CENTERS FOR DISEASE CONTROL

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Current Trends

Imported Dengue Fever — United States, 1982

In 1982, 144 cases of dengue-like illness were reported to CDC by 28 states. Only single blood samples were received for many of these, and the etiology could not be determined. However, 45 cases, imported into 14 states, were confirmed as dengue fever (Figure 1). Eight cases of confirmed dengue were imported into southern states where *Aedes aegypti* is found at least part of the year, and most of the others were imported into eastern or midwestern states (Figure 1). No indigenous transmission of dengue was reported in the continental United States in 1982.

Six cases were confirmed virologically, and dengue types 1, 2, and 4 were isolated. Dengue type 1 was isolated from patients returning from Michoacan state, Mexico, and New Delhi, India. Dengue type 2 was isolated from a student who had been living in Jamaica and from a traveler returning from Sri Lanka. Dengue type 4 was isolated from two individuals, one who had visited Puerto Rico, the other who was returning from Martinique. The majority of serologic confirmations came from persons returning from tropical areas of the Western Hemisphere, including Puerto Rico, Jamaica, Surinam, Martinique, Dominican Republic, Guyana, Venezuela, El Salvador, and Mexico. Southeast Asia, the Pacific Islands, India, and Africa accounted for smaller numbers of imported cases.

At least two patients with imported, confirmed dengue had associated hemorrhagic manifestations. One, a 54-year-old Hispanic male with a history of travel to Puerto Rico, was hospitalized with hematemesis, epistaxis, gingival bleeding, purpura, and a platelet count of 15,000. The second patient, a 41-year-old male returning from India, had petechiae and a platelet count of 20,000.

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Editorial Note: The increase in epidemic dengue activity in most of the tropics during the past decade has been aided by increased frequency of air travel, which provides an ideal mechanism for dengue virus movement between world population centers, and by lack of control of *Ae. aegypti*, the principal vector mosquito. An increase in imported dengue into the United States has paralleled this increased epidemic activity in the tropics; since 1977, 855 suspected cases of dengue have been reported.

A large part of the southeastern United States, from Texas to Florida and the Carolinas, is infested with *Ae. aegypti*. Moreover, a recent study has shown that *Ae. triseriatus*, the principal vector of La Crosse virus encephalitis in man, is an efficient transmitter of dengue virus

Dengue Fever — Continued

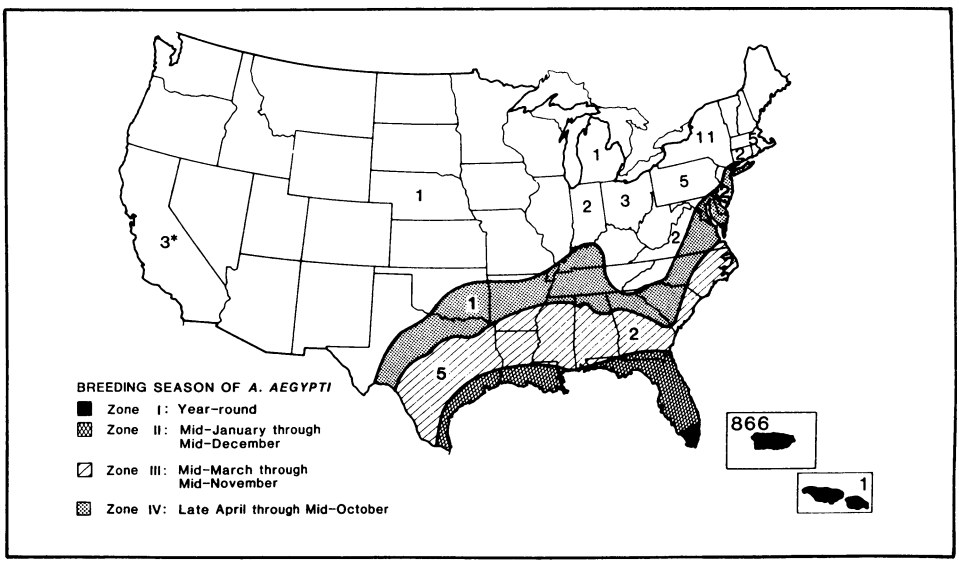
under laboratory conditions (*1*). This report suggests that dengue virus might be transmitted in areas without *Ae. aegypti*, although there is no present epidemiologic evidence to suggest such transmission.

It is important that physicians consider dengue in the differential diagnosis of acutely ill, febrile patients returning from any tropical part of the world. If possible, they should submit acute- and convalescent-phase serum samples, as well as clinical and epidemiologic information on such patients, to appropriate state or federal public health laboratories for serologic and virologic confirmation.

Reference

1. Frier, JE, Grimstad PR. Unpublished data.

FIGURE 1. Confirmed, imported dengue cases and *Aedes Aegypti* distribution — United States, 1982



*Number of confirmed dengue cases.

Update: Influenza Activity — United States

Influenza isolates reported to CDC this season have increased from 707 two weeks ago (*1*) to 971 (Figure 2). Seventeen states now report influenza type A(H1N1) virus activity, although most isolates (91%) continue to be identified as type A(H3N2) related to the A/Bangkok/79 component of the current vaccine. Influenza type A(H3N2) virus isolates have been reported from 42 states. An influenza B isolate was recently reported from Minnesota, raising to seven the number of states with influenza B activity.

