CENTERS FOR DISEASE CONTROL

July 31, 1981 / Vol. 30 / No. 29

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

Epidemiologic Notes and Reports

Rabies in Raccoons – Virginia

A recent increase in the number of cases of rabies among wild raccoons in Virginia has been reported. In June 1981, 4 wild raccoons in Front Royal, Virginia, were found to have laboratory-confirmed rabies. These animals were being used in a live trapping-radiotracking project at the Department of Conservation, National Zoological Park, Washington, D.C.

The Department of Conservation is a 3,000-acre preserve surrounded by a 6- to 8-foot chain-link fence; public access is restricted. The area is adjacent to the north end of the Shenandoah National Park and to the town of Front Royal. The preserve is used by the National Zoological Park as a breeding facility for exotic canids,* birds, and hoofstock. In addition to raccoons, there are wild populations of striped skunks, woodchucks, opossums, gray and red foxes, bobcats, and black bears. Pet and feral dogs and cats are also found there.

The trapping area is approximately 6 km^2. In the last year, 154 different raccoons have been trapped and marked; radiotransmitters have been placed on 45 of these animals. Preliminary estimates of population density in the study area indicate that there are about 20 raccoons/km^2. There is intensive trapping of raccoons for pelts in areas immediately adjacent to the preserve; radiocollared raccoons have been observed crossing the fences around the preserve.

During a 10-day trapping program in June 1981, 4 raccoons behaved in an unusual manner: they were highly excitable, vocalized continuously, and constantly moved about in the trap. Unlike normal raccoons, these animals often allowed themselves to be retrapped. Some animals were noted to lack coordination and to have rear-limb paralysis. Two of the 4 animals were euthanized when *in extremis*, and 2 were found dead shortly after they were trapped.

Necropsy revealed heavily parasitized animals with marginal nutritional reserves. Microscopic examination revealed large numbers of eosinophilic inclusion bodies that were compatible with Negri bodies in the nuclei and cytoplasm of Purkinje cells and cells of the hippocampus. Formalin-fixed brain tissue from the raccoons sent to CDC for fluorescent-antibody testing was found positive for rabies virus in all 4 cases.

Nine persons had had potential exposure to the raccoons; all of these persons had already received pre-exposure human diploid cell rabies vaccination. They were given booster injections.

Reported by RJ Montali, DVM, PC Mann, DVM, Dept of Pathology, J Seidensticker, PhD, Dept of Zoological Research, National Zoological Park, Washington, DC; Viral Diseases Div, Center for Infectious Diseases, CDC.

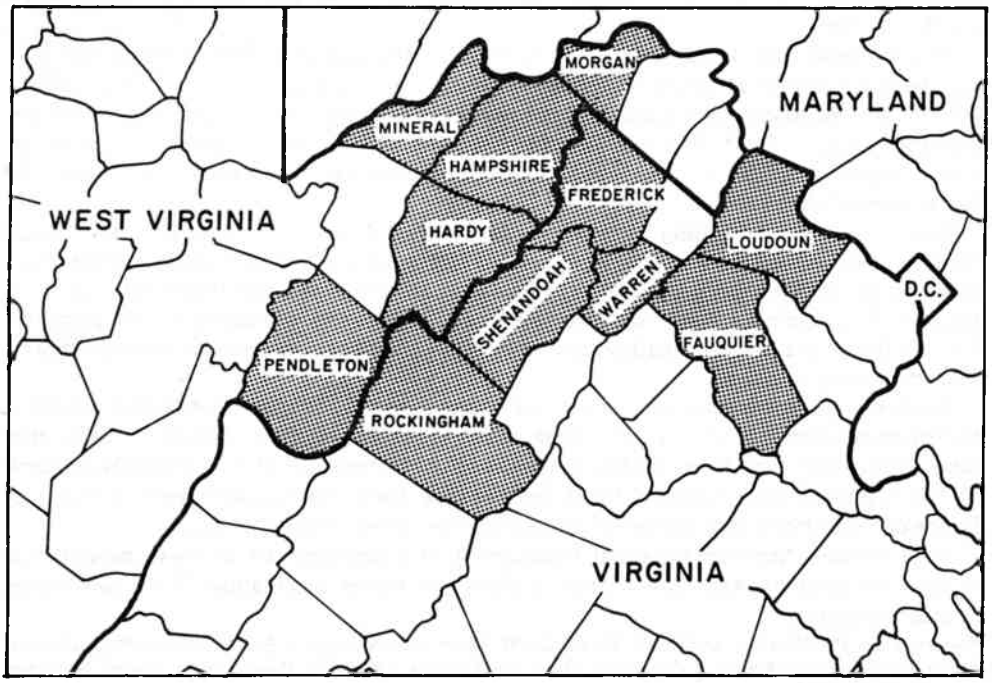
*Members of the family Canidae, including wolves, foxes, and bush dogs.

Rabies — Continued

Editorial Note: In most of the United States, raccoon rabies is reported as sporadic, isolated cases that presumably result from exposure to more commonly infected indigenous wildlife such as skunks. However, in the southeastern United States—Alabama, Florida, Georgia, and South Carolina—raccoon rabies occurs as an enzootic or epizootic disease, and, in those states, raccoons are the major rabies reservoir. The reporting of 4 cases of raccoon rabies in Virginia in June of this year and the recent increase in reported cases of raccoon rabies in both Virginia and West Virginia suggest that raccoon rabies is now established in this area (Table 1, Figure 1).

It is not clear why enzootic raccoon rabies should have appeared in this area, which is over 300 miles from the nearest recognized focus of raccoon rabies in South Carolina. It may be that a new nidus in raccoons has developed by chance after a spillover from other infected wildlife, or it could represent an abrupt extension of the known geographic range of disease. However, it seems highly unlikely that surveillance would not have detected a contiguous spread over such a large distance. The problem could also have resulted from translocation of infected raccoons from the Southeast. (For example, rabies was diagnosed earlier in raccoons trapped in Florida and illegally transported to another state by private hunting clubs [*1*]). Health officials should be aware of this apparent spread of enzootic raccoon rabies and its potential impact on treatment recommendations following exposure to these animals.

