CENTER FOR DISEASE CONTROL

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Epidemiologic Notes and Reports

Fatality and Illness Associated with Consumption of Pennyroyal Oil — Colorado

Three recent cases of poisoning associated with the ingestion of pennyroyal oil (*Mentha pulegium*) have been reported to the CDC. One case was fatal.

All 3 cases were in Colorado women; at least 2 of these women had ingested this concentrated extract of the pulegium plant in unsuccessful attempts to induce abortion. The oil is primarily marketed as an insect repellent and herbal fragrance, but it can be taken as an herbal tea, which allegedly has a calming effect, produces diaphoresis, and induces menses (*1*). The importers of the pennyroyal oil taken by the women stated that it contained 85% of the volatile ketone pulegone ($C_6H_{10}O$).

According to close contacts, the 3 women had used self-administered herbal remedies for common ailments in the past. Each had allegedly read in a book that pennyroyal oil was an abortifacient (*2,3*), although no dosage was specified. Each woman appeared to have acted independently; as far as could be ascertained, they did not know each other, did not use the same health food shop, and did not seek advice from a common source. Details of the 3 reported cases follow.

Case 1: On November 2, a 21-year-old woman was seen in the emergency room of a county hospital with symtoms of nausea, dizziness, and paresthesia of her fingers. The physical examination on admission was within normal limits. She had a positive pregnancy test. After 2 hours in the emergency room, her symptoms subsided, and she was discharged.

In an interview, the woman stated that 5 days after her expected menstrual period she had begun having symptoms of pregnancy: morning sickness, breast tenderness, and urinary frequency. Two days later, her pregnancy had been confirmed by a physician. The next day, she ingested one-quarter ounce of pennyroyal oil in 4 gelatin capsules in an attempt to induce an abortion.

After her discharge on November 2, she had a legally induced abortion. She has had no apparent sequelae to the pennyroyal oil ingestion.

Case 2: A 24-year-old woman was brought to the emergency room of a hospital 2 hours after ingesting approximately one quarter of an ounce of pennyroyal oil, taken in an attempt to self-induce an abortion. She was a student of "Herbal Science and Acupuncture" at a local college and gave a history of having taken pennyroyal tea on past occasions when her menses were late. She stated that her menses were overdue by 3 weeks, and that she felt pregnant. Pregnancy was confirmed during her hospitalization. One hour after ingesting the oil she felt dizzy and nauseated, vomited twice, and had a burning sensation in her throat. A physical examination on admission as well as liver and renal function tests were normal. She was observed overnight and discharged the following day.

Consumption of Pennyroyal Oil — Continued

Case 3: This woman, alleged to be 18 years old, was brought to the emergency room of a city hospital in a semi-comatose state 2 hours after ingesting 1 ounce of pennyroyal oil. She had reportedly been using herbal preparations for about 2 years to treat herself for minor ailments and had, on a number of occasions, taken pennyroyal tea, rue, and black cohosh to induce menses. She had had a normal menstrual period 3 weeks before ingesting the pennyroyal. Her reason for taking such a large dose is not clear, but, according to close friends, from the time of her last period she had had severe bouts of depression and had talked of suicide and of her fear of pregnancy.

On admission, she was afebrile and had normal vital signs. Physical examination was normal except for a generalized urticarial rash and diffuse abdominal pain on palpation. She had several episodes of hematemesis in the emergency room. Her pregnancy test was negative. At this time, her blood chemistry, coagulation, and cellular morphology were all normal.

Over the next 12 hours she became more alert and had intermittent episodes of hematemesis. Her abdominal pain persisted. By the next morning she had developed coagulation abnormalities manifested by vaginal bleeding, epistaxis, scleral hemorrhages, and excessive bleeding at venipuncture sites. Her liver was tender and enlarged 6 cm below the costal margin. Liver function tests taken 24 hours after ingestion were abnormal. Despite treatment, which included fresh frozen plasma and platelet concentrates, on the third hospital day she lapsed into coma, developed bilateral pulmonary infiltrates, and required intubation for respiratory support. Her liver function tests revealed further hepatic damage. By the next day her bleeding diathesis became intermittent, and there was an improvement in her hepatic functioning. On the sixth hospital day, she was unresponsive to verbal or painful stimuli. The cause was thought to be hepatic encephalopathy. On the next day, she had 2 cardiopulmonary arrests and expired, despite intensive resuscitation attempts.

Preliminary autopsy findings revealed massive hepatic necrosis, 4,000 ml of fluid in the peritoneal cavity, and bilateral pulmonary congestion with extensive consolidation; the kidneys were pale and edematous. Histologic examination is pending.

Reported by B Rumack, MD, J Sullivan, MD, Rocky Mountain Poison Center, Denver General Hospital; TA Edell, MD, Acting State Epidemiologist, S Ferguson, PhD, Colorado State Dept of Health; Abortion Surveillance Br, Family Planning Evaluation Div, Bur of Epidemiology, CDC.

Editorial Note: Pennyroyal, also known as squawmint or mosquito plant, grows from Canada to Florida and west to Nebraska. It has been used since the time of Pliny (*1*) as an abortifacient, but its action is unpredictable and dangerous (*4,5*). It is a volatile oil (etherial oil) of the same group as turpentine and is thought to be an irritant to the uterus and bladder, resulting in reflex contractions. The oil is toxic to many organ systems, producing nausea and vomiting, coagulopathies, and hepatic and renal failure (*6*). Two cases of fatal ingestion of pennyroyal oil taken as an abortifacient have been previously reported (*7,8*).

The extent to which herbal remedies are used is unknown, but in Denver and Boulder several herbalists are consulted, mostly by college students, for primary medical care. Cost and a general rejection of conventional medicine, as well as a trend towards "self-help" medicine, are reportedly contributing factors to this apparently increasing use of "alternate" medical practices.

There are potentially serious risks associated with the inadvertent ingestion of herbal preparations in excessive doses. What constitutes a "safe" dose is not known. Directions provided in commercially-available herbal books usually do not give information on the amount to use. Local poison information centers, however, often carry information on the toxic effects of commonly used medicinal herbs. The Colorado State Health Department

Consumption of Pennyroyal Oil – Continued

and local health departments are cooperating to disseminate information about the risks associated with ingestion of herbal preparations.

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Mycobacterial Infections Associated with Augmentation Mammoplasty – Florida, North Carolina, Texas

Postoperative wound infections caused by organisms of the *Mycobacterium fortuitum* complex have recently been reported from Florida, North Carolina, and Texas. To date, 17 patients who underwent insertion of silicone mammary prostheses for augmentation mammoplasty and then developed infections at 1 or both periprosthetic sites have been identified. All patients were previously healthy women who ranged in age from 20-51 years.

