

# M M W R

## MORBIDITY AND MORTALITY WEEKLY REPORT

**Recommendations of the Public Health Service  
Advisory Committee on Immunization Practices**

403 Rabies  
Current Trends

406 Influenza — Worldwide

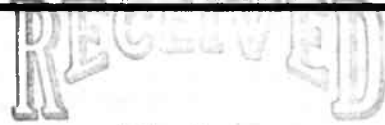
415 Primary and Secondary Syphilis — United States,  
October 1976  
International Notes

415 Cholera — Hong Kong

417 Chickenpox — Newfoundland, 1976  
Epidemiologic Notes and Reports

416 Guillain-Barré Syndrome — United States

Recommendations of the Public Health Service  
Advisory Committee on Immunization Practices



CDC LIBRARY  
ATLANTA, GA. 30333

### Rabies

#### INTRODUCTION

Although rabies rarely affects humans in the United States, every year thousands of persons receive rabies prophylaxis. Managing those who have possibly been exposed to rabies infection is of paramount importance. The following is an interpretation of both the risk of infection and the efficacy of treatment. It incorporates many current concepts of the World Health Organization Expert Committee on Rabies.

The problem of how to treat persons bitten, scratched, or otherwise exposed to rabies by animals suspected of being infective is a perplexing one for physicians. All available methods of systemic treatment are complicated by instances of adverse reactions, a few of which have resulted in death or permanent disability. Furthermore, decisions on management must be made immediately, because the longer treatment is postponed, the less likely it is to be effective.

Data on the efficacy of active and passive immunization after rabies exposure have come principally from studies with animals. Because rabies has occasionally developed in humans who had received antirabies postexposure prophylaxis, the efficacy of vaccine has been questioned. Evidence from laboratory and field experience in many areas of the world, however, indicates that postexposure prophylaxis is usually effective when appropriately used.

#### Rabies in the United States

Rabies in humans has decreased from an average of 22 cases per year in 1946-1950 to only 1-3 cases per year since 1960. The number of cases of rabies in domestic animals has decreased similarly. In 1946, for example, there were more than 8,000 cases of rabies in dogs, compared with 129 in 1975. Thus, the likelihood of human's being exposed to rabies by domestic animals has decreased greatly, although bites by dogs and cats continue to be the reason for giving the majority of antirabies treatments.

The disease in wildlife — especially skunks, foxes, raccoons, and bats — has become increasingly prominent in recent years, accounting for more than 70% of all reported cases of animal rabies every year since 1968. Wild animals constitute the most important source of infection for humans and domestic animals in the United States today.

In 1975 only Idaho, Vermont, Hawaii, and the District of Columbia reported no wildlife rabies.

Nerve tissue origin rabies vaccine of the Semple type (NTV) — no longer available in the United States — was used almost exclusively until 1957, when duck embryo origin vaccine (DEV) was licensed. Treatment failure rates for the 2 vaccines were not significantly different, and the lower incidence of central nervous system reactions with DEV made it preferable to NTV.

#### Effectiveness of Antirabies Treatment in Humans

Comparative effectiveness of treatment can be judged in the United States only by reported failures. During the years 1957-1971, when both vaccines and antirabies serum were available, 6 of the 125,000 NTV-treated persons died of rabies (1/20,800), and 12 of the 310,000 treated with DEV (1/25,800) died. An estimated 105,000 persons were treated with DEV in 1972-1975; only 1 rabies death was reported. Fatalities have been reported in several cases in which the course of treatment was not started immediately or was not completed.

#### RABIES IMMUNIZING PRODUCTS

##### Duck Embryo Vaccine (DEV)

DEV is a killed vaccine prepared from embryonated duck eggs infected with a fixed virus and inactivated with beta-propiolactone. It is supplied as 1-ml, single-dose vials of lyophilized vaccine with diluent ampoule.

##### Rabies Immune Globulin, Human (RIG)

RIG is antirabies gamma globulin concentrated by cold ethanol fractionation from plasma of hyperimmunized human donors. Neutralizing antibody content is standardized to contain 150 International Units (IU) per milliliter. It is supplied in 2-ml (300 IU) and 10-ml (1,500 IU) vials for pediatric or adult use.

##### Antirabies Serum, Equine (ARS)

Antirabies serum is a refined, concentrated serum obtained from hyperimmunized horses. Neutralizing antibody content is standardized to contain 1,000 IU per vial. Volume is adjusted by manufacturer on the basis of antibody potency in each lot. Currently a 1,000-IU vial contains approximately 5 ml.

*Rabies — Continued***Reactions**

Local reactions to postexposure treatment with DEV are very common. Most patients experience pain, erythema, and induration at the injection site. Approximately 13% have itching at the site. Systemic symptoms (fever, malaise, myalgia) occur in 33%, usually after 5-8 doses. Anaphylaxis develops in less than 1% of persons receiving DEV and may occur after the first dose, particularly in persons previously sensitized with vaccines containing avian tissue. Neuroparalytic reactions occur rarely with DEV. Between 1958 and 1975, 5 cases of transverse myelitis, 7 cases of cranial or peripheral neuropathy, and 9 cases of encephalopathy (2 fatal) were reported among an estimated 595,000 recipients of DEV. Neuroparalytic reactions were estimated to occur at the rate of 1 case for every 2,000 of the now discontinued NTV.

Local pain and slight febrile response may follow receipt of RIG. Although not reported for RIG, angioneurotic edema, nephrotic syndrome, and anaphylaxis have been reported but rarely after routine injection of immune serum globulin (ISG). These reactions occur so rarely that the causal relationship between ISG and these reactions is not clear.

ARS produces serum sickness in at least 40% of adult recipients; reaction rates for children are lower. Anaphylactic reactions may occur. When ARS is indicated, the patient

should be tested for sensitivity to equine serum. (In rare instances the sensitivity test has induced anaphylactic reaction.)

Because adverse reactions are associated more frequently with ARS than with RIG, and ARS might sensitize recipients to equine protein, RIG is the product of choice. ARS should be used only when RIG cannot be obtained within 24 hours.

**RATIONALE OF TREATMENT**

Every possible exposure to rabies infection must be individually evaluated.

In the United States the following factors should be considered before specific antirabies treatment is initiated:

**Species of Biting Animal**

Carnivorous animals (especially skunks, foxes, coyotes, raccoons, dogs, and cats) and bats are more likely than other animals to be infected with rabies. Bites of rabbits, squirrels, hamsters, guinea pigs, gerbils, chipmunks, rats, mice, and other rodents have never resulted in human rabies in the United States and almost never call for antirabies prophylaxis.

**Circumstances of Biting Incident**

An UNPROVOKED attack is more likely to mean that the animal is rabid. (Bites inflicted on a person attempting to feed or handle an apparently healthy animal should generally be regarded as PROVOKED.)

