CENTERS FOR DISEASE CONTROL

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MORBIDITY AND MORTALITY WEEKLY REPORT

Epidemiologic Notes and Reports

Winter Plague — Colorado, Washington, Texas, 1983-1984

Three human plague cases have been reported to and confirmed by CDC during the 1983-1984 winter season. The patients, all adult males, acquired their infections by direct contact with infected animal tissues. Plague or tularemia was suspected early in all three cases. They were treated with appropriate antibiotics and recovered uneventfully. Brief case reports follow.

Case 1: A 32-year-old gas-well service contractor in Rangely, Rio Blanco County, Colorado, experienced onset of illness with fever, malaise, and painful axillary swelling on December 11, 1983; he was hospitalized on December 12. Two blood cultures obtained on admission grew organisms subsequently identified as *Yersinia pestis*. The patient was treated with streptomycin and progressively improved. Sera drawn from the patient on December 12 and December 19 had plague antibody titers of less than 4 and 64, respectively.

Interviews with the patient revealed that he had shot, skinned, and dressed a cottontail rabbit on December 8 or December 9 in an area about 25 miles south of Rangely. During follow-up studies of this case, 12 cottontail rabbits from this area and 29 pools of 506 fleas from them were collected, none of which yielded evidence of plague infection.

This is the second human plague infection reported from Rio Blanco County; the first occurred in a 60-year-old man in June 1967.

Case 2: A 29-year-old male resident of Yakima County, Washington, who is a professional hunter/trapper, suffered onset of illness on January 11, 1984. Clinical findings on hospitalization on January 12 included fever and bilateral axillary pain and swelling. Based on his symptoms and on a history of repeated animal contact, the patient's illness was diagnosed as tularemia. He was treated with tetracycline and recovered. Blood cultures taken on admission grew organisms subsequently identified as *Y. pestis*. Paired sera drawn January 12 and February 7 showed plague antibody titers of less than 4 and 32, respectively.

The patient's exposure to infection probably occurred January 7 or January 8, when he skinned several coyotes and bobcats. He remembered cutting his arm while doing so. Long bones from the carcasses of three coyotes and three bobcats the patient had skinned were recovered from their disposal site and submitted for bacteriologic testing. *Y. pestis* was recovered from two of the bobcat specimens; *Pasteurella multocida*, a common, sometimes pathogenic, bacterial resident of mammalian respiratory tracts, was also recovered from one of the plague-positive bobcats.

This case is the first human plague infection reported from Yakima County and the first human case in Washington since 1913. The eight previous indigenous Washington cases, seven in 1907 and one in 1913, all occurred in Seattle, King County.

Winter Plague — Continued

Case 3: A 48-year-old Winkler County, Texas, man had hunted, skinned, and dressed cottontail rabbits in the Wink, Texas, area on January 14, 1984. He experienced onset of illness, including fever, chills, and axillary soreness on January 16. He sought medical attention and was hospitalized on January 18. Blood cultures were obtained, and the patient was treated with antibiotics, including tetracycline. He gradually improved and was afebrile on January 22, when organisms recovered from an admission blood culture were tentatively identified as *Y. pestis*. This culture was destroyed, and no confirmatory tests were performed. Paired sera drawn January 24 and February 2 demonstrated a fourfold decrease in titer to *Y. pestis*—32 and 8, respectively—confirming the diagnosis of plague.

The patient's hunting companion, who had similar exposure, became ill with a cough and fever on January 20. Plague was considered but eventually ruled out by serologic testing.

Fifteen rabbit carcasses processed and frozen by the two men were available for bacteriologic studies. *Y. pestis* was recovered from three of these carcasses. This is the first human plague infection reported from Winkler County and the second indigenous human plague case in Texas since 1920. The last human case occurred in a 22-year-old male resident of Ector County, who died in January 1982. Ector County adjoins the eastern boundary of Winkler County.

None of the sera from the three patients had measurable antibody titers to the tularemia organism. None of the three patients developed secondary plague pneumonia, and no concurrent cases occurred among contacts of the patients.

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Table 1. "Off-season"* human plague — United States, 1960-1984

Patient no.	Age/ sex	Out-come†	Month/ year of onset	Geographic location (county/state)	Proven or suspected zoonotic source	Comments
1	24 yrs./M	R	Feb. 1960	Chaves/NM§	Rabbits	Hunting companion of #2
2	23 yrs./M	R	Feb. 1960	Chaves/NM§	Rabbits	Hunting companion of #1
3	28 yrs./M	D	Dec. 1963	Apache/AZ	Rabbits	
4	32 yrs./M	D	Oct. 1968	Lemhi/ID§	Snowshoe hares	
5	15 yrs./M	R	Oct. 1969	Bernalillo/NM	Undetermined	Presumably flea bite (inguinal bubo)
6	49 yrs./M	D	Nov. 1970	Wallowa/OR§	Rabbits	
7	19 yrs./M	R	Feb. 1972	Coconino/AZ	Bobcat	
8	28 yrs./M	R	Oct. 1974	McKinley/NM	Undetermined	Presumably flea bite (inguinal bubo)
9	62 yrs./F	R	Nov. 1974	Bernalillo/NM	Rabbits	
10	23 yrs./M	R	Dec. 1974	Bernalillo/NM	Undetermined	(Axillary bubo)
11	11 yrs./M	R	Feb. 1975	Bernalillo/NM	Coyote	
12	15 yrs./M	R	Feb. 1975	Coconino/AZ	Rabbits	
13	38 yrs./M	R	Feb. 1977	Moffat/CO§	Rabbits	