The onset of infection occurred 1-2 weeks to over 1 year after surgery. All infections were localized to the operative site. Typically, infection was manifested by a painful, swollen breast with little or no erythema or incisional drainage and the absence of fever and systemic signs. However, when the breast was re-incised and drained because of the infection, non-odorous, serosanguineous or purulent fluid was often present in the pocket around the prosthesis. Gram stain of the fluid usually revealed many polymorphonuclear leukocytes with few, if any, organisms; initial cultures were often reported to be sterile (*1*).

The first case occurred in March 1975; the last in October 1978. Clustering in time has been observed in Texas in 3 practices; in each, 2 cases occurred in patients who had received implants within a span of 1 month. Investigation of cases has revealed that the silicone gel-containing prostheses implanted in the patients were made by several different manufacturers. Some prostheses had been sterilized by the manufacturers; others had been nonsterile when distributed but were sterilized just prior to their use.

Review of charts from the practices of 3 surgeons who each reported more than 1 case has yielded no additional cases and has demonstrated uniformly low postoperative wound infection rates after augmentation mammoplasty. A case-control study in the practice of 1 surgeon has failed to demonstrate exposure factors significantly associated with cases. Investigations are continuing in search of possible sources of contamination.

CDC would like to receive, through state health departments, reports of suspected cases of mycobacterial postoperative infections at sites of augmentation mammoplasties.

Reported by MT Foster, MD, Jacksonville, Florida; WE Sanders, MD, Omaha, Nebraska; JL Baker, MD, Orlando, CB Bass, MD, Miami, MM Shuster, MD, HI Wald, MD, Hollywood, Florida; RM Yeller, MD, Acting State Epidemiologist, Florida State Dept of Health and Rehabilitative Services; TR Kitchens, MD, Greensboro; MP Hines, DVM, North Carolina Dept of Human Resources; WE Barnes, MD, Austin; GW Johnson, MD, RJ Wallace, MD, RW Wood, MD, Houston; IR Toranto, MD, Plano; TS Wilkinson, MD, San Antonio; CR Webb Jr, MD, State Epidemiologist, Texas State Dept of Health; Mycobacteriology Br, Bacteriology Div, Bur of Laboratories, Special Pathogens Br, Hospital Infections Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

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Restaurant Outbreak of Salmonellosis Due to Undercooked Turkey — Washington

During October an outbreak of febrile gastroenteritis due to *Salmonella muenster*, involving 19 persons, occurred in King County, Washington. Investigation traced the illness to turkey prepared at a local restaurant.

An epidemiologic investigation was initiated on October 9, when individuals representing 3 separate groups telephoned complaints of food poisoning to the county health department. Investigation and reports by physicians identified a total of 19 patients. Eighteen of these persons had eaten at 1 restaurant at different times during October 3-5, 1978; the other patient was a cook at the restaurant.

The symptoms of the 18 diners were diarrhea (100%), abdominal cramps (100%), fever (67%), and vomiting (44%) 8 to 39 hours (mean, 17 hours) after eating. The duration of illness ranged from 1 to 17 days (mean, 3 days). *S. muenster* was isolated from 10 stool specimens submitted by 11 of the 18 symptomatic patients, from 1 of 2 specimens submitted by asymptomatic customers, and from the cook who had had diarrheal illness during the same 3-day period.

Food histories of the 18 customers and of 9 other restaurant patrons showed that all 18 ill diners but only 2 of 8 well customers had eaten cold turkey meat in either cold sandwiches or turkey salad (p=.0012). Investigation revealed that all turkey served in the restaurant was cooked on the premises by roasting to an internal meat temperature

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

[Cumulative totals include revised and delayed reports through previous weeks.]

DISEASE	50th WEEK ENDING			CUMULATIVE, FIRST 50 WEEKS		
	December 16, 1978	December 17, 1977*	MEDIAN 1973-1977**	December 16, 1978	December 17, 1977*	MEDIAN 1973-1977**
Aseptic meningitis	115	89	60	5,967	4,535	3,999
Brucellosis	5	1	3	158	214	214
Chickenpox	3,013	2,770	2,968	143,329	179,959	157,750
Diphtheria	3	1	6	75	81	190
Encephalitis: Primary (arthropod-borne & unspec.)	14	12	15	1,009	1,112	1,359
Post-infectious	3	6	5	192	204	256
Hepatitis, Viral: Type B	286	383	276	14,173	15,842	11,387
Type A	589	667	794	27,973	29,588	33,504
Type unspecified	241	187		8,841	8,555	
Malaria	3	4	4	677	512	400
Measles (rubeola)	187	168	220	26,362	54,566	26,237
Meningococcal infections: Total	40	39	29	2,257	1,710	1,373
Civilian	40	39	29	2,234	1,699	1,345
Military	–	–	–	23	11	26
Mumps	326	394	1,264	15,948	20,211	54,919
Pertussis	15	84	---	1,938	1,947	---
Rubella (German measles)	91	115	154	17,569	19,859	15,993
Tetanus	1	2	1	77	79	86
Tuberculosis	590	689	626	28,066	28,944	29,937
Tularemia	5	4	2	139	156	135
Typhoid fever	10	3	9	497	374	368
Typhus fever, tick-borne (Rky. Mt. spotted)	4	2	2	1,003	1,113	803
Venereal diseases:						
Gonorrhea: Civilian	21,193	21,315	20,702	978,360	964,658	964,668
Military	365	355	439	24,777	25,683	27,756
Syphilis, primary & secondary: Civilian	464	508	508	20,956	19,774	22,992
Military	9	2	5	296	294	329
Rabies in animals	53	26	32	3,046	2,911	2,832

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1978		CUM. 1978
Anthrax	5	Poliomyelitis: Total	4
Botulism (Pa. 1, Del 1)	73	Paralytic	2
Cholera	12	Psittacosis (Calif. 4)	110
Congenital rubella syndrome (Upst. NY 1)	26	Rabies in man	2
Leprosy †(NYC 1)	151	Trichinosis (Calif. 2)	50
Leptospirosis (Miss. 1)	60	Typhus fever, flea-borne (endemic, murine)	38
Plague	8		

*Delayed reports received for calendar year 1977 are used to update last year's weekly and cumulative totals.