**Table I. Summary—Cases of Specified Notifiable Diseases: United States***[Cumulative totals include revised and delayed reports through previous weeks]*

DISEASE	50th WEEK ENDING		MEDIAN 1971-1975	CUMULATIVE, FIRST 50 WEEKS		
	December 18, 1976	December 13, 1975		December 18, 1976	December 13, 1975	MEDIAN 1971-1975
Aseptic meningitis	48	50	73	3,095	3,999	4,144
Brucellosis	1	3	3	276	247	181
Chickenpox	3,701	3,522	---	170,173	136,423	---
Diphtheria	1	6	10	144	277	196
Encephalitis	Primary	11	26	1,332	2,563	1,468
	Post-Infectious	3	9	254	296	266
Hepatitis, Viral	Type B	302	276	14,158	11,387	8,575
	Type A	619	798	31,847	33,504	49,938
	Type unspecified	143	222	8,073	8,005	
Malaria	7	4	4	441	400	400
Measles (rubeola)	732	295	295	38,247	23,481	26,237
Meningococcal infections, total	20	30	29	1,460	1,373	1,316
Civilian	20	30	28	1,449	1,345	1,296
Military	-	-	-	11	28	29
Mumps	555	1,264	1,510	36,905	56,236	66,972
Pertussis	13	27	---	904	1,520	---
Rubella (German measles)	167	110	155	11,841	15,993	24,153
Tetanus	1	-	2	64	93	93
Tuberculosis	676	626	---	31,518	31,778	---
Tularemia	9	1	2	138	109	140
Typhoid fever	3	12	10	375	359	405
Typhus, tick-borne (Rky. Mt. spotted fever)	3	1	1	877	803	628
<b>Venereal Diseases:</b>						
Gonorrhea	19,491	20,702	---	967,133	959,474	---
Civilian	400	443	---	28,004	27,756	---
Military	453	563	---	22,944	24,550	---
Syphilis, primary and secondary	5	7	---	328	338	---
Civilian	5	7	---	328	338	---
Military	5	7	---	328	338	---
Rabies in animals	48	29	34	2,823	2,290	3,223

**Table II. Notifiable Diseases of Low Frequency: United States**

	CUM.		CUM.
Anthrax:	2	Poliomyelitis, total:	9
Botulism:	28	Paralytic:	8
Congenital rubella syndrome:	25	Psittacosis: Minn. 2:	65
Leptosy: Wash. 1, Calif. 2:	127	Rabies in man:	2
Leptospirosis: Okla. 1:	43	Trichinosis:	81
Plague:	15	Typhus, murine:	50

### Type of Exposure

Rabies is commonly transmitted by inoculation with infectious saliva. The likelihood that rabies infection will result from exposure to a rabid animal varies with the nature and extent of the exposure. Two categories of exposure should be considered:

**Bite:** Any penetration of the skin by teeth.

**Nonbite:** Scratches, abrasions, open wounds, or mucous membranes contaminated with saliva.

### Vaccination Status of Biting Animal

A properly immunized animal has only a minimal chance of contracting rabies and transmitting the virus.

### Presence of Rabies in Region

If adequate laboratory and field records indicate that there is no rabies infection in a domestic species within a given region, local and state health officials are justified in considering this in making recommendations on antirabies treatment for bites by particular species. Such officials should be consulted for current interpretations.

### MANAGEMENT OF BITING ANIMALS

A healthy domestic dog or cat that bites a person should be confined and observed by a veterinarian for 10 days. Any illness in the animal should be reported immediately to the local health department. If signs suggestive of rabies develop, the animal should be humanely killed and its head removed and shipped under refrigeration to a qualified laboratory designated by the local or state health department for examination. Stray or unwanted dogs or cats should be killed immediately and their heads submitted for rabies examination by fluorescent microscopy.

Signs of rabies in wild animals cannot be interpreted reliably; therefore, any wild animal that bites or scratches a person should be killed at once (without unnecessary damage to the head) and the brain examined for evidence of rabies.

If the brain is negative by fluorescent antibody examination for rabies, one can assume that the saliva contains no virus, and the bitten person need not be treated.

### LOCAL TREATMENT OF WOUNDS

Immediate and thorough local treatment of all bite wounds and scratches is perhaps the most effective rabies preventive. Experimentally the incidence of rabies in animals can be markedly reduced with local therapy alone.

### First-Aid Treatment to be Carried Out Immediately

The wound should be thoroughly cleansed immediately with soap and water.

### Treatment by or under Direction of Physician

1. The wound should be thoroughly cleansed immediately with soap solution.

2. Tetanus prophylaxis and measures to control bacterial infection should be given as indicated.

### POSTEXPOSURE PROPHYLAXIS

THE FOLLOWING RECOMMENDATIONS ARE INTENDED AS ONLY A GUIDE. THEY MAY BE MODIFIED ACCORDING TO KNOWLEDGE OF THE SPECIES OF BITING ANIMAL, CIRCUMSTANCES SURROUNDING THE EXPOSURE INCIDENT, VACCINATION STATUS OF THE ANIMAL, AND PRESENCE OF RABIES IN THE REGION.

A combination of passive and active immunization (vaccine and immune globulin) is considered the best postexposure prophylaxis and is recommended both for treatment of ALL BITES by animals suspected of having rabies and for nonbite exposures inflicted by animals suspected of being rabid. Passive immunization should be used in conjunction with active immunization regardless of the interval between exposure and treatment.

TABLE 1. Postexposure antirabies treatment guide.

[The following recommendations are only a guide. They should be applied in conjunction with knowledge of the animal species involved, circumstances of the bite or other exposure, vaccination status of the animal, and presence of rabies in the region.]

SPECIES OF ANIMAL		CONDITION OF ANIMAL AT TIME OF ATTACK	TREATMENT OF EXPOSED HUMAN
WILD	Skunk	Regard as Rabid	RIG + DEV <sup>1</sup>
	Fox		
	Coyote		
	Raccoon Bat		
DOMESTIC	Dog	Healthy	None <sup>2</sup>
		Unknown (escaped)	RIG + DEV
	Cat	Rabid or Suspected Rabid	RIG + DEV <sup>1</sup>
Other		Consider individually — See "Rationale of Treatment"	

1. Discontinue vaccine if fluorescent antibody (FA) tests of animal killed at time of attack are negative

2. Begin RIG + DEV at first sign of rabies in biting dog or cat during holding period (10 days)

### Immunization

**RIG and DEV:** Passive antibody, RIG (ARS only if RIG is not available), is administered only once, at the beginning of antirabies therapy. The recommended dose of RIG is 20 IU/kg or approximately 9 IU/lb body weight. (When ARS must be used, the recommended dose is 40 IU/kg, approximately 18 IU/lb or 1 vial of 1,000 IU/55 lb body weight.) Up to half the dose of RIG (or ARS) should be thoroughly infiltrated around the wound and the rest administered intramuscularly in the buttocks.

Twenty-three 1-ml doses of DEV should be given, beginning the day passive antibody is administered. Vaccine may be given as 21 daily doses or 14 doses in the first 7 days (2 injections each day) and then 7 daily doses. This should be followed by the 2 "booster" doses, the first booster 10 days after the 21st dose and the second booster 10 days later. Vaccine should be injected subcutaneously in the abdomen, lower back, or lateral aspect of the thigh; rotation of sites is recommended.

All persons who receive vaccine and RIG (or ARS) should have serum collected for rabies antibody testing at the time of the second booster. Testing for rabies antibody can be arranged by state health department laboratories. If no antibody is detected, additional boosters should be given.

### Precautions

Since RIG (or ARS) partially suppresses active production of antibody, no more than the recommended dose of RIG (or ARS) should be given, and the 2 "booster" doses of vaccine must be given.

Local reactions to vaccine (DEV) are common and do not contraindicate continuing treatment.

*Rabies — Continued*

When rabies vaccine must be given to a person with a history of hypersensitivity, especially to avian tissues, antihistamine drugs may be given. Epinephrine is indicated to counteract anaphylactoid reactions. If serious allergic manifestations preclude continuing prophylaxis with DEV, state health departments can advise physicians about possible use of experimental vaccines.

If neurologic reactions develop, vaccine treatment should be discontinued. Corticosteroids may interfere with development of active immunity and should be used only to treat life-threatening neuroparalytic reactions when the possibility of clinical rabies has been ruled out. The Center for Disease Control, Bureau of Epidemiology, Viral Diseases Division, should be contacted for additional information on the differential diagnosis of rabies.

**PREEXPOSURE PROPHYLAXIS**

The relatively low frequency of severe reactions to DEV has made it practical to offer preexposure immunization to persons in high-risk groups: veterinarians, animal handlers, certain laboratory workers, and persons — especially children — living in places where rabies is a constant threat. Others whose vocational or avocational pursuits bring them into contact with potentially rabid dogs, cats, foxes, skunks, or bats should also be considered for preexposure prophylaxis.

Two 1-ml injections of DEV given subcutaneously in the deltoid area 1 month apart should be followed by a dose 6-7 months after the second dose. This series of 3 injections can be expected to produce neutralizing antibody in 80%-90% of vaccinees.

