $p < 0.001$ ), accounted for most of the difference. The number of eye injuries and lacerations also increased, but not significantly, from 10 to 15, and from three to eight, respectively. No amputations were reported in either year. Other fireworks-related visits increased from one to five.

The wholesale company, which is estimated to have sold half the fireworks in the state that did not go to American Indian reservations, had 2.5-fold greater July 4 holiday sales in 1982 than in 1981 (including 160 million exploding firecrackers in 1982 vs. none in 1981). The wholesaler did not know what effect the law change had had on sales on reservations.

*Reported by JM Kobayashi, MD, State Epidemiologist, Washington State Dept of Social and Health Svcs; Field Svcs Div, Epidemiology Program Office, Special Studies Br, Chronic Diseases Div, Environmental Health Svcs Div, Center for Environmental Health, CDC.*

**Editorial Note:** The above data strongly suggest that the 1982 change in Washington's fireworks law was associated with a significant rise in the number of fireworks-related injuries during the July 4 holiday period, probably because of the increased availability and use of firecrackers and aerial devices.

*Fireworks-Related Injuries – Continued*

Although no precise statistical data exist on the total number of people injured by fireworks each year in the United States, the U.S. Consumer Product Safety Commission (CPSC) estimates that 11,400 such injured persons were treated in hospital emergency rooms in 1981; an estimated 8.8% of these were subsequently hospitalized as a result of their injuries. About 45% of all fireworks-related injuries seen in hospital emergency rooms in 1981 occurred among children 14 years of age and under (2). Approximately 60% of the injuries were burns, and 25% were contusions, abrasions, and lacerations (3).

Eye injuries account for some of the most disabling fireworks-related injuries. The Washington study did not measure the sequelae of injuries, but in a 5-year study in Arkansas, 30% of fireworks-related eye injuries resulted in permanent visual loss or enucleation (4). The lack of significant increase in the number of eye injuries after Washington's law changed may be explained by the non-legalization of rockets. In the Arkansas study, most fireworks-related injuries were caused by rockets.

Federal legislators have attempted to reduce the injury-producing potential of fireworks. Since 1966, the sale to consumers of large, Class B firecrackers, such as "cherry-bombs" and "M-80s," has been banned by federal law because of the large amount of explosive they contain. In 1976, CPSC lowered the permissible explosive charge in firecrackers to no more than 50 mg (0.772 grains) of powder and mandated performance, construction, and labeling specifications for all fireworks intended for public sale (collectively designated as Class C fireworks) (5).

CPSC and the American Pyrotechnics Association have maintained that banning Class C fireworks would stimulate the illegal manufacture and distribution of dangerous Class B fireworks and that the availability of safer, legal fireworks is the best control over illegal items (6).

The sale of Class C fireworks is regulated by the states. From 1977 to February 1982, the number of states that allowed the sale of all Class C fireworks increased from seven to eight. The number of states (including the District of Columbia) that allowed the sale of Class C fireworks as approved by the state enforcement authority or as specified by state law increased from 13 to 16. As of February 1982, an additional 11 states allowed the sale of sparklers and "snakes" only (7,8).

The trend in fireworks-related injuries has been generally upward since 1975, a year in which approximately 4,700 persons were treated for such injuries in hospital emergency rooms. The 1981 injury estimate of 11,400 equals that of 1976, the nation's bicentennial year and the previous peak year noted for such injuries since 1974 (3).

*References*

1. Harris J, Kobayashi J, Frost F. Injuries from fireworks. *JAMA* 1983;249:2460.
2. U.S. Consumer Product Safety Commission. Product summary report and NEISS (National Electronic Injury Surveillance System) estimates of national injury incidents. Washington, D.C.: U.S. Consumer Product Safety Commission, June 3, 1982.
3. Kale D, Harwood B. Fireworks injuries, 1981. Washington, D.C.: U.S. Consumer Product Safety Commission, undated.
4. Wilson RS. Ocular fireworks injuries and blindness. An analysis of 154 cases and a three-state survey comparing the effectiveness of Model Law regulation. *Ophthalmology* 1982;89:291-7.
5. Kale D, Harwood B. Fireworks injuries, 1979-1980. Washington, D.C.: U.S. Consumer Product Safety Commission, 1980.
6. U.S. Consumer Product Safety Commission, American Pyrotechnics Association. Fireworks in America. Washington, D.C.: U.S. Consumer Product Safety Commission, American Pyrotechnics Association, May 28, 1982.
7. U.S. Consumer Product Safety Commission. Product safety fact sheet No. 12: Fireworks. Washington, D.C.: U.S. Consumer Product Safety Commission, Revised June 1980.
8. U.S. Consumer Product Safety Commission. Fireworks control laws (as of 2/1/82). Washington, D.C.: U.S. Consumer Product Safety Commission, undated.

## Epidemiologic Notes and Reports

### **Epidemic Psychogenic Illness in an Industrial Setting — Pennsylvania**

On April 21, 1982, three of approximately 220 employees at an electronic components manufacturing plant in Pennsylvania experienced nausea and headache and complained of disorientation. Suspecting a defect in the air-conditioning system, which had been turned on several days before, the company examined the system for refrigerant leaks but found none. On April 26, diesel fumes accidentally entered the production area of the plant from an automobile engine being tested in the anechoic chamber, an enclosed test area. The fumes apparently aroused concern among employees who, unaware of the source of the diesel odors, were concerned they might be exposed to toxic chemicals. During May, six episodes of illness occurred, causing the plant to be closed twice. Numerous workers became ill and were sent home; employees from the plant made 30 visits to the emergency room of a local hospital between April 21 and May 24.

