CENTERS FOR DISEASE CONTROL

February 27, 1981 / Vol. 30 / No. 7

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

Current Trends

Measles — United States

For 24 weeks of 1980, fewer than 100 cases of measles per week were reported in the United States. Moreover, for 19 of these weeks, fewer than 50 cases per week were reported. This low incidence has occurred in only 5 other weeks since measles surveillance began. Data from the period beginning August 10, 1980, and ending February 21, 1981, indicate that the trend is continuing: fewer than 100 cases were reported for each week during this 27-week period. Such an extended period of low measles activity is particularly striking in view of the increased surveillance for measles carried out in many states during the past year as part of the initiative to eliminate measles by October 1, 1982. The previous record low was in 1979, when 12 consecutive weeks of fewer than 100 reported measles cases occurred.

To summarize the weekly reporting of measles during the countdown period, the MMWR will periodically publish a table showing the following information: the number of measles cases for the preceding week, the cumulative number of cases for 1981 at the end of that week, and the number of cases for comparable periods in 1960, 1970, and 1980 (Table 1).

Reported by Immunization Div, Center for Prevention Services, CDC.

TABLE 1. Measles—United States, February 21, 1981

Year	Week 7	Weeks 1-7
1981	38	248
1980	260	964
1970	978	6,469
1960	9,952	60,582

Epidemiologic Notes and Reports

Salmonellosis Traced To Marijuana — Ohio, Michigan

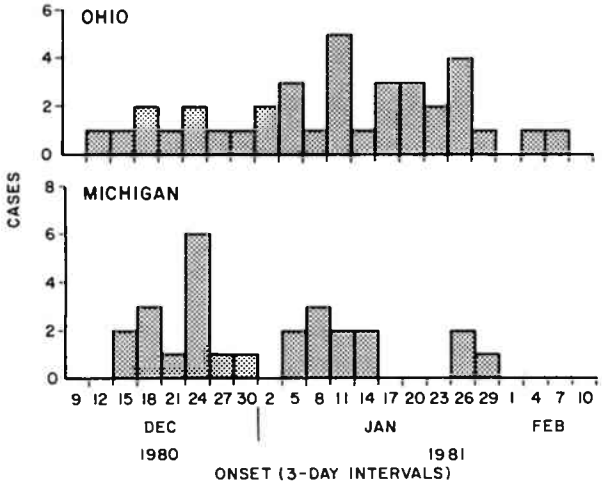
Ohio and Michigan recently reported separate outbreaks of salmonellosis that have been epidemiologically linked to marijuana. Samples of marijuana obtained from several households of patients in both states were subsequently found to be contaminated with *Salmonella muenchen*, the organism isolated from all 62 patients. This is the first outbreak of salmonellosis in which marijuana has been found to be the source of infection.

From December 12, 1980 to February 4, 1981, *S. muenchen* was isolated from 36

Salmonellosis – Continued

persons in eastern Ohio and from 26 persons in Michigan (Figure 1). In Ohio 26 of 36 (72%) of the ill persons were hospitalized. Diarrhea (86%), fever (74%), and abdominal pain (71%) were the most frequently encountered symptoms; 43% of the cases noted bloody diarrhea.

FIGURE 1. Reported cases of *Salmonella muenchen* gastroenteritis, by date of onset, Michigan and Ohio, December 9, 1980-February 10, 1981



Because teenagers and young adults accounted for an unusually large number of the cases, a search for activities common to this age group was initiated. In Ohio, in the patient households of 12 of 16 (75%) children, 12 of 17 (71%) young adults, and 1 of 3 older adults, there was a history of marijuana use. In Michigan, where data were available from 17 patient households, a history of marijuana use was found in the households of 8 of 10 (80%) children and 5 of 7 (71%) young adults.

To test the hypothesis that marijuana was associated with *S. muenchen* infection, a case-control study was performed using 17 Michigan patients. All patients, their age- and residence-matched controls (2 each), and all household members older than 13 years in the families of cases and controls were interviewed. Patients were significantly more likely than their matched controls to live in households where marijuana was in current use ($p<.001$).

Samples of marijuana obtained from 3 of 5 households in Ohio and 1 of 6 in Michigan were found to be contaminated with *S. muenchen.*

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Editorial Note: Had Ohio and Michigan not serotyped their *Salmonella* isolates, it would not have been evident that these outbreaks were related. *S. muenchen* is in serogroup C_2, which contains *S. newport*, a common serotype; thus, serogrouping alone would not have been sufficient to suggest a common vehicle.

Although the saliva on shared marijuana cigarettes has been implicated in the spread

Salmonellosis – Continued

of hepatitis B, (*1*), this is the first instance reported to CDC in which marijuana was the source of infection.

In these outbreaks of salmonellosis, the precise mechanism of transmission is unknown. For the marijuana users the most likely route of infection was direct contact with the marijuana while preparing or smoking a cigarette. These patients may have been at additional risk because this drug has been shown to lower gastric acidity (*2*). Thus, a low dose of *Salmonella* organisms may have led to illness. The cases among children and other non-marijuana users indicate that secondary transmission probably occurred, although it is possible that these patients had direct contact with contaminated environmental sources.

There are 300-400 isolates of *S. muenchen* from humans reported to the CDC each year; it is one of the 20 most frequently reported serotypes. *S. muenchen* has been isolated from poultry, cattle, and swine. In this outbreak, the marijuana could have been contaminated with animal feces either at the time of cultivation or at the time of drying and storage. *Salmonella* organisms can tolerate dry conditions and are frequently isolated from soil and dust samples around poultry-rearing facilities.

The marijuana implicated in Michigan and Ohio almost certainly originated from a common source, but since using and distributing marijuana are illegal activities it is uncertain that details concerning the preparation or distribution of this contaminated product will be uncovered.

