CENTER FOR DISEASE CONTROL

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WEEKLY REPORT

For Week Ending May 15, 1971

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

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INTERNATIONAL NOTES

SMALLPOX SUMMARY – Worldwide

Between Jan. 1 and May 4, 1971, 13,843 cases of smallpox were reported to the World Health Organization (WHO), representing approximately the same number as were recorded for the same period last year. Over half of the cases in 1971, however, have been reported by Ethiopia which, in the 4 months since its eradication program started, has made remarkable progress in the development of case notification and surveillance. Excluding Ethiopia, the incidence throughout the world has declined this year by over 50 percent, the largest decrease in incidence yet observed in a single year. Based on a composite analysis of trends in smallpox incidence in the separate countries, it is estimated that approximately 25,000 cases will be recorded in 1971, a substantial decrease from the 131,000 cases recorded in 1967, the first year of the Smallpox Eradication Program.

CONTENTS

Cases by year and by continent since 1963 are shown in Table 1. The total of 30,812 cases recorded in 1970 is the lowest ever reported to WHO. A decreased incidence was noted in all endemic areas except eastern and southern Africa, where an increase in reported cases in Sudan and Ethiopia was balanced by a decreasing incidence in most other African countries.

The number of countries reporting one or more cases of smallpox has also steadily declined in the past 4 years. In

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

DISEASE	19th WEEK ENDED		MEDIAN	CUMULATIVE, FIRST 19 WEEKS		
	May 15, 1971	May 16, 1970	1966 - 1970	1971	1970	MEDIAN 1966 - 1970
Aseptic meningitis	21	30	30	851	525	538
Brucellosis	8	4	6	52	60	60
Diphtheria	2	34	1	66	154	53
Encephalitis, primary:						
Arthropod-borne & unspecified	20	24	24	408	384	382
Encephalitis, post-infectious	11	6	14	118	159	201
Hepatitis, serum	174	125	83	3,179	2,493	1,427
Hepatitis, infectious	1,252	1,116	929	22,924	20,734	15,967
Malaria	89	84	27	1,399	1,273	787
Measles (rubeola)	3,281	1,998	1,998	47,571	26,005	26,005
Meningococcal infections, total	47	48	50	1,246	1,259	1,350
Civilian	42	48	49	1,070	1,130	1,219
Military	5	–	2	176	129	131
Mumps	3,936	3,022	- - -	70,558	52,450	- - -
Poliomyelitis, total	–	–	–	6	2	6
Paralytic	–	–	–	4	2	5
Rubella (German measles)	1,895	3,045	2,283	26,384	36,369	28,443
Tetanus	3	–	3	30	30	41
Tularemia	1	–	2	29	31	52
Typhoid fever	2	1	7	90	78	98
Typhus, tick-borne (Rky. Mt. spotted fever)	3	10	5	17	21	21
Rabies in animals	100	43	79	1,725	1,256	1,479

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	–	Psittacosis: Pa. –1	12
Botulism: Calif. –1	1	Rabies in Man:	1
Leprosy: Calif. –1, Tex. -1	47	Rubella congenital syndrome: Calif. –1	28
Leptospirosis: Okla. –1	12	Trichinosis: Pa. –1	29
Plague:	–	Typhus, murine:	3

SMALLPOX – *(Continued from front page)*

Table 1
Reported Smallpox Cases, by Continent, 1963–1970

Continent	1963	1964	1965	1966	1967	1968	1969	1970
Africa								
North	5	–	–	–	–	–	–	–
West and Central	6,687	3,565	6,257	7,599	10,818	5,408	476	64
South and East	10,249	9,058	10,699	6,897	4,460	5,549	3,119	3,090
South America	7,385	3,713	3,632	3,665	4,537	4,375	7,410	1,795
Asia	108,405	58,906	91,558	76,184	111,340	64,766	43,032	25,841
Europe	129	–	1	72	5	2	–	22
Total	132,860	75,242	112,147	94,417	131,160	80,100	54,037	30,812

1967, 42 countries reported one or more cases of smallpox; in 1968, 38 countries; in 1969, 30 countries; and in 1970, 23 countries. Thus far in 1971, cases have been reported by only 13 countries, and in three of these (Kenya, Iran, Trucial Sheikhdoms), the cases could be attributed to importations from endemic areas.

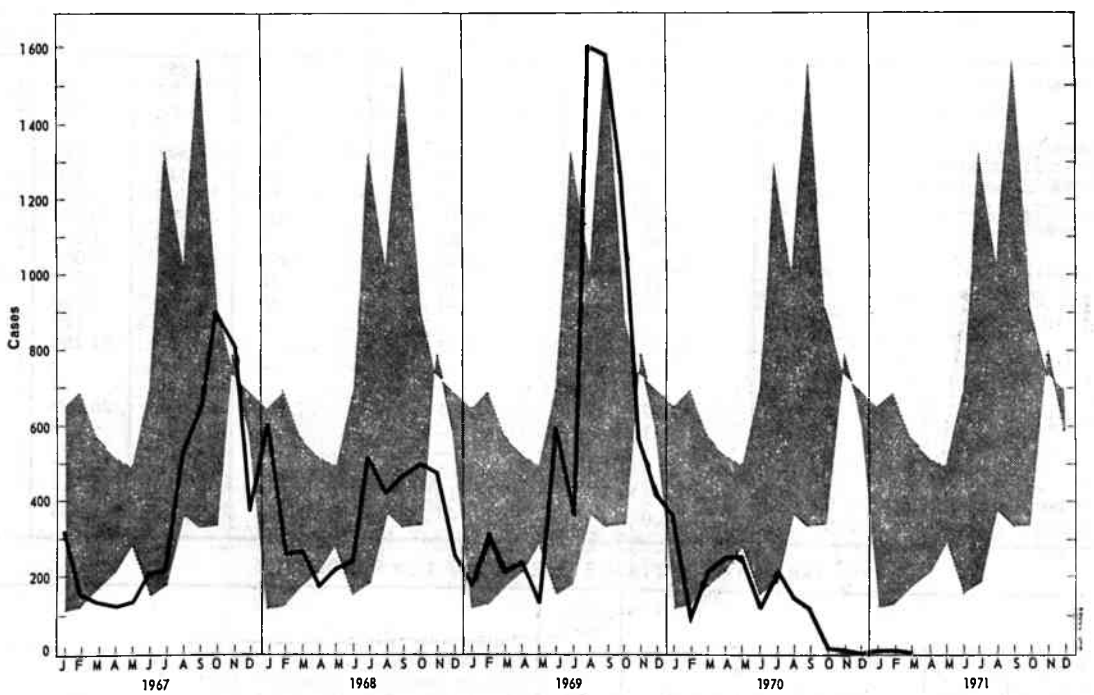
In 1967, 15 countries recorded rates exceeding 5.0 per 100,000 population. In 1971, only Ethiopia is expected to record a rate this high. As noted, Ethiopia started its eradication program in January 1971 and has rapidly developed its surveillance program. The apparent increase in incidence reflects the efficacy of this effort.