On May 27 and 28, the National Institute for Occupational Safety and Health (NIOSH) initially evaluated the plant, surveyed medical records at the hospital emergency room, and interviewed the employees. Investigators also contacted representatives from the Occupational Safety and Health Administration (OSHA), a medical team from a local medical center, and representatives of a private environmental consulting firm, all of whom had investigated the illness before the NIOSH investigation. Extensive environmental investigations by OSHA and private consultants had not detected any deficiencies in ventilation or toxic concentrations of chemicals in the plant. Carbon monoxide, toluene, trichloroethylene, and ethyl acetate levels measured by these groups were well within the relevant current occupational standards and criteria. Sampling for lead, formaldehyde, sewer gas, and air-conditioning refrigerant revealed no detectable amounts.

In a meeting with all the plant's employees on May 28, a medical officer from NIOSH explained that the Institute's preliminary analysis of investigations done by the other groups indicated no toxic concentrations of chemicals and a marked decrease in the number and severity of cases since the company implemented various environmental controls. Employees were encouraged to inform supervisors of all illnesses and were told that NIOSH would inform employees of all subsequent test results.

Since a psychogenic component of the outbreak seemed possible, a medical officer returned on June 21 to administer a questionnaire to 213 (97%) employees; it covered such subjects as: general medical condition, physical work environment, non-physical work conditions (e.g., overtime and job security), and socioeconomic variables (e.g., education and income) (1). A case was defined as anyone who complained of recent illness and who either sought medical attention or was sent home after being seen by a paramedic.

Analysis showed that 98 (46%) employees given questionnaires reported symptoms, including lightheadedness, headache, sleepiness, and numbness and/or tingling of the face or extremities. Forty-one (42%) of these, all in production areas, met the case definition; workers without symptoms were classified as well; employees with symptoms but who neither went home nor sought medical attention were considered intermediate. Attack rates by departments within production areas followed no apparent pattern. Among production workers, 28% of females and 8% of males were classified as ill, and 39% of females and 8% of males as intermediate, while 33% of females and 84% of males were classified as well. More ill than well employees complained of bothersome odors ( $p < 0.001$ ), discounted the role of psychological factors in the outbreak ( $p < 0.001$ ), and believed the illness was likely to recur ( $p$

*Psychogenic Illness — Continued*

< 0.05). Medical records from the emergency room provided no objective evidence of chemical toxicity. Blood gas analyses for seven of 11 ill workers showed respiratory alkalosis consistent with hyperventilation.

The poorly defined nature of the employees' illness, the absence of exposures to environmental contaminants in concentrations exceeding current occupational standards and criteria, and the presence of symptoms similar to those of hyperventilation suggest that this incident was an outbreak of psychogenic illness. The release of diesel fumes into the plant from an automobile engine may have contributed to a heightened awareness of various odors in the plant. The air-conditioning system was restarted on June 14; no unusual employee illness at the plant has since been reported to NIOSH (2).

*Reported by Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, NIOSH, CDC.*

**Editorial Note:** Outbreaks of psychogenic illness have been described in industrial settings (3,4) and among schoolchildren (5-7). Although the phenomenon has typically been reported in plants with a largely female, relatively uneducated work force, sex and educational level are not necessarily risk factors. The fact that women without higher education are likely to

*(Continued on page 294)*

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

Disease	22nd Week Ending			Cumulative, 22nd Week Ending		
	June 4, 1983	June 5, 1982	Median 1978-1982	June 4, 1983	June 5, 1982	Median 1978-1982
Aseptic meningitis	96	72	72	1,746	1,664	1,368
Encephalitis: Primary (arthropod-borne & unspc.)	12	12	16	344	348	263
Post-infectious	1	1	1	37	28	83
Gonorrhoea: Civilian	13,421	16,749	16,850	367,497	391,294	395,017
Military	341	654	480	10,143	11,655	11,526
Hepatitis: Type A	327	309	475	9,559	9,401	11,337
Type B	439	311	311	9,280	8,716	6,870
Non A, Non B	74	37	N	1,404	917	N
Unspecified	132	148	148	3,297	3,518	4,214
Legionellosis	14	21	N	306	191	N
Leprosy	2	1	2	110	83	74
Malaria	20	30	26	278	368	368
Measles: Total	19	32	372	837	692	8,918
Indigenous	9	N	N	684	N	N
Imported*	10	N	N	153	N	N
Meningococcal infections: Total	70	56	52	1,449	1,532	1,419
Civilian	69	55	51	1,434	1,525	1,409
Military	1	1	1	15	7	10
Mumps	65	213	213	1,822	3,395	5,833
Pertussis	28	19	18	715	463	463
Rubella (German measles)	21	50	234	514	1,408	2,471
Syphilis (Primary & Secondary): Civilian	440	594	441	13,472	13,945	10,959
Military	2	3	5	200	168	142
Toxic-shock syndrome	19	N	N	182	N	N
Tuberculosis	357	493	493	9,324	10,485	10,945
Tularemia	4	4	4	77	53	53
Typhoid fever	3	10	10	144	155	175
Typhus fever, tick-borne (RMSF)	40	47	29	159	192	171
Rabies, animal	99	153	153	2,702	2,593	2,593

**TABLE II. Notifiable diseases of low frequency, United States**

	Cum. 1983		Cum. 1983
Anthrax	-	Plague (Ariz. 2)	6
Botulism: Foodborne	9	Poliomyelitis: Total	1
Infant (Wash. 1, Calif. 1)	29	Paralytic	1
Other	-	Psittacosis (Iowa 1)	37
Brucellosis (Pa. 1, S. Dak. 1, Va. 1)	57	Rabies, human	2
Cholera	-	Tetanus (N.Y. City 1, N.J. 1, N.C. 1, Ariz. 1)	22
Congenital rubella syndrome	9	Trichinosis	17
Diphtheria	-	Typhus fever, flea-borne (endemic, murine) (Hawaii 1)	13
Leptospirosis	12		

