



Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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EPIDEMIOLOGIC NOTES AND REPORTS
DIPHTHERIA - Navajo Indian Reservation

Between Nov. 30, 1970, and Feb. 11, 1971, 12 laboratory-confirmed cases of diphtheria, with one death, were reported in the Navajo Indian Reservation, Chinle, north-eastern Arizona. There were toxigenic *Corynebacterium diphtheriae*, intermedius type, isolated from all the patients. Four patients had moderate systemic symptoms, and seven had only localized symptoms. Nine patients were hospitalized and were treated with antitoxin and antibiotics; the other three also received antibiotics. Eleven made uneventful recoveries.

The fatal case, which was the first reported, was in a 15-year-old boy who had been hospitalized on Dec. 1, 1970,

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with severe pharyngitis, gray necrotic peritonsillar exudate, massive cervical adenopathy, and inspiratory distress. He was started on intramuscular penicillin. He experienced a respiratory arrest the next day, but was successfully resuscitated; a tracheostomy was then performed. Diphtheria

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TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	7th WEEK ENDED		MEDIAN 1966 - 1970	CUMULATIVE, FIRST 7 WEEKS		
	February 20, 1971	February 21, 1970		1971	1970	MEDIAN 1966 - 1970
Aseptic meningitis	46	22	27	402	205	196
Brucellosis	2	3	1	8	14	14
Diphtheria	4	11	3	26	57	19
Encephalitis, primary:						
Arthropod-borne & unspecified	24	17	21	144	137	148
Encephalitis, post-infectious	2	6	8	44	48	58
Hepatitis, serum	104	136	60	1,144	872	453
Hepatitis, infectious	1,122	1,095	866	8,653	7,561	5,559
Malaria	66	75	29	498	445	268
Measles (rubeola)	1,599	978	978	10,024	6,469	6,469
Meningococcal infections, total	58	67	82	386	461	549
Civilian	55	64	78	360	441	481
Military	3	3	4	26	20	28
Mumps	3,417	2,849	---	21,808	17,462	---
Poliomyelitis, total	1	1	---	2	1	1
Paralytic	1	1	---	1	1	1
Rubella (German measles)	1,598	1,577	1,288	5,673	7,747	5,218
Tetanus	---	---	4	10	5	13
Tularemia	1	1	2	16	10	12
Typhoid fever	4	3	4	37	36	32
Typhus, tick-borne (Rky. Mt. spotted fever)	---	---	---	3	---	3
Rabies in animals	70	79	69	482	398	500

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	---	Psittacosis:	5
Botulism:	---	Rabies in Man:	---
Leprosy: *Calif.-3, Hawaii-1, Tex.-1	23	Rubella congenital syndrome:	5
Leptospirosis: Tex.-1	4	Trichinosis: *NY Ups.-1	14
Plague:	---	Typhus, murine:	---

*Delayed reports: Leprosy: (1971) Utah 1
 Trichinosis: Alaska delete 1 (1971), add 1 (1970)

DIPHTHERIA - (Continued from front page)

was diagnosed, and the patient was given 40,000 units of diphtheria antitoxin. On December 5, first degree heart block developed. This progressed to complete heart block on December 7, and a pacemaker was inserted. The patient subsequently suffered congestive heart failure, and his condition deteriorated despite digitalization, steroids, and other supportive therapy. He died on December 10 after a second respiratory arrest.

The first two cases, reported on December 1 and December 2 (Figure 1), were in brothers from a household which was subsequently shown to have nine out of 13 contacts culture-positive for *C. diphtheriae*. The next three cases were reported in the week ending December 12. Two were in school girls who attended different schools; both had several culture-positive family contacts. None of the remaining seven cases could be related epidemiologically to each other. In all instances, however, where there had been family contact, at least one asymptomatic household carrier was found. No single source for the outbreak has been found. Of the 12 cases, three occurred in males and nine in females. The age distribution of cases is shown in Table 1.

Figure 1

DIPHTHERIA CASES, BY WEEK OF ONSET,
NAVAJO INDIAN RESERVATION, CHINLE, ARIZONA,
NOV. 28, 1970-FEB. 20, 1971

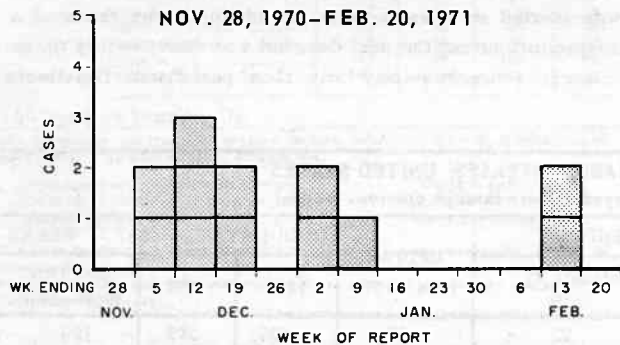


Table 1

Age Distribution of Diphtheria Cases
Navajo Indian Reservation, Chinle, Arizona

Age Group	Cases
0-4	2
5-9	7
10-14	0
15-19	2
20-29	0
30-39	1
40-49	0
50	0
Total	12

Two were in preschool children and nine were in school-aged children from four different schools. The remaining case was in an adult who worked at the elementary school where two cases in children occurred.

Cultures of throat specimens from 70 household contacts of eight cases revealed 30 carriers. Throat swabs from approximately 150 students were cultured as part of a survey of the classrooms in which cases occurred; only one additional carrier was found. All household contacts were, in addition, treated with intramuscular penicillin and oral erythromycin for 1 week. They were considered free of infection only after throat specimens taken 1 week after cessation of erythromycin were culture-negative for *C. diphtheriae*.

Of the 10 patients whose immunization status was known, four had been adequately immunized (Table 2), including the 15-year-old boy who died. He had received one TD immunization in 1964 and two in 1965. A total of 65 percent (33) of the contacts studied were fully immunized, and 48 percent (16) of these were culture-positive.

Table 2
Immunization Status of
Diphtheria Patients and Household Contacts*
Navajo Indian Reservation, Chinle, Arizona

History of Immunization	Number of Cases	Number of Contacts Studied	Culture-Positive Contacts	Percent of Culture-Positive Contacts
Full**	4	33	16	50
Inadequate***	5	12	3	25
None	1	5	5	100
Total	10	50	24	48

*No information available about immunization for 20 contacts

**Three or more injections within 10 years of onset of illness

***Incomplete primary series (less than three injections)

Immunization campaigns have been conducted through schools, public health clinics, visiting health nurses, and other facilities; 5,000 persons have been immunized so far. Follow-up and treatment of contacts are still in progress.

(Reported by Carol Geil, M.D., Deputy Chief of Pediatrics, USPHS Hospital, Fort Defiance, Arizona; John V. Donlon, M.D., Service Unit Director, Chinle Health Service; Philip M. Hotchkiss, D.V.M., State Epidemiologist, Arizona State Department of Health; the Laboratory Division, and the Bacterial Diseases Branch, Epidemiology Program, CDC.)

