NATIONAL COMMUNICABLE DISEASE CENTER

Morbidity and Mortality

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WEEKLY REPORT

Week Ending May 18, 1968

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

PUBLIC HEALTH SERVICE

BUREAU OF DISEASE PREVENTION AND ENVIRONMENTAL CONTROL

CONTENTS

EPIDEMIOLOGIC NOTES AND REPORTS

TULAREMIA – New York

During the second week of April 1968, three muskrat trappers in Crown Point, New York, developed fever, cutaneous ulcers on the hands and wrists, and regional adenopathy. Agglutination titers against *Francisella tularensis* on sera drawn from these three trappers between April 26 and May 1 were 1:80, 1:320, and 1:1280, respectively. Four additional trappers or fur handlers from this area, two of whom had slow healing hand lesions but no other symptoms, had negative serologies.

Crown Point lies on the western shore of Lake Champlain, 20 miles southwest of the counties in Vermont where 32 cases of tularemia in muskrat trappers and skinners were recently reported (MMWR, Vol. 17, No. 18). One of the three New York trappers took his animals solely from Otter Creek in Vermont, where many of the Vermont patients had trapped. However, the other two trappers had obtained

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

DISEASE	20th WEEK ENDED		MEDIAN	CUMULATIVE, FIRST 20 WEEKS		
	May 18, 1968	May 20, 1967	1963 - 1967	1968	1967	MEDIAN 1963 - 1967
Aseptic meningitis	30	62	36	573	626	551
Brucellosis	2	6	8	58	87	87
Diphtheria	–	1	3	68	40	74
Encephalitis, primary:						
Arthropod-borne & unspecified	16	30	- - -	317	493	- - -
Encephalitis, post-infectious	11	25	- - -	210	336	- - -
Hepatitis, serum	112	40	755	1,537	763	16,596
Hepatitis, infectious	943	843		16,918	15,833	
Malaria	52	39	5	838	760	41
Measles (rubeola)	927	1,825	9,236	13,857	46,212	191,481
Meningococcal infections, total	48	64	62	1,397	1,177	1,302
Civilian	39	58	- - -	1,257	1,088	- - -
Military	9	6	- - -	140	89	- - -
Mumps	4,324	- - -	- - -	98,067	- - -	- - -
Poliomyelitis, total	–	2	2	15	8	9
Paralytic	–	2	2	15	7	8
Rubella (German measles)	2,545	2,218	- - -	30,630	27,048	- - -
Streptococcal sore throat & scarlet fever	8,849	9,568	7,989	216,598	234,894	211,156
Tetanus	5	2	4	44	57	76
Tularemia	2	2	2	61	57	73
Typhoid fever	5	7	9	97	124	130
Typhus, tick-borne (Rky. Mt. spotted fever)	8	5	5	23	32	16
Rabies in animals	74	87	87	1,511	1,791	1,791

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Rabies in man:	–
Botulism:	–	Rubella, Congenital Syndrome:	3
Leptospirosis: Hawaii-2	11	Trichinosis: N.Y.C.-1	21
Plague:	–	Typhus, murine: Tex.-1	4
Psittacosis: Tex. 1	14		

TULAREMIA *(Continued from front page)*

their animals only in New York. One had skinned 20 muskrats, 15 of which he found dead along Putnam Creek near Crown Point, while the other trapper had taken some dead animals he found along the western shore of Lake Champlain. According to trappers, swamplands and lake shore areas near Crown Point harbored unusually large numbers of live muskrats this year and dead muskrats were also apparent.

(Reported by J. S. Miller, M.D., Crown Point, New York; Clayton M. Steward, M.D., District Health Officer, Saranac Lake, New York; Joseph Dell, Ph.D., Chief Wildlife Biologist, and Ralph B. Colson, Chief, Bureau of Game, Department of Conservation, New York; Julia L. Freitag, M.D., Director, Bureau of Epidemiology, New York State Department of Health; and an EIS Officer.)

MENINGOCOCCAL MENINGITIS – Hawaii

Between February 23 and March 7, 1968, five of 24 persons in a closely-knit social unit in the district of Kona, Hawaii, developed meningococcemia and meningococcal meningitis. The index patient (Table 1) was a 17-year-old male who developed fever, confusion, and purpura, and progressed to a state of unresponsiveness within several hours. Cultures of the patient's blood and spinal fluid grew *Neisseria meningitidis* Group B. The organism was sulfonamide-resistant with a minimal inhibitory concentration of 10 mg percent of sulfadiazine, but was sensitive to penicillin at a concentration of 0.05 microgram per ml. This patient had intimate contact with members of another household in which 8 days later on March 3, three persons within 8 hours developed fever, headache, and diffuse petechiae or purpura. Although all three persons had received parenteral penicillin prophylaxis (Table 1), lumbar puncture revealed purulent meningitis in each case, and a Group B sulfonamide-resistant meningococcus was cultured from the spinal fluid of the fourth patient. Spinal fluid cultures on Cases 2 and 3 were negative.

The fifth patient, who lived near Cases 2, 3, 4, and had contact with Case 1, developed an identical illness consisting of fever, headache, and diffuse petechiae on March 7. Although he received 600,000 units of intramuscular procaine penicillin G in the 24 hours preceding symptoms, a sulfonamide-resistant Group B meningococcus was cultured from spinal fluid obtained on admission to the hospital.

The five patients were treated with 12 million units of parenteral penicillin and 6 gm of chloramphenicol per 24 hours for a minimum of 10 days and all patients recovered. Nineteen contacts thought to be at risk had negative nasopharyngeal cultures for meningococci, but these negative findings may have resulted from administration of various antibiotics prior to the culture survey.

(Reported by R. Penington, Jr., M.D., Chief, Epidemiology Branch, Hawaii Department of Health; the Bacterial Reference Unit and Bacterial Serology Unit, Laboratory Program, NCDC; and an EIS Officer.)

Editoral Comment

This epidemic is unusual in two respects. First, the overall attack rate of 20.8 percent (5 of 24 persons) is high for a Group B outbreak, and second, penicillin administration 24 to 48 hours prior to onset of symptoms did not prevent meningitis although it may have contributed to negative spinal fluid cultures in two cases with characteristic clinical illness. It has been reported that penicillin in doses from 1 to 6 million units a day administered orally fails to eradicate the meningococcal carrier state.[1,2,3] In the parenteral doses used in these cases, penicillin failed to prevent overt disease.

References

[1]Dowd, J.M., et al: Antibiotic prophylaxis of carriers of sulfadiazine-resistant meningococci. J Infect Dis *116*:473-80, 1966.