Winter Plague — Continued

Table 1. "Off-season"* human plague — United States, 1960-1984 — *(Cont.)*

Patient no.	Age/ sex	Out-come†	Month/ year of onset	Geographic location (county/state)	Proven or suspected zoonotic source	Comments
14	36 yrs./M	R	Oct. 1977	McKinley/NM	Undetermined	Presumably flea bite (inguinal bubo)
15	16 yrs./M	R	Nov. 1977	Chaffee/CO§	Rabbits	
16	58 yrs./M	R	Oct. 1978	Bernalillo/NM	Undetermined	(Cervical bubo)
17	47 yrs./M	R	Dec. 1978	Washakie/WY§	Rabbits	Traveled to Oregon before onset
18	76 yrs./F	D	Dec. 1978	Douglas/NV	Cat	
19	47 yrs./F	D	Oct. 1980	El Dorado/CA	Cat	Patient had primary pneumonia
20	25 yrs./M	D	Feb. 1981	Otero/NM	Bobcat	*Pasteurella multocida* also isolated from bobcat
21	31 yrs./M	D	Nov. 1981	Klamath/OR	Undetermined	Septicemic patient traveled to California before onset
22	2 yrs./M	R	Nov. 1981	Navajo/NM	Undetermined	Gastrointestinal case
23	63 yrs./F	R	Dec. 1981	Coconino/AZ	Rabbits	
24	23 yrs./M	D	Jan. 1982	Ector/TX§	Rabbits	
25	34 yrs./M	R	Oct. 1982	Colfax/NM	Abert's squirrels	
26	16 yrs./M	R	Dec. 1982	Apache/AZ	Rabbits	
27	14 yrs./M	R	Oct. 1983	McKinley/NM	Undetermined	Possibly prairie dog flea bite(s)
28	32 yrs./M	R	Dec. 1983	Rio Blanco/CO	Rabbits	
29	29 yrs./M	R	Jan. 1984	Yakima/WA§	Bobcats	*P. multocida* also isolated from bobcat
30	48 yrs./M	R	Jan. 1984	Winkler/TX§	Rabbits	

*October-February.

†R = recovered; D = died.

§Cases represent only human plague infections reported for county.

Editorial Note: From 1956 to 1983, 231 persons in the United States were reported ill with plague, and an additional two persons have had plague as of March 1, 1984. The majority of these persons experienced onset from April through September. "Off-season" plague occurs during rabbit-hunting season in many states (October-February) primarily among male rabbit hunters (Table 1). Of off-season cases, 26 of 30 occurred in males (24 of hunting age, i.e., 12 years of age and older), and 15 were proven or circumstantially associated with direct contact with rabbits or hares. Incriminated sources for other off-season cases include direct contact

Winter Plague — Continued

with tissues of bobcats (three cases), coyotes (1), Abert's squirrels (1), or domestic cats (2). One plague patient, associated with a sick domestic cat, developed primary plague pneumonia. Sources of infection for eight cases were not determined, but four were considered possibly due to flea bites, the usual mode of transmission during warmer months.

Ten of the 30 cases occurred in nine areas that had never before reported human plague and constitute the only human infections recorded for these counties. For two patients, the places of exposure were far removed from the location where they had onset of illness. A Eugene, Oregon, resident hunted rabbits in central Wyoming and became ill in Ontario, Oregon, enroute home. A Klamath County, Oregon, man, most likely exposed at or near home, traveled to Los Angeles, California, before onset of his fatal illness. These data emphasize the continuing need for physicians and laboratory personnel at any time and in any place to be alert to the possibility of plague infection in a patient with fever, lymphadenopathy, and a suggestive epidemiologic history (i.e., wild-animal exposure in the western states).

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

Disease	11th Week Ending			Cumulative, 11th Week Ending		
	March 17, 1984	March 19, 1983	Median 1979-1983	March 17, 1984	March 19, 1983	Median 1979-1983
Acquired Immunodeficiency Syndrome (AIDS)	51	N	N	632	N	N
Aseptic meningitis	52	96	76	829	911	704
Encephalitis: Primary (arthropod-borne & unspec.)	12	24	15	125	197	172
Post-infectious	-	2	5	6	13	20
Gonorrhea: Civilian	16,009	17,003	18,119	170,391	192,398	200,529
Military	418	330	503	4,120	5,250	5,935
Hepatitis: Type A	427	503	503	4,743	5,144	5,201
Type B	496	508	406	4,720	4,502	3,880
Non A, Non B	64	79	N	677	644	N
Unspecified	136	165	192	1,304	1,539	2,134
Legionellosis	4	13	N	98	124	N
Leprosy	3	8	3	44	52	38
Malaria	8	9	17	106	130	159
Measles: Total*	66	84	84	354	278	525
Indigenous	66	83	N	328	246	N
Imported	-	1	N	26	32	N
Meningococcal infections: Total	60	70	83	679	676	741
Civilian	60	69	83	679	665	735
Military	-	1	-	-	11	6
Mumps	65	106	220	766	913	1,305
Pertussis	40	31	25	358	265	222
Rubella (German measles)	8	41	59	112	221	526
Syphilis (Primary & Secondary): Civilian	501	587	587	5,900	7,102	6,464
Military	5	4	5	61	102	84
Toxic Shock syndrome	10	6	N	70	89	N
Tuberculosis	372	436	502	4,022	4,346	4,985
Tularemia	-	5	-	17	32	18
Typhoid fever	3	6	10	53	69	79
Typhus fever, tick-borne (RMSF)	-	1	1	9	12	12
Rabies, animal	103	105	108	837	1,109	997