FOLLOW-UP ON PROBABLE HUMAN RABIES - Lima, Ohio

The 6-year-old boy who was bitten by a rabid bat in Lima, Ohio, (MMWR, Vol. 19, No. 50) has continued to improve. He was discharged from the hospital on Jan. 27, 1971, with minimal neurological residual. His only detectable

abnormality at the present time is difficulty in writing. Laboratory data continue to support the diagnosis of rabies (Table 3). Antibody levels against California encephalitis have remained at low levels. Laboratory tests for other

possible diagnoses, including Western equine encephalomyelitis, Eastern equine encephalomyelitis, St. Louis en-

Table 3

Serum-Neutralization Titers* in Probable Human Rabies Case
Nov. 13, 1970-Jan. 11, 1971 - Lima, Ohio

Date	Serum Neutralization Titers
November 13	6,300
November 20	15,000
November 27	37,000
December 4	29,000
December 11	25,000
December 18	30,000
December 25	40,000
January 4	32,000
January 11	46,000

*All tests were performed using 2-fold dilutions, 10 mice per dilution.

cephalitis, and allergic encephalitis, have been negative.

(Reported by the Miscellaneous Pathogens Unit, and the Laboratory Investigations Unit, Viral Diseases Branch, Epidemiology Program, CDC.)

Editorial Note:

Extensive laboratory tests to establish an alternative diagnosis for this child's illness have been unsuccessful. Contrary to the editorial note in MMWR, Vol. 19, No. 50, which may have implied that this case would ultimately be proven by culture, it was not possible to isolate rabies virus from the patient's brain biopsy, saliva, cerebrospinal fluid, or serum. Although this is not a case of human rabies proven by culture, the laboratory, clinical, and epidemiologic features of the case indicate rabies as the most probable diagnosis.

CURRENT TRENDS

INFLUENZA - United States

The fourth telephone survey of State health departments for the 1970-71 season was conducted by the Respiratory Disease Surveillance Unit on Feb. 23, 1971. Increased levels of febrile upper respiratory illness were reported mainly from the New England and Middle Atlantic states, with peaks in late January and early February in the majority of States affected. Influenza B has been isolated in most affected States.

New England

Massachusetts reported a widespread outbreak of influenza which started in the eastern part of the State and moved steadily west, reaching a peak in the last half of January in the eastern part of the State and in the first week of February in the western part. Influenza B was isolated from a number of cases. School-aged children were predominately affected; no elevation in industrial absenteeism was noted.

Connecticut experienced a widespread outbreak of influenza involving primarily school children. Absenteeism from some schools reached 20-30 percent. There was no industrial absenteeism reported. Eighteen isolations of Influenza B were reported, in addition to several documented seroconversions. There have been no isolations of Influenza A/2. Peak incidence occurred in the week ending February 13.

In New Hampshire, there was also widespread influenza activity (8 isolations) concentrated in the southern part of the State, with peak activity in the week ending February 6.

Vermont experienced an increase in influenza-like illness in at least 12 of their 14 counties. School absenteeism rose in many schools during the first week in February. Viral isolations have not been reported yet.

Rhode Island reported widespread influenza involving school children. Seroconversion to Influenza B was documented in 10 cases. The peak of school absenteeism occurred in the week ending February 5.

Middle Atlantic

New Jersey reported widespread outbreaks of influenza

in which Influenza B was isolated. No A/2 Influenza virus has been isolated. School-aged children were mainly affected, resulting in 15 to 20 percent school absenteeism. The peak activity was in the first week of February.

New York reported Influenza B activity in the eastern counties documented by seroconversions and isolations. A number of schools were closed. Scattered cases of influenza-like illness have occurred in New York City, and seroconversions to both Influenza A and B were documented.

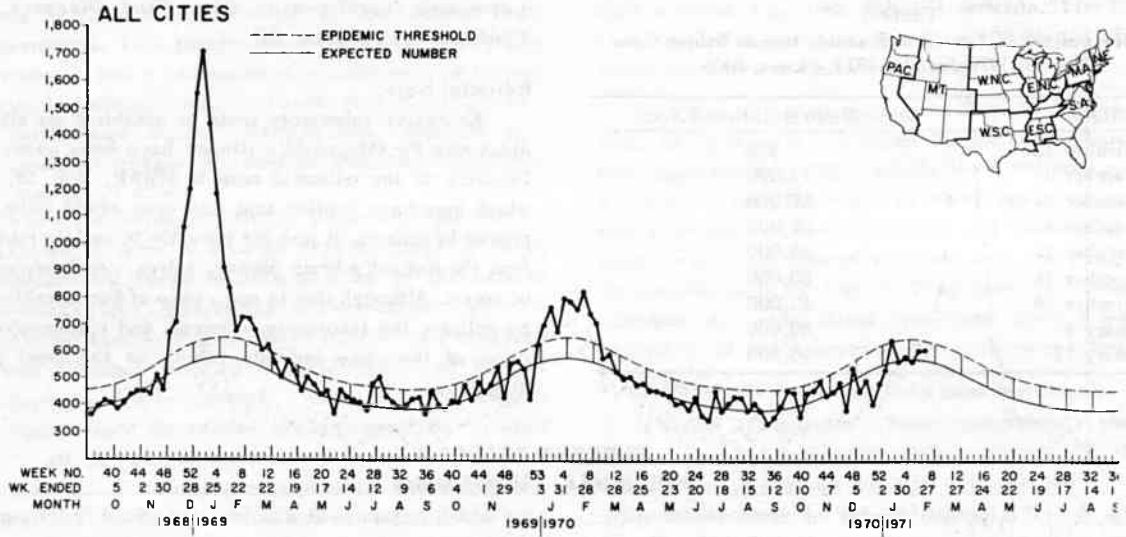
Elsewhere in the United States

In Virginia, widespread influenza was reported in connection with the closing of some schools and 15 to 20 percent absenteeism in other schools. Influenza B/mass/66 was isolated in three cases. Isolated cases or outbreaks of Influenza B were also reported from Wisconsin (4 isolations), Washington, D.C. (6 isolations), Michigan (2 isolations), Ohio (2 isolations), North Carolina (1 seroconversion), Colorado (3 isolations). Isolated cases of Influenza A/2 Hong Kong were reported from California (5 isolations) and Hawaii (2 isolations). Hawaii also reported nine isolations of Influenza B and noted a marked increase in influenza-like illness during the latter part of February. Tennessee, Pennsylvania, Arizona, Montana, Kentucky, New Mexico, and Indiana reported seasonal increases in influenza-like illness without marked school or industrial absenteeism and without viral isolations or documented seroconversions to influenza.

