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MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

Current Trends

Follow-up on Penicillinase-Producing *Neisseria gonorrhoeae* — Worldwide

Cases of infection caused by penicillinase-producing *Neisseria gonorrhoeae* (PPNG) have now been detected in 16 different countries — Australia, Belgium, Canada, Denmark, Hong Kong, Japan, the Netherlands, New Zealand, Norway, the Philippines, Republic of Korea, Singapore, Sweden, Switzerland, the United Kingdom, and the United States. In the United States the only source for importation of infection caused by PPNG has been the Far East, but several cases in Europe have been linked to sexual contact in West Africa.

In the United States from March 1, 1976, to May 2, 1977, a total of 150 cases of PPNG infection from 21 states, New York City, and Guam have been confirmed at the CDC (Figure 1). In Hawaii, state health officials in cooperation with public, private, and military health care providers performed beta-lactamase tests on 1,174 pretreatment gonococcal isolates obtained from 938 different patients during January, February, and March 1977; 4 patients (0.4%) were infected with PPNG.

Three of the U.S. cases of PPNG infection known to have been treated with either 2 or 4 grams of spectinomycin IM did not respond to treatment. The PPNG isolates from these failures were not resistant to spectinomycin *in vitro*.

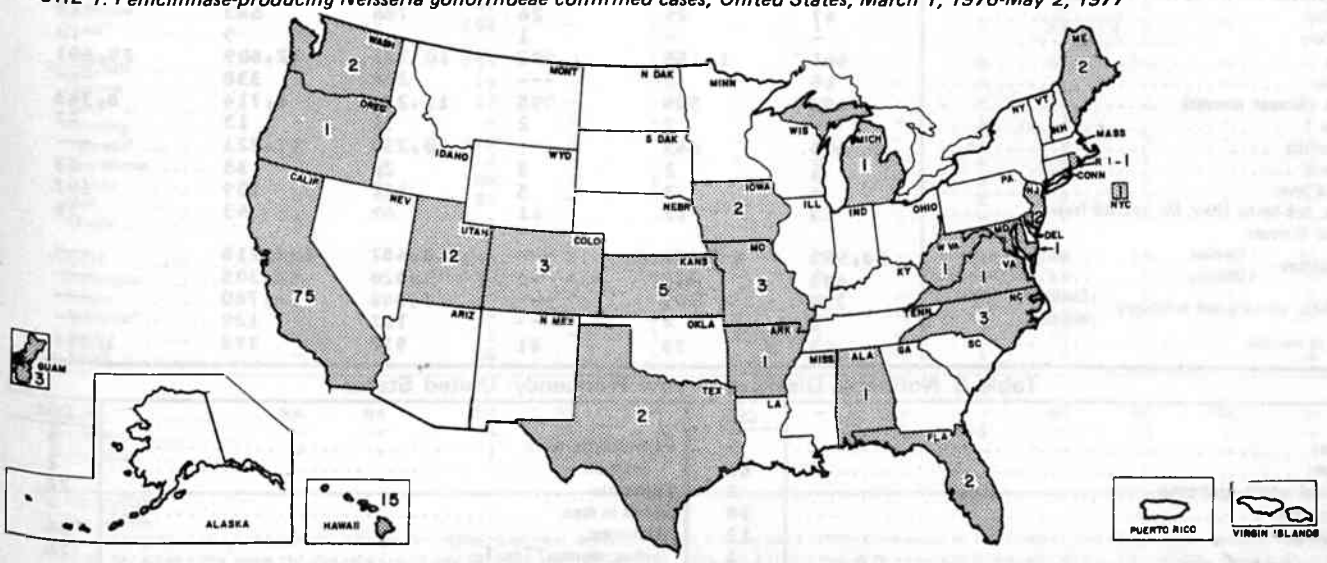
Reported by R Ohye, G Ching, N Wiebanga, MD, State Epidemiologist, Hawaii State Dept of Health; G Causse, MD, Bacterial and Venereal Infections, World Health Organization, Bur of State Services, Bur of Laboratories. CDC.

Editorial Note: Since January 21, 1977, when the last update on PPNG was reported (*1*), cases of infection caused by PPNG have been confirmed in 5 additional states and Guam; however, the prevalence of cases in the United States is still very low.

CDC continues to recommend 4.8 million units of aqueous procaine penicillin IM plus 1 gram of probenecid as the initial treatment of choice for routine cases of uncomplicated gonococcal infection. All patients should have a post-treatment culture 3-7 days following therapy. Testing all positive post-treatment gonococcal cultures for beta-lactamase (penicillinase) production is recommended in areas where no cases caused by PPNG have previously been detected. More intensive surveillance coupled with contact-tracing is recommended in areas where cases are continually being detected. All state health laboratories have now received instructions on beta-lactamase (penicillinase) testing from the Bureau of Laboratories at CDC.

Two grams of spectinomycin IM is recommended only for patients who do not respond to treatment with other antibiotics or who are likely to be infected with PPNG. Non-penicillinase-producing gonococci with absolute resis-

FIGURE 1. Penicillinase-producing Neisseria gonorrhoeae confirmed cases, United States, March 1, 1976-May 2, 1977



Gonorrhoeae – Continued

tance to spectinomycin have been detected (*1*), and if the drug is used indiscriminately the probability of PPNG acquiring spectinomycin resistance will increase (*2*).

References

1. MMWR 26[5]:29-30,1977
2. Siegel MS, Thompson SE, Perine PL: Penicillinase-producing *Neisseria gonorrhoeae*. Sexually Transmitted Diseases 4:32-33,1977

Epidemiologic Notes and Reports

Follow-up on Ectopic Pregnancy Following Sterilization

CDC reported in March 1977 that 3 cases of fatal ectopic pregnancy after sterilization or abortion had occurred in New York and California (MMWR 26 [9], 1977). Since that report, 4 more ectopic pregnancies have been reported in 3 women who had had tubal sterilization procedures. Two separate ectopic pregnancies occurred in a 33-year-old woman; the first pregnancy occurred 11 months after sterilization in the right fallopian tube, the second, 25 months after sterilization in the left tube. A second woman, also 33, died of a ruptured ectopic pregnancy 3 years and 8 months after sterilization. The details of the fourth case follow.

