CENTER FOR DISEASE CONTROL

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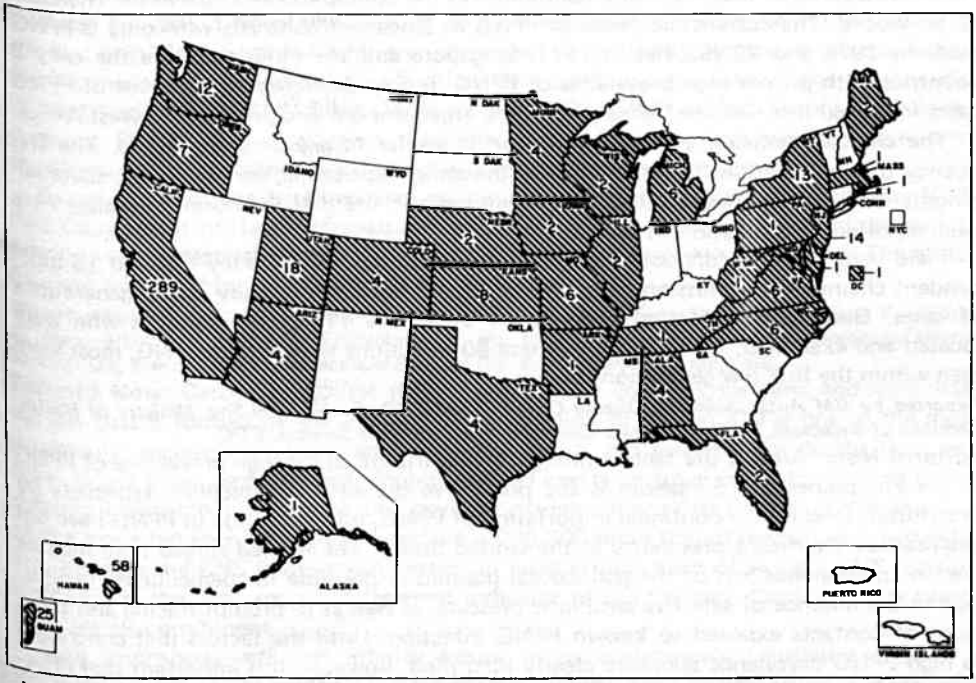
Surveillance Summary

Penicillinase-producing *Neisseria gonorrhoeae* — United States, Worldwide

A total of 508 cases of penicillinase-producing *Neisseria gonorrhoeae* (PPNG) from 31 states, the District of Columbia, and Guam were reported to CDC from March 1976, when the first case was detected, through December 1978 (Figure 1). California, the only state that has experienced one or more cases each month since nationwide surveillance for PPNG began in September 1976 (Figure 2), reported 289 (56.9%) of the cases.

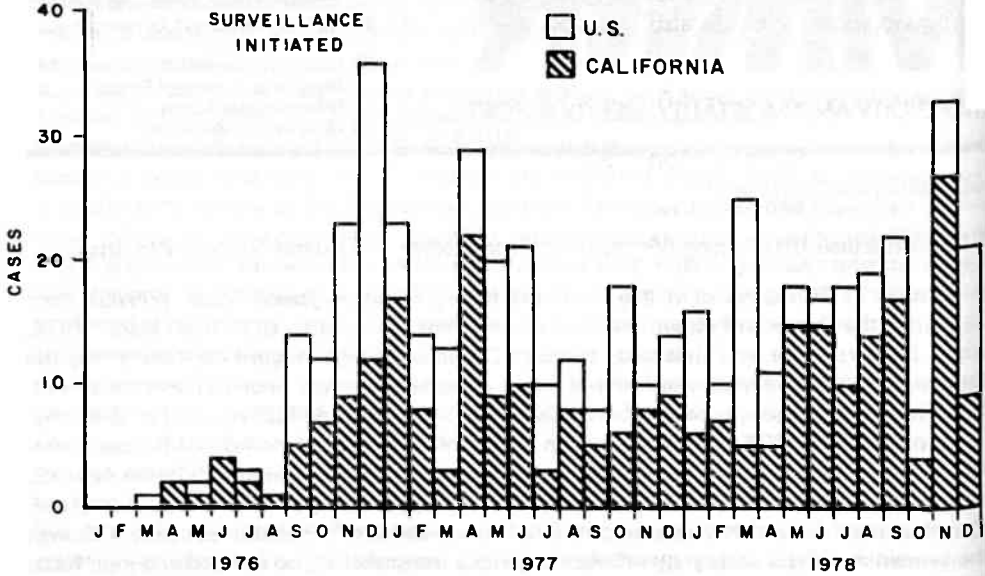
Approximately 40% of PPNG cases in California and about one-half of the cases elsewhere in the United States were imported or linked to imported cases. All index patients, except for 1 from Ghana, came from or were infected in Southeast Asia. Military personnel or their dependents were responsible for two-thirds of the imported cases. Although the remaining PPNG cases may reflect indigenous transmission, no defined endemic focus of PPNG has been identified.

FIGURE 1. Cases of penicillinase-producing *Neisseria gonorrhoeae*, by state, March 1976 through December 1978



Neisseria gonorrhoeae — Continued

FIGURE 2. Comparison of U.S.* and California cases of penicillinase-producing *Neisseria gonorrhoeae*, by month of onset, March 1976 through December 1978



*includes U.S. territories but excludes California

Twenty-seven countries in Europe, Asia, Africa, Oceania, and North America have reported cases of PPNG to the World Health Organization (WHO). The organism accounts for about 30% of all recent gonococcal isolates in the Philippines and 16% in the Republic of Singapore. The current incidence of PPNG in Singapore contrasts with only 3 PPNG cases in 1976 and 22 (0.24%) in 1977. Singapore and the Philippines are the only 2 countries with proven high prevalence of PPNG, but epidemiologic assessment of PPNG cases imported into Europe indicates that the organisms are also prevalent in West Africa.

The clinical spectrum of PPNG infection is similar to ordinary gonorrhea. The frequency of complications is approximately the same. Septicemia, conjunctivitis, acute salpingitis, adolescent vulvovaginitis, and asymptomatic urethral infection (in males) have been reported in association with PPNG.

Field investigations conducted in Utah, Minnesota, and New Jersey revealed 13 independent chains of transmission consisting of 2 to 8 epidemiologically linked generations of cases. Gonococcal infection occurred in 60 of the 115 sexual contacts who were located and examined. Twenty-one of these 60 infections were due to PPNG; most were seen within the first few generations of cases.