[2]Singer, R.C.: Sulfonamide-resistant meningococcal disease. Med Clin N Amer *51*: 719–27, 1967.

[3]Feldman, H.A.: Meningococcal disease, 1965. JAMA *196*:391–393, 1966.

Table 1
Five Cases of Meningococcal Meningitis – Hawaii
February – March 1968

Case	Age	Sex	Date of Onset	Penicillin Prophylaxis	Spinal Fluid Culture
1	17	M	2/23/68	--	Group B, sulfa resistant
2	10	M	3/3/68	600,000 units procaine I.M. in 48 hours preceding symptoms	Negative
3	13	M	3/3/68	600,000 units procaine I.M. in 24 hours preceding symptoms	Negative
4	18	F	3/3/68	1.2 million units benzathine penicillin G I.M. in 48 hours preceding symptoms	Group B, sulfa resistant
5	17	M	3/7/68	600,000 units procaine penicillin G I.M. in 24 hours preceding symptoms	Group B, sulfa resistant

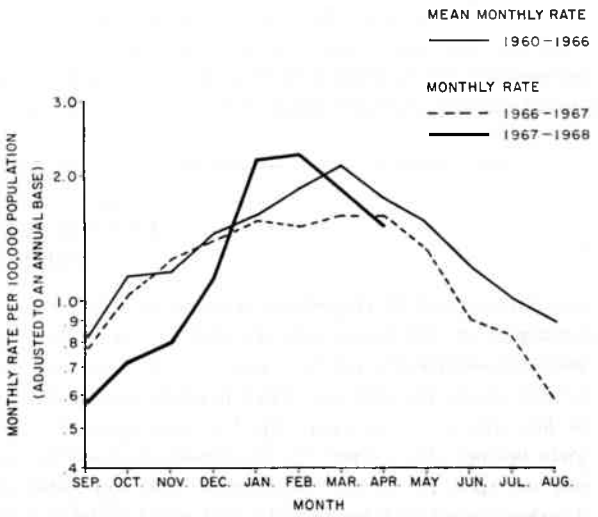
CURRENT TRENDS
MENINGOCOCCAL DISEASE – United States

The adjusted incidence rate of meningococcal infections for April 1968 is 1.59 cases per 100,000 population. This rate is nearly identical to the rate of 1.60 cases per 100,000 population for April 1967 and is below the mean monthly rate of 1.77 for April 1960–1966. The South Atlantic Division reported 71 cases in April 1968 which is twice as many cases as any other division reported. Military cases comprised 12 percent of the April total. The present trend (Figure 1) suggests that the increased incidence of meningococcal disease noted during the first 2 months of 1968 represents an early peak in the epidemiologic year.

Of 274 meningococcal strains submitted to NCDC between January 1 and April 30, 1968, for antibiotic sensitivity testing, 48.5 percent were Serogroup B and 42.7 percent were Serogroup C. During 1967, Serogroups B and C comprised 66 percent and 21 percent of 367 meningococcal isolates submitted to NCDC.

(Reported by the Bacterial Diseases Section and Statistics Section, Epidemiology Program, and the Bacterial Reference Unit and Bacterial Serology Unit, Laboratory Program, NCDC.)

Figure 1
MONTHLY INCIDENCE OF MENINGOCOCCAL INFECTIONS, UNITED STATES



SURVEILLANCE SUMMARY
TETANUS – 1965 and 1966 PART III

In the United States in 1965 and 1966, puncture wounds and lacerations accounted for 33 percent and 25 percent, respectively, of the wounds associated with tetanus cases reported to NCDC. No wound or obvious source of infection could be found in 7 percent of the cases. Nine cases occurred postoperatively resulting in six deaths, while six cases, all fatal, were related to abortion or parturition. Of the nine cases due to injections, seven were fatal. In addition to tetanus complicating overt traumatic injury, tetanus was also the sequel to a number of unusual wounds (Table 2). These unusual wounds, including animal and human bites, decubitus and varicose ulcers, frostbite, and dental abscesses, illustrate a variety of conditions that may be associated with tetanus.

Figure 2
DAYS FROM WOUND TO ONSET OF TETANUS
UNITED STATES, 1965-1966

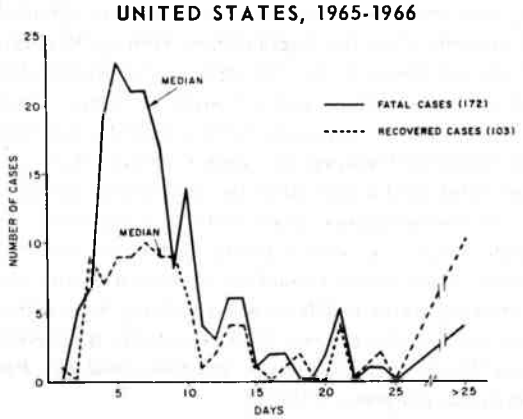


Table 2
Unusual Wounds Associated with Tetanus
United States, 1965-1966

Type of Wound	Total Cases	Fatal Cases
Chronic ulcers	20	19
Unknown etiology	12	12
Carcinoma	3	3
Diabetic	2	2
Decubitus ulcer	2	2
Varicose	1	
Animal Related	8	1
Dog bite	3	1
Cat scratch (multiple)	1	
Clawed by rooster	1	
Wound from cow horn	1	
Kicked by horse	2	
Miscellaneous Wounds	19	17
Frostbite	4	4
Gangrene	4	4
Leg	2	2
Foot	1	1
Toe	1	1
Gums and Teeth	4	4
Infected gums and teeth	1	1
Tooth abscess	3	3
Gunshot wound	2	2
Traumatic amputation	2	2
Trimming fingernail	1	1
Avulsion toenail	1	
Human bite	1	
Total	47	37

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TETANUS *(Continued from page 179)*

The median incubation period for fatal cases and non-fatal cases was 7 and 8 days, respectively, with a range from 1 to 54 days (Figure 2). However, 88 percent of all cases had dates of onset within 14 days or less from the time of injury.

Trismus alone and trismus with local muscle spasm were the two most frequent presenting symptoms (33 and 29 percent, respectively). Convulsions were part of the initial manifestation of tetanus in 21 percent of the cases. The overall case fatality ratio for patients with convulsions at any time during the illness was 76 percent and was significantly greater than the 60 percent for patients without convulsions. Of the patients who died, 53 percent died within 5 days after the onset of symptoms, while 82 percent died by the 10th day.

(Reported by Special Pathogens Unit, Bacterial Diseases Section, and Statistics Section, Epidemiology Program, NCDC.)