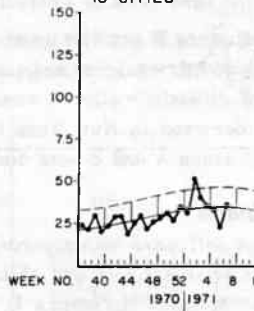
Pneumonia-influenza deaths from 122 cities in the United States as a whole have not risen above the epidemic threshold so far this season (Figure 2). A sustained elevation of pneumonia-influenza deaths above the epidemic threshold has been observed only in the New England region. The curves for deaths from all causes were slightly above the epidemic threshold in the first 2 weeks of January (Figure 3).

(Reported by the Respiratory Diseases Unit, Viral Diseases Branch, Epidemiology Program, CDC.)

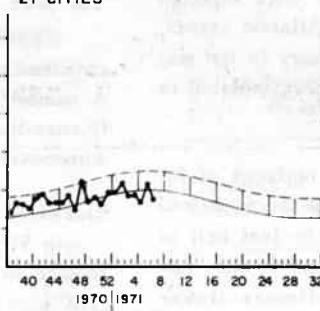
Figure 2
PNEUMONIA-INFLUENZA DEATHS IN 122 UNITED STATES CITIES



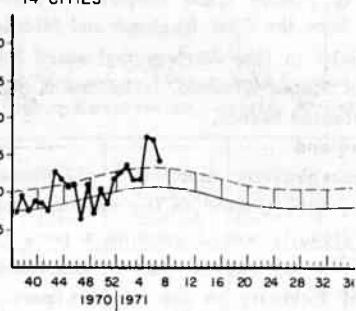
W. N. CENTRAL
10 CITIES



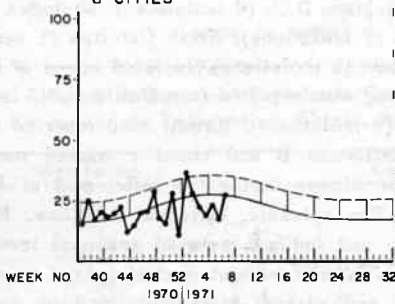
E. N. CENTRAL
21 CITIES



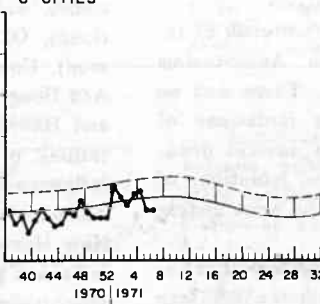
NEW ENGLAND
14 CITIES



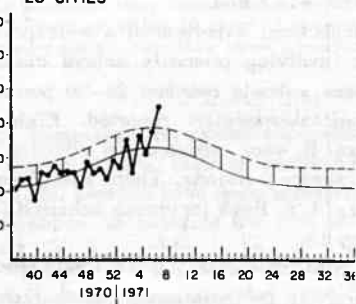
MOUNTAIN
8 CITIES



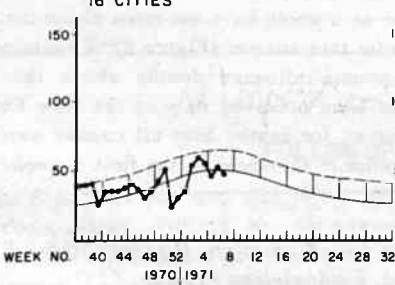
E. S. CENTRAL
8 CITIES



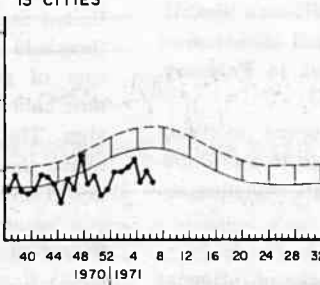
MIDDLE ATLANTIC
20 CITIES



PACIFIC
16 CITIES



W. S. CENTRAL
13 CITIES



SOUTH ATLANTIC
12 CITIES

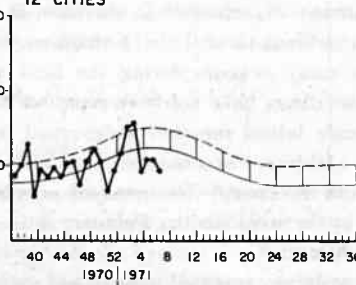
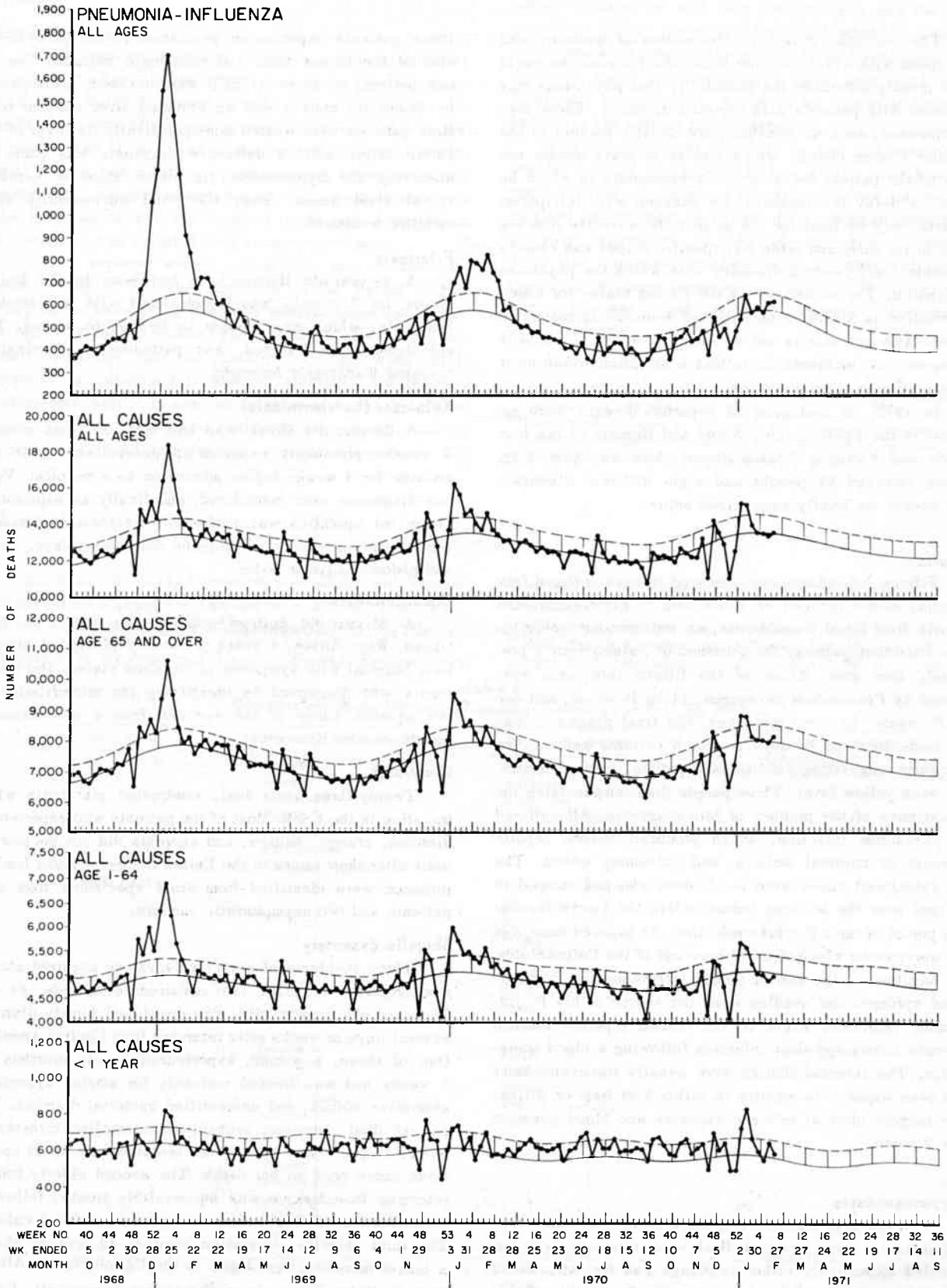