Reported by GM Antal, Venereal Disease Control Div, WHO, Geneva; EH Sng, Ministry of Health, Republic of Singapore; Venereal Disease Control Div, Bur of State Services, CDC.

Editorial Note: Among the factors thought to contribute to the high prevalence of PPNG in the Philippines and Singapore is the preventive use of oral penicillins, especially by prostitutes. Despite the continual importation of PPNG, infections due to PPNG have not yet reached significant prevalence in the United States. The limited spread here may be due to spontaneous loss of the gonococcal plasmid responsible for penicillinase production in the absence of selective antibiotic pressure, as well as to prompt tracing and treatment of contacts exposed to known PPNG infection. Until the factors that contribute to high PPNG prevalence are more clearly identified, however, it is important that effective surveillance continue.

Neisseria gonorrhoeae – Continued

All gonorrhea patients not successfully treated with penicillin should continue to be treated with spectinomycin, 2.0 g intramuscularly, and gonococcal isolates obtained from them should be tested for penicillinase production. Routine screening of pretreatment gonococcal isolates is also indicated in areas at high risk for importation of PPNG.

Epidemiologic Notes and Reports

Carbon Monoxide Poisoning – New York City

On January 7, 1979, 15 persons in a Bronx bowling alley were overcome by fumes from a defective heater. All presented to hospital emergency rooms over a 3-hour period from 10:30 PM January 7 to 1:30 AM January 8. Thirteen of the 15 formally registered at the emergency rooms, and 2 went home unseen; epidemiologic information was obtained on the 13 who registered.

Ages ranged from 17 to 64 years (mean, 30.6 years). Eight were male, and 5 female. Carboxyhemoglobin levels were determined for 12 of the 13. Levels ranged from 14% to 59%. Normal carboxyhemoglobin values are <1% for non-smokers and 3-8% for smokers (*1*). One person with a carboxyhemoglobin level of 28% was described in the emergency room as having the classic "cherry red" color of carbon monoxide poisoning.

All 13 of the patients had symptoms possibly related to the central nervous system (CNS): dizziness (in 9), headache (9), definite syncope (2), possible syncope (2), and alteration of mental status (2). Other symptoms included nausea (4), dry mouth (2), chest pain (1), shortness of breath (1), and diaphoresis (1).

Eight of the 13 were admitted to hospitals. The mean carboxyhemoglobin level for the group admitted was 30.3%, as compared to 19.3% for those sent home. Seven of the 8 who were admitted were discharged within 24 hours. One 35-year-old man with chest pain and a carboxyhemoglobin level of 26% on admission was hospitalized for 3 days to rule out possible myocardial infarction; however, no enzyme elevations or electrocardiographic evidence of myocardial infarction developed in him. One of the persons discharged from the hospital within 24 hours was a 22-year-old woman who was 12 weeks pregnant. She had had a carboxyhemoglobin level of 47%. She had been syncopal, later developed vaginal bleeding, and is scheduled to have a therapeutic abortion.

Examination of the bowling alley on January 9 by power company and New York City Department of Health officials uncovered a faulty gas-fired unit heater in the ceiling. The flue was defective, resulting in exhaust fumes backing up into the facility. The faulty unit was sealed off by health officials pending repair.

Reported by R Garrett, MD, L Goldfrank, MD, A Shander, MD, Montefiore Hospital, New York City; JS Marr, MD, New York City Epidemiologist, Bur of Preventable Diseases; Environmental Health Services Div, Bur of State Services, Field Services Div, Bur of Epidemiology, CDC.

Editorial Note: Carbon monoxide (CO) is an odorless, colorless, tasteless, and nonirritating gas that is formed by the incomplete combustion of carbon. CO is one of the most commonly encountered toxic environmental agents and causes more deaths than any other single toxic agent, except alcohol (*2*). CO exerts its toxic effect by binding to circulating hemoglobin to reduce the oxygen-carrying capacity of the blood; the tenacity of the bond between CO and hemoglobin is 200-300 times that of oxygen with hemoglobin. Because the CNS is the organ system in most critical need of oxygen, CNS symptomatology is the first and most frequent indicator of CO toxicity. Cardiovascular symptoms are also prominent.

Any improperly adjusted interior heater in an inadequately ventilated room is a potential source of CO poisoning. Nevertheless, despite wide knowledge of this common

Carbon Monoxide Poisoning – Continued

hazard, cases of CO poisoning continue to occur under circumstances such as those described in the above report. For example, in the 13-year period, 1961-1973, 474 accidental deaths were caused in Georgia alone by carbon monoxide inhalation (*3*). The number of cases of carbon monoxide poisoning may be expected to increase in future years in the United States if recurrent energy shortages force an increased reliance on individual room space heaters.

Prevention of CO poisoning requires proper adjustment and regular cleaning of the air inlet to any device that burns fuel (for example, cooking stoves, lamps, space heaters, hot water heaters, and gasoline or diesel engines). If the air inlet to such equipment is improperly adjusted or the inlet is blocked by dirt, soot, or grease, the amount of CO produced will increase sharply (*4*). The need for regular cleaning and adjustment of air inlets and for adequate ventilation is especially important in the case of fuel-burning devices that are used indoors.

References

1. National Academy of Sciences, Committee on Medical and Biological Effects of Environmental Pollutants, Subcommittee on Carbon Monoxide: Carbon Monoxide. Washington, D.C., National Academy of Sciences, 1977, pp 63-67
2. National Institute for Occupational Safety and Health: Criteria for a Recommended Standard: Occupational Exposure to Carbon Monoxide. Washington, D.C., U.S. Government Printing Office, 1972
3. MMWR 26:119, 1977
4. MMWR 26:41, 1977