South America

Except for occasional imported cases in non-endemic areas, all cases recorded in South America since 1967 have occurred in Brazil, the only endemic country in the Americas. Smallpox incidence in Brazil increased sharply in 1969, coincident with the development of an intensified surveillance program (Figure 1). In 1970, however, in spite of more complete reporting of cases, the incidence declined steadily, and since mid-November, only one localized outbreak of 19 cases has been detected.

The program of systematic vaccination in Brazil which began in 1967 was completed in the first quarter of 1971. In

Figure 1
SOUTH AMERICA: SMALLPOX INCIDENCE, 1967–1971



Note: The grey area represents the range between the highest and lowest incidence reported during the five-year period 1962-1966..

this campaign, 79.3 million vaccinations were performed, which is equivalent to 85 percent of the population. Special vaccination campaigns were also conducted in the neighboring countries of Argentina, Bolivia, Ecuador, Colombia, Peru, and Venezuela.

While there are no known active foci of smallpox in the Americas, and while only one localized outbreak has been detected in the past 5 months, it is possible that limited transmission may yet persist in remote areas. Of special concern are those areas bordering Brazil and in the interior of Brazil, where surveillance is less complete than would be desired. Special surveillance programs incorporating an extensive search throughout such areas in Brazil and adjacent countries are now in progress. Intensive surveillance programs will need to be continued for at least 2 more years, since, as defined by the WHO Scientific Group on Smallpox Eradication, a period of 2 years must elapse following the last detected case before eradication can be provisionally assumed.

Africa – West and Central

In the 20 countries of western and central Africa, no cases of smallpox have been detected since May 1970 (Figure 2). Surveillance activities and programs of systematic vaccination are continuing in all areas. All cases of suspect smallpox are being investigated both clinically and virologically.

Of interest was the discovery in the course of surveillance activities last year of four cases of a smallpox-like illness in Liberia and one case in Sierra Leone. All occurred between Sept. 12 and Dec. 1, 1970, in unvaccinated inhabitants of remote villages in tropical rain forest areas. The cases were similar to one other case discovered in late August in the Democratic Republic of the Congo. From four of the cases, a virus closely resembling monkeypox was isolated at WHO Reference Centers in Moscow and Atlanta. These represent the first recognized human infections caused by this virus. The patients lived in areas heavily populated by monkeys, which constitute a source of food. No illnesses, however, were recognized to be occurring in monkeys at the time. In no instance did person-to-person transmission of virus occur.

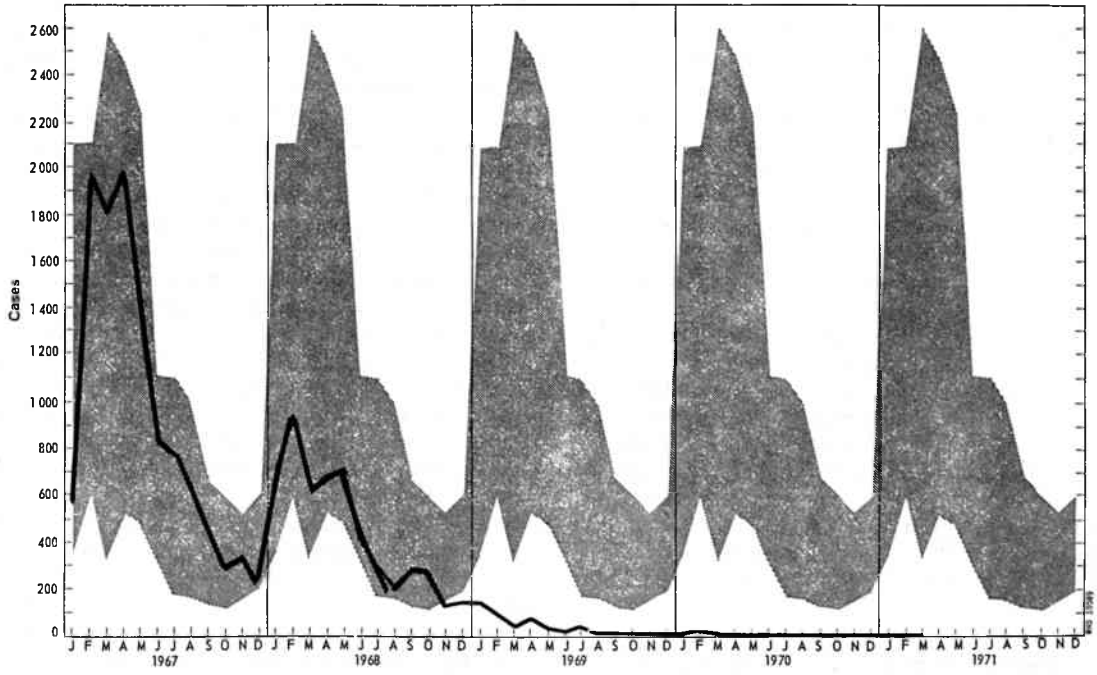
It is believed that occasional cases of this type may have occurred sporadically in past years but were not recognized due to the concurrence of extensive smallpox outbreaks. Special surveillance programs have been specifically developed to detect other cases of this type should they occur.

Africa – East and South

In eastern and southern Africa, smallpox transmission is believed to have been interrupted in all but six countries (Figure 3). In two of these six, Burundi and Southern Rhodesia, it is doubtful that transmission is continuing. In Burundi, 2.75 million of the 3.6 million inhabitants have been vaccinated in the systematic program, and no cases have been reported since October. Surveillance and reporting, however, are not yet sufficiently developed to assure the absence of cases in remote areas. In Southern Rhodesia, after 1 year

(Continued on page 174)

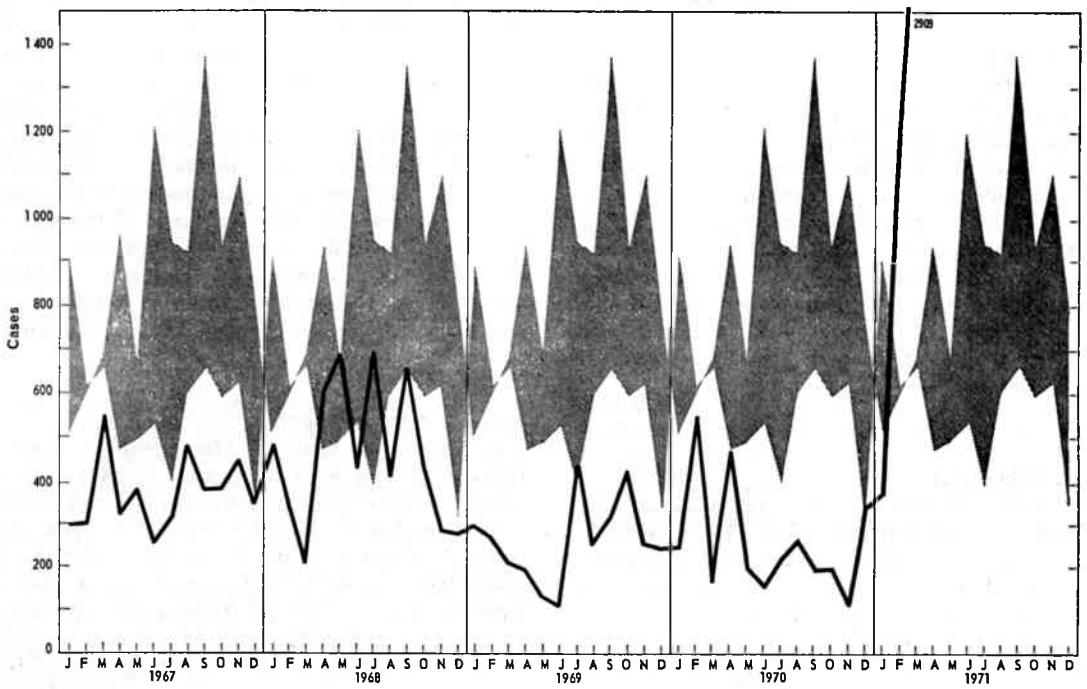
Figure 2
AFRICA, WEST AND CENTRAL: SMALLPOX INCIDENCE, 1967–1971



Note: The grey area represents the range between the highest and lowest incidence reported during the five-year period 1962-1966.