For more rapid immunization, 3 injections of DEV, 1-ml each, should be given at weekly intervals with the fourth dose 3 months later. This schedule elicits an antibody response in about 80% of the vaccinees.

All who receive the preexposure vaccination should *have serum collected for rabies antibody testing 3-4 weeks after the last injection*. Testing for rabies antibody can be arranged by state health department laboratories. If no anti-

body is detected, booster doses should be given until a response is demonstrated. Persons with continuing exposure should receive boosters every 2 years.

When an immunized person with previously demonstrated rabies antibody is bitten by a rabid animal, he or she should receive 5 daily doses of vaccine plus a booster dose 20 days after the fifth dose. Passive immunization should not be given in this case; it might inhibit a rapid anamnestic response. For non-bite exposures, an immunized person with antibody needs only one 1-ml dose of vaccine. If the immune status of a previously vaccinated person is not known, postexposure antirabies treatment may be necessary. In such cases, if antibody can be demonstrated in a serum sample collected before vaccine is given, treatment can be adjusted accordingly.

**MANAGEMENT OF PERSONS WHO FAIL TO DEVELOP ANTIBODY FOLLOWING VACCINATION**

Some individuals receiving postexposure or preexposure prophylaxis fail to develop demonstrable antibody after completion of the recommended regimens. Additional booster doses of DEV may produce the desired seroconversion. The patient's serum should be tested for antibody 2-3 weeks after each booster dose of DEV. If 2 additional booster doses of vaccine do not result in demonstrable antibody, authorities at the state health department or CDC should be consulted to determine if alternative procedures, such as the use of experimental vaccines, may be indicated.

**ACCIDENTAL INOCULATION WITH LIVE RABIES VIRUS VACCINE**

Persons exposed to Flury or the SAD (formerly ERA) vaccine should not be considered at risk, and antirabies prophylaxis is not indicated. There is no reliable information on which to judge the risk associated with accidental human exposure to new animal vaccines incorporating these strains in other substrates or to animal vaccines incorporating other rabies virus strains, and they should be regarded as potentially virulent for purposes of managing the treatment of exposed humans.

Current Trends**Influenza — Worldwide**

**Worldwide:** Influenza B has been isolated from 2 children in Montreal. These are the first confirmed isolates of influenza in Canada this winter.

*Reported by Canada Diseases Weekly Report 2(1-50):197, 1976.*

**United States:** No evidence of secondary cases has been uncovered to date in the investigation of the second case of A/New Jersey/76 influenza reported from Wisconsin (MMWR 25 [50]).

A/Victoria/75-like virus has been isolated from sporadic cases of influenza in an adult in Michigan, a 2-year-old child in Alaska, a 12-year-old child in South Carolina, and an adult in North Carolina. In each of these cases clinical illness occurred in late November or early December. While there have been increases in visits for febrile respiratory disease to sentinel physicians in Anchorage and Fairbanks,

there have been no other indications of influenza activity in any of these states.

Isolates of influenza B from sporadic cases of influenza have been made in Texas, Tennessee, and Pennsylvania. Influenza surveillance does not indicate significant influenza activity in these locations.

*Reported by NS Hayner, MD, State Epidemiologist, Michigan Dept of Public Health; MP Hines, DVM, State Epidemiologist, North Carolina Division of Health Services; AR Hinman, MD, State Epidemiologist, Tennessee Dept of Public Health; JP Middaugh, MD, Acting State Epidemiologist, Alaska Dept of Health and Social Services; RL Parker, DVM, State Epidemiologist, South Carolina Dept of Health and Environmental Control; W Parkin, DVM, Acting State Epidemiologist, Wisconsin Dept of Health and Social Services; CR Webb Jr, MD, Acting State Epidemiologist, Texas Dept of Health Resources; and the National Influenza Immunization Program, CDC.*

**Table III**  
**Cases of Specified Notifiable Diseases: United States**  
*Weeks Ending December 18, 1976 and December 13, 1975 - 50th Week*

AREA REPORTING	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
						1976	1975	1976	1976	1976	1976		
UNITED STATES	48	1	3,701	1	144	11	26	3	302	619	143	7	441
NEW ENGLAND	1	-	282	-	-	-	-	-	8	23	11	-	21
Maine	-	-	5	-	-	-	-	-	-	-	-	-	-
New Hampshire*	-	-	61	-	-	-	-	-	-	2	-	-	-
Vermont	-	-	5	-	-	-	-	-	-	-	-	-	-
Massachusetts	1	-	101	-	-	-	-	-	1	2	9	-	11
Rhode Island	-	-	62	-	-	-	-	-	-	2	-	-	4
Connecticut	-	-	48	-	-	-	-	-	7	17	2	-	6
MIDDLE ATLANTIC	6	-	210	-	-	4	3	-	50	83	16	2	99
Upstate New York	3	-	78	-	-	4	1	-	2	13	3	-	22
New York City	2	-	31	-	-	-	-	-	20	31	-	2	43
New Jersey	-	-	NN	-	-	-	-	-	27	31	12	-	15
Pennsylvania	1	-	101	-	-	-	2	-	1	8	1	-	19
EAST NORTH CENTRAL	6	-	1,968	-	2	-	4	-	35	108	14	1	23
Ohio*	-	-	155	-	1	-	-	-	7	42	-	-	7
Indiana	1	-	178	-	-	-	-	-	1	4	7	-	-
Illinois	1	-	266	-	-	-	-	-	9	7	1	1	5
Michigan	3	-	969	-	-	-	4	-	15	46	6	-	9
Wisconsin*	1	-	400	-	1	-	-	-	3	9	-	-	2
WEST NORTH CENTRAL	4	-	473	-	4	2	5	-	12	47	9	-	27
Minnesota	-	-	-	-	-	-	-	-	2	3	-	-	4
Iowa	-	-	319	-	-	-	5	-	-	-	-	-	-
Missouri*	2	-	18	-	1	-	-	-	5	32	9	-	9
North Dakota	-	-	44	-	-	-	-	-	-	4	-	-	1
South Dakota*	-	-	-	-	3	-	-	-	-	1	-	-	3
Nebraska	2	-	-	-	-	2	-	-	2	2	-	-	5
Kansas	-	-	92	-	-	-	-	-	3	5	-	-	5
SOUTH ATLANTIC	4	-	151	-	1	1	4	2	35	53	16	-	67
Delaware*	-	-	5	-	-	-	-	-	-	2	-	-	-
Maryland	-	-	6	-	-	-	2	-	7	6	2	-	12
District of Columbia	-	-	1	-	-	-	-	-	2	-	-	-	9
Virginia	1	-	20	-	-	-	-	-	8	4	2	-	10
West Virginia	-	-	78	-	1	-	-	-	1	5	-	-	3
North Carolina	-	-	NN	-	-	1	2	-	7	13	3	-	6
South Carolina	1	-	3	-	-	-	-	-	1	2	3	-	1
Georgia	-	-	-	-	-	-	-	-	-	8	-	-	5
Florida	2	-	38	-	-	-	-	2	9	13	6	-	21
EAST SOUTH CENTRAL	6	-	121	-	-	-	4	-	16	39	1	1	5
Kentucky	-	-	25	-	-	-	4	-	-	-	-	-	1
Tennessee	2	-	NN	-	-	-	-	-	11	20	1	-	-
Alabama	3	-	92	-	-	-	-	-	3	1	-	-	2
Mississippi	1	-	4	-	-	-	-	-	2	18	-	1	2
WEST SOUTH CENTRAL	3	1	182	-	1	1	4	1	19	41	24	-	21
Arkansas	-	-	-	-	-	-	-	-	-	2	7	-	2
Louisiana*	1	-	NN	-	-	-	2	-	9	21	9	-	2
Oklahoma*	-	-	29	-	-	-	-	-	3	6	5	-	3
Texas	2	1	153	-	1	1	2	1	7	12	3	-	14
MOUNTAIN	2	-	121	-	6	-	-	-	14	58	9	-	17
Montana	-	-	1	-	-	-	-	-	1	2	1	-	-
Idaho	-	-	17	-	-	-	-	-	-	5	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	75	-	3	-	-	-	5	17	3	-	10
New Mexico	-	-	1	-	2	-	-	-	5	17	-	-	1
Arizona	-	-	NN	-	1	-	-	-	3	13	3	-	5
Utah	2	-	23	-	-	-	-	-	-	4	2	-	-
Nevada*	-	-	4	-	-	-	-	-	-	-	-	-	1
PACIFIC	16	-	193	1	130	3	2	-	113	167	43	3	161
Washington	4	-	181	1	122	1	-	-	5	5	1	-	4
Oregon	-	-	-	-	-	-	-	-	8	17	6	1	8
California*	12	-	-	-	1	2	2	-	98	144	36	2	147
Alaska	-	-	-	-	6	-	-	-	-	-	-	-	-
Hawaii	-	-	12	-	1	-	-	-	2	1	-	-	2
Guam*	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	3	-	1	-	1	-	-	-	-	8	-	-	1
Virgin Islands	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-