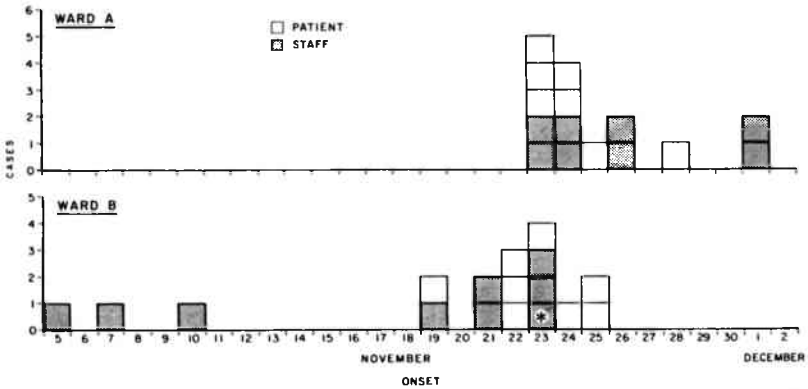
References

1. Cates W, Warren JW. Hepatitis B in Nuremberg, Germany. JAMA 1975;234:930-4.
2. Nalin DR, Rhead J, Rennels M, et al. Cannabis, hypochlorhydria, and cholera. Lancet 1978;ii: 859-62.

Influenza A in a Hospital – Illinois

In the period November 5-December 1, 1980, 32 cases of respiratory illness occurred among the patients and staff of 2 psychiatric wards in a Chicago hospital (Figure 2). The

FIGURE 2. Respiratory illness among patients and staff on 1 floor of a hospital, by date of onset, Chicago, November 5-December 2, 1980



*Worked on both wards.

Influenza – Continued

wards, A and B, were on the south and north sides, respectively, of a single floor. Fifteen cases (47%) occurred among patients, and 17 (53%) among staff.

Twenty-one cases (66%) had temperatures ≥100 F (37.7 C), and 5 (16%) had temperatures ≥102 F (38.8 C). More than 50% of the cases reported symptoms of cough, nasal congestion, sore throat, headache, and chills. The clinical attack rates were similar in patients (35%) and staff (32%). There was no significant clustering by ward, room assignment, or age. The dates of onset of illness suggest that illness was introduced into ward B by a staff member. Illness in ward A began simultaneously with the onset of symptoms in the only staff member who worked on both wards. Two of 10 throat swabs obtained from ill individuals yielded influenza A(H3N2) virus similar to A/Bangkok/79.

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Editorial Note: Nosocomial outbreaks of influenza are not uncommon, especially during periods of significant influenza activity in the surrounding community. Several measures may be considered as possible means of limiting the spread of influenza within hospitals: not admitting elective patients who have an uncomplicated respiratory-tract infection

(Continued on page 85)

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

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

DISEASE	7th WEEK ENDING		MEDIAN 1976-1980	CUMULATIVE, FIRST 7 WEEKS		
	February 21 1981	February 16 1980		February 21 1981	February 16 1980	MEDIAN 1976-1980
Aseptic meningitis	50	61	48	416	457	274
Brucellosis	1	5	5	10	27	24
Chickenpox	6,112	5,551	5,551	33,819	31,619	34,841
Diphtheria	–	–	4	3	–	12
Encephalitis: Primary (arthropod-borne & unspec.)	7	19	9	84	85	85
Post-infectious	1	3	3	10	17	17
Hepatitis, Viral: Type B	356	313	270	2,173	2,046	1,948
Type A	575	637	636	2,987	3,661	3,739
Type unspecified	184	238	212	1,361	1,375	1,198
Malaria	17	30	6	149	180	56
Measles (rubeola)	38	260	401	248	964	1,910
Meningococcal infections: Total	130	66	57	648	390	335
Civilian	130	65	56	647	386	333
Military	–	1	–	1	4	2
Mumps	136	385	385	695	1,742	2,599
Pertussis	25	19	19	114	134	177
Rubella (German measles)	51	88	285	299	422	1,107
Tetanus	–	–	–	8	5	5
Tuberculosis	453	460	475	2,947	2,904	3,374
Tularemia	2	1	–	13	12	12
Typhoid fever	8	4	6	56	25	41
Typhus fever, tick-borne (Rky. Mt. spotted)	2	1	1	9	7	7
Venereal diseases:						
Gonorrhea: Civilian	17,305	18,392	17,376	128,339	130,887	129,326
Military	433	637	494	3,708	3,819	3,819
Syphilis, primary & secondary: Civilian	575	449	449	3,850	3,539	3,241
Military	7	2	4	48	56	42
Rabies in animals	107	103	48	644	618	304