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

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

DISEASE	8th WEEK ENDING		MEDIAN	CUMULATIVE, FIRST 8 WEEKS		
	February 24, 1979	February 25, 1978*	1974-1978**	February 24, 1979	February 25, 1978*	MEDIAN 1974-1978**
Aseptic meningitis	39	38	35	386	312	297
Brucellosis	1	4	4	9	21	21
Chickenpox	6,348	4,024	4,311	42,507	28,447	29,693
Diphtheria	1	–	3	20	12	14
Encephalitis: Primary (arthropod-borne & unspec.)	13	15	15	76	77	96
Post-infectious	5	3	4	18	23	32
Hepatitis, Viral: Type B	252	269	246	1,831	2,218	1,987
Type A	656	481	707	4,234	4,020	5,423
Type unspecified	217	155	155	1,558	1,205	1,224
Malaria	10	12	6	56	68	42
Measles (rubeola)	284	622	622	1,476	2,532	3,575
Meningococcal infections: Total	67	71	45	445	406	270
Civilian	67	70	45	445	403	267
Military	–	1	–	–	3	3
Mumps	370	534	1,360	2,427	3,137	9,305
Pertussis	24	56	23	233	372	201
Rubella (German measles)	292	154	285	1,184	1,261	1,837
Tetanus	2	1	–	6	5	7
Tuberculosis	484	494	562	3,667	3,613	4,056
Tularemia	3	1	1	19	13	13
Typhoid fever	6	26	5	42	64	51
Typhus fever, tick-borne (Rky. Mt. spotted)	1	–	–	18	6	10
Venereal diseases:						
Gonorrhea: Civilian	16,336	15,698	17,350	139,037	138,383	146,676
Military	437	482	482	3,961	3,695	4,347
Syphilis, primary & secondary: Civilian	399	459	459	3,348	3,043	3,568
Military	5	13	9	44	48	51
Rabies in animals	70	48	45	388	352	329

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1979		CUM. 1979
Anthrax	–	Poliomyelitis: Total	2
Botulism	3	Paralytic	2
Congenital rubella syndrome	3	Psittacosis	16
Leprosy †	29	Rabies in man	1
Leptospirosis	10	Trichinosis † (Mass. 1)	8
Plague	1	Typhus fever, flea-borne (endemic, murine) †	2

*Delayed reports received for calendar year 1978 are used to update last year's weekly and cumulative totals.
**Medians for gonorrhea and syphilis are based on data for 1976-1978.
†The following delayed report will be reflected in next week's cumulative totals: Leprosy: Calif. 1.
†Delayed report: Trichinosis: Tex. +1 (1978); Typhus, murine: Tex. +1 (1978)

TABLE III. Cases of specified notifiable diseases, United States, weeks ending February 24, 1979, and February 25, 1978 (8th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-infectious	B	A	Unspecified		
	1979	1979	1979	1979	CUM. 1979	1979	1978*	1979	1979	1979	1979	1979	CUM. 1979
UNITED STATES	39	1	6,348	1	20	13	15	5	252	656	217	10	56
NEW ENGLAND	–	–	834	–	–	–	–	–	5	14	10	–	3
Maine	–	–	9	–	–	–	–	–	1	3	–	–	–
N.H.	–	–	31	–	–	–	–	–	–	–	–	–	–
Vt.	–	–	–	–	–	–	–	–	–	–	–	–	–
Mass.†	–	–	251	–	–	–	–	–	1	1	10	–	–
R.I.	–	–	194	–	–	–	–	–	1	7	–	–	3
Conn.†	–	–	349	–	–	–	–	–	2	3	–	–	–
MID. ATLANTIC	6	–	387	–	–	3	7	–	63	77	22	1	6
Upstate N.Y.	6	–	234	–	–	2	1	–	4	13	3	–	2
N.Y. City	–	–	75	–	–	1	1	–	9	7	2	1	4
N.J.	–	–	NN	–	–	–	–	–	20	13	4	–	–
Pa.	–	–	78	–	–	–	5	–	30	44	13	–	–
E.N. CENTRAL	6	–	2,772	–	–	1	3	2	35	107	12	–	2
Ohio†	–	–	267	–	–	1	–	1	8	28	–	–	1
Ind.†	–	–	357	–	–	–	1	–	4	7	3	–	–
Ill.	2	–	404	–	–	–	–	–	15	23	1	–	–
Mich.	4	–	1,274	–	–	–	2	–	6	41	8	–	1
Wis.	–	–	470	–	–	–	–	1	2	8	–	–	–
W.N. CENTRAL	1	–	1,136	–	–	–	–	–	21	49	11	–	4
Minn.	–	–	–	–	–	–	–	–	3	17	1	–	3
Iowa	1	–	353	–	–	–	–	–	1	5	3	–	–
Mo.	–	–	228	–	–	–	–	–	16	16	5	–	1
N. Dak.	–	–	23	–	–	–	–	–	1	3	–	–	–
S. Dak.	–	–	4	–	–	–	–	–	–	7	–	–	–
Nebr.	–	–	7	–	–	–	–	–	–	1	2	–	–
Kans.	–	–	521	–	–	–	–	–	–	–	–	–	–
S. ATLANTIC	3	–	363	–	–	3	1	–	24	58	20	4	12
Del.†	–	–	7	–	–	–	–	–	–	–	–	–	–
Md.†	2	–	38	–	–	1	–	–	3	8	5	1	3
D.C.†	–	–	–	–	–	–	–	–	–	–	–	1	3
Va.†	–	–	4	–	–	1	–	–	8	9	3	–	3
W. Va.†	–	–	192	–	–	–	–	–	1	2	1	1	1
N.C.†	–	–	NN	–	–	1	1	–	2	4	1	–	–
S.C.	–	–	10	–	–	–	–	–	–	–	1	–	–
Ga.†	–	–	–	–	–	–	–	–	7	19	–	1	1
Fla.	1	–	112	–	–	–	–	–	3	16	9	–	1
E.S. CENTRAL	4	–	188	–	–	2	–	–	15	42	7	–	–
Ky.	–	–	162	–	–	–	–	–	2	12	2	–	–
Tenn.	2	–	NN	–	–	–	–	–	11	15	2	–	–
Ala.	2	–	19	–	–	1	–	–	2	5	3	–	–
Miss.	–	–	7	–	–	1	–	–	–	10	–	–	–
W.S. CENTRAL	8	1	175	–	–	2	1	1	22	102	37	–	5
Ark.	1	–	13	–	–	–	1	–	3	2	4	–	1
La.	2	–	NN	–	–	–	–	–	2	15	4	–	–
Okla.	1	–	–	–	–	–	–	–	5	8	2	–	–
Tex.	4	1	162	–	–	2	–	1	12	77	27	–	4
MOUNTAIN	1	–	78	–	1	1	–	1	8	70	48	–	–
Mont.	–	–	20	–	–	–	–	–	–	1	–	–	–
Idaho	–	–	1	–	–	–	–	–	–	3	–	–	–
Wyo.	–	–	–	–	–	–	–	1	–	–	–	–	–
Colo.	–	–	44	–	–	–	–	–	2	9	5	–	–
N. Mex.†	1	–	–	–	–	1	–	–	–	18	4	–	–
Ariz.†	–	–	NN	–	1	–	–	–	3	20	32	–	–
Utah†	–	–	2	–	–	–	–	–	2	18	7	–	–
Nev.	–	–	11	–	–	–	–	–	1	1	–	–	–
PACIFIC	10	–	415	1	19	1	3	1	59	137	50	5	24
Wash.†	2	–	398	1	18	–	–	–	6	32	8	1	1
Oreg.	–	–	1	–	–	–	–	–	12	30	9	–	2
Calif.†	8	–	–	–	1	1	2	1	38	69	30	4	20
Alaska	–	–	–	–	–	–	–	–	–	–	1	–	–
Hawaii	–	–	16	–	–	–	1	–	3	6	2	–	1
Guam†	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
P.R.	–	–	10	–	–	–	–	–	–	3	11	–	–
V.I.	–	–	–	–	–	–	–	–	–	–	–	–	–
Pac. Trust Terr.	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–

