



Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE
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EPIDEMIOLOGIC NOTES AND REPORTS
CONTAMINATION OF BLOOD-CULTURE MEDIUM
Kentucky, Maryland

On March 1, and March 19, 1974, representatives of hospitals in Kentucky and Maryland reported to CDC suspected contamination of Tryptic Soy Broth blood culture medium in vacuum bottles with CO₂ and SPS (Difco Laboratories, Detroit, Michigan). In January and February 1974, infection control personnel in the Kentucky hospital had noted inordinately high rates of isolation of *Bacillus spp.* in blood cultures. No clinical correlation with isolation of these organisms was apparent on review of affected patients' charts; thus, laboratory artifact was suspected. These organisms were isolated with significantly greater frequency in bottles of Difco medium with lot no. 593-678 than in bottles with other

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lot numbers from the same manufacturer. Several bottles of various lots were then incubated without prior manipulation, and 1 bottle of lot no. 592-647 also grew *Bacillus spp.*

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

DISEASE	12th WEEK ENDING		MEDIAN 1969-1973	CUMULATIVE, FIRST 12 WEEKS		
	March 23, 1974	March 24, 1973		1974	1973	MEDIAN 1969-1973
Aseptic meningitis	29	28	27	395	421	395
Brucellosis	3	1	2	21	19	22
Chickenpox	3,838	7,159	---	43,321	64,945	---
Diphtheria	10	3	1	47	57	47
Encephalitis:						
Primary: Arthropod-borne and unspecified	27	20	16	200	202	225
Post-Infectious	3	3	10	47	44	58
Hepatitis, Viral:						
Type B	221	159	159	2,031	1,656	1,656
Type A	880	1,194	1,179	10,303	11,804	12,902
Type unspecified	152	---	---	1,929	---	---
Malaria	2	5	30	35	50	550
Measles (rubeola)	957	690	1,291	6,596	7,962	9,240
Meningococcal infections, total	37	29	59	372	396	794
Civilian	37	29	40	366	384	678
Military	---	---	8	6	12	75
Mumps	1,836	2,509	2,509	20,273	23,231	28,377
Pertussis	25	---	---	309	---	---
Rubella (German measles)	414	1,558	1,717	3,161	8,338	11,930
Tetanus	1	3	3	10	12	18
Tuberculosis, new active	685	679	---	6,521	6,740	---
Tularemia	2	1	1	24	15	23
Typhoid fever	5	97	5	81	151	59
Typhus, tick-borne (Rky. Mt. spotted fever)	---	---	---	14	6	4
Veneral Diseases:						
Gonorrhea	16,745	14,555	---	193,736	172,766	---
Syphilis, primary and secondary	481	470	---	5,423	5,754	---
Rabies in animals	40	76	76	558	713	849

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	2	Poliomyelitis, total:	1
Botulism: Calif. 1	4	Paralytic:	1
Congenital rubella syndrome:	20	Psittacosis:	5
Leprosy: * NYC 1	20	Rabies in man:	---
Leptospirosis: Va. 1, Ala. 1	16	Trichinosis: UpState N.Y. 7	36
Plague:	---	Typhus, murine: Calif. 1	6

*Delayed reports: Leprosy: Texas 1 (1974)

BLOOD-CULTURE MEDIA — Continued

Independently, the Maryland hospital had also noted high isolation rates of *Bacillus spp.* in blood cultures. In lot no. 597-658, 11% of clinical specimens grew the organism. Also suspecting laboratory artifact or contamination of medium, the clinical laboratory subsequently found 10% of bottles sampled from lot no. 597-665 and 2% of bottles sampled from lot no. 597-666 (unmanipulated prior to incubation) to be non-sterile.

On March 22, 1974, CDC received 7 bottles of lot no. 593-678 recovered from the Kentucky hospital. After examination for turbidity, the bung closure was cut with a hot wire and removed from the body of the bottle in order to prevent introduction of organisms into the medium at time of culturing. The top surfaces of the bungs were sampled with swabs and cultured. The entire bung and the medium in the bottles were then cultured separately. One bottle was visibly turbid upon receipt; the medium and the bung from that bottle have grown *Bacillus spp.*; in addition, the bung from another bottle has also grown *Bacillus spp.* Swab samples from the tops of bungs thus far show no growth at 5 days.

Difco has voluntarily undertaken recall of lots numbered 592-479, 592-480, 592-647, 593-678, 595-647, 597-658, 597-660, 597-661, 597-665, and 597-666, although only 5 of these have been documented to be contaminated. The Food and Drug Administration has instituted further investigations of the problem.

(Reported by Robert C. Noble, M.D., Assistant Professor of Medicine, Division of Infectious Diseases, Sally Reeves, R.N., Nurse Epidemiologist, S.R. Goodwin, R.Ph., and Sandra D.

ERRATUM:
10/1/73
SHOULD READ 595-890

FOLLOW-UP ON HAMSTER-ASSOCIATED LCM INFECTION — United States

Since December 1973, a total of 51 human cases of lymphocytic choriomeningitis (LCM) infection associated with hamster contact have been documented: 5 in California, 8 in Florida, 5 in Massachusetts, 1 in Nevada, 2 in New Jersey, and 30 in New York (MMWR, Vol. 23, No. 8). All implicated pet hamsters available for serologic examination (5) have been positive for LCM, and a tentative isolate has been made from 1 serologically positive hamster. The 51 infected persons either had a pet hamster or were exposed to hamsters at work.