NA: Not available

NN: Not notifiable

\*Delayed reports:

Asep. Meng.: Wisc. add 1, La. delete 1; Chickenpox: N. Hamp. add 25, Del. add 4, Nev. add 1, Calif. add 1, Guam add 6; Enceph: Wisc. add 3; Hep. B: Ohio add 1, S. Dak. delete 1, La. delete 2, Nev. add 1, Guam add 1; Hep. A: N. Hamp. add 1, Ohio delete 1, Mo. delete 2, La. delete 3, Okla. delete 1, Nev. add 1, Guam add 4; Hep. unsp.: Mo. add 1, La. delete 1

Table III-Continued  
**Cases of Specified Notifiable Diseases: United States**  
*Weeks Ending December 18, 1976 and December 13, 1975 — 50th Week*

REPORTING AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1976	CUMULATIVE		1976	CUMULATIVE		1976	CUM. 1976	1976	1976	CUM. 1976	CUM. 1976
		1976	1975		1976	1975						
UNITED STATES .....	732	38,247	23,481	20	1,460	1,373	555	36,905	13	167	11,841	64
NEW ENGLAND .....	3	504	353	1	70	79	23	1,585	-	14	329	2
Maine .....	-	10	16	-	1	7	-	128	-	-	14	-
New Hampshire .....	1	10	23	-	5	4	-	28	-	-	12	-
Vermont .....	-	144	75	-	6	2	-	48	-	-	6	-
Massachusetts .....	-	39	111	1	22	28	3	181	-	14	161	1
Rhode Island .....	-	15	3	-	8	7	4	498	-	-	7	-
Connecticut .....	2	286	125	-	28	31	16	702	-	-	129	1
MIDDLE ATLANTIC .....	101	7,379	2,286	1	216	140	18	3,311	6	2	2,351	9
Upstate New York .....	4	2,971	1,028	-	84	44	2	430	1	-	624	4
New York City .....	3	486	166	-	54	36	4	1,727	3	1	155	4
New Jersey .....	-	624	476	-	31	21	2	557	-	-	1,357	-
Pennsylvania .....	94	3,298	616	1	47	39	10	597	2	1	215	1
EAST NORTH CENTRAL ..	434	16,657	7,035	1	181	201	286	15,165	-	95	4,564	5
Ohio .....	2	620	106	-	68	68	38	2,182	-	37	388	2
Indiana .....	217	4,147	500	-	16	10	13	1,586	-	22	973	-
Illinois .....	85	1,837	1,862	-	20	25	14	1,896	-	7	1,223	-
Michigan .....	40	6,085	3,180	1	65	75	134	5,393	-	17	1,488	3
Wisconsin .....	90	3,968	1,387	-	12	23	87	4,108	-	12	492	-
WEST NORTH CENTRAL ..	72	1,466	5,133	2	88	94	48	3,867	1	5	437	7
Minnesota .....	3	430	231	-	12	20	-	550	1	-	31	2
Iowa .....	-	37	672	-	10	8	38	1,565	-	1	87	-
Missouri .....	28	227	271	2	41	49	7	372	-	-	46	2
North Dakota .....	-	3	1,061	-	3	2	-	128	-	-	3	1
South Dakota .....	-	4	356	-	3	1	-	11	-	-	21	1
Nebraska .....	-	55	395	-	5	3	3	114	-	-	3	-
Kansas .....	41	710	2,147	-	14	11	-	1,127	-	4	246	1
SOUTH ATLANTIC .....	26	2,256	466	7	288	272	20	2,736	1	-	1,329	10
Delaware .....	-	130	35	-	9	8	4	78	-	-	36	-
Maryland .....	-	715	62	2	25	32	1	710	-	-	3	3
District of Columbia ..	-	13	1	-	4	5	1	108	-	-	46	-
Virginia .....	23	838	40	-	34	21	2	219	-	-	243	1
West Virginia .....	2	212	214	-	8	5	8	835	1	-	322	-
North Carolina .....	1	18	2	2	54	51	-	388	-	-	18	-
South Carolina .....	-	4	-	-	36	39	-	46	-	-	599	1
Georgia .....	-	4	40	-	32	18	-	3	-	-	2	-
Florida .....	-	322	72	3	86	93	4	349	-	-	60	5
EAST SOUTH CENTRAL ..	23	970	366	2	138	184	39	3,093	1	17	422	9
Kentucky .....	2	760	155	-	24	77	1	986	1	1	186	2
Tennessee .....	21	193	178	1	61	61	20	1,685	-	16	223	6
Alabama .....	-	-	5	1	39	32	18	362	-	-	2	1
Mississippi .....	-	17	28	-	14	14	-	60	-	-	11	-
WEST SOUTH CENTRAL ..	6	887	486	3	217	210	66	2,692	2	6	627	12
Arkansas .....	-	19	-	-	14	14	-	81	-	-	190	1
Louisiana* .....	-	301	2	1	42	41	7	35	-	-	92	2
Oklahoma .....	-	307	210	-	23	14	27	832	2	1	81	-
Texas .....	6	260	274	2	138	141	32	1,744	-	5	264	9
MOUNTAIN .....	12	5,305	1,599	-	47	40	25	1,244	-	3	503	2
Montana .....	10	374	50	-	6	8	-	25	-	1	237	-
Idaho .....	-	2,024	40	-	7	5	8	478	-	-	18	-
Wyoming .....	-	4	3	-	-	1	-	1	-	-	2	-
Colorado* .....	-	348	1,163	-	12	11	13	273	-	-	31	-
New Mexico .....	-	16	16	-	4	4	1	128	-	-	31	-
Arizona .....	1	235	83	-	10	3	-	-	-	-	-	2
Utah .....	-	2,237	216	-	6	7	3	221	-	2	164	-
Nevada .....	1	67	28	-	2	1	-	118	-	-	20	-
PACIFIC .....	55	2,823	5,757	3	215	153	30	3,212	2	25	1,279	8
Washington .....	1	361	300	1	36	22	3	923	1	6	226	1
Oregon .....	-	175	199	1	19	9	4	408	-	1	140	1
California .....	54	2,270	5,193	1	135	113	22	1,805	1	18	890	6
Alaska .....	-	11	-	-	22	7	-	34	-	-	3	-
Hawaii .....	-	6	65	-	3	2	1	42	-	-	20	-
Guam* .....	-	16	39	-	1	3	-	23	-	-	6	-
Puerto Rico .....	14	477	733	-	4	1	15	768	2	3	13	7
Virgin Islands .....	NA	17	8	-	2	-	NA	61	NA	NA	12	2

NA: Not available

\*Delayed reports: Measles: Mo. add 2, La. delete 1, Colo. add 63; Men. Inf.: Mo. add 1, Okla. delete 1; Mumps: N. Hamp. add 1, Okla. add 19, Guam add 1; Pertussis: La. delete 1