SMALLPOX – *(Continued from page 173)*

Figure 3
AFRICA, EAST AND SOUTH: SMALLPOX INCIDENCE, 1967–1971



Note: The grey area represents the range between the highest and lowest incidence reported during the five-year period 1962-1966.

without detected cases, two cases of "mild smallpox" were diagnosed in November, but their source was not traced and laboratory confirmation was not undertaken. As there were no known foci of smallpox within hundreds of miles, it is conceivable that these cases may have been misdiagnosed cases of varicella.

In the Democratic Republic of the Congo, the vaccination campaign has almost been completed. As of the end of March 1971, 21.0 million of the 23.6 million inhabitants had been vaccinated in a well-organized, intensive effort. To date, 52 cases have been recorded, compared to 420 cases for the same period in 1970. Surveillance activities are rapidly being intensified, and transmission is expected to be interrupted in 1971.

Only seven cases have been reported to WHO by South Africa in 1971. As in 1970, the cases all occurred in Transvaal Province. Essentially no other information is available regarding the extent or nature of control activities, nor is there any indication as to the probable completeness of reporting.

Over 95 percent of all cases in Africa are being reported by Ethiopia and Sudan. The high incidence of smallpox in these two countries represents a continuing threat to other countries throughout the continent. In February, Kenya recorded its first cases in almost 2 years as a result of infection from Ethiopia.

In Ethiopia, the program of smallpox eradication began in January 1971. Principal emphasis has been placed on the development of a reporting network and on surveillance activities. To date, 7,881 cases have been recorded, compared to only 141 cases in a comparable period last year. Surveillance teams are now fully operative in six of the 17 provinces, and all known outbreaks are being investigated and contained. Health services throughout the country are actively participating in vaccination programs.

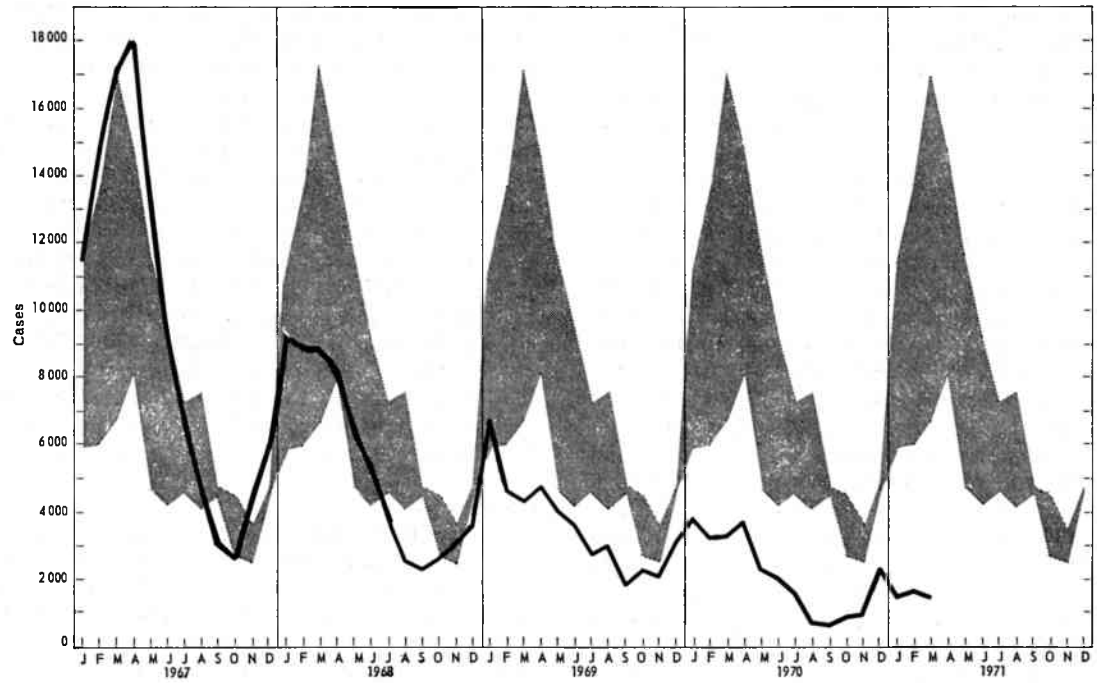
Four years after commencement of its eradication program, Sudan continues to experience substantial numbers of cases, primarily in the southern provinces. The systematic program of vaccination has progressed more slowly than had been hoped due to administrative and logistical problems. The completeness of notification has improved, but surveillance-containment activities are still limited in scope.

As a result of the substantial progress of eradication programs in Africa in the past 4 years, it is reasonable to expect that by the end of 1971, smallpox will be confined to two or three countries: Ethiopia, Sudan, and possibly South Africa. In Ethiopia and Sudan, however, the disease is highly endemic, and concerted efforts will be required for some time before interruption of transmission can be anticipated. In the meantime, other African countries should maintain an active vigilance for imported cases and a high level of immunity in their populations through vaccination.

Asia

Since 1967, the smallpox incidence in Asia has shown a steady and continuing decline (Figure 4) despite substantially more complete reporting in most countries.

Figure 4
ASIA: SMALLPOX INCIDENCE, 1967–1971



Note: The grey area represents the range between the highest and lowest incidence reported during the five-year period 1962-1966.

The most significant progress so far has been made by Indonesia, Afghanistan, and East Pakistan, each of which has placed a major emphasis on reporting, surveillance, and containment activities.

In Afghanistan, a reporting network has been established throughout the country and is steadily being strengthened. For more than a year, all cases have been investigated by special surveillance teams and containment measures have been effected. The increase in cases recorded in 1970 reflects the effectiveness of these activities. Special problems, however, have hampered efforts to interrupt transmission. These include transmission of infection by persons vaccinating with smallpox material instead of vaccinia (variolators) and by large migrant populations, as well as frequent introductions of smallpox from Pakistan. The program of systematic vaccination has been accelerated, and in 1970, over 3.9 million persons were vaccinated.

In East Pakistan, an intensive surveillance program, begun in January 1970, has apparently succeeded in interrupting transmission. No cases have been detected for more than 8 months, despite an active search. In West Pakistan, activities have principally been restricted to Punjab Province. Smallpox incidence in this province is declining, but not as rapidly as had been hoped. In the other provinces, smallpox is believed to be considerably under-reported, but a surveillance program in these provinces is starting.