On March 24, 1977, a 29-year-old gravida 3, para 3, whose last menstrual period had been 26 days earlier, presented to a Pennsylvania hospital with a 3-week history of nausea, breast tenderness, and severe, intermittent, crampy left lower quadrant pelvic pain. Her past medical history included a laparotomy with tubal ligation in 1975 (Pomeroy procedure). Her periods were regular with an occasional blood-tinged discharge between periods. There had been no gross bleeding or period irregularity. She had been seen in the emergency room 1 week earlier and had been given Percodan* for pain. A culture for *Neisseria gonorrhoeae* was taken and subsequently reported as negative.

Physical examination revealed signs of early pregnancy and some left adnexal induration. Laboratory data included a positive pregnancy test and a hemoglobin of 12.7 gms %. She was admitted with a diagnosis of probable ectopic pregnancy.

At the time of an exploratory laparotomy a large amount of old clotted blood was noted in both the anterior and posterior cul-de-sac. A large hematoma encircled the left ovary, and a ruptured tubal pregnancy was found in the ampulla of the left uterine tube, distal to the portion of the tube that had been ligated more than a year ago. A left salpingo-oophorectomy was performed.

Recanalization could not be demonstrated either at the time of surgery or later on histologic examination of the tissue specimens. However, retrospective examination of

*Use of trade names is for identification only and does not constitute endorsement by the PHS, U.S. Dept. HEW.

(Continued on page 159)

Table I. Summary—Cases of Specified Notifiable Diseases: United States

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

DISEASE	18th WEEK ENDING		MEDIAN 1972–1976	CUMULATIVE, FIRST 18 WEEKS		MEDIAN 1972–1976
	May 7, 1977	May 8, 1976		May 7, 1977	May 8, 1976	
Aseptic meningitis	38	31	47	633	615	617
Brucellosis	3	9	6	57	82	49
Chickenpox	5,961	6,008	---	110,010	103,097	---
Diphtheria	2	1	5	34	96	94
Encephalitis: Primary	17	13	13	209	265	284
Encephalitis: Post-Infectious	2	10	7	54	100	94
Hepatitis, Viral: Type B	345	267	170	5,513	4,906	3,306
Hepatitis, Viral: Type A	544	630	840	11,295	12,371	15,333
Hepatitis, Viral: Type unspecified	163	137		3,225	3,020	
Malaria	15	13	6	125	120	90
Measles (rubeola)	2,740	1,927	1,251	30,083	19,820	15,576
Meningococcal infections, total	47	25	27	791	688	614
Civilian	47	25	26	786	683	589
Military	-	-	1	5	5	16
Mumps	461	1,189	1,982	10,337	22,609	29,681
Pertussis	15	5	---	228	338	---
Rubella (German measles)	692	509	995	11,251	6,714	8,343
Tetanus	-	2	2	13	13	22
Tuberculosis	605	663	---	10,233	11,221	---
Tularemia	1	2	3	26	35	33
Typhoid fever	4	3	5	122	109	107
Typhus, tick-borne (Rky. Mt. spotted fever)	19	13	11	64	43	36
Venereal Diseases:						
Gonorrhea: Civilian	18,995	19,480	---	318,487	333,718	---
Gonorrhea: Military	433	726	---	9,028	10,305	---
Syphilis, primary and secondary: Civilian	339	367	---	7,348	8,780	---
Syphilis, primary and secondary: Military	6	4	---	107	129	---
Rabies in animals	66	58	81	912	878	1,046

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax:	-	Poliomyelitis, total:	2
Botulism:	66	Paralytic:	2
Congenital rubella syndrome:	3	Psittacosis:	22
Leprosy: Calif. 1	38	Rabies in man:	-
Leptospirosis:*	13	Trichinosis:	34
Plague:	1	Typhus, murine: *Tex. 1	16

*Delayed reports: Leptospirosis: Ark. delete 1 (1976); Typhus,murine: Tex. 1 (1976)

Table III
Cases of Specified Notifiable Diseases: United States
Weeks Ending May 7, 1977 and May 8, 1976 — 18th Week