EPIDEMIOLOGIC NOTES AND REPORTS

SHIGELLOSIS – Washington

An outbreak of shigellosis occurred among 7 girls in a troup of 19 Girl Scouts who attended a camp in Washington between April 9 and 11, 1968. The index patient was a 10-year-old girl who developed diarrhea on the evening of her arrival at the camp, April 9. Subsequently, three girls became ill on April 11, two others on April 12, and one on April 13. Of the seven girls, four had fever and diarrhea, two had diarrhea only, and one had fever only. Duration of illness ranged from 1 to 8 days. Two girls received medical attention. Eight secondary cases of diarrheal illness occurred among family members of the girls. *Shigella sonnei,* Group D, was isolated by the Seattle-King County Department of Health Laboratory from rectal swabs or stool specimens of all seven girls.

At the camp, each of the four patrols composing the troop had its own cabin and participated in activities as a unit. With the exception of the index case, all girls helped with the preparation of two meals. Of the seven girls who became ill, four were in the same patrol and three were in two other patrols. Sanitary facilities at the camp consisted of two rustic latrines, two outside cold water faucets, and running water in the kitchen. The girls admitted sharing hand towels and drinking cups. Another troop who simultaneously used the camp, but in a separate location, experienced no diarrheal illness.

Although a common source of infection could not be definitely ruled out, the epidemic was thought to have been propagated by person-to-person transmission and by fomites after introduction of the disease agent by the index case. The source of infection for the index patient is unknown. Her family denied any prior diarrheal illness, and her teacher recalled no school absenteeism by the girl's classmates because of diarrheal illness.

(Reported by Jean G. Spearmen, B.S., R.N., M.N., Public Health Nurse Epidemiologist, and Donald R. Peterson, M.D., M.P.H., Epidemiologist, Director, Division of Epidemiology, Seattle-King County Department of Public Health, Seattle, Washington.)

INTERNATIONAL NOTES

CHOLERA

Beginning in 1960, cholera, due to the El Tor biotype of *Vibrio cholerae,* spread from its endemic focus in Indonesia. By the summer of 1966 this pandemic, the seventh in recorded history, had encompassed most of Southeast and South Asia as far west as Iraq in the Middle East. Abruptly, the pandemic abated late in 1966. No further spread was noted during 1967, and the disease disappeared in most of the countries previously infected.

During April 1968, the World Health Organization received official notification of the presence of cholera in three previously infected areas, Singapore, West Pakistan, and Cambodia. It is not yet established whether the infecting strain causing these current outbreaks is the same El Tor biotype which caused the seventh pandemic or whether it is the classical strain, which has long been responsible for outbreaks in the endemic focus of East Pakistan.

Because the disease has an unpredictable pattern of geographic spread, there is once again concern of further extension facilitated by rapid means of ground and air travel from infected foci. It is not uncommon for health authorities in countries neighboring infected areas to impose on unvaccinated travelers stringent quarantine measures and other restrictions such as chemoprophylaxis not authorized by the International Sanitary Regulations. It behooves the traveler, therefore, to familiarize himself with such restrictions and to maintain a current vaccination status. It is important to note that the International Certificate of Vaccination against cholera does not become valid until 6 days after the injection is given.

These epidemics pose little serious threat to the health of travelers who maintain reasonable sanitary discipline. Precautions should be exercised in the choices of drinking water and food when visiting infected areas.

(Reported by the Enteric Diseases Unit, Bacterial Diseases Section, Epidemiology Program, and the Foreign Quarantine Program, NCDC.)

RECOMMENDATION OF THE PUBLIC HEALTH SERVICE ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES

The Public Health Service Advisory Committee on Immunization Practices meeting on February 15, 1968, issued the following recommendation on cholera vaccine.

CHOLERA VACCINE

CHOLERA

Cholera generally occurs in endemic and epidemic form only in South and Southeast Asia. In recent years, however, it has also been epidemic in certain areas of the Middle East.

Infection is acquired from contaminated water or food. It is believed to result from personal contact only in rare instances.

CHOLERA VACCINE

Various cholera vaccines have been widely used, but until recently their efficacy was unproved. Carefully controlled field studies have now clearly demonstrated the effectiveness of current vaccines against both the classical and El Tor strains of cholera vibrios. However, severe cases of cholera have occurred in vaccinated persons.

The duration of immunity induced by vaccine is relatively brief. Antibody titers reach a peak within 4 weeks of vaccination and are maintained for about 3 months. Protection against disease seems to last no more than 6 months after the primary series or a booster dose.

Vaccine available in the United States is prepared from a combination of inactivated suspensions of classical Inaba and Ogawa strains of cholera vibrios grown on agar or in broth and preserved with phenol.

RECOMMENDATIONS FOR VACCINE USE

A primary vaccination or a booster dose within the previous 6 months is generally required for persons traveling to or from countries with cholera.* Vaccination requirements are published annually by the World Health Organization and summarized by the Public Health Service in its booklet *Immunization Information for International Travel* (PHS Publication No. 384). Because cholera sometimes reappears in countries free of the disease for several years, travelers should seek up-to-date information to determine the need for a valid International Certificate of Vaccination.

Physicians administering vaccine to travelers should emphasize that an International Certificate of Vaccination must be validated for it to be acceptable to quarantine authorities. Validation can be obtained at most city, county, and State health departments. Failure to secure validation can cause travelers to be revaccinated or quarantined during the course of travel. The Certificate remains valid for 6 months.

The traveler's best protection against cholera, as well as against many other enteric diseases, is to avoid potentially contaminated food and water. Persons following the usual tourist itinerary through countries reporting cholera and using standard accommodations run virtually no risk of acquiring cholera.

*For a current listing, consult the most recent issue of the World Health Organization's Weekly Epidemiologic Record.

Vaccination Schedule

Injections may be given subcutaneously or intramuscularly.

Primary: **For travelers vaccinated in the United States, a single 0.5 ml. dose of cholera vaccine is considered adequate to satisfy the International Sanitary Regulations.** The single dose for children is proportionately smaller (see table below).

Two doses of cholera vaccine, 0.5 ml. and 1.0 ml., preferably given a month or more apart, are recommended for adults traveling or working in areas where cholera is epidemic or known to be endemic and living under conditions in which sanitation is less than adequate. The doses for children are suggested in the summary table. A two-dose schedule of vaccination is also advisable for persons working with cholera vibrios in the laboratory.

Boosters: Booster injections should be given every 6 months as long as the likelihood of exposure persists. In areas where cholera only occurs in a two to three month "season", protection is optimal when the booster dose is given at the beginning of the season. The primary series need never be repeated for booster doses to be effective.

