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International Notes

Chloroquine-Resistant Malaria Acquired in Kenya and Tanzania — Denmark, Georgia, New York

Three cases of *Plasmodium falciparum* malaria in travelers to Kenya and Tanzania not cured by chloroquine have recently been reported. During late spring of 1978,1 patient, a 49-year-old man who worked in southeast Kenya, developed *P. falciparum* malaria after his return to New York. He was treated with chloroquine on 2 occasions, and each time his malaria recrudesced. He was finally treated successfully with a drug effective against chloroquine-resistant *P. falciparum* (*1*). The 2 other cases, which occurred in residents of Denmark and Georgia, are reported in detail below.

Copenhagen, Denmark: A 37-year-old man took a tour to Nairobi, Thika, Mombasa, and Amboseli and Tsavo National Parks from November 27 to December 9, 1977. He took the recommended chloroquine prophylaxis* while in Kenya and for 2 weeks after returning to Denmark. On December 28 he developed headache, fever up to 40 C (104 F), and chills. He was hospitalized on January 6 and found to have *P. falciparum* malaria. He received 2.5 gm of chloroquine phosphate over 3 days and was discharged after an uneventful recovery. He became febrile again on January 30, was again found to have *P. falciparum* parasitemia, and was treated with 3 gm chloroquine over 3 days. After treatment, no parasites could be found on a thick film. The third recrudesence occurred on April 2. *P. falciparum* was again seen. Over a 3-day period, 3125 mg of chloroquine was given. No parasites were found 2½ days later. Chloroquine absorption was documented by positive tests of urinary excretion. The fourth recrudescence occurred on May 2. He was treated with pyrimethamine and sulfadoxine, and no parasites were seen 4 days later. After 4 months no recrudescence has been detected, and the patient is presumed cured.

Atlanta, Georgia: A 50-year-old man took a hunting safari in southern Tanzania from August 15-September 3, 1978. He did not take malaria chemoprophylaxis. On September 9, he was admitted to an Atlanta hospital for shaking chills and intermittent fever (40.5 C [105 F]). *P. falciparum* parasites were identified on the thick and thin films. He received 2.5 gm of chloroquine over 3 days and was then discharged, despite mild "sweats" and headache, since no parasite could be seen on the smears. A blood smear performed on September 17 was negative, as was one done on October 10, although at that time the patient complained of low-grade fever and malaise. On October 12, a blood smear showed 5,000 parasites per mm^3, and the patient was then treated for 7 days with a twice-daily dosage of 160 mg of trimethoprim and 800 mg of sulfamethoxazole. By the second day of therapy, the smears became negative. The patient remains asymptomatic.

*The current recommendation is chloroquine phosphate 500 mg (300 mg base) orally, once a week, beginning 1-2 weeks before arrival and continued for 6 weeks after departure. Primaquine use is discussed in the MMWR Malaria Supplement (*3*).

Malaria – Continued

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Editorial Note: The World Health Organization recognizes 3 degrees of drug resistance—R1, R2, R3. The lowest degree of resistance, R1, is defined as the clearance of *asexual* malaria parasites (though not gametocytes) from the blood within 7 days of initiation of specific drug therapy (chloroquine in this case) followed by *recrudescence* of asexual parasitemia within 28 days after treatment. R2 resistance is the marked reduction, but not clearance, of asexual parasitemia. R3 resistance indicates no marked reduction in asexual parasitemia. The cases reported here appear to be R1 resistant. Generally acceptable criteria for documenting *P. falciparum* chloroquine resistance include:(1) No other *Plasmodium* species present; (2) Asexual *P. falciparum* parasitemia; (3) Adequately supervised chloroquine therapy with standard dosage—2.5 gm (1.5 gm base) over 3 days for adults; (4) Documentation of clearance of parasitemia followed by recrudescence (for R1 resistance), as determined by follow-up blood films up to 28 days after therapy; (5) Strict protection from reinfection for the 28-day period; and (6) *In vitro* documentation (optional) (*2*).

Chloroquine-resistant *P. falciparum* malaria has previously been reported from Asia, South America, Panama, and Oceania. In the last few years there has been an increasing number of reports of possible chloroquine-resistant malaria from Africa. The 3 cases reported here present the strongest evidence to date that chloroquine-resistant *P. falciparum* malaria has appeared in Africa.

It is premature to alter recommendations for chloroquine prophylaxis for travelers to Kenya and Tanzania, since the relative frequency of chloroquine-resistant strains there is unknown, and the degree of resistance appears low (R1). It is well known that clinical malaria may occur after appropriate chemoprophylaxis even with chloroquine-sensitive *Plasmodium*. In addition, one must now recognize that patients coming from Africa might have chloroquine-resistant *P. falciparum* malaria regardless of whether they took chloroquine prophylaxis. These individuals may, therefore, require treatment with regimens for chloroquine-resistant malaria. CDC can provide *in vitro* sensitivity testing and would like to receive reports through state health departments of suspected cases of chloroquine-resistant *P. falciparum* from Africa.

References

1. Kean BH: Chloroquine-resistant *falciparum* malaria from Africa. JAMA (in press)
2. Rieckmann KH: Determination of the drug sensitivity of *P. falciparum*. JAMA 217:573-578, 1971
3. MMWR 27(Suppl):81-90, 1978

Follow-up on Japanese B Encephalitis – India

As of November 9, a total of 5,459 confirmed and clinically suspected cases of Japanese B encephalitis have been reported this year in India. There have been 1,869 deaths. The outbreaks have been occurring in at least 7 states, but they have been particularly severe in Uttar Pradesh, which has over 2,000 reported cases with 768 deaths, and West Bengal (1,600 reported cases; 532 deaths). The attack rate is estimated to be about 4 per hundred thousand population.

The high mortality rate reported in children has declined, particularly in Uttar Pradesh. Intensive and massive spray operations have been carried out to rid the areas, many of them flood-ridden, of the mosquito vector, and people have been asked to use mosquito nets, appropriate clothing, and mosquito repellants. The Director General of Health

Japanese B Encephalitis — Continued

Services has secured 40,000 doses of Japanese encephalitis vaccine from Japan, and expects 87,000 more doses by January. An intensive collaborative epidemiologic study has been started in Uttar Pradesh and Bihar to identify possible asymptomatic infections.