\*Eight of the 19 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  
June 4, 1983 and June 5, 1982 (22nd week)

Reporting Area	Aseptic Meningi- tis	Encephalitis		Gonorrhoea (Civilian)		Hepatitis (Viral), by type				Legionel- losis	Leprosy	Malaria
		Primary	Post-in- fectious			A	B	NA,NB	Unspeci- fied			
UNITED STATES	96	344	37	367,497	391,294	327	439	74	132	14	110	278
NEW ENGLAND	1	16	-	9,180	9,324	2	23	4	14	-	3	10
Maine	-	-	-	500	416	-	1	-	-	-	-	-
N.H.	1	1	-	258	310	-	4	-	-	-	2	-
Vt.	-	1	-	170	190	-	1	-	-	-	-	-
Mass.	-	8	-	4,084	4,328	-	4	1	14	-	-	4
R.I.	-	-	-	508	627	-	3	-	-	-	-	2
Conn.	-	6	-	3,662	3,453	2	10	3	-	-	1	4
MID ATLANTIC	12	46	4	47,272	47,175	35	50	6	12	-	18	41
Upstate N.Y.	2	13	-	7,040	7,478	7	10	2	6	-	-	13
N.Y. City	2	7	-	19,791	19,753	5	-	-	-	-	17	13
N.J.	1	11	-	8,878	8,826	13	24	1	6	-	-	12
Pa.	7	15	4	11,563	11,118	10	16	3	-	-	1	3
EN. CENTRAL	8	62	7	49,382	56,208	31	50	5	9	2	4*	13
Ohio	1	25	5	13,691	15,433	9	11	1	1	1	1	2
Ind.	-	8	1	5,958	6,255	8	8	-	3	-	-	-
Ill.	-	-	-	11,231	16,318	1	6	-	-	-	2	2
Mich.	7	27	-	13,987	13,111	13	25	4	5	1	1	8
Wis.	-	2	1	4,515	5,091	-	-	-	-	-	-	1
W.N. CENTRAL	1	42	4	17,109	18,219	8	11	1	2	7	3	12
Minn.	-	18	1	2,484	2,759	2	1	1	-	1	2	3
Iowa	1	18	-	1,955	1,994	-	4	-	-	-	-	2
Mo.	-	2	-	8,164	8,276	2	4	-	2	5	-	2
N. Dak.	-	-	-	165	251	-	-	-	-	-	-	1
S. Dak.	-	-	1	484	520	-	-	-	-	-	-	-
Nebr.	-	3	-	998	1,171	4	1	-	-	-	-	1
Kans.	-	1	2	2,859	3,248	-	1	-	-	1	1	3
S. ATLANTIC	13	58	12	94,639	100,577	24	78	8	14	1	3	39
Del.	-	-	-	1,742	1,541	1	-	-	-	-	-	-
Md.	2	11	-	11,918	12,737	3	19	1	2	-	-	6
D.C.	-	-	-	6,500	5,247	-	-	-	-	-	-	3
Va.	1	18	1	7,949	8,436	2	17	2	4	1	-	6
W. Va.	-	-	-	990	1,141	-	1	-	-	-	-	1
N.C.	3	13	-	13,660	15,900	-	3	-	2	-	-	1
S.C.	-	2	-	9,041	9,485	-	12	-	2	-	-	5
Ga.	-	3	-	20,605	19,386	4	12	2	-	-	1	3
Fla.	7	11	11	22,234	26,704	14	14	3	4	-	2	14
E.S. CENTRAL	1	10	2	31,122	32,934	8	35	1	1	-	-	3
Ky.	-	-	-	3,720	4,391	-	2	-	-	-	-	-
Tenn.	-	1	-	12,498	12,745	3	20	1	-	-	-	-
Ala.	1	9	2	9,761	9,898	1	11	-	1	-	-	1
Miss.	-	-	-	5,143	5,900	4	2	-	-	-	-	2
W.S. CENTRAL	33	33	1	52,933	54,120	58	45	-	41	-	12	34
Ark.	-	4	-	3,922	4,539	-	2	-	2	-	-	1
La.	-	3	-	9,882	9,583	12	1	-	-	-	-	4
Okla.	5	7	1	6,088	5,854	10	8	-	3	-	-	8
Tex.	28	19	-	33,041	34,144	36	34	-	36	-	12	21
MOUNTAIN	1	20	3	11,413	13,498	36	15	5	8	1	11	15
Mont.	-	-	-	497	565	-	1	-	-	-	-	-
Idaho	-	-	-	528	636	6	-	-	1	1	-	2
Wyo.	-	2	-	301	376	1	5	-	-	-	-	1
Colo.	1	9	-	3,233	3,582	5	2	-	1	-	2	5
N. Mex.	-	1	-	1,411	1,699	3	1	-	1	-	-	3
Ariz.	-	1	3	3,146	3,721	20	6	2	4	-	9	3
Utah	-	7	-	567	613	1	-	2	-	-	-	1
Nev.	-	-	-	1,730	2,306	-	-	-	1	-	-	-
PACIFIC	26	57	4	54,447	59,239	125	132	44	31	3	56	111
Wash.	-	4	1	3,952	4,881	6	11	7	-	-	7	2
Oreg.	-	-	1	2,781	3,286	-	9	-	1	-	1	4
Calif.	24	49	2	45,292	48,552	101	112	37	30	3	34	105
Alaska	1	-	-	1,325	1,485	1	-	-	-	-	-	-
Hawaii	1	4	-	1,097	1,035	-	-	-	-	-	14	-
Guam	U	-	-	54	59	U	U	U	U	U	-	2
P.R.	1	-	1	1,268	1,198	6	6	-	3	-	-	1
V.I.	U	-	-	113	97	-	-	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	195	U	U	U	U	U	-	-