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1984		Cum. 1984
Anthrax	-	Plague	2
Botulism: Foodborne (Oreg. 2)	4	Poliomyelitis: Total	-
Infant (Calif. 3)	14	Paralytic	-
Other (Ohio 1)	2	Psittacosis (Mass. 1, Calif. 1)	13
Brucellosis (Va. 1)	21	Rabies, human	-
Cholera	-	Tetanus (Upstate N.Y. 1, Fla. 1)	6
Congenital rubella syndrome (Fla. 1)	1	Trichinosis (N.J. 1)	8
Diphtheria	-	Typhus fever, flea-borne (endemic, murine)	5
Leptospirosis	3		

*There were no cases of internationally imported measles reported for this week.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending March 17, 1984 and March 19, 1983 (11th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1984	1984	Cum. 1984	Cum. 1984	Cum. 1984	Cum. 1983	1984	1984	1984	1984	1984	Cum. 1984
UNITED STATES	632	52	125	6	170,391	192,398	427	496	64	136	4	44
NEW ENGLAND	27	2	6	-	5,451	4,907	6	25	3	6	-	1
Maine	-	-	-	-	202	279	-	-	-	-	-	-
N.H.	-	1	2	-	120	140	-	4	-	-	-	-
Vt.	-	-	-	-	83	79	-	1	-	-	-	-
Mass.	18	1	4	-	2,041	2,252	5	12	1	3	-	1
R.I.	-	-	-	-	351	266	-	-	-	-	-	-
Conn.	9	-	-	-	2,654	1,891	1	8	2	3	-	-
MID ATLANTIC	336	7	12	-	22,763	24,278	75	92	-	14	1	2
Upstate N.Y.	30	4	4	-	3,466	3,400	7	30	-	5	-	2
N.Y. City	250	-	-	-	9,761	10,281	46	31	-	3	-	-
N.J.	50	-	4	-	3,396	4,528	13	14	-	6	1	-
Pa.	6	3	4	-	6,140	6,069	9	17	-	-	-	-
E.N. CENTRAL	25	16	25	1	20,982	27,676	18	51	8	5	2	3
Ohio	9	3	11	1	6,012	7,209	10	17	2	1	-	1
Ind.	-	2	3	-	2,448	2,947	-	5	1	2	1	-
Ill.	14	5	2	-	3,089	7,708	2	1	2	1	-	-
Mich.	2	6	7	-	6,861	7,381	6	28	3	1	1	2
Wis.	-	-	2	-	2,572	2,431	-	-	-	-	-	-
W.N. CENTRAL	1	2	3	-	7,861	9,248	21	18	5	-	-	-
Minn.	-	-	-	-	1,074	1,348	4	1	2	-	-	-
Iowa	1	2	2	-	956	934	-	2	1	-	-	-
Mo.	-	-	-	-	3,655	4,439	13	13	2	-	-	-
N. Dak.	-	-	-	-	98	93	-	-	-	-	-	-
S. Dak.	-	-	-	-	251	260	3	1	-	-	-	-
Nebr.	-	-	-	-	557	527	1	1	-	-	-	-
Kans.	-	-	1	-	1,270	1,647	-	-	-	-	-	-
S. ATLANTIC	52	7	24	4	44,448	49,132	30	74	8	15	-	2
Del.	1	-	1	-	703	944	1	-	-	-	-	-
Md.	15	1	4	-	5,646	6,338	-	7	1	1	-	-
D.C.	6	-	-	-	3,286	3,384	-	-	-	-	-	-
Va.	4	-	8	3	4,361	4,129	4	7	1	1	-	1
W. Va.	-	-	3	-	514	469	1	1	-	-	-	-
N.C.	2	4	4	1	7,277	6,794	3	7	1	4	-	-
S.C.	-	-	1	-	4,196	4,744	-	5	-	1	-	-
Ga.	-	1	3	-	8,471	10,989	10	24	-	1	-	-
Fla.	24	1	-	-	9,994	11,341	11	23	5	7	-	1
E.S. CENTRAL	5	2	7	-	14,657	16,764	20	28	7	3	1	-
Ky.	2	-	-	-	1,797	2,068	12	3	2	-	-	-
Tenn.	-	-	2	-	5,851	6,538	2	9	2	1	-	-
Ala.	2	2	5	-	4,819	5,265	2	12	3	2	1	-
Miss.	1	-	-	-	2,190	2,893	4	4	-	-	-	-
W.S. CENTRAL	13	1	8	1	23,869	26,973	64	52	-	48	-	3
Ark.	-	-	-	1	1,962	2,127	-	-	-	6	-	-
La.	5	-	2	-	5,472	4,306	9	5	-	-	-	-
Okla.	1	1	-	-	2,678	3,217	8	8	-	1	-	-
Tex.	7	-	6	-	13,757	17,323	47	39	-	41	-	3
MOUNTAIN	4	5	4	-	5,364	5,725	26	31	7	9	-	5
Mont.	-	-	-	-	252	285	2	1	-	-	-	-
Idaho	-	1	-	-	251	296	-	1	-	-	-	-
Wyo.	-	-	-	-	154	172	-	-	-	-	-	-
Colo.	-	2	3	-	1,502	1,651	7	11	1	-	-	-
N. Mex.	-	1	-	-	647	787	3	-	1	1	-	-
Ariz.	4	1	-	-	1,402	1,324	10	13	4	5	-	4
Utah	-	-	1	-	304	274	-	1	-	-	-	1
Nev.	-	-	-	-	852	936	4	4	1	3	-	-
PACIFIC	169	10	36	-	24,996	27,695	167	125	26	36	-	28
Wash.	4	-	-	-	1,657	2,104	11	5	1	2	-	1
Oreg.	-	-	-	-	1,537	1,407	16	7	6	1	-	1
Calif.	163	10	36	-	20,721	22,994	135	112	19	33	-	19
Alaska	-	-	-	-	632	623	-	-	-	-	-	-
Hawaii	2	-	-	-	449	567	5	1	-	-	-	7
Guam	-	U	-	-	22	50	U	U	U	U	U	-
P.R.	13	4	-	-	782	611	2	8	-	1	-	-
V.I.	-	-	-	-	93	62	-	-	-	-	-	-
Pac. Trust Terr.	-	U	-	-	-	-	U	U	U	U	U	-