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1981		CUM. 1981
Anthrax	–	Poliomyelitis: Total	–
Botulism Mont. 1	9	Paralytic	–
Cholera	–	Psittacosis Upstate N.Y. 1	7
Congenital rubella syndrome	–	Rabies in man	–
Leprosy Wash. 1, Calif. 1, Hawaii 1	17	Trichinosis Conn. 1, Ohio 1	23
Leptospirosis Hawaii 1	5	Typhus fever, flea-borne (endemic, murine)	–
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 February 21, 1981 and February 16, 1980 (7th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKEN-POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-infectious	B	A	Unspecified		
	1981	1981	1981	1981	CUM. 1981	1981	1980	1981	1981	1981	1981	1981	CUM. 1981
UNITED STATES	50	1	6,112	-	3	7	19	1	356	575	184	17	149
NEW ENGLAND	-	-	397	-	-	-	2	-	5	7	5	3	10
Maine	-	-	8	-	-	-	-	-	1	1	-	-	1
N.H.	-	-	35	-	-	-	-	-	-	-	-	-	1
Vt.	-	-	41	-	-	-	-	-	1	2	-	-	-
Mass.	-	-	130	-	-	-	2	-	1	-	5	2	6
R.I.	-	-	55	-	-	-	-	-	1	-	-	-	1
Conn.	-	-	128	-	-	-	-	-	1	4	-	1	1
MID. ATLANTIC	1	-	185	-	-	-	5	-	23	26	7	2	15
Upstate N.Y.	-	-	100	-	-	-	2	-	2	2	-	1	5
N.Y. City	-	-	50	-	-	-	-	-	6	4	-	-	8
N.J.	-	-	NN	-	-	-	2	-	15	20	7	1	1
Pa.	1	-	35	-	-	-	1	-	NA	NA	NA	-	1
E.N. CENTRAL	6	-	2,677	-	-	2	1	-	48	41	18	-	5
Ohio	-	-	81	-	-	1	-	-	7	10	6	-	-
Ind.	-	-	276	-	-	-	1	-	10	9	7	-	1
Ill.	-	-	623	-	-	-	-	-	14	11	1	-	1
Mich.	6	-	1,205	-	-	1	-	-	15	11	4	-	3
Wis.	-	-	492	-	-	-	-	-	2	-	-	-	-
W.N. CENTRAL	1	1	944	-	-	-	-	-	11	21	7	2	6
Minn.	-	-	1	-	-	-	-	-	3	2	1	1	1
Iowa	1	-	396	-	-	-	-	-	2	13	4	1	2
Mo.	-	-	4	-	-	-	-	-	1	4	-	-	1
N. Dak.	-	-	39	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	1	28	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	12	-	-	-	-	-	3	1	2	-	-
Kans.	-	-	464	-	-	-	-	-	2	1	-	-	2
S. ATLANTIC	7	-	658	-	1	1	-	-	88	62	33	3	14
Del.	-	-	3	-	-	-	-	-	-	-	1	-	-
Md.	-	-	170	-	-	-	-	-	13	3	9	-	2
D.C.	-	-	-	-	-	-	-	-	1	-	-	-	-
Va.	2	-	53	-	-	-	-	-	19	8	11	2	6
W. Va.	-	-	78	-	-	-	-	-	5	6	2	-	-
N.C.	1	-	NN	-	-	1	-	-	8	10	6	-	-
S.C.	-	-	8	-	-	-	-	-	7	3	2	-	-
Ga.	1	-	23	-	-	-	-	-	15	9	-	1	3
Fla.	3	-	323	-	1	-	-	-	20	23	2	-	3
E.S. CENTRAL	14	-	186	-	-	1	1	-	20	19	1	-	-
Ky.	-	-	98	-	-	-	-	-	-	-	-	-	-
Tenn.	-	-	NN	-	-	-	1	-	11	5	-	-	-
Ala.	14	-	79	-	-	1	-	-	9	5	1	-	-
Miss.	-	-	9	-	-	-	-	-	-	9	-	-	-
W.S. CENTRAL	2	-	309	-	-	1	1	-	38	92	34	1	5
Ark.	-	-	2	-	-	-	-	-	2	5	2	-	1
La.	-	-	NN	-	-	-	1	-	24	17	8	-	1
Okla.	1	-	-	-	-	1	-	-	3	7	6	-	1
Tex.	1	-	307	-	-	-	-	-	9	63	18	1	2
MOUNTAIN	7	-	95	-	1	-	1	-	20	89	31	1	4
Mont.	-	-	-	-	1	-	-	-	1	1	-	-	-
Idaho	-	-	-	-	-	-	-	-	1	37	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	1	1	-	-
Colo.	2	-	90	-	-	-	1	-	4	13	-	-	1
N. Mex.	-	-	-	-	-	-	-	-	4	17	8	-	-
Ariz.	-	-	NN	-	-	-	-	-	3	12	16	-	2
Utah	1	-	2	-	-	-	-	-	3	3	5	-	-
Nev.	4	-	3	-	-	-	-	-	4	5	1	1	1
PACIFIC	12	-	661	-	1	2	8	1	103	218	48	5	90