NN: Not notifiable. NA: Not available.

*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Asep. meng.: Mass. –1, Ind. –2, Calif. +6; Chickenpox; Conn. +135, Ind. +271, Del. +1, Md. +1, D.C. +7, W. Va. +1, N. Mex. +8, Utah –2, Calif. +85, Guam +2; Diph.: Wash. +13; Enceph.: N.C. –1, Calif. +1; Hep. B: Del. +1, D.C. +1, Va. –1, Ga. +14, Ariz. –1, Calif. +51, Guam +1; Hep. A: Ohio –1, Del. +1, D.C. +6, W. Va. –1, Ga. +15, Ariz. –4, Calif. +58, Guam +4; Hep. unsp.: D.C. +1, W. Va. +1, Ariz. –3, Calif. +42, Guam +7; Malaria: D.C. +1, Va. +2, Calif. +6.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 24, 1979, and February 25, 1978 (8th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	1979	1979	CUM. 1979	CUM. 1979
UNITED STATES	284	1,476	2,532	67	445	406	370	2,427	24	292	1,184	6
NEW ENGLAND	2	101	103	–	8	26	13	121	1	41	170	–
Maine	–	–	24	–	–	3	–	59	1	–	10	–
N.H. †	–	1	8	–	1	2	–	2	–	3	14	–
Vt.	–	2	5	–	–	1	1	4	–	26	66	–
Mass. †	–	–	31	–	3	9	–	6	–	9	62	–
R.I.	2	98	–	–	–	4	1	6	–	–	3	–
Conn.	–	–	35	–	4	7	11	44	–	3	15	–
MID. ATLANTIC	13	91	224	13	63	52	25	143	2	18	144	1
Upstate N.Y.	2	56	148	5	29	20	2	29	1	11	46	1
N.Y. City	10	28	47	4	19	14	1	20	1	3	11	–
N.J. †	–	–	1	1	10	9	14	60	–	3	40	–
Pa.	1	7	38	3	5	9	8	34	–	1	47	–
E.N. CENTRAL	41	306	1,248	4	37	32	199	1,029	4	38	280	1
Ohio	–	2	6	2	12	1	118	367	–	1	11	–
Ind. †	3	27	31	1	10	9	14	78	–	5	61	–
Ill.	1	55	228	–	–	6	9	117	–	–	21	–
Mich.	22	161	914	–	12	14	28	165	3	25	153	1
Wis.	15	61	69	1	3	2	30	302	1	7	34	–
W.N. CENTRAL	66	237	23	3	12	14	39	146	1	16	46	–
Minn.	60	71	3	–	1	3	–	1	–	8	8	–
Iowa	–	1	8	–	3	1	17	54	–	–	2	–
Mo.	5	156	1	3	7	9	12	38	–	2	6	–
N. Dak.	–	1	–	–	–	–	–	1	–	–	4	–
S. Dak.	–	–	–	–	–	–	–	1	–	–	–	–
Nebr.	–	–	1	–	–	–	–	2	1	–	–	–
Kans.	1	8	10	–	1	1	10	49	–	6	26	–
S. ATLANTIC	33	120	506	14	112	124	20	85	3	14	94	1
Del.	–	–	3	–	2	–	1	5	–	–	–	–
Md. †	–	1	1	2	6	4	7	10	–	–	–	–
D.C.	–	–	–	–	–	–	–	1	–	–	–	–
Va. †	6	15	302	5	19	13	3	25	3	1	4	–
W. Va.	5	27	108	–	3	4	8	21	–	2	34	–
N.C.	–	2	25	–	18	29	–	4	–	2	17	1
S.C.	–	9	43	2	17	11	–	1	–	1	1	–
Ga. †	1	2	1	3	21	16	1	2	–	–	–	–
Fla.	21	64	23	2	26	47	–	16	–	8	38	–
E.S. CENTRAL	–	30	201	6	37	30	28	386	2	10	49	2
Ky. †	–	7	33	–	10	10	18	329	–	4	16	–
Tenn.	–	6	139	3	12	8	7	37	2	6	17	–
Ala.	–	16	1	1	6	8	–	4	–	–	9	2
Miss.	–	1	28	2	9	4	3	16	–	–	7	–
W.S. CENTRAL	44	171	101	17	84	53	13	283	4	11	35	1
Ark.	2	7	1	1	5	6	–	78	–	–	–	1
La.	28	42	35	13	47	15	–	8	–	5	5	–
Okla.	1	1	3	–	6	5	–	–	–	1	4	–
Tex. †	13	121	62	3	26	27	13	197	4	5	26	–
MOUNTAIN	6	54	35	5	28	4	10	66	2	43	68	–
Mont.	1	16	22	–	2	1	–	5	–	4	15	–
Idaho	–	1	1	1	2	–	1	1	–	32	40	–
Wyo.	–	–	–	–	–	–	–	–	–	–	–	–
Colo.	1	4	5	–	1	–	3	38	–	7	9	–
N. Mex. †	–	10	–	–	2	1	–	–	1	–	–	–
Ariz.	4	6	4	4	18	2	–	6	1	–	4	–
Utah	–	15	1	–	2	–	6	10	–	–	–	–
Nev.	–	2	2	–	1	–	–	6	–	–	–	–
PACIFIC	79	366	91	5	64	71	23	168	5	101	298	–
Wash. †	8	198	16	–	7	12	8	72	–	8	35	–
Oreg.	–	3	2	–	4	4	2	13	3	9	19	–
Calif. †	50	136	72	4	50	51	12	71	2	83	241	–
Alaska	–	–	–	1	1	3	–	4	–	–	–	–
Hawaii	21	29	1	–	2	1	1	8	–	1	3	–
Guam	NA	–	1	–	–	–	NA	–	NA	NA	–	–
P.R.	11	23	29	–	–	–	30	122	–	6	8	2
V.I.	–	1	1	–	–	–	–	–	–	–	–	–
Pac. Trust Terr.	NA	2	224	–	1	2	NA	4	NA	NA	–	–

NA: Not available.