N: Not notifiable

U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending  
June 4, 1983 and June 5, 1982 (22nd week)

Reporting Area	Measles (Rubeola)					Meningococcal infections	Mumps			Pertussis			Rubella			
	Indigenous		Imported*		Total		Cum. 1983	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982
	1983	Cum. 1983	1983	Cum. 1983												
UNITED STATES	9	684	10	153	692	1,449	65	1,822	3,395	28	715	463	21	514	1,408	
NEW ENGLAND	-	2	5	8	9	72	1	72	136	-	21	29	1	8	11	
Maine	-	-	-	-	-	6	1	14	32	-	3	-	-	-	-	
N.H.	-	-	1	1	2	2	-	14	13	-	2	4	-	2	8	
Vt.	-	-	-	-	2	3	-	8	5	-	3	1	-	3	-	
Mass.	-	2	-	-	2	27	-	17	63	-	14	10	1	3	-	
R.I.	-	-	-	-	-	5	-	9	11	-	2	9	-	-	1	
Conn.	-	-	5†	7	4	29	-	10	12	-	-	2	-	-	2	
MID ATLANTIC	-	11	2	17	89	231	3	135	219	1	212	74	1	39	73	
Upstate N.Y.	-	-	2§	4	63	79	-	51	43	1	62	44	-	18	34	
N.Y. City	-	11	-	9	18	34	-	10	34	-	26	16	1	7	26	
N.J.	-	-	-	1	4	34	1	26	31	-	11	7	-	3	13	
Pa.	-	-	-	3	4	84	2	48	111	-	113	7	-	11	-	
E.N. CENTRAL	6	402	-	51	33	239	25	904	1,936	9	165	136	2	78	132	
Ohio	2	13	-	13	-	87	8	431	1,442	6	56	25	-	1	-	
Ind.	-	304	-	-	2	26	4	22	30	1	14	11	1	14	20	
Ill.	4	85	-	33	15	59	4	106	141	2	77	69	1	37	50	
Mich.	-	-	-	5	16	50	8	292	252	-	11	8	-	12	42	
Wis.	-	-	-	-	-	17	1	53	71	-	7	23	-	14	20	
W.N. CENTRAL	-	2	-	-	31	88	3	121	383	3	50	23	-	33	51	
Minn.	-	-	-	-	-	12	-	17	276	2	19	8	-	5	2	
Iowa	-	-	-	-	-	10	-	35	28	1	5	3	-	-	-	
Mo.	-	2	-	-	2	46	1	19	7	-	8	6	-	4	38	
N. Dak.	-	-	-	-	-	2	-	-	-	-	1	-	-	-	-	
S. Dak.	-	-	-	-	-	4	-	-	1	-	2	3	-	-	1	
Nebr.	-	-	-	-	-	1	-	2	-	-	-	1	-	-	-	
Kans.	-	-	-	-	29	13	2	48	71	-	15	2	-	24	10	
S. ATLANTIC	1	144	2	23	33	316	4	114	197	3	93	52	3	66	52	
Del.	-	-	-	-	-	-	-	5	5	-	-	3	-	-	1	
Md.	-	-	2†	4	2	36	3	21	18	-	8	1	-	1	26	
D.C.	-	-	-	-	1	4	-	-	-	-	-	1	-	-	-	
Va.	-	10	-	11	14	44	-	20	30	-	37	8	-	1	8	
W. Va.	-	-	-	-	2	3	1	23	79	-	3	3	-	-	1	
N.C.	-	-	-	-	-	61	-	4	8	-	5	8	-	6	1	
S.C.	-	-	-	4	-	35	-	6	11	-	6	6	-	-	1	
Ga.	-	6	-	-	-	51	-	35	9	2	23	9	2	10	4	
Fla.	1	128	-	4	14	82	-	-	37	1	11	13	1	48	10	
E.S. CENTRAL	-	-	-	5	5	89	2	34	27	1	6	14	1	8	36	
Ky.	-	-	-	1	1	19	-	14	9	-	2	2	1	7	20	
Tenn.	-	-	-	-	4	33	2	17	11	-	2	5	-	-	-	
Ala.	-	-	-	4	-	23	-	-	4	1	1	-	-	1	-	
Miss.	-	-	-	-	-	14	-	3	3	-	1	7	-	-	16	
W.S. CENTRAL	-	34	-	24	8	162	9	134	123	8	75	27	1	83	62	
Ark.	-	-	-	11	-	12	-	2	6	-	3	2	-	-	-	
La.	-	-	-	12	-	28	-	-	3	-	2	2	-	9	-	
Okla.	-	1	-	-	-	19	-	-	-	8	42	3	-	-	3	
Tex.	-	33	-	1	8	103	9	132	114	-	28	20	1	74	59	
MOUNTAIN	-	-	-	2	-	52	4	83	55	-	67	26	1	17	49	
Mont.	-	-	-	-	-	5	-	2	3	-	1	-	-	3	4	
Idaho	-	-	-	-	-	5	1	5	3	-	2	1	-	5	1	
Wyo.	-	-	-	-	-	1	-	-	2	-	4	1	-	1	5	
Colo.	-	-	-	2	-	23	-	10	11	-	42	7	-	-	5	
N. Mex.	-	-	-	-	-	5	-	-	-	-	5	4	-	-	5	
Ariz.	-	-	-	-	-	8	2	57	23	-	9	12	-	4	7	
Utah	-	-	-	-	-	5	-	6	11	-	4	1	1	3	13	