All hamsters associated with human disease have been distributed by the Aquarium Supply Company, Harrison, New Jersey. These hamsters are known to have been shipped on several dates between December 1973 and February 1974 to several states, including Massachusetts and New York. The Aquarium Supply Company receives hamsters from 12 major breeding companies through 1 large distributor.

Testing of 663 hamsters sampled from the breeders and the distributor has been performed at CDC by indirect fluorescent antibody screening. All but 1 hamster was negative.

CDC has notified all state health departments regarding distribution of hamsters in their area. Additional sampling from the breeders' stocks of hamsters (the animals most likely to be positive) is presently underway by CDC to identify the source(s) of the contaminated animals. CDC is cooperating with state health departments to initiate surveillance programs to determine any additional cases.

(Reported by Richard W. Emmons, M.D., M.P.H., Ph.D., Viral and Rickettsial Diseases Laboratory and Infectious Diseases Section, and James Chin, M.D., M.P.H., State Epidemiologist, California State Department of Health; Chester L. Nayfield,

Cox, M.T. [ASCP], University of Kentucky College of Medicine, Lexington, Kentucky; Calixto Hernandez, M.D., State Epidemiologist, Kentucky Bureau of Health Services; Anita Bahn, M.D., State Epidemiologist, Maryland State Department of Health; James D. MacLowry, M.D., Chief, Clinical Pathology Department, Clinical Center, National Institutes of Health, Bethesda, Maryland; the Division of Bacteriology, Bureau of Laboratories, and the Epidemiologic Services Laboratory Section, and the Hospital Infections Section, Bacterial Diseases Division, Bureau of Epidemiology, CDC.)

Editorial Note

Contamination of blood culture media may confuse the results of an important laboratory test and result in potential harm to patients. Contaminants may obscure the growth of organisms truly infecting the patient or may, on the other hand, suggest the faulty diagnosis of bacteremia.

Although *Bacillus spp.* are gram-positive organisms, the organisms isolated from these fluids initially appear to be gram-negative, which may further confuse the diagnosis and reporting to clinicians.

Fluid of some of the bottles in the above lots has not been turbid, even though contaminating organisms were cultured from the fluid. Furthermore, incubating the medium prior to use may not be adequate to assure sterility since contaminating organisms, if present between the bung and the glass bottle, could be introduced into the medium with manipulation at the time a clinical specimen is inoculated.

All lots presently known to be contaminated are being recalled.

M.D., State Epidemiologist, Florida Division of Health; George E. Waterman, M.D., Assistant Director, and Nicholas J. Fiumara, M.D., Director, Communicable Diseases, Massachusetts Department of Public Health; David C. Poskanzer, M.D., Associate Neurologist, and Martin S. Hirsch, M.D., Infectious Diseases Unit, Massachusetts General Hospital; Michael Ford, M.P.H., Public Health Environmentalist, and Edward S. Gallagher, M.D., M.P.H., District Health Officer, Washoe County, Nevada, Health Department; William M. Edwards, M.D., M.P.H., State Epidemiologist, Nevada State Department of Health and Welfare; Leah Ziskin, M.D., M.P.H., Program Coordinator, Communicable Diseases Control Program, Martin Goldfield, M.D., Assistant Commissioner, Division of Laboratories and Epidemiology, and Ronald Altman, M.D., State Epidemiologist, New Jersey State Department of Health; John Woodall, M.D., Ph.D., and Rudolph Deibel, M.D., Director, Arbovirus Laboratory, Division of Laboratories and Research, and Alan R. Hinman, M.D., Assistant Commissioner for Epidemiology and Preventive Health Services, New York State Department of Health; the Viral Pathology Section, Virology Division, Bureau of Laboratories, and the Viral Diseases Division, Bureau of Epidemiology, CDC.)

Editorial Note

Although the percentage of positive animals tested to date from this distributor is small (0.15%), over the span of the period December 1973-March 1974 an estimated several hundred thousand hamsters have been distributed in the United States by this supplier. This may represent a significant potential for hamster-associated human disease.