Influenza morbidity reports collected weekly from each state suggest a gradual decline in activity. Since the week ending February 19, states reporting regional activity have decreased from 15 to seven, coincident with an increase in states reporting sporadic activity, 21 to 33. For the week ending March 19, 1983, four states (Iowa, Kentucky, Nebraska, and Virginia) reported widespread activity. For that same week, an excess in the ratio of pneumonia and influenza (P&I) deaths to total deaths was reported from 121 cities for the 10th consecutive week (Figure 2). The observed ratio was 5.1, and the expected ratio was 4.1.

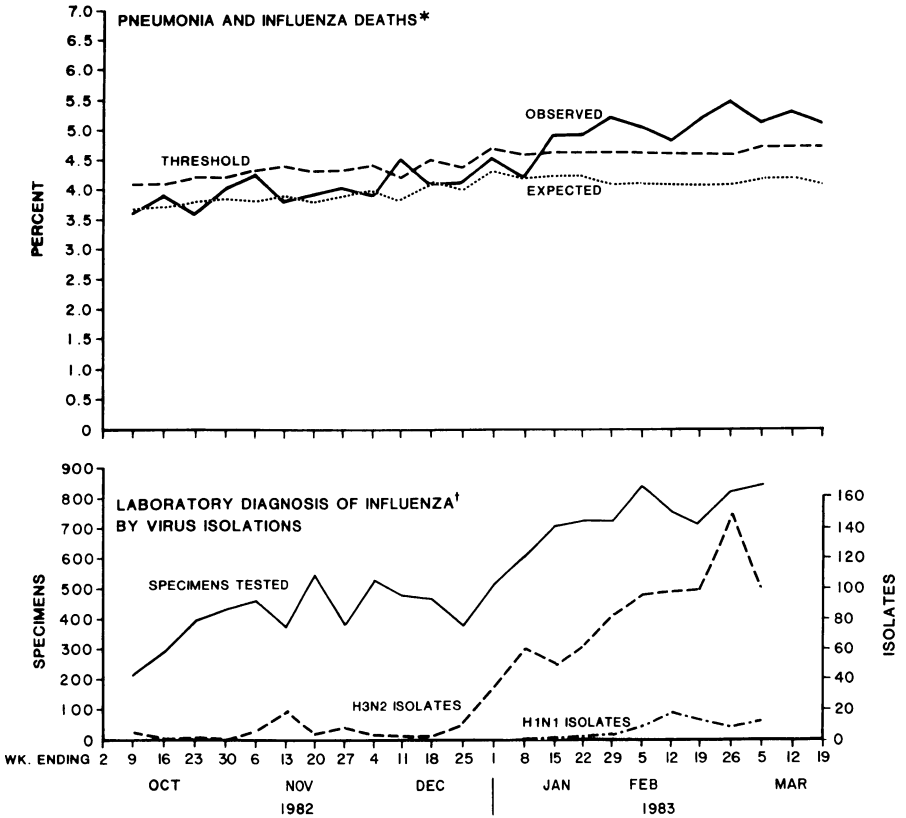
Influenza — Continued

Reported by Respective state epidemiologists and laboratory directors; Div of Surveillance and Epidemiologic Studies, Epidemiology Program Office, WHO Collaborating Center for Influenza, Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Reference

1. CDC. Update: influenza activity—United States. MMWR 1983;32:120-1.

FIGURE 2. Indicators of influenza activity — United States, 1982-1983



*Reported to CDC by 121 cities.
†Reported to CDC by WHO collaborating laboratories (including military sources).

Epidemiologic Notes and Reports

Phototoxic Reaction among Dock Workers — Tennessee

The National Institute for Occupational Safety and Health (NIOSH) investigated a cluster of phototoxic reactions among dock workers who transfer coal tar pitch and petroleum pitch (asphalt) to and from river barges in Memphis, Tennessee (*1*). Transfers of granular, unheated pitch are made once every 2-3 weeks, normally requiring two shifts of eight to 10 workers each.

Investigators visited the Memphis docks on August 20-21, 1981, to evaluate exposure to coal tar pitch, and on October 12-13, 1981, to evaluate exposure to petroleum pitch. Air samples from the area and from workers' personal breathing zones were taken to measure

Phototoxic Reaction — Continued

exposure to total and respirable pitch dust, benzene-soluble pitch, polynuclear aromatic hydrocarbons (PNA's) and organic vapors. Work practices and personal protective equipment were also evaluated, and a physician interviewed and examined 26 workers, 11 of whom had been exposed to pitch.

Air sampling data showed that concentrations of coal tar pitch (measured as benzene solubles) ranged from 0.05 to 1.47 mg/M^3.* For asphalt dust, the highest measurement was 2.4 mg/M^3.† Protective equipment (hard hats, goggles, gloves, disposable respirators, coveralls, hoods, etc.) used by the workers was considered adequate. However, deficiencies were noted in work practices, including improper use of goggles and failure to remove contaminated work clothing after exposure.

Eye and skin irritations associated with exposure to pitch were each reported by 23 of 26 workers participating in the study. Reported symptoms and signs of eye irritation included burning, redness, swelling, and watering, lasting approximately 2 days after each pitch transfer operation; abnormal sensitiveness to light (photophobia) was occasionally present. Skin irritation, characterized by redness similar to sunburn and lasting 2-3 days with occasional

*The Occupational Safety and Health Administration's (OSHA) applicable standard is 0.2 mg/M^3. Based on available scientific information, NIOSH recommends exposure limits of 0.1 mg/M^3.

†There is neither an OSHA standard nor a NIOSH-recommended criterion applicable to asphalt dusts.