**Medians for gonorrhea and syphilis are based on data for 1975-1977.

†Delayed report: Leprosy: Pac. Trust. Terr. +5. The following delayed report will be reflected in next week's cumulative total: Leprosy: Hawaii —1

TABLE III. Cases of specified notifiable diseases, United States, weeks ending December 16, 1978, and December 17, 1977 (50th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-infectious	B	A	Unspecified		
	1978	1978	1978	1978	CUM. 1978	1978	1977*	1978	1978	1978	1978	1978	CUM. 1978
UNITED STATES	115	5	3,013	3	75	14	12	3	286	589	241	3	677
NEW ENGLAND	6	–	440	–	–	–	–	–	9	24	8	–	30
Maine	–	–	76	–	–	–	–	–	1	10	–	–	2
N.H.†	–	–	–	–	–	–	–	–	–	6	–	–	4
Vt.	–	–	–	–	–	–	–	–	–	2	–	–	–
Mass.	–	–	164	–	–	–	–	–	–	4	6	–	7
R.I.	–	–	139	–	–	–	–	–	2	1	–	–	5
Conn.	6	–	61	–	–	–	–	–	6	1	2	–	12
MID. ATLANTIC	18	–	158	–	1	2	1	–	57	64	23	–	145
Upstate N.Y.	9	–	31	–	–	–	–	–	18	14	6	–	21
N.Y. City	5	–	36	–	1	1	–	–	6	7	2	–	65
N.J.†	–	–	NN	–	–	–	–	–	10	19	8	–	28
Pa.†	4	–	91	–	–	1	1	–	23	24	7	–	31
E.N. CENTRAL	7	–	1,443	–	–	1	6	–	35	76	18	1	50
Ohio†	–	–	47	–	–	–	3	–	4	11	–	1	9
Ind.†	–	–	–	–	–	–	2	–	2	2	12	–	4
Ill.	2	–	222	–	–	–	–	–	6	18	–	–	14
Mich.	5	–	795	–	–	1	1	–	23	33	6	–	21
Wis.†	–	–	379	–	–	–	–	–	–	12	–	–	2
W.N. CENTRAL	5	1	442	–	2	–	2	–	17	82	12	–	26
Minn.	1	–	–	–	–	–	–	–	6	15	2	–	4
Iowa	–	1	144	–	–	–	–	–	–	3	–	–	–
Mo.	1	–	88	–	1	–	–	–	8	41	10	–	10
N. Dak.	–	–	1	–	–	–	–	–	–	–	–	–	–
S. Dak.	–	–	2	–	–	–	–	–	–	14	–	–	1
Nebr.†	3	–	16	–	1	–	2	–	1	2	–	–	5
Kans.	–	–	191	–	–	–	–	–	2	7	–	–	6
S. ATLANTIC	26	–	171	–	–	4	–	3	40	57	29	–	116
Del.†	–	–	4	–	–	–	–	–	2	–	–	–	1
Md.	5	–	2	–	–	–	–	–	3	1	7	–	25
D.C.	–	–	1	–	–	–	–	–	1	–	–	–	6
Va.†	4	–	17	–	–	1	–	–	7	10	5	–	22
W. Va.	–	–	104	–	–	–	–	–	–	–	–	–	1
N.C.	11	–	NN	–	–	3	–	–	3	6	2	–	10
S.C.	–	–	11	–	–	–	–	–	2	2	3	–	4
Ga.	–	–	–	–	–	–	–	–	–	–	–	–	12
Fla.†	6	–	32	–	–	–	–	3	22	38	12	–	35
E.S. CENTRAL	15	2	2	–	–	1	1	–	22	29	1	–	6
Ky.†	–	–	–	–	–	–	–	–	–	–	–	–	2
Tenn.	2	–	NN	–	–	1	–	–	14	14	–	–	1
Ala.	13	–	1	–	–	–	–	–	7	4	1	–	1
Miss.	–	2	1	–	–	–	1	–	1	11	–	–	2
W.S. CENTRAL	8	1	90	–	1	2	1	–	17	71	57	–	32
Ark.	–	–	–	–	1	2	–	–	1	2	23	–	1
La.	–	–	NN	–	–	–	1	–	2	16	2	–	3
Okla.	3	–	–	–	–	–	–	–	3	2	2	–	1
Tex.	5	1	90	–	–	–	–	–	11	51	30	–	27
MOUNTAIN	5	1	58	–	4	–	–	–	6	64	37	–	9
Mont.	1	–	7	–	–	–	–	–	–	9	–	–	–
Idaho	1	1	–	–	–	–	–	–	–	2	1	–	–
Wyo.	–	–	–	–	–	–	–	–	–	–	–	–	–
Colo.	2	–	47	–	2	–	–	–	5	9	6	–	5
N. Mex.	1	–	–	–	–	–	–	–	NA	NA	NA	–	1
Ariz.	–	–	NN	–	1	–	–	–	–	35	29	–	2
Utah	–	–	–	–	–	–	–	–	–	6	1	–	–
Nev.	–	–	4	–	1	–	–	–	1	3	–	–	1
PACIFIC	25	–	209	3	67	4	1	–	83	122	56	2	263
Wash.	–	–	196	3	63	–	–	–	8	10	12	–	8
Oreg.	2	–	–	–	–	3	–	–	7	19	2	–	9
Calif.†	21	–	–	–	1	1	1	–	66	91	38	2	219
Alaska	2	–	9	–	3	–	–	–	1	1	1	–	4
Hawaii†	–	–	4	–	–	–	–	–	1	1	3	–	23
Guam	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
P.R.	1	–	22	–	–	–	–	–	1	1	5	–	4
V.I.	–	–	3	–	–	–	–	–	–	–	–	–	1
Pac. Trust Terr.†	–	–	3	–	–	–	–	–	–	–	1	–	–

NN: Not notifiable. NA: Not available.

*Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Asep. meng.: Ohio +26, Ind. +1, Ky. +5, Pac. Trust Terr. +25; Chickenpox: Ind. +278, Ky. +125, Calif. +5, Pac. Trust Terr. +279; Enceph.: Fla. +5; Hep B: N.J. –1, Pa. +30, Del. –6, Ky. +7; Hep. A: N.H. –1, Pa. +36, Wis. –1, Va. –1, Ky. +15; Hep. unsp.: N.J. –1, Pa. +8, Nebr. +1, Va. –4, Ky. +1, Pac. Trust Terr. +76; Malaria: Hawaii –1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 16, 1978, and December 17, 1977 (50th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	1978	1978	CUM. 1978	CUM. 1978
UNITED STATES	187	26,362	54,566	40	2,257	1,710	326	15,948	15	91	17,569	77
NEW ENGLAND	2	2,055	2,519	–	127	80	9	879	2	6	800	3
Maine	–	1,319	173	–	10	4	4	571	–	1	156	–
N.H.	2	86	511	–	10	4	1	18	–	–	107	–
Vt.	–	53	294	–	2	8	–	6	–	1	33	2
Mass.	–	261	642	–	44	25	1	97	1	4	258	–
R.I.	–	8	65	–	20	2	–	53	–	–	42	–
Conn.†	–	328	834	–	41	37	3	134	1	–	204	1
MID. ATLANTIC	9	2,263	8,560	12	381	234	14	760	4	8	3,099	5
Upstate N.Y.	1	1,426	3,882	4	122	51	4	246	2	4	562	2
N.Y. City	6	400	801	2	84	67	1	164	1	4	151	–
N.J.	–	74	210	–	74	55	5	171	–	–	1,620	–
Pa.	2	363	3,667	6	101	61	4	179	1	–	766	3
E.N. CENTRAL	69	11,458	11,851	5	244	191	138	6,564	4	28	8,753	4
Ohio	–	494	1,865	2	77	70	28	1,324	–	3	1,385	1
Ind.†	–	717	4,372	–	43	15	–	351	–	–	627	1
Ill.	7	1,278	1,889	–	30	40	35	2,046	2	3	1,817	1
Mich.	60	7,953	1,246	3	79	50	24	1,579	2	18	3,334	1
Wis.†	2	1,516	2,479	–	15	16	51	1,264	–	4	1,590	–
W.N. CENTRAL	9	524	9,559	3	86	73	30	2,060	–	7	710	9
Minn.	–	40	2,644	–	23	19	–	22	–	–	130	2
Iowa†	5	67	4,328	2	12	10	2	173	–	7	71	–
Mo.	4	107	1,049	1	33	28	18	1,194	–	–	115	2
N. Dak.	–	211	29	–	3	1	–	17	–	–	82	–
S. Dak.	–	–	75	–	3	6	–	8	–	–	112	1
Nebr.	–	5	214	–	–	2	–	26	–	–	34	–
Kans.	–	94	1,220	–	12	7	10	620	–	–	166	4
S. ATLANTIC	5	5,475	4,729	10	567	389	11	979	2	5	1,082	17
Del.	–	7	22	–	19	23	–	57	–	–	38	–
Md.	–	51	372	–	38	28	1	83	–	–	7	2
D.C.	–	2	14	–	2	1	–	2	–	–	1	–
Va.	2	2,836	2,751	1	70	38	1	191	1	–	248	1
W. Va.	2	1,068	274	–	17	10	3	190	–	4	341	–
N.C.	–	122	66	5	108	79	–	79	1	1	200	3
S.C.†	–	199	162	2	43	41	–	18	–	–	30	4
Ga.	–	36	770	–	64	52	–	71	–	–	29	–
Fla.†	1	1,154	298	2	206	117	6	288	–	–	188	7
E.S. CENTRAL	5	1,438	2,081	3	183	168	5	1,246	–	2	541	5
Ky.†	–	122	1,193	–	31	32	–	261	–	–	148	2
Tenn.	2	965	752	2	51	46	2	461	–	1	209	–
Ala.	1	102	79	1	51	55	2	433	–	–	25	–
Miss.	2	249	57	–	50	35	1	91	–	1	159	3
W.S. CENTRAL	12	1,310	2,207	2	307	316	79	2,025	–	3	970	16
Ark.	–	16	36	1	24	20	–	620	–	–	58	1
La.	7	358	83	–	123	138	1	66	–	1	489	2
Okla.	–	19	67	–	20	15	–	4	–	–	17	3
Tex.†	5	917	2,021	1	140	143	78	1,335	–	2	406	10
MOUNTAIN	1	266	2,560	1	53	44	6	466	–	1	226	4
Mont.	1	107	1,163	–	6	7	–	148	–	–	18	–
Idaho†	–	1	163	–	5	8	–	22	–	–	3	1
Wyo.	–	–	19	–	–	2	–	2	–	–	–	–
Colo.	–	37	513	–	3	1	1	110	–	1	50	1
N. Mex.	–	–	257	–	11	11	–	20	–	–	3	–
Ariz.	–	57	329	–	15	10	2	24	–	–	101	–
Utah	–	44	23	–	6	4	2	131	–	–	38	2
Nev.	–	20	93	1	7	1	1	9	–	–	13	–
PACIFIC	75	1,573	10,500	4	309	215	34	969	3	31	1,388	14
Wash.	25	418	559	–	50	33	5	213	–	2	138	1
Oreg.	33	503	367	–	33	18	5	137	1	6	161	–
Calif.	17	639	9,478	4	211	125	20	572	1	23	1,069	13
Alaska	–	1	60	–	10	34	1	14	1	–	8	–
Hawaii	–	12	36	–	5	5	3	33	–	–	12	–
Guam	NA	25	5	–	1	1	NA	39	NA	NA	4	1
P.R.	11	311	1,391	1	11	1	24	1,626	–	–	17	10
V.I.	–	6	14	–	1	–	–	1	–	–	1	–
Pac. Trust Terr.†	–	53	–	–	1	–	–	15	–	–	2	–

NA: Not available.

*Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Measles: Ind. +7, Wis. –9, Fla. –5, Tex. –1, Pac. Trust Terr. +592; Men. inf.: Conn. –1, S.C. –1, Idaho –1, Pac. Trust Terr. +2; Mumps: Ind. +3, Iowa +8, Ky. +31, Pac. Trust Terr. +93; Pertussis: Fla. +7, Rubella: Ind. +1, Wis. +3, Ky. +3, Tex. –1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending December 16, 1978, and December 17, 1977 (50th week)