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING MARCH 23, 1974 AND MARCH 24, 1973 (12th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
						1974	1973	1974	1974	1974	1974		
UNITED STATES	29	3	3,838	10	47	27	20	3	221	880	152	2	35
NEW ENGLAND	2	-	516	-	-	1	2	-	13	44	14	-	3
Maine *	-	-	27	-	-	-	-	-	-	7	-	-	-
New Hampshire *	-	-	21	-	-	-	-	-	2	2	-	-	-
Vermont	-	-	18	-	-	-	-	-	-	1	-	-	-
Massachusetts	2	-	228	-	-	-	2	-	6	16	14	-	1
Rhode Island	-	-	-	-	-	1	-	-	-	-	-	-	2
Connecticut	-	-	222	-	-	-	-	-	5	18	-	-	-
MIDDLE ATLANTIC	6	-	182	-	-	1	1	1	31	65	34	-	2
Upstate New York	4	-	71	-	-	-	-	-	2	27	2	-	-
New York City	1	-	94	-	-	-	-	-	8	15	-	-	1
New Jersey	-	-	NN	-	-	-	-	-	14	9	27	-	-
Pennsylvania *	1	-	17	-	-	1	1	1	7	14	5	-	1
EAST NORTH CENTRAL	5	-	1,642	-	-	1	8	-	61	175	7	1	4
Ohio	3	-	403	-	-	-	4	-	23	47	-	1	3
Indiana	-	-	147	-	-	-	-	-	-	11	-	-	-
Illinois	-	-	-	-	-	-	1	-	5	50	1	-	1
Michigan	2	-	643	-	-	1	3	-	28	62	6	-	-
Wisconsin	-	-	449	-	-	-	-	-	5	5	-	-	-
WEST NORTH CENTRAL	2	-	385	-	-	3	-	-	11	26	6	-	1
Minnesota	-	-	41	-	-	-	-	-	8	3	-	-	-
Iowa	-	-	234	-	-	-	-	-	1	8	4	-	-
Missouri	2	-	45	-	-	3	-	-	2	-	2	-	-
North Dakota	-	-	11	-	-	-	-	-	-	-	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	1	-	-	1
Nebraska	-	-	9	-	-	-	-	-	-	2	-	-	-
Kansas	-	-	45	-	-	-	-	-	-	12	-	-	-
SOUTH ATLANTIC	5	2	223	-	1	6	5	2	29	153	13	1	8
Delaware	-	-	16	-	-	-	-	-	-	1	-	-	-
Maryland	-	-	5	-	-	-	-	-	1	6	2	-	1
District of Columbia	-	-	5	-	-	-	-	-	-	1	-	-	2
Virginia *	2	-	14	-	-	1	-	-	4	14	3	1	2
West Virginia *	-	-	163	-	-	-	-	-	1	8	-	-	-
North Carolina	-	-	NN	-	-	-	1	-	4	31	1	-	1
South Carolina *	-	1	19	-	-	1	1	1	-	6	1	-	-
Georgia	-	1	1	-	-	1	-	-	-	19	-	-	-
Florida	3	-	-	-	1	3	3	1	19	67	6	-	2
EAST SOUTH CENTRAL	2	-	68	-	-	-	-	-	7	86	-	-	-
Kentucky	-	-	36	-	-	-	-	-	-	25	-	-	-
Tennessee	1	-	-	-	-	-	-	-	5	48	-	-	-
Alabama	1	-	31	-	-	-	-	-	-	9	-	-	-
Mississippi	-	-	1	-	-	-	-	-	2	4	-	-	-
WEST SOUTH CENTRAL	2	1	252	-	8	2	-	-	14	88	10	-	2
Arkansas	-	1	19	-	-	-	-	-	1	7	-	-	-
Louisiana	-	-	NN	-	-	-	-	-	4	6	5	-	1
Oklahoma	-	-	12	-	-	1	-	-	1	7	5	-	1
Texas *	2	-	221	-	8	1	-	-	8	68	-	-	-
MOUNTAIN	-	-	162	-	1	11	-	-	5	95	8	-	1
Montana	-	-	94	-	-	9	-	-	1	9	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	1	1	-	-
Wyoming	-	-	-	-	-	-	-	-	-	1	-	-	-
Colorado	-	-	25	-	-	-	-	-	-	43	-	-	1
New Mexico *	-	-	43	-	1	1	-	-	2	28	-	-	-
Arizona	-	-	-	-	-	-	-	-	-	7	2	-	-
Utah	-	-	-	-	-	1	-	-	2	1	5	-	-
Nevada	-	-	-	-	-	-	-	-	-	5	-	-	-
PACIFIC	5	-	408	10	37	2	4	-	50	148	60	-	14
Washington	-	-	379	10	34	1	-	-	5	10	24	-	-
Oregon	-	-	-	-	-	-	-	-	1	4	13	-	-
California *	4	-	-	-	1	1	4	-	39	127	21	-	14
Alaska	-	-	6	-	2	-	-	-	-	1	-	-	-
Hawaii	1	-	23	-	-	-	-	-	5	6	2	-	-
Guam *	-	-	-	-	-	-	-	-	-	-	-	-	1
Puerto Rico	-	-	30	-	-	-	-	-	1	-	18	-	-
Virgin Islands	-	-	12	-	-	-	-	-	-	-	-	-	-

*Delayed reports: Aseptic Meningitis: Texas 5 (1974)
 Brucellosis: N.M. 4 (1973)
 Chickenpox: Me 17, N.H. 5, Texas 409, Calif. 76 (1974)
 Diphtheria: N.M. 4 (1973), Texas 2 (1974)
 Encephalitis, primary: Texas 1

Hepatitis B: Texas 2, Guam 2 (1974)
 Hepatitis A: Penn. 4 (1973), N.H. 1, Va. delete 1,
 W. Va. delete 2, S.C. delete 1, Texas 77,
 Guam 6 (1974)
 Hepatitis Unspecified: W. Va. 2, S.C. delete 1 (1974)