(Continued on page 153)

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

Disease	11th Week Ending			Cumulative, 11th Week Ending		
	March 19, 1983	March 20, 1982	Median 1978-1982	March 19, 1983	March 20, 1982	Median 1978-1982
Aseptic meningitis	92	77	67	902	840	704
Encephalitis: Primary (arthropod-borne & unspec.)	16	11	11	172	157	126
Post-infectious	1	1	5	12	6	33
Gonorrhea: Civilian	15,869	16,941	18,119	188,902	198,123	200,529
Military	310	343	503	5,088	5,807	5,935
Hepatitis: Type A	487	470	567	5,088	4,872	5,726
Type B	482	431	383	4,423	4,111	3,253
Non A, Non B	74	42	N	627	374	N
Unspecified	171	189	191	1,614	1,788	2,134
Legioneliosis	13	2	N	115	58	N
Leprosy	8	2	2	50	29	32
Malaria	9	17	17	123	155	155
Measles: Total	39	37	356	190	158	2,103
Indigenous	39	N	N	154	N	N
Imported*	-	N	N	36	N	N
Meningococcal infections: Total	61	85	85	659	718	724
Civilian	60	85	85	648	714	717
Military	1	-	-	11	4	5
Mumps	93	197	224	889	1,234	3,094
Pertussis	30	19	24	260	207	222
Rubella (German measles)	40	55	176	219	421	968
Syphilis (Primary & Secondary): Civilian	526	713	506	6,923	7,168	5,563
Military	4	7	5	101	85	84
Toxic-shock syndrome	3	N	N	70	N	N
Tuberculosis	412	449	543	4,401	4,879	5,008
Tularemia	5	-	-	33	16	18
Typhoid fever	6	9	12	66	84	84
Typhus fever, tick-borne (RMSF)	2	1	1	12	17	12
Rabies, animal	97	109	108	1,064	975	975

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1983		Cum. 1983
Anthrax	-	Plague	-
Botulism: Foodborne (Wash. 1)	6	Poliomyelitis: Total	1
Infant	12	Paralytic	1
Other	-	Psittacosis (Upst. N.Y. 1, Kans. 1, S.C. 1, Oreg. 1)	15
Brucellosis (Tex. 1)	21	Rabies, human	1
Cholera	-	Tetanus (Minn. 1, Ala. 1)	10
Congenital rubella syndrome (Calif. 2)	8	Trichinosis (La. 1)	6
Diphtheria	-	Typhus fever, flea-borne (endemic, murine) (Okla. 1)	3
Leptospirosis	4		

*None of the thirty-nine reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending March 19, 1983 and March 20, 1982 (11th week)

Reporting Area	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy	Malaria
		Primary	Post-infectious			A	B	NA,NB	Unspecified			
	1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1982	1983	1983	1983	1983	1983	Cum. 1983	Cum. 1983
UNITED STATES	92	172	12	188,902	198,123	487	482	74	171	13	50	123
NEW ENGLAND	1	7	-	4,996	4,516	12	29	9	13	-	-	1
Maine	1	-	-	279	216	-	-	-	-	-	-	-
N.H.	-	-	-	139	172	-	2	1	-	-	-	-
Vt.	-	-	-	79	98	2	1	-	-	-	-	-
Mass.	-	5	-	2,252	1,995	6	6	-	13	-	-	-
R.I.	-	-	-	266	345	2	4	-	-	-	-	-
Conn.	-	2	-	1,981	1,690	2	16	8	-	-	-	1
MID ATLANTIC	13	24	2	24,338	23,865	85	89	8	12	-	4	22
Upstate N.Y.	1	9	-	3,460	3,725	8	18	3	-	-	-	8
N.Y. City	4	6	-	10,281	10,523	47	17	-	5	-	4	8
N.J.	4	3	-	4,528	4,106	13	29	3	7	-	-	4
Pa.	4	6	2	6,069	5,511	17	25	2	-	-	-	2
E.N. CENTRAL	4	37	2	24,031	28,279	30	45	4	11	4	2	5
Ohio	2	19	1	7,209	8,341	18	20	1	4	4	1	-
Ind.	2	4	1	2,947	3,163	10	18	1	5	-	-	-
Ill.	-	-	-	4,651	7,502	2	7	2	2	-	1	1
Mich.	U	13	-	6,793	6,712	U	U	U	U	U	-	4
Wis.	-	1	-	2,431	2,561	-	-	-	-	-	-	-
W.N. CENTRAL	6	13	1	9,293	8,986	17	26	3	11	1	-	4
Minn.	-	-	-	1,348	1,303	3	1	-	-	-	-	-
Iowa	3	12	-	934	1,048	1	2	3	-	-	-	2
Mo.	3	-	-	4,484	3,993	1	17	-	7	1	-	1
N. Dak.	-	-	-	93	113	-	-	-	-	-	-	-
S. Dak.	-	-	-	259	268	1	1	-	1	-	-	-
Nebr.	-	1	-	528	571	8	2	-	1	-	-	-
Kans.	-	-	1	1,647	1,690	3	3	-	2	-	-	1
S. ATLANTIC	15	31	3	49,132	50,307	42	126	10	21	2	1	17
Del.	-	-	-	944	778	-	2	2	1	-	-	-
Md.	5	4	-	6,338	6,741	6	19	1	3	1	-	3
D.C.	1	-	-	3,384	2,514	-	7	-	-	-	-	2
Va.	3	12	1	4,129	4,306	3	29	3	3	1	-	4
W. Va.	1	-	-	469	597	-	-	-	-	-	-	1
N.C.	1	6	-	6,794	8,354	1	6	-	2	-	-	-
S.C.	-	1	-	4,744	4,521	4	5	-	3	-	-	1
Ga.	-	1	-	10,989	8,331	5	32	1	2	-	-	1
Fla.	4	7	2	11,341	14,165	23	26	3	7	-	1	5
E.S. CENTRAL	7	7	2	16,763	16,303	25	23	3	7	-	-	2
Ky.	-	-	-	2,067	2,225	9	6	-	1	-	-	-
Tenn.	-	1	-	6,538	6,193	5	9	-	-	-	-	-
Ala.	7	6	2	5,265	4,847	11	6	3	6	-	-	1
Miss.	-	-	-	2,893	3,038	-	2	-	-	-	-	1
W.S. CENTRAL	7	15	-	27,124	28,019	74	33	4	56	-	2	9
Ark.	1	-	-	2,127	2,320	-	1	1	5	-	-	1
La.	3	2	-	4,457	4,877	13	10	2	7	-	-	-
Okla.	-	4	-	3,217	2,863	6	7	1	4	-	-	5
Tex.	3	9	-	17,323	17,959	55	15	-	40	-	2	3
MOUNTAIN	10	9	-	5,724	7,230	74	21	6	5	1	10	7
Mont.	-	-	-	285	318	2	-	-	-	-	-	-
Idaho	-	-	-	296	283	-	-	-	-	-	-	-
Wyo.	-	1	-	171	212	2	-	-	-	-	-	-
Colo.	2	2	-	1,651	1,952	9	6	-	1	-	1	4
N. Mex.	-	-	-	787	912	2	-	-	-	-	-	1
Ariz.	8	1	-	1,324	2,009	59	12	4	2	-	9	2
Utah	-	5	-	274	276	-	2	1	-	1	-	-
Nev.	-	-	-	936	1,268	-	1	1	2	-	-	-
PACIFIC	29	29	2	27,501	30,618	128	90	27	35	5	31	56
Wash.	-	2	-	1,910	2,571	6	4	4	-	-	2	2
Oreg.	-	-	-	1,407	1,734	12	3	3	1	-	1	2
Calif.	24	25	2	22,994	25,005	109	83	20	34	5	20	52
Alaska	-	-	-	623	776	1	-	-	-	-	-	-
Hawaii	5	2	-	567	532	-	-	-	-	-	8	-
Guam	U	-	-	26	29	U	U	U	U	U	-	-
P.R.	2	-	-	611	669	2	1	-	2	-	-	1
V.I.	-	-	-	62	51	-	2	-	-	-	-	-
Pac. Trust Terr.	U	-	-	-	98	U	U	U	U	U	-	-