AREA REPORTING	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
	1977	1977	1977	1977	CUM. 1977	1977	1976	1977	1977	1977	1977	1977	CUM. 1977
UNITED STATES	38	3	5,961	2	34	17	13	2	345	544	163	15	125
NEW ENGLAND	–	–	567	–	–	1	–	–	9	9	6	2	7
Maine	–	–	20	–	–	1	–	–	–	–	–	–	–
New Hampshire*	–	–	2	–	–	–	–	–	–	1	–	–	–
Vermont	–	–	4	–	–	–	–	–	1	3	–	–	1
Massachusetts	–	–	287	–	–	–	–	–	3	2	6	–	2
Rhode Island	–	–	118	–	–	–	–	–	1	1	–	1	2
Connecticut	–	–	156	–	–	–	–	–	4	2	–	1	2
MIDDLE ATLANTIC	4	1	972	–	5	3	2	–	55	77	22	2	27
Upstate New York	3	–	785	–	–	2	–	–	6	17	3	2	8
New York City	1	–	100	–	5	1	–	–	16	9	6	–	14
New Jersey	–	1	NN	–	–	–	2	–	11	21	12	–	3
Pennsylvania	–	–	87	–	–	–	–	–	22	30	1	–	2
EAST NORTH CENTRAL	1	–	2,477	–	–	2	1	–	50	73	9	1	9
Ohio	–	–	148	–	–	–	–	–	5	18	–	1	5
Indiana	–	–	183	–	–	–	–	–	2	4	4	–	–
Illinois	–	–	708	–	–	–	–	–	15	6	–	–	1
Michigan	1	–	895	–	–	2	1	–	21	36	5	–	2
Wisconsin*	–	–	543	–	–	–	–	–	7	9	–	–	1
WEST NORTH CENTRAL	3	–	317	–	1	2	–	1	24	24	13	3	13
Minnesota	–	–	–	–	–	–	–	1	5	5	–	–	4
Iowa	2	–	180	–	–	–	–	–	14	8	2	–	–
Missouri*	–	–	20	–	1	2	–	–	3	7	9	3	7
North Dakota	1	–	5	–	–	–	–	–	–	2	–	–	–
South Dakota	–	–	30	–	–	–	–	–	–	–	–	–	1
Nebraska	–	–	14	–	–	–	–	–	2	1	2	–	–
Kansas	–	–	68	–	–	–	–	–	–	1	–	–	1
SOUTH ATLANTIC	5	–	311	–	–	1	4	–	53	67	15	2	20
Delaware	–	–	7	–	–	–	–	–	2	1	–	–	–
Maryland	1	–	33	–	–	–	2	–	6	9	4	–	6
District of Columbia	–	–	6	–	–	–	–	–	15	1	1	–	1
Virginia	–	–	30	–	–	–	–	–	12	4	3	–	3
West Virginia	–	–	133	–	–	–	1	–	–	6	1	–	–
North Carolina	1	–	NN	–	–	1	–	–	7	9	2	–	4
South Carolina	3	–	–	–	–	–	–	–	2	1	1	–	–
Georgia	–	–	7	–	–	–	–	–	6	21	–	2	3
Florida*	–	–	95	–	–	–	1	–	3	15	3	–	3
EAST SOUTH CENTRAL	9	–	22	–	–	3	1	1	34	52	15	–	3
Kentucky	1	–	12	–	–	–	1	–	24	25	6	–	3
Tennessee	3	–	NN	–	–	2	–	–	7	16	2	–	–
Alabama	5	–	4	–	–	1	–	1	2	2	7	–	–
Mississippi	–	–	6	–	–	–	–	–	1	9	–	–	–
WEST SOUTH CENTRAL	2	1	332	–	1	–	2	–	5	26	11	–	7
Arkansas*	–	–	2	–	–	–	–	–	–	5	–	–	–
Louisiana	–	–	NN	–	–	–	–	–	–	–	–	–	–
Oklahoma	–	–	47	–	–	–	1	–	–	2	2	–	–
Texas*	2	1	283	–	1	–	1	–	5	19	9	–	7
MOUNTAIN	–	1	299	–	1	–	–	–	20	48	14	–	6
Montana	–	–	19	–	–	–	–	–	–	–	–	–	–
Idaho	–	–	27	–	–	–	–	–	–	11	2	–	–
Wyoming	–	–	–	–	–	–	–	–	1	1	–	–	1
Colorado*	–	–	215	–	–	–	–	–	11	8	7	–	4
New Mexico	–	–	2	–	–	–	–	–	1	6	1	–	–
Arizona	–	1	NN	–	1	–	–	–	5	20	3	–	1
Utah	–	–	36	–	–	–	–	–	2	2	1	–	–
Nevada	–	–	–	–	–	–	–	–	–	–	–	–	–
PACIFIC	14	–	644	2	26	5	3	–	95	168	58	5	33
Washington	–	–	578	1	24	–	2	–	4	14	5	–	–
Oregon	2	–	4	–	–	–	–	–	13	11	2	–	1
California*	12	–	–	1	1	4	–	–	77	115	51	5	28
Alaska	–	–	2	–	1	1	1	–	–	26	–	–	–
Hawaii	–	–	60	–	–	–	–	–	1	2	–	–	4
Guam*	NA	NA	NA	NA	–	NA	–	–	–	NA	NA	NA	–
Puerto Rico	–	–	4	–	–	–	–	–	1	–	3	–	–
Virgin Islands	–	–	1	–	–	–	–	–	–	–	–	–	–

NN: Not notifiable
NA: Not available
*Delayed reports: Asep. Meng.: Ark. add 11, Colo. delete 1 (1976); Bruc.: Ark. delete 3, Tex. add 3, Guam add 2 (1976); Chickenpox: N. Hamp. add 10, Ark. delete 2, Tex. delete 4, Guam add 10 (1976), Mo. delete 1, Fla. delete 100, Ark. add 1, Calif. add 50, Guam add 5 (1977); Diph.: Colo. add 2 (1976);Hep. B: N. Hamp. add 2, Ark. add 50, Tex. delete 4, Colo. delete 1, Guam add 2 (1976), Wisc. delete 3, Mo. delete 1, Tex. add 3 (1977); Hep. A: N. Hamp. delete 1, Ark. add 20, Tex. delete 3 (1976), Wisc. delete 4, Ark. add 6 (1977); Hep. Unsp.: N. Hamp. add 1, Ark. delete 90, Colo. add 12, Guam add 6 (1976), Tex. delete 3, Guam add 2 (1977); Malaria: Tex. add 1, Guam add 1 (1976)

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending May 7, 1977 and May 8, 1976– 18th Week