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING MARCH 23, 1974 AND MARCH 24, 1973 (12th WEEK) - Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1974	Cumulative		1974	Cumulative		1974	Cum. 1974	1974	1974	Cum. 1974	Cum. 1974
		1974	1973		1974	1973						
UNITED STATES	957	6,596	7,962	37	372	396	1,836	20,273	25	414	3,161	10
NEW ENGLAND	59	364	3,156	2	21	20	245	2,918	-	52	280	-
Maine *	10	22	11	-	-	-	50	536	-	9	64	-
New Hampshire*	17	178	532	-	4	3	1	121	-	-	6	-
Vermont	-	1	59	-	-	2	-	9	-	1	6	-
Massachusetts	24	92	1,565	1	7	7	39	437	-	7	112	-
Rhode Island	2	45	251	1	4	1	110	942	-	3	13	-
Connecticut	6	26	738	-	6	7	45	873	-	32	79	-
MIDDLE ATLANTIC	375	2,491	671	8	44	58	171	1,576	4	37	350	1
Upstate New York *	6	33	162	6	21	19	39	300	3	8	78	-
New York City	14	119	379	2	12	13	17	224	1	7	40	-
New Jersey *	338	2,057	66	-	8	13	19	370	-	10	151	1
Pennsylvania	17	282	64	-	3	13	96	682	-	12	81	-
EAST NORTH CENTRAL	421	2,605	2,256	8	40	42	516	5,860	12	120	1,055	-
Ohio	210	1,144	115	4	12	23	200	1,539	-	33	147	-
Indiana	7	78	222	-	2	1	28	493	-	19	259	-
Illinois	59	443	619	2	7	5	26	531	7	8	142	-
Michigan	138	799	863	2	13	10	216	2,481	-	36	370	-
Wisconsin	7	141	437	-	6	3	46	816	5	24	137	-
WEST NORTH CENTRAL	7	169	209	6	24	34	192	1,625	-	22	81	2
Minnesota	-	76	14	5	10	-	-	25	-	1	3	-
Iowa	1	7	139	-	5	5	70	1,092	-	1	6	-
Missouri	1	24	12	1	5	17	84	254	-	6	20	2
North Dakota	5	18	28	-	1	3	-	8	-	-	6	-
South Dakota	-	1	-	-	-	2	-	2	-	-	-	-
Nebraska	-	1	1	-	-	3	2	43	-	-	3	-
Kansas	-	42	15	-	3	4	36	201	-	14	43	-
SOUTH ATLANTIC	27	232	279	4	77	73	254	2,201	2	27	248	3
Delaware	1	3	1	-	3	1	3	33	-	-	7	-
Maryland	17	19	-	-	12	13	1	39	-	-	-	-
District of Columbia	-	-	-	-	-	1	1	23	-	-	1	-
Virginia	-	12	19	-	11	8	12	154	-	4	12	1
West Virginia	6	60	93	-	2	1	163	1,312	-	2	48	-
North Carolina	-	2	4	-	15	14	NN	NN	-	15	20	-
South Carolina	-	13	19	-	9	6	10	27	-	3	88	-
Georgia	-	1	11	-	4	15	-	-	1	-	2	-
Florida	3	122	132	4	21	14	64	613	1	3	70	2
EAST SOUTH CENTRAL	5	47	153	-	35	24	149	2,010	-	17	197	2
Kentucky	3	36	52	-	16	6	54	771	-	6	54	-
Tennessee	1	1	77	-	17	12	52	1,007	-	10	109	1
Alabama	1	2	-	-	2	2	43	208	-	1	25	-
Mississippi	-	8	24	-	-	4	-	24	-	-	9	1
WEST SOUTH CENTRAL	4	83	329	6	78	59	106	1,356	-	9	112	1
Arkansas	-	4	22	1	5	7	6	90	-	-	7	-
Louisiana	-	6	30	-	13	8	2	63	-	1	7	-
Oklahoma	-	10	11	-	8	4	12	173	-	1	17	-
Texas *	4	63	266	5	52	40	86	1,030	-	7	81	1
MOUNTAIN	19	218	212	1	9	12	25	594	-	24	166	-
Montana	9	119	2	-	1	2	8	104	-	-	56	-
Idaho	4	44	101	-	1	1	-	128	-	-	5	-
Wyoming	-	3	7	-	-	-	-	4	-	-	-	-
Colorado	3	15	20	1	1	2	14	238	-	-	30	-
New Mexico	2	30	72	-	2	1	3	117	-	23	47	-
Arizona	1	4	9	-	3	3	-	-	-	-	-	-
Utah	-	-	1	-	1	1	-	3	-	1	5	-
Nevada	-	3	-	-	-	2	-	-	-	-	23	-
PACIFIC	40	387	697	2	44	74	178	2,133	7	106	672	1
Washington	2	25	301	1	7	6	77	820	2	9	171	-
Oregon	-	-	182	-	6	4	24	419	-	7	76	-
California	38	359	209	1	28	63	74	819	5	89	415	1
Alaska	-	-	-	-	2	1	2	57	-	-	-	-
Hawaii	-	3	5	-	1	-	1	18	-	1	10	-
Guam *	-	1	3	-	-	-	-	81	-	-	-	-
Puerto Rico	22	181	500	-	-	3	40	254	-	-	4	1
Virgin Islands	-	-	-	-	-	-	3	6	-	-	-	1

*Delayed reports: Measles: N.H. 9, N.J. 75, Texas 6 (1974)
Meningococcal Infections: Texas 15 (1974)
Mumps: Me. 46, N.H. 3, Texas 101, Guam 15 (1974)

Pertussis: Up State N.Y. 2, Texas delete 44 (1974)
Rubella: Me 23, N.J. 77, Texas 9 (1974)
Tetanus: Texas 1 (1973)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING MARCH 23, 1974 AND MARCH 24, 1973 (12th WEEK) - Continued