N: Not notifiable U: Unavailable

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 19, 1983 and March 20, 1982 (11th week)

Reporting Area	Measles (Rubeola)					Menin-gococcal Infections	Mumps			Pertussis			Rubella		
	Indigenous		Imported*		Total										
	1983	Cum. 1983	1983	Cum. 1983	Cum. 1982	Cum. 1983	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982	1983	Cum. 1983	Cum. 1982
UNITED STATES	39	154	-	36	158	659	93	889	1,234	30	260	207	40	219	421
NEW ENGLAND	-	-	-	-	5	32	3	40	86	1	11	19	2	6	8
Maine	-	-	-	-	-	6	-	5	20	-	-	-	-	-	-
N.H.	-	-	-	-	-	1	-	10	8	-	2	4	-	-	8
Vt.	-	-	-	-	2	-	2	6	4	-	1	-	-	1	-
Mass.	-	-	-	-	-	11	-	9	39	1	7	6	2	5	-
R.I.	-	-	-	-	-	1	-	3	7	-	1	7	-	-	-
Conn.	-	-	-	-	3	13	1	7	8	-	-	2	-	-	-
MID ATLANTIC	-	-	-	4	23	97	16	65	83	3	52	24	4	13	28
Upstate N.Y.	-	-	-	1	12	35	6	27	23	-	25	15	2	8	17
N.Y. City	-	-	-	2	9	12	-	5	14	2	7	3	-	2	10
N.J.	-	-	-	1	-	14	2	13	17	1	7	2	-	1	1
Pa.	-	-	-	-	2	36	8	20	29	-	13	4	2	2	-
E.N. CENTRAL	18	44	-	10	21	97	35	452	650	13	66	65	7	28	53
Ohio	-	-	-	1	-	43	35	282	418	6	30	15	-	1	-
Ind.	12	12	-	-	1	14	-	9	17	-	3	8	-	-	8
Ill.	6	32	-	4	12	14	-	28	32	7	27	19	7	14	13
Mich.	U	-	U	5	8	24	U	106	117	U	3	7	U	4	17
Wis.	-	-	-	-	-	2	-	27	66	-	3	16	-	9	15
W.N. CENTRAL	-	-	-	-	-	40	6	68	45	1	11	9	2	15	14
Minn.	-	-	-	-	-	3	3	10	3	1	1	3	-	3	1
Iowa	-	-	-	-	-	6	1	29	14	-	2	-	-	-	-
Mo.	-	-	-	-	-	23	1	3	3	-	2	4	-	-	9
N. Dak.	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	1	-	-	-	-	-	1	-	-	1
Nebr.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Kans.	-	-	-	-	-	6	1	26	25	-	6	-	2	12	3
S. ATLANTIC	19	65	-	4	17	160	6	40	114	-	33	19	5	19	15
Del.	-	-	-	-	-	-	-	3	3	-	-	3	-	-	-
Md.	-	1	-	-	1	21	4	8	7	-	-	-	-	1	4
D.C.	-	-	-	-	1	1	-	-	-	-	-	1	-	-	-
Va.	-	1	-	1	10	21	1	9	15	-	10	3	-	1	5
W. Va.	-	-	-	-	1	1	1	9	57	-	2	3	-	-	1
N.C.	-	-	-	-	-	29	-	4	4	-	1	1	1	1	-
S.C.	-	-	-	3	-	21	-	2	5	-	2	2	-	-	1
Ga.	-	2	-	-	-	27	-	5	2	-	14	2	-	4	1
Fla.	19	61	-	-	4	39	-	-	21	-	4	4	4	12	3
E.S. CENTRAL	-	-	-	-	4	45	6	16	17	-	3	4	1	4	8
Ky.	-	-	-	-	1	8	-	6	7	-	1	-	1	4	8
Tenn.	-	-	-	-	3	14	4	8	6	-	2	3	-	-	-
Ala.	-	-	-	-	-	17	-	-	2	-	-	-	-	-	-
Miss.	-	-	-	-	-	6	2	2	2	-	-	1	-	-	-
W.S. CENTRAL	-	-	-	11	4	79	4	82	49	1	35	12	6	35	30
Ark.	-	-	-	11	-	5	-	1	3	-	1	-	-	-	-
La.	-	-	-	-	-	11	-	-	-	-	2	-	-	-	-
Okla.	-	-	-	-	-	11	-	-	-	-	7	2	-	-	1
Tex.	-	-	-	-	4	52	4	81	46	1	25	10	6	35	29
MOUNTAIN	-	-	-	1	-	19	5	31	27	9	40	12	2	10	12
Mont.	-	-	-	-	-	-	-	-	2	-	1	-	1	2	1
Idaho	-	-	-	-	-	2	-	1	2	-	2	-	-	2	-
Wyo.	-	-	-	-	-	1	-	-	1	1	3	1	-	1	4
Colo.	-	-	-	1	-	10	-	3	6	4	24	4	-	-	1
N. Mex.	-	-	-	-	-	2	-	-	-	-	4	3	-	-	1
Ariz.	-	-	-	-	-	1	5	21	8	3	5	4	1	4	1
Utah	-	-	-	-	-	3	-	6	6	1	1	-	-	1	3
Nev.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1
PACIFIC	2	45	-	6	84	90	12	95	163	2	9	43	11	89	253
Wash.	-	1	-	-	14	16	5	15	28	-	1	7	-	-	14
Oreg.	1	4	-	-	-	9	-	-	-	-	-	4	-	5	2
Calif.	1	39	-	6	69	63	6	67	131	2	8	32	11	84	235
Alaska	-	-	-	-	-	-	1	8	3	-	-	-	-	-	1
Hawaii	-	1	-	-	1	2	-	5	1	-	-	-	-	-	1
Guam	U	-	U	-	-	-	U	-	1	U	-	-	U	-	1
P.R.	7	26	-	-	31	6	2	32	12	1	3	4	-	1	2
V.I.	-	-	-	5	-	-	-	-	-	-	-	-	-	1	-
Pac. Trust Terr.	U	-	U	-	-	-	U	-	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations. U: Unavailable †International §Out-of-state