Figure 3
MORTALITY IN 122 UNITED STATES CITIES



INTERNATIONAL NOTES
IMPORTED DISEASE - United States - 1970*

The enormous growth in the number of travelers and the speed with which they are transported across the world have greatly increased the possibility that physicians may be faced with patients with imported diseases. These may be diseases, such as smallpox, not usually present in the traveler's home country which may be of grave danger not only to the patient but also to the community in which he lives. A delay in diagnosis, for example with falciparum malaria, may be fatal for the patient, because the disease seen in its early and often non-specific stages can closely resemble many common diseases with which the physician is familiar. The experience in the United States for which information is available on imported diseases is presented below. Although this is not an exhaustive list of all such diseases, the incidents do reflect a situation which must be occurring in many countries.

In 1970, 28 instances of imported disease were reported in the Epidemiologic Notes and Reports of the *Morbidity and Mortality Weekly Report*, Vol. 19, Nos. 1-52. These involved 88 people and eight different diseases. The events are briefly summarized below.

Malaria

Fifteen individuals were reported to have suffered from malaria, either induced or introduced.** Eight contracted malaria from blood transfusions, an indirect but nevertheless important pathway for introducing malaria into a previously free area. Three of the fifteen infections were caused by *Plasmodium falciparum*, 11 by *P. vivax*, and one by *P. ovale*. In some instances, the final diagnosis was not made for 4 to 10 days in which patients had various symptoms suggesting infectious hepatitis, gastroenteritis, and even yellow fever. Three people died, emphasizing the seriousness of the problem of late diagnosis. All suffered *P. falciparum* infection, which produced severe hepatic necrosis or cerebral malaria, and pulmonary edema. The two introduced cases were in children who had camped in an area near the Mexican border within the known incubation period of their *P. vivax* infection. An induced case was in a serviceman who had never been out of the United States but admitted to the use of heroin intravenously. Contaminated syringes and needles were the source of his *P. falciparum* infection. Eight of the fifteen reported malaria patients contracted their infection following a blood transfusion. The infected donors were usually traceable. Most had been exposed to malaria in either Viet Nam or Africa. The longest interval between exposure and blood donation was 2 years.

Trypanosomiasis

Two cases of imported trypanosomiasis (African sleeping sickness) were recorded. Both were in tourists who had traveled extensively either in Kenya and Rwanda. For 3 and 9 days, respectively, after returning from their safaris,

these patients experienced persistent fever, pain at the site of the insect bite, and neurologic abnormalities. In one patient, an abnormal ECG was detected, accompanied by hemolytic anemia and an elevated liver enzyme test. Both patients were treated non-specifically for fever of unknown origin until a definitive diagnosis was made by observing the trypanosomes in either blood or cerebral spinal fluid smear. They recovered successfully after specific treatment.

Filariasis

A 44-year-old Haitian who had been in the United States for 7 months was hospitalized with a testicular hydrocele, which was thought to be due to trauma. The epididymus was excised, and pathological examination revealed *Wuchereria bancrofti*.

Kala-azar (Leishmaniasis)

A 38-year-old Greek who had left his home country 4 months previously experienced generalized fever and malaise for 4 weeks before admission to a hospital. Various diagnoses were considered, and finally an exploratory abdominal operation was performed. *Leishmania donovani* were found in smears of biopsies from the spleen, liver, and abdominal lymph nodes.

Onchocerciasis

A 21-year-old college student who had come from Ghana, West Africa, 4 years previously presented himself to a hospital with symptoms of impaired vision. Onchocerciasis was diagnosed by identifying the microfilariae in the aqueous humor of the eye and from a subcutaneous nodule on the iliac crest.

Giardiasis

Twenty-three individuals contracted giardiasis while traveling in the USSR. Most of the patients who experienced diarrhea, cramps, nausea, and anorexia did not become ill until after their return to the United States. *Giardia lamblia* protozoa were identified from stool specimens from nine patients and two asymptomatic carriers.

Shigella dysentery

Three incidents of shigella dysentery acquired abroad were reported in 1970. Two occurred in tourists, 64 and 78 years old respectively, who developed bloody diarrhea several days or weeks after returning from Central America. One of these, a woman, experienced bloody diarrhea for 3 weeks and was treated variously for amebic dysentery, ulcerative colitis, and unidentified bacterial diarrhea. The patient died, however, probably from cardiac arrhythmia. *Shigella dysenteriae* type 1 was isolated from blood specimens taken prior to her death. The second elderly tourist returning from Mexico was successfully treated following identification of *S. dysenteriae* type 1 in a fecal culture. The third shigella importation involved 42 persons aboard a tanker traveling from Japan to the United States. After a stop in Italy, the cook on the tanker became ill. Later,

S. sonnei was cultured from his stool. Subsequently, 42 other members of the crew suffered a similar diarrheal illness.

Lassa virus

A 50-year-old laboratory technician had an unknown exposure to Lassa virus while working in the laboratory. The virus had been brought to the United States from Nigeria for study after causing two unusual deaths in that country. The illness was characterized by fever, pharyngeal ulcers, pneumonitis, petechial rash, albuminuria, and leukopenia. Autopsy revealed acute fatty metamorphosis of the liver, pneumonia, and atypical lymph node hyperplasia. Lassa virus was isolated from autopsy specimens.

These reported events undoubtedly are not the complete extent of imported diseases in the United States. They serve, however, to illustrate several important characteristics of such diseases. The infectious agents were primarily parasites, and the countries of origin were mainly tropical or sub-tropical. Seamen, tourists, and returned servicemen were, not unexpectedly, at greatest risk. However, students, immigrants, laboratory personnel, and recipients of blood transfusions were also involved. *The*

critical problem is the delay in diagnosis. If the doctor can be conditioned to think in terms of the possibility of imported disease, he will then automatically ask the basic question, "where have you been and when?". Equipped with some knowledge of the geographical distribution of the diseases under consideration, he will then *think* of the diagnostic possibilities, which is an essential first step in making the correct final diagnosis.