Reported smallpox incidence in India has declined to very low levels in the southern states, but extensive outbreaks have continued in the northwestern states of Rajasthan and Haryana, with continuing dissemination of infection to neighboring areas. Since reporting is still greatly delayed and incomplete throughout India and since surveillance activities are still limited, a more exact appraisal of the overall status of smallpox in the country is not yet possible.

The program in Nepal has been steadily improving, and in 1970, 2.5 million of the 12.2 million inhabitants were vaccinated. In the past year, only one outbreak involving 17 cases has been detected. This resulted from an importation from Bihar State, India. Surveillance activities must be further developed to assure the interruption of transmission.

Indonesia

In Indonesia, smallpox incidence continues to decline and the geographical extent of infected areas to contract. Through May 4, 1971, 1,188 cases were reported to WHO, compared to 5,927 cases for the same period in 1970. At the end of April, only 35 villages were known to be infected, of which 30 were located in a localized geographical area in Sulawesi. Specially intensified surveillance programs are in progress, with the expectation that smallpox transmission will be interrupted within the next 6 months.

(Reported by the World Health Organization, Weekly Epidemiological Record, *Vol. 46, No. 19, May 7, 1971.)*

INTERNATIONAL NOTES
ANIMAL RABIES – Mexico

On Jan. 6, 1971, the California State Health Department learned that a family from Illinois traveling through Santa Barbara, California, had been exposed to rabies in Puerto Vallarta, Mexico. The epidemiologic investigation of the circumstances of their exposure raised the possibility that other persons from Mexico, Canada, and the United States might also have been exposed.

Puerto Vallarta is a popular international resort town on the Pacific coast in the State of Jalisco. Rabies is endemic in the wildlife and dog populations in the area, and in the past 6 years, two human deaths from rabies were attributed to bat bites and one to a dog bite. In the fall of 1970, an employee of a local hotel acquired a pet coati mundi (a racoon-like animal) which had been captured in the nearby hills. The animal was kept tied to a tree near the hotel. It was friendly, and hotel employees, guests, and visitors often played with it. On December 25, the animal suddenly became aggressive and bit several people. Its aggressive behavior continued, and it subsequently experienced diarrhea, weakness, and lethargy. On Jan. 1, 1971, the animal was found unconscious, and it died the following day. On January 4, rabies was confirmed on examination of the brain by the fluorescent antibody technique at the Department of Agriculture in Mexico City.

The hotel was notified by telegram of the test results, and all hotel employees were then interviewed. Those who had been in contact with the coati mundi were vaccinated. A list of guests who had stayed at the hotel from December 15 to 31 was obtained. The Center for Disease Control secured the names and addresses of the American and Canadian residents and immediately notified the appropriate State health departments and the Canadian health authorities.

At least 59 Mexican nationals may have been exposed; 53 of these were contacted and interviewed. Fourteen of those interviewed had had extensive contact and were vaccinated. Ninety-seven of the 102 American hotel guests were contacted by State and local health departments. As a result of television, radio, and newspaper publicity, 32 additional persons with possible exposure were also discovered. Twenty-three Americans were found to have been exposed to the animal, varying in extent from a scratch to multiple bites. All but two of the 23 received antirabies vaccination.

(Reported by Ernesto Córdova Ibarra, Chief of Health Services, Puerto Vallarta; Dr. Jorge Vilchis Villaseñor, Director, Epidemiology and Control Programs, National Campaign Against Rabies, Ministry of Health, Mexico; Richard Emmons, M.D., Epidemiologist, California State Viral and Rickettsial Diseases Laboratory; Medical Epidemiologist, Foreign Quarantine Program, CDC in Mexico City; and the Viral Diseases Branch, Epidemiology Program, CDC.)

Editorial Note

This incident points up aspects about rabies that are not new to public health workers; for example, one rabid animal can expose a surprisingly large number of people, and individuals living in or traveling through endemic areas should be alerted to the hazards of animal bites. A less familiar aspect of this incident is that, in effect, one rabid animal can expose people from an entire continent. Traditionally, health officials have been concerned about rabies at local, state, and national levels. Increasingly, there will be a need to know about rabies incidents that are not delimited by national borders.

EPIDEMIOLOGIC NOTES AND REPORTS
TRANSFUSION-INDUCED MALARIA – New York

On Dec. 23 and 25, 1970, a newborn infant underwent exchange transfusions at a New York City hospital due to hyperbilirubinemia associated with erythroblastosis fetalis. After the second transfusion, the patient's hematocrit was 46.5 percent, and she was discharged from the hospital. On Feb. 10, 1971, at 7 weeks of age, she was readmitted to the hospital due to persistent anemia and a temperature spike of 102.6° F. On admission, the hematocrit was 17 percent, and she received 100 cc of packed red blood cells. She was discharged the next day. Review of the peripheral blood smear prepared at the time of the second admission, however, before the additional transfusion was given, showed *Plasmodium vivax* parasites. The patient was recalled to the hospital and treated with chloroquine phosphate. She subsequently made an uneventful recovery.

The 2 units of blood administered in December were obtained from a blood collection agency in Fayetteville, North Carolina. One of the donors was a 26-year-old serviceman at Ft. Bragg, North Carolina. He denied having had malaria or a malaria-like illness, traveling outside the United States, and sharing needles and syringes. His peripheral blood smear was negative for malaria parasites, and his serum, when tested by the indirect fluorescent antibody test for malaria, gave an end-point dilution titer of 1:16 against *P. falciparum* antigen and was negative against *P. vivax* and *P. malariae* antigens. The second blood donor could not be located.

(Reported by Aaran A. Altar, Director of Blood Bank, Maimonides Medical Center, Brooklyn, New York; Kevin Cahill, M.D., Director, Tropical Disease Center, New York City; Howard B. Shookhoff, M.D., Chief, Tropical Medicine Division, Vincent F. Guinee, M.D., Director, Bureau of Preventable Diseases, New York City Health Department; the Laboratory Division, CDC; and an EIS Officer.)

SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS: By Reporting Areas April 1970 and April 1971 – Provisional Data

Reporting Area	April		Cumulative Jan-Apr	
	1971	1970	1971	1970
NEW ENGLAND	46	47	217	182
Maine	–	–	4	4
New Hampshire	–	1	1	2
Vermont	–	1	1	1
Massachusetts	22	32	105	112
Rhode Island	–	3	14	15
Connecticut	24	10	92	48
MIDDLE ATLANTIC	469	502	1,987	1,718
Upstate New York	42	35	157	124
New York City	321	341	1,352	1,241
Pa. (Excl. Phila.)	10	13	53	43
Philadelphia	19	19	58	63
New Jersey	77	94	367	247
EAST NORTH CENTRAL	220	211	860	862
Ohio	48	37	165	133
Indiana	30	39	110	164
Downstate Illinois	14	13	50	44
Chicago	62	76	270	289
Michigan	62	36	239	198
Wisconsin	4	10	26	34
WEST NORTH CENTRAL	32	38	158	180
Minnesota	6	7	24	30
Iowa	1	1	3	4
Missouri	17	22	96	91
North Dakota	1	1	1	2
South Dakota	2	–	5	6
Nebraska	1	4	9	11
Kansas	4	3	20	36
SOUTH ATLANTIC	458	413	1,858	1,590
Delaware	6	24	15	54
Maryland	44	41	179	163
District of Columbia	49	36	196	156
Virginia	25	18	122	82
West Virginia	2	–	9	7
North Carolina	43	41	152	178
South Carolina	21	40	97	125
Georgia	104	110	470	402
Florida	164	103	618	423

Reporting Area	April		Cumulative Jan-Apr	
	1971	1970	1971	1970
EAST SOUTH CENTRAL	105	64	357	208
Kentucky	32	19	113	51
Tennessee	24	12	100	62
Alabama	15	14	40	44
Mississippi	34	19	104	51
WEST SOUTH CENTRAL	323	352	1,341	1,141
Arkansas	26	15	84	74
Louisiana	71	88	228	228
Oklahoma	4	9	28	30
Texas	222	240	1,001	809
MOUNTAIN	33	47	164	192
Montana	–	–	–	1
Idaho	–	–	–	1
Wyoming	–	–	1	–
Colorado	3	4	14	20
New Mexico	7	10	33	37
Arizona	14	19	65	90
Utah	2	2	8	4
Nevada	7	12	43	39
PACIFIC	252	264	1,037	796
Washington	9	7	50	17
Oregon	1	–	6	8
California	238	255	971	765
Alaska	3	2	6	3
Hawaii	1	–	4	3
U. S. TOTAL	1,938	1,938	7,979	6,869
TERRITORIES	70	81	285	360
Puerto Rico	70	76	277	347
Virgin Islands	–	5	8	13

Note: Cumulative Totals include revised and delayed reports through previous months.

EPIDEMIOLOGIC NOTES AND REPORTS

CADMIUM CONTAMINATION OF EDIBLE "LOVE BEADS" – United States

Since January 1971, at least 15 individuals in Illinois, California, and Washington have become ill after eating candy beads. Symptoms usually began 10 to 60 minutes after ingestion and included severe stomach pains, vomiting, lethargy, and drowsiness approaching unconsciousness. Most patients recovered within several hours.

The implicated product is sold as a novelty under the brand "Candy Love Beads," and consists of approximately 85 multi-colored candy "love beads" on an elastic string. The string also contains an edible medallion which is imprinted with slogans such as "flower power" and "flower child." The Food and Drug Administration's (FDA) analysis of the medallion revealed over 1,000 parts per million of cadmium, a toxic heavy metal.

"Candy Love Beads" are manufactured in Hong Kong, and more than 600,000 have been sold in the United States since Jan. 1, 1971. Most of the material was distributed west of Mississippi River, but some was also sold in Illinois, Indiana, Kentucky, and Tennessee. The distributor is voluntarily recalling this product, as well as another product called "Luv Beads," since there is some indication that these have been produced by the same manufacturer. The FDA has recommended that all further purchases and consumption of these beads be discontinued immediately.

(Reported by the Los Angeles and Chicago Food and Drug Administration District Offices, and the Associate Commissioner for Compliance, Food and Drug Administration, Washington, D.C.)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED
MAY 15. 1971 AND MAY 16, 1970 (19th WEEK)

AREA	ASEPTIC MENIN-GITIS	BRUCEL-LOSIS	DIPH-THERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post In-fectious	Serum	Infectious			
	1971	1971	1971	1971	1970	1971	1971	1971	1970	1971	Cum. 1971
UNITED STATES.....	21	8	2	20	24	11	174	1,252	1,116	89	1,399
NEW ENGLAND.....	2	–	–	4	2	1	11	109	34	4	45
Maine.....	–	–	–	–	–	–	5	16	9	1	3
New Hampshire.....	–	–	–	–	–	–	–	9	3	–	1
Vermont.....	–	–	–	–	–	–	–	6	5	–	1
Massachusetts.....	–	–	–	–	2	–	1	45	–	2	32
Rhode Island.....	–	–	–	3	–	–	–	16	9	–	3
Connecticut.....	2	–	–	1	–	1	5	17	8	1	5
MIDDLE ATLANTIC.....	3	–	–	3	5	1	67	225	135	5	135
New York City.....	2	–	–	2	4	–	24	45	41	1	13
New York, Up-State...	1	–	–	–	–	–	9	71	33	–	34
New Jersey..*.....	–	–	–	1	–	–	30	72	36	–	59
Pennsylvania.....	–	–	–	–	1	1	4	37	25	4	29
EAST NORTH CENTRAL.....	2	–	–	8	9	–	27	213	187	7	64
Ohio.....	1	–	–	–	4	–	6	55	46	–	12
Indiana.*.....	1	–	–	1	–	–	–	9	28	–	5
Illinois.....	–	–	–	3	1	–	4	46	28	1	14
Michigan.....	–	–	–	2	4	–	17	103	76	6	26
Wisconsin.....	–	–	–	2	–	–	–	–	9	–	7
WEST NORTH CENTRAL.....	–	1	1	1	–	4	2	45	53	5	109
Minnesota.....	–	1	–	–	–	4	–	3	15	–	12
Iowa.....	–	–	–	1	–	–	–	6	6	–	12
Missouri.....	–	–	–	–	–	–	2	18	14	1	19
North Dakota.....	–	–	–	–	–	–	–	3	–	–	–
South Dakota.....	–	–	–	–	–	–	–	1	1	–	–
Nebraska.....	–	–	1	–	–	–	–	6	11	–	6
Kansas.....	–	–	–	–	–	–	–	8	6	4	60
SOUTH ATLANTIC.....	2	–	–	3	2	–	20	145	153	19	217
Delaware.....	–	–	–	–	–	–	–	4	1	–	1
Maryland.....	–	–	–	–	2	–	4	20	17	–	34
Dist. of Columbia....	–	–	–	–	–	–	–	3	–	1	1
Virginia.....	–	–	–	–	–	–	1	30	21	2	25
West Virginia.....	–	–	–	–	–	–	–	5	4	–	6
North Carolina.....	–	–	–	–	–	–	3	9	31	2	72
South Carolina.....	–	–	–	–	–	–	–	5	12	1	10
Georgia.....	–	–	–	–	–	–	–	15	12	10	43
Florida.....	2	–	–	3	–	–	12	54	55	3	25
EAST SOUTH CENTRAL.....	6	1	–	–	2	2	2	62	71	2	108
Kentucky.....	–	–	–	–	–	–	–	20	19	1	89
Tennessee.....	3	1	–	–	2	2	1	23	34	–	–
Alabama.....	3	–	–	–	–	–	1	15	15	1	15
Mississippi.....	–	–	–	–	–	–	–	4	3	–	4
WEST SOUTH CENTRAL.....	6	1	1	1	1	–	8	146	135	22	353
Arkansas.*.....	–	–	–	–	–	–	1	5	10	–	11
Louisiana.....	3	1	–	1	1	–	5	28	18	1	31
Oklahoma.....	–	–	–	–	–	–	–	11	5	2	50
Texas.....	3	–	1	–	–	–	2	102	102	19	261
MOUNTAIN.....	–	–	–	–	–	–	7	90	68	14	91
Montana.....	–	–	–	–	–	–	–	1	3	–	1
Idaho.....	–	–	–	–	–	–	1	7	1	–	3
Wyoming.....	–	–	–	–	–	–	1	5	2	–	1
Colorado.....	–	–	–	–	–	–	3	31	37	14	68
New Mexico.....	–	–	–	–	–	–	–	14	6	–	6
Arizona.....	–	–	–	–	–	–	1	11	16	–	8
Utah.....	–	–	–	–	–	–	1	9	3	–	3
Nevada.....	–	–	–	–	–	–	–	12	–	–	1
PACIFIC.....	–	5	–	–	3	3	30	217	280	11	277
Washington.....	–	–	–	–	1	–	–	20	29	–	1
Oregon.....	–	–	–	–	–	–	3	19	17	4	12
California.....	–	5	–	–	2	3	27	169	225	6	236
Alaska.....	–	–	–	–	–	–	–	–	3	1	4
Hawaii.....	–	–	–	–	–	–	–	9	6	–	24
Puerto Rico.*.....	–	–	–	–	–	–	–	18	26	–	13
Virgin Islands.....	–	–	–	–	–	–	–	–	–	–	–