REPORTING AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1977	CUMULATIVE		1977	CUMULATIVE		1977	CUM. 1977	1977	1977	CUM. 1977	CUM. 1977
		1977	1976		1977	1976						
UNITED STATES	2,740	30,083	19,817	47	791	689	461	10,337	15	692	11,251	13
NEW ENGLAND	80	1,398	168	–	36	3	10	453	–	111	667	–
Maine	1	4	3	–	3	–	2	32	–	–	22	–
New Hampshire*	23	366	3	–	3	2	–	67	–	9	144	–
Vermont	3	251	–	–	3	3	–	5	–	1	58	–
Massachusetts*	32	392	2	–	9	9	2	81	–	23	213	–
Rhode Island	–	6	14	–	–	4	1	36	–	61	92	–
Connecticut	21	379	146	–	18	15	5	232	–	17	138	–
MIDDLE ATLANTIC	311	3,999	4,400	10	117	86	50	669	1	213	3,142	–
Upstate New York	155	1,301	1,750	2	31	32	10	114	–	141	1,827	–
New York City	27	188	206	2	23	21	18	265	–	13	185	–
New Jersey*	13	97	445	1	26	13	19	179	–	41	932	–
Pennsylvania*	116	2,413	1,999	5	37	20	3	111	1	18	198	–
EAST NORTH CENTRAL	304	6,327	7,853	7	78	87	171	3,653	–	115	2,384	–
Ohio	7	334	274	–	29	36	15	498	–	7	601	–
Indiana	131	3,109	1,571	–	7	4	5	201	–	47	732	–
Illinois	49	788	744	5	13	9	29	520	–	4	180	–
Michigan	40	664	2,967	1	20	32	83	1,236	–	45	612	–
Wisconsin	77	1,432	2,297	1	9	6	39	1,198	–	12	259	–
WEST NORTH CENTRAL	597	5,772	408	–	49	50	42	2,512	–	31	354	2
Minnesota	105	1,134	146	–	18	11	–	3	–	–	9	–
Iowa	408	3,219	9	–	2	8	16	1,157	–	24	141	–
Missouri*	45	573	7	–	21	12	20	606	–	1	29	1
North Dakota	–	5	1	–	1	3	–	7	–	2	4	–
South Dakota	9	37	2	–	4	2	2	58	–	–	–	–
Nebraska	–	85	40	–	–	3	–	24	–	–	1	–
Kansas	30	719	203	–	3	11	4	657	–	4	170	1
SOUTH ATLANTIC	234	2,020	1,241	7	166	138	19	401	2	36	1,136	4
Delaware	–	19	113	–	2	2	6	76	–	1	17	–
Maryland	3	279	592	1	12	10	–	25	–	–	3	–
District of Columbia	–	1	3	–	–	2	–	5	–	–	–	–
Virginia	158	1,063	168	–	9	13	2	48	1	21	367	1
West Virginia	23	91	117	–	8	4	6	105	–	1	67	–
North Carolina	1	30	–	5	46	24	–	18	1	13	369	–
South Carolina*	–	116	3	–	16	27	–	9	–	–	152	–
Georgia	30	364	–	–	29	13	–	8	–	–	44	–
Florida	19	57	245	1	44	43	5	107	–	–	117	3
EAST SOUTH CENTRAL	332	586	467	12	94	53	27	521	2	61	1,564	1
Kentucky	245	421	448	–	19	9	4	72	1	4	39	1
Tennessee	86	489	5	1	23	22	20	296	1	53	1,461	–
Alabama	–	59	–	8	33	16	1	135	–	3	60	–
Mississippi	1	17	14	3	19	6	2	18	–	1	4	–
WEST SOUTH CENTRAL	99	1,593	463	3	139	111	48	861	2	16	530	3
Arkansas*	–	1	–	–	7	3	2	15	1	–	1	–
Louisiana	9	65	114	–	44	14	–	29	–	3	12	1
Oklahoma	–	46	220	–	5	17	16	329	–	–	22	–
Texas*	90	1,481	129	3	83	77	30	488	1	13	495	2
MOUNTAIN	76	1,558	3,633	4	26	25	49	469	–	–	262	–
Montana	41	925	154	–	2	2	–	3	–	–	7	–
Idaho	–	30	1,485	1	2	2	34	111	–	–	2	–
Wyoming	1	2	–	–	1	–	–	–	–	–	2	–
Colorado*	12	384	138	–	1	10	1	207	–	–	199	–
New Mexico	2	12	8	2	11	1	7	86	–	–	7	–
Arizona	20	131	209	1	7	6	–	–	–	–	–	–
Utah	–	5	1,591	–	1	4	7	60	–	–	41	–
Nevada	–	69	48	–	1	–	–	2	–	–	4	–
PACIFIC	707	6,430	1,184	4	86	106	45	798	8	109	1,212	3
Washington	23	348	92	–	11	18	16	183	2	15	279	–
Oregon	7	121	73	–	7	9	4	151	2	8	71	–
California	674	5,894	1,017	4	53	73	23	437	4	86	856	3
Alaska	–	56	–	–	14	4	–	17	–	–	–	–
Hawaii	3	11	2	–	1	2	2	10	–	–	6	
Guam*	NA	3	6	–	–	1	NA	1	NA	NA	4	–
Puerto Rico	15	303	86	–	–	2	7	249	1	2	15	3
Virgin Islands	–	9	4	–	–	–	4	147	–	–	–	–

NA: Not available

*Delayed reports: Measles: N. Hamp. add 1, Ark. delete 1, Tex. delete 2, Colo. delete 60 (1976), N. Hamp. add 28, Mass. delete 3, Mo. delete 2 (1977); Men. Inf.: N. Hamp. add 1, Ark. delete 1, Tex. delete 1 civ. add 1 mil., Colo. delete 6, Guam delete 1 (1976), Pa. delete 1, Mo. add 1, S. Car. delete 2, Ark. add 1 (1977); Mumps: N. Hamp. add 2, Ark. delete 2 (1976), N. Hamp. add 17 (1977); Pertussis: Colo. add 10 (1976), N.J. add 1 (1977); Rubella: Tex. delete 3, Colo. delete 1, Guam add 1 (1976), N. Hamp. add 9, N.J. add 216 (1977)