Reported by B Sankaran, Director General of Health Services, India.

Epidemiologic Notes and Reports

Increase in Reported Animal Rabies — Alabama, Georgia, South Carolina, 1978

Alabama: The Alabama State Department of Health has reported an appreciable increase in laboratory-confirmed cases of animal rabies in the first 10½ months of 1978 (43) compared with the annual total for 1977 (13). Thirty of the 43 cases this year have occurred in 9 southeastern counties (Barbour, Coffee, Covington, Crenshaw, Dale, Geneva, Henry, Houston, and Pike); 23 of these cases were in raccoons. Only 2 counties from this area reported rabies in 1977 (Coffee, 1 raccoon; Houston, 1 weasel). From January through May of this year, rabies was diagnosed exclusively in raccoons in the 9 counties, but in June, a Coffee County cat was found infected. Since that time, 4 dogs and 2 additional cats have contracted the disease along with an increasing number of raccoons.

On November 10, Alabama health officials declared that a rabies epizootic exists in the 9 counties and requested the assistance of all state, county, and municipal officials in those counties to reduce the incidence and risk of infection. The following steps were recommended: (1) immediate immunization of all dogs, cats, and valuable livestock; (2) strict control and destruction of all stray and unwanted dogs and cats; (3) avoidance of all contacts with wild animals especially raccoons and stray dogs or cats; (4) immediate reporting of abnormal behavior in pets or livestock to local veterinarians or health departments.

Georgia, South Carolina: There has been a gradual northern movement of reported raccoon rabies from Florida since the early 1960s. Raccoon rabies has been endemic in Florida and Georgia for over 15 years. These 2 states accounted for over 90% of all cases reported in the United States until 1977, when South Carolina reported 17 cases (6% of the total). Of the 4 primarily affected southeastern states (Alabama, Georgia, Florida, South Carolina), all except Florida have reported more cases of raccoon rabies this year than for all of last year (Alabama 5 in 1977 vs. 23 in 1978; Florida 69 vs. 28; Georgia 175 vs. 206; South Carolina 17 vs. 57).

Only 1 raccoon rabies case has been reported this year from the 6 counties of Florida that adjoin Alabama; 27 additional cases of raccoon rabies have been reported elsewhere in Florida. Eighty-six of the 206 raccoon rabies cases in Georgia this year have been reported from 36 southwestern counties, but only 3 cases have been reported in the 5 counties that directly adjoin the affected area in Alabama.

Reported by WE Birch, DVM, State Public Health Veterinarian, FS Wolf, MD, State Epidemiologist, Alabama State Dept of Public Health; RM Yeller, MD, State Epidemiologist, Florida State Dept of Health and Rehabilitative Services; RK Sikes, DVM, State Public Health Veterinarian, Georgia Dept of Human Resources; RL Parker, DVM, State Epidemiologist, South Carolina State Dept of Health and Environmental Control; Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Some reports have given the impression that packs of rabid raccoons are migrating from the southeastern states and that almost 100 people have been "infected" by these animals. Raccoons are not migrating, although there is a northern movement of the infection, and no human cases of rabies have been reported in association with this epizootic. Although there appears to be an increase in raccoon rabies cases in the Southeast, health officials in the 4 affected states are taking appropriate action to reduce possible human exposures.

Botulism — Colorado

One suspected and 2 confirmed cases of botulism have recently been reported from Colorado. The first patient, a 46-year-old man, developed abdominal cramps, nausea, and diarrhea on November 17, followed by symmetrical cranial nerve dysfunction. He was admitted to a Denver hospital the same day with a clinical diagnosis of botulism. The next day, a 58-year-old woman who had developed symmetrical cranial nerve dysfunction on November 16 was admitted to another Denver hospital and was also diagnosed as having botulism. Surveillance has also identified a suspected case: a 27-year-old man who had developed cranial nerve dysfunction on November 14 and had been hospitalized on November 18 without a specific diagnosis.

The only common exposure shared by these 3 patients was lunch at 1 restaurant, the Country Broker, in the Denver area. The first 2 patients had eaten there separately on November 15; the third ate there on November 13. Epidemiologic investigation is in progress. Laboratory studies have identified type A botulinal toxin in serum from the first 2 patients. Studies of the serum from the third patient are in progress. All patients have received trivalent (ABE) botulinal antitoxin; the second patient is requiring ventilatory support.

Reported by G Lasater, MD, Denver; T Edell, MD, Acting State Epidemiologist, J Emerson, DVM, Colorado Dept of Health; FDA; USDA; Enterobacteriology Br, Bacteriology Div, Bur of Laboratories, Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

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

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

DISEASE	46th WEEK ENDING		MEDIAN	CUMULATIVE, FIRST 46 WEEKS		
	November 18, 1978	November 19, 1977*	1973-1977**	November 18, 1978	November 19, 1977*	MEDIAN 1973-1977**
Aseptic meningitis	164	100	93	5,444	4,220	3,691
Brucellosis	2	1	2	137	196	196
Chickenpox	1,603	2,225	1,976	131,661	169,912	151,048
Diphtheria	1	–	2	65	76	167
Encephalitis: Primary (arthropod-borne & unspec.)	21	27	47	899	1,033	1,299
Post-infectious	3	5	5	181	187	246
Hepatitis, Viral: Type B	308	280	270	13,056	14,483	10,355
Type A	573	538	675	25,677	27,024	30,896
Type unspecified	182	184		7,926	7,789	
Malaria	13	12	6	645	485	371
Measles (rubeola)	398	143	169	25,350	53,921	25,299
Meningococcal infections: Total	50	48	27	2,085	1,548	1,283
Civilian	48	48	26	2,062	1,537	1,256
Military	2	–	–	23	11	26
Mumps	235	429	791	14,791	18,733	49,336
Pertussis	38	95	---	1,824	1,709	---
Rubella (German measles)	104	120	138	17,148	19,407	15,584
Tetanus	2	4	3	72	69	82
Tuberculosis	643	532	570	26,133	26,633	27,671
Tularemia	–	–	1	123	145	130
Typhoid fever	15	7	7	463	352	372
Typhus fever, tick-borne (Rky. Mt. spotted)	4	5	5	987	1,090	791
Venereal diseases:						
Gonorrhea: Civilian	19,452	19,472	20,119	897,939	885,221	885,221
Military	621	398	549	22,842	23,777	25,896
Syphilis, primary & secondary: Civilian	446	384	465	19,193	18,091	21,347
Military	7	7	7	262	269	307
Rabies in animals	53	52	49	2,793	2,767	2,664

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1978		CUM. 1978
Anthrax	5	Poliomyelitis: Total	3
Botulism (Calif. 1)	66	Paralytic	1
Cholera	11	Psittacosis (Va. 1)	94
Congenital rubella syndrome	25	Rabies in man†	–
Leprosy † (Nebraska 1)	135	Trichinosis	47
Leptospirosis	59	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	37
Plague†	7		

*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.