The importation of infection in man and animals has become part of the global pattern of the distribution of communicable diseases. This dissemination of microbiological agents must be balanced by prompt distribution of accurate information to both physicians and travelers. Thus, the continual development of national and international surveillance programs is essential if correct diagnosis, treatment, and control of imported diseases are to be achieved.

*Source: World Health Organization: *Weekly Epidemiological Record*, Vol. 46, No. 7.

**Introduced malaria is acquired by mosquito transmission of infection contracted from an imported case in an area where malaria is not a regular occurrence.

Cholera

On Feb. 16, 1971, Cameroon was added and Trucial Oman (Dubai) deleted from the list of countries currently reporting cholera to the World Health Organization (1) (Table 4).

(Reported by the Bacterial Diseases Branch, Epidemiology

Program, and the Foreign Quarantine Program, CDC.)

References:

1. WHO, *Weekly Epidemiological Record*, Vol. 46, No. 8
2. WHO, *Weekly Epidemiological Record*, Vol. 46, Nos. 1-8.
3. WHO, *Weekly Epidemiological Record*, Vol. 45, Nos. 1-52.

Table 4
Countries and Areas Officially Reporting Cholera, as of Feb. 22, 1971

Geographic Area	Currently Reporting (2)	Previously Reporting (3)	Imported Cases Only
I. Asia	Burma India Indonesia Nepal Pakistan Philippines Vietnam, Republic of	Brunei Malaysia Singapore Korea, Republic of	Japan
II. Middle East		Trucial Oman (Dubai) Gaza Strip Israel Jordan Kuwait Lebanon Saudi Arabia Syria Turkey	
III. Africa	Cameroon Dahomey Ghana Ivory Coast Liberia Mali Niger Nigeria Sierra Leone Somalia Togo Upper Volta	Libya Tunisia Ethiopia French Territory of Affars and Issas (formerly French Somaliland)	
IV. Europe		Czechoslovakia France USSR	Wales (U.K.)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

February 20, 1971 and February 21, 1970 (7th Week)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	DIPH- THERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post In- fectious	Serum	Infectious		1971	Cum. 1971
				1971	1970	1971	1971	1971	1970		
UNITED STATES.....	46	2	4	24	17	2	104	1,122	1,095	66	498
NEW ENGLAND.....	1	1	-	-	1	-	5	103	106	1	17
Maine.....	-	-	-	-	-	-	-	10	27	-	1
New Hampshire*.....	-	1	-	-	-	-	-	4	2	-	1
Vermont.....	-	-	-	-	-	-	-	17	-	-	1
Massachusetts.....	1	-	-	-	-	-	2	43	45	-	11
Rhode Island.....	-	-	-	-	-	-	1	12	2	-	1
Connecticut.....	-	-	-	-	1	-	2	17	30	1	2
MIDDLE ATLANTIC.....	14	-	-	2	5	-	34	201	201	16	52
New York City.....	14	-	-	1	3	-	13	34	63	2	3
New York, Up-State... New Jersey*.....	-	-	-	-	-	-	5	77	80	2	10
Pennsylvania.....	-	-	-	1	2	-	13	56	29	12	28
EAST NORTH CENTRAL.....	4	-	-	5	6	-	23	166	171	1	23
Ohio.....	-	-	-	3	4	-	4	31	38	-	4
Indiana.....	-	-	-	-	-	-	2	9	15	-	-
Illinois.....	3	-	-	1	1	-	7	33	40	-	6
Michigan.....	1	-	-	1	1	-	10	80	67	1	6
Wisconsin.....	-	-	-	1	-	-	-	13	11	-	7
WEST NORTH CENTRAL.....	-	-	-	-	-	2	1	47	49	2	43
Minnesota.....	-	-	-	-	-	2	1	9	20	-	1
Iowa*.....	-	-	-	-	-	-	-	2	5	-	4
Missouri.....	-	-	-	-	-	-	-	8	13	-	11
North Dakota.....	-	-	-	-	-	-	-	3	-	-	-
South Dakota.....	-	-	-	-	-	-	-	2	1	-	-
Nebraska.....	-	-	-	-	-	-	-	6	4	-	3
Kansas.....	-	-	-	-	-	-	-	17	6	2	24
SOUTH ATLANTIC.....	8	-	2	2	1	-	13	120	99	10	78
Delaware.....	-	-	-	-	-	-	-	2	1	-	-
Maryland.....	1	-	-	-	-	-	4	15	16	2	18
Dist. of Columbia... Virginia.....	-	-	-	-	1	-	1	-	-	-	-
West Virginia.....	3	-	-	1	1	-	2	8	15	-	8
North Carolina.....	-	-	-	1	-	-	-	10	2	-	3
South Carolina.....	2	-	-	-	-	-	2	17	24	4	30
Georgia.....	2	-	2	-	-	-	-	12	3	-	4
Florida.....	2	-	-	-	-	-	4	22	4	4	6
EAST SOUTH CENTRAL.....	4	-	-	9	-	-	1	55	68	2	49
Kentucky.....	1	-	-	9	-	-	1	19	34	2	45
Tennessee*.....	3	-	-	-	-	-	-	22	29	-	-
Alabama.....	-	-	-	-	-	-	-	9	3	-	4
Mississippi.....	-	-	-	-	-	-	-	5	2	-	-
WEST SOUTH CENTRAL.....	2	-	2	1	-	-	2	112	82	2	91
Arkansas.....	-	-	-	-	-	-	-	7	-	-	2
Louisiana.....	1	-	-	-	-	-	1	7	2	-	10
Oklahoma*.....	-	-	-	1	-	-	-	11	11	-	16
Texas.....	1	-	2	-	-	-	1	87	69	2	63
MOUNTAIN.....	1	-	-	-	-	-	4	68	45	13	41
Montana.....	-	-	-	-	-	-	-	14	7	1	1
Idaho.....	1	-	-	-	-	-	1	8	-	-	-
Wyoming.....	-	-	-	-	-	-	-	-	4	1	1
Colorado.....	-	-	-	-	-	-	1	10	10	7	31
New Mexico.....	-	-	-	-	-	-	-	16	5	1	1
Arizona.....	-	-	-	-	-	-	-	13	18	2	6
Utah.....	-	-	-	-	-	-	2	7	1	1	1
Nevada.....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	12	1	-	5	4	-	21	250	274	19	104
Washington.....	1	-	-	-	-	-	-	37	27	-	-
Oregon.....	-	-	-	-	-	-	1	36	15	1	6
California.....	11	1	-	5	4	-	20	171	227	13	79
Alaska.....	-	-	-	-	-	-	-	2	-	-	1
Hawaii.....	-	-	-	-	-	-	-	4	5	-	18
Puerto Rico*.....	-	-	-	-	-	-	3	7	15	1	2
Virgin Islands.....	-	-	-	-	-	-	-	-	-	-	-

