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MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

MAY 15 1980

Health Status of the Cuban Refugees

Approximately 35,000 Cuban refugees have arrived in the United States since April 21, 1979. After initial preliminary screening and, if necessary, immediate medical attention, the refugees are routed to 1 of the 3 processing centers: Opa-Locka, Florida; Eglin Air Force Base near Fort Walton Beach, Florida; and Fort Chafee, Arkansas. The last 2 centers are primarily for refugees who do not have family or friends in southern Florida. Those who do (about 70%) are generally bussed to holding stations scattered throughout the Miami-Dade County area to await processing at Opa-Locka.

Processing is conducted by several federal, state, local, and volunteer agencies and bilingual volunteers. After processing, most refugees are reunited with family or friends for resettlement, primarily in southern Florida. Those refugees who have no sponsor are temporarily housed until the volunteer agencies can identify sponsors throughout the country.

Below are explanations of the screening programs underway and a summary of the preliminary findings from these programs at 1 center, Eglin Air Force Base.

Syphilis: Cuba has a syphilis control program based upon case identification and sexual-partner referral carried out in neighborhood health clinics. Control efforts are supplemented by selective serologic screening in other health-care settings. In 1977, the reported incidence rate of all stages of syphilis in Cuba was 39.3 cases per 100,000 population (1977 U.S. rate = 30.0 cases per 100,000 population.)

All refugees age 15 and older are being tested for syphilis with the Rapid Plasma Reagin (RPR) 18-mm, circle-card test. All persons with positive RPR card tests and/or lesions of primary or secondary syphilis receive 2.4 million units of Benzathine Penicillin G.* Those patients who have reactive tests but no lesions are referred to the state or local health departments in the localities where they plan to settle. State or local health departments are being informed of these refugees and should ensure that the refugees receive follow-up medical assessment and therapy (total dose, 7.2 million units of Benzathine Penicillin G) sufficient to cure asymptomatic neurosyphilis, unless otherwise indicated.

Immunization: Effective immunization programs are known to exist in Cuba. They reach high proportions of young children with diphtheria, tetanus, pertussis, oral polio, and BCG vaccines. Less emphasis is placed on measles immunization, and rubella and mumps vaccine are not routinely administered. Consequently, refugees 15 months of age to 19 years of age will routinely receive measles-mumps-rubella (MMR) vaccine at the time of screening, unless contraindications exist. An immunization record similar to that

*Inclusion of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

Health Status of Cuban Refugees – Continued

used with Southeast Asian refugees will be provided to the Cuban refugees with a copy sent to the health department at the refugee's destination. Information about other possible vaccine needs of refugees will be obtained to determine if any additional immunization programs will be required.

Tuberculosis: Preliminary data indicate that tuberculosis is not prevalent among the Cuban refugees. Tuberculosis screening consists of a 14 x 17 roentgenogram for all persons 15 years of age and older, with further medical work-up and sputum examinations for those with suspicious roentgenograms. Initial screening results are consistent with information obtained from the Pan American Health Organization showing a tuberculosis case rate for Cuba in 1977-78 of about 13 per 100,000, one of the lowest case rates reported in the Western Hemisphere.

Summary of findings at Eglin Air Force Base: Eglin Air Force Base has been serving as a screening center for Cuban refugees since May 3. As of May 12, the base was housing 10,000 refugees. Of these, 5,247 had been screened. By sex, 84.6% are males, and 15.4%, females; 70.8% are 21 through 40 years old.

Of 3,581 chest X rays performed, 7 (0.2%) have been classified as suspected active (Class A) tuberculosis, and 59 (1.6%) have been classified as other than active tuberculosis (Class B). All preliminary sputum smears on Class A patients have been negative, to date.

Nine patients are being detained for psychiatric reasons. Three cases of primary syphilis and 3 of secondary syphilis have been identified; results on screening RPRs are being analyzed.

In the first week, there were 78 hospital admissions at the base. The most common reason was asthma, which accounted for 17 (21.8%) admissions. Over 10% of the population is being seen on an outpatient basis each day, but most ailments are minor. The most common diagnosis is upper respiratory infection (10%-15% of visits).

Reported by U.S. Air Force Regional Hospital, Eglin Air Force Base, Florida; Immunization Div, Tuberculosis Control Div, Venereal Disease Control Div, Bur of State Services; Field Services Div, Quarantine Div, Bur of Epidemiology, CDC.

Editorial Note: The data being gathered from several centers indicate that the health of the Cuban refugees is good. Illnesses in this population appear to be in miscellaneous categories that one would expect from any such large group of people.

International Notes

Follow-up on the Health Status of Kampuchean Refugees – Thailand, November 1979-February 1980

Through mid-February 1980, approximately 142,000 Kampuchean refugees had been brought together in the 3 Thai holding centers: Sakaeo, Kamput, and Khao I-Dang.

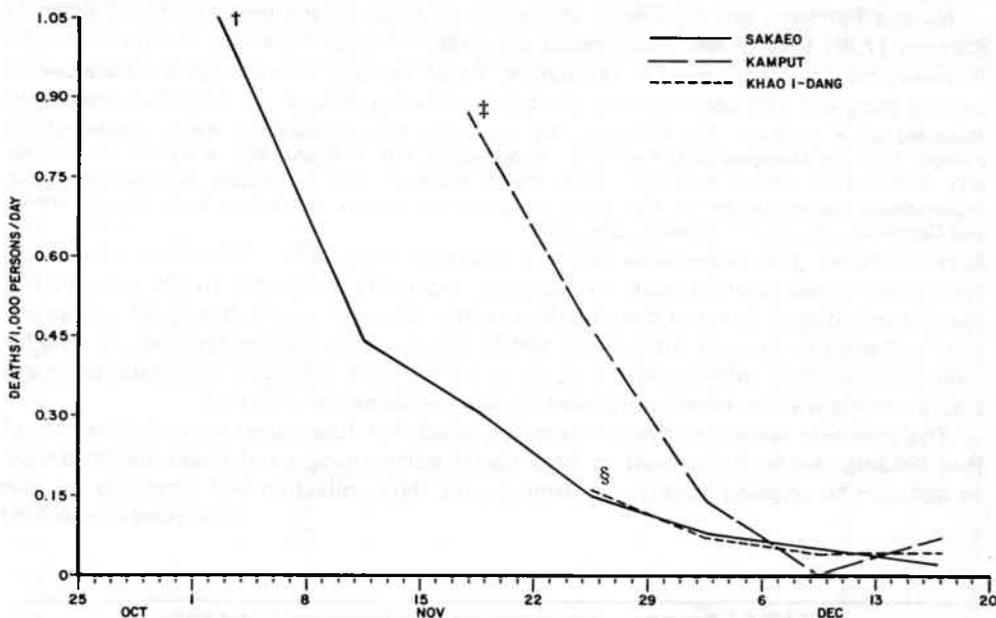
Since the initial reports (1,2), crude and age-specific mortality rates have decreased in each camp (Figure 1). By late December, they reached a level no greater than that estimated for Kampuchea before the present conflict (3); malaria, malnutrition, pneumonia, and diarrhea/dehydration were no longer major causes of death. Other health indicators also showed improvement.