Summary: The following table summarizes the recommended doses for primary and booster vaccination:

Dose Number	Age (Years) Under 5	5–10	Over 10
1	0.1 ml.	0.3 ml.	0.5 ml.
2 & Boosters	0.3 ml.	0.5 ml.	1.0 ml.

Reactions

Vaccination often results in discomfort at the site of injection for one or more days. The local reaction may be accompanied by fever, malaise, and headache.

Contraindication

Rarely, several reactions of various kinds follow administration of cholera vaccine. If one experiences such a reaction, revaccination is not advisable. Most governments will permit such an individual to proceed provided he carries a physician's statement of the medical contraindication. However, any inadequately vaccinated traveler coming from an infected area may be quarantined or placed under surveillance for 5 days.

CURRENT TRENDS
MEASLES

For the week ending May 18, 1968, 927 cases of measles were reported to NCDC. This is 898 fewer cases than the 1,825 cases reported for the corresponding week in 1967.

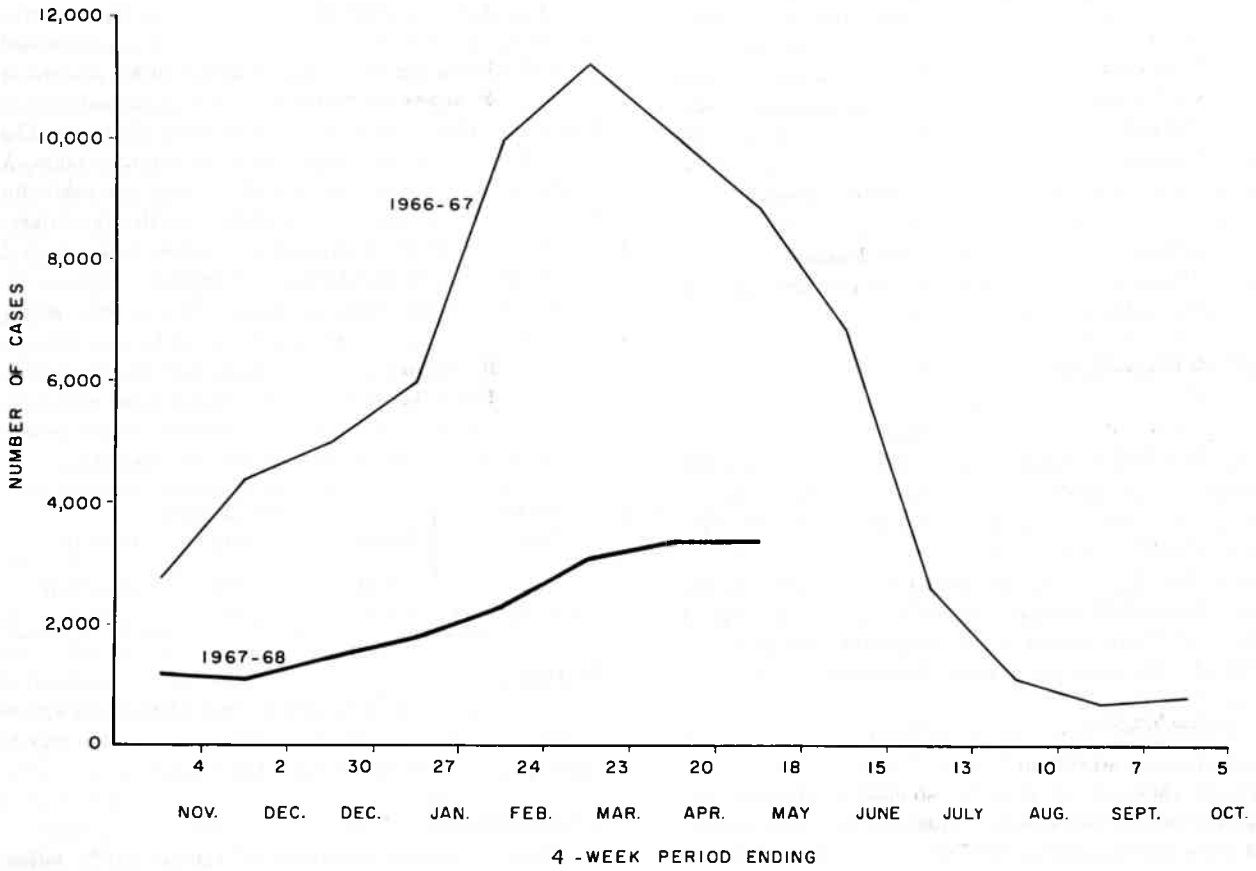
The 4-week total for April 21 through May 18, 1968 (weeks 17-20), is 3,354 cases (Figure 3), which is 38 percent of the 8,853 cases reported for the comparable 4 weeks in 1967.

During the first 32 weeks of the current measles epidemiologic year*, 17,746 cases were reported to NCDC. This total is 30 percent of the 58,405 cases reported during the comparable 32-week period in epidemiologic year 1966-67.

(Reported by State Services Section, and Statistics Section, Epidemiology Program, NCDC.)

*The epidemiologic year for measles begins with week 41 of the calendar year and ends with week 40 of the succeeding year.

Figure 3
REPORTED CASES OF MEASLES BY 4-WEEK PERIODS – UNITED STATES
EPIDEMIOLOGIC YEAR 1967-68, COMPARED WITH 1966-67



POST -INFECTIOUS ENCEPHALITIS - United States

For the first quarter of 1968, a preliminary total of 114 cases of post-infectious encephalitis were reported to NCDC (Table 3). This is the lowest first quarter total of cases since this kind of reporting began in 1964 (Table 4).

This low quarterly total may result in part from a marked decline in the number of reported cases of measles encephalitis (Table 4 and MMWR, Vol. 17, No. 8).

(Reported by Neurotropic Viral Diseases Unit, Viral Diseases Section, and Statistics Section, NCDC.)