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1978	CUM. 1978	CUM. 1978	1978	CUM. 1978	1978	CUM. 1978	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	CUM. 1977*	CUM. 1978
UNITED STATES	590	28,066	139	10	497	4	1,033	21,193	978,360	964,668	464	20,956	19,774	3,046
NEW ENGLAND	20	921	2	1	79	2	15	479	24,786	25,976	15	575	778	96
Maine	1	66	–	–	–	–	–	33	2,042	1,987	–	9	28	76
N.H.	1	16	–	–	5	–	–	28	1,145	1,080	–	5	5	3
Vt.	1	41	–	–	1	–	–	11	598	630	–	3	7	2
Mass.	8	542	–	1	61	–	5	166	10,771	11,084	9	357	538	7
R.I.	2	70	–	–	4	–	1	32	1,855	1,993	3	27	10	–
Conn.	7	186	2	–	8	2	9	209	8,375	9,202	3	174	190	8
MID. ATLANTIC	109	4,347	6	3	73	–	57	2,258	106,174	100,832	71	2,840	2,838	99
Upstate N.Y.	30	760	5	–	10	–	31	254	17,713	17,407	–	192	254	64
N.Y. City	41	1,393	1	3	48	–	4	1,010	40,323	38,973	47	1,977	1,791	–
N.J.	21	966	–	–	8	–	13	217	19,588	17,884	16	359	375	14
Pa.	17	1,228	–	–	7	–	9	777	28,550	26,568	8	312	418	21
E.N. CENTRAL	81	4,536	1	1	40	1	50	3,486	152,800	152,251	48	2,392	2,036	197
Ohio	14	846	1	–	7	1	24	1,176	40,102	40,061	16	449	457	22
Ind.	7	521	–	–	2	–	1	NA	15,074	14,305	NA	164	154	13
Ill.	16	1,697	–	–	17	–	25	1,203	48,822	49,061	26	1,490	1,081	66
Mich.†	27	1,219	–	1	14	–	–	772	35,357	35,460	3	223	238	8
Wis.	17	253	–	–	–	–	–	335	13,445	13,364	3	66	106	88
W.N. CENTRAL	14	912	29	–	20	–	51	1,267	49,364	49,867	9	419	434	632
Minn.	1	154	–	–	7	–	–	142	8,202	8,970	2	150	152	190
Iowa	2	105	1	–	3	–	1	86	5,414	5,880	–	34	40	132
Mo.	6	409	23	–	5	–	23	661	21,960	20,460	6	144	164	85
N. Dak.	–	32	–	–	–	–	1	21	894	932	–	3	3	99
S. Dak.	2	73	–	–	–	–	7	19	1,653	1,547	–	3	10	85
Nebr.	–	25	1	–	1	–	12	98	3,536	4,330	–	14	25	7
Kans.†	3	114	4	–	4	–	7	240	7,705	7,748	1	71	40	34
S. ATLANTIC	163	6,127	10	1	65	1	536	5,307	237,740	236,396	131	5,503	5,322	479
Del.†	2	56	–	–	3	–	5	77	3,415	3,176	–	13	20	3
Md.†	12	893	5	–	11	–	105	602	30,548	29,683	8	414	310	–
D.C.	12	309	–	–	1	–	1	303	15,992	15,496	7	415	526	–
Va.†	35	715	5	–	6	–	111	530	23,125	24,649	13	459	529	14
W. Va.	3	223	–	–	7	–	11	51	3,251	3,348	–	30	5	12
N.C.†	20	933	–	1	3	1	200	643	33,475	35,497	15	584	704	14
S.C.	17	532	–	–	9	–	56	527	23,341	22,661	4	275	243	116
Ga.	28	858	–	–	4	–	47	970	46,069	45,347	30	1,378	1,213	285
Fla.†	34	1,608	–	–	21	–	–	1,604	58,524	56,539	54	1,935	1,772	35
E.S. CENTRAL	29	2,630	8	–	10	–	180	801	81,441	85,448	25	1,104	757	159
Ky.†	–	593	3	–	2	–	42	–	10,597	11,555	–	141	108	75
Tenn.	11	801	4	–	3	–	111	357	29,850	33,931	10	380	241	33
Ala.	9	641	1	–	3	–	13	252	23,578	23,415	9	199	161	51
Miss.†	9	595	–	–	2	–	14	192	17,416	16,547	6	384	247	–
W.S. CENTRAL	67	3,375	66	–	58	–	99	3,348	130,432	122,667	59	3,369	2,838	890
Ark.†	7	386	40	–	9	–	16	264	9,669	9,176	5	75	64	150
La.	16	623	6	–	4	–	2	651	21,487	18,682	11	704	635	22
Okla.	6	332	14	–	5	–	54	185	12,244	11,811	1	90	81	186
Tex.	38	2,034	6	–	40	–	27	2,248	87,032	82,998	42	2,500	2,058	532
MOUNTAIN	14	843	10	–	20	–	11	834	37,561	39,123	3	456	409	112
Mont.	–	58	–	–	3	–	2	23	2,072	2,067	–	9	6	19
Idaho	3	34	3	–	5	–	3	40	1,548	1,757	–	13	12	–
Wyo.	–	15	2	–	–	–	1	33	941	924	–	9	3	–
Colo.	2	108	1	–	4	–	2	236	10,384	10,255	2	149	123	38
N. Mex.	1	133	–	–	2	–	–	138	5,390	5,701	–	81	84	25
Ariz.	5	379	1	–	4	–	1	152	9,681	10,732	–	105	154	23
Utah	2	39	3	–	1	–	–	52	2,062	2,379	–	13	11	7
Nev.	1	74	–	–	1	–	2	160	5,483	5,308	1	77	16	–
PACIFIC	93	4,378	7	4	132	–	4	3,413	158,062	152,108	103	4,298	4,362	382
Wash.†	NA	307	–	–	7	–	1	431	12,970	11,736	NA	241	252	2
Oreg.	8	184	4	–	1	–	2	233	10,723	10,596	3	164	139	12
Calif.	83	3,329	3	4	113	–	1	2,559	126,688	121,689	98	3,838	3,904	360
Alaska	–	66	–	–	–	–	–	123	4,917	4,967	–	12	27	8
Hawaii	2	501	–	–	11	–	–	67	2,764	3,120	2	43	40	–
Guam	NA	54	–	NA	–	NA	–	NA	123	207	NA	–	2	–
P.R.	–	369	–	–	3	–	–	46	2,121	3,042	14	490	523	39
V.I.†	–	4	–	–	2	–	–	10	209	218	–	17	9	–
Pac. Trust Terr.†	–	11	–	–	–	–	–	7	70	–	–	–	–	–

NA: Not available.

*Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: TB: Mich. –3, Kans. –1, Del. –1, Md. –5, N.C. –2, Fla. –2, Ky. +16, Ark. –1, Wash. –14, V.I. +1, Pac. Trust Terr. +42; RMSF: Va. –1; GC: Ky. +245 civ. +44 mil., Miss. +50 civ., Wash. –1 civ., Pac. Tr. Terr. +350 (civ.); Syphilis: Ky +1; An. rabies: Ky. +1.