†The following delayed reports will be reflected in next week's cumulative totals: Leprosy: Neb. +1, Colo. +1; Plague: N. Mex. +1; Rabies in man: Idaho +1.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 18, 1978, and November 19, 1977 (46th 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	164	2	1,603	1	65	21	27	3	308	573	182	13	645
NEW ENGLAND	3	–	336	–	–	1	–	–	14	15	9	–	29
Maine	–	–	42	–	–	–	–	–	–	–	–	–	1
N.H.†	–	–	–	–	–	–	–	–	1	–	–	–	4
Vt.	–	–	5	–	–	–	–	–	1	3	–	–	–
Mass.	2	–	131	–	–	–	–	–	–	2	9	–	7
R.I.	–	–	131	–	–	–	–	–	2	1	–	–	5
Conn.	1	–	27	–	–	1	–	–	10	9	–	–	12
MID. ATLANTIC	25	–	88	–	1	9	1	–	57	72	34	2	138
Upstate N.Y.	10	–	17	–	–	5	–	–	5	9	12	–	18
N.Y. City	8	–	25	–	1	2	–	–	13	15	10	–	61
N.J.†	5	–	NN	–	–	1	–	–	15	12	4	1	28
Pa.†	2	–	46	–	–	1	1	–	24	36	8	1	31
E.N. CENTRAL	18	–	561	–	–	2	8	–	59	91	12	–	44
Ohio†	–	–	161	–	–	1	5	–	17	25	–	–	7
Ind.†	5	–	–	–	–	–	–	–	8	5	7	–	3
Ill.	–	–	48	–	–	–	–	–	26	39	1	–	14
Mich.	13	–	167	–	–	1	2	–	5	17	3	–	18
Wis.†	–	–	185	–	–	–	1	–	3	5	1	–	2
W.N. CENTRAL	6	–	205	–	2	–	1	–	13	58	15	2	26
Minn.	–	–	–	–	–	–	–	–	2	39	–	–	4
Iowa	–	–	70	–	–	–	–	–	–	2	3	–	–
Mo.	4	–	64	–	1	–	–	–	11	5	10	–	10
N. Dak.†	1	–	10	–	–	–	–	–	–	–	–	–	–
S. Dak.	–	–	–	–	–	–	–	–	–	10	2	–	1
Nebr.†	1	–	1	–	1	–	1	–	–	1	–	1	5
Kans.	–	–	60	–	–	–	–	–	–	1	–	1	6
S. ATLANTIC	32	–	147	–	–	4	1	3	53	53	12	–	111
Del.	–	–	–	–	–	–	–	–	4	1	–	–	1
Md.	1	–	6	–	–	2	–	–	1	4	–	–	25
D.C.	–	–	1	–	–	–	–	–	–	1	–	–	6
Va.	16	–	7	–	–	1	1	–	7	5	3	–	20
W. Va.	–	–	109	–	–	–	–	–	–	3	–	–	1
N.C.	8	–	NN	–	–	1	–	–	5	2	1	–	10
S.C.	–	–	2	–	–	–	–	–	14	4	2	–	4
Ga.	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	10
Fla.	7	–	22	–	–	–	–	3	22	33	6	–	34
E.S. CENTRAL	23	–	29	–	–	–	10	–	18	36	1	–	6
Ky.	5	–	25	–	–	–	–	–	5	11	–	–	2
Tenn.	3	–	NN	–	–	–	3	–	9	13	–	–	1
Ala.	14	–	3	–	–	–	–	–	4	4	1	–	1
Miss.	1	–	1	–	–	–	7	–	–	8	–	–	2
W.S. CENTRAL	12	1	33	–	1	2	1	–	14	57	45	–	32
Ark.	2	–	–	–	1	–	–	–	3	5	9	–	1
La.	–	–	NN	–	–	1	–	–	1	4	2	–	3
Okla.	1	1	–	–	–	–	–	–	–	10	5	–	1
Tex.	9	–	33	–	–	1	1	–	10	38	29	–	27
MOUNTAIN	5	1	57	–	4	–	–	–	3	29	12	–	8
Mont.	1	–	7	–	–	–	–	–	–	1	–	–	–
Idaho	–	1	3	–	–	–	–	–	–	–	1	–	–
Wyo.	–	–	–	–	–	–	–	–	–	1	1	–	–
Colo.	2	–	38	–	2	–	–	–	–	6	1	–	4
N. Mex.	2	–	5	–	–	–	–	–	2	10	1	–	1
Ariz.	–	–	NN	–	1	–	–	–	–	5	7	–	2
Utah	–	–	4	–	–	–	–	–	–	4	1	–	–
Nev.	–	–	–	–	1	–	–	–	1	2	–	–	1
PACIFIC	40	–	147	1	57	3	5	–	77	162	42	9	251
Wash.	–	–	127	1	53	–	1	–	1	12	–	–	8
Oreg.	–	–	–	–	–	–	–	–	4	23	2	–	9
Calif.†	38	–	–	–	1	3	4	–	68	124	40	9	208
Alaska	–	–	17	–	3	–	–	–	4	2	–	–	4
Hawaii	2	–	3	–	–	–	–	–	–	1	–	–	22
Guam	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
P.R.	–	–	6	–	–	–	–	–	3	1	2	–	4
V.I.	–	–	–	–	–	–	–	–	–	–	1	–	1
Pac. Trust Terr.	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–