Table III-Continued

Cases of Specified Notifiable Diseases: United States

Weeks Ending May 7, 1977 and May 8, 1976 — 18th Week

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1977	CUM. 1977	CUM. 1977	1977	CUM. 1977	1977	CUM. 1977	1977	CUMULATIVE 1977	CUMULATIVE 1976	1977	CUMULATIVE 1977	CUMULATIVE 1976	CUM. 1977
UNITED STATES	605	10,233	26	4	122	19	64	18,995	318,487	333,029	339	7,348	8,780	912
NEW ENGLAND	24	371	1	–	6	–	–	575	8,350	9,103	11	275	258	12
Maine	–	27	–	–	–	–	–	27	643	770	–	8	8	11
New Hampshire*	1	9	–	–	–	–	–	25	330	240	–	1	3	–
Vermont	–	17	–	–	–	–	–	9	211	201	–	4	2	–
Massachusetts	15	200	1	–	4	–	–	241	3,669	4,327	7	207	188	–
Rhode Island	2	24	–	–	1	–	–	52	643	601	–	3	10	–
Connecticut	6	94	–	–	1	–	–	221	2,854	2,964	4	52	47	1
MIDDLE ATLANTIC	125	1,653	–	1	23	–	2	1,479	34,315	35,795	39	1,041	1,496	13
Upstate New York*	22	260	–	–	3	–	2	261	5,120	5,717	–	93	95	9
New York City*	49	560	–	1	10	–	–	416	14,904	15,462	26	652	973	–
New Jersey	39	426	–	–	8	–	–	464	5,459	5,885	1	134	189	4
Pennsylvania	15	407	–	–	2	–	–	338	8,832	8,731	12	162	239	–
EAST NORTH CENTRAL	80	1,642	2	–	13	–	–	3,411	47,286	53,680	22	787	809	34
Ohio*	26	262	1	–	5	–	–	845	11,563	13,162	8	207	190	–
Indiana	15	193	–	–	–	–	–	651	4,408	5,000	4	56	43	1
Illinois	19	611	–	–	1	–	–	1,092	15,946	19,637	7	408	422	7
Michigan	11	494	–	–	7	–	–	556	10,769	11,010	2	81	107	3
Wisconsin*	9	82	1	–	–	–	–	267	4,600	4,871	1	35	47	23
WEST NORTH CENTRAL	27	353	4	1	9	1	3	1,139	16,790	16,891	21	176	164	197
Minnesota	10	73	–	–	1	–	–	203	2,995	3,197	2	52	37	71
Iowa*	5	34	–	–	–	–	–	118	2,026	2,143	8	21	18	39
Missouri*	12	151	3	–	4	1	2	578	7,194	6,618	8	65	66	16
North Dakota	–	9	–	–	–	–	–	19	295	247	–	–	–	26
South Dakota*	–	15	1	–	–	–	–	20	435	486	–	1	2	32
Nebraska	–	13	–	–	–	–	–	69	1,387	1,425	1	17	13	–
Kansas	–	58	–	1	4	–	1	132	2,458	2,775	2	20	28	13
SOUTH ATLANTIC	135	2,332	8	1	17	13	28	4,477	77,037	80,786	80	2,125	2,615	91
Delaware	2	18	–	–	–	–	–	54	945	1,109	–	13	22	–
Maryland	20	344	1	–	–	2	2	758	9,909	11,154	3	135	226	–
District of Columbia	4	111	–	–	–	–	–	341	5,342	5,562	8	239	219	–
Virginia	9	240	–	–	5	2	6	426	8,082	8,586	6	208	225	2
West Virginia	3	90	–	–	3	–	–	105	1,093	1,037	–	1	14	3
North Carolina*	32	427	2	–	1	2	10	648	11,316	11,906	10	308	503	2
South Carolina*	13	228	2	–	–	–	1	449	7,152	7,821	3	96	134	–
Georgia	16	260	3	–	–	7	9	356	14,440	14,834	16	384	363	64
Florida*	36	614	–	1	8	–	–	1,340	18,758	18,777	34	741	909	20
EAST SOUTH CENTRAL	45	881	1	–	1	1	10	1,806	27,988	29,930	24	241	368	34
Kentucky	18	211	1	–	–	–	1	414	3,852	3,863	4	26	57	10
Tennessee	10	290	–	–	–	1	8	663	11,177	11,683	6	72	152	18
Alabama	5	229	–	–	1	–	1	383	7,729	8,381	4	47	70	6
Mississippi	12	151	–	–	–	–	–	346	5,230	6,003	10	96	89	–
WEST SOUTH CENTRAL	61	1,171	6	1	4	4	21	2,307	40,827	45,161	60	1,016	970	350
Arkansas*	5	132	3	–	–	–	1	96	3,005	4,164	3	25	30	34
Louisiana	18	244	–	–	–	–	–	592	5,938	6,519	23	211	202	4
Oklahoma	6	107	1	–	–	2	13	200	3,811	4,157	4	28	39	128
Texas*	32	688	2	1	4	2	7	1,419	28,073	30,321	30	752	699	184
MOUNTAIN	15	273	3	–	13	–	–	770	13,057	13,035	3	153	242	26
Montana	1	13	1	–	–	–	–	39	667	646	–	–	3	10
Idaho	–	15	–	–	–	–	–	47	637	715	–	3	10	–
Wyoming	–	5	–	–	–	–	–	26	345	290	–	12	5	–
Colorado*	4	47	2	–	6	–	–	167	3,355	3,245	–	44	61	–
New Mexico	–	44	–	–	–	–	–	132	1,924	2,613	–	30	66	–
Arizona*	10	125	–	–	3	–	–	244	3,695	3,625	2	54	73	16
Utah	–	12	–	–	4	–	–	11	746	687	–	4	8	–
Nevada	–	12	–	–	–	–	–	104	1,688	1,214	1	6	16	–
PACIFIC	93	1,557	1	–	36	–	–	3,031	52,837	48,648	79	1,534	1,858	155
Washington*	NA	60	–	–	1	–	–	NA	3,760	4,049	NA	49	49	–
Oregon	8	72	–	–	2	–	–	189	3,864	3,594	3	51	51	–
California*	65	1,171	1	–	32	–	–	2,680	42,318	38,654	74	1,408	1,721	145
Alaska	–	22	–	–	–	–	–	105	1,756	1,383	–	10	7	10
Hawaii	20	232	–	–	1	–	–	57	1,139	968	2	16	30	–
Guam*	NA	21	–	NA	1	NA	–	NA	83	148	NA	1	1	–
Puerto Rico	–	106	–	–	2	–	–	52	954	960	16	194	195	13
Virgin Islands	–	1	–	–	–	–	–	2	50	96	2	3	28	–