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 17, 1984 and March 19, 1983 (11th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1984	1984	Cum. 1984	1984	Cum. 1984	Cum. 1983	Cum. 1984	1984	Cum. 1984	1984	Cum. 1984	Cum. 1983	1984	Cum. 1984	Cum. 1983
UNITED STATES	106	66	328	-	26	278	679	65	766	40	358	265	8	112	221
NEW ENGLAND	13	-	-	-	-	1	57	2	35	1	8	13	3	15	2
Maine	-	-	-	-	-	-	1	-	12	-	-	-	-	1	-
N.H.	-	-	-	-	-	-	4	-	4	-	2	3	-	-	-
Vt.	1	-	-	-	-	-	18	-	1	-	4	2	-	-	1
Mass.	7	-	-	-	-	-	20	2	14	1	1	7	3	14	1
R.I.	1	-	-	-	-	-	4	-	1	-	1	1	-	-	-
Conn.	4	-	-	-	-	1	10	-	3	-	-	-	-	-	-
MID ATLANTIC	7	2	9	-	3	4	83	10	103	1	22	51	1	2	13
Upstate N.Y.	3	-	-	-	-	1	32	2	25	1	12	24	1	1	8
N.Y. City	-	2	9	-	-	2	11	-	3	-	1	7	-	-	2
N.J.	1	-	-	-	3	1	20	8	66	-	1	7	-	1	1
Pa.	3	-	-	-	-	-	20	-	9	-	8	13	-	-	2
E.N. CENTRAL	12	1	108	-	2	143	101	23	258	22	114	74	-	16	37
Ohio	4	-	1	-	2	1	40	9	77	7	26	30	-	1	1
Ind.	-	1	3	-	-	101	12	-	16	14	66	3	-	1	-
Ill.	2	-	15	-	-	36	14	-	54	1	7	31	-	9	17
Mich.	4	-	89	-	-	5	23	14	88	-	7	3	-	3	6
Wis.	2	-	-	-	-	-	12	-	23	-	8	7	-	2	13
W.N. CENTRAL	5	-	-	-	-	-	41	-	55	1	57	11	-	10	15
Minn.	-	-	-	-	-	-	4	-	1	-	2	1	-	-	3
Iowa	1	-	-	-	-	-	13	-	11	-	3	2	-	-	-
Mo.	3	-	-	-	-	-	14	-	5	-	9	2	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-
S. Dak.	-	-	-	-	-	-	1	-	-	1	1	-	-	-	-
Nebr.	-	-	-	-	-	-	3	-	1	-	2	-	-	-	-
Kans.	1	-	-	-	-	-	6	-	36	-	40	6	-	9	12
S. ATLANTIC	16	-	-	-	4	68	165	7	65	7	42	36	1	10	19
Del.	2	-	-	-	-	-	1	-	2	-	-	-	-	-	-
Md.	5	-	-	-	-	1	13	2	16	2	3	4	-	-	-
D.C.	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Va.	3	-	-	-	1	2	16	-	3	-	7	8	-	-	1
W. Va.	-	-	-	-	-	-	3	3	13	2	5	2	-	-	-
N.C.	1	-	-	-	-	-	24	1	9	2	15	1	-	-	1
S.C.	1	-	-	-	-	3	15	-	1	-	1	2	-	-	-
Ga.	1	-	-	-	-	2	36	-	3	-	2	15	-	1	5
Fla.	3	-	-	-	3	60	55	1	18	1	9	4	1	9	12
E.S. CENTRAL	-	1	1	-	2	-	28	-	11	-	2	3	-	-	4
Ky.	-	1	1	-	-	-	4	-	3	-	1	1	-	-	4
Tenn.	-	-	-	-	2	-	11	-	3	-	1	2	-	-	-
Ala.	-	-	-	-	-	-	8	-	3	-	-	-	-	-	-
Miss.	-	-	-	-	-	-	5	-	2	-	-	-	-	-	-
W.S. CENTRAL	4	13	70	-	-	10	85	6	45	4	37	26	-	11	32
Ark.	-	-	-	-	-	10	10	-	3	-	9	1	-	1	-
La.	-	-	-	-	-	-	15	-	-	-	1	2	-	-	-
Okla.	2	-	-	-	-	-	14	N	N	4	26	8	-	-	-
Tex.	2	13	70	-	-	-	46	6	42	-	1	15	-	10	32
MOUNTAIN	4	2	40	-	8	1	25	5	70	-	35	42	-	3	10
Mont.	-	-	-	-	-	-	1	1	3	-	19	1	-	-	2
Idaho	-	-	-	-	-	-	3	-	5	-	1	2	-	1	2
Wyo.	-	-	-	-	-	-	-	-	1	-	1	3	-	-	1
Colo.	1	-	-	-	-	1	11	3	6	-	11	25	-	-	-
N. Mex.	-	1	17	-	8	-	3	N	N	-	2	4	-	-	-
Ariz.	1	-	-	-	-	-	4	-	52	-	-	5	-	-	4
Utah	2	1	23	-	-	-	3	1	3	-	1	2	-	2	1
Nev.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC	45	47	100	-	7	51	94	12	124	4	41	9	3	45	89
Wash.	2	-	13	-	-	1	11	1	17	1	8	1	-	-	-
Oreg.	1	-	-	-	-	4	16	N	N	-	4	-	-	-	5
Calif.	39	47	87	-	5	45	65	11	99	3	16	8	3	44	84
Alaska	-	-	-	-	-	-	2	-	3	-	-	-	-	-	-
Hawaii	3	-	-	-	2	1	-	-	5	-	13	-	-	1	-
Guam	-	U	4	U	1	-	-	U	1	U	-	-	U	1	-
P.R.	2	-	-	-	-	40	2	5	34	-	-	3	-	1	1
V.I.	-	-	-	-	-	5	-	2	3	-	-	-	-	-	1
Pac. Trust Terr.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 17, 1984 and March 19, 1983 (11th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1984	Cum. 1983	1984	Cum. 1984	Cum. 1983	Cum. 1984	Cum. 1984	Cum. 1984	Cum. 1984
UNITED STATES	5,900	7,102	10	4,022	4,346	17	53	9	837
NEW ENGLAND	132	165	1	110	113	1	-	-	6
Maine	1	1	-	6	9	-	-	-	6