Wash.	2	-	583	-	-	-	1	-	15	32	5	2	6
Oreg.	-	-	4	-	-	-	-	-	14	12	-	-	3
Calif.	7	-	-	-	-	2	6	1	73	173	43	3	81
Alaska	-	-	61	-	1	-	-	-	1	1	-	-	-
Hawaii	3	-	13	-	-	-	1	-	-	-	-	-	-
Guam	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
P.R.	1	-	7	-	-	-	-	-	-	1	7	-	2
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 February 21, 1981 and February 16, 1980 (7th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1981	CUM. 1981	CUM. 1980	1981	CUM. 1981	CUM. 1980	1981	CUM. 1981	1981	1981	CUM. 1981	CUM. 1981
UNITED STATES	38	248	964	130	648	390	136	695	25	51	299	8
NEW ENGLAND	–	7	72	7	46	15	4	28	–	5	43	–
Maine	–	–	–	3	5	1	–	4	–	4	27	–
N.H.	–	2	44	–	5	–	–	3	–	–	10	–
Vt.	–	1	26	–	–	1	–	1	–	–	–	–
Mass.	–	–	–	1	12	7	4	12	–	1	6	–
R.I.	–	–	1	–	3	–	–	3	–	–	–	–
Conn.	–	4	1	3	21	6	–	5	–	–	–	–
MID. ATLANTIC	3	68	186	8	67	54	8	67	2	–	40	1
Upstate N.Y.	1	39	51	1	20	29	–	17	–	–	15	–
N.Y. City	2	12	48	–	3	11	1	8	–	–	8	1
N.J.	–	7	14	6	28	9	1	14	–	–	15	–
Pa.	–	10	73	1	16	5	6	28	2	–	2	–
E.N. CENTRAL	13	20	107	13	68	47	39	209	5	12	66	1
Ohio	7	7	18	2	26	21	6	39	2	–	–	–
Ind.	–	–	8	1	9	9	4	30	–	6	24	–
Ill.	2	3	25	8	16	2	5	26	2	–	11	–
Mich.	4	10	29	2	14	11	12	79	1	1	9	1
Wis.	–	–	27	–	3	4	12	35	–	5	22	–
W.N. CENTRAL	2	2	94	5	23	11	10	54	1	1	15	2
Minn.	1	1	69	5	12	5	–	–	–	–	2	1
Iowa	–	–	–	–	6	–	1	18	–	–	–	–
Mo.	–	–	18	–	2	4	–	2	1	1	1	1
N. Dak.	–	–	–	–	–	1	–	–	–	–	–	–
S. Dak.	–	–	–	–	1	1	1	1	–	–	–	–
Nebr.	1	1	2	–	–	–	–	–	–	–	–	–
Kans.	–	–	5	–	2	–	8	33	–	–	12	–
S. ATLANTIC	11	59	268	40	172	93	18	102	4	9	29	1
Del.	–	–	–	–	4	–	–	2	–	–	–	–
Md.	–	–	1	1	6	10	3	16	–	–	–	–
D.C.	–	–	–	–	1	–	–	–	–	–	–	–
Va.	–	–	48	2	16	11	5	30	–	2	6	–
W. Va.	3	5	1	3	8	3	1	18	–	1	4	–
N.C.	–	–	1	4	20	17	–	3	1	–	2	–
S.C.	–	–	–	6	22	9	1	3	–	–	3	1
Ga.	5	30	166	5	29	20	4	11	2	3	5	–
Fla.	3	24	51	19	66	23	4	19	1	3	9	–
E.S. CENTRAL	–	1	72	13	56	38	6	26	1	2	6	–
Ky.	–	–	27	2	14	9	4	12	–	1	4	–
Tenn.	–	1	3	3	17	12	–	8	1	1	2	–
Ala.	–	–	6	7	16	12	2	5	–	–	–	–
Miss.	–	–	36	1	9	5	–	1	–	–	–	–
W.S. CENTRAL	2	19	43	33	129	42	5	32	–	4	21	1
Ark.	–	–	1	4	14	2	–	–	–	–	–	–
La.	–	–	2	23	28	12	–	3	–	1	2	–
Okla.	–	1	7	–	3	4	–	–	–	–	–	–
Tex.	2	18	33	6	84	24	5	29	–	3	19	1
MOUNTAIN	–	7	30	1	31	24	2	21	–	1	7	1
Mont.	–	–	–	–	1	1	–	–	–	1	1	–
Idaho	–	–	–	–	2	2	–	2	–	–	–	–
Wyo.	–	–	–	–	–	1	–	–	–	–	–	–
Colo.	–	–	2	–	13	7	–	9	–	–	3	–
N. Mex.	–	–	1	–	4	3	–	–	–	–	–	–
Ariz.	–	–	9	–	7	5	2	6	–	–	1	1
Utah	–	–	16	–	3	1	–	2	–	–	2	–
Nev.	–	7	2	1	1	4	–	2	–	–	–	–
PACIFIC	7	65	92	10	56	66	44	156	12	17	72	1
Wash.	–	–	15	1	9	10	16	53	3	1	15	–
Oreg.	–	–	–	–	3	5	15	25	–	3	3	–
Calif.	7	64	75	9	38	51	12	70	9	13	54	1
Alaska	–	–	–	–	2	–	–	1	–	–	–	–
Hawaii	–	1	2	–	4	–	1	7	–	–	–	–
Guam	NA	–	1	–	–	–	NA	–	NA	NA	–	–
P.R.	1	13	8	–	1	3	1	9	–	–	–	–
V.I.	NA	–	–	–	–	–	NA	–	NA	NA	–	–
Pac. Trust Terr.	NA	–	2	–	–	–	NA	–	NA	NA	–	–