NA: Not available

*Delayed reports: TB: Ark. delete 40, Guam delete 1 (1976), Ohio delete 1, N. Car. delete 2, S. Car. delete 1, Fla. delete 1, Wash. add 32, Guam add 2 (1977); Tularemia: Ark. delete 1 (1976), Ark. add 2 (1977); Typhoid Fever: Ark. add 4, Colo. add 1 (1976), Fla. delete 1 (1977); RMSF: Tex. add 3 (1976), Ark. add 3 (1977); GC: Ups. N.Y. add 219, NYC delete 545, Iowa add 154, N. Car. delete 336, Ariz. add 777, Wash. add 52 (1976), N. Hamp. add 6 mil. Ups. N.Y. delete 16 civ. Guam add 3 (1977); Syphilis: Ups. N.Y. add 13, NYC add 87, Iowa add 1, N. Car. add 79, Ariz. delete 2 (1976), Tex. delete 1, Wash. add 7 (1977); An. Rabies: S. Dak. add 15 (1977)

Table IV
Deaths in 121 United States Cities*
Week Ending May 7, 1977 — 18th Week

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	ALL AGES
NEW ENGLAND	622	393	159	34	14	22
Boston, Mass.	182	97	55	17	4	3
Bridgeport, Conn.	45	26	11	2	2	2
Cambridge, Mass.	19	13	3	3	–	–
Fall River, Mass.	18	17	1	–	–	–
Hartford, Conn.	60	38	15	2	3	3
Lowell, Mass.	19	15	3	1	–	2
Lynn, Mass.	21	13	6	2	–	–
New Bedford, Mass.	28	22	6	–	–	2
New Haven, Conn.	36	22	8	1	3	1
Providence, R.I.	63	42	17	3	–	5
Somerville, Mass.	11	5	5	–	–	1
Springfield, Mass.	48	34	9	2	1	–
Waterbury, Conn.	33	25	7	1	–	–
Worcester, Mass.	39	24	13	–	1	2
MIDDLE ATLANTIC	2,548	1,630	600	168	87	120
Albany, N. Y.	54	35	8	3	6	2
Allentown, Pa.	18	14	1	2	–	1
Buffalo, N. Y.	123	83	26	6	3	11
Camden, N. J.	33	23	8	–	2	–
Elizabeth, N. J.	36	25	6	3	1	–
Erie, Pa.	38	21	14	1	1	1
Jersey City, N. J.	42	25	15	1	1	1
Newark, N. J.	59	33	16	5	4	–
New York City, N. Y.	1,361	864	313	105	42	57
Paterson, N. J.	40	18	14	3	5	4
Philadelphia, Pa.	289	180	67	25	10	16
Pittsburgh, Pa.	144	85	46	6	4	11
Reading, Pa.	28	23	5	–	–	–
Rochester, N. Y.	105	77	16	3	7	8
Schenectady, N. Y.	20	15	4	1	–	1
Scranton, Pa.	44	25	15	1	1	3
Syracuse, N. Y.	41	30	8	2	–	1
Trenton, N. J.	29	22	6	1	–	–
Utica, N. Y.	23	16	7	–	–	–
Yonkers, N. Y.	21	16	5	–	–	3
EAST NORTH CENTRAL	2,253	1,349	594	135	90	72
Akron, Ohio	85	54	21	3	5	–
Canton, Ohio	35	20	12	3	–	2
Chicago, Ill.	566	318	152	40	31	12
Cincinnati, Ohio	148	93	36	7	6	1
Cleveland, Ohio	128	72	42	8	3	2
Columbus, Ohio	136	82	37	9	3	3
Dayton, Ohio	110	66	25	8	1	3
Detroit, Mich.	268	160	70	15	11	3
Evansville, Ind.	48	36	7	–	3	1
Fort Wayne, Ind.	59	30	22	4	2	3
Gary, Ind.	18	8	8	1	1	1
Grand Rapids, Mich.	45	31	8	3	2	6
Indianapolis, Ind.	160	89	48	10	9	2
Madison, Wis.	27	17	8	–	2	4
Milwaukee, Wis.	145	93	37	6	6	4
Peoria, Ill.	41	26	9	3	2	2
Rockford, Ill.	41	25	11	2	1	6
South Bend, Ind.	32	15	14	2	1	2
Toledo, Ohio	97	72	15	6	1	3
Youngstown, Ohio	64	42	12	5	–	–
WEST NORTH CENTRAL	768	483	182	44	29	24
Des Moines, Iowa	54	42	9	1	2	–
Duluth, Minn.	35	26	7	–	–	2
Kansas City, Kans.	31	16	8	4	1	1
Kansas City, Mo.	125	75	26	11	6	2
Lincoln, Nebr.	29	18	11	–	–	2
Minneapolis, Minn.	81	52	17	6	2	2
Omaha, Nebr.	101	62	21	9	3	2
St. Louis, Mo.	196	109	60	8	13	8
St. Paul, Minn.	78	60	12	3	1	–
Wichita, Kans.	38	23	11	2	1	5
SOUTH ATLANTIC	1,068	620	288	79	42	51
Atlanta, Ga.	114	56	37	9	3	2
Baltimore, Md.	219	122	65	19	8	3
Charlotte, N. C.	46	18	18	7	2	2
Jacksonville, Fla.	58	33	18	5	2	6
Miami, Fla.	114	64	35	7	5	5
Norfolk, Va.	52	32	13	1	4	2
Richmond, Va.	71	47	17	4	–	7
Savannah, Ga.	39	23	10	3	1	6
St. Petersburg, Fla.	75	62	11	–	1	6
Tampa, Fla.	75	51	10	8	3	6
Washington, D. C.	175	91	48	15	12	4
Wilmington, Del.	30	21	6	1	1	2
EAST SOUTH CENTRAL	691	368	201	65	22	26
Birmingham, Ala.	115	51	37	14	3	2
Chattanooga, Tenn.	64	37	23	4	–	4
Knoxville, Tenn.	31	20	10	–	1	–
Louisville, Ky.	120	71	29	11	4	11
Memphis, Tenn.	168	87	56	12	6	3
Mobile, Ala.	63	30	19	7	2	3
Montgomery, Ala.	41	23	10	4	3	–
Nashville, Tenn.	89	49	17	13	3	3
WEST SOUTH CENTRAL	1,196	689	317	99	34	35
Austin, Tex.	27	14	6	4	–	3
Baton Rouge, La.	63	40	15	5	2	4
Corpus Christi, Tex.	32	22	6	2	–	1
Dallas, Tex.	176	106	47	13	1	2
El Paso, Tex.	45	32	7	3	1	4
Fort Worth, Tex.	73	46	18	5	3	3
Houston, Tex.	266	131	80	26	10	4
Little Rock, Ark.	71	43	16	7	4	3
New Orleans, La.	128	72	41	9	4	–
San Antonio, Tex.	123	72	26	9	5	–
Shreveport, La.	106	53	37	13	1	6
Tulsa, Okla.	86	58	18	3	3	5
MOUNTAIN	531	322	124	41	18	12
Albuquerque, N. Mex.	43	24	13	5	–	3
Colorado Springs, Colo.	29	11	10	2	4	1
Denver, Colo.	129	85	28	9	3	1
Las Vegas, Nev.	30	11	10	9	–	–
Ogden, Utah	25	15	7	2	1	3
Phoenix, Ariz.	136	80	35	6	5	–
Pueblo, Colo.	8	5	2	1	–	2
Salt Lake City, Utah	59	44	5	4	3	2
Tucson, Ariz.	72	47	14	3	2	–
PACIFIC	1,699	1,061	419	99	59	39
Berkeley, Calif.	18	13	5	–	–	–
Fresno, Calif.	63	39	15	2	4	2
Glendale, Calif.	33	20	11	1	–	–
Honolulu, Hawaii	64	33	19	8	3	–
Long Beach, Calif.	105	70	27	4	3	2
Los Angeles, Calif.	545	341	139	32	16	11
Oakland, Calif.	81	51	23	3	3	1
Pasadena, Calif.	20	14	2	2	2	1
Portland, Oreg.	107	67	25	4	3	1
Sacramento, Calif.	69	34	22	8	3	2
San Diego, Calif.	124	74	25	10	7	1
San Francisco, Calif.	165	109	35	10	6	3
San Jose, Calif.	59	35	13	7	3	1
Seattle, Wash.	159	108	35	6	3	7
Spokane, Wash.	53	33	13	–	2	7
Tacoma, Wash.	34	20	10	2	1	–
TOTAL	11,376	6,915	2,884	764	395	401
Expected Number	11,500	7,002	2,983	728	370	423