FIGURE 1. Raccoon rabies, Virginia and West Virginia, 1977-1981



Rabies – Continued

TABLE 1. Reported raccoon rabies cases in Virginia and West Virginia, by county, 1977-1981

	1977	1978	1979	1980	1981*
West Virginia					
Hampshire	–	–	5	8	1
Hardy	–	–	3	6	1
Mineral	–	–	–	–	2
Morgan	–	–	–	–	2
Pendleton	1	–	–	–	1
Virginia					
Shenandoah	–	3	6	3	2
Rockingham	–	–	–	1	–
Warren	–	–	–	1	3
Frederick	–	–	–	–	1
Fauquier	–	–	–	–	2
Loudoun	–	–	–	–	1

*Through June 1981.

Reference

1. Nettles VF, Shaddock JH, Sikes RK, Reyes CR. Rabies in translocated raccoons. Am J Public Health 1979;69:601-2.

International Notes

Gonococcal Infections Among Indochinese Refugees – Thailand

Songkhla Refugee Camp

Médecins Sans Frontières (MSF), the agency responsible for medical care of Vietnamese refugees in Songkhla, Thailand, until April 30, 1981, reported increases in the numbers of female refugees with suspected gonorrhea in late 1980. Whereas camp physicians rarely saw clinically suspected gonorrhea cases in 1979, by early 1981 such cases began being reported frequently. The number of refugee women who said they had been raped during pirate attacks enroute to Thailand by boat had also risen since 1979.

More than 50,000 Vietnamese refugees have arrived in Thailand by boat since June 1977–21,500 in 1980 alone. Representatives of the United Nations High Commission for Refugees (UNHCR) and voluntary aid agencies interview, counsel, and provide necessary care to the refugees during the 2-4 weeks after arrival, while they are at holding centers. Refugees are later transferred to more permanent camps. In the period December 1980-March 1981, nearly 20% of approximately 2,000 female refugees 9 years of age or older who were transferred to Songkhla Camp said they had been raped sometime during the boat journey from Vietnam.

The MSF medical team in Songkhla obtained culture specimens for *Neisseria gonorrhoeae* from 138 female rape victims from December 1980 to March 1981. *N. gonorrhoeae* isolates were obtained from 18 (13%) of these women. All 18 isolates were found to be resistant to penicillin in disc susceptibility tests done at the local hospital laboratory. Six of the isolates were tested for beta-lactamase production by the Armed Forces Research Institute of Medical Sciences (AFRIMS) laboratory in Bangkok; 5 were confirmed as penicillinase-producing *N. gonorrhoeae* (PPNG). Of 63 women tested in May

Gonococcal Infections – Continued

1981, who indicated they had not been raped, 1 was positive. This isolate was sensitive to penicillin.

Because of these findings, the UNHCR established a policy for treating refugees who have been raped. Medical personnel now give 2 g of kanamycin to rape victims when they are first identified at holding centers. When the refugees are transferred to the Songkhla Camp, culture specimens for gonorrhea are obtained from all identified rape victims. Women with gonorrhea receive 2 g of spectinomycin. Without being cultured, current sexual partners are treated with the same drugs.

During May and June 1981, Catholic Relief Services (CRS), which replaced MSF as the medical-care agency in Songkhla Camp, reevaluated the prevalence of gonococcal infections. CRS, with the cooperation of UNHCR, obtained specimens for *N. gonorrhoeae* from 114 arriving female refugees, ages 15-30 years, including 51 rape victims. Two women were infected with penicillin-susceptible gonococci; 1 was a rape victim, and 1 denied being raped. The rape victim had not been through a holding center before coming to the camp at Songkhla; therefore, specimens were taken for culture before she was treated.

Phanat Nikhom Transit Center

After several months in refugee camps throughout Thailand, most Indochinese refugees who are to be resettled are transferred to the Phanat Nikhom Transit Center for pre-

(Continued on page 361)

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

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

DISEASE	29th WEEK ENDING		MEDIAN	CUMULATIVE, FIRST 29 WEEKS		
	July 25 1981	July 19 1980	1976-1980	July 25 1981	July 19 1980	MEDIAN 1976-1980
Aseptic meningitis	302	184	146	2,695	2,268	1,639
Brucellosis	1	4	7	82	105	105
Chickenpox	1,056	1,598	996	163,806	153,911	153,911
Diphtheria	–	–	–	3	2	54
Encephalitis: Primary (arthropod-borne & unspec.)	32	24	27	466	385	385
Post-infectious	–	4	5	48	119	128
Hepatitis, Viral: Type B	376	358	344	11,115	9,420	8,382
Type A	474	592	592	13,971	15,113	16,249
Type unspecified	193	236	187	6,247	6,176	4,954
Malaria	24	71	19	755	1,091	348
Measles (rubeola)	44	124	276	2,468	12,256	22,352
Meningococcal infections: Total	54	38	34	2,223	1,723	1,551
Civilian	54	38	32	2,211	1,711	1,530
Military	–	–	–	12	12	16
Mumps	40	52	181	2,852	6,687	12,560
Pertussis	22	64	44	566	692	692
Rubella (German measles)	28	36	150	1,553	2,996	10,328
Tetanus	–	4	2	33	43	35
Tuberculosis	544	535	596	14,827	14,831	16,022
Tularemia	12	8	7	116	94	79
Typhoid fever	11	17	10	268	236	236
Typhus fever, tick-borne (Rky. Mt. spotted)	57	76	58	674	573	522
Venereal diseases:						
Gonorrhea: Civilian	19,753	20,759	20,872	542,613	530,052	530,099
Military	710	553	541	16,192	14,895	15,109
Syphilis, primary & secondary: Civilian	640	471	452	16,449	14,155	13,213
Military	21	5	5	215	172	167
Rabies in animals	160	146	81	4,042	3,795	1,714