AREA	TUBERCULOSIS (New Active)		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES					RABIES IN ANIMALS	
	1974	Cum. 1974		1974	Cum. 1974	1974	Cum. 1974	1974	GONORRHEA		SYPHILIS (Pri. & Sec.)			Cum. 1974
			1974						Cumulative 1974 1973	1974	Cumulative 1974 1973			
UNITED STATES	685	6,521	24	5	81	-	14	16,745	193,736	172,766	481	5,423	5,754	558
NEW ENGLAND	33	294	-	-	2	-	-	219	4,698	4,557	8	110	151	3
Maine	3	24	-	-	-	-	-	25	373	257	-	10	6	1
New Hampshire	-	10	-	-	-	-	-	10	154	153	-	3	4	-
Vermont	-	3	-	-	-	-	-	7	151	56	1	1	8	-
Massachusetts	21	168	-	-	-	-	-	-	1,913	2,142	5	45	65	-
Rhode Island	5	32	-	-	2	-	-	38	440	552	-	3	6	2
Connecticut	4	57	-	-	-	-	-	139	1,667	1,397	2	48	62	-
MIDDLE ATLANTIC	154	1,115	1	3	15	-	9	1,774	24,615	22,737	91	1,204	1,304	3
Upstate New York	23	112	1	2	2	-	-	227	4,507	5,355	7	115	82	1
New York City	45	452	-	1	12	-	-	666	9,653	9,184	46	696	825	-
New Jersey	33	238	-	-	1	-	-	467	4,411	3,009	18	192	224	-
Pennsylvania	53	313	-	-	-	-	9	414	6,044	5,189	20	201	173	2
EAST NORTH CENTRAL	86	832	-	1	6	-	-	2,106	25,099	20,284	21	280	326	31
Ohio *	34	249	-	1	1	-	-	746	9,132	6,412	9	57	64	-
Indiana	2	118	-	-	-	-	-	247	2,603	2,404	2	42	68	1
Illinois	14	215	-	-	3	-	-	225	3,115	2,568	3	63	45	2
Michigan	36	250	-	-	2	-	-	595	7,422	6,666	8	91	128	-
Wisconsin	-	-	-	-	-	-	-	293	2,827	2,234	-	27	21	28
WEST NORTH CENTRAL	18	207	8	-	3	-	-	873	9,698	10,073	18	100	69	139
Minnesota	3	31	-	-	2	-	-	293	2,488	2,027	-	10	27	69
Iowa	-	16	-	-	-	-	-	120	1,241	1,305	-	9	8	28
Missouri	6	114	7	-	1	-	-	179	2,768	3,681	15	62	20	3
North Dakota	1	5	-	-	-	-	-	17	176	153	-	-	1	29
South Dakota	-	10	1	-	-	-	-	32	469	467	-	1	1	-
Nebraska	3	8	-	-	-	-	-	113	790	1,006	1	3	1	-
Kansas	5	23	-	-	-	-	-	119	1,766	1,434	2	15	11	10
SOUTH ATLANTIC	142	1,347	1	1	12	-	4	4,574	49,373	44,829	186	1,804	1,680	71
Delaware	6	24	-	-	-	-	-	42	739	653	-	24	20	-
Maryland	11	151	-	-	1	-	1	329	4,549	3,921	6	194	187	-
District of Columbia	5	92	-	-	-	-	-	356	3,890	3,845	12	159	189	-
Virginia	29	180	1	1	1	-	-	401	4,352	4,250	31	243	156	31
West Virginia	4	76	-	-	3	-	-	48	612	663	1	6	6	10
North Carolina *	20	242	-	-	-	-	-	813	6,647	6,459	33	198	131	1
South Carolina	19	134	-	-	-	-	-	460	5,649	4,839	17	235	260	2
Georgia	20	152	-	-	-	-	2	850	9,670	8,221	12	181	343	20
Florida	28	296	-	-	7	-	1	1,275	13,265	11,978	74	564	388	7
EAST SOUTH CENTRAL	38	592	6	-	13	-	-	1,844	16,604	14,731	24	295	415	77
Kentucky	-	120	1	-	7	-	-	144	2,035	1,795	1	63	179	51
Tennessee	17	187	3	-	4	-	-	608	6,574	5,496	6	111	94	18
Alabama	17	187	2	-	2	-	-	793	4,539	4,049	9	60	32	8
Mississippi	4	98	-	-	-	-	-	299	3,456	3,391	8	61	110	-
WEST SOUTH CENTRAL	83	876	6	-	5	-	-	2,284	28,074	22,651	33	537	655	137
Arkansas	4	115	2	-	1	-	-	147	2,556	2,931	2	26	47	17
Louisiana *	8	122	1	-	1	-	-	555	5,763	4,522	1	131	175	3
Oklahoma	-	50	2	-	-	-	-	182	2,215	2,468	-	36	52	27
Texas *	71	589	1	-	3	-	-	1,400	17,540	12,730	30	344	381	90
MOUNTAIN	36	211	2	-	7	-	1	689	7,140	6,632	11	125	192	16
Montana	2	17	-	-	-	-	-	36	415	378	-	-	-	-
Idaho	-	9	-	-	-	-	-	33	482	390	-	1	5	-
Wyoming	1	4	1	-	2	-	-	16	147	101	2	3	8	2
Colorado	11	27	-	-	-	-	1	229	2,062	1,823	4	30	68	-
New Mexico *	6	54	1	-	-	-	-	118	1,037	1,060	-	18	23	7
Arizona *	15	72	-	-	5	-	-	195	2,160	1,908	4	42	47	7
Utah	-	11	-	-	-	-	-	32	334	374	-	6	5	-
Nevada	1	17	-	-	-	-	-	30	503	598	1	25	36	-
PACIFIC	95	1,047	-	-	18	-	-	2,382	28,435	26,272	89	968	962	81
Washington	8	74	-	-	2	-	-	235	2,489	2,434	-	27	35	-
Oregon	5	43	-	-	-	-	-	219	2,308	2,408	-	19	22	8
California	75	838	-	-	16	-	-	1,823	22,359	20,249	88	909	862	72
Alaska	-	20	-	-	-	-	-	64	633	630	-	1	19	1
Hawaii	7	72	-	-	-	-	-	41	646	551	1	12	24	-
Guam *	-	3	-	-	-	-	-	-	38	76	-	-	-	-
Puerto Rico	5	139	-	1	1	-	-	46	649	902	28	220	171	18
Virgin Islands	-	-	-	-	-	-	-	10	61	48	-	7	6	-