TABLE III. (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 19, 1983 and March 20, 1982 (11th week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1983	Cum. 1982	1983	1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1983	Cum. 1983
UNITED STATES	6,923	7,168	3	412	4,401	33	66	12	1,064
NEW ENGLAND	165	136	1	18	113	-	2	1	2
Maine	3	-	-	-	9	-	-	-	2
N.H.	3	-	-	2	12	-	-	-	-
Vt.	1	-	1	-	1	-	-	-	-
Mass.	112	99	-	9	48	-	2	1	-
R.I.	3	8	-	4	13	-	-	-	-
Conn.	43	29	-	3	30	-	-	-	-
MID ATLANTIC	827	964	-	62	883	-	16	-	22
Upstate N.Y.	43	95	-	11	169	-	3	-	17
N.Y. City	505	606	-	29	343	-	7	-	-
N.J.	164	107	-	6	188	-	6	-	-
Pa.	115	156	-	16	183	-	-	-	5
E.N. CENTRAL	309	437	-	43	666	-	9	1	63
Ohio	114	78	-	9	87	-	3	-	6
Ind.	40	46	-	3	88	-	1	-	1
Ill.	81	224	-	29	325	-	2	-	32
Mich.	54	63	U	U	133	-	3	1	-
Wis.	20	26	-	2	33	-	-	-	24
W.N. CENTRAL	89	132	-	14	151	10	1	3	149
Minn.	39	23	-	4	22	-	-	-	33
Iowa	4	3	-	2	20	-	-	-	46
Mo.	31	80	-	6	82	8	1	2	19
N. Dak.	-	3	-	-	-	-	-	1	13
S. Dak.	-	-	-	1	11	-	-	-	12
Nebr.	5	3	-	-	4	-	-	-	8
Kans.	10	20	-	1	12	2	-	-	18
S. ATLANTIC	1,835	1,954	-	98	835	10	10	2	410
Del.	10	3	-	6	7	-	-	-	-
Md.	97	116	-	-	96	4	4	1	181
D.C.	72	129	-	-	25	-	-	-	-
Va.	136	138	-	24	67	1	3	-	157
W. Va.	5	6	-	4	41	-	2	-	20
N.C.	177	165	-	17	87	4	-	-	2
S.C.	142	102	-	9	80	-	-	-	6
Ga.	342	424	-	10	150	1	-	-	37
Fla.	854	871	-	28	282	-	1	1	7
E.S. CENTRAL	481	547	-	46	441	4	1	3	95
Ky.	29	29	-	9	121	-	-	-	21
Tenn.	129	140	-	14	124	3	1	1	64
Ala.	196	185	-	23	127	-	-	2	10
Miss.	127	193	-	-	69	1	-	-	-
W.S. CENTRAL	1,771	1,808	-	33	400	7	1	1	210
Ark.	29	42	-	5	31	5	-	-	33
La.	359	394	-	4	56	2	-	-	6
Okla.	51	32	-	3	53	-	-	-	26
Tex.	1,332	1,340	-	21	260	-	1	1	145
MOUNTAIN	143	206	1	7	119	1	4	-	39
Mont.	4	1	-	-	11	-	-	-	29
Idaho	1	14	-	-	8	-	-	-	-
Wyo.	3	9	-	-	2	-	-	-	-
Colo.	41	69	1	-	8	-	1	-	-
N. Mex.	51	33	-	1	19	1	-	-	2
Ariz.	24	41	-	5	53	-	3	-	8
Utah	8	5	-	1	11	-	-	-	-
Nev.	11	34	-	-	7	-	-	-	-
PACIFIC	1,303	984	1	91	793	1	22	1	74
Wash.	39	31	-	4	45	-	2	-	-
Oreg.	19	33	-	5	35	-	-	-	-
Calif.	1,218	890	1	76	655	1	19	1	68
Alaska	6	6	-	-	4	-	-	-	6
Hawaii	21	24	-	6	54	-	1	-	-
Guam	-	-	U	U	-	-	-	-	-
P.R.	112	138	-	-	96	-	-	-	13
V.I.	6	-	-	-	-	-	-	-	-
Pac. Trust Terr.	-	-	U	U	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending March 19, 1983 (11th week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	730	524	140	34	9	22	72
Boston, Mass.	171	98	47	13	3	10	24
Bridgeport, Conn.	50	40	7	2	-	1	9
Cambridge, Mass.	34	29	4	1	-	-	4
Fall River, Mass.	23	19	4	-	-	-	-
Hartford, Conn.	69	49	14	3	-	3	1
Lowell, Mass.	33	22	8	3	-	-	-
Lynn, Mass.	27	20	3	1	2	1	1
New Bedford, Mass.	20	16	3	-	1	-	1
New Haven, Conn.	81	60	11	6	1	3	3
Providence, R.I.	57	47	7	1	-	1	9
Somerville, Mass.	11	9	2	-	-	-	-
Springfield, Mass.	49	33	11	2	2	1	6
Waterbury, Conn.	36	23	13	-	-	-	6
Worcester, Mass.	69	59	6	2	-	2	8
MID. ATLANTIC	2,903	1,965	626	180	73	59	130
Albany, N.Y.	59	42	7	5	2	3	1
Allentown, Pa.	15	14	1	-	-	-	-
Buffalo, N.Y.	136	89	32	8	6	1	9
Camden, N.J.	31	22	6	2	1	-	-
Elizabeth, N.J.	31	26	3	2	-	-	4
Erie, Pa†	47	36	9	-	2	-	2
Jersey City, N.J.	49	29	15	1	2	2	2
N.Y. City, N.Y.	1,506	1,023	302	111	42	28	62
Newark, N.J.	78	44	20	6	2	6	6
Paterson, N.J.	34	24	8	1	1	-	1
Philadelphia, Pa†	419	257	117	26	6	13	24
Pittsburgh, Pa†	74	44	23	4	1	2	2
Reading, Pa.	31	25	5	-	1	-	-
Rochester, N.Y.	139	103	28	4	1	3	9
Schenectady, N.Y.	38	30	6	1	1	-	2
Scranton, Pa†	26	22	3	1	-	-	2