* Delayed reports: Encephalitis, primary: Ind. delete 1
Hepatitis, serum: N.J. delete 2
Hepatitis, infectious: N.J. delete 2, Ark. delete 1, P.R. 10

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

MAY 15, 1971 AND MAY 16, 1970 (19th WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		POLIOMYELITIS		
		Cumulative			Cumulative			Cum.	Total	Paralytic	
	1971	1971	1970	1971	1971	1970	1971	1971	1971	1971	Cum. 1971
UNITED STATES.....	3,281	47,571	26,005	47	1,246	1,259	3,936	70,558	–	–	4
NEW ENGLAND.....	301	2,106	381	4	55	57	160	4,117	–	–	–
Maine.*	75	899	18	–	7	1	48	806	–	–	–
New Hampshire.....	1	102	17	–	8	5	–	502	–	–	–
Vermont.....	5	81	2	–	–	5	–	–	–	–	–
Massachusetts.*	16	215	265	1	20	26	54	1,033	–	–	–
Rhode Island.....	109	142	24	–	2	3	28	914	–	–	–
Connecticut.....	95	667	55	3	18	17	30	862	–	–	–
MIDDLE ATLANTIC.....	334	5,052	3,275	6	153	221	135	4,553	–	–	–
New York City.....	114	2,818	566	–	24	55	55	962	–	–	–
New York, Up-State...	14	329	131	2	40	43	NN	NN	–	–	–
New Jersey.....	108	674	1,320	3	41	83	51	1,288	–	–	–
Pennsylvania.....	98	1,231	1,258	1	48	40	29	2,303	–	–	–
EAST NORTH CENTRAL.....	848	9,524	6,023	8	132	143	1,746	28,903	–	–	–
Ohio.....	153	2,803	2,413	2	36	65	404	5,833	–	–	–
Indiana.....	247	1,676	192	–	8	15	302	4,091	–	–	–
Illinois.....	128	2,056	2,129	1	42	31	238	2,988	–	–	–
Michigan.....	149	1,022	751	3	36	28	391	6,589	–	–	–
Wisconsin.....	171	1,967	538	2	10	4	411	9,402	–	–	–
WEST NORTH CENTRAL.....	244	4,835	2,238	–	107	62	257	4,546	–	–	–
Minnesota.....	4	51	30	–	16	7	40	799	–	–	–
Iowa.....	106	1,853	101	–	7	8	142	2,434	–	–	–
Missouri.....	44	1,597	852	–	41	42	7	549	–	–	–
North Dakota.....	13	170	249	–	4	2	28	261	–	–	–
South Dakota.....	3	189	76	–	5	–	2	164	–	–	–
Nebraska.....	8	38	885	–	11	2	7	71	–	–	–
Kansas.....	66	937	45	–	23	1	31	268	–	–	–
SOUTH ATLANTIC.....	417	5,115	5,008	10	198	270	316	5,099	–	–	1
Delaware.....	2	29	208	–	1	3	6	99	–	–	–
Maryland.....	10	318	1,046	1	28	27	21	405	–	–	–
Dist. of Columbia....	2	9	315	–	8	1	4	69	–	–	–
Virginia.....	45	921	1,344	–	16	23	29	609	–	–	–
West Virginia.....	48	322	182	–	3	5	66	1,321	–	–	–
North Carolina.....	96	1,548	520	–	31	53	NN	NN	–	–	–
South Carolina.....	48	712	377	–	16	29	35	644	–	–	–
Georgia.....	4	178	5	3	14	28	–	1	–	–	1
Florida.....	162	1,078	1,011	6	81	101	155	1,951	–	–	–
EAST SOUTH CENTRAL.....	402	6,372	629	1	112	96	271	5,606	–	–	–
Kentucky.....	293	3,054	339	–	35	34	93	1,974	–	–	–
Tennessee.....	52	594	217	1	39	39	124	2,871	–	–	–
Alabama.....	53	1,394	40	–	22	18	52	669	–	–	–
Mississippi.*.....	4	1,330	33	–	16	5	2	92	–	–	–
WEST SOUTH CENTRAL.....	411	9,892	6,047	1	109	180	369	5,624	–	–	1
Arkansas.....	11	314	27	–	4	15	1	47	–	–	–
Louisiana.....	42	1,407	59	–	38	46	8	120	–	–	–
Oklahoma.*.....	9	671	305	–	6	11	8	152	–	–	–
Texas.....	349	7,500	5,656	1	61	108	352	5,305	–	–	1
MOUNTAIN.....	145	2,257	1,065	7	38	19	193	3,004	–	–	–
Montana.....	13	835	14	1	3	–	14	332	–	–	–
Idaho.....	18	176	19	2	4	3	–	107	–	–	–
Wyoming.....	7	79	8	1	2	1	32	224	–	–	–
Colorado.....	66	624	104	1	6	5	73	979	–	–	–
New Mexico.....	2	220	129	–	3	–	28	476	–	–	–
Arizona.....	17	219	757	–	8	8	46	802	–	–	–
Utah.....	22	101	19	–	9	2	–	84	–	–	–
Nevada.....	–	3	15	2	3	–	–	–	–	–	–
PACIFIC.....	179	2,418	1,339	10	342	211	489	9,106	–	–	2
Washington.....	40	677	172	2	16	32	205	4,160	–	–	1
Oregon.....	12	226	143	1	21	17	39	870	–	–	1
California.....	112	1,421	929	7	300	161	220	3,516	–	–	–
Alaska.....	1	9	44	–	–	–	–	64	–	–	–
Hawaii.....	14	85	51	–	5	1	25	496	–	–	–
Puerto Rico.....	10	183	728	–	1	3	28	601	–	–	–
Virgin Islands.....	–	5	5	–	–	1	1	10	–	–	–

*Delayed reports: Measles: Mass. delete 17, Miss. delete 5, Okla. 2
Mumps: Me. 4, Okla. 5