*Delayed reports: Tuberculosis: Ohio delete 13 (1973), Ohio delete 1, N.C. delete 3, Texas 103 (1974)
Typhoid: N.M. 4 (1973), Texas 1 (1974), Ariz. 1 (1973)
Gonorrhea: La. delete 2, Texas 1626, Guam 3 (1974)

Syphilis: Texas 21 (1974)
Rabies: Texas 14 (1974)

Week No.

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING MARCH 23, 1974

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

Area	All Causes					Pneumonia and Influenza All Ages	Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year			All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
NEW ENGLAND	730	468	189	29	18	45	SOUTH ATLANTIC	1,248	696	348	111	38	54
Boston, Mass.	238	144	62	15	7	18	Atlanta, Ga.	146	62	47	19	4	2
Bridgeport, Conn.	38	24	11	—	1	2	Baltimore, Md.	177	102	43	18	6	3
Cambridge, Mass.*	26	20	5	1	1	6	Charlotte, N. C.	49	20	12	7	5	—
Fall River, Mass.	30	23	5	1	—	—	Jacksonville, Fla.	97	52	36	6	2	4
Hartford, Conn.	58	34	20	2	1	1	Miami, Fla.	117	63	39	12	1	4
Lowell, Mass.	25	13	12	—	—	1	Norfolk, Va.	70	37	24	5	2	10
Lynn, Mass.	19	16	3	—	—	2	Richmond, Va.	100	54	35	6	1	12
New Bedford, Mass.	31	24	7	—	—	3	Savannah, Ga.	42	26	6	3	3	3
New Haven, Conn.	45	30	11	1	—	2	St. Petersburg, Fla.	109	91	13	3	1	3
Providence, R. I.	56	33	15	3	2	4	Tampa, Fla.	72	42	17	4	5	5
Somerville, Mass.	12	8	4	—	—	—	Washington, D. C.	221	114	65	24	8	8
Springfield, Mass.	70	47	16	3	3	5	Wilmington, Del.	48	33	11	4	—	—
Waterbury, Conn.	36	23	6	1	2	—	EAST SOUTH CENTRAL	726	427	208	36	24	27
Worcester, Mass.	46	29	12	2	1	1	Birmingham, Ala.	131	70	37	12	7	2
MIDDLE ATLANTIC	3,299	2,040	875	205	89	206	Chattanooga, Tenn.	60	31	18	4	4	10
Albany, N. Y.	58	34	16	1	3	—	Knoxville, Tenn.	47	31	13	1	1	—
Allentown, Pa.	27	17	7	2	—	3	Louisville, Ky.	132	85	36	3	3	5
Buffalo, N. Y.	157	91	49	11	2	14	Memphis, Tenn.	172	110	45	7	6	—
Camden, N. J.	42	28	9	3	1	3	Mobile, Ala.	45	27	14	2	1	2
Elizabeth, N. J.	26	19	5	1	—	3	Montgomery, Ala.	47	19	15	3	2	4
Erie, Pa.	33	23	7	1	1	—	Nashville, Tenn.	92	54	30	4	—	4
Jersey City, N. J.	67	37	18	6	6	5	WEST SOUTH CENTRAL	1,309	712	366	108	68	60
Newark, N. J.	88	40	30	7	8	7	Austin, Tex.	52	21	20	5	2	7
New York City, N. Y.† ..	1,645	1,053	405	111	38	114	Baton Rouge, La.	41	21	14	4	1	2
Paterson, N. J.	47	31	9	2	3	11	Corpus Christi, Tex.	16	9	2	4	1	—
Philadelphia, Pa.	487	282	150	29	13	7	Dallas, Tex.	207	110	63	12	15	3
Pittsburgh, Pa.	190	99	63	11	5	9	El Paso, Tex.	45	27	9	2	5	8
Reading, Pa.	40	29	8	2	—	3	Fort Worth, Tex.	92	43	35	8	4	3
Rochester, N. Y.	133	87	36	4	3	11	Houston, Tex.	279	131	92	35	8	6
Schenectady, N. Y.	23	13	5	4	—	1	Little Rock, Ark.	76	51	16	2	3	5
Scranton, Pa.	47	32	14	—	—	5	New Orleans, La.	186	110	43	17	9	3
Syracuse, N. Y.	84	55	16	7	4	2	San Antonio, Tex.	162	88	41	11	14	8
Trenton, N. J.	44	28	11	2	2	2	Shreveport, La.	71	42	16	5	4	4
Utica, N. Y.	31	22	7	1	—	4	Tulsa, Okla.	82	59	15	3	2	11
Yonkers, N. Y.	30	20	10	—	—	2	MOUNTAIN	589	333	139	44	37	28
EAST NORTH CENTRAL	2,512	1,505	653	162	104	72	Albuquerque, N. Mex.	52	26	13	5	4	4
Akron, Ohio	65	42	11	4	5	—	Colorado Springs, Colo.	34	21	5	1	1	3
Canton, Ohio	37	29	3	1	2	2	Denver, Colo.	138	72	30	7	19	5
Chicago, Ill.	662	406	166	42	31	22	Las Vegas, Nev.	29	15	8	5	1	1
Cincinnati, Ohio	137	86	37	9	1	2	Ogden, Utah	29	16	9	3	1	3
Cleveland, Ohio	184	88	69	14	7	1	Phoenix, Ariz.	135	86	27	9	4	3
Columbus, Ohio	131	69	36	10	5	3	Pueblo, Colo.	23	15	5	2	—	4
Dayton, Ohio	102	56	27	8	6	3	Salt Lake City, Utah	64	34	14	8	5	2
Detroit, Mich.	312	173	85	30	9	6	Tucson, Ariz.	85	48	28	4	2	3
Evansville, Ind.	32	23	6	2	1	—	PACIFIC	1,767	1,143	417	100	53	37
Fort Wayne, Ind.	41	28	9	1	3	2	Berkeley, Calif.	19	13	4	2	—	—
Gary, Ind.	33	19	7	4	2	6	Fresno, Calif.	55	32	15	3	1	2
Grand Rapids, Mich.	67	42	14	5	4	7	Glendale, Calif.	24	18	4	2	—	—
Indianapolis, Ind.	188	109	54	10	6	2	Honolulu, Hawaii	58	30	17	7	—	—
Madison, Wis.	43	27	11	1	1	4	Long Beach, Calif.	121	85	27	4	3	4
Milwaukee, Wis.	137	93	34	5	3	3	Los Angeles, Calif.	548	374	114	31	19	8
Peoria, Ill.	36	21	9	—	5	1	Oakland, Calif.	93	61	23	5	1	—
Rockford, Ill.	37	27	6	1	1	3	Pasadena, Calif.	37	31	4	2	—	1
South Bend, Ind.	51	28	13	5	5	3	Portland, Oreg.	137	88	33	5	8	3
Toledo, Ohio	123	79	31	6	3	1	Sacramento, Calif.	61	36	14	7	1	1
Youngstown, Ohio	94	60	25	4	4	1	San Diego, Calif.	160	91	48	12	4	4
WEST NORTH CENTRAL	819	518	196	37	44	27	San Francisco, Calif.	154	94	45	7	5	6
Des Moines, Iowa	52	35	12	2	2	—	San Jose, Calif.	63	41	9	3	2	1
Duluth, Minn.	28	24	1	2	1	—	Seattle, Wash.	157	97	41	5	7	5
Kansas City, Kans.	26	17	6	1	—	3	Spokane, Wash.	52	35	12	2	2	2
Kansas City, Mo.	135	85	32	7	6	—	Tacoma, Wash.	28	17	7	3	—	—
Lincoln, Nebr.	43	26	9	—	6	2	Total	12,999	7,842	3,391	832	475	556
Minneapolis, Minn.	128	79	30	6	10	4	Expected Number	12,703	7,507	3,463	814	434	495
Omaha, Nebr.	101	56	33	2	10	3							
St. Louis, Mo.	189	114	48	6	14	4							
St. Paul, Minn.	74	54	15	4	—	5							
Wichita, Kans.	43	28	10	1	1	5							