N.H.	1	5	-	8	12	-	-	-	-
Vt.	-	1	1	3	1	-	-	-	-
Mass.	79	112	-	56	48	1	-	-	-
R.I.	6	3	-	14	13	-	-	-	-
Conn.	45	43	-	23	30	-	-	-	-
MID ATLANTIC	792	856	-	750	865	-	10	-	54
Upstate N.Y.	48	72	-	127	151	-	5	-	3
N.Y. City	465	505	-	309	343	-	2	-	-
N.J.	168	164	-	143	188	-	3	-	-
Pa.	111	115	-	171	183	-	-	-	51
E.N. CENTRAL	198	433	2	523	638	-	6	1	30
Ohio	51	114	1	112	98	-	2	1	2
Ind.	35	40	-	55	88	-	1	-	4
Ill.	30	202	1	193	286	-	1	-	18
Mich.	61	57	-	134	133	-	-	-	1
Wis.	21	20	-	29	33	-	2	-	5
W.N. CENTRAL	90	90	2	102	150	5	2	2	101
Minn.	16	39	-	17	22	-	2	-	11
Iowa	9	4	-	17	20	-	-	-	26
Mo.	53	32	-	43	81	5	-	2	7
N. Dak.	-	-	-	4	-	-	-	-	18
S. Dak.	-	-	-	3	11	-	-	-	23
Nebr.	4	5	2	7	4	-	-	-	5
Kans.	8	10	-	11	12	-	-	-	11
S. ATLANTIC	1,852	1,832	-	919	805	1	9	1	316
Del.	7	10	-	10	6	-	-	-	-
Md.	86	101	-	109	71	-	-	-	217
D.C.	64	72	-	28	25	-	3	-	-
Va.	105	136	-	72	67	-	3	-	59
W. Va.	8	5	-	33	41	-	-	-	7
N.C.	215	177	-	156	85	-	1	-	1
S.C.	178	142	-	109	79	-	1	-	-
Ga.	310	335	-	112	150	1	-	-	31
Fla.	879	854	-	290	281	-	1	1	1
E.S. CENTRAL	388	481	-	367	434	-	2	3	49
Ky.	20	29	-	93	116	-	-	-	11
Tenn.	90	129	-	114	124	-	2	1	26
Ala.	139	196	-	129	125	-	-	2	12
Miss.	139	127	-	31	69	-	-	-	-
W.S. CENTRAL	1,441	1,787	1	381	419	4	3	1	164
Ark.	56	29	-	31	31	3	-	1	17
La.	272	375	-	55	75	-	1	-	-
Okla.	42	51	1	42	53	1	-	-	18
Tex.	1,071	1,332	-	253	260	-	2	-	129
MOUNTAIN	135	145	1	79	123	3	2	-	22
Mont.	-	4	-	2	11	-	1	-	12
Idaho	8	1	-	4	8	-	-	-	-
Wyo.	1	3	-	-	2	-	-	-	-
Colo.	30	38	-	7	9	-	-	-	-
N. Mex.	16	51	-	19	19	-	1	-	4
Ariz.	49	24	1	36	54	1	-	-	6
Utah	6	8	-	7	11	2	-	-	-
Nev.	25	16	-	4	9	-	-	-	-
PACIFIC	872	1,313	3	791	799	3	19	1	95
Wash.	29	48	1	28	45	-	1	-	1
Oreg.	23	19	-	33	35	2	-	1	-
Calif.	800	1,218	2	662	655	1	15	-	91
Alaska	1	6	-	17	10	-	1	-	3
Hawaii	19	22	-	51	54	-	2	-	-
Guam	-	-	U	-	1	-	-	-	-
P.R.	201	112	-	62	112	-	1	-	8
V.I.	6	6	-	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	-	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending March 17, 1984 (11th Week Ending)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	685	490	127	37	16	15	50
Boston, Mass.	162	98	38	15	7	4	15
Bridgeport, Conn.	31	23	6	2	-	-	1
Cambridge, Mass.	23	18	5	-	-	-	2
Fall River, Mass.	19	16	2	1	-	-	-
Hartford, Conn.	61	41	11	3	3	3	2
Lowell, Mass.	33	28	5	-	-	-	2
Lynn, Mass.	25	23	1	1	-	-	-
New Bedford, Mass.	25	23	2	-	-	-	2
New Haven, Conn.	68	44	12	5	3	4	4
Providence, R.I.	71	54	15	1	-	1	4
Somerville, Mass.	13	10	2	-	1	-	1
Springfield, Mass.	53	37	11	4	-	1	6
Waterbury, Conn.	28	23	3	1	1	-	3
Worcester, Mass.	73	52	14	4	1	2	8
MID. ATLANTIC	2,541	1,695	583	159	45	59	127
Albany, N.Y.	62	40	15	5	-	2	1
Allentown, Pa.	23	17	6	-	-	-	-
Buffalo, N.Y.	127	88	29	8	-	2	15
Camden, N.J.	45	23	13	4	-	5	-
Elizabeth, N.J.	25	18	4	2	-	1	1
Erie, Pa.†	50	39	10	1	-	-	3
Jersey City, N.J.	49	35	7	3	2	2	1
N.Y. City, N.Y.	1,436	952	323	104	30	27	65
Newark, N.J.	32	16	7	3	1	5	4
Paterson, N.J.	34	23	6	4	-	1	6
Philadelphia, Pa.†	196	125	52	10	5	4	4
Pittsburgh, Pa.†	70	44	25	-	1	-	3
Reading, Pa.	33	27	5	-	-	1	3
Rochester, N.Y.	108	74	22	7	2	3	11
Schenectady, N.Y.	26	18	4	3	-	1	-
Scranton, Pa.†	24	18	3	1	-	2	2
Syracuse, N.Y.	87	52	27	2	3	3	2
Trenton, N.J.	37	19	16	2	-	-	2
Utica, N.Y.	31	23	7	-	1	-	-
Yonkers, N.Y.	46	44	2	-	-	-	4