The occurrence of measles (4), polio, and tetanus in 2 of the 3 holding centers has given added emphasis to completing the immunization program already underway.

Sakaeo: A complete census was undertaken during December and January at Sakaeo; 27,819 persons were counted, somewhat fewer than the earlier estimate (7). As of Jan-

Health Status of Kampuchean Refugees — Continued

FIGURE 1. Crude mortality rates, by 7-day periods,* Sakaeo, Kamput, Khao I-Dang, October 28-December 19, 1979



*Except where noted.

†This figure is for 10 days (October 28-November 7).

‡This figure is for 8 days (November 14-21).

§This figure is for 8 days (November 21-28).

uary 18, 109 infants were born there. Follow-up surveillance suggests that the nutritional status of the population has improved.

In association with mass treatment with pyrimethamine-sulfadoxine (Fansidar*), *Plasmodium falciparum* malaria prevalence (as measured by random survey) and malaria-associated deaths and hospitalizations markedly decreased by late January. As of the same period, the tuberculosis control program identified 137 persons with disease; they have begun treatment.

Kamput: The population of Kamput has grown more slowly; on January 30, it measured 2,634 persons. The crude mortality rate fell from 0.74 deaths/1,000 persons/day during November 15-28 to 0.07 deaths/1,000 persons/day by January 10-30. Mass pyrimethamine-sulfadoxine therapy was associated with a decrease in *P. falciparum* malaria prevalence (as measured by random survey) from 49% during November 23-30 to 19% during December 15-31. Malaria, responsible for 7 deaths during November 14-28, was not associated with any deaths from December 20-January 30.

Khao I-Dang: The population of Khao I-Dang reached 111,000 by February 1. These persons passed through an initial medical screening process described earlier (2). As of February 15, 537 infants were born in this camp. Nearly 3,000 other pregnant women were identified during entry screening and were being followed in antenatal clinics.

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Health Status of Kampuchean Refugees — Continued

During the last week of January, 1% of 200 randomly selected, weighed and measured children were below 80% of the median weight-for-height standard, suggestive of malnutrition; 10 weeks earlier, the rate had been 5%-8% (2).

Malaria has been less frequently diagnosed at Khao I-Dang than at either Sakaeo or Kamput (1,2); 57% of the cases found by survey through February 3 were caused by *P. vivax*; the remainder were *P. falciparum*. As of January 17, through the tuberculosis control program, 146 persons were identified as having disease and begun on treatment.

Reported by P. Erickson, RN, C. Knaub, RN, J. Sterling, RN, International Rescue Committee; V. Faveau, MD, Les Medecins Sans Frontières; M. Dubouloz, MD, M. Grabe, MD, B. Hansen, M. Koskela, MD, H. Nothdurft, MD, S. Peel, RN, J. Prag, MD, R. Russbach, MD, E. Wallstam, B. Zetterstrom, MD, International Committee of the Red Cross, Bangkok and Geneva; M. Buhner, Swiss Disaster Relief; and Quarantine Div, Bur of Epidemiology, CDC.

Editorial Note: The surveillance systems operating since early in the relief effort (1,2) have documented improvements in mortality, morbidity, and other health indicators in the Khmer refugees living in these holding centers. Data (including demographic information) collected by routine surveillance and by surveys have allowed rational planning for immediate, curative health needs and, equally important, for preventive health programs such as immunization, tuberculosis control, and supplementary feeding.

The screening system at Khao I-Dang (2), which has functioned from the first day of that holding center, has proved to be a useful epidemiologic and public health device. In addition to ongoing census and demographic data collection and screening for new

(Continued on page 225)

TABLE I. Summary — cases of specified notifiable diseases, United States
(Cumulative totals include revised and delayed reports through previous weeks.)

DISEASE	19th WEEK ENDING		MEDIAN 1975-1978	CUMULATIVE, FIRST 19 WEEKS		
	May 10, 1980	May 12, 1979*		May 10, 1980	May 12, 1979*	MEDIAN 1975-1979
Aseptic meningitis	51	61	47	1,111	910	701
Brucellosis	4	6	6	56	36	62
Chickenpox	7,234	7,893	6,131	108,807	127,188	112,473
Diphtheria	—	—	2	2	3	36
Encephalitis: Primary (arthropod-borne & unspec.)	7	9	11	211	172	224
Post-infectious	6	4	5	63	80	80
Hepatitis, Viral: Type B	306	279	279	5,873	5,073	5,287
Type A	549	596	613	9,619	10,752	11,911
Type unspecified	226	171	166	4,233	3,654	3,044
Malaria	39	12	8	521	161	140
Measles (rubeola)	805	379	1,250	7,669	7,199	13,288
Meningococcal infections: Total	83	41	43	1,231	1,225	854
Civilian	82	41	43	1,225	1,217	850
Military	1	—	—	6	8	8
Mumps	321	457	588	5,057	7,455	11,257
Pertussis	21	20	20	382	472	449
Rubella (German measles)	156	617	1,153	1,999	6,802	9,016
Tetanus	—	—	—	14	14	17
Tuberculosis	567	494	639	9,574	9,722	10,786
Tularemia	3	2	2	25	46	36
Typhoid fever	15	3	5	115	138	130
Typhus fever, tick-borne (Rky. Mt. spotted)	18	26	24	46	63	63
Veneral diseases:						
Gonorrhea: Civilian	20,259	17,159	18,214	344,673	344,413	339,811
Military	587	521	577	9,523	10,297	10,297
Syphilis, primary & secondary: Civilian	497	457	418	9,608	8,804	8,804
Military	4	2	8	128	108	112
Rabies in animals	170	125	76	2,242	1,652	1,032