Table III  
Cases of Specified Notifiable Diseases: United States  
Weeks Ending December 25, 1976 and December 20, 1975 - 51st Week

AREA REPORTING	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
						1976	1975	1976	1976	1976	1976		
UNITED STATES .....	66	-	3,548	-	144	17	15	1	254	513	151	4	445
NEW ENGLAND .....	3	-	294	-	-	-	-	-	9	21	16	-	21
Maine .....	-	-	10	-	-	-	-	-	-	-	-	-	-
New Hampshire .....	-	-	29	-	-	-	-	-	-	2	-	-	-
Vermont .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts .....	2	-	158	-	-	-	-	-	-	6	12	-	11
Rhode Island .....	1	-	66	-	-	-	-	-	4	1	-	-	4
Connecticut .....	-	-	31	-	-	-	-	-	5	12	4	-	6
MIDDLE ATLANTIC .....	7	-	367	-	-	2	-	-	60	76	27	4	103
Upstate New York .....	1	-	292	-	-	-	-	-	5	17	3	1	23
New York City .....	2	-	33	-	-	-	-	-	17	19	-	-	43
New Jersey .....	4	-	NN	-	-	1	-	-	21	25	20	-	15
Pennsylvania .....	-	-	42	-	-	1	-	-	17	15	4	3	22
EAST NORTH CENTRAL .....	7	-	1,814	-	2	1	5	-	30	70	10	-	23
Ohio .....	-	-	141	-	1	-	2	-	3	11	-	-	7
Indiana .....	1	-	72	-	-	-	-	-	2	4	5	-	-
Illinois .....	-	-	395	-	-	-	-	-	15	33	2	-	5
Michigan .....	6	-	793	-	-	1	3	-	4	18	-	-	9
Wisconsin* .....	-	-	413	-	1	-	-	-	6	4	3	-	2
WEST NORTH CENTRAL .....	2	-	442	-	4	1	4	-	17	38	8	-	27
Minnesota .....	-	-	-	-	-	-	3	-	8	14	-	-	4
Iowa .....	-	-	276	-	-	-	1	-	4	-	1	-	-
Missouri .....	2	-	32	-	1	1	-	-	1	9	3	-	9
North Dakota .....	-	-	18	-	-	-	-	-	1	1	-	-	1
South Dakota .....	-	-	-	-	3	-	-	-	-	-	-	-	3
Nebraska .....	-	-	13	-	-	-	-	-	2	4	-	-	5
Kansas* .....	-	-	103	-	-	-	-	-	1	10	4	-	5
SOUTH ATLANTIC .....	8	-	189	-	1	2	4	1	41	100	22	-	67
Delaware .....	-	-	4	-	-	-	-	-	-	-	-	-	-
Maryland .....	-	-	22	-	-	-	2	-	8	5	12	-	12
District of Columbia .....	-	-	1	-	-	-	-	-	3	-	-	-	9
Virginia .....	3	-	18	-	-	-	1	1	3	11	-	-	10
West Virginia .....	-	-	104	-	1	-	-	-	5	7	-	-	3
North Carolina .....	-	-	NN	-	-	1	1	-	4	9	1	-	6
South Carolina .....	-	-	-	-	-	-	-	-	-	1	-	-	1
Georgia .....	-	-	-	-	-	-	-	-	-	41	-	-	5
Florida .....	5	-	40	-	-	1	-	-	18	26	9	-	21
EAST SOUTH CENTRAL .....	5	-	91	-	-	8	1	-	4	11	2	-	5
Kentucky .....	1	-	77	-	-	-	-	-	-	-	-	-	1
Tennessee .....	1	-	NN	-	-	2	-	-	2	5	2	-	-
Alabama .....	-	-	8	-	-	3	-	-	1	1	-	-	2
Mississippi .....	3	-	6	-	-	3	1	-	1	5	-	-	2
WEST SOUTH CENTRAL .....	3	-	148	-	1	-	-	-	13	37	11	-	21
Arkansas .....	-	-	-	-	-	-	-	-	1	12	2	-	2
Louisiana* .....	-	-	NN	-	-	-	-	-	4	11	6	-	2
Oklahoma .....	1	-	30	-	-	-	-	-	6	7	2	-	3
Texas .....	2	-	118	-	1	-	-	-	2	7	1	-	14
MOUNTAIN .....	-	-	65	-	6	-	-	-	16	51	24	-	17
Montana .....	-	-	18	-	-	-	-	-	-	6	-	-	-
Idaho .....	-	-	3	-	-	-	-	-	1	1	-	-	-
Wyoming .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado .....	-	-	42	-	3	-	-	-	13	14	15	-	10
New Mexico .....	-	-	1	-	2	-	-	-	-	10	-	-	1
Arizona .....	-	-	NN	-	1	-	-	-	2	18	8	-	5
Utah .....	-	-	1	-	-	-	-	-	-	2	1	-	-
Nevada .....	-	-	-	-	-	-	-	-	-	-	-	-	1
PACIFIC .....	31	-	138	-	130	3	1	-	64	109	31	-	161
Washington .....	1	-	134	-	122	-	-	-	4	3	2	-	4
Oregon .....	4	-	-	-	-	-	-	-	12	16	3	-	8
California* .....	24	-	-	-	1	3	1	-	48	90	26	-	147
Alaska .....	1	-	2	-	6	-	-	-	-	-	-	-	-
Hawaii .....	1	-	2	-	1	-	-	-	-	-	-	-	2
Guam .....	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico .....	-	-	6	-	1	-	-	-	-	2	-	-	1
Virgin Islands .....	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-

NN: Not notifiable

NA: Not available

\*Delayed reports: Asep. Meng.: Wisc. add 4; Chickenpox: Kans. add 300, Calif. add 6; Enceph.: La. delete 1

Table III-Continued  
 Cases of Specified Notifiable Diseases: United States  
 Weeks Ending December 25, 1976 and December 20, 1975 - 51st Week