E.N. CENTRAL	2,285	1,460	536	157	67	65	75
Akron, Ohio	60	39	17	2	-	2	-
Canton, Ohio	34	22	9	1	-	2	2
Chicago, Ill.	519	316	124	46	15	18	12
Cincinnati, Ohio	154	103	28	10	5	8	13
Cleveland, Ohio	181	91	66	15	5	4	5
Columbus, Ohio	132	81	32	10	5	4	3
Dayton, Ohio	108	71	32	2	2	1	-
Detroit, Mich.	264	153	68	27	12	4	6
Evansville, Ind.	62	46	12	2	1	1	1
Fort Wayne, Ind.	58	37	17	2	2	-	1
Gary, Ind.	12	9	2	-	1	-	-
Grand Rapids, Mich.	49	40	6	1	1	1	2
Indianapolis, Ind.	182	121	31	18	6	6	1
Madison, Wis.	46	27	10	5	3	1	7
Milwaukee, Wis.	142	101	29	3	4	5	5
Peoria, Ill.	32	24	3	1	-	4	4
Rockford, Ill.	42	30	10	-	1	1	6
South Bend, Ind.	50	35	11	2	2	-	4
Toledo, Ohio	93	67	15	7	1	3	3
Youngstown, Ohio	65	47	14	3	1	-	-
W.N. CENTRAL	744	498	149	52	22	20	40
Des Moines, Iowa	60	34	18	3	3	2	3
Duluth, Minn.	29	20	5	3	1	-	1
Kansas City, Kans.	38	26	7	3	-	2	1
Kansas City, Mo.	149	92	27	20	4	3	8
Lincoln, Nebr.	26	20	4	2	-	-	3
Minneapolis, Minn.	104	80	12	5	4	3	3
Omaha, Nebr.	69	47	16	5	-	1	5
St. Louis, Mo.	139	96	29	6	4	4	10
St. Paul, Minn.	68	44	14	5	2	3	4
Wichita, Kans.	62	39	17	-	4	2	2
S. ATLANTIC	1,266	778	291	119	34	44	47
Atlanta, Ga.	138	75	39	17	4	3	3
Baltimore, Md.	241	156	50	16	7	12	10
Charlotte, N.C.	74	42	18	8	2	4	4
Jacksonville, Fla.	110	68	30	5	3	4	6
Miami, Fla.	92	52	26	12	2	-	-
Norfolk, Va.	65	43	10	9	2	1	2
Richmond, Va.	89	68	12	6	3	-	7
Savannah, Ga.	45	25	10	4	2	4	2
St. Petersburg, Fla.	125	107	10	4	1	3	5
Tampa, Fla.	79	45	17	11	3	3	4
Washington, D.C.	157	68	55	24	3	7	2
Wilmington, Del.	51	29	14	3	2	3	2
E.S. CENTRAL	766	493	174	52	25	21	35
Birmingham, Ala.	112	64	27	9	7	5	-
Chattanooga, Tenn.	60	41	10	4	2	3	4
Knoxville, Tenn.	68	50	10	4	1	2	2
Louisville, Ky.	138	87	37	7	5	2	8
Memphis, Tenn.	155	105	33	11	5	1	8
Mobile, Ala.	69	39	20	8	1	1	5
Montgomery, Ala.	31	23	6	1	1	-	2
Nashville, Tenn.	133	84	31	8	3	7	6
W.S. CENTRAL	1,471	928	315	113	58	57	76
Austin, Tex.	43	33	5	2	-	3	2
Baton Rouge, La.	48	28	14	6	-	-	4
Corpus Christi, Tex.	46	34	7	2	1	2	1
Dallas, Tex.	237	145	54	21	7	10	11
El Paso, Tex.	80	55	15	5	4	1	6
Fort Worth, Tex.	95	65	20	6	2	2	6
Houston, Tex.	326	190	74	27	20	15	10
Little Rock, Ark.	71	50	15	2	2	2	12
New Orleans, La.	147	82	40	10	8	7	-
San Antonio, Tex.	200	129	38	15	10	8	12
Shreveport, La.	86	54	17	7	2	6	6
Tulsa, Okla.	92	63	16	10	2	1	6
MOUNTAIN	694	459	151	46	18	20	49
Albuquerque, N.Mex.	77	45	19	9	2	2	4
Colo. Springs, Colo.	38	24	9	2	2	1	10
Denver, Colo.	100	63	24	10	1	2	6
Las Vegas, Nev.	81	49	21	5	3	3	7
Ogden, Utah	16	14	1	-	1	-	4
Phoenix, Ariz.	173	127	29	10	3	4	5
Pueblo, Colo.	35	22	8	3	1	1	1
Salt Lake City, Utah	52	29	14	3	1	5	-
Tucson, Ariz.	122	86	26	4	4	2	12
PACIFIC	2,007	1,373	389	116	63	65	102
Berkeley, Calif.	23	15	3	3	-	2	-
Fresno, Calif.	66	47	10	4	4	1	9
Glendale, Calif.	19	17	2	-	-	-	-
Honolulu, Hawaii	80	53	11	5	5	6	8
Long Beach, Calif.	87	48	22	8	3	6	4
Los Angeles, Calif.	557	356	134	40	15	12	-
Oakland, Calif.	82	56	17	3	1	5	6
Pasadena, Calif.	46	40	5	-	-	1	5
Portland, Oreg.	156	107	33	7	4	5	8
Sacramento, Calif.	87	60	15	7	5	-	4
San Diego, Calif.	154	107	27	10	4	5	21
San Francisco, Calif.	158	106	32	8	5	7	6
San Jose, Calif.	166	121	23	11	5	6	7
Seattle, Wash.	201	148	36	6	7	4	9
Spokane, Wash.	65	45	15	3	1	1	7
Tacoma, Wash.	60	47	4	1	4	4	8
TOTAL	12,459††	8,174	2,715	851	348	366	601