TABLE IV. Deaths in 121 U.S. cities,* week ending December 16, 1978 (50th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	<1	
NEW ENGLAND	704	458	152	39	31	31
Boston, Mass.	189	119	42	14	6	8
Bridgeport, Conn.	43	31	9	2	1	3
Cambridge, Mass.	27	16	4	5	–	2
Fall River, Mass.	24	17	5	–	1	–
Hartford, Conn.	62	41	12	3	2	5
Lowell, Mass.	26	17	6	3	–	1
Lynn, Mass.	36	26	6	2	–	1
New Bedford, Mass.	26	20	5	–	–	1
New Haven, Conn.	63	38	12	1	11	–
Providence, R.I.	65	38	17	3	6	5
Somerville, Mass.	4	2	1	1	–	1
Springfield, Mass.	47	29	10	3	2	1
Waterbury, Conn.	39	29	7	1	2	1
Worcester, Mass.	53	35	16	1	–	2
MID. ATLANTIC	2,229	1,436	501	149	60	87
Albany, N.Y.	54	31	13	2	5	1
Allentown, Pa.	23	17	6	–	–	2
Buffalo, N.Y.	100	67	22	4	3	5
Camden, N.J.	28	15	7	4	2	2
Elizabeth, N.J.	26	20	4	1	–	1
Erie, Pa.†	37	25	11	–	–	2
Jersey City, N.J.	70	39	22	7	1	1
Newark, N.J.	70	28	28	4	4	1
N.Y. City, N.Y.	1,473	949	327	110	37	55
Paterson, N.J.	25	16	3	3	–	2
Philadelphia, Pa.†	208	117	53	21	12	9
Pittsburgh, Pa.†	70	39	25	3	2	2
Reading, Pa.	38	31	3	1	1	–
Rochester, N.Y.	123	87	24	4	2	8
Schenectady, N.Y.	36	24	7	2	–	3
Scranton, Pa.†	28	22	4	2	–	2
Syracuse, N.Y.	81	55	16	5	3	4
Trenton, N.J.	42	28	12	1	–	–
Utica, N.Y.	14	11	3	–	–	1
Yonkers, N.Y.	26	18	4	1	2	1
E.N. CENTRAL	2,461	1,530	631	149	70	75
Akron, Ohio	54	36	12	4	1	–
Canton, Ohio	58	42	13	–	3	4
Chicago, Ill.	615	370	168	45	13	12
Cincinnati, Ohio	171	111	40	11	2	7
Cleveland, Ohio	181	94	65	12	3	–
Columbus, Ohio	140	85	34	9	7	4
Dayton, Ohio	116	70	30	5	6	4
Detroit, Mich.	251	142	65	23	8	4
Evansville, Ind.	45	27	13	2	2	–
Fort Wayne, Ind.	54	38	11	1	1	5
Gary, Ind.	13	8	5	–	–	2
Grand Rapids, Mich.	50	40	7	1	1	7
Indianapolis, Ind.	162	95	42	12	8	3
Madison, Wis.	29	18	7	1	2	2
Milwaukee, Wis.	173	118	45	6	1	6
Peoria, Ill.	53	32	15	1	4	2
Rockford, Ill.	56	36	12	5	1	2
South Bend, Ind.	56	40	13	2	1	10
Toledo, Ohio	120	83	23	4	4	1
Youngstown, Ohio	64	45	11	5	2	–
W.N. CENTRAL	733	479	154	47	30	28
Des Moines, Iowa	55	33	15	4	3	2
Duluth, Minn.	19	15	2	2	–	1
Kansas City, Kans.	31	17	7	2	2	–
Kansas City, Mo.	129	73	31	14	7	3
Lincoln, Nebr.	26	18	6	–	1	2
Minneapolis, Minn.	89	62	11	5	7	7
Omaha, Nebr.	85	64	18	2	–	–
St. Louis, Mo.	160	109	30	7	6	4
St. Paul, Minn.	56	37	13	4	2	–
Wichita, Kans.	83	51	21	7	2	9

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	<1	
S. ATLANTIC	1,092	653	277	89	33	40
Atlanta, Ga.	129	74	31	16	–	3
Baltimore, Md.	269	160	68	22	13	8
Charlotte, N.C.	60	30	23	3	1	–
Jacksonville, Fla.	79	43	16	8	8	3
Miami, Fla.	76	46	19	6	2	6
Norfolk, Va.	67	36	18	6	2	3
Richmond, Va.	73	48	20	4	–	7
Savannah, Ga.	41	30	7	2	1	4
St. Petersburg, Fla.	76	62	11	2	–	2
Tampa, Fla.	73	44	17	5	2	2
Washington, D.C.	101	49	35	13	3	–
Wilmington, Del.	48	31	12	2	1	2
E.S. CENTRAL	643	364	192	40	19	25
Birmingham, Ala.	120	62	41	9	5	1
Chattanooga, Tenn.	59	36	15	4	1	4
Knoxville, Tenn.	42	25	13	2	–	–
Louisville, Ky.	80	49	18	4	4	3
Memphis, Tenn.	138	82	43	8	–	3
Mobile, Ala.	67	37	19	7	2	2
Montgomery, Ala.	33	19	8	3	3	2
Nashville, Tenn.	104	54	35	3	4	10
W.S. CENTRAL	1,217	651	326	108	59	40
Austin, Tex.	49	29	11	4	3	2
Baton Rouge, La.	40	24	8	4	2	4
Corpus Christi, Tex.	43	22	14	2	3	1
Dallas, Tex.	171	105	43	8	9	1
El Paso, Tex.	47	20	17	5	1	4
Fort Worth, Tex.	93	50	20	12	4	1
Houston, Tex.	293	123	89	42	14	7
Little Rock, Ark.	51	29	12	4	4	3
New Orleans, La.	145	79	43	5	9	1
San Antonio, Tex.	162	95	41	13	6	8
Shreveport, La.	49	28	16	2	2	3
Tulsa, Okla.	74	47	12	7	2	5
MOUNTAIN	593	358	127	43	31	26
Albuquerque, N. Mex.	63	39	14	5	2	3
Colo. Springs, Colo.	44	23	8	5	1	1
Denver, Colo.	136	71	31	9	16	6
Las Vegas, Nev.	43	25	13	3	–	2
Ogden, Utah	21	13	3	–	5	3
Phoenix, Ariz.	119	70	29	12	3	2
Pueblo, Colo.	25	21	1	1	1	3
Salt Lake City, Utah	52	36	7	4	2	5
Tucson, Ariz.	90	60	21	4	1	1
PACIFIC	1,802	1,177	412	91	54	53
Berkeley, Calif.	16	8	6	–	1	1
Fresno, Calif.	55	32	13	2	6	6
Glendale, Calif.	18	17	1	–	–	–
Honolulu, Hawaii	53	35	10	3	3	–
Long Beach, Calif.	111	76	27	2	3	5
Los Angeles, Calif.	470	308	102	32	4	15
Oakland, Calif.	62	40	14	3	2	1
Pasadena, Calif.	26	22	3	–	–	–
Portland, Oreg.	120	79	32	5	3	2
Sacramento, Calif.	77	47	21	4	2	1
San Diego, Calif.	190	117	41	8	12	1
San Francisco, Calif.	198	132	50	7	7	3
San Jose, Calif.	168	100	46	13	3	3
Seattle, Wash.	147	101	28	9	5	12
Spokane, Wash.	51	35	10	1	2	1
Tacoma, Wash.	40	28	8	2	1	2
TOTAL	11,474	7,106	2,772	755	387	405
Expected Number	11,231	6,913	2,820	677	414	398

*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, there will now be 117 cities involved in the generation of the expected values used to monitor pneumonia and influenza activity in the United States. Data from these 4 cities will appear in the tables but will not be included in the totals for the United States and the Middle Atlantic Region.