REPORTING AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1976	CUMULATIVE		1976	CUMULATIVE		1976	CUM. 1976	1976	1976	CUM. 1976	CUM. 1976
		1976	1975		1976	1975						
UNITED STATES .....	664	38,975	23,850	33	1,493	1,398	488	37,413	8	134	11,975	67
NEW ENGLAND .....	1	505	357	3	73	79	33	1,619	-	19	348	2
Maine .....	-	10	16	-	1	7	-	128	-	1	15	-
New Hampshire* .....	-	10	23	-	5	4	-	29	-	-	12	-
Vermont .....	-	144	75	-	6	2	-	48	-	-	6	-
Massachusetts .....	1	40	111	2	24	28	3	184	-	16	177	1
Rhode Island .....	-	15	3	-	8	7	4	502	-	-	7	-
Connecticut .....	-	286	129	1	29	31	26	728	-	2	131	1
MIDDLE ATLANTIC .....	35	7,414	2,317	7	223	143	27	3,338	3	5	2,356	10
Upstate New York .....	1	2,972	1,052	2	86	46	5	435	-	3	627	4
New York City .....	7	493	167	1	55	36	8	1,735	1	-	155	4
New Jersey .....	-	624	477	4	35	22	7	564	-	-	1,357	-
Pennsylvania .....	27	3,325	621	-	47	39	7	604	2	2	217	2
EAST NORTH CENTRAL .....	451	17,108	7,168	-	181	203	172	15,337	3	61	4,625	5
Ohio .....	6	626	107	-	68	68	4	2,186	-	2	390	2
Indiana .....	153	4,300	546	-	16	10	6	1,592	-	34	1,007	-
Illinois .....	132	1,969	1,863	-	20	27	46	1,942	-	7	1,230	-
Michigan .....	25	6,110	3,218	-	65	75	52	5,445	2	12	1,500	3
Wisconsin .....	135	4,103	1,434	-	12	23	64	4,172	1	6	498	-
WEST NORTH CENTRAL .....	-	1,468	5,145	1	90	95	120	3,987	-	17	454	7
Minnesota .....	-	430	231	-	12	20	1	551	-	1	32	2
Iowa .....	-	37	683	-	10	9	38	1,603	-	1	88	-
Missouri .....	-	229	271	1	43	49	49	421	-	-	46	2
North Dakota .....	-	3	1,061	-	3	2	-	128	-	-	3	1
South Dakota .....	-	4	356	-	3	1	-	11	-	-	21	1
Nebraska .....	-	55	396	-	5	3	1	115	-	-	3	-
Kansas .....	-	710	2,147	-	14	11	31	1,158	-	15	261	1
SOUTH ATLANTIC .....	9	2,265	484	6	294	278	32	2,768	-	5	1,334	12
Delaware .....	1	131	35	-	9	8	-	78	-	-	36	-
Maryland .....	-	715	62	1	26	34	5	715	-	-	3	4
District of Columbia .....	-	13	1	2	6	5	-	108	-	-	46	-
Virginia .....	7	845	40	1	35	21	6	225	-	5	248	1
West Virginia .....	-	212	222	-	8	5	20	855	-	-	322	-
North Carolina .....	-	18	2	-	54	53	-	388	-	-	18	-
South Carolina .....	-	4	-	-	36	40	-	46	-	-	599	1
Georgia .....	-	4	40	1	33	18	-	3	-	-	2	-
Florida .....	1	323	82	1	87	94	1	350	-	-	60	6
EAST SOUTH CENTRAL .....	1	971	377	3	141	185	31	3,124	-	9	431	9
Kentucky .....	-	760	158	-	24	77	1	987	-	7	193	2
Tennessee .....	1	194	178	3	64	61	25	1,710	-	2	225	6
Alabama .....	-	-	5	-	39	33	3	365	-	-	2	1
Mississippi .....	-	17	36	-	14	14	2	62	-	-	11	-
WEST SOUTH CENTRAL .....	13	899	546	6	222	214	24	2,735	1	4	631	12
Arkansas .....	-	19	-	-	14	14	-	81	-	-	190	1
Louisiana .....	8	308	2	2	44	41	-	35	-	-	92	2
Oklahoma .....	1	308	269	3	25	15	21	872	1	2	83	-
Texas* .....	4	264	275	1	139	144	3	1,747	-	2	266	9
MOUNTAIN .....	101	5,469	1,691	-	47	42	9	1,253	-	1	504	2
Montana .....	100	474	50	-	6	9	2	27	-	-	237	-
Idaho .....	-	2,024	54	-	7	5	-	478	-	-	18	-
Wyoming .....	-	4	3	-	-	1	-	1	-	-	2	-
Colorado* .....	-	411	1,164	-	12	11	7	280	-	-	31	-
New Mexico .....	-	16	16	-	4	4	-	128	-	-	31	-
Arizona .....	1	236	83	-	10	3	-	-	-	-	-	2
Utah .....	-	2,237	293	-	6	8	-	221	-	1	165	-
Nevada .....	-	67	28	-	2	1	-	118	-	-	20	-
PACIFIC .....	53	2,876	5,765	7	222	159	40	3,252	1	13	1,292	8
Washington .....	1	362	300	-	36	23	6	929	-	11	237	1
Oregon .....	-	175	199	1	20	11	11	419	-	1	141	1
California .....	52	2,322	5,201	5	140	114	19	1,824	1	1	891	6
Alaska .....	-	11	-	1	23	9	4	38	-	-	3	-
Hawaii .....	-	6	65	-	3	2	-	42	-	-	20	-
Guam .....	-	16	39	-	1	3	-	24	-	-	6	-
Puerto Rico .....	13	490	733	-	4	1	6	774	-	1	14	7
Virgin Islands .....	NA	17	8	-	2	-	NA	61	NA	NA	12	2

NA: Not available

\*Delayed reports: Measles: N. Hamp. delete 1, Colo. add 40; Pertussis: Tex. add 1





International Notes

**Cholera — Hong Kong**

A 50-year-old American woman tourist was hospitalized in Hong Kong on July 8, 1976, because of an intestinal illness with severe diarrhea and dehydration. *Vibrio cholerae* was isolated from her stool on July 10 and confirmed on July 11.

The patient and her husband were members of a group of American tourists who stayed in Tokyo and Taipei before their arrival in Hong Kong on July 4. On July 3, the patient ate the same food as the rest of the group except for lunch, which she had with her husband in a restaurant in Taipei. On July 4, she suffered from abdominal discomfort and developed diarrhea. Three days later, her condition worsened, leading to her hospitalization. *V. cholerae* biotype E1 Tor serotype Inaba was isolated from the patient and from 1 of several contacts cultured. There was no secondary spread. Routine bacteriological monitoring, including culture for vibrios, of all patients with intestinal illness in government hospitals and clinics and regular sampling of night soil for cholera vibrios during this period, revealed no positive isolations, supporting the epidemiological information that the case was imported.

*Reported by the World Health Organization in the Weekly Epidemiological Record 51(36):282, 1976.*

**Editorial Note:** This is the fifth documented case of cholera in American travelers during the current pandemic (1). The fact that so few cases have occurred among the millions of American travelers who have traveled to cholera-infected areas emphasizes that the risk of acquiring cholera while traveling abroad is exceedingly small. The fact that there was no secondary transmission from these 5 patients or from the many cases introduced into European countries during the current pandemic also emphasizes that contact transmission does not play a significant role in the transmission of cholera (2).

*Reported by the Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.*

**References**

1. Gangarosa EJ, Faich GA: Cholera: The risk to American travelers. *Ann Intern Med* 74:412-415, 1971
2. Gangarosa EJ, Mosley WH: Epidemiology and surveillance of Cholera, in Barua D, Burrows W (eds): Cholera. Philadelphia, WB Saunders Co, 1974, pp 381-397

Current Trends

**Primary and Secondary Syphilis — United States, October 1976**

Reported cases of primary and secondary syphilis numbered 2,077 in October 1976 — 11.3% less than the number of cases reported in October 1975. During the first 10 months of 1976, some 20,026 cases were reported; this was 1,555 cases or 7.2% less than the number reported during the same period of 1975. A corresponding 4.9% decrease in reported early latent syphilis cases during 1976 suggests

that the decline in infectious syphilis is real and not a reporting artifact. This trend appears to be related to intensified case detection and prevention programs which began in 1972.

*Reported by Veneral Disease Control Div, Bur of State Services, CDC.*

**Summary of Reported Primary and Secondary Syphilis Cases by Reporting Area**  
*October 1976 and October 1975 — Provisional Data*