*By place of occurrence and week of filing certificate. Excludes fetal deaths.

The Morbidity and Mortality Weekly Report, circulation 65,000, is published by the Center 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: Center for Disease Control, Attn.: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

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Ectopic Pregnancy — Continued

the surgical specimens obtained at the time of ligation confirmed that the sections removed were from the fallopian tube, indicating that recanalization had probably occurred.

The patient did well postoperatively and was discharged 1 week later in satisfactory condition.

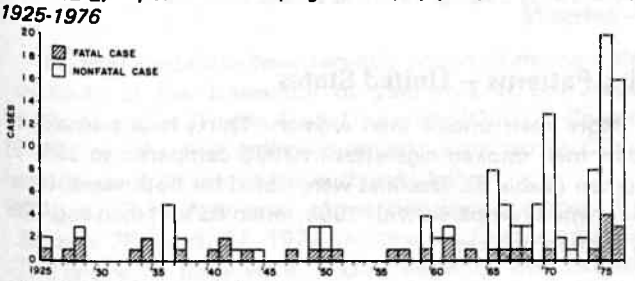
Reported by D Jorkasky, University of Pennsylvania School of Medicine; KM Sharrar, MD, Emergency Room, A Nazari, MD, Dept of Obstetrics and Gynecology, Presbyterian-University of Pennsylvania Medical Center; and the Family Planning Evaluation, Div, Bur of Epidemiology, CDC.

Current Trends

Plague — United States, 1976

Sixteen cases of plague in humans were reported in the United States in 1976. None of the cases were epidemiologically linked. Although this figure is a decrease from the 20 reported in 1975, it is consistent with the trend of an increasing number of cases (Figure 2).

FIGURE 2. Reported human plague cases, by year, United States, 1925-1976*



*Excludes Alaska and Hawaii

Nine of the 16 cases were acquired in New Mexico, 4 in Arizona, 2 in California, and 1 in Colorado (Table 1). Five of the cases were in American Indians. All cases were of sylvatic origin and occurred in enzootic areas. A precise mode of transmission could be determined for only 3 patients, who had direct contact with tissues of infected animals. Although epidemiologic and clinical information suggested that the other patients acquired their infections from bites of infective fleas, only 5 of these 13 patients actually reported unspecified insect bites or had lesions compatible with an insect bite.

Four of the 11 patients who were not American Indians acquired their infections while visiting locations outside their counties of residence, including 2 campers in enzootic areas. The other 7 acquired their infections at or near their homes.

Three of the 16 patients (19%) died. This case-fatality ratio is comparable to the 21% (18/86) ratio in the period 1950-1975. Five patients developed secondary plague pneumonia; 3 of these died. No instances of person-to-person plague transmission occurred.

Reported by JM Counts, DrPH, Acting State Epidemiologist, Arizona State Dept of Health Services; J Chin, MD, State Epidemiologist, California State Dept of Health; TM Vernon, MD, State Epidemiologist, Colorado State Dept of Health; JM Mann, MD, Acting State Epidemiologist, New Mexico Health and Social Services Dept; Plague Br, Bur of Laboratories, and Bacterial Zoonoses Br, Bur of Epidemiology, CDC.

Editorial Note: Human plague in the United States appears to exhibit a definite cycle: peak years occur approximately every 5 years (Figure 2). This periodicity is thought to reflect a comparable cycle in wild animal reservoirs. If this trend continues, the number of cases occurring in 1977 should decrease from the relatively high incidence in 1975-1976.