Nev.	-	-	-	-	-	-	1	3	2	-	-	-	-	1	9	
PACIFIC	2	89	1	23	484	200	14	225	319	3	26	82	11	182	942	
Wash.	-	1	-	3	24	26	-	32	55	-	2	14	-	6	24	
Oreg.	-	5	-	2	-	33	-	-	-	-	5	18	-	9	3	
Calif.	2	82	1†	18	456	135	14	172	252	3	19	50	11	167	908	
Alaska	-	-	-	-	1	-	-	9	6	-	-	-	-	-	1	
Hawaii	-	1	-	-	3	6	-	12	6	-	-	-	-	-	6	
Guam	U	-	U	-	5	1	U	-	3	U	-	-	U	-	2	
P.R.	-	77	-	-	64	8	2	87	37	-	7	12	-	3	4	
V.I.	-	-	-	5	-	-	-	-	-	-	-	-	-	1	-	
Pac. Trust Terr.	U	-	U	-	-	-	U	-	1	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  
June 4, 1983 and June 5, 1982 (22nd 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	13,472	13,945	19	357	9,324	77	144	159	2,702
NEW ENGLAND	301	249	-	12	254	-	5	1	5
Maine	8	1	-	2	17	-	-	-	2
N.H.	9	1	-	2	22	-	-	-	1
Vt.	2	1	-	-	2	-	-	-	-
Mass.	186	173	-	-	131	-	5	1	-
R.I.	10	12	-	-	20	-	-	-	-
Conn.	86	61	-	6	62	-	-	-	2
MID ATLANTIC	1,703	1,895	2	86	1,704	-	28	1	77
Upstate N.Y.	89	219	-	13	280	-	4	-	31
N.Y. City	1,027	1,133	-	30	708	-	13	1	-
N.J.	351	237	-	10	342	-	9	-	1
Pa.	236	306	2	33	374	-	2	-	45
E.N. CENTRAL	644	884	-	22	1,219	1	23	13	213
Ohio	196	135	-	6	193	-	6	6	27
Ind.	69	93	-	-	91	-	1	-	16
Ill.	248	480	-	11	547	-	9	2	113
Mich.	96	128	-	-	325	1	7	3	1
Wis.	35	48	-	5	63	-	-	2	56
W.N. CENTRAL	160	267	14	5	304	21	6	8	400
Minn.	70	48	-	4	56	-	-	-	76
Iowa	4	14	-	-	27	-	-	-	103
Mo.	58	161	14	-	164	15	1	6	47
N. Dak.	1	4	-	1	3	-	-	1	32
S. Dak.	3	-	-	-	21	-	-	-	70
Nebr.	10	8	-	-	8	2	-	-	35
Kans.	14	32	-	-	25	4	5	1	37
S. ATLANTIC	3,534	3,805	-	95	1,871	13	19	51	948
Del.	15	8	-	1	14	-	-	-	1
Md.	224	218	-	11	145	5	4	6	390
D.C.	151	233	-	-	76	-	-	-	1
Va.	247	260	-	16	185	1	4	12	354
W. Va.	12	13	-	2	68	-	2	3	68
N.C.	327	266	-	20	253	6	1	14	7
S.C.	225	191	-	7	166	-	1	6	12
Ga.	662	785	-	9	377	1	-	9	98
Fla.	1,671	1,831	-	29	587	-	7	1	17
E.S. CENTRAL	924	961	-	31	889	7	2	9	226
Ky.	53	52	-	3	228	-	-	1	47
Tenn.	257	260	-	12	267	5	1	4	151
Ala.	378	344	-	10	227	-	-	3	28
Miss.	236	305	-	6	167	2	1	1	-
W.S. CENTRAL	3,565	3,482	1	14	1,027	30	13	72	576
Ark.	89	89	-	3	115	20	2	8	99
La.	756	736	-	-	158	2	3	-	16
Okla.	101	74	1	-	125	7	-	47	60
Tex.	2,619	2,583	-	11	629	1	8	17	401
MOUNTAIN	310	354	1	12	255	2	7	3	91
Mont.	4	2	-	-	22	-	1	1	66
Idaho	6	17	1	-	13	1	-	1	-
Wyo.	6	10	-	-	4	-	-	1	1
Colo.	72	102	-	1	22	-	1	-	-
N. Mex.	104	77	-	2	49	1	-	-	4
Ariz.	71	80	-	4	114	-	3	-	20
Utah	9	11	-	5	22	-	1	-	-
Nev.	38	55	-	-	9	-	1	-	-
PACIFIC	2,331	2,048	1	80	1,801	3	41	1	166
Wash.	71	68	-	-	93	2	2	-	-
Oreg.	43	55	-	4	81	-	-	-	-
Calif.	2,182	1,864	1	73	1,485	1	38	1	159
Alaska	7	7	-	-	25	-	-	-	7
Hawaii	28	54	-	3	117	-	1	-	-
Guam	-	1	U	U	2	-	-	-	-
P.R.	377	256	-	-	182	-	-	-	25
V.I.	8	6	-	-	1	-	-	-	-
Pac. Trust Terr.	-	-	U	U	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,\* week ending  
June 4, 1983 (22nd week)