*Delayed reports: Aseptic meningitis: (1970) N.J. 3, (1971) Iowa 2
 Brucellosis: (1971) Tenn. delete 1
 Encephalitis, primary: (1970) Okla. 2, (1971) Iowa 1
 Hepatitis, serum: (1970) P.R. 2, (1971) N.J. delete 1
 Hepatitis, infectious: (1970) Okla. 1, P.R. 13, (1971) N.H. 3, N.J. delete 2
 Malaria: (1970) Okla. 1, P.R. 9, (1971) Iowa 1, Okla. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
February 20, 1971 and February 21, 1970 (7th Week) - Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		POLIOMYELITIS		
	1971	Cumulative		1971	Cumulative		1971	Cum.	Total	Paralytic	
		1971	1970		1971	1970				1971	1971
UNITED STATES.....	1,599	10,024	6,469	58	386	461	3,417	21,808	1	1	1
NEW ENGLAND.....	22	260	95	3	20	24	189	1,555	-	-	-
Maine.....	8	131	-	-	5	-	77	272	-	-	-
New Hampshire*.....	3	7	6	-	1	3	2	183	-	-	-
Vermont.....	-	2	-	-	-	1	-	-	-	-	-
Massachusetts.....	10	102	57	1	9	7	44	412	-	-	-
Rhode Island.....	-	8	11	-	1	3	38	375	-	-	-
Connecticut.....	1	10	21	2	4	10	28	313	-	-	-
MIDDLE ATLANTIC.....	181	1,074	972	16	44	75	330	1,653	-	-	-
New York City.....	125	623	141	9	11	21	32	232	-	-	-
New York, Up-State*..	1	149	40	5	13	14	NN	NN	-	-	-
New Jersey.....	14	59	482	-	5	19	31	520	-	-	-
Pennsylvania.....	41	243	309	2	15	21	267	901	-	-	-
EAST NORTH CENTRAL.....	258	1,841	1,657	1	37	69	1,167	8,443	-	-	-
Ohio.....	96	870	513	-	15	35	280	1,793	-	-	-
Indiana.....	8	27	50	-	2	5	194	1,023	-	-	-
Illinois.....	100	511	876	-	7	13	129	695	-	-	-
Michigan.....	16	102	105	1	10	15	168	2,028	-	-	-
Wisconsin.....	38	331	113	-	3	1	396	2,904	-	-	-
WEST NORTH CENTRAL.....	76	492	822	5	37	8	202	1,201	-	-	-
Minnesota.....	-	21	4	1	7	2	18	176	-	-	-
Iowa.....	-	57	-	-	2	2	89	684	-	-	-
Missouri.....	28	288	115	-	8	4	-	71	-	-	-
North Dakota.....	15	33	17	-	1	-	5	91	-	-	-
South Dakota.....	10	52	36	-	3	-	8	76	-	-	-
Nebraska.....	1	7	649	1	4	-	-	13	-	-	-
Kansas.....	22	34	1	3	12	-	82	90	-	-	-
SOUTH ATLANTIC.....	194	1,229	888	8	48	94	291	1,611	-	-	-
Delaware.....	1	6	72	-	-	2	4	41	-	-	-
Maryland.....	-	9	128	-	7	7	26	213	-	-	-
Dist. of Columbia....	-	2	189	-	1	1	3	36	-	-	-
Virginia.....	38	518	166	2	4	7	14	183	-	-	-
West Virginia*.....	16	67	40	-	1	1	98	414	-	-	-
North Carolina.....	70	340	98	2	8	17	NN	NN	-	-	-
South Carolina.....	28	131	22	1	3	3	54	169	-	-	-
Georgia.....	3	11	2	1	4	17	-	1	-	-	-
Florida.....	38	145	171	2	20	39	92	554	-	-	-
EAST SOUTH CENTRAL.....	136	2,036	90	5	29	34	211	1,891	-	-	-
Kentucky.....	78	828	58	-	7	11	66	707	-	-	-
Tennessee.....	13	136	9	2	11	16	134	861	-	-	-
Alabama.....	22	351	12	2	7	4	11	301	-	-	-
Mississippi.....	23	721	11	1	4	3	-	22	-	-	-
WEST SOUTH CENTRAL.....	598	2,315	1,381	6	35	81	339	1,475	1	1	1
Arkansas.....	7	12	1	-	1	8	-	16	-	-	-
Louisiana.....	141	354	7	2	13	18	1	12	-	-	-
Oklahoma.....	63	285	60	1	3	8	10	26	-	-	-
Texas.....	387	1,664	1,313	3	18	47	328	1,421	1	1	1
MOUNTAIN.....	49	328	258	1	14	6	122	789	-	-	-
Montana.....	10	69	8	-	-	-	6	79	-	-	-
Idaho.....	-	58	3	-	-	-	1	83	-	-	-
Wyoming.....	-	5	-	-	-	-	-	17	-	-	-
Colorado.....	21	64	5	1	4	2	58	208	-	-	-
New Mexico.....	4	67	48	-	-	-	28	104	-	-	-
Arizona.....	11	48	190	-	5	2	29	251	-	-	-
Utah.....	3	17	2	-	4	2	-	47	-	-	-
Nevada.....	-	-	2	-	1	-	-	-	-	-	-
PACIFIC.....	85	449	306	13	122	70	566	3,190	-	-	-
Washington.....	24	126	34	1	5	8	331	1,640	-	-	-
Oregon.....	-	33	5	-	10	6	51	331	-	-	-
California.....	61	270	253	12	105	56	149	1,027	-	-	-
Alaska.....	-	6	1	-	-	-	6	24	-	-	-
Hawaii.....	-	14	13	-	2	-	29	168	-	-	-
Puerto Rico.....	12	32	353	-	-	2	28	122	-	-	-
Virgin Islands.....	-	2	3	-	-	-	-	-	-	-	-

* Delayed reports: Measles: (1970) N.Y. Ups. 43, N.J. 1, (1971) N.J. 9, W.Va. 1
Mumps: (1971) N.H. 66