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1981		CUM. 1981
Anthrax	–	Poliomyelitis: Total	1
Botulism	34	Paralytic	1
Cholera (Tex. 1)	3	Psittacosis (Miss. 1, Tex. 1, Calif. 2)	66
Congenital rubella syndrome (Ariz. 1)	6	Rabies in man	1
Leprosy (Ariz. 1, Calif. 5)	144	Trichinosis (Upstate N.Y. 1, Pa. 2)	94
Leptospirosis (Md. 1)	22	Typhus fever, flea-borne (endemic, murine) (Tex. 2)	28
Plague	5		

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 July 25, 1981 and July 19, 1980 (29th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	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	302	1	1,056	–	3	32	24	–	376	474	193	24	755
NEW ENGLAND	14	–	303	–	–	2	–	–	14	5	16	1	38
Maine	1	–	17	–	–	–	–	–	1	–	–	–	1
N.H.	1	–	–	–	–	–	–	–	–	–	2	–	3
Vt.	–	–	2	–	–	–	–	–	1	–	1	–	2
Mass.	2	–	226	–	–	–	–	–	1	1	12	1	20
R.I.	7	–	21	–	–	–	–	–	1	3	–	–	2
Conn.	3	–	37	–	–	2	–	–	10	1	1	–	10
MID. ATLANTIC	18	–	96	–	–	5	1	–	58	59	23	4	94
Upstate N.Y.	8	–	49	–	–	3	–	–	18	23	7	2	26
N.Y. City	4	–	47	–	–	–	1	–	16	19	6	–	32
N.J.	4	–	NN	–	–	1	–	–	24	17	10	1	26
Pa.	2	–	–	–	–	1	–	–	NA	NA	NA	1	10
E.N. CENTRAL	22	–	430	–	–	7	10	–	40	43	26	–	32
Ohio	7	–	11	–	–	2	4	–	11	16	7	–	6
Ind.	3	–	29	–	–	4	3	–	7	7	9	–	6
Ill.	–	–	229	–	–	–	3	–	14	4	3	–	9
Mich.	12	–	61	–	–	–	–	–	7	16	6	–	11
Wis.	–	–	100	–	–	1	–	–	1	–	1	–	–
W.N. CENTRAL	12	–	6	–	–	2	–	–	12	17	6	1	21
Minn.	–	–	–	–	–	–	–	–	–	–	–	–	9
Iowa	2	–	1	–	–	–	–	–	–	6	3	–	2
Mo.	10	–	1	–	–	–	–	–	4	7	2	1	3
N. Dak.	–	–	1	–	–	–	–	–	–	–	–	–	1
S. Dak.	–	–	3	–	–	–	–	–	1	1	–	–	1
Nebr.	–	–	–	–	–	–	–	–	4	–	–	–	–
Kans.	–	–	–	–	–	2	–	–	3	3	1	–	5
S. ATLANTIC	63	–	84	–	1	2	5	–	89	50	29	4	81
Del.	–	–	2	–	–	–	–	–	1	–	1	–	1
Md.	1	–	14	–	–	–	–	–	15	6	10	2	19
D.C.	–	–	–	–	–	–	–	–	–	–	–	–	1
Va.	1	–	5	–	–	–	4	–	8	1	3	1	12
W. Va.	5	–	24	–	–	–	–	–	6	2	–	–	3
N.C.	5	–	NN	–	–	1	–	–	6	6	6	–	7
S.C.	3	–	2	–	–	–	–	–	8	3	1	–	1
Ga.	2	–	2	–	–	–	–	–	8	9	–	–	8
Fla.	46	–	35	–	1	1	1	–	37	23	8	1	29
E.S. CENTRAL	48	–	16	–	–	10	2	–	26	37	5	1	8
Ky.	5	–	16	–	–	1	–	–	1	9	–	–	–
Tenn.	32	–	NN	–	–	4	1	–	12	6	1	–	–
Ala.	10	–	–	–	–	3	–	–	12	15	4	1	7
Miss.	1	–	–	–	–	2	1	–	1	7	–	–	1
W.S. CENTRAL	36	1	38	–	–	2	–	–	26	60	27	6	57
Ark.	–	–	–	–	–	–	–	–	3	3	3	1	4
La.	1	–	NN	–	–	1	–	–	1	5	2	–	3
Okla.	5	–	–	–	–	–	–	–	4	5	–	–	4
Tex.	30	1	38	–	–	1	–	–	18	47	22	5	46
MOUNTAIN	4	–	8	–	1	–	2	–	14	58	9	2	25
Mont.	1	–	–	–	1	–	–	–	–	4	–	1	1
Idaho	–	–	–	–	–	–	–	–	1	1	1	–	1
Wyo.	–	–	–	–	–	–	1	–	–	25	–	–	–
Colo.	1	–	–	–	–	–	–	–	4	13	2	–	11
N. Mex.	2	–	–	–	–	–	–	–	2	14	1	1	2
Ariz.	–	–	NN	–	–	–	–	–	–	–	2	–	4
Utah	–	–	–	–	–	–	1	–	–	–	–	–	3
Nev.	–	–	8	–	–	–	–	–	7	1	3	–	3
PACIFIC	85	–	75	–	1	2	4	–	97	145	52	5	399
Wash.	2	–	56	–	–	–	–	–	7	6	2	1	20
Oreg.	–	–	1	–	–	–	–	–	6	16	–	–	11
Calif.	74	–	4	–	–	2	3	–	84	116	50	3	363
Alaska	–	–	1	–	1	–	1	–	–	6	–	–	1
Hawaii	9	–	13	–	–	–	–	–	–	1	–	1	4
Guam	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	1
P.R.	–	–	8	–	–	–	–	–	2	3	–	–	9
V.I.	–	–	3	–	–	–	–	–	–	–	–	–	4
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 July 25, 1981 and July 19, 1980 (29th 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	44	2,468	12,256	54	2,223	1,723	40	2,852	22	28	1,553	33
NEW ENGLAND	–	72	665	4	141	103	2	141	1	1	104	2
Maine	–	5	33	–	21	4	–	27	–	–	33	–
N.H.	–	4	330	2	15	5	1	17	–	–	35	–
Vt.	–	1	226	–	6	13	–	6	–	–	–	–
Mass.	–	54	52	–	33	35	–	40	1	1	24	–
R.I.	–	–	2	1	13	7	1	20	–	–	–	–
Conn.	–	8	22	1	53	39	–	31	–	–	12	2
MID. ATLANTIC	12	756	3,612	9	306	297	3	498	1	2	189	1
Upstate N.Y.	3	203	646	3	100	102	–	84	1	2	86	–
N.Y. City	7	66	1,128	3	51	74	1	62	–	–	47	1
N.J.	1	52	797	1	69	62	–	82	–	–	46	–
Pa.	1	435	1,041	2	86	59	2	270	–	–	10	–
E.N. CENTRAL	2	76	2,205	7	267	220	12	806	11	5	329	6
Ohio	–	15	346	3	96	69	5	125	–	2	3	1
Ind.	–	8	89	–	40	33	–	91	2	1	114	1
Ill.	2	23	318	4	66	59	5	162	9	1	79	–
Mich.	–	28	230	–	61	47	1	295	–	–	33	3
Wis.	–	2	1,222	–	4	12	1	133	–	1	100	1