Reporting Area by HEW Regions	October		Calendar Year Cumulative January-October		Reporting Area by HEW Regions	October		Calendar Year Cumulative January-October		Reporting Area by HEW Regions	October		Calendar Year Cumulative January-October	
	1976	1975	1976	1975		1976	1975	1976	1975		1976	1975	1976	1975
Connecticut	8	17	136	187	Illinois (Excl. Chicago)	17	21	128	231	Arizona	13	18	181	207
Maine	3	9	22	35	Chicago	82	86	786	647	California (Excl. LA & SF)	168	160	1,700	1,551
Massachusetts	51	52	452	475	Indiana (Excl. Indianapolis)	5	4	70	92	Los Angeles*	138	199	1,522	1,606
New Hampshire	0	1	8	15	Indianapolis*	1	2	30	39	San Francisco*	84	81	684	819
Rhode Island	0	4	17	21	Michigan	30	39	210	289	Hawaii	7	3	77	47
Vermont	0	1	9	8	Minnesota	8	4	84	93	Nevada	5	2	37	44
REGION I TOTAL	62	84	644	741	Ohio	48	44	424	425	REGION IX TOTAL	415	463	4,201	4,274
New Jersey	48	79	475	673	Wisconsin	15	7	93	62	Alaska	3	0	25	6
New York (Excl. NYC)	21	24	203	344	REGION V TOTAL	206	207	1,825	1,878	Idaho	3	3	23	16
New York City	178	271	2,030	2,460	Arkansas	19	8	89	55	Oregon	10	14	96	116
REGION II TOTAL	247	374	2,708	3,477	Louisiana	56	63	501	450	Washington	17	12	139	177
Delaware	5	7	56	76	New Mexico	8	18	130	132	REGION X TOTAL	33	29	283	315
District of Columbia	50	55	486	573	Oklahoma	5	15	84	76	UNITED STATES TOTAL	2,077	2,342	20,026	21,581
Maryland (Excl. Baltimore)	6	23	159	185	Texas	176	101	1,702	1,258	Puerto Rico	69	63	528	642
Baltimore	38	24	326	309	REGION VI TOTAL	264	205	2,506	1,971	Virgin Islands	2	6	32	27
Pennsylvania (Excl. Phila.)	14	36	199	323	Iowa	3	1	36	27	United States, Including Outlying Areas	2,148	2,411	20,586	22,250
Philadelphia	34	21	346	329	Kansas	10	9	70	122					
Virginia	77	44	585	487	Missouri	21	19	154	238					
West Virginia	1	2	21	33	Nebraska	4	1	33	18					
REGION III TOTAL	225	212	2,178	2,315	REGION VII TOTAL	38	30	293	405					
Alabama	13	22	157	217	Colorado	12	18	117	97					
Florida	255	284	2,135	2,751	Montana	4	2	12	6					
Georgia (Excl. Atlanta)	52	81	507	570	North Dakota	0	0	2	4					
Atlanta*	37	47	401	377	South Dakota	1	0	5	4					
Kentucky	9	18	110	148	Utah	2	2	23	14					
Mississippi	24	44	241	247	Wyoming	1	0	5	6					
North Carolina	131	128	1,097	925	REGION VIII TOTAL	20	22	164	131					
South Carolina	23	52	321	476										
Tennessee	23	40	255	363										
REGION IV TOTAL	687	718	5,224	6,074										

\*County Data

Note: Cumulative totals include revised and delayed reports through previous months.  
Source: CDC 9-98, HEW-CDC-BSS-VD Control Division, Atlanta, Georgia

Epidemiologic Notes and Reports**Guillain-Barré Syndrome — United States**

Forty-seven states have reported a total of 526 cases of Guillain-Barré syndrome (GBS) to CDC in the period October 1-December 27, 1976 (Table 2). There have been 257 cases in influenza vaccine recipients (3 of whom received influenza Type B vaccine only) and 245 cases in non-recipients. The vaccine status for 21 cases is unknown. Fourteen states have reported a total of 21 deaths. Twelve of these were in influenza vaccine recipients and 8 in persons with no history of vaccination; in 1 case, vaccine status was unknown.

**TABLE 2. Reports of Guillain-Barré syndrome by state and vaccination status, United States, October 1-December 27, 1976**

State	Reported Cases	Vaccinated	Nonvaccinated	Received B Vaccine only	Unknown
Alabama	9(1)	7(1)	2	0	0
Alaska	5	5	0	0	0
Arizona	5(2)	5(2)	0	0	0
Arkansas	3	1	2	0	0
California	63(6)	16(2)	43(3)	0	4(1)
Colorado	11	6	5	0	0
Connecticut	13(1)	8(1)	5	0	0
Delaware	1	0	1	0	0
Florida	17(1)	11	4(1)	2	0
Georgia	9	6	3	0	0
Hawaii	2	0	2	0	0
Idaho	2	1	1	0	0
Illinois	10	3	6	0	1
Indiana	14(1)	4	9(1)	0	1
Iowa	10	5	5	0	0
Kansas	11	8	3	0	0
Kentucky	12	6	6	0	0
Louisiana	4	1	3	0	0
Maryland	9	8	0	0	1
Massachusetts	8	3	4	1	0
Michigan	29(1)	21	7(1)	0	1
Minnesota	18(1)	12(1)	6	0	0
Mississippi	10	1	9	0	0
Missouri	9(1)	3(1)	6	0	0
Montana	2	2	0	0	0
Nebraska	6	4	1	0	1
New Hampshire	4	2	2	0	0
New Jersey	29	8	21	0	0
New Mexico	7	2	3	0	2
New York	28(1)	11	17(1)	0	0
North Carolina	9	2	7	0	0
North Dakota	3	3	0	0	0
Ohio	25(1)	16(1)	7	0	2
Oklahoma	2	2	0	0	0
Oregon	10	7	3	0	0
Pennsylvania	12	8	1	0	3
Rhode Island	3	2	1	0	0
South Carolina	5	0	4	0	1
South Dakota	3	3	0	0	0
Tennessee	19	9	10	0	0
Texas	10	0	9	0	1
Utah	8(2)	6(2)	2	0	0
Vermont	4	3	1	0	0
Virginia	16	9	6	0	1
Washington	14	5	9	0	0
Wisconsin	22(1)	12(1)	8	0	2
Wyoming	1(1)	0	1(1)	0	0
<b>Total</b>	<b>526(21)</b>	<b>257(12)</b>	<b>245(8)</b>	<b>3</b>	<b>21(1)</b>

( ) = deaths

Of the 521 cases for which data are available, 10% of patients who received vaccine are less than 30 years of age, 59% are between 30 and 59 years old, and 31% are 60 years of age or older. For non-vaccinated GBS patients, 47% are less than 30, 41% are 30-59 years old, and 15% are 60 or over. For 231 of the 257 cases in vaccine recipients, 175 (76%) had onset of GBS within 8-28 days following vaccination.

Intensive case investigation efforts have been underway in 11 states — Alabama, Colorado, Connecticut, Maryland, Michigan, Minnesota, New Jersey, Ohio, Oklahoma, Rhode Island, and Virginia — and have included complete state-wide surveys of practicing neurologists and/or physicians, as well as complete investigations of individually reported cases. Data from these states have been reported to CDC, and case rates per million person weeks and relative risks were determined for the period of week ending October 2-December 10, 1976 (Table 3). Total case rates expressed as cases per million-person weeks for the 11 states are 1.55 for vaccinees and 0.17 for non-vaccinees. The relative risk of GBS for vaccinees was 9.4 times that of the non-vaccinees.

**TABLE 3. Attack rates of GBS in 11 states per million person weeks, for weeks ending October 2 - December 10, 1976**

	Vaccinated	Unvaccinated	Relative Risk
Alabama	1.81	.10	18.5
Colorado	1.60	.42	3.9
Connecticut	1.51	.30	5.1
Maryland	2.68	.00	*
Michigan	.71	.02	38.0
Minnesota	1.30	.32	4.1
New Jersey	2.40	.43	5.6
Ohio	1.56	.09	17.0
Oklahoma	.71	.00	*
Rhode Island	2.09	.16	12.9
Virginia	2.61	.17	15.7
<b>Total</b>	<b>1.55</b>	<b>.17</b>	<b>9.4</b>

\*Rates cannot be calculated when there are no cases in unvaccinated persons.

Age-specific attack rates for cases in these 11 states during the period October 1-November 30, 1976, were also calculated and expressed as cases per million population. The numbers of cases in persons 17 years of age and less were so small that calculation of rates was not meaningful. Case rates among vaccinees were higher than those among the unvaccinated for all age groups. Rates of GBS were: in persons 18-24, 5.61 in vaccinees, 1.23 in non-vaccinees (relative risk: 4.54); in persons 25-44, 11.44 in vaccinees, 1.42 in non-vaccinees (8.07); in persons 45-64, 8.29 in vaccinees, 2.20 in non-vaccinees (3.77); in persons over 64, 7.01 in vaccinees, 1.27 in non-vaccinees (5.50). Total rates of GBS in persons aged 18 to over 64 were 9.27 in vaccinees, 1.20 in non-vaccinees.