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 February 21, 1981 and February 16, 1980 (7th week)

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1981	CUM. 1981	CUM. 1981	1981	CUM. 1981	1981	CUM. 1981	1981	CUM. 1981	CUM. 1980	1981	CUM. 1981	CUM. 1980	CUM. 1981
UNITED STATES	453	2,947	13	8	56	2	9	17,305	128,339	130,887	575	3,850	3,539	644
NEW ENGLAND	13	80	–	–	1	–	–	324	3,297	3,674	12	97	88	3
Maine	1	9	–	–	–	–	–	20	150	234	–	1	–	3
N.H.	–	1	–	–	–	–	–	22	129	127	–	3	–	–
Vt.	1	2	–	–	–	–	–	3	52	113	–	1	1	–
Mass.	7	48	–	–	1	–	–	100	1,281	1,406	10	56	47	–
R.I.	2	5	–	–	–	–	–	20	149	203	–	9	3	–
Conn.	2	15	–	–	–	–	–	159	1,536	1,591	2	27	37	–
MID. ATLANTIC	54	513	–	–	5	2	2	1,895	14,387	14,256	84	635	490	1
Upstate N.Y.	7	88	–	–	1	–	–	206	2,083	1,993	–	48	27	1
N.Y. City	21	197	–	–	4	2	2	900	5,625	6,037	62	398	348	–
N.J.	24	138	–	–	–	–	–	389	3,158	2,700	11	79	54	–
Pa.	2	90	–	–	–	–	–	400	3,521	3,526	11	110	61	–
E.N. CENTRAL	37	379	–	1	5	–	1	2,641	19,832	22,025	13	138	333	71
Ohio	8	65	–	1	1	–	1	1,313	8,951	5,810	9	49	57	3
Ind.	–	23	–	–	–	–	–	278	1,692	2,179	2	17	35	4
Ill.	29	173	–	–	4	–	–	249	2,905	6,999	–	23	186	39
Mich.	–	109	–	–	–	–	–	654	4,583	4,661	–	33	45	–
Wis.	–	9	–	–	–	–	–	147	1,701	2,376	2	16	10	25
W.N. CENTRAL	21	95	1	1	2	–	1	714	6,519	5,645	6	64	37	289
Minn.	–	13	–	1	1	–	–	107	1,018	1,089	–	17	11	52
Iowa	6	21	–	–	–	–	–	55	586	684	–	3	4	110
Mo.	5	29	1	–	–	–	1	286	2,979	2,199	4	36	21	20
N. Dak.	1	5	–	–	–	–	–	9	62	73	–	–	–	52
S. Dak.	3	8	–	–	1	–	–	34	181	191	–	–	–	24
Nebr.	3	6	–	–	–	–	–	47	476	502	1	3	1	13
Kans.	3	13	–	–	–	–	–	176	1,217	907	1	5	–	18
S. ATLANTIC	101	669	2	1	7	–	3	4,677	33,120	31,785	153	1,041	843	48
Del.	1	6	1	–	–	–	–	24	503	492	–	1	3	–
Md.	14	57	–	1	1	–	–	369	3,314	3,039	16	83	67	1
D.C.	3	50	–	–	1	–	–	376	2,220	2,341	7	88	62	–
Va.	7	65	–	–	–	–	–	261	3,100	2,680	9	97	81	9
W. Va.	6	32	–	–	3	–	–	44	426	444	–	1	3	2
N.C.	14	130	–	–	1	–	3	790	5,483	4,992	8	71	71	–
S.C.	13	52	1	–	–	–	–	388	2,921	3,273	8	76	31	1
Ga.	13	88	–	–	–	–	–	859	6,909	5,651	39	257	233	24
Fla.	30	189	–	–	1	–	–	1,566	8,244	8,873	66	367	292	11
E.S. CENTRAL	42	257	2	–	1	–	2	1,462	10,766	9,885	62	320	291	30
Ky.	12	69	2	–	–	–	–	153	1,347	1,644	3	15	15	8
Tenn.	18	88	–	–	–	–	1	436	3,893	3,694	26	124	118	18
Ala.	7	87	–	–	–	–	–	574	3,657	2,312	12	96	56	4
Miss.	5	13	–	–	1	–	1	299	1,869	2,235	21	85	102	–
W.S. CENTRAL	60	253	3	–	4	–	–	2,365	19,065	16,580	197	995	673	128
Ark.	4	17	–	–	–	–	–	168	1,112	1,216	–	12	25	29
La.	19	75	2	–	–	–	–	316	2,889	2,447	98	206	146	5
Okla.	13	42	–	–	1	–	–	207	1,819	1,729	2	21	9	17
Tex.	24	119	1	–	3	–	–	1,674	13,245	11,188	97	756	493	77
MOUNTAIN	19	84	5	2	4	–	–	804	4,873	4,864	13	97	76	10
Mont.	–	6	1	1	3	–	–	68	207	180	2	3	–	10
Idaho	–	4	1	–	–	–	–	25	210	249	–	5	3	–
Wyo.	–	1	–	–	–	–	–	6	118	145	–	1	3	–
Colo.	4	8	2	1	1	–	–	169	1,158	1,224	8	23	24	–
N. Mex.	3	15	–	–	–	–	–	115	636	717	–	15	12	–
Ariz.	9	36	–	–	–	–	–	271	1,556	1,212	–	17	20	–
Utah	–	2	1	–	–	–	–	46	248	253	–	–	4	–
Nev.	3	12	–	–	–	–	–	104	740	884	3	33	10	–
PACIFIC	106	617	–	3	27	–	–	2,423	16,480	22,173	35	463	708	64
Wash.	10	39	–	–	–	–	–	304	1,489	1,822	–	8	41	–
Oreg.	1	21	–	–	1	–	–	149	1,444	1,363	–	10	13	–
Calif.	95	548	–	3	24	–	–	1,862	12,679	18,078	35	430	642	58
Alaska	–	1	–	–	–	–	–	52	454	500	–	1	1	6
Hawaii	–	8	–	–	2	–	–	56	414	410	–	14	11	–
Guam	NA	–	–	NA	–	NA	–	NA	–	22	NA	–	–	–
P.R.	–	–	–	–	–	–	–	17	325	253	5	60	62	5
V.I.	NA	–	–	NA	–	NA	–	NA	–	21	NA	–	4	–
Pac. Trust Terr.	NA	–	–	NA	–	NA	–	NA	–	86	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 February 21, 1981 (7th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	≥65	45-64	25-44	<1	
NEW ENGLAND	783	531	175	36	24	54
Boston, Mass.	181	107	47	13	7	21
Bridgeport, Conn.	53	36	11	4	2	2
Cambridge, Mass.	19	13	6	–	–	4
Fall River, Mass.	36	26	9	–	–	–
Hartford, Conn.	94	60	19	6	6	1
Lowell, Mass.	21	19	2	–	–	–
Lynn, Mass.	24	22	2	–	–	1
New Bedford, Mass.	32	23	8	–	1	3
New Haven, Conn.	67	37	18	3	6	4
Providence, R.I.	74	53	16	4	1	5
Somerville, Mass.	7	6	1	–	–	1
Springfield, Mass.	50	31	15	2	–	5
Waterbury, Conn.	43	35	7	1	–	3
Worcester, Mass.	82	63	14	3	1	4
MID. ATLANTIC	2,608	1,764	578	156	48	107
Albany, N.Y.	73	42	23	4	2	–
Allentown, Pa.	30	20	10	–	–	–
Buffalo, N.Y.	100	67	26	4	2	5
Camden, N.J.	51	30	10	5	5	3
Elizabeth, N.J.	29	19	8	1	–	2
Erie, Pa.†	37	25	9	2	1	1
Jersey City, N.J.	34	24	3	5	1	–
Newark, N.J.††	57	28	16	6	2	2
N.Y. City, N.Y.	1,501	1,040	300	102	21	59
Paterson, N.J.	25	16	4	1	3	2
Philadelphia, Pa.†	204	118	65	13	3	13
Pittsburgh, Pa.†	77	46	24	5	1	5
Reading, Pa.	27	22	5	–	–	1
Rochester, N.Y.	129	90	32	3	2	4
Schenectady, N.Y.	30	22	7	1	–	–
Scranton, Pa.†	35	26	7	1	1	2
Syracuse, N.Y.	85	64	15	2	3	2
Trenton, N.J.	30	25	4	–	–	1
Utica, N.Y.	29	20	5	1	1	2
Yonkers, N.Y.	25	20	5	–	–	3
E.N. CENTRAL	2,481	1,574	579	173	79	85
Akron, Ohio	57	41	11	1	3	1
Canton, Ohio	39	26	9	2	2	2
Chicago, Ill.	595	349	140	66	19	14
Cincinnati, Ohio	119	80	29	6	2	10
Cleveland, Ohio	164	111	38	8	5	2
Columbus, Ohio	180	107	45	15	6	7
Dayton, Ohio	108	67	33	5	1	5
Detroit, Mich.	330	196	85	28	8	5
Evansville, Ind.	58	42	11	5	–	6
Fort Wayne, Ind.	63	45	11	2	2	2
Gary, Ind.	24	12	7	3	2	1
Grand Rapids, Mich.	80	54	19	4	2	5
Indianapolis, Ind.	169	108	37	9	7	5
Madison, Wis.	37	21	10	2	3	3
Milwaukee, Wis.	154	108	35	3	3	–
Peoria, Ill.	40	22	7	2	4	–
Rockford, Ill.	43	33	7	–	3	4
South Bend, Ind.	42	32	9	–	1	4
Toledo, Ohio	112	78	21	7	3	8
Youngstown, Ohio	67	42	15	5	3	1
W.N. CENTRAL	859	610	162	35	26	53
Des Moines, Iowa	86	55	20	6	2	4
Duluth, Minn.	33	23	7	1	2	4
Kansas City, Kans.	37	27	7	1	–	2
Kansas City, Mo.	149	102	32	6	5	8
Lincoln, Nebr.	45	41	2	–	–	4
Minneapolis, Minn.	108	77	18	3	6	9
Omaha, Nebr.	86	59	15	6	1	8
St. Louis, Mo.	152	103	38	3	4	2
St. Paul, Minn.	76	61	11	3	1	5
Wichita, Kans.	87	62	12	6	5	7