W.N. CENTRAL	–	6	1,302	3	102	70	2	176	–	1	76	3
Minn.	–	2	1,068	3	36	18	–	8	–	–	6	2
Iowa	–	1	20	–	18	8	1	41	–	–	4	–
Mo.	–	1	64	–	30	31	1	28	–	–	3	1
N. Dak.	–	–	–	–	1	1	–	–	–	–	–	–
S. Dak.	–	–	–	–	4	4	–	1	–	–	–	–
Nebr.	–	1	83	–	–	–	–	3	–	–	1	–
Kans.	–	1	67	–	13	8	–	95	–	1	62	–
S. ATLANTIC	3	332	1,839	9	503	408	6	396	4	3	129	7
Del.	–	–	3	–	4	2	–	9	–	–	1	–
Md.	–	2	70	–	36	41	2	78	–	–	1	–
D.C.	–	1	–	–	1	1	–	1	–	–	–	–
Va.	–	6	298	1	63	35	2	110	–	–	6	–
W. Va.	–	8	9	–	19	14	1	65	–	–	22	–
N.C.	–	4	124	3	74	75	–	12	–	1	5	2
S.C.	–	–	157	–	65	50	–	10	–	–	8	2
Ga.	1	109	799	2	84	72	–	33	1	–	35	1
Fla.	2	202	379	3	157	118	1	78	3	2	51	2
E.S. CENTRAL	–	2	324	6	162	154	1	66	–	2	27	2
Ky.	–	–	51	1	45	49	1	32	–	2	16	–
Tenn.	–	–	167	2	47	42	–	20	–	–	10	–
Ala.	–	2	22	3	54	40	–	13	–	–	1	2
Miss.	–	–	84	–	16	23	–	1	–	–	–	–
W.S. CENTRAL	20	877	923	6	367	185	3	168	3	3	135	5
Ark.	–	1	16	–	20	14	–	1	–	–	1	1
La.	2	2	11	–	88	66	–	4	–	–	9	2
Okla.	–	6	769	1	30	16	–	–	–	–	–	1
Tex.	18	868	127	5	229	89	3	163	3	3	125	1
MOUNTAIN	1	32	415	–	76	60	1	103	–	1	74	2
Mont.	–	–	2	–	6	2	–	6	–	–	4	–
Idaho	–	1	–	–	3	4	–	4	–	–	3	–
Wyo.	–	–	–	–	2	2	–	1	–	–	3	–
Colo.	1	9	22	–	32	14	1	42	–	–	27	–
N. Mex.	–	8	11	–	6	7	–	–	–	–	5	–
Ariz.	–	4	326	–	17	10	–	23	–	1	19	1
Utah	–	–	46	–	5	2	–	16	–	–	4	1
Nev.	–	10	8	–	5	19	–	11	–	–	9	–
PACIFIC	6	315	971	10	299	226	10	498	2	10	490	5
Wash.	–	3	169	2	56	42	1	133	–	–	61	–
Oreg.	–	3	–	–	43	39	1	57	–	1	31	–
Calif.	6	307	792	8	190	140	7	284	2	9	389	5
Alaska	–	–	5	–	6	5	1	7	–	–	–	–
Hawaii	–	2	5	–	4	–	–	17	–	–	9	–
Guam	NA	4	5	–	–	1	NA	6	NA	NA	1	–
P.R.	10	245	102	–	10	8	2	105	–	–	3	3
V.I.	–	13	6	–	–	1	–	4	–	–	1	–
Pac. Trust Terr.	NA	1	6	–	–	–	NA	8	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 July 25, 1981 and July 19, 1980 (29th 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	544	14,827	116	11	268	57	674	19,753	542,613	530,052	640	16,449	14,155	4,042
NEW ENGLAND	13	422	1	–	12	1	6	705	13,628	13,305	7	348	300	15
Maine	1	26	–	–	1	–	–	23	672	787	–	2	4	8
N.H.	–	11	–	–	–	–	–	29	484	432	–	11	1	1
Vt.	–	12	–	–	–	–	–	5	234	306	–	13	4	–
Mass.	7	244	–	–	7	1	4	227	5,506	5,493	6	231	171	2
R.I.	4	26	–	–	–	–	–	46	725	835	–	19	17	–
Conn.	1	103	1	–	4	–	2	375	6,007	5,452	1	72	103	4
MID. ATLANTIC	90	2,366	10	2	45	2	22	2,852	64,936	57,112	65	2,491	2,047	40
Upstate N.Y.	19	412	10	2	9	–	9	356	10,656	10,299	–	232	163	31
N.Y. City	38	927	–	–	25	–	2	1,672	27,510	22,181	38	1,496	1,357	–
N.J.	21	497	–	–	7	–	7	346	12,066	10,564	11	340	252	5
Pa.	12	530	–	–	4	2	4	478	14,704	14,068	16	423	275	4
E.N. CENTRAL	56	1,898	1	1	16	4	34	2,822	80,191	80,714	26	1,014	1,327	531
Ohio	12	370	–	1	2	4	29	1,356	28,369	21,955	–	149	220	44
Ind.	–	148	–	–	–	–	2	175	7,327	7,646	1	111	98	49
Ill.	22	756	–	–	6	–	3	329	19,578	24,958	17	520	738	401
Mich.	18	520	1	–	6	–	–	674	17,447	18,302	5	182	220	5
Wis.	4	104	–	–	2	–	–	288	7,470	7,853	3	52	51	32
W.N. CENTRAL	16	531	13	–	9	7	26	1,148	26,290	23,808	26	326	176	1,754
Minn.	–	91	–	–	2	–	–	221	4,224	3,964	11	118	62	307
Iowa	1	56	–	–	2	1	2	113	2,846	2,628	–	13	9	551
Mo.	13	234	12	–	2	5	15	483	12,093	10,167	13	170	86	137
N. Dak.	–	18	–	–	–	–	–	22	365	357	–	4	3	287
S. Dak.	–	42	–	–	1	–	–	13	717	745	–	2	2	209
Nebr.	2	18	1	–	1	–	2	92	1,997	1,956	1	4	6	130
Kans.	–	72	–	–	1	1	7	204	4,048	3,991	1	15	8	133
S. ATLANTIC	104	3,287	8	1	37	28	386	4,826	133,893	132,891	154	4,335	3,401	235
Del.	2	45	1	–	–	–	2	89	2,107	1,829	–	7	10	–
Md.	14	326	–	–	12	2	38	576	14,647	14,161	6	320	235	8
D.C.	9	213	–	–	1	–	–	236	8,217	9,123	11	361	242	–
Va.	5	324	–	–	1	10	59	600	12,199	11,515	25	395	304	41
W. Va.	3	110	–	–	4	–	4	70	2,039	1,703	–	14	13	11
N.C.	18	564	1	–	1	11	171	921	20,826	19,139	10	335	240	2
S.C.	6	310	2	1	1	5	73	640	13,111	12,544	10	288	192	15
Ga.	21	529	4	–	2	–	31	1,146	27,563	24,956	54	1,124	977	111
Fla.	26	866	–	–	15	–	8	548	33,184	37,921	38	1,491	1,188	47
E.S. CENTRAL	62	1,296	5	–	5	7	67	1,323	44,617	42,755	57	1,070	1,153	259