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1980		CUM. 1980
Anthrax	—	Poliomyelitis: Total	4
Botulism	19	Paralytic (Oreg. 1)	2
Cholera (Calif. 1)	3	Prionocosis	27
Congenital rubella syndrome	32	Rabies in man	—
Leprosy (Tex. 1, Calif. 1)	61	Trichinosis (N.J. 5, Calif. 2)	33
Leptospirosis (Ga. 1, Calif. 1)	17	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	16
Plague	—		

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending May 10, 1980, and May 12, 1979 (19th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKEN-POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-infectious	B	A	Unspecified		
						1980	1979*	1980	1980	1980	1980		
UNITED STATES	51	4	7,234	-	2	7	9	6	306	549	226	39	521
NEW ENGLAND	1	-	860	-	-	1	1	1	15	13	10	1	33
Maine	-	-	176	-	-	-	-	-	-	-	-	-	7
N.H.	-	-	37	-	-	-	-	-	2	-	-	-	2
Vt.	-	-	49	-	-	-	-	-	-	1	-	-	-
Mass.	1	-	260	-	-	-	1	-	2	2	9	1	18
R.I.	-	-	78	-	-	-	-	-	2	-	-	-	2
Conn.	-	-	260	-	-	1	-	1	9	10	1	-	4
MID. ATLANTIC	11	-	716	-	1	3	-	-	34	29	15	-	75
Upstate N.Y.	4	-	313	-	-	2	-	-	6	10	5	-	12
N.Y. City	3	-	190	-	1	1	-	-	12	5	4	-	25
N.J.	4	-	NN	-	-	-	-	-	9	9	6	-	20
Pa.	-	-	213	-	-	-	-	-	7	5	-	-	18
E.N. CENTRAL	2	1	3,154	-	1	-	-	-	32	53	13	1	24
Ohio	-	1	450	-	-	-	-	-	8	4	3	-	4
Ind.	-	-	190	-	-	-	-	-	7	17	1	-	3
Ill.	-	-	723	-	-	-	-	-	4	4	2	-	5
Mich.	2	-	1,001	-	1	-	-	-	12	18	5	1	8
Wis.	-	-	790	-	-	-	-	-	1	10	2	-	4
W.N. CENTRAL	-	-	1,002	-	-	-	-	1	3	14	8	5	24
Minn.	-	-	1	-	-	-	-	-	3	5	-	-	9
Iowa	-	-	270	-	-	-	-	-	-	4	-	-	3
Mo.	-	-	79	-	-	-	-	-	-	1	6	3	6
N. Dak.	-	-	28	-	-	-	-	1	-	-	-	-	-
S. Dak.	-	-	32	-	-	-	-	-	-	1	-	1	1
Nebr.	-	-	36	-	-	-	-	-	-	-	-	1	3
Kans.	-	-	556	-	-	-	-	-	-	3	2	-	2
S. ATLANTIC	9	-	528	-	-	1	3	1	60	102	42	1	53
Del.	-	-	44	-	-	-	-	-	4	1	1	-	-
Md.	-	-	33	-	-	1	-	-	14	5	14	1	11
D.C.	-	-	2	-	-	-	-	-	3	1	-	-	1
Va.	-	-	1	-	-	-	-	-	3	9	1	-	17
W. Va.	-	-	69	-	-	-	-	-	1	3	-	-	2
N.C.	-	-	NN	-	-	1	-	-	3	1	3	-	4
S.C.	2	-	10	-	-	1	1	-	6	1	1	-	3
Ga.	-	-	2	-	-	-	-	-	12	24	-	-	4
Fla.	7	-	367	-	-	-	-	1	18	54	22	-	11
E.S. CENTRAL	4	-	150	-	-	-	1	1	19	27	1	2	6
Ky.	2	-	87	-	-	-	-	-	4	3	-	-	2
Tenn.	1	-	NN	-	-	-	-	1	10	12	1	-	-
Ala.	1	-	28	-	-	-	-	-	1	2	-	2	4
Miss.	-	-	35	-	-	-	1	-	4	10	-	-	-
W.S. CENTRAL	5	1	425	-	-	1	-	2	33	94	70	2	41
Ark.	-	1	4	-	-	-	-	1	2	9	1	1	3
La.	1	-	NN	-	-	-	-	-	8	15	10	-	14
Okla.	1	-	-	-	-	1	-	-	1	5	4	-	7
Tex.	3	-	421	-	-	-	-	1	22	65	55	1	17
MOUNTAIN	3	1	135	-	-	-	1	-	17	60	39	1	21
Mont.	-	-	54	-	-	-	-	-	-	4	-	-	-
Idaho	-	1	-	-	-	-	-	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	3	-	-	2
Colo.	3	-	76	-	-	-	1	-	2	11	2	1	10
N. Max.	-	-	-	-	-	-	-	-	-	3	-	-	1
Ariz.	-	-	NN	-	-	-	-	-	7	17	34	-	7
Utah	-	-	5	-	-	-	-	-	1	2	1	-	-
Nev.	-	-	-	-	-	-	-	-	7	20	2	-	1
PACIFIC	16	1	264	-	-	1	3	-	93	157	28	26	244
Wash.	-	-	207	-	-	-	-	-	2	17	2	1	26
Oreg.	3	-	1	-	-	1	2	-	3	8	1	1	14
Calif.	12	1	-	-	-	1	-	-	88	131	25	23	195
Alaska	1	-	-	-	-	-	-	-	-	1	-	-	2
Hawaii	-	-	56	-	-	-	-	-	-	-	-	1	7
Guam	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	1
P.R.	-	-	5	-	-	-	-	-	-	3	1	-	1
V.I.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
Pac. Trust Terr.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-

NN: Not notifiable.