Table 4
Reported Cases of Post-Infectious Encephalitis
First Quarter (Weeks 1–13), 1964–1968 by Etiology

Year	Etiology				
	Mumps	Measles	Chickenpox	Other	Total
1964	105	28	10	9	152
1965	114	31	33	9	187
1966	107	62	28	11	208
1967	134	17	16	5	172
1968	80	2	18	14	114

Table 3
Reported Cases of Post-Infectious Encephalitis
First Quarter Ending March 30, 1968 (Weeks 1–13)

State	Mumps	Measles	Chickenpox	Other Specified
Alaska	1			
California	25	1	6	H. Simplex – 1, Inf. Mononucleosis – 1
Connecticut				Post-Vaccination – 1
Florida	2			
Georgia	1			
Idaho	1			
Illinois	4	1		
Iowa	2		1	
Kansas	1			
Maryland	2			
Massachusetts	6		1	
Michigan	7		2	H. Simplex – 5
Minnesota	5			Eaton Agent – 1
Mississippi	1			
New Mexico	2			
New York, Upstate			2	
Ohio	2		1	ECHO Virus – 1
Oregon	1			
Pennsylvania	7		2	
South Dakota	1			
Tennessee	5		2	Influenza – 1
Texas	2		1	Influenza – 3
Virginia	1			
Washington	1			
First Quarter Total				
1968	80	2	18	
1967	134	17	16	

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

MAY 18, 1968 AND MAY 20, 1967 (20th WEEK)

AREA	ASEPTIC MENINGITIS		BRUCELLOSIS	DIPHTHERIA	ENCEPHALITIS			HEPATITIS			MALARIA
					Primary including unsp. cases		Post-Infectious	Serum	Infectious		
	1968	1967	1968	1968	1968	1967	1968	1968	1968	1967	1968
UNITED STATES...	30	62	2	-	16	30	11	112	943	843	52
NEW ENGLAND.....	-	-	-	-	-	1	-	2	29	33	2
Maine.....	-	-	-	-	-	-	-	-	-	3	1
New Hampshire.....	-	-	-	-	-	-	-	-	1	1	-
Vermont.....	-	-	-	-	-	-	-	-	1	1	-
Massachusetts.....	-	-	-	-	-	-	-	-	16	10	1
Rhode Island.....	-	-	-	-	-	1	-	1	7	6	-
Connecticut.....	-	-	-	-	-	-	-	1	4	12	-
MIDDLE ATLANTIC.....	7	3	-	-	2	5	-	38	120	109	5
New York City.....	2	1	-	-	-	3	-	31	53	6	1
New York, up-State.	1	-	-	-	-	-	-	3	17	35	-
New Jersey.....	4	1	-	-	1	1	-	2	29	27	2
Pennsylvania.....	-	1	-	-	1	1	-	2	21	41	2
EAST NORTH CENTRAL...	1	8	-	-	2	8	2	6	160	125	1
Ohio.....	1	1	-	-	-	2	1	2	31	31	-
Indiana.....	-	1	-	-	1	3	-	-	14	8	-
Illinois.....	-	6	-	-	-	2	-	2	49	35	1
Michigan.....	-	-	-	-	1	1	1	2	50	42	-
Wisconsin.....	-	-	-	-	-	-	-	-	16	9	-
WEST NORTH CENTRAL...	-	-	-	-	-	-	2	-	73	62	1
Minnesota.....	-	-	-	-	-	-	1	-	11	13	-
Iowa.....	-	-	-	-	-	-	-	-	20	8	-
Missouri.....	-	-	-	-	-	-	-	-	28	35	-
North Dakota.....	-	-	-	-	-	-	-	-	-	1	-
South Dakota.....	-	-	-	-	-	-	-	-	-	1	-
Nebraska.....	-	-	-	-	-	-	-	-	1	-	1
Kansas.....	-	-	-	-	-	-	1	-	13	4	-
SOUTH ATLANTIC.....	2	2	1	-	4	3	3	3	68	96	8
Delaware.....	-	1	-	-	-	-	-	-	-	7	-
Maryland.....	-	-	-	-	1	2	-	-	18	17	2
Dist. of Columbia..	1	-	-	-	-	-	-	-	-	1	-
Virginia.....	-	1	1	-	3	1	-	-	12	26	-
West Virginia.....	-	-	-	-	-	-	-	-	1	4	-
North Carolina.....	-	-	-	-	-	-	-	1	16	2	5
South Carolina.....	-	-	-	-	-	-	-	-	1	1	-
Georgia.....	-	-	-	-	-	-	-	-	3	26	1
Florida.....	1	-	-	-	-	-	3	2	17	12	-
EAST SOUTH CENTRAL...	3	5	-	-	-	2	-	-	50	51	12
Kentucky.....	-	3	-	-	-	-	-	-	21	14	12
Tennessee.....	-	-	-	-	-	2	-	-	16	18	-
Alabama.....	-	2	-	-	-	-	-	-	1	9	-
Mississippi.....	3	-	-	-	-	-	-	-	12	10	-
WEST SOUTH CENTRAL...	3	6	1	-	1	1	-	4	97	95	2
Arkansas*.....	-	1	-	-	-	-	-	-	6	1	-
Louisiana.....	-	3	-	-	1	-	-	2	14	12	2
Oklahoma*.....	1	-	-	-	-	1	-	-	21	4	-
Texas.....	2	2	1	-	-	-	-	2	56	78	-
MOUNTAIN.....	1	-	-	-	-	1	-	-	72	46	17
Montana.....	1	-	-	-	-	-	-	-	11	-	-
Idaho.....	-	-	-	-	-	-	-	-	3	3	-
Wyoming*.....	-	-	-	-	-	-	-	-	-	2	-
Colorado.....	-	-	-	-	-	-	-	-	28	11	17
New Mexico.....	-	-	-	-	-	-	-	-	6	5	-
Arizona.....	-	-	-	-	-	-	-	-	22	8	-
Utah.....	-	-	-	-	-	1	-	-	1	17	-
Nevada.....	-	-	-	-	-	-	-	-	1	-	-
PACIFIC.....	13	38	-	-	7	9	4	59	274	226	4
Washington.....	2	1	-	-	-	1	-	-	35	72	-
Oregon.....	1	-	-	-	-	-	1	1	17	12	-
California.....	9	12	-	-	7	6	3	58	222	142	4
Alaska.....	-	-	-	-	-	-	-	-	-	-	-
Hawaii.....	1	25	-	-	-	2	-	-	-	-	-
Puerto Rico.....	1	-	-	-	-	-	-	-	29	20	-

*Delayed Reports: Hepatitis, infectious: Ark. delete 1, Okla. 1, Wyo. 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