Ky.	13	345	2	–	–	–	2	245	5,716	6,400	5	51	76	77
Tenn.	36	424	3	–	1	3	45	637	17,043	15,314	29	422	480	143
Ala.	5	353	–	–	2	2	5	308	13,396	12,342	11	303	246	39
Miss.	8	174	–	–	2	2	15	133	8,462	8,699	12	294	351	–
W.S. CENTRAL	58	1,658	57	5	36	5	113	2,380	71,069	68,718	210	4,046	2,784	722
Ark.	13	175	32	–	1	2	23	281	5,270	5,204	5	76	85	96
La.	13	300	2	–	2	–	–	230	10,950	12,445	57	938	660	21
Okla.	10	195	13	–	3	2	68	310	7,702	6,768	1	89	56	143
Tex.	22	988	10	5	30	1	22	1,559	47,147	44,301	147	2,943	1,983	462
MOUNTAIN	15	432	18	1	20	3	18	668	21,409	20,406	8	422	330	124
Mont.	1	24	5	–	4	3	10	30	774	755	–	9	1	72
Idaho	–	6	2	–	–	–	4	46	895	905	1	15	13	–
Wyo.	2	8	1	–	–	–	3	13	497	611	–	8	8	6
Colo.	–	50	5	–	5	–	–	235	5,757	5,496	7	137	94	16
N. Mex.	1	74	1	–	–	–	–	86	2,346	2,547	–	78	51	19
Ariz.	8	200	–	1	10	–	–	168	6,583	5,480	–	80	107	9
Utah	3	32	3	–	1	–	–	37	996	954	–	16	10	–
Nev.	–	38	1	–	–	–	1	53	3,561	3,658	–	79	46	2
PACIFIC	130	2,937	3	1	88	–	2	3,029	86,580	90,343	87	2,397	2,637	362
Wash.	10	214	1	–	3	–	–	221	6,879	7,640	–	68	141	4
Oreg.	1	107	–	–	4	–	–	241	5,285	6,313	5	55	63	3
Calif.	115	2,497	2	1	80	–	2	2,432	70,620	72,399	80	2,226	2,325	341
Alaska	–	39	–	–	–	–	–	78	2,142	2,170	–	6	7	14
Hawaii	4	80	–	–	1	–	–	57	1,654	1,821	2	42	101	–
Guam	NA	7	–	NA	–	NA	–	NA	47	81	NA	–	4	–
P.R.	–	183	–	1	4	–	–	56	1,821	1,455	4	378	302	46
V.I.	–	1	–	–	4	–	–	3	104	108	2	15	10	–
Pac. Trust Terr.	NA	38	–	NA	–	NA	–	NA	211	232	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 July 25, 1981 (29th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	638	442	131	36	13	16	46
Boston, Mass.	171	105	43	10	7	6	20
Bridgeport, Conn.	39	30	6	1	1	1	3
Cambridge, Mass.	30	22	3	5	–	–	5
Fall River, Mass.	22	17	5	–	–	–	–
Hartford, Conn.	49	33	11	4	1	–	–
Lowell, Mass.	29	19	6	3	–	1	2
Lynn, Mass.	27	22	4	1	–	–	–
New Bedford, Mass.	27	24	3	–	–	–	1
New Haven, Conn.	39	23	9	2	1	4	2
Providence, R.I. §	64	42	16	4	–	2	4
Somerville, Mass.	7	6	1	–	–	–	1
Springfield, Mass. §	47	32	10	3	1	1	2
Waterbury, Conn.	38	33	3	1	1	–	3
Worcester, Mass.	49	34	11	2	1	1	3
MID. ATLANTIC	2,558	1,653	537	211	76	80	86
Albany, N.Y.	47	33	5	2	–	7	–
Allentown, Pa.	18	15	3	–	–	–	–
Buffalo, N.Y.	100	66	23	5	3	3	4
Camden, N.J.	29	19	7	–	2	1	–
Elizabeth, N.J.	26	19	4	1	2	–	2
Erie, Pa.†	40	34	5	–	–	1	5
Jersey City, N.J.	50	36	7	5	1	–	1
N.Y. City, N.Y.	1,388	884	273	133	47	51	38
Newark, N.J.	57	35	16	4	2	–	2
Paterson, N.J.	22	13	5	4	–	–	–
Philadelphia, Pa.†	331	189	93	31	10	8	13
Pittsburgh, Pa.†	80	50	25	3	2	–	4
Reading, Pa.	32	24	6	–	1	1	2
Rochester, N.Y.	99	68	17	6	3	5	7
Schenectady, N.Y.	26	18	4	3	1	–	–
Scranton, Pa.†	28	23	4	–	1	–	3
Syracuse, N.Y.	96	70	16	7	1	2	–
Trenton, N.J.	35	14	15	6	–	–	1
Utica, N.Y.	18	13	4	1	–	–	2
Yonkers, N.Y.	36	30	5	–	–	1	2
E.N. CENTRAL	2,268	1,370	592	138	98	70	57
Akron, Ohio	66	47	12	3	2	2	–
Canton, Ohio	41	32	7	–	1	1	1
Chicago, Ill.	544	287	176	39	32	10	10
Cincinnati, Ohio	146	94	33	5	6	8	13
Cleveland, Ohio	159	85	45	12	9	8	2
Columbus, Ohio	134	73	48	7	3	3	4
Dayton, Ohio	107	63	33	9	2	–	–
Detroit, Mich.	237	136	54	27	7	13	4
Evansville, Ind.	56	33	14	3	5	1	–
Fort Wayne, Ind.	60	40	13	4	2	1	5
Gary, Ind.	17	9	3	3	1	1	1
Grand Rapids, Mich.	60	47	9	2	–	2	3
Indianapolis, Ind.	171	99	46	6	10	10	–
Madison, Wis.	43	28	6	4	4	1	3
Milwaukee, Wis.	114	90	20	1	1	2	1
Peoria, Ill.	35	27	4	1	1	2	–
Rockford, Ill.	51	34	13	4	–	–	2
South Bend, Ind.	40	27	10	1	1	1	–
Toledo, Ohio	115	70	30	4	8	3	4
Youngstown, Ohio	72	49	16	3	3	1	4
W.N. CENTRAL	746	498	150	36	34	28	33
Des Moines, Iowa	59	40	8	4	6	1	1
Duluth, Minn.	41	31	8	1	–	1	6
Kansas City, Kans.	46	24	12	4	5	1	2
Kansas City, Mo.	101	70	16	9	2	4	3
Lincoln, Nebr.	45	33	8	2	2	–	5
Minneapolis, Minn.	94	63	18	4	5	4	4
Omaha, Nebr.	77	52	10	3	7	5	1
St. Louis, Mo.	153	96	44	5	3	5	5
St. Paul, Minn.	65	44	13	2	2	4	2
Wichita, Kans.	65	45	13	2	2	3	4