Reported by KH Acrea, MDCM, State Epidemiologist, Maryland Dept of Health and Mental Hygiene; R Altman, MD, State Epidemiologist, New Jersey Dept of Health; JS Andrews Jr, MD, Acting State Epidemiologist, Minnesota Dept of Health; GA Faich, MD, State Epidemiologist, Rhode Island Dept of Health; TJ Halpin, MD, State Epidemiologist, Ohio Dept of Health; NS Hayner, MD, State Epidemiologist, Michigan Dept of Public Health; RS Jackson, MD,

*Guillain-Barre Syndrome – Continued*

State Epidemiologist, Virginia Dept of Health; JN Lewis, MD, State Epidemiologist, Connecticut Dept of Health; PM Morgan, DVM, DrPH, State Epidemiologist, Oklahoma Dept of Health; FS Wolf,

MD, State Epidemiologist, Alabama State Dept of Health; National Influenza Immunization Program; Viral Diseases Div, Bur of Epidemiology, CDC.

International Notes

**Chickenpox – Newfoundland, 1976**

One hundred fifty cases of chickenpox were reported from Ramea, Newfoundland, (island population 1,325), in the period February 4-May 20, 1976. There were several clusters of cases with a mean interval of 15 days between clusters (Figure 1).

The age distribution ranged from 1 month to 29 years; the median was 7 years. There were 77 males and 73 females, with an overall community attack rate of 11%. Attack rates by age were 16% for persons 0-4 years, 45% for persons 5-10 years, and 17% for persons 11-15 years. The highest attack rates were in children born in 1965 or later. Children below 1 year of age had an attack rate of only 5%. The last major outbreak of reported chickenpox on the Ramea Islands was in the spring of 1964.

Seventy-nine families in the epidemic area reported at least 1 ill child; of these, 21 had only 1 child living at home. In the remaining 58 families there were 230 children living at home of whom 129 became ill, making an attack rate of 56% in children of affected households. Of these 230 children, there were 128 children less than 10 years of age who were considered susceptible because of birth after 1964.

Ninety-one cases of illness were reported in the 128 children – an attack rate of 85% among susceptibles. The incubation period was calculated from day of onset of rash of the first ill child in the home to day of onset of the next illness. Nine persons became ill within 8 days of the first case. These were considered concurrent primary cases. Fifty-one became ill between the eleventh and the twenty-first day, the majority between the fourteenth and sixteenth day. Eight patients became ill from 25 to 41 days after the first illness in the household was diagnosed; these were considered to represent second generation spread. The distribution of probable secondary cases is compatible with an incubation period of 14 to 16 days, with a range of 11 to 21 days. Only 2 cases were noted to have mild complications during the epidemic. None of the patients was hospitalized.

*Reported by D Stewart, RJ Mathias, MD, Newfoundland, and FM White, MD, Bur of Epidemiology, Laboratory Centre for Disease Control, Ottawa, in Canada Diseases Weekly Report 2(41):162-163, 1976.*

FIGURE 1. Cases of Chickenpox by date of onset of rash, Ramea, Newfoundland, 1976

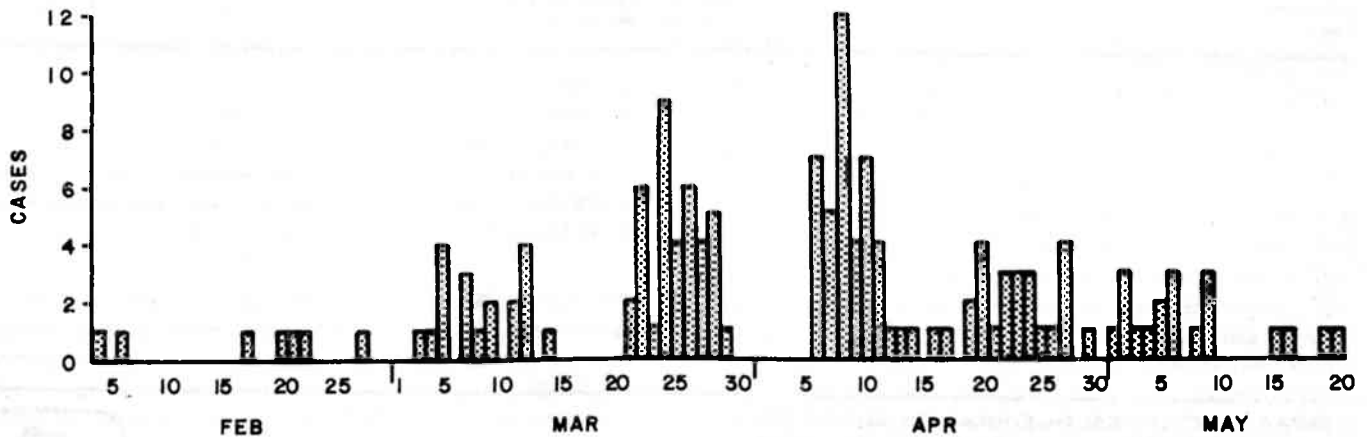


Table I. Summary—Cases of Specified Notifiable Diseases: United States

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

DISEASE	51st WEEK ENDING		MEDIAN 1971-1975	CUMULATIVE, FIRST 51 WEEKS		
	December 25, 1976	December 20, 1975		December 25, 1976	December 20, 1975	MEDIAN 1971-1975
Aseptic meningitis	66	59	70	3,161	4,058	4,214
Brucellosis	—	9	2	276	257	183
Chickenpox	3,548	3,513	—	173,752	139,936	—
Diphtheria	—	—	3	144	277	207
Encephalitis	17	15	15	1,352	2,579	1,488
Post-Infectious	1	1	2	255	297	274
Type B	254	303	153	14,411	11,690	8,712
Hepatitis, Viral	513	603	963	32,355	34,107	50,980
Type A	151	214	—	8,224	8,219	—
Type unspecified	—	—	—	—	—	—
Malaria	4	13	5	445	413	413
Measles (rubeola)	664	369	369	38,975	23,850	26,476
Meningococcal infections, total	33	25	24	1,493	1,398	1,336
Civilian	32	25	20	1,481	1,370	1,316
Military	1	—	—	12	28	29
Mumps	488	1,177	1,512	37,413	57,413	68,310
Pertussis	8	23	—	911	1,543	—
Rubella (German measles)	134	103	194	11,975	16,096	24,924
Tetanus	3	—	2	67	93	94
Tuberculosis	427	688	—	31,938	32,466	—
Tularemia	4	3	3	142	112	144
Typhoid fever	5	6	6	380	365	411
Typhus, tick-borne (Rky. Mt. spotted fever)	2	6	6	879	809	636
Veneral Diseases:						
Gonorrhea	16,263	18,467	—	983,396	977,941	—
Civilian	371	479	—	28,375	28,235	—
Military	—	—	—	—	—	—
Syphilis, primary and secondary	384	550	—	23,328	25,100	—
Civilian	6	4	—	334	342	—
Military	—	—	—	—	—	—
Rabies in animals	25	28	37	2,848	2,318	3,259

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax:	2	Poliomyelitis, total:	9
Botulism:	28	Paralytic:	8
Congenital rubella syndrome:	25	Psittacosis: Ore. 3, Calif. 2:	70
Leprosy: Calif. 2:	129	Rabies in man:	2
Leptospirosis:	43	Trichinosis: Pa. 2, Calif. 1:	84
Plague:	15	Typhus, murine:	50

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE / CENTER FOR DISEASE CONTROL  
ATLANTA, GEORGIA 30333

Director, Center for Disease Control, David J. Sencer, M.D.  
Director, Bureau of Epidemiology, Philip S. Brachman, M.D.  
Editor, Michael B. Gregg, M.D.  
Managing Editor, Anne D. Mather, M.A.

OFFICIAL BUSINESS FIRST CLASS

Redistribution using indicia is illegal.

9A1906  
Mrs Mary Alice Mills  
Director, Library  
1-408



POSTAGE AND FEES PAID  
U.S. DEPARTMENT OF HEW  
HEW 399