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

MAY 15, 1971 AND MAY 16, 1970 (19th WEEK) - CONTINUED

AREA	RUBELLA		TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971
UNITED STATES.....	1,895	26,384	3	30	1	29	2	90	3	17	100	1,725
NEW ENGLAND.....	126	1,077	1	1	–	–	1	5	–	–	12	143
Maine*	28	210	–	–	–	–	–	–	–	–	11	135
New Hampshire.....	–	27	–	–	–	–	–	–	–	–	–	1
Vermont.....	–	53	–	–	–	–	–	–	–	–	1	7
Massachusetts.....	58	493	1	1	–	–	1	5	–	–	–	–
Rhode Island.....	3	57	–	–	–	–	–	–	–	–	–	–
Connecticut.....	37	237	–	–	–	–	–	–	–	–	–	–
MIDDLE ATLANTIC.....	107	1,715	–	4	–	–	–	13	–	1	3	73
New York City.....	26	318	–	4	–	–	–	5	–	–	–	–
New York, Up-State..	19	311	–	–	–	–	–	5	–	–	3	71
New Jersey.....	31	389	–	–	–	–	–	2	–	–	–	–
Pennsylvania.....	31	697	–	–	–	–	–	1	–	1	–	2
EAST NORTH CENTRAL....	491	5,492	–	4	–	1	1	9	–	1	8	140
Ohio.....	63	651	–	1	–	1	–	5	–	–	2	37
Indiana.....	160	1,116	–	1	–	–	1	1	–	–	4	32
Illinois.....	70	955	–	2	–	–	–	1	–	1	2	25
Michigan.....	148	1,854	–	–	–	–	–	2	–	–	–	25
Wisconsin.....	50	916	–	–	–	–	–	–	–	–	–	21
WEST NORTH CENTRAL....	267	2,214	–	3	–	4	–	–	–	–	23	410
Minnesota.....	5	210	–	1	–	–	–	–	–	–	4	80
Iowa.....	62	516	–	–	–	–	–	–	–	–	6	112
Missouri.....	118	1,042	–	2	–	4	–	–	–	–	3	72
North Dakota.....	4	82	–	–	–	–	–	–	–	–	5	73
South Dakota.....	54	86	–	–	–	–	–	–	–	–	1	30
Nebraska.....	16	61	–	–	–	–	–	–	–	–	–	–
Kansas.....	8	217	–	–	–	–	–	–	–	–	4	43
SOUTH ATLANTIC.....	139	2,033	–	8	–	12	–	19	2	7	11	195
Delaware.....	–	36	–	–	–	–	–	1	–	–	–	–
Maryland.....	3	87	–	1	–	3	–	3	1	1	–	–
Dist. of Columbia...	1	4	–	–	–	–	–	–	–	–	–	–
Virginia.....	8	123	–	–	–	5	–	1	–	–	2	51
West Virginia.....	14	340	–	–	–	–	–	2	–	–	8	80
North Carolina.....	9	28	–	–	–	4	–	3	1	3	–	–
South Carolina.....	27	385	–	–	–	–	–	–	–	3	–	–
Georgia.....	–	–	–	2	–	–	–	2	–	–	–	40
Florida.....	77	1,030	–	5	–	–	–	7	–	–	1	24
EAST SOUTH CENTRAL....	129	2,223	–	5	–	6	–	6	–	3	7	188
Kentucky.....	25	911	–	–	–	2	–	2	–	1	2	102
Tennessee.....	100	1,126	–	2	–	2	–	2	–	1	4	57
Alabama.....	4	121	–	2	–	2	–	2	–	–	1	29
Mississippi.....	–	65	–	1	–	–	–	–	–	1	–	–
WEST SOUTH CENTRAL....	130	3,687	–	1	1	4	–	8	1	4	28	405
Arkansas.....	5	301	–	–	–	1	–	–	–	–	6	41
Louisiana.....	16	269	–	–	–	1	–	5	–	–	2	17
Oklahoma.....	–	46	–	–	1	2	–	–	1	4	7	203
Texas.....	109	3,071	–	1	–	–	–	3	–	–	13	144
MOUNTAIN.....	55	1,582	–	–	–	2	–	2	–	1	–	13
Montana.....	3	105	–	–	–	1	–	–	–	–	–	–
Idaho.....	–	32	–	–	–	–	–	–	–	–	–	–
Wyoming.....	18	846	–	–	–	–	–	–	–	–	–	5
Colorado.....	14	185	–	–	–	–	–	–	–	1	–	–
New Mexico.....	7	178	–	–	–	–	–	–	–	–	–	3
Arizona.....	10	192	–	–	–	–	–	2	–	–	–	4
Utah.....	3	31	–	–	–	1	–	–	–	–	–	–
Nevada.....	–	13	–	–	–	–	–	–	–	–	–	1
PACIFIC.....	451	6,361	2	4	–	–	–	28	–	–	8	158
Washington.....	127	1,040	–	–	–	–	–	–	–	–	–	–
Oregon.....	32	496	–	–	–	–	–	–	–	–	–	–
California.....	288	4,699	2	4	–	–	–	28	–	–	6	128
Alaska.....	–	35	–	–	–	–	–	–	–	–	2	30
Hawaii.....	4	91	–	–	–	–	–	–	–	–	–	–
Puerto Rico.....	–	9	–	3	–	–	–	1	–	–	6	31
Virgin Islands.....	–	–	–	–	–	–	–	–	–	–	–	–

* Delayed reports: Rubella: Me. 1

Week No. 19

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED MAY 15, 1971

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

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over		
NEW ENGLAND:	687	433	41	32
Boston, Mass.	223	134	22	14
Bridgeport, Conn.	39	27	1	2
Cambridge, Mass.	25	16	4	–
Fall River, Mass.	23	13	–	1
Hartford, Conn.	47	27	1	5
Lowell, Mass.	22	9	–	2
Lynn, Mass.	17	13	–	–
New Bedford, Mass.	27	20	1	–
New Haven, Conn.	56	40	1	2
Providence, R. I.	57	32	3	2
Somerville, Mass.	11	7	1	–
Springfield, Mass.	50	30	3	–
Waterbury, Conn.	33	22	2	4
Worcester, Mass.	57	43	2	–
MIDDLE ATLANTIC:	3,150	1,850	152	123
Albany, N. Y.	51	35	3	2
Allentown, Pa.	35	21	6	2
Buffalo, N. Y.	151	90	4	12
Camden, N. J.	42	18	4	4
Elizabeth, N. J.	32	23	1	1
Erie, Pa.	58	37	5	2
Jersey City, N. J.	59	33	2	3
Newark, N. J.	77	37	7	4
New York City, N. Y.†	1,499	877	60	46
Paterson, N. J.	50	28	1	2
Philadelphia, Pa.	398	220	3	23
Pittsburgh, Pa.	233	124	14	5
Reading, Pa.	73	35	2	–
Rochester, N. Y.	121	81	12	4
Schenectady, N. Y.	31	23	6	–
Scranton, Pa.	27	23	1	1
Syracuse, N. Y.	92	59	6	5
Trenton, N. J.	60	40	6	4
Utica, N. Y.	27	19	1	2
Yonkers, N. Y.	34	27	8	1
EAST NORTH CENTRAL:	2,615	1,479	64	118
Akron, Ohio	69	49	2	5
Canton, Ohio	45	29	4	4
Chicago, Ill.	667	355	11	29
Cincinnati, Ohio	196	108	3	6
Cleveland, Ohio	198	101	4	8
Columbus, Ohio	88	49	3	5
Dayton, Ohio	87	44	1	2
Detroit, Mich.	330	163	7	16
Evansville, Ind.	66	49	3	–
Flint, Mich.	54	26	5	9
Fort Wayne, Ind.	50	28	3	1
Gary, Ind.	39	20	1	4
Grand Rapids, Mich.	53	29	3	2
Indianapolis, Ind.	178	106	3	11
Madison, Wis.	23	10	3	4
Milwaukee, Wis.	147	93	2	2
Peoria, Ill.	53	35	–	1
Rockford, Ill.	50	36	1	1
South Bend, Ind.	53	28	4	2
Toledo, Ohio	112	80	1	6
Youngstown, Ohio	57	41	–	–
WEST NORTH CENTRAL:	824	509	17	31
Des Moines, Iowa	59	37	–	2
Duluth, Minn.	31	26	2	–
Kansas City, Kans.	32	15	–	6
Kansas City, Mo.	123	69	2	2
Lincoln, Nebr.	41	24	2	2
Minneapolis, Minn.	103	63	2	4
Omaha, Nebr.	86	50	2	2
St. Louis, Mo.	244	156	6	9
St. Paul, Minn.	65	48	–	2
Wichita, Kans.	40	21	1	2
Las Vegas, Nev.*	11	7	–	–