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza

† Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

Current Trends

Racial and Educational Factors Associated with Breast-Feeding — United States, 1969 and 1980

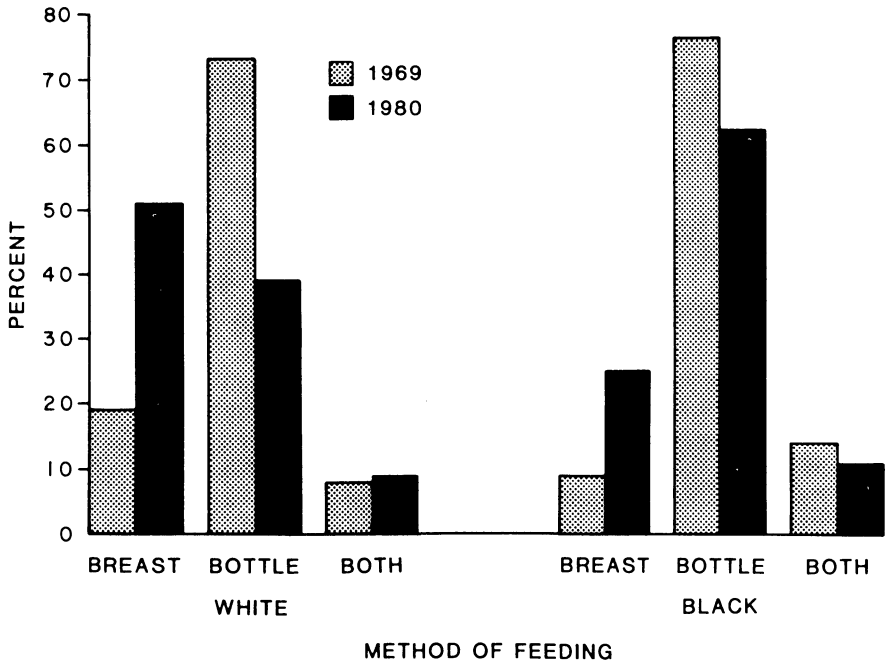
According to 1969 and 1980 National Natality Surveys (NNS) of postpartum women conducted by the National Center for Health Statistics, a significantly higher percentage of both black and white women exclusively breast-fed their infants in 1980 than in 1969 (Figure 1).