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending May 10, 1980, and May 12, 1979 (19th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1980	CUM. 1980	CUM. 1979*	1980	CUM. 1980	CUM. 1979*	1980	CUM. 1980	1980	1980	CUM. 1980	CUM. 1980
UNITED STATES	805	7,669	7,199	83	1,231	1,225	321	5,057	21	156	1,999	14
NEW ENGLAND	17	489	201	2	71	50	17	468	-	13	151	-
Maine	3	24	4	1	3	1	11	240	-	6	63	-
N.H.	5	224	18	-	4	5	-	11	-	-	24	-
Vt.	7	203	71	-	8	3	1	5	-	-	-	-
Mass.	2	29	8	1	26	15	1	111	-	6	46	-
R.I.	-	2	100	-	6	2	1	15	-	-	7	-
Conn.	-	7	-	-	24	24	3	86	-	1	11	-
MID. ATLANTIC	272	2,297	679	31	220	177	96	619	5	34	271	2
Upstate N.Y.	70	461	334	11	78	65	4	69	5	12	120	1
N.Y. City	107	624	298	9	66	45	4	39	-	5	56	-
N.J.	33	440	29	5	39	47	1	65	-	-	55	-
P.a.	62	772	18	6	37	20	87	446	-	17	40	1
E.N. CENTRAL	130	1,126	1,698	1	129	125	131	2,044	-	16	489	-
Ohio	4	152	47	-	46	44	73	887	-	-	2	-
Ind.	15	65	129	-	22	29	3	75	-	9	184	-
Ill.	2	191	828	-	17	3	25	240	-	1	115	-
Mich.	5	177	443	1	36	34	21	634	-	2	102	-
Wis.	104	541	251	-	8	15	9	208	-	4	86	-
W.N. CENTRAL	90	921	880	6	48	41	20	176	5	3	145	2
Minn.	85	741	515	2	14	7	-	9	2	-	21	1
Iowa	-	-	14	-	5	5	5	29	-	-	3	-
Mo.	-	59	333	4	18	21	2	63	2	-	33	-
N. Dak.	-	-	6	-	1	1	-	3	-	-	5	-
S. Dak.	-	-	1	-	4	2	-	1	-	-	-	-
Nebr.	-	59	-	-	-	-	-	9	-	-	-	-
Kans.	5	62	11	-	6	5	13	62	1	3	83	1
S. ATLANTIC	58	1,386	1,041	14	300	306	16	499	5	40	210	3
Del.	-	1	-	-	2	5	-	32	-	-	-	-
Md.	-	32	6	4	31	20	2	180	-	24	25	-
D.C.	-	-	-	-	1	-	-	2	-	-	-	-
Va.	16	232	107	-	22	43	-	44	-	8	33	1
W. Va.	-	14	44	1	9	3	-	53	-	-	16	-
N.C.	2	95	97	3	60	44	1	70	-	-	40	-
S.C.	5	125	99	4	41	40	1	19	1	1	49	1
S.C.	11	610	173	1	59	50	-	1	2	-	-	-
Ga.	24	277	515	1	75	101	12	98	2	7	47	1
E.S. CENTRAL	84	222	92	11	121	98	19	644	3	4	68	1
Ky.	-	34	18	9	42	18	18	589	1	1	32	1
Tenn.	84	110	17	2	27	31	-	18	-	3	32	-
Ala.	-	17	42	-	32	23	-	10	-	-	3	-
Miss.	-	61	15	-	20	26	1	27	2	-	1	-
W.S. CENTRAL	45	571	744	9	138	202	5	163	2	8	75	2
Ark.	-	7	6	2	9	17	-	14	2	-	1	1
La.	-	9	197	2	48	85	-	48	-	1	6	-
Okla.	43	442	21	-	12	17	-	-	-	-	1	-
Tex.	2	113	520	5	69	83	5	101	-	7	67	1
MOUNTAIN	42	166	171	1	36	54	3	124	-	6	56	-
Mont.	-	1	43	-	1	4	-	41	-	3	6	-
Idaho	-	-	3	-	3	4	-	11	-	2	11	-
Wyo.	-	-	23	-	2	-	-	-	-	-	-	-
Calo.	3	8	24	-	11	3	2	26	-	-	2	-
N. Mex.	-	2	28	-	6	4	-	-	-	-	5	-
Ariz.	39	113	30	-	5	28	-	18	-	1	10	-
Utah	-	39	15	-	1	6	-	22	-	-	19	-
Nev.	-	3	5	1	7	5	1	6	-	-	3	-
PACIFIC	67	491	1,693	8	168	172	14	320	1	32	534	4
Wash.	8	135	911	3	29	25	2	96	-	-	40	-
Oreg.	-	-	48	-	32	12	1	42	-	9	37	-
Calif.	59	350	664	5	105	125	11	174	1	23	455	4
Alaska	-	3	15	-	2	3	-	4	-	-	1	-
Hawaii	-	3	55	-	-	7	-	4	-	-	1	-
Guam	NA	2	2	-	-	-	NA	3	NA	NA	-	-
P.R.	1	49	179	-	7	-	7	91	-	1	8	4
V.I.	NA	4	2	-	1	3	NA	1	NA	NA	-	-
Pac. Trust Terr.	NA	3	5	-	-	1	NA	1	NA	NA	1	-

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending
May 10, 1980, and May 12, 1979 (19th week)