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)						P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	1-24	<1	
S. ATLANTIC	1,313	729	353	113	56	61	40
Atlanta, Ga.	169	83	44	22	15	5	7
Baltimore, Md.	294	160	77	29	10	17	3
Charlotte, N.C.	60	34	20	3	2	1	4
Jacksonville, Fla.	95	49	30	6	2	8	1
Miami, Fla.	132	73	37	14	4	4	2
Norfolk, Va.	47	24	15	–	5	3	4
Richmond, Va.	77	40	22	4	–	11	4
Savannah, Ga.	60	34	17	5	2	2	3
St. Petersburg, Fla.	86	69	12	2	2	1	5
Tampa, Fla.	55	29	14	4	2	6	3
Washington, D.C.	176	97	48	21	7	3	4
Wilmington, Del.	62	37	17	3	5	–	–
E.S. CENTRAL	697	428	173	53	25	18	19
Birmingham, Ala.	89	49	20	10	7	3	1
Chattanooga, Tenn.	60	37	13	6	2	2	2
Knoxville, Tenn.	45	36	6	1	–	2	–
Louisville, Ky.	96	58	25	7	3	3	3
Memphis, Tenn.	176	104	52	12	4	4	4
Mobile, Ala.	73	52	10	8	3	–	3
Montgomery, Ala.	35	20	12	1	1	1	2
Nashville, Tenn.	123	72	35	8	5	3	4
W.S. CENTRAL	1,299	677	347	135	87	53	25
Austin, Tex.	49	29	10	2	5	3	–
Baton Rouge, La.	34	17	8	3	4	2	1
Corpus Christi, Tex.	48	17	16	5	4	6	2
Dallas, Tex.	198	93	62	17	17	9	1
El Paso, Tex.	53	29	11	8	2	3	1
Fort Worth, Tex.	96	55	22	9	2	8	4
Houston, Tex.	334	149	96	52	32	5	5
Little Rock, Ark.	63	31	24	4	2	2	2
New Orleans, La.	146	86	37	13	4	6	–
San Antonio, Tex.	154	95	31	11	11	6	7
Shreveport, La.	33	23	8	1	–	1	–
Tulsa, Okla.	91	53	22	10	4	2	2
MOUNTAIN	611	348	148	42	52	21	18
Albuquerque, N.Mex	77	36	17	8	15	1	1
Colo. Springs, Colo.	40	25	8	4	2	1	7
Denver, Colo.	136	86	27	8	12	3	1
Las Vegas, Nev.	61	28	17	4	7	5	1
Ogden, Utah	15	9	4	–	1	1	–
Phoenix, Ariz.	124	72	32	8	7	5	4
Pueblo, Colo.	26	17	6	3	–	–	–
Salt Lake City, Utah	46	24	12	4	4	2	1
Tucson, Ariz.	86	51	25	3	4	3	3
PACIFIC	1,623	1,002	402	105	58	56	58
Berkeley, Calif.	15	9	1	5	–	–	–
Fresno, Calif.	53	25	21	1	2	4	2
Glendale, Calif.	17	13	4	–	–	–	–
Honolulu, Hawaii	68	29	27	4	5	3	5
Long Beach, Calif.	93	57	27	5	1	3	–
Los Angeles, Calif.	476	281	114	39	26	16	14
Oakland, Calif.	74	45	22	5	–	2	3
Pasadena, Calif.	30	24	4	1	1	–	2
Portland, Oreg.	112	78	19	4	2	9	2
Sacramento, Calif.	69	43	15	5	3	3	1
San Diego, Calif.	99	64	24	8	3	–	4
San Francisco, Calif.	142	94	36	9	2	1	6
San Jose, Calif.	152	94	36	11	5	6	7
Seattle, Wash.	120	78	28	5	4	5	4
Spokane, Wash.	59	35	17	2	2	3	4
Tacoma, Wash.	44	33	7	1	2	1	4
TOTAL	11,753††	7,147	2,833	869	499	403	382