MAY 18, 1968 AND MAY 20, 1967 (20th WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS	POLIOMYELITIS			RUBELLA
		Cumulative			Cumulative			Total	Paralytic		
	1968	1968	1967	1968	1968	1967	1968	1968	1968	Cum. 1968	1968
UNITED STATES...	927	13,857	46,212	48	1,397	1,177	4,324	-	-	15	2,545
NEW ENGLAND.....	63	634	565	1	72	52	366	-	-	-	575
Maine*.....	-	13	140	-	5	3	3	-	-	-	20
New Hampshire.....	8	79	70	-	7	2	4	-	-	-	6
Vermont.....	-	1	23	-	1	-	28	-	-	-	3
Massachusetts.....	16	222	223	1	32	25	201	-	-	-	302
Rhode Island.....	-	1	46	-	6	3	24	-	-	-	70
Connecticut.....	39	318	63	-	21	19	106	-	-	-	174
MIDDLE ATLANTIC.....	147	2,140	1,561	7	232	179	243	-	-	-	283
New York City.....	90	776	276	2	46	31	108	-	-	-	151
New York, Up-State.	14	901	360	1	38	43	NN	-	-	-	45
New Jersey.....	36	349	378	4	84	69	135	-	-	-	69
Pennsylvania.*.....	7	114	547	-	64	36	NN	-	-	-	18
EAST NORTH CENTRAL...	187	2,952	3,793	10	154	141	1,180	-	-	-	544
Ohio.....	7	240	695	1	40	54	37	-	-	-	170
Indiana.....	80	516	458	1	20	20	216	-	-	-	42
Illinois.....	58	1,165	644	2	37	30	89	-	-	-	122
Michigan*.....	7	186	734	5	44	28	404	-	-	-	58
Wisconsin.....	35	845	1,262	1	13	9	434	-	-	-	152
WEST NORTH CENTRAL...	17	299	2,062	1	65	52	619	-	-	-	208
Minnesota.....	3	13	103	-	16	11	3	-	-	-	-
Iowa.....	9	73	575	-	4	11	356	-	-	-	188
Missouri.....	2	67	144	-	18	11	155	-	-	-	4
North Dakota.....	2	105	707	1	3	-	42	-	-	-	7
South Dakota.....	-	4	46	-	4	6	NN	-	-	-	-
Nebraska.....	1	29	480	-	6	9	28	-	-	-	-
Kansas.....	-	8	7	-	14	4	35	-	-	-	9
SOUTH ATLANTIC.....	48	1,073	5,380	5	303	226	214	-	-	-	134
Delaware.....	-	9	36	-	4	5	13	-	-	-	4
Maryland.....	4	66	98	-	18	27	40	-	-	-	7
Dist. of Columbia..	-	6	12	-	11	8	11	-	-	-	1
Virginia.....	12	218	1,673	-	21	21	36	-	-	-	31
West Virginia.....	6	175	1,020	-	7	17	51	-	-	-	30
North Carolina.....	2	258	792	2	60	46	NN	-	-	-	-
South Carolina.....	-	10	423	2	53	23	-	-	-	-	6
Georgia.....	-	3	23	-	57	33	-	-	-	-	-
Florida.....	24	328	1,303	1	72	46	63	-	-	-	55
EAST SOUTH CENTRAL...	25	398	4,351	7	120	105	151	-	-	-	173
Kentucky.....	10	114	1,101	4	46	29	27	-	-	-	112
Tennessee.....	2	50	1,503	2	40	44	114	-	-	-	38
Alabama.....	5	65	1,124	-	16	20	10	-	-	-	23
Mississippi.....	8	169	623	1	18	12	-	-	-	-	-
WEST SOUTH CENTRAL...	298	3,722	15,183	3	247	171	441	-	-	7	144
Arkansas.....	1	2	1,368	-	15	20	1	-	-	-	-
Louisiana.....	-	2	120	-	64	66	1	-	-	-	5
Oklahoma.....	2	103	3,285	1	46	11	1	-	-	-	-
Texas.....	295	3,615	10,410	2	122	74	438	-	-	7	139
MOUNTAIN.....	61	712	3,518	3	22	24	225	-	-	-	75
Montana.....	1	64	242	-	2	-	17	-	-	-	-
Idaho.....	-	11	334	3	9	1	9	-	-	-	-
Wyoming.....	-	44	46	-	-	1	-	-	-	-	-
Colorado*.....	35	346	1,003	-	7	10	54	-	-	-	31
New Mexico.....	17	70	522	-	-	3	70	-	-	-	3
Arizona.....	8	153	818	-	1	4	65	-	-	-	40
Utah.....	-	19	289	-	-	3	10	-	-	-	1
Nevada.....	-	5	264	-	3	2	-	-	-	-	-
PACIFIC.....	81	1,927	9,799	11	182	227	885	-	-	8	409
Washington.....	13	463	4,636	2	29	22	132	-	-	-	55
Oregon.....	8	375	1,276	-	16	21	16	-	-	-	27
California.....	60	1,056	3,678	9	127	175	647	-	-	8	316
Alaska.....	-	-	112	-	-	8	9	-	-	-	1
Hawaii.....	-	33	97	-	10	1	81	-	-	-	10
Puerto Rico.....	20	289	1,661	-	15	8	26	-	-	-	3

*Delayed Reports: Measles: Pa. delete 7, Colo. 28
Mumps: Me. 10, Mich. 14
Rubella: Me. 5, Pa. 7, Mich. delete 14