REPORTING AREA	TUBERCULOSIS		TULA-REMI	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1980	CUM. 1980	CUM. 1980	1980	CUM. 1980	1980	CUM. 1980	1980	CUM. 1980	CUM. 1979*	1980	CUM. 1980	CUM. 1979*	CUM. 1980
UNITED STATES	567	9,574	25	15	115	18	46	20,259	344,673	346,413	497	9,608	8,804	2,242
NEW ENGLAND	9	276	-	-	5	-	1	527	8,917	8,889	6	266	161	15
Maine	1	19	-	-	-	-	-	19	533	622	-	3	3	14
N.H.	-	6	-	-	-	-	-	11	300	306	-	-	11	-
Vt.	-	9	-	-	-	-	-	9	224	169	-	3	-	-
Mass.	6	140	-	-	3	-	1	265	3,630	3,569	5	168	99	1
R.I.	-	33	-	-	1	-	-	23	520	731	-	11	5	-
Conn.	2	69	-	-	1	-	-	200	3,710	3,492	1	81	43	-
MID. ATLANTIC	81	1,629	1	6	33	-	2	2,745	38,007	36,513	79	1,368	1,363	4
Upstate N.Y.	21	311	-	-	5	-	-	465	6,887	5,734	4	106	102	2
N.Y. City	42	590	1	2	13	-	-	800	14,937	14,354	52	892	919	-
N.J.	6	345	-	3	6	-	1	993	7,072	7,033	9	181	186	2
Pa.	12	383	-	1	9	-	1	487	9,111	9,392	14	189	156	-
E.N. CENTRAL	72	1,375	1	-	10	-	-	2,946	54,393	53,093	67	927	1,228	309
Ohio	9	230	-	-	3	-	-	992	14,680	14,606	12	150	226	16
Ind.	9	158	-	-	-	-	-	265	5,382	4,412	5	83	70	34
Ill.	23	502	-	-	3	-	-	689	17,129	17,023	27	503	757	189
Mich.	25	408	1	-	3	-	-	753	11,873	12,338	19	149	138	-
Wis.	6	77	-	-	1	-	-	247	5,329	4,714	4	42	37	70
W.N. CENTRAL	26	320	5	-	2	-	2	874	15,316	16,420	10	107	120	682
Minn.	6	45	1	-	1	-	-	209	2,648	2,737	3	38	38	59
Iowa	1	32	-	-	-	-	-	95	1,685	2,094	-	4	19	142
Mo.	11	155	3	-	-	-	2	284	6,536	7,012	4	57	44	173
N. Dak.	5	17	-	-	-	-	-	10	221	288	-	-	-	60
S. Dak.	-	15	-	-	1	-	-	27	457	567	-	1	-	154
Nebr.	-	12	1	-	-	-	-	145	1,286	1,054	2	4	2	31
Kans.	3	44	-	-	-	-	-	104	2,483	2,668	1	3	17	63
S. ATLANTIC	154	2,181	7	1	17	13	26	5,740	83,734	81,763	102	2,279	2,113	144
Del.	2	30	-	-	1	-	-	74	1,139	1,302	-	5	12	-
Md.†	22	282	1	-	1	-	1	617	8,871	9,859	6	158	149	-
D.C.	4	118	-	-	3	-	-	270	5,915	4,927	4	157	153	-
Va.	23	254	-	1	3	3	4	383	7,095	7,809	10	198	210	3
W. Va.	7	88	-	-	1	-	-	66	1,057	1,184	-	8	30	3
N.C.	18	374	2	-	1	7	14	717	12,376	12,268	14	173	184	1
S.C.	17	185	-	-	2	3	5	442	7,971	7,224	6	113	104	23
Ga.	34	287	4	-	-	-	-	894	15,552	16,061	28	686	555	80
Fla.	27	563	-	-	5	-	2	2,277	23,758	21,129	34	781	716	34
E.S. CENTRAL	53	885	4	-	3	4	6	979	27,883	29,753	38	764	572	133
Ky.	16	196	-	-	1	-	-	234	4,070	3,899	4	59	61	57
Tenn.	16	281	4	-	-	3	5	212	9,789	10,257	17	302	240	66
Ala.	12	253	-	-	1	-	-	362	8,166	9,128	7	156	114	10
Miss.	9	155	-	-	1	1	1	171	5,858	6,469	10	247	157	-
W.S. CENTRAL	58	940	3	-	3	1	9	2,358	44,156	45,389	85	1,794	1,497	678
Ark.	7	90	3	-	-	-	4	168	3,223	3,739	-	61	45	87
La.	11	195	-	-	-	-	-	361	7,684	8,034	34	433	349	6
Okla.	-	86	-	-	1	1	3	294	4,381	4,040	1	29	30	113
Tex.	40	569	-	-	2	-	2	1,535	28,868	29,576	50	1,271	1,073	472
MOUNTAIN	14	257	2	-	7	-	-	818	13,279	13,438	11	220	158	58
Mont.	-	11	-	-	1	-	-	30	493	706	-	1	6	3
Idaho	-	9	1	-	-	-	-	19	631	558	1	14	12	-
Wyo.	-	13	-	-	-	-	-	25	388	303	-	7	3	-
Colo.	3	26	-	-	2	-	-	193	3,486	3,639	3	58	39	-
N. Mex.	1	55	-	-	1	-	-	99	1,687	1,703	-	41	29	17
Ariz.	5	114	1	-	2	-	-	288	3,689	3,704	-	62	42	38
Utah	5	16	-	-	1	-	-	27	628	687	-	5	3	-
Nev.	-	13	-	-	-	-	-	137	2,277	2,138	7	32	24	-
PACIFIC	100	1,711	2	8	35	-	-	3,272	58,988	59,155	99	1,883	1,592	219
Wash.	5	131	-	-	-	-	-	322	5,106	5,127	-	73	98	-
Oreg.	2	76	-	-	4	-	-	227	4,151	3,717	3	42	74	-
Calif.	93	1,466	2	8	31	-	-	2,596	47,553	47,409	90	1,698	1,371	176
Alaska	-	24	-	-	-	-	-	98	1,393	1,923	-	3	9	43
Hawaii	-	14	-	-	-	-	-	29	785	979	6	67	38	-
Guam	NA	11	-	NA	-	NA	-	NA	27	36	NA	-	-	-
P.R.	NA	48	-	-	-	-	-	NA	953	754	10	202	187	18
V.I.	NA	-	-	NA	-	NA	-	NA	54	63	NA	7	2	-
Pac. Trust Terr.	NA	7	-	NA	-	NA	-	NA	94	178	NA	-	-	-

NA: Not available.

All delayed reports and corrections will be included in the following week's cumulative totals.