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.: N.J. +1, Ohio +1; Chickenpox: Wis. +63, Calif. +7; Enceph.: Wis. +1; Hep. B: Pa. +19, Neb. –1; Hep. A: N.H. +1, Pa. +31, Ind. –1, N. Dak. +1; Hep. unsp.: Pa. +11, Ind. –1; Malaria: Ind. +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 18, 1978, and November 19, 1977 (46th 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	398	25,350	53,921	50	2,085	1,548	235	14,791	38	104	17,148	72
NEW ENGLAND	16	2,038	2,509	1	116	64	37	828	–	3	777	3
Maine	2	1,318	173	–	10	3	27	539	–	–	154	–
N.H.†	10	73	511	–	8	3	–	17	–	–	105	–
Vt.	1	52	294	–	2	6	–	6	–	–	27	2
Mass.†	3	259	633	–	42	19	1	93	–	3	245	–
R.I.	–	8	64	1	20	2	2	50	–	–	42	–
Conn.	–	328	834	–	34	31	7	123	–	–	204	1
MID. ATLANTIC	9	2,226	8,432	15	355	205	13	685	5	13	3,045	5
Upstate N.Y.	6	1,417	3,853	3	113	44	8	228	5	11	545	2
N.Y. City	3	377	753	3	81	55	–	158	–	1	142	–
N.J.	–	74	197	9	70	50	–	142	–	1	1,613	–
Pa.	–	358	3,629	–	91	56	5	157	–	–	745	3
E.N. CENTRAL	23	11,189	11,596	3	225	181	74	6,014	18	28	8,555	3
Ohio	1	494	1,861	–	72	64	48	1,139	2	5	1,382	1
Ind.	–	213	4,358	–	39	14	–	339	–	–	612	1
Ill.	12	1,192	1,841	–	30	39	7	1,923	16	12	1,761	1
Mich.	6	7,800	1,081	1	69	48	5	1,476	–	4	3,237	–
Wis.	4	1,490	2,455	2	15	16	14	1,137	–	7	1,563	–
W.N. CENTRAL	7	409	9,528	3	76	64	6	1,990	–	7	693	8
Minn.	–	38	2,634	2	23	19	–	22	–	1	130	2
Iowa	2	57	4,316	–	5	9	4	157	–	3	65	–
Mo.	2	17	1,047	–	30	24	–	1,173	–	3	110	1
N. Dak.	3	202	28	–	3	1	–	17	–	–	82	–
S. Dak.	–	–	75	–	3	4	–	7	–	–	112	1
Nebr.	–	5	214	–	–	2	–	25	–	–	34	–
Kans.	–	90	1,214	1	12	5	2	589	–	–	160	4
S. ATLANTIC	37	5,270	4,682	13	521	350	30	914	3	6	1,064	17
Del.	–	7	22	–	16	22	–	56	–	1	38	–
Md.	–	51	372	–	37	22	8	80	–	–	7	2
D.C.	–	1	14	–	2	1	–	2	–	–	1	–
Va.	–	2,830	2,751	4	63	34	6	183	1	–	247	1
W. Va.†	1	1,063	262	2	15	9	2	184	–	4	334	–
N.C.	–	122	65	3	98	75	1	76	2	–	196	3
S.C.	–	199	156	4	37	36	–	17	–	–	29	4
Ga.	NA	34	768	–	58	50	NA	70	NA	NA	27	–
Fla.†	36	963	272	–	195	101	13	246	–	1	185	7
E.S. CENTRAL	–	1,431	2,036	5	165	159	11	1,193	3	4	528	5
Ky.	–	122	1,191	–	30	32	8	223	3	2	146	2
Tenn.	–	961	729	1	42	42	1	454	–	1	207	–
Ala.	–	101	78	–	49	53	–	430	–	–	22	–
Miss.	–	247	38	4	44	32	2	86	–	1	153	3
W.S. CENTRAL	40	1,248	2,159	3	295	293	41	1,852	5	6	958	14
Ark.	–	16	29	–	23	18	–	606	1	–	58	1
La.	–	344	80	1	120	134	–	65	–	–	486	1
Okla.	–	15	67	–	17	14	–	4	–	1	17	3
Tex.	40	873	1,983	2	135	127	41	1,177	4	5	397	9
MOUNTAIN	–	263	2,543	–	46	39	3	433	–	–	222	3
Mont.	–	105	1,163	–	3	5	–	146	–	–	18	–
Idaho	–	1	163	–	5	7	–	20	–	–	2	1
Wyo.	–	–	19	–	–	2	–	1	–	–	–	–
Colo.	–	37	504	–	3	1	1	102	–	–	49	1
N. Mex.†	–	–	257	–	8	10	1	17	–	–	3	–
Ariz.	–	56	323	–	15	10	1	20	–	–	99	–
Utah	–	44	21	–	6	3	–	119	–	–	38	1
Nev.	–	20	93	–	6	1	–	8	–	–	13	–
PACIFIC	266	1,276	10,436	7	286	193	20	882	4	37	1,306	14
Wash.	43	309	558	–	44	27	4	198	–	5	124	1
Oreg.	216	364	367	–	29	18	2	119	–	13	139	–
Calif.	7	590	9,416	7	199	113	14	526	4	19	1,023	13
Alaska	–	1	60	–	9	32	–	12	–	–	8	–
Hawaii	–	12	35	–	5	3	–	27	–	–	12	–
Guam	NA	25	9	–	1	1	NA	38	NA	NA	4	1
P.R.	–	285	1,302	–	9	1	13	1,436	–	–	17	9
V.I.	–	6	14	–	1	–	–	1	–	–	1	–
Pac. Trust Terr.	NA	27	NA	NA	1	NA	NA	8	NA	NA	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: N.H. +1, Fla. +72; Men. inf.: W.Va. +1, N.Mex. +3; Rubella; Mass. +4.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 18, 1978, and November 19, 1977 (46th 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	643	26,133	123	15	463	4	987	19,452	897,939	885,221	446	19,193	18,091	2,793