Salmonellosis – Continued

of 135-140 F (57-60 C), rather than the 165 F (74 C) required by Washington state regulations. Cooked turkeys were then refrigerated until served in sandwiches or salad. Hot turkey dishes were prepared by reheating sliced meat to a temperature over 164 F (74 C). No food specimens from the implicated time period were available for culture; a specimen of turkey obtained a week after the outbreak was culture-negative for salmonellae, as were several environmental cultures.

The restaurant complied promptly with all regulations; subsequently, no further cases have been reported.

Reported by HW Anderson, BS, RS, M Blaine, BS, HH Handsfield, MD, W Heaton, RS, T Yerkes, G Yuen, BS, Seattle-King County Dept of Public Health; JW Taylor, MD, State Epidemiologist, Washington State Dept of Social and Health Services; Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: This outbreak of *S. muenster* enteritis serves as a timely reminder of the need for proper cooking of poultry and other products to prevent salmonellosis. In this outbreak, reheating apparently provided sufficient additional cooking, since only cold turkey dishes were implicated.

The cook, although he was culture-positive, was probably not the source of the outbreak. He ate at the restaurant and probably became infected in this manner.

Measles – Oregon

During the last week of October and first 2 weeks in November, Washington County, Oregon, a part of the Portland metropolitan area, experienced a measles outbreak involving 200 persons ranging in age from 4 months to 39 years. One hundred forty of the cases occurred in 1 high school. Seventeen cases were documented by seroconversion. Because the number of school absentees more than doubled from October 19-24, the high school was closed on October 27 and October 30. When the school reopened, only students who could provide proof of previous immunity or who were vaccinated in special clinics were allowed to return.

Attack rates were 11.1% in the sophomore class, 7.7% in the junior class, and 5.6% in the senior class. Twelve children were hospitalized for dehydration, pneumonia, high fever, and other reasons. There were no cases of encephalitis or death.

Because of the widespread occurrence of cases, the Washington County Health Department, with the cooperation of the Washington County school districts, recommended and carried out measles immunization programs in all the schools in Washington County. Children who were not immunized were temporarily excluded from school.

In addition to the cases in Washington County, 175 cases of measles have been reported by telephone in 11 other counties during the period September 23 to December 11. Oregon is now in the process of conducting a statewide measles immunization program: 105,000 doses of measles vaccine were administered between October 20 and November 30. In most counties, dates for exclusion from school have been set for children who do not have proof of immunity. Intensive immunization efforts will continue until these exclusion dates are reached in December.

Reported by M Guftafson, RN, St. Vincent's Hospital, Portland; H Kemp, M Sorenson, RN, Washington County Health Dept; JA Googins, MD, State Epidemiologist, Oregon Dept of Human Resources; Immunization Div, Bur of State Services, Field Services Div, Bur of Epidemiology, CDC.

Editorial Note: Outbreaks of measles in high schools and junior high schools are becoming more common (*1*). According to the most recent recommendations by the Advisory Committee on Immunization Practices (*2*), persons can be considered immune to measles only if they have documentation of (a) physician-diagnosed measles or laboratory evidence of measles immunity or (b) adequate immunization with live measles vaccine when 12 or

Measles – Continued

more months of age. Once an outbreak occurs, preventing dissemination of measles depends on promptly vaccinating susceptible contacts. Ideally, they will have been identified before the outbreak (by school record reviews, for example); if not, they must be identified quickly. In addition to annual immunization record reviews of incoming students, a 1-time review of immunization status of all students in grades K-12 is currently underway in most states.

References

1. MMWR 27:235-237, 1978
2. Advisory Committee on Immunization Practices: Measles prevention. MMWR 27:427-437, 1978

Follow-up on *Vibrio cholerae* Infection – Louisiana

Vibrio cholerae 01 was last isolated from humans in Louisiana in September. It has not been isolated from sewage or the environment since November 13, when it was isolated from a sewage treatment plant in the town of Lake Arthur. The state is continuing surveillance of diarrheal illness and sewerage systems.

Reported by HB Bradford, PnD, Director, Bur of Laboratories, CT Caraway, DVM, State Epidemiologist, Louisiana Dept of Health and Human Resources; Food and Drug Administration; Enteric Diseases Br, Epidemiologic Investigations Laboratory Br, Bacterial Diseases Div, Quarantine Div, Field Services Div, Bur of Epidemiology, CDC.

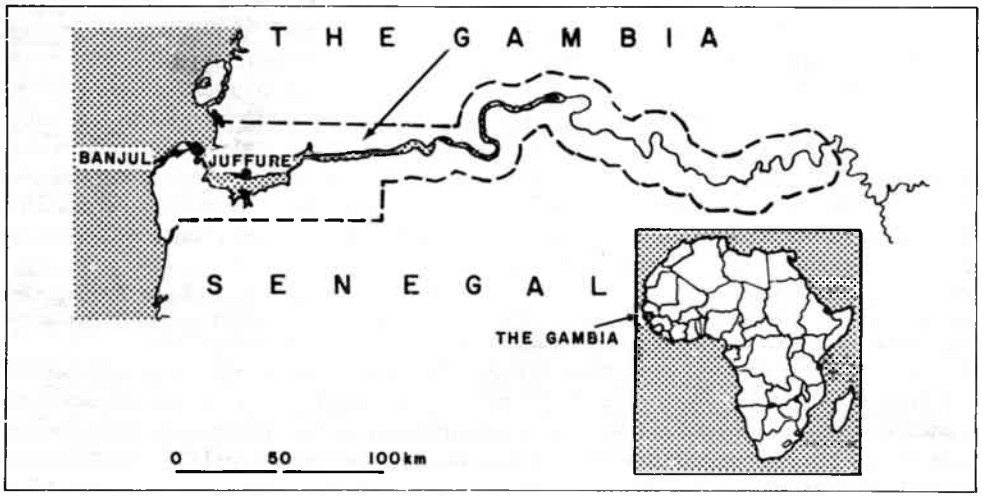
International Notes

Yellow Fever – The Gambia

An outbreak of yellow fever is in progress in the interior of The Gambia (Figure 1). Clinical cases have been observed since mid-November, and 78 deaths have been reported by the government of The Gambia (GOTG) through December 12. All cases have occurred in areas of the Gambia River basin upriver from the capital city, Banjul. The diagnosis of yellow fever is based on increased hemagglutination inhibition and neutralization antibody titers in convalescent serum specimens from survivors and on histologic morphology of liver specimens from fatal cases. Results of virus isolation studies from specimens are pending.