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

February 20, 1971 and February 21, 1970 (7th Week) - Continued

AREA	RUBELLA		TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971
UNITED STATES.....	1,598	5,673	-	10	1	16	4	37	-	3	70	482
NEW ENGLAND.....	28	193	-	-	-	-	-	1	-	-	4	21
Maine.....	9	49	-	-	-	-	-	-	-	-	4	16
New Hampshire.....	-	4	-	-	-	-	-	-	-	-	-	-
Vermont.....	-	5	-	-	-	-	-	-	-	-	-	5
Massachusetts.....	15	92	-	-	-	-	-	1	-	-	-	-
Rhode Island.....	-	13	-	-	-	-	-	-	-	-	-	-
Connecticut.....	4	30	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	75	293	-	2	-	-	-	3	-	-	4	36
New York City.....	-	53	-	2	-	-	-	3	-	-	-	-
New York, Up-State..	22	59	-	-	-	-	-	-	-	-	4	35
New Jersey.....	5	52	-	-	-	-	-	-	-	-	-	-
Pennsylvania.....	48	129	-	-	-	-	-	-	-	-	-	1
EAST NORTH CENTRAL....	150	1,144	-	-	-	1	-	3	-	-	-	34
Ohio.....	25	222	-	-	-	1	-	2	-	-	-	2
Indiana.....	30	298	-	-	-	-	-	-	-	-	-	2
Illinois.....	38	154	-	-	-	-	-	-	-	-	-	11
Michigan.....	38	298	-	-	-	-	-	1	-	-	-	7
Wisconsin.....	19	172	-	-	-	-	-	-	-	-	-	12
WEST NORTH CENTRAL....	87	332	-	-	1	1	-	-	-	-	18	126
Minnesota.....	7	13	-	-	-	-	-	-	-	-	5	18
Iowa.....	13	114	-	-	-	-	-	-	-	-	4	53
Missouri.....	3	98	-	-	1	1	-	-	-	-	3	28
North Dakota.....	4	23	-	-	-	-	-	-	-	-	4	20
South Dakota.....	1	14	-	-	-	-	-	-	-	-	-	-
Nebraska.....	3	10	-	-	-	-	-	-	-	-	-	-
Kansas.....	56	60	-	-	-	-	-	-	-	-	2	7
SOUTH ATLANTIC.....	202	548	-	4	-	10	1	12	-	1	15	65
Delaware.....	2	3	-	-	-	-	1	1	-	-	-	-
Maryland.....	2	13	-	-	-	3	-	3	-	-	-	-
Dist. of Columbia..	-	1	-	-	-	-	-	-	-	-	-	-
Virginia.....	21	56	-	-	-	5	-	1	-	-	5	17
West Virginia.....*	14	66	-	-	-	-	-	1	-	-	5	29
North Carolina.....	1	6	-	-	-	2	-	1	-	1	-	-
South Carolina.....	36	93	-	-	-	-	-	-	-	-	1	10
Georgia.....	-	-	-	-	-	-	-	1	-	-	-	-
Florida.....	126	310	-	4	-	-	-	4	-	-	4	9
EAST SOUTH CENTRAL....	102	352	-	2	-	4	1	4	-	1	5	61
Kentucky.....	38	114	-	-	-	2	-	1	-	-	4	32
Tennessee.....	57	165	-	1	-	2	-	1	-	-	-	17
Alabama.....	7	32	-	1	-	-	1	2	-	-	1	12
Mississippi.....	-	41	-	-	-	-	-	-	-	1	-	-
WEST SOUTH CENTRAL....	180	627	-	-	-	-	-	2	-	1	15	92
Arkansas.....	2	7	-	-	-	-	-	-	-	-	1	9
Louisiana.....	6	33	-	-	-	-	-	1	-	-	-	3
Oklahoma.....*	3	18	-	-	-	-	-	-	-	1	9	48
Texas.....	169	569	-	-	-	-	-	1	-	-	5	32
MOUNTAIN.....	526	717	-	2	-	-	2	2	-	-	-	1
Montana.....	4	23	-	-	-	-	-	-	-	-	-	-
Idaho.....	1	14	-	-	-	-	-	-	-	-	-	-
Wyoming.....	500	500	-	-	-	-	-	-	-	-	-	-
Colorado.....	5	65	-	-	-	-	-	-	-	-	-	-
New Mexico.....	11	39	-	-	-	-	-	-	-	-	-	-
Arizona.....	4	61	-	2	-	-	2	2	-	-	-	1
Utah.....	1	15	-	-	-	-	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	248	1,467	-	-	-	-	-	10	-	-	9	46
Washington.....	42	294	-	-	-	-	-	-	-	-	-	-
Oregon.....	15	105	-	-	-	-	-	-	-	-	-	-
California.....	181	1,008	-	-	-	-	-	10	-	-	9	46
Alaska.....	1	10	-	-	-	-	-	-	-	-	-	-
Hawaii.....	9	50	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	-	-	-	-	-	-	-	-	-	-	-	9
Virgin Islands.....	-	-	-	-	-	-	-	-	-	-	-	-

* Delayed reports: Rubella: (1970) Okla. 1, (1971) W. Va. delete 1
Tetanus: (1971) Kans. delete 1
Rabies in animals: (1971) W. Va. delete 1

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TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED February 20, 1971