NEW ENGLAND	23	858	2	–	78	–	13	443	22,863	23,889	6	520	717	96
Maine	1	65	–	–	–	–	–	65	1,896	1,797	–	9	26	76
N.H.	–	15	–	–	5	–	–	27	1,052	1,000	–	5	4	3
Vt.	1	36	–	–	1	–	–	15	555	600	–	3	7	2
Mass.	19	504	–	–	60	–	5	179	9,968	10,128	3	316	497	7
R.I.	1	61	–	–	4	–	1	56	1,660	1,885	1	23	8	–
Conn.	1	177	2	–	8	–	7	101	7,732	8,479	2	164	175	8
MID. ATLANTIC	112	4,342	5	4	64	–	55	1,999	96,867	92,266	79	2,544	2,580	97
Upstate N.Y.†	12	696	4	2	10	–	31	238	16,468	16,019	12	175	243	62
N.Y. City	51	1,588	1	2	40	–	4	866	36,613	35,734	52	1,767	1,623	–
N.J.	6	903	–	–	7	–	17	145	17,988	16,236	9	315	337	14
Pa.	43	1,155	–	–	7	–	8	750	25,798	24,277	6	287	377	21
E.N. CENTRAL	113	4,173	1	–	38	1	48	2,381	139,607	140,715	37	2,192	1,838	170
Ohio	6	760	1	–	6	1	22	587	36,471	37,462	8	397	430	19
Ind.	15	492	–	–	2	–	1	192	14,234	13,164	5	155	141	13
Ill.	54	1,570	–	–	17	–	25	777	44,339	45,387	20	1,387	943	57
Mich.†	28	1,134	–	–	13	–	–	662	32,368	32,424	4	197	225	7
Wis.	10	217	–	–	–	–	–	163	12,195	12,278	–	56	99	74
W.N. CENTRAL	21	838	27	–	20	1	48	960	45,288	46,146	6	408	397	565
Minn.	2	142	–	–	7	–	–	104	7,580	8,315	2	145	129	170
Iowa†	1	97	1	–	3	–	1	144	5,008	5,420	–	42	39	120
Mo.	11	371	22	–	5	–	23	469	19,990	19,038	4	133	152	75
N. Dak.	–	31	–	–	–	–	1	18	822	863	–	3	3	95
S. Dak.	–	65	–	–	–	–	7	28	1,542	1,401	–	3	9	69
Nebr.†	–	23	–	–	1	1	11	71	3,264	3,934	–	13	25	6
Kans.†	7	109	4	–	4	–	5	126	7,082	7,175	–	69	40	30
S. ATLANTIC	151	5,592	9	1	61	1	531	5,122	218,394	217,418	115	5,073	4,525	415
Del.	–	50	–	–	3	–	5	99	3,098	3,033	–	10	19	3
Md.	18	844	5	–	11	–	105	611	28,042	26,785	10	385	300	–
D.C.	8	276	–	–	1	–	1	326	14,723	14,354	4	386	494	–
Va.†	11	582	4	–	5	1	111	638	21,240	22,776	13	426	487	13
W. Va.	1	212	–	–	7	–	11	75	2,987	2,967	1	28	3	12
N.C.	15	866	–	–	2	–	197	612	30,999	32,878	14	537	659	14
S.C.	14	474	–	1	10	–	56	325	21,382	20,491	3	258	220	103
Ga.	43	799	–	NA	4	NA	45	1,062	42,128	41,975	34	1,274	1,101	256
Fla.†	41	1,491	–	–	18	–	–	1,374	53,795	52,189	36	1,769	1,642	14
E.S. CENTRAL	56	2,474	7	–	9	–	180	1,894	76,163	78,576	20	1,006	711	142
Ky.	18	574	3	–	2	–	42	164	10,108	10,700	2	133	101	70
Tenn.	15	753	3	–	3	–	111	555	27,722	31,316	7	341	227	29
Ala.	23	599	1	–	3	–	13	687	21,893	21,369	4	172	150	43
Miss.	–	548	–	–	1	–	14	488	16,440	15,191	7	360	233	–
W.S. CENTRAL	80	3,078	58	2	47	1	97	2,160	119,876	111,846	48	3,043	2,603	830
Ark.	4	360	39	–	9	–	15	120	8,976	8,589	3	68	63	137
La.	15	544	6	–	4	–	1	336	19,428	16,680	7	638	602	21
Okla.†	18	309	9	–	5	–	54	273	11,311	10,873	–	81	72	169
Tex.	43	1,865	4	2	29	1	27	1,431	80,161	75,704	38	2,256	1,866	503
MOUNTAIN	12	774	10	–	20	–	11	702	34,398	35,852	13	413	373	112
Mont.	4	57	–	–	3	–	2	48	1,949	1,889	–	8	5	19
Idaho	–	30	3	–	5	–	3	27	1,405	1,643	–	13	12	–
Wyo.	–	14	2	–	–	–	1	10	849	835	–	9	3	–
Colo.	–	93	1	–	4	–	2	211	9,496	9,329	6	131	110	38
N. Mex.	3	126	–	–	2	–	–	128	4,988	5,286	–	76	76	25
Ariz.	4	354	1	–	4	–	1	132	8,822	9,892	–	91	142	23
Utah	–	35	3	–	1	–	–	34	1,864	2,160	1	13	10	7
Nev.	1	65	–	–	1	–	2	112	5,025	4,818	6	72	15	–
PACIFIC	75	4,004	4	8	126	–	4	3,791	144,483	138,513	122	3,994	3,947	366
Wash.†	NA	273	–	–	7	–	1	327	11,894	10,874	NA	214	237	2
Oreg.	3	156	1	–	1	–	2	191	9,873	9,511	6	152	126	12
Calif.	70	3,052	3	8	107	–	1	3,118	115,780	110,769	115	3,577	3,524	344
Alaska†	–	59	–	–	–	–	–	105	4,412	4,485	–	11	25	8
Hawaii	2	464	–	–	11	–	–	50	2,524	2,874	1	40	35	–
Guam	NA	53	–	NA	–	NA	–	NA	93	198	NA	–	2	–
P.R.	–	349	–	–	3	–	–	46	1,993	2,811	13	447	484	34
V.I.	–	4	–	–	2	–	–	4	183	190	–	16	9	–
Pac. Trust Terr.	NA	6	–	NA	–	NA	–	NA	32	NA	NA	–	NA	–