At 3-6 months postpartum, NNS questionnaires were mailed to a probability sample of mothers of live infants born in wedlock during the respective years.* Eighty-five percent of the 3,666 mothers of selected newborns responded in 1969, while 80% of the 7,825 mothers of selected newborns responded in 1980. Responses were weighted to reflect national estimates of live infants born in wedlock in the United States during each year.

Nineteen percent of white women exclusively breast-fed newborns in 1969, compared with a significantly higher percentage (51%) in 1980. Nine percent of black women exclusively breast-fed newborns in 1969, compared with a significantly higher percentage (25%) in 1980. The percentage of both black and white women who exclusively bottle-fed was corre-

*The 1969 sample was selected from one in every 1,000 births of white infants and one in every 500 births of all other infants. The 1980 sample was selected from one in 400 liveborn infants weighing 2,500 g or more and one in 95 liveborn infants weighing under 2,500 g.

FIGURE 1. Percentages of breast- and bottle-feeding among white and black women — United States, 1969 and 1980*



*National Natality Survey, National Center for Health Statistics.

Breast-Feeding — Continued

spondingly lower in 1980 than in 1969. The percentage of women who mixed breast- and bottle-feeding did not differ appreciably in 1969 and 1980 in either racial group.

Among white women in 1969, breast-feeding significantly declined with parity from the first to sixth child and increased slightly thereafter. In contrast, among black women, significantly more breast-feeding of newborns in 1969 occurred among women with four children or more. In 1980, significantly more white primiparae than multiparae breast-fed. Among white multiparae, there was a slight but not significant decline in the percentage of breast-feeding with increasing parity. A similar decline was evident among black women in 1980; these differences, however, were not significant.

Among white women, a significantly higher percentage of breast-feeding was observed with increasing maternal education in 1969, as well as in 1980. In sharp contrast, among black women with newborns in 1969, there was a significant decrease in breast-feeding as the educational level of the mother increased. However, in 1980, a relationship similar to that observed in whites appeared.

The differences by race persist when education and parity are controlled for.

Reported by K Fetterly, B Graubard, MS, Epidemiology and Biometry Research Program, National Institute of Child Health and Human Development; Natality Statistics Br, National Center for Health Statistics; Div of Nutrition, Center for Health Promotion and Education, CDC.

Editorial Note: Estimates of breast-feeding in the NNS were based only on respondent data weighted to reflect the national distribution of live births to married women. Since the NNS breast-feeding estimates were not adjusted for nonresponse, and nonrespondents tend to be from the lower socioeconomic group, the estimate of breast-feeding among the less educated may be inaccurate. The NNS exclude births to unwed mothers, and out-of-wedlock births occur more frequently among the disadvantaged. To the extent that breast-feeding has positive health effects, the lower socioeconomic group with its high rates of infant morbidity and mortality can be expected to benefit the most. More information is needed about their infant-feeding practices to identify target groups for breast-feeding promotion efforts.

Update: Respiratory Virus Surveillance — United States, 1984

Reports of noninfluenza respiratory virus isolations from certain state and university laboratories received by CDC through March 16, 1984, show that respiratory syncytial virus (RSV) identification rates peaked in December in the South Atlantic and East South Central regions and in January in the West North Central, West South Central, and Pacific regions. The New England, Mid-Atlantic, East North Central, and Mountain regions have had continued high RSV identification rates through February. New England reported the largest number of RSV identifications for February and March; 198 of 543 specimens tested were positive for RSV (Table 2).

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Respiratory Virus – Continued

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Editorial Note: In general, outbreaks of RSV in the United States last between 2 and 5 months. The number of RSV isolates was declining in February in five regions, suggesting that the RSV outbreak is coming to an end in these regions 3 to 4 months after its onset. For the other four regions, the number of isolates was stable or increasing in February.

TABLE 2. Respiratory syncytial virus isolates—United States, November 1983-March 1984

	New England	Mid-Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
November 1983	3	0	0	1	14	3	6	7	2
December 1983	10	21	14	13	55	6	15	41	9
January 1984	71	55	60	40	37	0	16	149	12
February 1984	150	119	60	22	18	1	6	169	7
March 1984*	48	1	27	2	3	†	†	28	†
Total	**282**	**196**	**161**	**78**	**127**	**10**	**43**	**394**	**30**

*Includes isolates identified through March 16, 1984.

†March 1984 data pending.

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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report,* Centers for Disease Control, Atlanta, Georgia 30333.

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