TABLE IV. Deaths in 121 U.S. cities,* week ending
May 10, 1980 (19th 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			ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	695	464	153	36	23	36	S. ATLANTIC	1,075	630	296	60	56	29
Boston, Mass.	197	117	55	10	9	10	Atlanta, Ga.	143	82	49	5	2	-
Bridgeport, Conn.	40	29	5	4	1	-	Baltimore, Md.	171	103	44	11	10	2
Cambridge, Mass.	31	22	8	1	-	4	Charlotte, N.C.	57	33	13	4	3	1
Fall River, Mass.	37	31	5	1	-	-	Jacksonville, Fla.	96	54	28	5	4	5
Hartford, Conn.	62	38	14	4	4	1	Miami, Fla.	100	49	31	7	11	-
Lowell, Mass.	23	16	5	1	-	2	Norfolk, Va.	55	37	12	1	5	1
Lynn, Mass.	21	15	4	1	1	3	Richmond, Va.	59	39	15	4	1	4
New Bedford, Mass.	26	19	6	1	-	3	Savannah, Ga.	38	22	11	3	1	5
New Haven, Conn.	55	31	11	6	3	-	St. Petersburg, Fla.	72	62	7	1	-	2
Providence, R.I.	61	41	15	2	-	3	Tampa, Fla.	76	47	16	2	6	4
Somerville, Mass.	6	6	-	-	-	1	Washington, D.C.	162	82	55	12	8	5
Springfield, Mass.	48	27	13	1	4	5	Wilmington, Del.	46	20	15	5	5	-
Waterbury, Conn.	26	21	4	1	-	3							
Worcester, Mass.	62	49	8	3	1	1							
							E.S. CENTRAL	727	413	200	45	42	28
MID. ATLANTIC	2,660	1,694	609	173	92	106	Birmingham, Ala.	115	60	41	7	3	-
Albany, N.Y.	58	32	17	2	4	1	Chattanooga, Tenn.	69	43	14	7	3	4
Allentown, Pa.	25	23	2	-	-	-	Knoxville, Tenn.	57	38	16	1	1	1
Buffalo, N.Y.	110	67	21	7	9	3	Louisville, Ky.	110	70	24	5	4	5
Camden, N.J.	37	21	12	3	1	1	Memphis, Tenn.	169	87	50	10	18	7
Elizabeth, N.J.	32	25	5	2	-	-	Mobile, Ala.	84	46	20	6	7	5
Erie, Pa.†	34	24	8	-	2	1	Montgomery, Ala.	24	16	7	-	-	3
Jersey City, N.J.	45	25	12	3	3	-	Nashville, Tenn.	99	53	28	9	6	3
Newark, N.J.	53	24	12	3	9	3							
N.Y. City, N.Y.	1,491	977	326	105	32	49	W.S. CENTRAL	1,393	780	366	127	52	37
Paterson, N.J.	27	20	4	-	3	3	Austin, Tex.	51	32	11	6	-	3
Philadelphia, Pa.†	249	136	76	20	10	17	Baton Rouge, La.	60	38	11	3	-	5
Pittsburgh, Pa.††	133	80	35	7	6	5	Corpus Christi, Tex.	36	22	9	3	-	1
Reading, Pa.	47	29	13	4	-	5	Dallas, Tex.	200	107	60	16	9	3
Rochester, N.Y.	112	80	18	6	4	12	El Paso, Tex.	58	31	16	8	1	5
Schenectady, N.Y.	26	18	4	1	1	-	Fort Worth, Tex.	66	38	21	5	1	-
Scranton, Pa.†	25	21	2	1	-	2	Houston, Tex.	492	253	135	49	23	7
Syracuse, N.Y.	71	39	18	3	6	1	Little Rock, Ark.	45	25	14	2	2	-
Trenton, N.J.	44	24	15	4	1	1	New Orleans, La.	108	55	28	18	3	-
Utica, N.Y.	20	15	3	1	1	-	San Antonio, Tex.	140	88	31	11	4	5
Yonkers, N.Y.	21	14	6	1	-	2	Shreveport, La.	61	42	12	1	3	2
							Tulsa, Okla.	76	49	18	5	3	6
E.N. CENTRAL	2,168	1,328	539	132	97	55	MOUNTAIN	576	351	126	40	33	18
Akron, Ohio	59	32	21	2	3	-	Albuquerque, N. Mex.	55	32	12	7	-	4
Canton, Ohio	45	29	12	3	1	1	Colo. Springs, Colo.	40	29	8	1	2	5
Chicago, Ill.	530	300	134	41	28	5	Denver, Colo.	129	83	23	7	14	3
Cincinnati, Ohio	125	88	30	2	2	5	Las Vegas, Nev.	78	41	23	9	-	1
Cleveland, Ohio	191	110	52	14	9	3	Ogden, Utah	16	12	3	-	-	2
Columbus, Ohio	132	76	38	10	5	2	Phoenix, Ariz.	105	50	30	8	9	-
Dayton, Ohio	95	57	33	1	1	3	Pueblo, Colo.	19	16	2	1	-	2
Detroit, Mich.	271	158	61	27	17	10	Salt Lake City, Utah	54	26	14	3	8	1
Evanston, Ind.	57	36	16	4	-	-	Tucson, Ariz.	80	62	11	4	-	-
Fort Wayne, Ind.	41	34	3	3	1	6							
Gary, Ind.	11	7	3	-	1	-							
Grand Rapids, Mich.	52	39	7	1	5	5	PACIFIC	1,633	1,048	370	99	60	56
Indianapolis, Ind.	116	67	25	8	8	-	Berkeley, Calif.	30	22	6	2	-	-
Madison, Wis.	44	30	6	3	1	7	Fresno, Calif.	71	48	11	1	3	3
Milwaukee, Wis.	127	91	33	1	2	-	Glendale, Calif.	20	17	1	2	-	1
Peoria, Ill.	31	17	6	2	4	-	Honolulu, Hawaii	54	34	12	3	3	6
Rockford, Ill.	45	31	10	1	3	2	Long Beach, Calif.	89	54	29	2	3	3
South Bend, Ind.	30	20	8	1	1	2	Los Angeles, Calif.	353	231	74	23	9	14
Toledo, Ohio	103	66	23	7	3	3	Oakland, Calif.	64	39	18	3	2	5
Youngstown, Ohio	63	40	18	1	2	1	Pasadena, Calif.	39	30	4	3	2	3
							Portland, Oreg.	132	82	30	12	4	-
W.N. CENTRAL	663	421	158	47	23	19	Sacramento, Calif.	76	45	19	6	4	4
Des Moines, Iowa	65	49	11	4	1	-	San Diego, Calif.	152	95	38	8	8	3
Duluth, Minn.	21	17	2	1	1	1	San Francisco, Calif.	134	84	37	8	4	2
Kansas City, Kans.	44	24	12	5	1	1	San Jose, Calif.	159	95	40	8	9	7
Kansas City, Mo.	117	76	29	8	3	5	Seattle, Wash.	174	111	38	14	3	2
Lincoln, Nebr.	32	27	5	-	-	1	Spokane, Wash.	50	32	11	2	4	2
Minneapolis, Minn.	87	50	21	8	6	2	Tacoma, Wash.	36	29	2	2	2	1
Omaha, Nebr.	61	41	12	3	3	1							
St. Louis, Mo.	148	82	44	12	6	3							
St. Paul, Minn.	53	35	10	5	2	2							
Wichita, Kans.	35	20	12	1	-	3							
							TOTAL	11,590	7,129	2,817	759	478	384