*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.

§Data not available this week. Figures are estimates based on average percent of regional totals.

Gonococcal Infections – Continued

departure processing. In the period February-May 1981, cultures of specimens from 372 randomly selected United States-bound female refugees from different ethnic groups, ages 15-30 years, were tested for gonorrhea at the AFRIMS laboratory. The Vietnamese refugees in this group had arrived in Thailand before the treatment policy described above was implemented. Eleven (3%) endocervical cultures were positive, and 6 of the isolates were confirmed as PPNG at the AFRIMS laboratory (Table 2).

Reported by Dr. AG Rangaraj, Senior Medical Coordinator, United Nations High Commission for Refugees, Thailand; Drs. P Laurant, X Cockenpot, B Cockenpot, Mêdecins Sans Frontières; Drs. B Serrano, KC Nag Pal, Catholic Relief Services; Dr. P Echeverria, A McFarland, Armed Forces Research Institute of Medical Science; Intergovernmental Committee for Migration; Venereal Disease Control Div, Quarantine Div, Center for Prevention Services, CDC.

Editorial Note: A high proportion of gonococcal infections among female Vietnamese refugees apparently result from rapes that occur during the boat trip to Thailand. The policy of immediate treatment without culture led to a substantial reduction in gonorrhea prevalence among rape victims. Kanamycin is being used in Thailand because it is effective aganist PPNG (*1*), inexpensive, and readily available. The continued effectiveness of this program will be monitored by culturing identified rape victims after they are transferred to Songkhla Camp. To ensure optimal care for women not identified as rape victims, examination of women with vaginal discharge will include taking specimens for gonorrhea cultures.

Lao women, who enter northern Thailand by land, probably acquire gonococcal infections from sexual partners after they arrive in Nong Khai Camp. Appropriate control measures are being implemented at this camp, including the use of accurate diagnostic tests for gonococcal infection and effective treatments for identified cases. To monitor the effectiveness of gonorrhea control measures, periodic screening of United States-bound refugees for gonococcal infection will continue at Phanat Nikhom Transit Center.

More than 1 million cases of gonococcal infection have been reported in the United States each year since 1976. In 1980, more than 1,100 cases of PPNG were reported in the United States (*2*). Only 2 of these persons were Indochinese refugees, and only 1 other case has been linked to an Indochinese refugee.

Existing recommendations for nonmilitary cases of gonorrhea should be used for the Indochinese refugees: 2 g spectinomycin should be used as initial treatment for persons with gonorrhea who have recently arrived from countries with areas of high PPNG prevalence, such as Thailand (*3*); all isolates of *N. gonorrhoeae* should be tested for penicillinase production using a recommended technique (*4*). All cases of gonorrhea should be reported to the appropriate state or local health department.

TABLE 2. Gonorrhea culture results for female refugees, ages 15-30 years, Phanat Nikhom Transit Center, February-May, 1981

Ethnic group	Number screened	Number positive	Number of PPNG isolates
Vietnamese	150	5*	4
Lao	135	6*	2
Khmer	87	0	0
Total	372	11	6

*All Vietnamese with gonorrhea were from Songkhla Camp in southern Thailand, and all Lao with gonorrhea were from Nong Khai Camp in northeast Thailand.

Gonococcal Infections – Continued

References

1. Rajan VS, Pang R, Tan NJ, Sng EH. Kanamycin in the treatment of penicillinase-producing gonococcal infections. Asian J Infect Dis 1979;3:37-9.
2. Jaffee HW, Biddle JW, Johnson SB, Wiesner PJ. Infections due to penicillinase-producing *Neisseria gonorrhoeae* in the United States: 1976-1980. J Infect Dis (in press).
3. CDC. Penicillinase-producing *Neisseria gonorrhoeae* – New Mexico, California. MMWR 1980;29: 381-2.
4. CDC. Infections due to penicillinase-producing *Neisseria gonorrhoeae* – Florida. MMWR 1981; 30:245-7.

Surveillance Summary

Measles Encephalitis – United States, 1962-1979

In the period 1962-1979, there was a substantial decline in reported cases of both measles and measles encephalitis in the United States (Figure 2). In 1962, the year preceding the licensure of measles vaccine, there were 481,530 reported measles cases and 337 reported measles encephalitis cases. By 1979, both reported cases of measles and cases of measles encephalitis reached all-time record lows of 13,597 and 3 cases, respectively. The 3 cases of measles encephalitis represent a greater than 99% reduction from levels in the pre-vaccine era. In the period 1962-1979, the average measles encephalitis-to-case ratio was 0.73 measles encephalitis cases/1,000 measles cases.

Information on deaths resulting from measles encephalitis is available from 1963 to 1979. During this period the number of deaths from measles encephalitis declined substantially from a high of 46 deaths in 1964 to a record low of 1 death in 1979. However, from 1963 to 1979 the percentage of cases of measles encephalitis that resulted in death remained relatively constant at 14% overall. There was 1.0 measles encephalitis death/10,000 reported measles cases.