*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Measles: N.H. +1, Ind. +6, Va. –2, Tex. –2, N. Mex. –1, Wash. –2, Calif. +26; Men. inf.: N.J. +9, Md. +3, Ga. +4, Calif. +7; Mumps: Ind. +6, Md. +1, Calif. +3; Pertussis: Ind. +1, Va. –1, Ga. +2, Ky. –1, Calif. +1; Rubella: Mass. –8, N.J. +2, Ind. +8, Calif. +71.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending February 24, 1979, and February 25, 1978 (8th week)

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1979	CUM. 1979	CUM. 1979	1979	CUM. 1979	1979	CUM. 1979	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	CUM. 1978*	CUM. 1979
UNITED STATES	484	3,867	19	6	42	1	18	16,336	139,037	138,383	399	3,348	3,043	388
NEW ENGLAND	14	115	–	–	6	–	–	441	4,022	3,372	4	71	89	9
Maine	1	9	–	–	–	–	–	15	263	279	–	1	1	8
N.H.	–	1	–	–	–	–	–	8	109	154	–	2	1	1
Vt.	–	3	–	–	–	–	–	10	64	97	–	–	–	–
Mass.	10	69	–	–	4	–	–	122	1,640	1,523	4	48	60	–
R.I.	2	12	–	–	1	–	–	36	322	187	–	1	2	–
Conn.	1	21	–	–	1	–	–	250	1,624	1,132	–	19	25	–
MID. ATLANTIC	62	641	–	2	8	–	3	1,386	14,753	14,864	52	513	392	2
Upstate N.Y.	6	99	–	1	3	–	3	153	2,705	1,888	–	39	26	2
N.Y. City†	36	253	–	–	2	–	–	427	4,947	5,937	34	337	272	–
N.J.	9	111	–	1	2	–	–	364	2,845	2,990	3	70	51	–
Pa.	11	178	–	–	1	–	–	442	4,256	4,049	15	67	43	–
E.N. CENTRAL	62	545	–	–	4	–	2	2,009	18,430	18,541	11	296	271	23
Ohio†	9	105	–	–	–	–	2	496	5,980	5,064	–	96	38	1
Ind.	6	83	–	–	–	–	–	57	1,480	2,225	2	22	18	1
Ill.†	23	212	–	–	2	–	–	505	4,253	4,860	–	111	181	13
Mich.†	22	124	–	–	2	–	–	750	4,762	4,573	6	49	25	–
Wis.	2	21	–	–	–	–	–	201	1,955	1,819	3	18	9	8
W.N. CENTRAL	14	142	6	1	1	–	1	976	6,975	7,005	3	48	53	87
Minn.	–	19	–	–	–	–	–	205	1,242	1,321	–	19	11	24
Iowa	1	18	–	–	–	–	–	121	938	905	–	4	6	25
Mo.	8	74	5	1	1	–	–	478	2,948	2,604	3	17	23	19
N. Dak.	4	6	–	–	–	–	–	9	106	174	–	–	–	5
S. Dak.†	–	6	–	–	–	–	–	30	257	288	–	–	1	8
Nebr.	–	2	1	–	–	–	–	48	416	570	–	–	1	–
Kans.	1	17	–	–	–	–	1	85	1,068	1,143	–	8	11	6
S. ATLANTIC	98	863	–	–	2	–	7	4,248	34,259	33,855	103	904	833	49
Del.†	–	8	–	–	–	–	–	13	433	652	–	4	3	–
Md.†	6	121	–	–	–	–	4	586	3,900	4,626	3	49	57	–
D.C.†	5	46	–	–	1	–	–	93	1,718	2,181	1	60	67	–
Va.	13	99	–	–	–	–	–	431	3,367	3,005	12	94	84	–
W. Va.	4	34	–	–	–	–	–	50	529	504	1	17	1	–
N.C.	26	145	–	–	–	–	2	831	5,539	4,496	15	98	80	–
S.C.	4	26	–	–	–	–	1	191	2,930	2,951	4	52	37	11
Ga.	21	143	–	–	–	–	–	718	6,414	6,409	25	227	192	38
Fla.†	19	241	–	–	1	–	–	1,335	9,429	9,031	42	303	312	–
E.S. CENTRAL	76	371	4	–	3	1	4	1,460	12,963	11,978	32	271	131	13
Ky.	16	63	2	–	2	–	–	137	1,756	1,358	1	24	14	7
Tenn.	31	101	2	–	–	1	1	614	4,565	4,146	16	128	44	3
Ala.	11	85	–	–	1	–	3	361	3,861	3,716	6	49	18	3
Miss.	18	122	–	–	–	–	–	348	2,781	2,758	9	70	55	–
W.S. CENTRAL	77	461	3	–	2	–	–	2,552	20,124	19,797	97	607	484	162
Ark.	10	24	2	–	–	–	–	34	1,618	1,321	2	19	24	39
La.	27	117	–	–	–	–	–	385	3,461	3,084	32	133	101	1
Okla.	12	71	–	–	–	–	–	244	1,739	1,785	1	9	18	28
Tex.†	28	249	1	–	2	–	–	1,889	13,306	13,607	62	446	341	94
MOUNTAIN	8	108	5	1	2	–	1	586	5,771	4,889	5	47	70	1
Mont.	–	3	–	–	–	–	–	47	267	351	–	1	4	–
Idaho	–	2	–	–	–	–	–	29	255	166	–	3	–	–
Wyo.	–	4	–	–	–	–	–	8	151	92	–	3	3	–
Colo.	–	–	–	–	–	–	–	188	1,546	1,402	2	20	23	–
N. Mex.	3	21	1	1	1	–	–	68	783	685	1	7	16	–
Ariz.	3	61	–	–	–	–	–	104	1,650	1,120	–	6	15	1
Utah	–	3	4	–	–	–	–	33	277	305	–	–	2	–
Nev.	2	14	–	–	1	–	1	109	842	768	2	7	7	–
PACIFIC	73	621	1	2	14	–	–	2,678	21,740	24,082	92	591	720	42
Wash.	–	4	–	–	–	–	–	289	2,140	1,580	NA	19	26	–
Oreg.	2	34	–	–	–	–	–	182	1,692	1,660	7	31	17	–
Calif.†	68	532	1	2	10	–	–	2,045	16,770	19,701	85	532	666	42
Alaska	–	9	–	–	–	–	–	96	739	707	–	2	4	–
Hawaii	3	42	–	–	4	–	–	66	399	434	–	7	7	–
Guam†	NA	1	–	NA	–	NA	–	NA	3	20	NA	–	–	–
P.R.	1	41	–	1	1	–	–	38	260	401	8	81	63	4
V.I.	–	–	–	–	–	–	–	5	26	43	–	–	3	–
Pac. Trust Terr.	NA	6	–	NA	–	NA	–	NA	34	78	NA	–	–	–