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	≥65	45-64	25-44	<1	
S. ATLANTIC	1,305	780	341	75	72	80
Atlanta, Ga.	143	72	32	15	22	7
Baltimore, Md.	155	103	39	2	6	7
Charlotte, N.C.	71	37	24	4	5	7
Jacksonville, Fla.	138	91	26	10	7	6
Miami, Fla.	131	84	30	9	3	3
Norfolk, Va.	50	21	21	4	2	6
Richmond, Va.	67	38	23	3	3	7
Savannah, Ga.	37	26	10	1	–	3
St. Petersburg, Fla.	111	88	16	3	2	5
Tampa, Fla.	97	54	29	3	5	9
Washington, D.C.	258	133	80	21	15	12
Wilmington, Del.	47	33	11	–	2	8
E.S. CENTRAL	843	520	220	52	32	60
Birmingham, Ala.	119	81	26	6	5	2
Chattanooga, Tenn.	58	37	17	3	1	7
Knoxville, Tenn.	49	31	14	2	–	1
Louisville, Ky.	132	85	32	6	8	19
Memphis, Tenn.	262	158	64	19	11	16
Mobile, Ala.	38	17	18	2	–	4
Montgomery, Ala.	50	32	13	3	2	1
Nashville, Tenn.	135	79	36	11	5	10
W.S. CENTRAL	1,183	734	288	68	41	75
Austin, Tex.	52	33	12	1	4	1
Baton Rouge, La.	48	31	7	6	1	3
Corpus Christi, Tex.	48	29	13	1	3	4
Dallas, Tex.	219	128	58	20	6	6
El Paso, Tex.	49	35	8	3	–	10
Fort Worth, Tex.	108	74	24	2	2	12
Houston, Tex.	110	60	30	7	3	4
Little Rock, Ark.	72	40	18	5	5	6
New Orleans, La.	184	115	51	10	4	8
San Antonio, Tex.	159	110	32	4	7	9
Shreveport, La.	51	32	16	1	2	3
Tulsa, Okla.	83	47	19	8	4	9
MOUNTAIN	594	369	144	36	26	33
Albuquerque, N. Mex.	53	36	13	2	–	2
Colo. Springs, Colo.	46	26	14	4	–	5
Denver, Colo.	93	60	19	4	8	3
Las Vegas, Nev.	88	47	25	10	3	–
Ogden, Utah	11	9	2	–	–	1
Phoenix, Ariz.	145	86	39	6	10	6
Pueblo, Colo.	27	19	4	3	–	8
Salt Lake City, Utah	46	28	12	2	3	2
Tucson, Ariz.	85	58	16	5	2	6
PACIFIC	1,815	1,181	401	116	67	96
Berkeley, Calif.	17	13	3	1	–	1
Fresno, Calif.	61	35	14	6	4	2
Glendale, Calif.	24	18	4	–	2	2
Honolulu, Hawaii	65	35	20	6	2	7
Long Beach, Calif.	91	62	20	7	2	2
Los Angeles, Calif.	474	302	113	33	14	22
Oakland, Calif.	68	42	16	5	3	5
Pasadena, Calif.	22	18	2	2	–	–
Portland, Oreg.	145	87	39	7	10	1
Sacramento, Calif.	86	52	19	4	7	6
San Diego, Calif.	128	82	30	8	3	4
San Francisco, Calif.	183	130	31	15	4	1
San Jose, Calif.	186	116	36	14	7	24
Seattle, Wash.	136	99	24	5	4	4
Spokane, Wash.	68	44	19	1	3	5
Tacoma, Wash.	61	46	11	2	2	10
TOTAL	12,471	8,063	2,888	747	415	643

*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 totals.