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

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes	Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over				All Ages	65 years and over		
NEW ENGLAND:	890	570	71	28	SOUTH ATLANTIC:	1,271	688	46	58
Boston, Mass.-----	251	147	27	10	Atlanta, Ga.-----	138	61	5	10
Bridgeport, Conn.-----	63	42	5	3	Baltimore, Md.-----	256	142	2	9
Cambridge, Mass.-----	22	16	6	1	Charlotte, N. C.-----	57	24	—	6
Fall River, Mass.-----	39	29	4	1	Jacksonville, Fla.-----	85	42	8	4
Hartford, Conn.-----	74	47	2	2	Miami, Fla.-----	134	65	3	5
Lowell, Mass.-----	46	30	1	—	Norfolk, Va.-----	61	37	2	1
Lynn, Mass.-----	34	26	4	1	Richmond, Va.-----	109	55	4	7
New Bedford, Mass.-----	33	20	3	1	Savannah, Ga.-----	36	19	4	3
New Haven, Conn.-----	70	44	2	3	St. Petersburg, Fla.-----	98	76	3	1
Providence, R. I.-----	59	32	2	2	Tampa, Fla.-----	92	57	9	5
Somerville, Mass.-----	16	10	—	—	Washington, D. C.-----	155	82	6	6
Springfield, Mass.-----	65	44	8	1	Wilmington, Del.-----	50	28	—	1
Waterbury, Conn.-----	43	30	—	1	EAST SOUTH CENTRAL:	627	353	31	31
Worcester, Mass.-----	75	53	7	2	Birmingham, Ala.-----	91	35	1	9
MIDDLE ATLANTIC:	3,813	2,271	222	151	Chattanooga, Tenn.-----	38	19	4	1
Albany, N. Y.-----	60	32	4	1	Knoxville, Tenn.-----	58	43	2	1
Allentown, Pa.-----	40	23	4	2	Louisville, Ky.-----	107	65	10	4
Buffalo, N. Y.-----	193	111	11	7	Memphis, Tenn.-----	146	80	3	9
Camden, N. J.-----	54	30	3	1	Mobile, Ala.-----	59	27	1	2
Elizabeth, N. J.-----	54	31	3	1	Montgomery, Ala.-----	36	20	5	1
Erie, Pa.-----	45	25	6	3	Nashville, Tenn.-----	92	64	5	4
Jersey City, N. J.-----	80	55	6	1	WEST SOUTH CENTRAL:	1,298	731	42	75
Newark, N. J.-----	90	43	6	5	Austin, Tex.-----	41	24	2	2
New York City, N. Y. I-----	1,897	1,143	118	73	Baton Rouge, La.-----	47	26	4	3
Paterson, N. J.-----	35	18	4	3	Corpus Christi, Tex.-----	31	20	—	1
Philadelphia, Pa.-----	490	288	5	23	Dallas, Tex.-----	182	99	3	11
Pittsburgh, Pa.-----	241	135	17	9	El Paso, Tex.-----	45	22	3	7
Reading, Pa.-----	55	34	5	2	Fort Worth, Tex.-----	95	46	3	7
Rochester, N. Y.-----	147	86	5	8	Houston, Tex.-----	249	114	6	7
Schenectady, N. Y.-----	25	18	2	—	Little Rock, Ark.-----	45	25	1	7
Scranton, Pa.-----	64	45	3	1	New Orleans, La.-----	193	118	8	8
Syracuse, N. Y.-----	89	53	2	3	Oklahoma City, Okla.-----	99	69	2	5
Trenton, N. J.-----	53	28	4	2	San Antonio, Tex.-----	130	82	5	10
Utica, N. Y.-----	44	34	6	2	Shreveport, La.-----	76	42	2	2
Yonkers, N. Y.-----	57	39	8	4	Tulsa, Okla.-----	65	44	3	5
EAST NORTH CENTRAL:	2,691	1,577	87	119	MOUNTAIN:	607	354	28	25
Akron, Ohio-----	61	33	—	4	Albuquerque, N. Mex.-----	63	28	10	5
Canton, Ohio-----	26	12	3	2	Colorado Springs, Colo.-----	36	24	2	2
Chicago, Ill.-----	741	418	21	40	Denver, Colo.-----	107	58	4	6
Cincinnati, Ohio-----	189	109	8	9	Ogden, Utah-----	23	12	1	—
Cleveland, Ohio-----	237	128	4	12	Phoenix, Ariz.-----	156	90	4	5
Columbus, Ohio-----	130	71	6	7	Pueblo, Colo.-----	23	15	1	1
Dayton, Ohio-----	93	53	3	8	Salt Lake City, Utah-----	85	54	2	5
Detroit, Mich.-----	341	192	9	4	Tucson, Ariz.-----	114	73	4	1
Evansville, Ind.-----	46	25	1	5	PACIFIC:	1,576	1,003	48	62
Flint, Mich.-----	58	28	2	3	Berkeley, Calif.-----	18	15	—	—
Fort Wayne, Ind.-----	42	30	2	—	Fresno, Calif.-----	56	34	2	3
Gary, Ind.-----	42	25	2	1	Glendale, Calif.-----	25	21	1	—
Grand Rapids, Mich.-----	63	46	6	—	Honolulu, Hawaii-----	43	25	3	1
Indianapolis, Ind.-----	127	76	1	8	Long Beach, Calif.-----	130	78	7	1
Madison, Wis.-----	30	18	5	2	Los Angeles, Calif.-----	376	254	11	11
Milwaukee, Wis.-----	145	98	—	3	Oakland, Calif.-----	86	50	3	8
Peoria, Ill.-----	33	20	2	5	Pasadena, Calif.-----	35	23	1	2
Rockford, Ill.-----	33	24	3	—	Portland, Oreg.-----	128	81	1	3
South Bend, Ind.-----	47	31	2	1	Sacramento, Calif.-----	80	49	3	5
Toledo, Ohio-----	114	74	4	2	San Diego, Calif.-----	97	54	3	4
Youngstown, Ohio-----	93	66	3	3	San Francisco, Calif.-----	192	120	4	7
WEST NORTH CENTRAL:	902	590	37	25	San Jose, Calif.-----	52	27	—	1
Des Moines, Iowa-----	56	38	4	4	Seattle, Wash.-----	153	96	5	10
Duluth, Minn.-----	25	16	—	2	Spokane, Wash.-----	59	43	1	4
Kansas City, Kans.-----	48	29	2	3	Tacoma, Wash.-----	46	33	3	2
Kansas City, Mo.-----	138	90	6	3	Total	13,675	8,137	612	574
Lincoln, Nebr.-----	32	24	5	—	Expected Number	13,620	7,985	574	557
Minneapolis, Minn.-----	93	69	2	3	Cumulative Total (includes reported corrections for previous weeks)	98,671	57,848	4,135	4,515
Omaha, Nebr.-----	80	52	—	1					
St. Louis, Mo.-----	283	166	8	7					
St. Paul, Minn.-----	83	65	1	—					
Wichita, Kans.-----	64	41	9	2					
Las Vegas, Nev.*	20	13	1	1					

*Mortality data are being collected from Las Vegas, Nev., for possible inclusion in this table, however, for statistical reasons, these data will be listed only and not included in the total, expected number, or cumulative total, until 5 years of data are collected.

INTERNATIONAL NOTES
QUARANTINE MEASURES

Changes in the "Supplement - Vaccination Certification Requirements for International Travel,"
MMWR, Vol. 19, No. 21

In the present outbreak of cholera *el tor*, the vaccination requirements of countries have frequently been modified according to the evolution of the situation. Most of the requirements listed below are provisional, but they complete the information given in Vaccination Certificate Requirements for International Travel.

Additional Cholera Vaccination Requirements**Afars and Issas, French Territory of**

And from Burma, Ethiopia, Guinea, India, Iran, Iraq, Israel, Lebanon, Libya, Muscat and Oman, Pakistan, Southern Yemen, Philippines, Somali, Sudan, Syria, Tunisia, USSR, Vietnam, Yemen.*

Algeria

And from Afghanistan, Guinea, Jordan, Kuwait, Libya, Malaysia, Republic of Korea, Saudi Arabia, Sudan, United Arab Republic.*

Bahrain

And from Afghanistan, Cyprus, Ethiopia, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Muscat and Oman, Southern Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Republic, Yemen.*

Bulgaria

And from all countries in Asia (except Japan, Kuwait, Mongolia, Southern Yemen, the Asiatic part of USSR and Yemen), Ethiopia, Guinea, Libya, United Arab Republic, Upper Volta.*

Cameroon

And from Guinea, Iran, Iraq, United Arab Republic.*

Chad

And from Guinea.

Cyprus

And from Iran, Iraq, Israel, Jordan, Lebanon, Libya, Syria, Turkey, United Arab Republic, USSR.*

Czechoslovakia

And from Ethiopia, Guinea, Iran, Iraq, Muscat and Oman, Southern Yemen, Saudi Arabia, United Arab Republic, Yemen.*

Finland

And from Cyprus, Iran, Iraq, Israel, Jordan, Lebanon, Libya, Syria, United Arab Republic.*

Gambia

And from Liberia, Sierra Leone.*

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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.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks for case investigations of current interest to health officials.

Address all correspondence to

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