NA: Not available.
*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.
†The following delayed reports will be reflected in next week's cumulative totals: TB: Del. +2, Md. +10, Fla. –1, Calif. +54, Guam +1; T. Fever: Md. +1, Calif. +5; GC: NYC +788 civ., Ill. +1342 civ., Mich. +641 civ., S. Dak. –1 civ., Del. +65 civ., Md. +244 civ., D.C. +315 civ., Calif. +1829 civ. +4 mil., Guam +3 civ. +6 mil.; Syphilis: NYC +49, Ohio –1, Ill. +96, Mich. +6, Del. +3, Md. +8, D.C. +4, Tex. –1, Calif. +42; An. rabies: Calif. +2.

TABLE IV. Deaths in 121 U.S. cities,* week ending February 24, 1979 (8th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	715	474	183	32	11	39
Boston, Mass.	186	108	60	10	3	7
Bridgeport, Conn.	47	33	12	1	–	2
Cambridge, Mass.	31	21	9	–	–	1
Fall River, Mass.	21	15	6	–	–	2
Hartford, Conn.	60	39	17	3	–	1
Lowell, Mass.	32	22	7	2	–	3
Lynn, Mass.	34	25	7	2	–	1
New Bedford, Mass.	22	15	6	–	1	1
New Haven, Conn.	66	48	11	2	3	–
Providence, R.I.	72	43	19	5	3	6
Somerville, Mass.	9	6	3	–	–	1
Springfield, Mass.	51	37	11	3	–	4
Waterbury, Conn.	29	17	9	2	1	1
Worcester, Mass.	55	45	6	2	–	9
MID. ATLANTIC	2,235	1,480	503	145	63	98
Albany, N.Y.	61	45	9	5	1	1
Allentown, Pa.	36	19	12	5	–	4
Buffalo, N.Y.	130	87	31	7	3	16
Camden, N.J.	51	36	10	4	1	1
Elizabeth, N.J.	36	29	5	2	–	–
Erie, Pa.†	30	19	9	1	1	3
Jersey City, N.J.	56	38	14	4	–	1
Newark, N.J.	73	31	17	7	15	–
N.Y. City, N.Y.	1,379	905	322	92	32	50
Paterson, N.J.	40	20	14	5	1	3
Philadelphia, Pa.†	199	132	48	15	1	12
Pittsburgh, Pa.†	53	38	14	1	–	1
Reading, Pa.	40	28	9	1	–	1
Rochester, N.Y.	125	96	15	6	3	11
Schenectady, N.Y.	28	18	8	2	–	–
Scranton, Pa.†	22	13	7	–	1	2
Syracuse, N.Y.	95	68	17	2	6	1
Trenton, N.J.	23	17	5	1	–	1
Utica, N.Y.	26	18	7	1	–	4
Yonkers, N.Y.	36	25	8	1	1	4
E.N. CENTRAL	2,378	1,404	640	126	113	71
Akron, Ohio	77	51	20	2	3	–
Canton, Ohio	49	38	9	2	–	–
Chicago, Ill.	607	341	166	43	30	10
Cincinnati, Ohio	116	75	29	5	4	5
Cleveland, Ohio	184	96	68	9	6	9
Columbus, Ohio	86	46	26	6	6	3
Dayton, Ohio	99	64	25	5	4	3
Detroit, Mich.	305	163	90	21	18	12
Evansville, Ind.	52	30	14	1	2	1
Fort Wayne, Ind.	46	34	7	1	1	1
Gary, Ind.	19	11	4	1	–	–
Grand Rapids, Mich.	71	50	12	2	5	7
Indianapolis, Ind.	179	97	51	13	10	6
Madison, Wis.	54	30	13	–	7	5
Milwaukee, Wis.	136	94	33	2	4	–
Peoria, Ill.	43	27	13	–	–	–
Rockford, Ill.	55	32	13	2	3	2
South Bend, Ind.	48	27	12	3	3	2
Toledo, Ohio	86	51	23	5	5	2
Youngstown, Ohio	66	47	12	3	2	3
W.N. CENTRAL	714	471	160	33	22	21
Des Moines, Iowa	47	35	10	1	1	1
Duluth, Minn.	22	15	4	2	1	3
Kansas City, Kans.	40	27	9	1	1	1
Kansas City, Mo.	124	71	27	13	5	5
Lincoln, Nebr.	31	23	7	–	–	3
Minneapolis, Minn.	80	53	16	2	3	3
Omaha, Nebr.	88	53	27	2	1	2
St. Louis, Mo.	179	121	37	9	7	1
St. Paul, Minn.	55	41	10	2	2	1
Wichita, Kans.	48	32	13	1	1	1