*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.

††Data not available this week. Figures are estimates based on average percent of regional total.

Health Status of Kampuchean Refugees – Continued

entrants needing hospitalization, the screening system has allowed a number of long-term and short-term surveys to be done, among them ones on nutritional status, malaria screening, and anemia prevalence. The system is also useful for such programs as measles and other immunizations, vitamin A administration to high-risk groups, and registration and examination of pregnant women.

The approaching monsoon (rainy) season may again increase the risk of sanitation-related illnesses and malaria. Various alternatives for malaria control during the transmission season are under consideration.

References

1. MMWR 1979;28:545-6.
2. MMWR 1979;28:569-70.
3. American University. Area handbook for the Khmer Republic (Cambodia). Washington, DC: US Government Printing Office, 1973:19.
4. MMWR 1980;29:133-4.

Recommendation of the Public Health Service Immunization Practices Advisory Committee

Influenza Vaccine 1980-81

This annual revision of influenza vaccine recommendations updates information on influenza activity in the United States during 1979-80 and provides information on the vaccine to be available for the 1980-81 influenza season.

INTRODUCTION

Influenza virus infections occur every year in the United States, but they vary greatly in incidence and geographic distribution. Infections may be asymptomatic, or they may produce a spectrum of manifestations, ranging from mild upper respiratory infection to pneumonia and death. Influenza viruses A and B are responsible for only a portion of all respiratory disease. However, they are unique in their ability to cause periodic widespread outbreaks of febrile respiratory disease in both adults and children. Influenza epidemics are frequently associated with deaths in excess of the number normally expected. During the period from 1968 to 1980, more than 150,000 excess deaths are estimated to have occurred during epidemics of influenza in the United States.

Efforts to prevent or control influenza in the United States have been aimed at protecting those at greatest risk of serious illness or death. Observations during influenza epidemics have indicated that influenza-related deaths occur primarily among chronically ill adults and children and in older persons, especially those over age 65. Therefore, annual vaccination is recommended for these "high-risk" individuals.

Influenza A viruses can be classified into subtypes on the basis of 2 antigens: hemagglutinin (H) and neuraminidase (N). Four subtypes of hemagglutinin (H0-H3) and 2 subtypes of neuraminidase (N1,N2) are recognized among viruses causing widespread disease among humans. Immunity to these antigens reduces the likelihood of infection and reduces the severity of diseases in infected persons. However, there may be sufficient antigenic variation (antigenic drift) within the same subtype over time that infection or immunization with 1 strain may not induce immunity to distantly related strains. Although influenza B viruses have shown much more antigenic stability than influenza A viruses, antigenic variation does occur and was noted in the 1979-80 influenza season. As

Influenza Vaccine — Continued

a consequence, the antigenic composition of the most current strains is considered in selecting the virus strain(s) to be included in the vaccine.

The predominant strain of influenza virus in the United States during 1979-80 was B/Singapore/79, a variant of the prototype B/Hong Kong/72. Most reported influenza B outbreaks involved children and young adults, but outbreaks also occurred in older populations. Excess mortality due to pneumonia and influenza was noted in association with influenza B activity in 1979-80, confirming that infections with this virus can cause serious illness and death.

Isolates of influenza A virus of the H3N2 subtype, similar to A/Texas/77 and A/Bangkok/79, were obtained from sporadic cases of febrile respiratory disease. A/Bangkok/79 strains show significant antigenic drift from A/Texas/77. Influenza A/Brazil/78 (H1N1)-like viruses caused outbreaks of illness among young people.

INFLUENZA VIRUS VACCINE FOR 1980-81

Influenza vaccine for 1980-81* will consist of inactivated trivalent preparations of antigens representative of influenza viruses expected to be prevalent: A/Brazil/78 (H1N1), A/Bangkok/79(H3N2), and B/Singapore/79. The formulation will contain 7 micrograms of hemagglutinin of each antigen in each 0.5 ml dose. Persons 28 years and older will require only 1 dose. Because of lack of previous contact with H1N1 strains, persons less than 28 years of age who did not receive at least 1 dose of the 1978-79 or 1979-80 trivalent vaccine will require 2 doses of the 1980-81 vaccine. Those who received the 1978-79 or 1979-80 vaccine will require only 1 dose. The vaccine will be available as whole virion (whole-virus) and subvirion (split-virus) preparations. Based on past data, split-virus vaccines have been associated with somewhat fewer side effects than whole-virus vaccines in children. Thus, only split-virus vaccines are recommended for persons less than 13 years of age.