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
MAY 18, 1968 AND MAY 20, 1967 (20th WEEK) - CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1968	1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968	1968	Cum. 1968
UNITED STATES...	8,849	5	44	2	61	5	97	8	23	74	1,511
NEW ENGLAND.....	1,251	-	1	-	32	-	3	-	-	-	54
Maine*.....	11	-	-	-	-	-	-	-	-	-	49
New Hampshire.....	-	-	-	-	-	-	-	-	-	-	2
Vermont.....	24	-	-	-	32	-	-	-	-	-	2
Massachusetts.....	203	-	-	-	-	-	2	-	-	-	1
Rhode Island.....	88	-	-	-	-	-	-	-	-	-	-
Connecticut.....	925	-	1	-	-	-	1	-	-	-	-
MIDDLE ATLANTIC.....	813	-	8	-	1	-	10	2	3	1	13
New York City.....	21	-	4	-	-	-	6	-	-	-	-
New York, Up-State.	358	-	4	-	1	-	1	-	-	1	9
New Jersey.....	NN	-	-	-	-	-	-	-	-	-	-
Pennsylvania.....	434	-	-	-	-	-	3	2	3	-	4
EAST NORTH CENTRAL..	937	3	6	-	4	2	16	1	1	8	123
Ohio.....	202	-	-	-	1	-	11	1	1	-	50
Indiana.....	183	1	1	-	-	-	1	-	-	7	44
Illinois.....	260	2	4	-	2	2	3	-	-	1	12
Michigan.....	178	-	1	-	1	-	-	-	-	-	7
Wisconsin.....	114	-	-	-	-	-	1	-	-	-	10
WEST NORTH CENTRAL..	462	-	2	1	6	-	5	-	1	18	343
Minnesota.....	61	-	-	-	-	-	-	-	-	7	96
Iowa.....	169	-	-	-	-	-	-	-	-	4	62
Missouri.....	19	-	2	1	4	-	3	-	-	2	61
North Dakota.....	112	-	-	-	-	-	-	-	-	2	55
South Dakota.....	15	-	-	-	1	-	1	-	1	-	34
Nebraska.....	67	-	-	-	-	-	1	-	-	1	19
Kansas.....	19	-	-	-	1	-	-	-	-	2	16
SOUTH ATLANTIC.....	959	1	9	-	5	2	25	5	17	11	172
Delaware.....	12	-	-	-	-	-	-	-	-	-	-
Maryland.....	283	-	-	-	-	-	4	2	2	-	3
Dist. of Columbia..	3	-	1	-	-	-	1	-	-	-	-
Virginia.....	298	-	2	-	1	1	4	1	10	3	76
West Virginia.....	180	1	1	-	-	-	-	-	-	1	21
North Carolina.....	9	-	2	-	2	-	2	2	4	3	7
South Carolina.....	3	-	1	-	-	-	-	-	1	-	-
Georgia.....	12	-	-	-	1	-	7	-	-	2	17
Florida.....	159	-	2	-	1	1	7	-	-	2	48
EAST SOUTH CENTRAL...	1,047	-	4	-	5	-	13	-	1	11	393
Kentucky.....	148	-	1	-	1	-	2	-	-	2	182
Tennessee.....	766	-	-	-	3	-	8	-	-	8	195
Alabama.....	123	-	1	-	-	-	-	-	-	1	16
Mississippi.....	10	-	2	-	1	-	3	-	1	-	-
WEST SOUTH CENTRAL...	689	-	6	1	6	-	8	-	-	15	283
Arkansas.....	9	-	-	-	1	-	1	-	-	2	32
Louisiana.....	3	-	4	1	1	-	1	-	-	-	30
Oklahoma.....	46	-	-	-	1	-	1	-	-	2	90
Texas.....	631	-	2	-	3	-	5	-	-	11	131
MOUNTAIN.....	1,451	-	-	-	2	1	8	-	-	1	28
Montana.....	34	-	-	-	-	-	-	-	-	-	-
Idaho.....	138	-	-	-	-	-	-	-	-	-	-
Wyoming*.....	89	-	-	-	-	-	1	-	-	-	1
Colorado.....	846	-	-	-	1	-	2	-	-	-	1
New Mexico.....	190	-	-	-	-	1	5	-	-	1	15
Arizona.....	82	-	-	-	-	-	-	-	-	-	11
Utah.....	72	-	-	-	1	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	1,240	1	8	-	-	-	9	-	-	9	102
Washington.....	264	-	-	-	-	-	-	-	-	-	-
Oregon.....	118	-	-	-	-	-	2	-	-	-	1
California.....	710	1	8	-	-	-	7	-	-	9	101
Alaska.....	22	-	-	-	-	-	-	-	-	-	-
Hawaii.....	126	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	8	-	1	-	-	-	-	-	-	-	13

*Delayed Reports: SST: Me. 21, Wyo. 83

Week No. 20

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED MAY 18, 1968

(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
	All Ages	65 years and over		
NEW ENGLAND:	664	398	22	36
Boston, Mass.	186	107	7	14
Bridgeport, Conn.	30	16	3	1
Cambridge, Mass.	33	24	-	-
Fall River, Mass.	29	18	-	-
Hartford, Conn.	52	23	-	3
Lowell, Mass.	35	24	2	2
Lynn, Mass.	19	12	-	-
New Bedford, Mass.	30	19	-	2
New Haven, Conn.	49	29	1	4
Providence, R. I.	52	33	1	4
Somerville, Mass.	10	7	1	-
Springfield, Mass.	46	24	2	3
Waterbury, Conn.	37	26	-	-
Worcester, Mass.	56	36	5	3
MIDDLE ATLANTIC:	3,241	1,842	107	95
Albany, N. Y.	52	33	1	3
Allentown, Pa.	27	17	2	-
Buffalo, N. Y.	148	80	-	6
Camden, N. J.	40	21	6	1
Elizabeth, N. J.	33	22	4	2
Erie, Pa.	32	12	4	4
Jersey City, N. J.	63	34	8	2
Newark, N. J.	81	34	7	4
New York City, N. Y.	1,657	928	44	32
Paterson, N. J.	33	19	1	1
Philadelphia, Pa.	484	283	9	21
Pittsburgh, Pa.	179	97	4	5
Reading, Pa.	54	33	2	2
Rochester, N. Y.	109	65	4	6
Schenectady, N. Y.	22	16	1	-
Scranton, Pa.	44	30	4	-
Syracuse, N. Y.	84	58	-	2
Trenton, N. J.	37	18	-	2
Utica, N. Y.	23	16	5	-
Yonkers, N. Y.	39	26	1	2
EAST NORTH CENTRAL:	2,586	1,488	79	132
Akron, Ohio	58	32	-	6
Canton, Ohio	41	27	2	3
Chicago, Ill.	762	419	27	35
Cincinnati, Ohio	147	85	2	7
Cleveland, Ohio	208	114	8	9
Columbus, Ohio	132	74	3	4
Dayton, Ohio	68	37	-	2
Detroit, Mich.	346	191	6	20
Evansville, Ind.	44	31	2	1
Flint, Mich.	57	34	1	3
Fort Wayne, Ind.	53	30	4	1
Gary, Ind.	57	35	4	3
Grand Rapids, Mich.	35	21	3	4
Indianapolis, Ind.	166	93	1	13
Madison, Wis.	40	15	3	3
Milwaukee, Wis.	102	69	1	9
Peoria, Ill.	41	24	-	2
Rockford, Ill.	28	20	3	1
South Bend, Ind.	31	19	5	2
Toledo, Ohio	107	71	3	4
Youngstown, Ohio	63	47	1	-
WEST NORTH CENTRAL:	843	475	27	47
Des Moines, Iowa	54	31	2	3
Duluth, Minn.	20	11	4	1
Kansas City, Kans.	47	19	5	6
Kansas City, Mo.	140	71	-	6
Lincoln, Nebr.	31	24	2	-
Minneapolis, Minn.	106	64	1	8
Omaha, Nebr.	81	54	-	7
St. Louis, Mo.	244	135	6	12
St. Paul, Minn.	63	35	1	1
Wichita, Kans.	57	31	6	3
SOUTH ATLANTIC:	1,243	646	48	52
Atlanta, Ga.	123	54	1	8
Baltimore, Md.	283	137	11	11
Charlotte, N. C.	50	26	2	2
Jacksonville, Fla.	67	33	3	1
Miami, Fla.	130	69	1	7
Norfolk, Va.	63	35	6	1
Richmond, Va.	92	45	4	3
Savannah, Ga.	43	16	4	7
St. Petersburg, Fla.	68	58	2	1
Tampa, Fla.	87	56	5	2
Washington, D. C.	193	98	7	6
Wilmington, Del.	44	19	2	3
EAST SOUTH CENTRAL:	577	305	34	28
Birmingham, Ala.	88	48	3	1
Chattanooga, Tenn.	18	14	-	1
Knoxville, Tenn.	39	24	-	4
Louisville, Ky.	142	80	18	8
Memphis, Tenn.	121	51	1	4
Mobile, Ala.	55	31	5	2
Montgomery, Ala.	30	18	3	-
Nashville, Tenn.	84	39	4	8
WEST SOUTH CENTRAL:	1,155	585	35	84
Austin, Tex.	42	23	4	7
Baton Rouge, La.	40	22	4	5
Corpus Christi, Tex.	28	10	-	3
Dallas, Tex.	153	70	3	11
El Paso, Tex.	38	19	1	1
Fort Worth, Tex.	74	35	1	3
Houston, Tex.	236	117	5	12
Little Rock, Ark.	52	36	2	3
New Orleans, La.	179	77	2	18
Oklahoma City, Okla.	85	53	1	7
San Antonio, Tex.	124	60	8	7
Shreveport, La.	47	28	1	4
Tulsa, Okla.	57	35	3	3
MOUNTAIN:	440	254	21	24
Albuquerque, N. Mex.	34	20	4	2
Colorado Springs, Colo.	29	15	2	5
Denver, Colo.	136	74	7	8
Ogden, Utah	17	13	1	-
Phoenix, Ariz.	82	47	1	1
Pueblo, Colo.	19	13	1	-
Salt Lake City, Utah	63	38	3	2
Tucson, Ariz.	60	34	2	6
PACIFIC:	1,520	919	26	54
Berkeley, Calif.	18	12	-	-
Fresno, Calif.	44	23	1	2
Glendale, Calif.	20	13	1	1
Honolulu, Hawaii	34	18	1	2
Long Beach, Calif.	88	57	2	1
Los Angeles, Calif.	429	260	6	20
Oakland, Calif.	98	60	4	-
Pasadena, Calif.	26	14	-	-
Portland, Oreg.	128	84	1	5
Sacramento, Calif.	70	43	-	2
San Diego, Calif.	100	56	-	5
San Francisco, Calif.	166	87	3	5
San Jose, Calif.	28	17	1	1
Seattle, Wash.	159	97	6	7
Spokane, Wash.	76	52	-	2
Tacoma, Wash.	36	26	-	1
Total	12,269	6,912	399	552