Influenza – Continued

during the influenza season; grouping together influenza patients that are in similar stages of illness; restricting visitors with respiratory illness from visiting high-risk patients; immunizing hospital employees against influenza; giving prophylactic treatment with amantadine hydrochloride for susceptible high-risk patients and hospital personnel during outbreaks proven to be caused by influenza A virus (*1*), and increasing hospital surveillance of patients and employees for influenza during the influenza season (*2*). In some hospital settings, such as psychiatric wards, measures such as postponing elective admissions and cohorting patients and personnel may not be feasible.

References

1. Hoffman PC, Dixon RE. Control of influenza in a hospital. Ann Intern Med 1977;87:725-8.
2. CDC. Influenza B in a hospital—West Virginia. MMWR 1980;29:310-2.

International Notes

Follow-up on Refugees – Somalia

In May 1980, high rates of protein energy malnutrition (PEM)* and child mortality were documented among refugee children in Somalia (*2*). Thereafter, although the health status of these children began to improve, the major factors contributing to the influx of refugees and PEM among them—the military conflict in the Ogaden Region of Ethiopia and the 2-year drought that has affected many areas of Somalia—continued.

In July 1980, CDC epidemiologists were sent to Somalia to assist the Somali Ministry of Health (MOH) Refugee Health Unit in assessing nutritional status, tuberculosis control, health surveillance, and camp feeding programs. Information collected in August from the camps and from central logistics personnel suggested that there had been major interruptions in food supply and distribution to all camps during June and July. The health impact of this situation was unknown.

In September follow-up nutritional surveys were conducted with the help of MOH personnel and refugees in nearly all settled camps in the 3 regions previously surveyed (Figure 3). In October nutritional surveys were undertaken in the camps in the Qorioley Region. For comparison, data were collected to evaluate the nutritional status of selected

TABLE 2. Prevalence of PEM in refugee and nonrefugee children ≤110cm, Somalia, May and September 1980

	May 1980		September 1980	
	Moderate*	Severe†	Moderate*	Severe†
Refugees				
Waqooyi Galbeed Region‡	22.2%	6.2%	6.0%	0.5%
Hiran Region	23.8%	3.7%	1.0%	8.0%
Gedo Region	19.2%	2.5%	15.0%	3.0%
Nonrefugees	—	—	3.7%	0.2%

*Moderate PEM: 71%-80% of median weight for height.
†Severe PEM: ≤70% of median weight for height.
‡Excluding Las Dhure camp, which had a prevalence of 30.0% moderate and 9.4% severe PEM.

*Using a weight-for-height reference developed by CDC and the National Center for Health Statistics (*1*). Moderate malnutrition = 71%-80% of the reference median; severe = ≤70% of the reference median.

Refugees – Continued

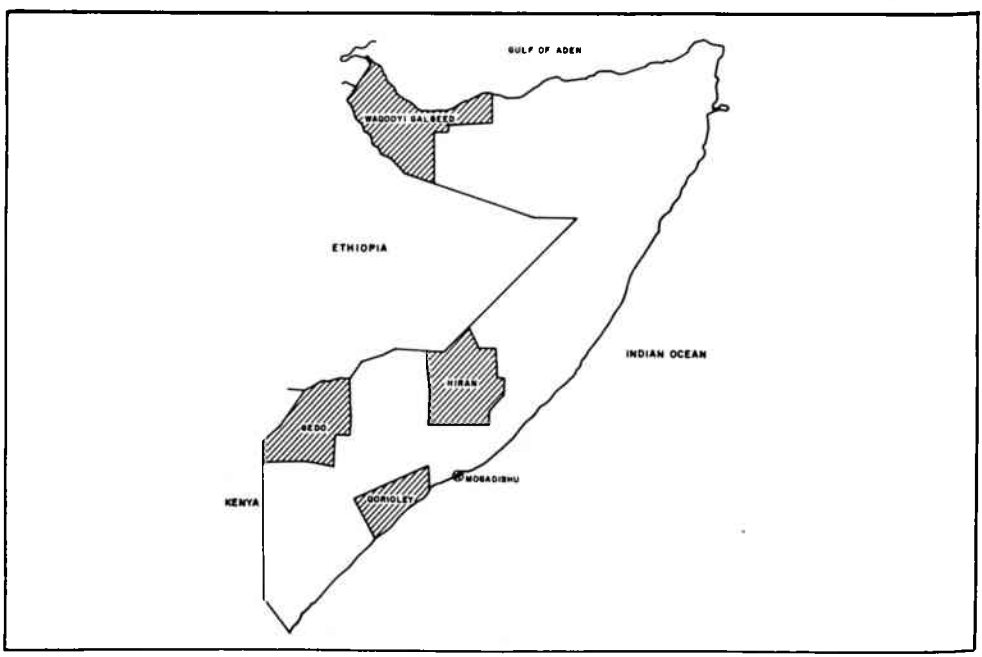
nonrefugee children in 3 population groups: nomads, farmers, and urban dwellers. Approximately 7,200 children under 110 cm (≤5 years) were surveyed. Overall, 8.9% of refugees and 3.9% of nonrefugees were classified as moderately or severely undernourished, based on weight-for-height criteria (Table 2, Figure 4). There were distinct areas with high rates of PEM: most of the 11 camps in the Gedo Region, where the overall prevalence of moderate or severe PEM was 17.5%, and the Las Dhure Camp (Waqooyi Galbeed Region), where the prevalence was 39.4%.