Syracuse, N.Y.	88	64	18	3	2	1	1
Trenton, N.J.	41	22	16	2	1	-	-
Utica, N.Y.	23	17	3	3	-	-	2
Yonkers, N.Y.	38	32	4	-	2	-	1
E.N. CENTRAL	2,188	1,434	522	111	70	51	75
Akron, Ohio	79	50	16	7	4	2	1
Canton, Ohio	49	36	12	-	1	-	2
Chicago, Ill.	426	256	114	35	15	6	5
Cincinnati, Ohio	117	75	32	5	1	4	14
Cleveland, Ohio	180	117	51	6	4	2	2
Columbus, Ohio	132	87	30	6	3	6	5
Dayton, Ohio	107	68	26	7	3	3	3
Detroit, Mich.	255	160	64	16	9	6	4
Evansville, Ind.	53	39	11	-	2	1	1
Fort Wayne, Ind.	65	41	18	1	2	3	-
Gary, Ind.	21	12	9	-	-	-	-
Grand Rapids, Mich.	48	33	10	1	2	2	5
Indianapolis, Ind.	184	107	49	12	10	6	1
Madison, Wis.	38	26	7	1	3	1	8
Milwaukee, Wis.	142	105	25	5	3	4	7
Peoria, Ill.	47	36	8	1	-	2	2
Rockford, Ill.	48	37	8	1	2	-	5
South Bend, Ind.	48	39	7	2	-	-	2
Toledo, Ohio	101	76	16	4	4	1	6
Youngstown, Ohio	48	34	9	1	2	2	2
W.N. CENTRAL	718	502	141	27	21	26	44
Des Moines, Iowa	65	39	18	2	4	2	10
Duluth, Minn.	14	8	4	-	-	2	1
Kansas City, Kans.	31	20	6	1	2	1	1
Kansas City, Mo.	105	79	20	3	1	2	5
Lincoln, Nebr.	42	35	4	1	-	2	3
Minneapolis, Minn.	101	66	21	3	3	8	4
Omaha, Nebr.	84	56	22	4	1	1	8
St. Louis, Mo.	146	109	22	9	3	3	6
St. Paul, Minn.	68	49	13	3	1	2	2
Wichita, Kans.	62	41	11	1	6	3	4
S. ATLANTIC	1,363	837	333	91	40	62	60
Atlanta, Ga.	177	101	39	16	6	15	8
Baltimore, Md.	265	158	59	23	3	22	3
Charlotte, N.C.	82	61	11	6	4	-	6
Jacksonville, Fla.	111	71	34	5	1	-	8
Miami, Fla.	84	50	28	5	1	-	1
Norfolk, Va.	64	36	17	4	4	3	6
Richmond, Va.	96	57	22	7	4	6	11
Savannah, Ga.	57	39	11	4	2	1	1
St. Petersburg, Fla.	88	65	19	3	-	1	3
Tampa, Fla.	82	50	21	2	6	3	2
Washington, D.C.	217	128	59	12	8	10	7
Wilmington, Del.	40	21	13	4	1	1	4
E.S. CENTRAL	740	477	160	37	37	29	44
Birmingham, Ala.	112	77	21	5	4	5	6
Chattanooga, Tenn.	83	52	16	6	6	3	6
Knoxville, Tenn.	59	36	13	3	6	1	3
Louisville, Ky.	138	85	35	3	7	8	13
Memphis, Tenn.	145	100	30	8	5	2	9
Mobile, Ala.	48	29	7	6	3	3	2
Montgomery, Ala.	42	25	9	3	3	2	3
Nashville, Tenn.	113	73	29	3	3	5	2
W.S. CENTRAL	1,564	975	366	108	54	61	71
Austin, Tex.	59	45	11	2	-	1	-
Baton Rouge, La.	40	24	13	3	-	-	4
Corpus Christi, Tex.	65	41	15	2	3	4	2
Dallas, Tex.	230	146	50	17	8	9	4
El Paso, Tex.	72	43	18	5	3	3	4
Fort Worth, Tex.	100	68	18	6	2	6	14
Houston, Tex.	510	286	139	46	21	18	20
Little Rock, Ark.	47	35	7	4	-	1	4
New Orleans, La.	109	67	23	6	6	7	2
San Antonio, Tex.	166	100	41	11	6	8	8
Shreveport, La.	84	59	19	3	1	2	3
Tulsa, Okla.	82	61	12	3	4	2	6
MOUNTAIN	658	436	137	45	19	21	40
Albuquerque, N.Mex.	63	30	25	3	2	3	6
Colo. Springs, Colo.	32	24	2	3	1	2	9
Denver, Colo.	111	76	21	10	1	3	6
Las Vegas, Nev.	81	45	23	6	5	2	4
Ogden, Utah	29	22	4	1	-	2	2
Phoenix, Ariz.	182	129	34	9	6	4	4
Pueblo, Colo.	21	18	3	-	-	-	1
Salt Lake City, Utah	53	34	9	6	1	3	1
Tucson, Ariz.	86	58	16	7	3	2	7
PACIFIC	2,023	1,329	447	129	46	70	125
Berkeley, Calif.	20	9	7	2	-	2	2
Fresno, Calif.	72	40	19	7	3	3	4
Glendale, Calif.	36	27	6	1	1	1	-
Honolulu, Hawaii	55	35	14	2	2	2	8
Long Beach, Calif.	110	64	34	2	1	9	4
Los Angeles, Calif.	715	491	141	43	19	21	34
Oakland, Calif.	75	43	21	6	2	3	3
Pasadena, Calif.	25	22	2	-	-	1	2
Portland, Oreg.	105	68	21	11	2	2	6
Sacramento, Calif.	76	41	17	10	3	5	6
San Diego, Calif.	133	86	35	6	2	4	13
San Francisco, Calif.	149	99	32	10	2	6	4
San Jose, Calif.	200	138	41	13	4	3	20
Seattle, Wash.	152	100	38	8	3	3	3
Spokane, Wash.	60	35	14	6	2	3	9
Tacoma, Wash.	40	31	5	2	-	2	7
TOTAL	12,887††	8,479	2,872	762	369	401	661