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. –1. Iowa –1, Kans. –1, Alaska +7; RMSF: Va. –1; GC: Wash. –2; Syphilis: Okla. +5, Wash. –1; An rabies: Ups NY +2, Neb. +1, Fla. +21.

TABLE IV. Deaths in 121 U.S. cities,* week ending November 18, 1978 (46th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P&I** TOTAL
	ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	705	468	158	38	21	31
Boston, Mass.	214	132	57	11	9	11
Bridgeport, Conn.	36	21	11	3	–	5
Cambridge, Mass.	26	20	6	–	–	1
Fall River, Mass.	24	19	4	1	–	–
Hartford, Conn.	55	34	14	5	1	–
Lowell, Mass.	31	19	8	4	–	2
Lynn, Mass.	30	20	8	1	–	–
New Bedford, Mass.	26	22	2	2	–	–
New Haven, Conn.	61	44	11	2	1	–
Providence, R.I.	59	37	12	4	6	5
Somerville, Mass.	12	8	2	2	–	–
Springfield, Mass.	38	23	7	1	2	1
Waterbury, Conn.	32	23	7	1	1	1
Worcester, Mass.	61	46	9	1	1	5
MID. ATLANTIC	2,113	1,359	513	116	70	96
Albany, N.Y.	46	29	11	1	4	2
Allentown, Pa.	21	16	5	–	–	–
Buffalo, N.Y.	133	84	33	5	10	8
Camden, N.J.	39	25	10	1	2	1
Elizabeth, N.J.	25	18	5	2	–	1
Erie, Pa.†	42	24	13	–	3	1
Jersey City, N.J.	35	28	5	1	1	–
Newark, N.J.	65	32	16	8	3	7
N.Y. City, N.Y.	1,342	860	320	81	44	52
Paterson, N.J.	41	22	14	3	1	2
Philadelphia, Pa.†	335	207	94	16	7	19
Pittsburgh, Pa.†	71	42	26	1	–	3
Reading, Pa.	43	30	11	1	–	5
Rochester, N.Y.	128	82	36	5	3	7
Schenectady, N.Y.	23	16	6	1	–	1
Scranton, Pa.†	28	17	9	–	1	–
Syracuse, N.Y.	94	62	24	3	–	3
Trenton, N.J.	35	24	8	2	1	1
Utica, N.Y.	20	14	6	–	–	2
Yonkers, N.Y.	23	17	3	2	1	4
E.N. CENTRAL	2,528	1,497	662	154	107	75
Akron, Ohio	54	31	15	2	4	–
Canton, Ohio	54	36	9	3	–	2
Chicago, Ill.	598	355	139	52	25	17
Cincinnati, Ohio	174	119	40	8	5	7
Cleveland, Ohio	177	87	61	9	14	2
Columbus, Ohio	132	79	35	8	2	5
Dayton, Ohio	121	71	37	4	3	3
Detroit, Mich.	314	173	89	24	13	10
Evansville, Ind.	47	33	8	3	3	1
Fort Wayne, Ind.	69	44	18	3	2	4
Gary, Ind.	22	9	5	4	1	–
Grand Rapids, Mich	77	48	17	6	3	3
Indianapolis, Ind.	169	99	48	8	7	–
Madison, Wis.	42	21	11	3	5	3
Milwaukee, Wis.	153	101	37	3	9	3
Peoria, Ill.	31	14	8	3	1	3
Rockford, Ill.	47	31	10	2	3	6
South Bend, Ind.	47	31	13	2	1	3
Toledo, Ohio	124	74	36	5	4	3
Youngstown, Ohio	76	41	26	2	7	–
W.N. CENTRAL	912	571	222	52	25	24
Des Moines, Iowa	88	61	12	11	–	–
Duluth, Minn.	41	32	7	1	–	2
Kansas City, Kans.	28	14	8	1	1	–
Kansas City, Mo.	118	70	30	7	5	1
Lincoln, Nebr.	41	31	10	–	–	1
Minneapolis, Minn.	122	78	28	7	6	5
Omaha, Nebr.	111	64	31	6	5	2
St. Louis, Mo.	209	130	53	7	7	7
St. Paul, Minn.	86	57	19	7	1	–
Wichita, Kans.	68	34	24	5	–	6

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P&I** TOTAL
	ALL AGES	>65	45-64	25-44	<1	
S. ATLANTIC	1,378	777	382	108	59	56
Atlanta, Ga.	114	58	38	13	–	4
Baltimore, Md.	329	190	96	23	13	8
Charlotte, N.C.	61	35	15	4	5	3
Jacksonville, Fla.	96	56	24	9	2	3
Miami, Fla.	149	82	48	11	2	3
Norfolk, Va.	69	38	20	4	1	8
Richmond, Va.	73	31	33	7	2	9
Savannah, Ga.	51	28	10	6	4	4
St. Petersburg, Fla.	98	81	11	2	3	2
Tampa, Fla.	77	52	14	6	2	7
Washington, D.C.	194	90	52	19	23	4
Wilmington, Del.	67	36	21	4	2	1
E.S. CENTRAL	753	438	197	52	34	28
Birmingham, Ala.	105	64	27	6	4	4
Chattanooga, Tenn.	56	31	12	3	3	5
Knoxville, Tenn.	60	42	11	5	–	–
Louisville, Ky.	114	69	32	4	4	6
Memphis, Tenn.	176	91	47	14	15	3
Mobile, Ala.	58	30	17	8	1	1
Montgomery, Ala.	56	37	13	1	4	2
Nashville, Tenn.	128	74	38	11	3	7
W.S. CENTRAL	1,297	714	339	112	64	37
Austin, Tex.	55	39	8	2	1	7
Baton Rouge, La.	47	28	13	3	–	3
Corpus Christi, Tex.	48	36	8	2	1	1
Dallas, Tex.	168	99	38	15	10	1
El Paso, Tex.	48	28	10	3	4	4
Fort Worth, Tex.	63	40	19	2	2	–
Houston, Tex.	346	155	96	48	17	6
Little Rock, Ark.	71	43	16	5	6	3
New Orleans, La.	167	88	53	11	8	–
San Antonio, Tex.	150	90	33	14	6	3
Shreveport, La.	60	28	20	4	6	2
Tulsa, Okla.	74	40	25	3	3	7
MOUNTAIN	611	366	147	42	27	19
Albuquerque, N.Mex.	49	29	8	4	2	1
Colo. Springs, Colo.	31	15	10	1	3	2
Denver, Colo.	166	97	43	18	3	2
Las Vegas, Nev.	46	22	16	2	4	4
Ogden, Utah	30	19	5	4	–	1
Phoenix, Ariz.	120	71	33	4	5	2
Pueblo, Colo.	25	18	6	1	–	5
Salt Lake City, Utah	52	34	5	3	7	1
Tucson, Ariz.	92	61	21	5	3	1
PACIFIC	1,748	1,075	420	118	65	51
Berkeley, Calif.	24	16	7	–	1	2
Fresno, Calif.	81	45	21	7	6	6
Glendale, Calif.	20	13	3	3	1	–
Honolulu, Hawaii	55	35	10	4	2	1
Long Beach, Calif.	82	46	25	5	5	1
Los Angeles, Calif.	480	294	109	40	14	14
Oakland, Calif.	67	45	11	5	3	3
Pasadena, Calif.	30	24	3	2	1	–
Portland, Oreg.	98	63	23	6	3	1
Sacramento, Calif.	76	46	18	5	2	3
San Diego, Calif.	111	59	31	7	6	–
San Francisco, Calif.	201	117	59	13	5	1
San Jose, Calif.	182	117	40	12	7	5
Seattle, Wash.	133	80	37	7	7	4
Spokane, Wash.	59	41	15	1	–	7
Tacoma, Wash.	49	34	8	1	2	3
TOTAL	12,045	7,265	3,040	792	472	417
Expected Number	10,734	6,597	2,703	664	409	361