Comparison with results from the May survey (*2*) indicated that the overall prevalence of PEM had decreased significantly in the Hiran and Waqooyi Galbeed Region camps (excluding Las Dhure) but only moderately in the Gedo camps. The continuing high prevalence of PEM in the Gedo camps was due to food shortages and irregular food distribution, as supplementary feeding programs had been in operation for only a short period of time. The improvements in nutritional status in the Waqooyi Galbeed and Hiran camps can be attributed to well-run supplementary feeding programs that had been under way for up to several months.

In 2 regions surveyed in September, the prevalence of PEM among children <1 year of age (21%-24%) was as high or higher than that among children 1 through 4 (15%-22%) or ≥5 years (9%). The <1-year age group is not classically considered the most vulnerable group in times of food shortages. Older children 110-135 cm (approximately 6-9 years) were evaluated at 2 camps. Survey results indicated a high prevalence of PEM at both: 22% at Lugh Jellow in Hiran (vs. 8% among children <5 years) and 22% at Las Dhure* (vs. 34% among children <5 years).

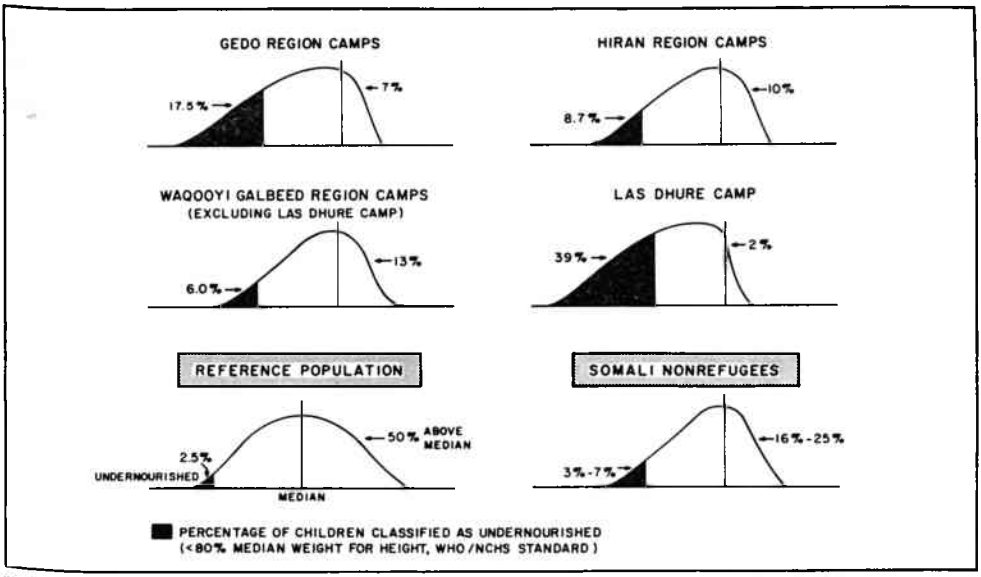
*November survey.

FIGURE 3. Somali regions with refugee camps



Refugees – Continued

FIGURE 4. Population distribution* of weight for height among Somali refugee children 0-5 years and among Somali nonrefugees, September 1980



*These figures are a schematic—not a precise—representation of the percentage distribution.

Two surveys were undertaken to evaluate the prevalence of tuberculosis among refugees. A cluster sample survey was conducted in 3 camps to identify possible cases of active pulmonary disease, based on individual questionnaires. The estimated prevalence based only on clinical criteria ranged from 1.6% to 2.4%. Active case finding was then instituted throughout all camps to detect all unidentified cases of suspected tuberculosis. Of the presumptive cases that were identified (estimated to be <1% of the camps' populations) sputum specimens from only 4% were postitive for acid-fast bacilli.

Surveillance in July and August indicated that the clinical syndromes most frequently seen by health personnel in all regions were cough and fever, nonbloody diarrhea, and anemia. Malaria and schistosomiasis were rare. Compared with random sample surveys conducted during the same period at several camps, this surveillance system appeared to greatly underreport mortality.

The major problems facing refugees in Somalia at the end of October included the persisting high prevalence of PEM among children in certain camps, the critical unavail-

(Continued on page 88)

The Morbidity and Mortality Weekly Report, circulation 106,874, is published by the Centers 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.

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Refugees – Continued

ability of firewood for cooking, the shortage of essential medications, the shortage of shelter covers and blankets, the inadequacy of camp water supplies in certain areas, and the shortage of other needed items, such as clothing and cooking utensils.

Reported by A Deria, MD, World Health Organization; SH Musa, MD, and CO Nuur, MD, Refugee Health Unit, Mogadishu, Somalia; Nutrition Div, Center for Health Promotion and Education, San Juan Laboratories, Center for Infectious Diseases, CDC.

Editorial Note: The nutritional surveys in Somali refugee camps not only documented improvements in the overall nutritional status of refugee children but also pinpointed those areas that needed to be given high priority for food deliveries and supplemental feeding programs. The latter factors are critical because solutions to refugee health problems depend upon the timely delivery of needed food and supplies as well as health-care programs. These epidemiologic studies, coupled with information from logistics personnel, have been important in evaluating problems, establishing priorities, and planning programs designed to improve the life and health of refugees in Somalia.

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1. National Center for Health Statistics. NCHS gross curves for children: birth to eighteen years. Hyattsville, MD:NCHS, 1977. (Vital and health statistics. Series 11: no. 165) (DHEW publication no. (PHS) 78:1650).
2. CDC: Malnutrition–Somalia. MMWR 1980;29:429-30.

Erratum, Vol. 29, No. 52

p639. In the article "Surveillance of Childhood Lead Poisoning – United States," Table 1, the Region IX cumulative FY 1980 total of children screened should read 8,977, not 3,977, as printed.

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HHS Publication No. (CDC) 81-8017