* 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.

Phototoxic Reaction — Continued

drying and peeling, was reported in areas exposed to the sun (neck, face, nose, forearms, and lips). Symptoms were often worse after exposure to the sun and on the day after exposure to pitch. Four exposed workers reported wart-like skin lesions or papules on the nose, jaw, palm, or hand.

Recommendations to minimize exposure of workers to pitch dust included: 1) control of pitch dust by fine water sprays and biodegradable agglomerating agents (used successfully to control coal dust); 2) personal measures to reduce contact with pitch dust through improved personal protective equipment and personal hygiene; 3) protection against ultraviolet light with sun screens containing benzophenone; and 4) medical monitoring of affected workers including annual physical examinations, with particular attention to the skin.

Reported by the Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, NIOSH, CDC.

Editorial Note: Populations occupationally exposed to coal tar products are at increased risk for cancers of the lung, mouth, and scrotum, and for both benign and malignant neoplasms of the skin (*2*). Coal tar pitch, a residue from the fractional distillation of coal tar, is estimated to contain thousands of hydrocarbon compounds, of which only about 300 have been chemically identified. The benzene-soluble fraction of coal tar pitch contains PNA's, several of which (e.g., benzo[a]pyrene and chrysene) are carcinogenic in animals.

The acute, toxic effects of exposure to coal tar and petroleum pitch include direct irritation of the skin and mucous membranes, as well as photosensitivity reactions involving an interaction between PNA's and ultraviolet radiation (*3,4*).