*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.

DTP Vaccine Reactions — Montana

In November, 1977 the Montana State Department of Health and Environmental Sciences received complaints about unusually frequent and severe reactions after administration of a single manufacturer's DTP vaccine. These complaints prompted a series of retrospective telephone surveys in November 1977 and January and August 1978.

A single interviewer contacted parents of 227 children who had received DTP vaccine 1 to 5 weeks before the interview. The mean age of the children was 18 months (range: 2-60 months). The study included children from 4 different public clinics. Six different lots of DTP vaccine, produced by 2 manufacturers, had been administered. None of the children had received other injectable vaccines at the same visit, although all but 6 had also received oral polio vaccine.

A febrile reaction was defined as a history of fever beginning within 24 hours of injection and lasting more than 36 hours or, if measured, a temperature of 100.8 F (38.2 C). A local reaction was defined as local inflammation or ecchymosis at the injection site for more than 24 hours. The overall reaction rate included all children with either local or febrile reactions, or both. No sterile abscesses or neurologic reactions were observed. The most severe reactions reported by parents were in 3 children who had fever and marked local erythema, swelling, and ecchymosis lasting 3 to 4 days.

Overall reaction rates ranged from 5.7% (3 of 53 recipients) after Manufacturer A's lots "1" and "2," to 32.5% (13 of 40 recipients) after the same company's lot "3" (Table 1). The distribution of reaction rates by lots was significantly different from a random distribution ($p<.05$). When children less than 13 months old were considered alone, a similar pattern was seen, with reaction rates ranging from 1.8% (1 of 53) after Manufacturer A's lots "1" and "2," to 35.7% (10 of 28) after Manufacturer B's lot "4."

TABLE 1. Incidence of fever and/or local reactions following DTP vaccination, by clinic and vaccine used, Montana

Vaccine manufacturer	Lot number	Number of clinics	Total	Number of children with reaction	Reaction rate
A	"1" & "2"	2	53	3	5.7%
A	"3"	1	40	13	32.5%
B	"5"	1	33	5	15.2%
B	"4"	2	50	13	26.0%
B	"6"	1	51	11	21.6%

Manufacturer A's lot "3" was associated with a reaction rate of 55.6% (10 of 18) in children over 12 months of age, all of whom were receiving their fourth or fifth dose of DTP vaccine, and a reaction rate of 13.6% (3 of 22) in children aged 12 months or less, all receiving one of their first 3 doses ($p<.02$).

Reported by B Smith, RN, Flathead County Health Dept; MD Skinner, MD, State Epidemiologist, Montana State Dept of Health and Environmental Sciences; Immunization Div, Bur of State Services, Field Services Div, Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: CDC and other agencies which receive reports of adverse vaccine reactions have at 1 time or another received reports of similar adverse reactions to DTP vaccines from virtually every manufacturer. Variations in minor reaction rates in various DTP vaccine preparations should be interpreted in light of corresponding information about their protective efficacy. The pertussis component of the vaccine is thought to be responsible for most of the minor reactions (*1*) and is the most variable in potency; vac-

DTP Vaccine – Continued

cines with pertussis potencies between 8 and 36 mouse protection units* per total human dose (in a single test estimate) are considered acceptable by the Bureau of Biologics.

Potencies of the pertussis vaccine components of the vaccines of Manufacturers A and B, as determined by the mouse pertussis protection bioassay (*3*), are shown in Table 2.

TABLE 2. DTP vaccine efficacy as measured by mouse protection units

Vaccine manufacturer	Lot number	Mouse protection units/human dose
A	"1"	17.5
	"2"	8.9
	"3"	18.0
B	"4"	22.9
	"5"	28.0
	"6"	21.8

Pertussis vaccine potency measured in this manner is thought to correlate with vaccine efficacy (*2*). Whether the difference in mouse protection between 8.9 units/total human dose (in 1 of Manufacturer A's lots) and 28.0 units/total human dose (in 1 of Manufacturer B's lots), represents a significant increment in human vaccine efficacy is unknown. All the lots of DTP vaccine involved in this study met safety and potency standards set by the Bureau of Biologics (*3*).

Ideally, children should receive vaccines that have minimal side effects but offer maximum protection against infection. There has been concern that increasing the pertussis potency may increase the rate of minor reactions. Further data are needed to clarify this point. A vaccine reaction surveillance system, designed to collect these types of data from the local and state levels, is currently being established by CDC. In the interim, the regimen for use of the DTP vaccine as presently constituted—including a final dose prior to the seventh birthday (*4*)—continues to be recommended for all normal children.

References

1. Tuft L: Allergic reactions following immunization procedures. Arch Environ Health 13: 91-95, 1966
2. Medical Research Council: Vaccination against whooping-cough. Br Med J 1:994, 1959
3. Code of Federal Regulations, Title 21, Chapter 1, Parts 620.1-620.7, pp 51-54, 1977
4 MMWR 26:401-402, 444, 1977

*Mouse protection units are a numerical measure of the protective effect of a particular lot of pertussis vaccine as compared to the U.S. Standard Perutssis Vaccine. Groups of mice are given the vaccine in question and subsequently challenged intracerebrally with live pertussis organisms. Protection against subsequent neurologic disease or death is calculated in terms of the unit value of the standard vaccine.