† Delayed report for week ending March 16, 1974

* Estimate based on average percent of divisional total

NEUROTOXIC SHELLFISH POISONING — Florida

At midnight on March 10, 1974, a 20-year-old man from Englewood, Florida, began experiencing an unusual sensation around his face and his mouth which he described as "plastic". At 4:00 a.m., he awoke with abdominal cramps, severe leg cramps and tight leg muscles, and a burning facial sensation. At 6:30 a.m., he was taken to the emergency room of a hospital in Venice, Florida, where he appeared oriented, but quite agitated. Physical examination revealed no fever, a heart rate of 130/minute, blood pressure of 140/100 mmHg, and a respiratory rate of 20/minute. He seemed to respond to symptomatic treatment and returned home.

Approximately 3 hours later, he had leg cramps more severe than before, cramps in his arms and chest, a suffocating feeling, and abnormal posturing and numbness of his hands and feet. He returned to the emergency room where he was noted to be extremely agitated. He was again given symptomatic treatment, including sedatives, and was admitted to the hospital.

Neurologic examination was difficult because of the patient's agitation and continuous movement of his extremities, but results of routine laboratory tests performed on admission were normal. His hospital course was essentially unremarkable, and he was discharged on March 12.

Epidemiologic investigation revealed that approximately 3 hours before the patient became ill, he and 2 friends had eaten clams that they had dug earlier that day. The clams came from the beach along the bay near Englewood, where a red tide caused by *Gymnodinium breve* organisms has been reported. Part of the clams had been steamed in beer for 30-40 minutes, and part had been baked and then fried. The patient ate about 2 dozen cooked clams, 1 of his companions ate 10 cooked clams, and the other ate 1 raw clam. All 3 drank a large quantity of beer and smoked marijuana after their meal. Neither of the patient's friends became ill.

Uncooked clams obtained from the patient's refrigerator were assayed in the Florida State Health Department Laboratory and were found to contain approximately 118 mouse

units of neurotoxin per 100 gm of flesh. Clams obtained on March 12 at the same site on the beach where the implicated clams had been dug were found to have 113 mouse units of neurotoxin per 100 gm of flesh.