VACCINE USAGE

General Recommendations

Annual vaccination is strongly recommended for all individuals at increased risk of adverse consequences from infections of the lower respiratory tract. Conditions predisposing to such risk include (1) acquired or congenital heart disease associated with altered circulatory dynamics, actual or potential (for example, mitral stenosis, congestive heart failure, or pulmonary vascular overload); (2) any chronic disorder with compromised pulmonary function, such as chronic obstructive pulmonary disease, bronchiectasis, tuberculosis, severe asthma, cystic fibrosis, neuromuscular and orthopedic disorders with impaired ventilation, and residual pulmonary dysplasia following the neonatal respiratory distress syndrome; (3) chronic renal disease with azotemia or the nephrotic syndrome; (4) diabetes mellitus and other metabolic diseases with increased susceptibility to infection; (5) chronic, severe anemia, such as sickle cell disease; and (6) conditions which compromise the immune mechanism, including certain malignancies and immunosuppressive therapy.

Vaccination is also recommended for older persons, particularly those over age 65, because excess mortality in influenza outbreaks occurs in this age group.

In considering vaccination of persons who provide essential community services or who may be at increased risk of exposure, such as medical care personnel, the inherent benefits, risks, and cost of vaccination should be taken into account.

Table 1 summarizes vaccine and dosage recommendations by age group for 1980-81.

*Official Name: Influenza Virus Vaccine, Trivalent.

*Influenza Vaccine — Continued***TABLE 1. Influenza vaccine* dosage, by age, 1980-81**

Age group	Product	Dosage (ml)	Number of doses
28 years and older	whole virion (whole virus) or subvirion (split virus)	0.5	1
13-27 years	whole virion (whole virus) or subvirion (split virus)	0.5	2†
3-12 years	subvirion (split virus)	0.5	2†
6-35 months‡	subvirion (split virus)	0.25	2†

* Contains 7 µg each of A/Brazil/78 hemagglutinin antigens in each 0.5 ml.

† 4 weeks or more between doses; both doses essential for good protection, unless the individual received at least 1 dose of 1978-79 or 1979-80 vaccine. In latter instance, 1 dose is sufficient.

‡ Based on limited data. Since the likelihood of febrile convulsions is greater in this age group, special care should be taken in weighing relative risks and benefits.

Use in Pregnancy

Only in the pandemics of 1918-19 and 1957-58 has strong evidence appeared relating influenza infections to increased maternal mortality. Although several studies have reported an increased risk of congenital malformations and childhood leukemia among children born to women who had influenza infection during pregnancy, other studies have not shown an increased risk; the issue is not settled.

Physicians prudently limit prescription of drugs and biologics for pregnant women. However, no evidence has been presented to suggest that influenza vaccination of pregnant women poses any special maternal or fetal risk. Furthermore, because influenza vaccine is an inactivated viral preparation, it does not share the theoretical risks that impel caution in the use of live-virus vaccines. Taking the above uncertainties into account, physicians should evaluate pregnant women for influenza immunization according to the same criteria applied to other persons. (See VACCINE USAGE—General Recommendations.)

SIDE EFFECTS AND ADVERSE REACTIONS

Recent influenza virus vaccines have been associated with few side effects. Local reactions, consisting of redness and induration at the site of injection lasting 1 or 2 days, have been observed in less than one-third of vaccinees. Three types of systemic reactions to influenza vaccines have been described:

1. Fever, malaise, myalgia, and other systemic symptoms of toxicity, although infrequent, occur more often in children and others who have had no experience with influenza viruses containing the vaccine antigen(s). These reactions, which begin 6-12 hours after vaccination and persist 1-2 days, are usually attributed to the influenza virus itself (even though it is inactivated) and constitute most of the side effects of influenza vaccination.

2. Immediate responses, presumably allergic, such as flare and wheal or various respiratory expressions of hypersensitivity, occur extremely rarely after influenza vaccination. They probably derive from sensitivity to some vaccine component, most likely residual egg protein. Although current influenza vaccines contain only a small quantity of egg protein, on rare occasions they can provoke hypersensitivity reactions. Individuals with anaphylactic hypersensitivity to eggs should not be given influenza vaccine. This

Influenza Vaccine — Continued

would include persons who, upon ingestion of eggs, develop swelling of the lips or tongue or experience acute respiratory distress or collapse.

3. Guillain-Barré syndrome (GBS) is an uncommon illness characterized by ascending paralysis that is usually self-limited and reversible. Though most persons with GBS recover without residual weakness, approximately 5% of cases are fatal. Before 1976, no association of GBS with influenza vaccination was recognized. That year, however, GBS appeared in excess frequency among persons who had received the A/New Jersey/76 swine influenza vaccine. For the 10 weeks following vaccination, the excess risk was found to be approximately 10 cases of GBS for every million persons vaccinated—an incidence 5-6 times higher than that in unvaccinated persons. Younger persons (under 25 years) had a lower relative risk than others and also had a lower case-fatality rate. Analysis of data from GBS surveillance during the 1978-79 influenza season and provisional data from the 1979-80 influenza season suggest that in contrast to the 1976 situation, the risk of GBS in vaccinees was not significantly higher than that in non-vaccinees. Nonetheless, persons who receive influenza vaccine should be made aware of this possible risk as compared with the risk of influenza and its complications.

SELECTED BIBLIOGRAPHY

Clinical studies on influenza vaccines—1976. (A conference held at the National Institutes of Health, Bethesda, Maryland, January 20-21, 1977.) *J Infect Dis* 1977;136 (Suppl): S345-S742.

Dowdle WR, Coleman MT, Gregg MB. National history of influenza type A in the United States, 1957-1972. *Prog Med Virol* 1974;17:91-135.

Eickhoff TC. Immunization against influenza: rationale and recommendations. *J Infect Dis* 1971; 123:446-54.

Kilbourne EB, ed. The influenza viruses and influenza. New York: Academic Press, 1975.

Leneman F. The Guillain-Barré syndrome. *Arch Intern Med* 1966;118:139-44.

Parkman PD, Galasso GH, Top FH, Noble GR. Summary of clinical trials of influenza vaccines. *J Infect Dis* 1976;134:100-7.

Schonberger LB, Bregman DJ, Sullivan-Bolyai JZ, et al. Guillain-Barré Syndrome following vaccination in the National Influenza Immunization Program, United States, 1976-1977. *Am J Epidemiol* 1979;110:105-23.

Wright PF, Dolin R, LaMontagne JR. Summary of clinical trials of influenza vaccines II. *J Infect Dis* 1976;134:633-8.

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