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1	
S. ATLANTIC	1,131	683	310	72	30	45
Atlanta, Ga.	111	66	31	11	–	5
Baltimore, Md.	189	104	57	14	9	1
Charlotte, N.C.	47	26	18	1	2	–
Jacksonville, Fla.	123	80	28	7	2	3
Miami, Fla.	105	67	30	5	1	5
Norfolk, Va.	55	31	20	2	1	6
Richmond, Va.	80	44	26	3	5	3
Savannah, Ga.	38	22	10	4	1	6
St. Petersburg, Fla.	88	75	9	2	–	3
Tampa, Fla.	79	50	17	3	3	8
Washington, D.C.	190	104	55	20	5	5
Wilmington, Del.	26	14	9	–	1	–
E.S. CENTRAL	638	379	163	40	29	31
Birmingham, Ala.	108	67	26	6	6	1
Chattanooga, Tenn.	35	25	5	5	–	2
Knoxville, Tenn.	58	40	13	2	–	2
Louisville, Ky.	92	43	35	6	3	8
Memphis, Tenn.	137	80	30	7	16	2
Mobile, Ala.	42	27	8	4	–	4
Montgomery, Ala.	50	26	11	6	3	3
Nashville, Tenn.	116	71	35	4	1	9
W.S. CENTRAL	1,165	663	321	97	49	46
Austin, Tex.	39	29	6	3	1	2
Baton Rouge, La.	37	18	13	4	–	4
Corpus Christi, Tex.	30	12	13	3	–	–
Dallas, Tex.	176	104	48	14	6	9
El Paso, Tex.	63	40	14	2	2	4
Fort Worth, Tex.	87	60	18	4	5	2
Houston, Tex.	279	133	87	38	11	7
Little Rock, Ark.	47	25	13	2	6	2
New Orleans, La.	76	42	21	7	3	–
San Antonio, Tex.	148	86	37	14	8	4
Shreveport, La.	68	36	25	3	3	6
Tulsa, Okla.	115	78	26	3	4	6
MOUNTAIN	565	347	132	40	23	15
Albuquerque, N.Mex.	58	35	15	6	–	2
Colo. Springs, Colo.	24	17	5	2	–	1
Denver, Colo.	99	68	21	8	2	5
Las Vegas, Nev.	52	29	18	1	–	3
Ogden, Utah	21	10	9	–	1	–
Phoenix, Ariz.	154	87	34	14	11	3
Pueblo, Colo.	20	13	5	–	–	–
Salt Lake City, Utah	47	35	7	–	4	1
Tucson, Ariz.	90	53	18	9	5	–
PACIFIC	1,627	1,024	374	105	63	56
Berkeley, Calif.	21	16	3	2	–	–
Fresno, Calif.	71	36	20	8	3	2
Glendale, Calif.	16	12	2	2	–	–
Honolulu, Hawaii	81	51	23	5	1	4
Long Beach, Calif.	94	61	25	3	3	4
Los Angeles, Calif.	440	273	115	28	8	15
Oakland, Calif.	62	41	18	1	1	3
Pasadena, Calif.	39	25	11	–	1	–
Portland, Oreg.	102	71	21	4	4	6
Sacramento, Calif.	58	39	10	5	2	2
San Diego, Calif.	114	71	20	9	8	2
San Francisco, Calif.	163	101	33	12	11	1
San Jose, Calif.	142	87	31	12	6	6
Seattle, Wash.	135	76	27	11	11	5
Spokane, Wash.	56	39	10	1	3	6
Tacoma, Wash.	33	25	5	2	1	–
TOTAL	11,168	6,925	2,786	690	403	422
Expected Number	11,597	7,250	2,897	682	414	474

*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, there will now be 117 cities involved in the generation of the expected values used to monitor pneumonia and influenza activity in the United States. Data from these 4 cities will appear in the tables but will not be included in the totals for the United States and the Middle Atlantic Region.

Paraquat Contamination of Marijuana — United States

Since 1975 the Mexican Government has conducted a marijuana eradication program consisting of widespread aerial spraying of herbicides, principally paraquat (1,1' dimethyl-4,4' bipyridinium dichloride). In 1977 and 1978 concern arose in the United States that paraquat-contaminated marijuana was entering the country and might present a health hazard (*1*). Analyses at the Research Institute of Pharmaceutical Sciences, University of Mississippi, in March 1978 showed that 13 of 63 samples of marijuana confiscated in the southwestern United States were contaminated with paraquat at concentrations ranging from 3 to 2,264 parts per million (ppm); the average level was 452 ppm (*2*). Experiments conducted by the Research Triangle Institute in 1978 indicated that approximately 50-250 nanograms (0.05-0.25 micrograms) of paraquat can be present in the smoke from a gram of marijuana contaminated with paraquat at the level of 450 ppm (*2*).

In November 1978 CDC initiated a nationwide marijuana testing program to obtain quantitative data on the national and regional prevalence and degree of paraquat contamination of marijuana. Samples of confiscated lots of marijuana were provided to CDC through the 7 regional laboratories of the Drug Enforcement Administration (DEA) and 14 local or state enforcement agencies from all areas of the United States. In this study 1,006 marijuana samples were received from 910 seizures covering the period 1975 through January 1979; of the 832 seizures for which the date of seizure was provided 63% were confiscated in the last quarter of 1978. Although the DEA seizures accounted for only 15% of all seizures, they constituted 95% of the weight of the material examined.

One-gram samples of each lot were analyzed by a high performance liquid chromatographic method developed at CDC, sensitive to a detection limit of 5 ppm. In interpreting the data, it was assumed that all marijuana confiscated in 1 seizure was from the same original source, and that the sample received was representative of the entire seizure.

Nationally, 33 of the 910 seizures (3.6%) or 1,059 of the 168,424 kilograms confiscated (0.63%) were found to be contaminated with paraquat (Table 1). Seventy percent of the total number of contaminated seizures and 98.6% of the total weight of contaminated marijuana represented in this study was confiscated in U.S. Census Division VI, which includes New Mexico, Texas, Oklahoma, Arizona, and Louisiana (Figure 3). No contamination was found in specimens from the Eastern Seaboard or the Pacific North-

TABLE 1. Prevalence and weight of paraquat-contaminated confiscated marijuana, by U.S. Census Division, 1975*—January 1979

	Confiscated Marijuana					
U.S. Census Division	Number of seizures	Number of seizures in which marijuana was contaminated	Number of seizures in which marijuana was contaminated (percentage)	Total weight of seizures (kg)	Weight of seizures in which marijuana was contaminated (kg)	Weight of seizures in which marijuana was contaminated (percentage)
I	6	0	0	<1	0	0
II	155	0	0	23184	0	0
III	6	0	0	61	0	0
IV	89	1	1.1	96804	1.7	<0.1
V	204	2	1.0	320	0.3	0.1
VI	180	23	12.8	46786	1044	2.2
VII	42	0	0	458	0	0
VIII	4	0	0	<1	0	0
IX	183	7	3.8	810	13.3	1.6
X	41	0	0	<1	0	0
TOTAL	910	33	3.6	168424	1059.3	0.6