Cumulative Totals
including reported corrections for previous weeks

All Causes, All Ages	266,658
All Causes, Age 65 and over	156,542
Pneumonia and Influenza, All Ages	12,430
All Causes, Under 1 Year of Age	11,884

INTERNATIONAL NOTES
QUARANTINE MEASURES

Additional Immunization Information for International Travel, 1967–68 edition, Public Health Service Publication No. 384

The following information should be included in Section 5:

AFRICA

Lesotho – Page 30

Delete all information under yellow fever.

Sao Tome and Principe – Page 33

Delete all previous information under yellow fever.

Insert: Yellow fever vaccination is required of arrivals from infected areas.

United Arab Republic – Page 38

In the note concerning cholera, delete East Pakistan.

Insert: Cambodia and Pakistan under cholera.

ASIA

Qatar – Page 61

Under cholera, after "1 year of age and over," add the following:

A vaccination certificate is required of all arrivals from West Pakistan. In addition, these arrivals are required to possess a certificate issued by a Pakistan health authority attesting that (a) they do not originate from an infected area, and (b) they are not carriers of cholera vibrios.*

ASIA AND EUROPE

Turkey – Pages 63 and 73

Under cholera, after "1 year of age and over," add the following:

and from Pakistan.*

EUROPE

Netherlands – Page 70

Under smallpox, delete all previous information.

Insert: Smallpox vaccination is required of all arrivals from infected local areas and from countries in Africa (except Azores and Madeira Islands, Canary Islands, and Reunion), America (except Bermuda, Canada, French Guiana, Greenland, Guadeloupe, Martinique, Netherlands Antilles, St. Pierre and Miquelon, Surinam, and the United States of America), and Asia.

The following information should be added to the list of Yellow Fever Vaccination Centers in Section 6:

Page 97

Under Corpus Christi, Texas, clinic hours, delete Friday. 2 p.m. Insert: Friday, 10:30 a.m. to 11:30 a.m.

*Conformity of this measure with the Regulations may be open to question and the World Health Organization is in communication with the health administration concerned.

ERRATUM, Vol. 17, No. 16, p. 148

In the article "Quarantine Measures," under "Europe, France – Page 67," the first sentence should be changed from "Delete the previous not concerning smallpox," to "Delete the previous note concerning smallpox."

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DIRECTOR, NATIONAL COMMUNICABLE DISEASE CENTER — DAVID J. SENCER, M.D.
CHIEF, EPIDEMIOLOGY PROGRAM — A.D. LANGMUIR, M.D.
ACTING CHIEF, STATISTICS SECTION — IDA L. SHERMAN, M.S.
EDITOR — MICHAEL B. GREGG, M.D.

IN ADDITION TO THE ESTABLISHED PROCEDURES FOR REPORTING MORBIDITY AND MORTALITY, THE NATIONAL COMMUNICABLE DISEASE CENTER WELCOMES ACCOUNTS OF INTERESTING OUTBREAKS OR CASE INVESTIGATIONS WHICH ARE OF CURRENT INTEREST TO HEALTH OFFICIALS AND WHICH ARE DIRECTLY RELATED TO THE CONTROL OF COMMUNICABLE DISEASES. SUCH COMMUNICATIONS SHOULD BE ADDRESSED TO:

NATIONAL COMMUNICABLE DISEASE CENTER
ATLANTA, GEORGIA 30333
ATTN: THE EDITOR
MORBIDITY AND MORTALITY WEEKLY REPORT

NOTE: THE DATA IN THIS REPORT ARE PROVISIONAL AND ARE BASED ON WEEKLY TELEGRAMS TO THE NCDC BY THE INDIVIDUAL STATE HEALTH DEPARTMENTS. THE REPORTING WEEK CONCLUDES ON SATURDAY; COMPILED DATA ON A NATIONAL BASIS ARE RELEASED ON THE SUCCEEDING FRIDAY.