(Reported by T. S. Friedman, M.D., private physician, Venice, Florida; John F. McGarry, M.D., County Health Officer, Sarasota County; Nathan J. Schneider, Ph.D., M.P.H., Chief, Bureau of Laboratories, Vernon Keys, Administrator, Sea Resources Section, Bureau of Sanitary Engineering, E. Charlton Prather, M.D., Chief, Bureau of Preventable Diseases, Florida Division of Health; and an EIS Officer.)

Editorial Note

This is the second episode of neurotoxic shellfish poisoning associated with the *G. breve* red tide now occurring along the southwestern coast of Florida that has been reported to CDC; the first occurred in November 1973 (MMWR, Vol. 22, No. 48). The effect of the ingestion of neurotoxin in this case is difficult to assess because the patient's drinking a large quantity of beer and smoking marijuana may have obscured the classic symptoms of numbness and tingling around the mouth and face progressing to involvement of the hands and feet and sometimes accompanied by difficulty walking. His suffocation and abnormal posturing are consistent with a classic episode of hyperventilation syndrome. The patient's 2 companions did not become ill probably because they ate fewer clams.

Neurotoxic shellfish poisoning is a serious health problem associated with red tide, but the illness is uncommon, and death resulting from the poisoning has never been reported to CDC. Coastal waters in affected areas of Florida have been closed to commercial shellfish harvesting since October 1973.

The most common public health problem associated with the red tide is respiratory irritation caused by exposure to the aerosol of red tide water along areas close to the beach when wind, tide, and surf conditions are appropriate. However, no evidence of any chronic or serious effects associated with exposure to the aerosol has been reported.

CURRENT TRENDS

SURVEILLANCE OF REYE'S SYNDROME — United States

A total of 286 cases of suspect or confirmed Reye's syndrome have been reported from 28 states and the District of Columbia since December 1973: Arkansas (1), California (4), Colorado (1), District of Columbia (1), Georgia (4), Illinois (28), Indiana (7), Iowa (4), Kansas (8), Kentucky (2), Maryland (12), Massachusetts (2), Michigan (42), Minnesota (13), Missouri (6), Nebraska (5), New Jersey (15), New Mexico (3), New York (15), North Carolina (7), North Dakota (1), Ohio (45), Oklahoma (10), Pennsylvania (17), South Dakota (2), Tennessee (5), Texas (2), West Virginia (1), Wisconsin (23).

The nationwide death to case ratio remains 36%.

(Reported by the Viral Diseases Division, Bureau of Epidemiology, CDC.)

Editorial Note

Case report data indicate that the outbreak of Reye's syndrome is nearing an end. The peak onset of disease occurred in February. The vast majority of patients have had preceding upper respiratory illnesses 3-10 days prior to the onset of protracted nausea and vomiting. In an effort to obtain uniform epidemiologic data nationally, standardized case report forms are available on request from state health departments.

INTERNATIONAL NOTES
QUARANTINE MEASURES

The following changes should be made in the "Supplement — Vaccination Certificate Requirements for International Travel," MMWR, Vol. 22, No. 17:

Barbados

Smallpox — Caribbean: add Jamaica.

Belgium

Smallpox — Asia: add Turkey.

Canada

Smallpox — Change code to II. Delete note and add: A Certificate is also required from travelers who within 14 days

QUARANTINE MEASURES – Continued

before arriving in Canada have been in an endemic area, or who have been or suspected of having been in contact with a known or suspect case of smallpox.

Cook Islands

Smallpox – Oceania: add New Zealand.

Cyprus

Yellow Fever – add: A Certificate is also required from travelers arriving from countries in the endemic zones.

Dominican Republic

Smallpox – delete note, change code to II.

Egypt

Smallpox – Under code delete >1 year, add >3 months.

El Salvador

Smallpox – add: Except that NO Certificate is required from travelers who have been resident in the following countries for 14 days before arriving in El Salvador: America: USA, Canada.

Germany, Eastern

Smallpox – Delete first sentence and add: Except that NO Certificate is required from travelers who have been resident in the following countries for 14 days before arriving in Eastern Germany: Americas: add Cuba. Add: Asia: Japan, Mongolia, North Korea, North Viet-Nam.

Germany, Federal Republic of

Smallpox – Americas – delete: USA, Canada, and add: All countries. Add: Caribbean: All countries.

Guinea

Yellow Fever – delete note, change code to II.

Jamaica

Smallpox – Caribbean: add Barbados, Grenada, Trinidad and Tobago.

Korea, Republic of

Smallpox – change code to II.

Maldives

Yellow Fever – add code II.

Mexico

Yellow Fever – add code II >6 months.

Nauru

Cholera and Yellow Fever – Under code add >1 year.

Smallpox – under code add >6 months.

New Caledonia

Yellow Fever – add code II.

Poland

Smallpox – delete last sentence and add: However, a Certificate will be required from travelers arriving from these countries if any part is infected with smallpox.

Saint Vincent

Smallpox – Caribbean: add Guadeloupe, Jamaica, Martinique, Netherlands Antilles, Trinidad and Tobago.

Sudan

Yellow Fever – delete code II, add code I.

Erratum, Vol. 23, No. 9, p. 85

In the article "Follow-Up on *Salmonella eastbourne* Outbreak – United States, Canada," paragraph 5, correct sentence 1 to read: Canada has reported 39 cases of *S. eastbourne* infection from 7 of its 10 provinces.

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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 or case investigations of current interest to health officials.

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