Reporting Area	All Causes, By Age (Years)						P&I** Total	Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1			All Ages	≥65	45-64	25-44	1-24	<1	
<b>NEW ENGLAND</b>	591	396	137	33	11	14	41	<b>S. ATLANTIC</b>	1,145	688	291	95	31	40	30
Boston, Mass.	158	106	33	10	6	3	19	Atlanta, Ga.	119	74	29	11	2	3	4
Bridgeport, Conn.	33	17	12	3	-	1	3	Baltimore, Md.	184	102	62	12	3	5	2
Cambridge, Mass.	23	15	8	-	-	-	2	Charlotte, N.C.	60	34	18	6	2	-	1
Fall River, Mass.	27	23	4	-	-	-	1	Jacksonville, Fla.	78	52	17	6	1	2	1
Hartford, Conn.	46	22	12	8	2	2	1	Miami, Fla.	147	101	22	16	4	4	2
Lowell, Mass.	37	28	6	3	-	-	2	Norfolk, Va.	53	30	13	4	2	4	4
Lynn, Mass.	25	18	7	-	-	-	-	Richmond, Va.	77	49	20	5	2	1	5
New Bedford, Mass.	21	15	6	-	-	-	-	Savannah, Ga.	56	36	11	5	1	3	3
New Haven, Conn.	35	21	11	1	-	2	1	St. Petersburg, Fla.	75	62	9	1	2	1	1
Providence, R.I.	51	37	10	2	1	1	4	Tampa, Fla.	66	35	14	8	3	6	2
Somerville, Mass.	6	4	2	-	-	-	1	Washington, D.C.	205	101	70	21	7	6	5
Springfield, Mass.	50	31	13	3	-	3	4	Wilmington, Del.	25	12	6	-	2	5	-
Waterbury, Conn.	27	19	7	1	-	-	1	<b>E.S. CENTRAL</b>	636	379	147	43	30	37	26
Worcester, Mass.	52	40	6	2	2	2	2	Birmingham, Ala.	83	49	17	5	7	5	1
<b>MID. ATLANTIC</b>	2,406	1,580	567	171	45	43	78	Chattanooga, Tenn.	35	21	7	3	3	1	2
Albany, N.Y.	44	27	12	4	-	1	1	Knoxville, Tenn.	44	23	12	5	3	1	-
Allentown, Pa.	12	5	4	2	1	-	-	Louisville, Ky.	112	77	19	6	3	7	11
Buffalo, N.Y.	110	71	31	4	-	4	5	Memphis, Tenn.	172	100	33	11	10	18	8
Camden, N.J.	37	19	14	3	-	1	1	Mobile, Ala.	75	44	23	5	1	2	4
Elizabeth, N.J.	35	27	5	1	-	2	-	Montgomery, Ala.	27	14	11	1	1	-	-
Erie, Pa. †	38	31	7	-	-	-	1	Nashville, Tenn.	88	51	25	7	2	3	-
Jersey City, N.J.	42	26	8	7	-	1	-	<b>W.S. CENTRAL</b>	1,022	678	185	66	49	32	42
N.Y. City, N.Y.	1,347	875	320	100	33	19	45	Austin, Tex.	45	30	7	6	1	1	1
Newark, N.J.	69	34	21	12	1	1	4	Baton Rouge, La.	48	37	8	-	3	-	3
Paterson, N.J.	37	28	7	1	-	1	1	Corpus Christi, Tex.	31	20	5	2	3	1	-
Philadelphia, Pa. †	173	112	47	10	3	1	6	Dallas, Tex.	144	77	45	16	4	2	4
Pittsburgh, Pa. †	71	45	16	8	-	2	1	El Paso, Tex.	68	43	17	4	2	1	7
Reading, Pa.	22	18	3	1	-	-	2	Fort Worth, Tex.	57	36	13	1	5	2	2
Rochester, N.Y.	129	85	31	6	3	4	8	Houston, Tex. §	237	191	3	6	17	9	5
Schenectady, N.Y.	21	16	3	1	-	1	-	Little Rock, Ark.	54	35	9	4	2	4	3
Scranton, Pa. †	24	20	4	-	-	-	-	New Orleans, La.	93	58	20	7	5	3	-
Syracuse, N.Y.	98	66	21	7	2	2	2	San Antonio, Tex.	139	77	38	13	4	7	11
Trenton, N.J.	39	25	7	2	2	3	-	Shreveport, La.	40	27	9	2	1	1	-
Utica, N.Y.	25	22	2	1	-	-	1	Tulsa, Okla.	66	47	11	5	2	1	6
Yonkers, N.Y.	33	28	4	1	-	-	-	<b>MOUNTAIN</b>	598	369	136	37	38	18	18
<b>E.N. CENTRAL</b>	2,101	1,318	530	128	64	61	53	Albuquerque, N.Mex.	64	39	14	7	4	-	2
Akron, Ohio	51	30	14	2	3	2	-	Colo. Springs, Colo.	21	13	5	-	-	3	2
Canton, Ohio	35	25	9	-	1	-	1	Denver, Colo.	112	75	23	8	5	1	2
Chicago, Ill.	538	348	131	34	14	11	8	Las Vegas, Nev.	84	42	24	10	6	2	5
Cincinnati, Ohio	107	67	29	10	1	-	6	Ogden, Utah	19	12	5	-	1	1	1
Cleveland, Ohio	142	85	36	12	6	3	3	Phoenix, Ariz.	145	91	33	7	9	5	3
Columbus, Ohio	135	81	36	10	3	5	1	Pueblo, Colo.	16	10	5	1	-	-	-
Dayton, Ohio	103	62	31	5	2	3	2	Salt Lake City, Utah	42	26	7	1	2	6	-
Detroit, Mich.	227	133	58	18	9	9	8	Tucson, Ariz.	95	61	20	3	11	-	3
Evansville, Ind.	33	23	6	2	1	1	1	<b>PACIFIC</b>	1,462	970	304	101	45	42	93
Fort Wayne, Ind.	44	25	12	3	3	1	1	Berkeley, Calif.	13	8	2	3	-	-	1
Gary, Ind.	19	8	5	3	2	1	-	Fresno, Calif.	78	50	16	5	-	7	5
Grand Rapids, Mich.	49	35	9	3	-	2	1	Glendale, Calif.	16	12	3	1	-	-	2
Indianapolis, Ind.	142	85	40	9	4	4	1	Honolulu, Hawaii	61	43	9	5	2	2	6
Madison, Wis.	23	21	2	-	-	-	1	Long Beach, Calif.	82	64	12	5	1	-	2
Milwaukee, Wis.	128	78	35	3	5	7	8	Los Angeles, Calif.	356	229	77	26	15	9	17
Peoria, Ill.	43	24	9	4	3	3	3	Oakland, Calif.	49	37	6	6	-	-	6
Rockford, Ill.	51	33	13	3	1	1	2	Pasadena, Calif.	16	13	1	2	-	-	1
South Bend, Ind.	49	38	8	-	1	2	4	Portland, Ore.	98	62	23	7	4	2	4
Toledo, Ohio	117	71	33	5	3	5	-	Sacramento, Calif.	61	41	14	3	2	1	6
Youngstown, Ohio	65	46	14	2	2	1	2	San Diego, Calif.	111	77	26	4	2	2	11
<b>W.N. CENTRAL</b>	616	398	125	42	24	25	26	San Francisco, Calif.	135	76	37	12	3	7	8
Des Moines, Iowa	48	35	7	2	1	3	4	San Jose, Calif.	154	99	34	10	8	3	7
Duluth, Minn.	18	9	4	1	2	2	1	Seattle, Wash.	122	83	24	7	4	4	5
Kansas City, Kans.	37	19	8	3	5	2	1	Spokane, Wash.	56	36	12	-	4	4	6
Kansas City, Mo.	97	63	21	5	4	2	5	Tacoma, Wash.	54	40	8	5	-	1	6
Lincoln, Nebr.	25	17	5	2	1	-	-	<b>TOTAL</b>	10,577	6,776	2,422	716	337	312	407
Minneapolis, Minn.	88	57	16	6	3	6	-								
Omaha, Nebr.	81	51	18	8	1	3	2								
St. Louis, Mo.	113	78	24	7	2	2	9								
St. Paul, Minn.	42	28	6	5	3	-	1								
Wichita, Kans.	67	41	16	3	2	5	3								