Current Trends

Influenza – United States

Surveillance: It has been observed repeatedly in the United States that during influenza epidemics the number of deaths from pneumonia and influenza (P&I) exceeds expected values for several weeks (*1-3*). Therefore, as part of the regular influenza surveillance system, CDC obtains from 121 U.S. cities* reports of all deaths due to P&I to assess the extent and impact of influenza activity. The following is a general description of CDC's system of collecting, analyzing, and interpreting data on deaths due to P&I.

Each week, 121 cities in the United States relay mortality data by postcard to CDC's MMWR Statistical Activity. The numbers of deaths occurring in these cities are reported

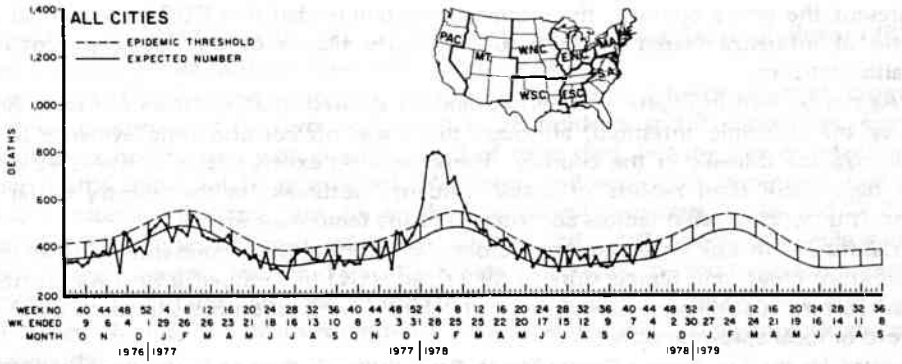
*Because of changes in reporting methods in 4 Pennsylvania cities, there are now 117 cities involved in the generation of the expected values used to monitor P&I activity. Data from these 4 cities appear in the tables but are not included in the totals for the United States and the Middle Atlantic Region.

Influenza — Continued

separately for all causes, for influenza, and for pneumonia. A death is attributed to pneumonia if it appears on Part 1(a) of the death certificate as an immediate cause of death or on Part 1(c) as an underlying cause of death. An influenza death is reported if influenza appears anywhere in Part 1 or 2 of the certificate, taking precedence over other causes of death. Deaths by age group are reported to CDC by the number reported to the health departments the previous week rather than by date of occurrence.

The reported numbers of deaths are shown as dots connected by line segments (Figure 1). The solid line is the expected number of deaths. The broken line is the epidemic threshold, which is set at a point where significant deviations from the expected number can be seen.

FIGURE 1. Pneumonia-influenza deaths in 121 United States cities



Each year before the respiratory disease season begins, equations to describe the expected number of P&I deaths are generated for each age group for the country and by geographic region. The expected mortality level is calculated by using weekly data for the previous 5-year period, omitting epidemic weeks, and fitting a regression model which includes terms to compensate for a general upward or downward linear trend, a semi-annual cycle (26 weeks), and an annual cycle (52 weeks) about a general mean value.

Equations are then used to evaluate current mortality statistics reported by the 121 cities in terms of previous reporting trends or expected number of deaths. Except for resulting in a slightly smoother curve and yielding a standard error, which forms the basis of the epidemic threshold, the regression procedure may be thought of as a means of averaging the deaths for corresponding weeks over the 5-year period and using the average as the expected number for the next year. The epidemic threshold is used to identify weeks in which the difference between the observed number of deaths and expected number of deaths cannot be explained by chance (*4*). Ninety-five percent of all the weekly reports should, according to the model, fall beneath the threshold line, which is 1.65 standard errors above the expected values (2-tailed test).

The statistical model generates expected values so that the sum of the differences between the expected and observed values will equal zero after epidemic weeks are eliminated. Two or more successive weeks falling above the threshold is interpreted as indicating a mechanism other than chance alone. (The probability that this would occur by chance alone is approximately 1 in 400 [0.05^2].) Experience has shown that when the observed numbers exceed the epidemic threshold for 2 or more weeks during the winter months, substantial influenza activity is nearly always occurring somewhere in the country. Heat waves in the summer have also been associated with increased numbers of P&I deaths above the epidemic threshold.

It should be emphasized that this surveillance method is based on data from 121 urban

Influenza – Continued

centers, most of whose populations exceed 100,000 and whose total population constitutes approximately one-third of the U.S. population. Thus, these numbers represent only an index of mortality due to P&I, but they nevertheless serve as the most readily available and sensitive indicator of influenza activity for the country.

As a part of CDC's effort to improve its influenza surveillance, a meeting of experts on influenza was convened in June to examine the 121-city mortality surveillance system. This group concluded that this method of surveillance provides a sound and useful current index of the extent and impact of influenza epidemics and should be continued. Because of the frequency of influenza epidemics in the last 10 years, the group recommended CDC explore what effect this may have on the derivation of expected numbers and subsequent determinations of excess deaths. Since the 121-city system data do not represent the entire country, the group also recommended that CDC base its final estimates of influenza-related mortality on mortality figures of the National Center for Health Statistics.

As can be seen in Figure 1, weeks 43 and 44 showed small numbers of excess deaths above the epidemic threshold, although there was no corroborating evidence of any influenza-like diseases in the country. There were no excess deaths in weeks 45 or 46, nor have there been reports of major influenza outbreaks in the country so far this year. It is not clear what factors contributed to the temporary excess.

California: In Los Angeles in late October, a 5-month-old boy presented with an upper respiratory illness and temperature of 39.2 C; an H1N1-like influenza virus was identified from culture specimens obtained from the child. Investigation has shown no secondary spread or local epidemic activity.

Reported by the Los Angeles County Health Dept; California Dept of Health Services; J Cherry, MD, University of California at Los Angeles; National Institute of Allergy and Infectious Diseases, National Institutes of Health; Immunization Div, Bur of State Services, Bur of Laboratories, MMWR Statistical Activity, Bur of Epidemiology, CDC.

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