On December 12 the GOTG Ministry of Health requested emergency assistance from the U.S. Government, and the next day the U.S. Ambassador in Banjul issued a disaster

FIGURE 1. The Gambia, West Africa



Yellow Fever — Continued

declaration, paving the way for U.S. assistance in supplying vaccine, equipment, and technical aid to support the GOTG in mounting an extensive vaccination campaign. The World Health Organization and the U.S. Agency for International Development are assisting the GOTG in obtaining 500,000 doses of yellow fever vaccine, and CDC has provided equipment and technical assistance for vaccine administration.

Reported by Office of Foreign Disaster Assistance, Agency for International Development; Bur of Smallpox Eradication, Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Although small, The Gambia has become a major destination for U.S. travelers as the town of Juffure was the home of Kunta Kinte, protagonist of the novel "Roots." Yellow fever is endemic in West Africa, and although human cases are reported only infrequently, persons who plan to travel extensively in these countries should receive yellow fever vaccination. Senegal currently requires that all travelers over the age of 12 months entering the country possess a valid yellow fever vaccination certificate except those who arrive from a non-infected area and stay less than 2 weeks. In view of the present outbreak, CDC recommends that all travelers to The Gambia and to adjacent areas of Senegal be vaccinated.

Influenza — Worldwide

Influenza A(H1N1) viruses have now been isolated in 6 states. The majority of U.S. strains that have been received at the WHO Collaborating Center for Influenza, CDC, can be distinguished from the prototype A/USSR virus using postinfection ferret sera; they are most closely related to H1N1 strains isolated in South America in mid-1978 (A/Brazil/11/78, for example).

California: H1N1 Influenza A viruses continue to be isolated in Los Angeles County. Several of the isolates were from students in schools where absenteeism had been high for 2 weeks. Additional isolates have been obtained from Ventura and Santa Barbara Counties, including one from an 86-year-old man. Serologic testing for H1N1-like virus was positive in 6 of 8 students involved in a previously reported outbreak at a seminary in Santa Barbara. School absenteeism remained elevated in much of the state through December 15, when schools closed for the holidays.

Utah: The state laboratory has reported 8 isolates of H1N1-like virus, all from persons younger than 26 years old. On December 18, school absenteeism increased, as high as 50%, in many areas of the state.

Arizona: As of December 19, the state health department reported influenza-like illness and increased school absenteeism in 8 counties. H1N1-like isolates have been obtained from 3 counties.

Texas: Additional H1N1 viruses have been isolated from sporadic cases in Houston and from a 20-year-old male student at the University of Texas in Austin. There is no indication of outbreak activity in the Austin area, but in Houston some increase in school absenteeism has been observed. Lackland Air Force Base reported 11 H1N1-like isolates obtained from new recruits on December 11.

The Morbidity and Mortality Weekly Report, circulation 84,000, is published by the Center for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs 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. Send reports to: Center for Disease Control, Attn: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

Send mailing list additions, deletions, and address changes to: Center for Disease Control, Attn: Distribution Services, GSO, 1-SB-36, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

Influenza – Continued

Florida: The isolation of H1N1 virus from a 34-year-old staff sergeant at Eglin Air Force Base has been confirmed by CDC.

Washington: Absenteeism due to influenza-like illness in a junior high school in Centralia reached 50% on December 15. Since then, absenteeism at that school has declined, but is rising above 25% in other schools in Centralia. Laboratory confirmation of the illness is pending.

Worldwide: Several influenza A (H1N1) strains isolated during October and November in Singapore and Thailand have been received at the WHO Collaborating Center for Influenza, Atlanta; the WHO Collaborating Center for Influenza, London, has received several H1N1 isolates from individuals with sporadic illness in Scotland and southwest England. Hemagglutination inhibition tests of acute- and convalescent-phase serum specimens from 3 patients with illnesses in Jamaica during November indicate that infection with an H1N1 strain of influenza A had occurred; 1 virus isolate has been reported.

Reported by the Influenza Research Center, Baylor College of Medicine, Houston, Texas; Los Angeles County Dept of Health Services, California; Salt Lake County Health Dept, Utah; Louis County Health Dept, Washington; State Epidemiologists and Laboratory Directors of the California, Utah, Arizona, Texas, Florida, and Washington health departments; Epidemiology Division, U.S. Air Force School of Aerospace Medicine, Brooks Air Force Base, Texas; U.S. Air Force Hospitals, Eglin Air Force Base, Florida, Lackland Air Force Base, Texas; WHO Collaborating Center for Influenza, London; WHO Weekly Epidemiological Record, No. 49, pp 359-360; Field Services Div, Bur of Epidemiology, Immunization Div, Bur of State Services, and WHO Collaborating Center for Influenza, Bur of Laboratories, CDC.

Erratum, Vol. 27, 49

p 495 In the article "Rubella and Congenital Rubella, United States, 1977-1978," third paragraph, first line, the incidence rate of reported rubella was reported as having declined dramatically in persons less than 15 years of age in the period 1966-1967. The correct time span is **1966-1977.**

Notice to Readers

The MMWR will not be published the week of Christmas. The next issue of the MMWR that you will receive will be No. 52 of Volume 27, dated January 5, 1979. This 16-page issue will accommodate the tables on specified notifiable diseases and deaths in 121 U.S. cities for the weeks ending December 23 and 30 (51st and 52nd weeks).

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PUBLIC HEALTH SERVICE / CENTER FOR DISEASE CONTROL
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Director, Center for Disease Control
William H. Foege, M.D.
Director, Bureau of Epidemiology
Philip S. Brachman, M.D.
Editor
Michael B. Gregg, M.D.
Managing Editor
Anne D. Mather, M.A.

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