Age-specific data for both measles cases and measles encephalitis cases in the United States are available from 1973 to 1979. Age was known for 151 of the 160 patients in this period whose measles encephalitis cases were reported to CDC. In the period 1973-1975, the measles encephalitis-to-case ratio rose with age (Table 3). However, in the period 1976-1979 the difference in the measles encephalitis-to-case ratio between the youngest and oldest age groups narrowed—primarily as a result of a declining ratio for the older age groups.

TABLE 3. Age-specific incidence of reported measles encephalitis cases, United States, 1973-1979

	1973-1975				1976-1979			
Age group (years)	Reported encephalitis cases	Estimated measles cases*	Measles encephalitis cases/1,000 measles cases	Relative risk	Reported encephalitis cases	Estimated measles cases*	Measles encephalitis cases/1,000 measles cases	Relative risk
<5	9	18,009	0.50	1.0	12	21,629	0.56	1.0
5-9	17	23,133	0.73	1.5	22	36,312	0.61	1.1
10-14	22	22,361	0.98	2.0	29	47,485	0.61	1.1
15+	17	9,676	1.76	3.5	23	33,512	0.69	1.2
Total	65	73,179	0.89	1.8	86	138,938	0.62	1.1

*Estimated measles cases by age are determined by extrapolating the percentage distribution of patients of known age to total reported cases.

Measles Encephalitis — Continued

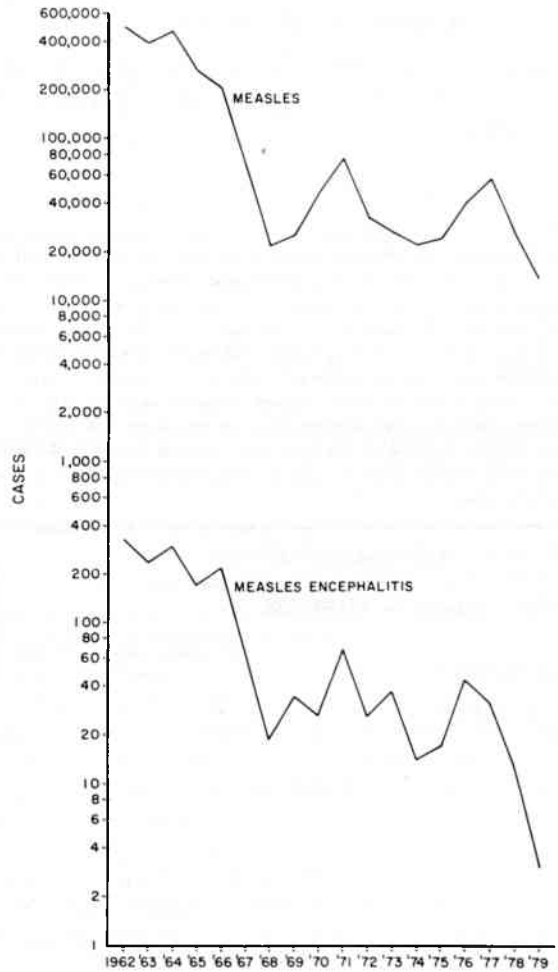
Reported by Enteric and Neurotropic Viral Diseases Br, Viral Diseases Div, Center for Infectious Diseases, Surveillance and Assessment Br, Immunization Div, Center for Prevention Services, CDC.

Editorial Note: The all-time record lows observed in 1979 for reported measles cases, measles encephalitis cases, and measles encephalitis deaths reflect the increased emphasis on measles vaccination during the nationwide Childhood Immunization Initiative and the Measles Elimination Program (*1,2*).

Approximately 15% of persons who have measles encephalitis die as a result of the illness. In addition, 25% of persons with measles encephalitis have brain damage, including such sequellae as mental retardation, seizures, severe behavior disorders, deafness, hemiplegia, and paraplegia (*3*).

Since the decline in measles encephalitis and measles encephalitis deaths has paralleled the decline in measles disease, continuation of the current measles elimination effort (*1,2*) should further reduce the incidence of these complications.

FIGURE 2. Reported measles and measles-encephalitis cases, United States, 1962-1979



Measles Encephalitis — Continued

References

1. CDC. Goal to eliminate measles from the United States. MMWR 1978;27:391.
2. Hinman AR, Brandling-Bennett AD, Nieburg PI. The opportunity and obligation to eliminate measles from the United States. JAMA 1979;242:1157-62.
3. Krugman S, Katz SL. Infectious diseases of children. St. Louis: Mosby, 1981:151.

Notice to Readers

MMWR To Be Sent Third-Class

In the interest of economy, most MMWRs will be mailed bulk mail, third-class, beginning with next week's issue. Because of this change, some readers may find that they receive the MMWR somewhat later than usual.

Erratum, Vol. 30, No. 28

p348. In Table IV, Deaths in 121 U.S. Cities, week ending July 18, 1981 (28th week), deaths reported by Lincoln, Nebraska, should read: All Ages, 26; 65+, 21; 45-64, 3;25-44, 1; 1-14, 1; P&I Total, 3.

The Morbidity and Mortality Weekly Report, circulation 89,000, 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.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Attn: Editor, Morbidity and Mortality Weekly Report, Centers for Disease Control, Atlanta, Georgia 30333.

Send mailing list additions, deletions and address changes to: Attn: Distribution Services, Management Analysis and Services Office, 1-SB-419, Centers for Disease Control, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE / CENTERS FOR DISEASE CONTROL
ATLANTA, GEORGIA 30333 **OFFICIAL BUSINESS**

Postage and Fees Paid
U.S. Department of HHS
HHS 396

U.S.MAIL

Director, Centers for Disease Control
William H. Foege, M.D.
Director, Epidemiology Program Office
Philip S. Brachman, M.D.
Editor
Michael B. Gregg, M.D.
Managing Editor
Anne D. Mather, M.A.
Mathematical Statistician
Keewhan Choi, Ph.D.

HHS Publication No. (CDC) 81-8017