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over		
SOUTH ATLANTIC:	1,177	619	56	41
Atlanta, Ga.	141	63	4	6
Baltimore, Md.	223	111	6	7
Charlotte, N. C.	49	25	–	3
Jacksonville, Fla.	79	40	4	1
Miami, Fla.	112	61	6	4
Norfolk, Va.	55	31	7	4
Richmond, Va.	73	34	5	2
Savannah, Ga.	49	26	5	3
St. Petersburg, Fla.	112	86	6	4
Tampa, Fla.	75	37	7	1
Washington, D. C.	165	83	5	3
Wilmington, Del.	44	22	1	3
EAST SOUTH CENTRAL:	681	346	24	41
Birmingham, Ala.	103	48	2	7
Chattanooga, Tenn.	45	23	3	1
Knoxville, Tenn.	43	29	4	–
Louisville, Ky.	169	86	7	9
Memphis, Tenn.	146	71	5	13
Mobile, Ala.	49	21	–	4
Montgomery, Ala.	36	21	1	4
Nashville, Tenn.	90	47	2	3
WEST SOUTH CENTRAL:	1,260	646	35	73
Austin, Tex.	37	19	3	4
Baton Rouge, La.	35	12	3	2
Corpus Christi, Tex.	37	26	–	2
Dallas, Tex.	160	77	3	7
El Paso, Tex.	51	31	2	4
Fort Worth, Tex.	85	52	5	5
Houston, Tex.	252	123	1	10
Little Rock, Ark.	51	27	–	3
New Orleans, La.	193	92	3	14
Oklahoma City, Okla.	106	42	4	7
San Antonio, Tex.	140	76	2	9
Shreveport, La.	48	29	2	4
Tulsa, Okla.	65	40	7	2
MOUNTAIN:	452	251	17	26
Albuquerque, N. Mex.	30	17	4	1
Colorado Springs, Colo.	29	12	5	1
Denver, Colo.	106	59	2	5
Ogden, Utah	25	20	1	–
Phoenix, Ariz.	114	62	2	8
Pueblo, Colo.	22	13	2	–
Salt Lake City, Utah	60	28	1	6
Tucson, Ariz.	66	40	–	5
PACIFIC:	1,553	949	36	60
Berkeley, Calif.	20	13	–	–
Fresno, Calif.	50	31	2	3
Glendale, Calif.	24	18	1	–
Honolulu, Hawaii	50	23	1	2
Long Beach, Calif.	76	44	4	2
Los Angeles, Calif.	447	285	7	15
Oakland, Calif.	81	44	1	5
Pasadena, Calif.	25	22	2	–
Portland, Oreg.	147	96	3	6
Sacramento, Calif.	64	33	–	5
San Diego, Calif.	103	61	1	2
San Francisco, Calif.	180	95	6	5
San Jose, Calif.	38	26	2	–
Seattle, Wash.	156	98	5	8
Spokane, Wash.	61	37	1	5
Tacoma, Wash.	31	23	–	2
Total	12,399	7,082	442	545
Expected Number	12,784	7,381	445	512
Cumulative Total (includes reported corrections for previous weeks)	256,889	149,510	10,610	11,288

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

†Delayed Report for Week ended May 8, 1971

TUBERCULOSIS – Florida

In September 1969, a 65-year-old man was admitted to a hospital in Miami with pulmonary edema secondary to hypertension and coronary artery disease. He spent 3 hours in the emergency room, 57 hours in a 45-bed ward, and 67 hours in a smaller, 4-bed special care area where he died. Postmortem examination revealed active pulmonary tuberculosis with massive caseation.

Due to the advanced state of the patient's disease and the possibility of significant spread to exposed hospital personnel, 102 hospital employees, who were tuberculin negative in 1968, were tested in October 1969 with the Mantoux tuberculin test using PPD intramuscularly. Twenty-six of the 102 (25 percent) converted to positive, suggesting recent exposure. (In 1968, 3.2 percent of previously negative hospital personnel in contact with patients had been tuberculin positive.) Two of the 26 employees with positive tests were actively symptomatic. One was a nurse's aide who had radiographic evidence of pulmonary tuberculosis and a positive sputum culture. The other, a house officer, had a negative chest X-ray but had afternoon sweats, fever, and weight loss.

A similar group of 20 hospital employees, tuberculin negative in 1968, with no known exposure to the patient was skin tested, and only one of these had a positive reaction. All 20 were employees who came in close and prolonged contact with other tuberculosis patients.

Further investigation showed that those working on the 45-bed ward with minimal exposure to the patient had a conversion rate of 13 out of 44, whereas similar personnel working in the 4-bed ward showed a rate of 0 out of 12. The 45-bed ward has central air-conditioning that recycles 70 percent of the air, with no bacterial filter. The 4-bed ward, although air-conditioned, has wall units that are 40 feet away from double doors opening to the outside. These doors are opened frequently or left open, thus exposing the room to outside air.

Although unknown differential exposure to tuberculosis patients might account for the differences in conversion rates of these two groups, the available evidence suggests airborne spread of tubercule bacilli throughout the air-conditioning system in the 45-bed ward.

(Reported by Leilani Kicklighter, R.N., Nurse Epidemiologist, Jackson Memorial Hospital, Miami, Florida; N. Joel Ehrenkranz, M.D., Professor and Acting Chairman, Department of Epidemiology and Public Health, University of Miami School of Medicine, Florida; Milton Saslow, M.D., Director, Dade County Department of Public Health; and E. Charlton Prather, M.D., Chief, Bureau of Preventable Diseases, Florida State Division of Health.)

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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.

Address all correspondence to

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