\* 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.

**TABLE V. Years of potential life lost, deaths, and death rates, by cause of death, and estimated number of physician contacts, by principal diagnosis, United States**

Cause of morbidity or mortality (Ninth Revision ICD, 1975)	Years of potential life lost before age 65 by persons dying in 1981 <sup>1</sup>	Estimated mortality January 1983		Estimated number of physician contacts January 1983 <sup>4</sup>
		Number <sup>2</sup>	Annual Rate/100,000 <sup>3</sup>	
ALL CAUSES (TOTAL)	9,879,590	181,090	916.3	104,501,000
Accidents and adverse effects (E800-E807, E810-E825, E826-E949)	2,587,140	6,780	34.3	5,031,000
Malignant neoplasms (140-208)	1,821,900	38,560	195.1	1,840,000
Diseases of heart (390-398, 402, 404-429)	1,621,290	70,100	354.7	5,997,000
Suicides, homicides (E950-E978)	1,403,560	4,230	21.4	—
Cerebrovascular diseases (430-438)	275,000	14,840	75.1	982,000
Chronic liver disease and cirrhosis (571)	267,350	2,490	12.6	155,000
Pneumonia and influenza <sup>5</sup> (480-487)	123,420	5,320	26.9	1,705,000
Chronic obstructive pulmonary diseases and allied conditions (490-496)	116,280	6,170	31.2	2,119,000
Diabetes mellitus (250)	105,960	3,220	16.3	3,061,000
Prenatal care <sup>6</sup>				2,577,000
Infant mortality <sup>6</sup>		3,600	11.5 /1,000 live births	

<sup>1</sup>Years of potential life lost for persons between 1 year and 65 years old at the time of death are derived from the number of deaths in each age category as reported by the National Center for Health Statistics, *Monthly Vital Statistics Report* (MVSRI), Vol. 30, No. 13, December 20, 1982, multiplied by the difference between 65 years and the age at the mid-point of each category. As a measure of mortality, "Years of potential life lost" underestimates the importance of diseases that contribute to death without being the underlying cause of death.

<sup>2</sup>The number of deaths is estimated by CDC by multiplying the estimated annual mortality rates (MVSRI Vol. 32, No. 2, May 12, 1983, pp. 8-9) and the provisional U.S. population in that month (MVSRI Vol. 32, No. 1, April 18, 1983, p.1) and dividing by the days in the month as a proportion of the days in the year.

<sup>3</sup>Annual mortality rates are estimated by NCHS (MVSRI Vol. 32, No. 2, May 12, 1983, pp. 8-9), using the underlying cause of death from a systematic sample of 10% of death certificates received in state vital statistics offices during the month and the provisional population of those states included in the sample for that month.

<sup>4</sup>IMS America *National Disease and Therapeutic Index* (NDTI), Monthly Report, January 1983, Section III. This estimate comprises the number of office, hospital, and nursing home visits and telephone calls prompted by each medical condition based on a stratified random sample of office-based physicians (2,100) who record all private patient contacts for 2 consecutive days each quarter.

<sup>5</sup>Data for "infectious diseases and their sequelae" as a cause of death and physician visits comparable to other multiple-code categories (e.g., "malignant neoplasms") are not presently available.

<sup>6</sup>"Prenatal care" (NDTI) and "Infant mortality" (MVSRI Vol. 32, No. 1, April 18, 1983, p.1) are included in the table because "Years of potential life lost" does not reflect deaths of children < 1 year.

*Psychogenic Illness — Continued*

find employment in stressful, low-paying, uninteresting jobs may explain in part why outbreaks of psychogenic illness are usually associated with unskilled or semi-skilled female workers (1,3,4).

Judging from the few literature reports of industrial psychogenic illness and from NIOSH's experience, many such outbreaks may go unreported (4). Some may be overlooked because symptoms are uncritically attributed to chemical exposures in the workplace.

In the present incident, NIOSH recommended to plant management that workers be educated in the proper use of chemicals and about their odors and health effects, that employees be allowed to tour the anechoic chamber to allay fears of exposure to radiation or chemicals from this area, and that meetings be held with employees to help dispel misconceptions about the term "psychogenic illness."