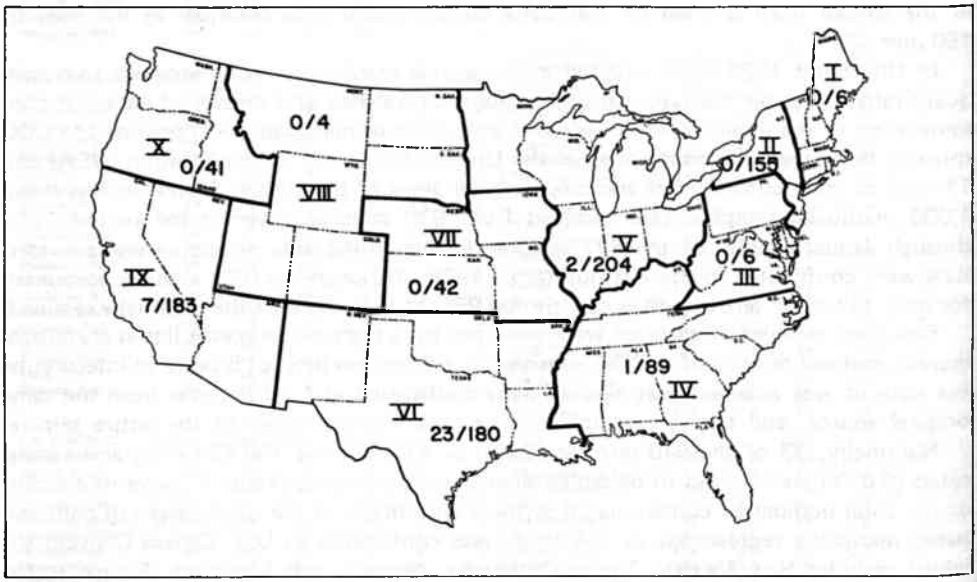
*month of seizures unknown

Paraquat Contamination of Marijuana — Continued

west. Paraquat concentrations in the 33 contaminated seizures ranged from 10 to 461 ppm (mean 108 ppm, median 52 ppm). Twenty-two of the 33 contaminated samples (66.7%) contained less than 100 ppm of paraquat; 2 of the 33 (6.1%) were contaminated at greater than 400 ppm. The origin of 96 of the seized lots was known; 89 of these, representing 25,715 kg of the total material seized, originated in Mexico. Of these 89 seizures, 11 (12.4%) representing 490.0 kg (1.9%) were found to be contaminated. Concentrations of paraquat ranged from 10 to 255 ppm, with a mean of 88 ppm and a median of 63 ppm.

Reported by Toxicology Br, Clinical Chemistry Div, Bur of Laboratories, Special Studies Br, Chronic Diseases Div, Bur of Epidemiology, CDC.

FIGURE 3. Seizures of marijuana in which paraquat-contaminated marijuana was found vs. all seizures, by U.S. Census Division, 1975*—January 1979



*month of seizures unknown

References

1. Smith RJ: Spraying of herbicides on Mexican marijuana backfires on U.S. Science 199:861-864, 1978

2. Hawks RL: Chemistry and Toxicology of Paraquat-Contaminated Marijuana. Rockville, Maryland, National Institute of Drug Abuse, 1978

International Notes

Quarantine Measures

The following changes should be made in the *Supplement — Health Information for International Travel*, MMWR, Vol. 27, September 1978:

KUWAIT

Cholera — Delete: None. Insert: A certificate is required ONLY for transit travelers going to Saudi Arabia during the pilgrimage season from 23 August to 19 November 1979. ALSO on page 14 delete: None. Insert *.

Smallpox — Change code to III. ALSO on page 14 change code to III.

Quarantine Measures — Continued

LIBERIA
Smallpox — Change code to II. ALSO on page 14 change code to II.
MALAWI
Cholera — Change code to II. ALSO on page 14 change code to II.
Smallpox — Insert: A certificate is required ALSO from travelers who within the preceding 14 days have been in transit in a country any part of which is infected. ALSO on page 14 insert * by code.
MALDIVES
Smallpox — Change code to III. ALSO on page 15 change code to III.
MAURITANIA
Smallpox — Change code to III. ALSO on page 15 change code to III.
NAMIBIA
Yellow fever — Delete second paragraph of the note. Insert: A certificate is required ALSO from travelers on unscheduled flights which use airports other than those used by scheduled airlines.
NEW CALEDONIA AND DEPENDENCIES
Yellow fever — Under code insert >1 yr. Insert: A certificate is required ALSO from travelers arriving from countries in the endemic zones (see pp. 59-60). ALSO on page 15 insert * by code.
Typhoid — Delete note.
NICARAGUA
Smallpox — Change code to III. ALSO on page 15 change code to III.
NIGER
Cholera — Delete: None. Insert code II. ALSO on page 15 delete: None. Insert code II.
Yellow fever — Change code to II. Delete note. ALSO on page 15 change code to II.
Smallpox — Change code to II. ALSO on page 15 change code to II.
NIGERIA
Smallpox — Change code to III. ALSO on page 15 change code to III.
OMAN
Cholera — Insert: None. Delete note. ALSO on page 16 delete *. Insert: None.
PAKISTAN
Yellow fever — From note delete: or transiting.
PUERTO RICO
Smallpox — Delete code. Insert: None. ALSO on page 16 delete code. Insert: None.
SAINT HELENA
Cholera — Delete code. Insert: None. ALSO on page 16 delete code. Insert: None.
Smallpox — Under code insert >1 yr.
SOMALIA
Smallpox — Delete all information. Insert code III. ALSO on page 17 change code to III.
SOUTH AFRICA
Yellow fever — Under code insert >1 yr. Delete second paragraph of the note. Insert: A certificate is required ALSO from travelers on unscheduled flights which use airports other than those used by scheduled airlines.
SRI LANKA
Smallpox — Change code to III. ALSO on page 17 change code to III.
SUDAN
Cholera — Delete: None. Insert code II. ALSO on page 17 delete: None. Insert code II.
SYRIAN ARAB REPUBLIC
Smallpox — Change code to III. ALSO on page 17 change code to III.
TOGO
Smallpox — Change code to III. ALSO on page 18 change code to III.

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