Most investigations of occupational exposure to coal tar and petroleum pitch have evaluated heated processes, which produce pitch volatiles (*2,5*). The investigation reported here involved an unheated process and documented airborne concentrations of total particulates, benzene-soluble material, and benzo(a)pyrene in quantities as great as some observed in investigations of heated processes.¶ Two other recent NIOSH studies of unheated pitch processes also found complaints among workers suggestive of phototoxicity and documented detectable levels of cyclohexane-soluble material and specific PNA's (*6,7*).

The small, wart-like lesions noted in some of the exposed workers in this study were similar to tar keratosis and should be considered precancerous. The vast majority of such lesions remain unchanged or regress spontaneously, but a small fraction may progress to squamous cell carcinoma (*8,9*). Management of such lesions includes cessation of exposure and removal of the lesion, either by excision or physical destruction (with liquid nitrogen or dessication and currettage).

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¶Because of benzene toxicity, cyclohexane is often used as the solvent in such analyses.

Phototoxic Reaction — Continued

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International Notes

Expanded Program on Immunization: Using Survey Data to Supplement Disease Surveillance

The success of an immunization program in reducing morbidity and mortality from vaccine-preventable diseases can be measured only with a reliable disease surveillance system. Currently, the impact of WHO's Expanded Program on Immunization at regional and global levels is monitored primarily through national incidence figures, which are often inaccurate because they are based on incomplete data gathered in the routine surveillance systems. In many countries, more accurate incidence figures are needed to guide immunization priorities and targets.

Completeness of reporting depends primarily on two elements. First, the public must have access to health services and use them. Second, the health services must report cases accurately and regularly to appropriate public health authorities. The following examples show that loss of information within the health system is a problem in both developed and developing countries.

In one study in the United States, discharge records of 11 Washington, D.C. hospitals revealed that only 35% of selected notifiable communicable diseases were officially reported (*1*). In the Netherlands, the number of measles cases reported by sentinel stations was compared with the number reported by general practitioners. Only an estimated 3% of cases had been reported (*2*). In an Eastern Mediterranean country, 850 cases of tetanus were reported to the Ministry of Health. However, based on hospital chart reviews, the total number of patients with tetanus admitted to hospitals in the same period was 1,880. Thus, 45% were properly reported. In Thailand, based on polio prevalence surveys, routine reporting of poliomyelitis was estimated at 24%. However, wide variations in reporting were observed in different areas; 85% of the expected number was reported in the northern and northeastern areas. In a Western Pacific country, surveys showed that 85% of polio cases had been seen by medical practitioners during the acute phase of illness. However, comparison of the estimated annual incidence of polio, calculated from lameness surveys, with official polio incidence figures showed a reporting efficiency of only 12% (*3*).

To help overcome under-reporting, surveys have been conducted in many countries. In Tables 1 and 2, respectively, the results of 13 recent neonatal tetanus (TNN) surveys and 13 poliomyelitis surveys are compared with officially reported incidence figures to estimate reporting completeness.

Based on mortality rates in TNN surveys, an estimated 500,000 deaths from TNN occurred annually in the two regions (Table 1). Assuming that the case fatality rate for TNN is 85% and that TNN constitutes about 40% - 60% of all tetanus cases, approximately 1.2 million cases of tetanus occurred annually. The total number of all reported tetanus cases was 56,000. Thus, only approximately 2%-5% of all tetanus cases were detected and reported through the routine surveillance system.

Under-reporting of poliomyelitis in 13 countries from different regions was similarly estimated from lameness surveys (Table 2). Reporting completeness ranged from 1% to 26%.

The above examples indicate the magnitude of under-reporting using routine surveillance systems. In many countries, a great need exists to strengthen routine communicable disease

Immunization — Continued

surveillance. The task will be difficult, however, until there is easy access to health services and conscientious reporting. Until then, special surveys will remain periodically necessary to assess the completeness of existing reporting systems and to determine trends in actual disease incidence.

Reported by WHO Weekly Epidemiologic Record *1982;57:361-2.*

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TABLE 1. Estimated completeness of tetanus reporting, based on neonatal tetanus (TNN) surveys and reported incidence — Eastern Mediterranean and Southeast Asia, 1980-1981

Region	Results of TNN surveys: Deaths from TNN	Estimated TNN cases*	Estimated tetanus cases†	Reported tetanus cases	Estimated reporting completeness (%)
Eastern Mediterranean¶	132,285	155,626	311,252	7,128	2
Southeast Asia§	393,067	462,429	924,858	48,974	5

*Assuming an 85% case fatality rate.

†Assuming TNN accounts for approximately 50% of all tetanus cases.

¶Seven countries: Pakistan, Sudan, Somalia, Syria, Yemen Arab Republic, Democratic Yemen, Egypt

§Six countries: Bangladesh, Bhutan, India, Indonesia, Nepal, Thailand.

TABLE 2. Estimated completeness of poliomyelitis reporting, based on lameness surveys and reported incidence, 1978-1981

Country	Incidence of poliomyelitis per 100,000 population: Incidence estimated from lameness surveys*	Reported incidence	Reporting completeness (%)
Bangladesh	4	0.1	3
Burma	18	1.1	6
Cameroon, United Republic of	24	1.2	5
Egypt	7	1.8	26
Ghana	31	2.3	7
India	18	2.1	12
Indonesia	13	0.1	1
Ivory Coast	34	1.2	4
Malawi	28	1.2	4
Nepal	5	0.3	6
Philippines	19.4	2.1	11
Thailand	7	1.7	24
Yemen	14	3.3	24

*For methodology, see *Bulletin of the World Health Organization* 1980:58;609-20.

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