In future outbreaks of similar illness, NIOSH recommends that symptomatic persons be removed to a quiet room away from other employees. Unless trained medical personnel or lifesaving equipment are required, transportation for medical evaluation does not require an ambulance. If an ambulance must be called, use of sirens and flashers should be avoided near the plant.

Investigations of such outbreaks of possible psychogenic illness may involve personnel from medical centers, health departments, and regulatory agencies. Investigators should reflect on the possible connotations of the word "psychogenic" and emphasize the reality of signs and symptoms among those affected. If an investigation can help establish good communications between employees and management, the length of the outbreak may decrease and its spread to unaffected employees may be prevented.

*References*

1. Colligan MJ, Smith MJ. A methodological approach for evaluating outbreaks of mass psychogenic illness in industry. *J Occ Med* 1978;20:401-2.
2. National Institute for Occupational Safety and Health. Health hazard evaluation report no. HETA 82-273-1239. Cincinnati, Ohio: National Institute for Occupational Safety and Health, 1982.
3. Smith MJ, Colligan MJ, Hurrell JJ. Three incidents of industrial mass psychogenic illness: a preliminary report. *J Occ Med* 1978;20:399-400.
4. Elesh E, Moseley C, Pryor P, Singal M. Mass psychogenic illness in industry—NIOSH's role. Presented at the American Industrial Hygiene Conference Symposium on "The Diagnosis and Amelioration of Mass Psychogenic Illness," Chicago, Illinois, May 20-June 1, 1979.
5. Knight JA, Friedman TI, Sulianti J. Epidemic hysteria: a field study. *Am J Public Health* 1965;55:858-65.
6. Mohr PD, Bond MJ. A chronic epidemic of hysterical blackouts in a comprehensive school. *Br Med J* 1982;284:961-2.
7. Small GW, Nicholi AM, Jr. Mass hysteria among schoolchildren. Early loss as a predisposing factor. *Arch Gen Psychiatry* 1982;39:721-4.

## **Staphylococcal Food Poisoning on a Cruise Ship**

In February 1983, an outbreak of staphylococcal food poisoning occurred on a Caribbean cruise ship sailing from the United States. The probable source was cream pastries served during two separate meals.

The overall attack rate of acute gastroenteritis on board, estimated from the 56 passengers who responded to a 10% systematic survey of the 715 passengers, was 32%. Ninety-four percent of patients filling out questionnaires complained of nausea and/or vomiting, 82%

*Food Poisoning — Continued*

reported diarrhea, and 60% reported abdominal cramps. Symptoms usually subsided within 12 hours, although 36% of patients indicated illness lasted at least 2 days. The incubation period ranged from 1 to 8 hours (median 5 hours).

When plotted by time of onset, the number of cases peaked twice, corresponding to meals served 2 days apart. Forty-six (95.8%) of 48 patients and 20 (58.8%) of 34 well passengers ate the cream pastry served for dessert on the evening of February 22 ( $p < 0.001$ ). Seven (70%) of 10 patients and four (13.3%) of 30 controls ate a similar pastry item for lunch on February 24 ( $p < 0.001$ ).

*Staphylococcus aureus*, phage type 85/+, was isolated from the stools of five (38.4%) of 13 patients cultured and from none of nine controls. The same staphylococcal phage type was grown from a perirectal swab, an anterior nares culture, and a swab of a forearm lesion from three of the seven crew members who made pastry. Pastries from the implicated meals were not available for culture because the pastry kitchen routinely disposed of leftovers.

Investigation of the ship's pastry kitchen did not reveal any improper food handling in the preparation of the pastry items. Refrigeration temperatures were adequate, and the foodhandlers were free of pustular skin lesions. However, because the pastry was prepared in large quantities in several steps by a number of foodhandlers, opportunities could have existed for the introduction of staphylococci into the pastry, with adequate time for incubation of the enterotoxin.

*Reported by Div of Quarantine, Center for Prevention Svcs, Dengue Br, Div of Vector-Borne Viral Diseases, Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.*

**Editorial Note:** Although *Staphylococcus* remains the second most common etiologic agent (after *Salmonella*) in foodborne outbreaks in the United States, this is the first well-documented outbreak of staphylococcal food poisoning on a cruise ship sailing from the United States. This outbreak emphasizes the importance of extreme care in adequately refrigerating perishable food items prepared in large kitchens. The elaboration of staphylococcal enterotoxin requires incubation at temperatures above 6.7 C (44 F). The investigation also shows the value of phage typing to support epidemiologic evidence on the probable source of an outbreak, despite the inability to culture the implicated food item.

**Erratum, Vol. 32, No. 20**

p. 271. In the article, "Late Season Influenza Type B Virus Activity—United States," D Streitz, North Dakota State Department of Health, should be included in the credits.

The *Morbidity and Mortality Weekly Report* is prepared by the Centers for Disease Control, Atlanta, Georgia, and available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (202) 783-3238.

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, and 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.

Director, Centers for Disease Control  
William H. Foege, M.D.  
Director, Epidemiology Program Office  
Carl W. Tyler, Jr., M.D.

Assistant Editor  
Karen L. Foster, M.A.

Editor  
Michael B. Gregg, M.D.  
Mathematical Statistician  
Keewhan Choi, Ph.D.

\*U.S. Government Printing Office: 1982-740-185/970 Region IV

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
PUBLIC HEALTH SERVICE / CENTERS FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333  
OFFICIAL BUSINESS

Postage and Fees Paid  
U.S. Department of HHS  
HHS 396



S 6HCRH3MCDJ73 8129  
JOSEPH MC DADE PHD  
LEGIONNAIRE ACTIVITY  
LEPROSY & RICKETTSIAL BR  
VIROLOGY DIV, CID  
7-B5

X