Travelers to wilderness areas in the enzootic western states are considered to be at low risk of infection, and immunization of visitors to these areas is not recommended. However, visitors should check with state and local health departments to determine if parks are closed for any health reason. There are also common-sense precautions that should be taken in wilderness areas. Any contact with rodents, including prairie dogs and ground squirrels, should be avoided. Sick or dead rodents or other mammals should never be handled, but they should be reported to local health authorities, park rangers, or campground supervisors.

TABLE 1. Reported confirmed cases of plague in the United States, 1976

Case	Age	Sex	Month Onset	County	State
1	15	M	Feb.	Coconino	Arizona
2*	45	M	Apr.	Kern	California
3*	63	F	Apr.	Sandoval	New Mexico
4	16	F	May	Coconino	Arizona
5	22	F	May	Fremont	Colorado
6	39	F	May	Bernalillo	New Mexico
7	12	F	June	Bernalillo	New Mexico
8	17	M	June	Rio Arriba	New Mexico
9	5	F	June	Plumas	California
10	12	M	June	Rio Arriba	New Mexico
11	12	F	June	Coconino	Arizona
12	5	M	July	Harding	New Mexico
13	16	M	July	Apache	Arizona
14	2	M	Aug.	San Miguel	New Mexico
15*	15	M	Aug.	Bernalillo	New Mexico
16	59	F	Aug.	Rio Arriba	New Mexico

*=Fatal

Epidemiologic Notes and Reports

Vibrio cholerae — Alabama

A 61-year-old truck driver was admitted to a Montgomery, Alabama, hospital on April 19, 1977, with a 6-day history of fever, chills, and right upper quadrant pain. A clinical diagnosis of cholecystitis was made, and on April 25 the gall bladder was removed and bile cultured. On May 2, a gram-negative rod isolated from the culture was identified as *Vibrio cholerae*. This identification was confirmed by both the state laboratory in Alabama and by the Bureau of Laboratories, CDC.

The patient denied any recent history of severe diarrhea, but he had experienced episodes of recurrent diarrhea approximately once a month for at least 14 years. The patient made many transcontinental trips each year, but denied any travel outside the United States except for brief trips into Mexico more than 30 years ago. Although he was in the Armed Forces during World War II, he did not serve overseas. However, he did have contact with persons in prisoner of war camps who came from countries where cholera was endemic. The patient also has eaten large quantities of raw oysters for many years.

An investigation conducted by the Alabama State Department of Health and CDC did not demonstrate vibrios in stool cultures from the patient or his family. Cultures of sewage from the patient's home and neighborhood sewage

system were negative for *V. cholerae*. Further investigations are in progress.

Reported by JM Cameron, MD, K Hester, MD, and WL Smith, MD, Montgomery; E Caviness, T Hosty, PhD, and FS Wolf, MD, State Epidemiologist, Alabama State Dept of Health; Enteric Section, Bacteriology Div, Bur of Laboratories, and Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: This is the second case of non-laboratory-acquired infection with *V. cholerae* in the United States since 1911; the first occurred in Port Lavaca, Texas, in 1973. Although the source of infection of the Alabama case has not yet been identified, the patient, as with the Port Lavaca case, gave a history of eating large quantities of raw oysters. Shellfish have previously caused cholera epidemics in Italy and Portugal (*1,2*).

Chronic carriage of *V. cholerae* is rare, but studies suggest that carriage can occur in the gall bladder, with or without evidence of excretion of the bacteria in the stool (*3,4*). The occurrence of a carrier in the United States poses little risk because of our generally adequate water sanitation and sewage treatment practices.

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Current Trends

Adult and Teenage Cigarette Smoking Patterns — United States

Cigarette smoking in the United States was less prevalent among persons 20 years of age or older in 1975 than it was in the comparable age group 10 years ago. In 1975, 34% of adults† smoked cigarettes, whereas 42% smoked in 1965 (Table 2). This decline of 8% represents a reduction by nearly one-fifth in the proportion of smokers during the 10-year period.

Despite an increase in the adult population from 118 to 139 million persons during this period, the total number of cigarette smokers declined from 49.7 million to 46.9 million.

TABLE 2. Estimated cigarette smokers, by age, United States, 1955, 1965, and 1975

Age Group (years)	Year	Total Population* (millions)	Cigarette Smokers** (millions)	% Smokers
13-19	1955	16.0	2.2	14
	1965	24.4	3.5	14
	1975	29.5	6.0	20
20 and over	1955	104.8	39.6	38
	1965	118.0	49.7	42
	1975	138.8	46.9	34

*U.S. Department of Commerce, Bureau of the Census. Current Population Report. Estimates of the Population of the United States, by Age, Sex, and Race: 1970 to 1975. Series P-25.
**Based on national surveys in 1955, 1965, and 1975.

†Throughout this report adults are defined as persons 20 years of age or older.

More men smoke than women. Thirty-nine percent of adult men smoked cigarettes in 1975 compared to 29% of women (Table 3). Declines were noted for both sexes, however, when compared with 1965, when 53% of men and 32% of women smoked.

TABLE 3. Estimated cigarette smokers, by sex, in persons 20 years of age or older, United States, 1955, 1965 and 1975

Sex	Year	Total Population* (millions)	Cigarette Smokers** (millions)	% Smokers
Male	1955	50.9	26.5	52
	1965	65.8	30.0	53
	1975	66.1	25.9	39
Female	1955	53.9	13.1	24
	1965	61.2	19.7	32
	1975	72.7	21.0	29

*U.S. Department of Commerce, Bureau of the Census. Current Population Report. Estimates of the Population of the United States, by Age, Sex, and Race: 1970 to 1975. Series P-25.
** Based on national surveys in 1955, 1965, and 1975.

The pattern of teenage smoking, however, is quite different. In 1975, 20% of 13- to 19-year-olds smoked, an increase of 6% from 1965 (Table 2). Six million of the 29.5 million teenagers in the United States smoked in 1975, compared to 3.5 million out of 24.4 million in 1965.

Reported by the National Clearinghouse for Smoking and Health, Bur of Health Education, CDC.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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