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WEEKLY REPORT

For Week Ending June 10, 1972

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE — HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

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EPIDEMIOLOGIC NOTES AND REPORTS
TYPHOID FEVER CONTRACTED IN MEXICO
Louisiana and Arizona

Since the epidemic of typhoid fever began in Mexico (MMWR, Vol. 21, No. 21), three cases have been reported in American tourists to that country. The case reports are summarized below.

Case 1 (Louisiana): On April 4, 1972, a 16-year-old boy from Lafayette, Louisiana, had onset of nausea, vomiting, and diarrhea which lasted for 4-5 days. The patient was asymptomatic until April 23, when he experienced a severe headache and malaise. These symptoms persisted, and on April 30, he was hospitalized with fever of undetermined origin.

Blood specimens cultured on May 3 and 5 and a bone marrow specimen cultured on May 12 yielded *Salmonella typhi*. The organisms showed a phage lysis pattern, degraded Vi(A), similar but not identical to phage type A and were sensitive to ampicillin and resistant to chloramphenicol.

The patient was given 800 mg of ampicillin by mouth every 4 hours on May 9 and 1 gm intravenously every 4 hours on May 10. Ampicillin was discontinued on May 14. Chloramphenicol 500 mg by mouth 4 times a day was started on May 14 and continued until May 21. The patient was

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

DISEASE	23rd WEEK ENDING		MEDIAN 1967-1971	CUMULATIVE, FIRST 23 WEEKS		
	June 10, 1972	June 12, 1971		1972	1971	MEDIAN 1967-1971
Aseptic meningitis	52	70	48	840	1,081	688
Brucellosis	4	9	7	62	69	72
Chickenpox	4,118	– – –	– – –	98,063	– – –	– – –
Diphtheria	2	8	3	49	79	79
Encephalitis, primary:						
Arthropod-borne and unspecified	17	33	28	359	503	453
Encephalitis, post-infectious	11	9	9	126	153	212
Hepatitis, serum (Hepatitis B)	206	143	93	4,224	3,784	2,289
Hepatitis, infectious (Hepatitis A)	1,114	1,111	833	25,252	27,464	21,019
Malaria	7	73	50	561	1,633	1,161
Measles (rubeola)	1,208	2,416	1,614	22,649	59,064	33,199
Meningococcal infections, total	21	33	43	745	1,416	1,429
Civilian	18	33	41	712	1,239	1,283
Military	3	–	1	33	177	146
Mumps	1,656	3,382	– – –	48,189	85,714	– – –
Rubella (German measles)	650	1,302	1,633	17,842	32,510	36,112
Tetanus	1	2	2	40	41	51
Tuberculosis, new active	598	– – –	– – –	14,552	– – –	– – –
Tularemia	2	2	3	45	42	59
Typhoid fever	5	7	7	129	114	116
Typhus, tick-borne (Rky. Mt. spotted fever)	15	16	16	89	63	63
Venereal Diseases:†						
Gonorrhea	13,758	11,783	– – –	301,072	269,080	– – –
Syphilis, primary and secondary	536	436	– – –	10,599	10,301	– – –
Rabies in animals	92	78	68	1,968	2,066	1,726

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	–	Poliomyelitis, total:	5
Botulism:	–	Paralytic:	5
Congenital rubella syndrome:	16	Psittacosis: Calif. – 2	14
Leprosy: Calif. – 1, Tex. – 1	46	Rabies in man:	1
Leptospirosis: Ohio – 1	8	Trichinosis:	38
Plague:	1	Typhus, murine: Tex. – 1	8

†Numbers for 1971 are estimated from quarterly reports to the Venereal Disease Branch, CDC

TYPHOID FEVER – Continued

again placed on ampicillin 500 mg on May 19. He was discharged on May 22 and continued to receive ampicillin.

The patient and four other persons had entered Mexico at Brownsville, Texas, on March 30 and traveled via Ciudad Valles, Tampico, and Tuxpan to Tulancingo, Hidalgo, where they spent April 2 and 3. They returned by the same route and arrived in Brownsville on April 4. Three of the other persons experienced diarrhea of a few days duration on or about April 4 but have otherwise remained well.

(Reported by James J. Fournet, M.D., private physician, Lafayette, Louisiana; Edith C. Fontan, Nursing Supervisor, Lafayette Parish Health Unit; Charles T. Caraway, D.V.M., Chief, Section of Epidemiology, and George H. Hauser, M.D., Director, State Laboratory, Louisiana State Department of Health.)

Case 2 (Arizona): On May 16, 1972, a 21-year-old male resident of Portland, Oregon, was admitted to the Pima County General Hospital in Tucson, Arizona, with a 10-day history of fever, chills, and anorexia. On admission, the patient was diaphoretic with a temperature of 104°F., had a slightly enlarged liver, and generalized mild lymphadenopathy. Laboratory findings revealed an elevated SGOT, Widal test positive with O titer of 1:640, and H titer of 1:320. Blood and stool cultures were positive for *S. typhi*. The strain was multiply sensitive, including sensitive to chloramphenicol. The patient's temperature returned to normal during treatment with intravenous ampicillin. He left the hospital on May 20 and returned to his home in Portland, where he is under medical surveillance.

A week before the onset of his symptoms, the patient had returned to the United States from a 6-week visit to Mexico. During his visit, he traveled by car throughout the country.

(Reported by Clarence L. Robbins, M.D., Communicable Disease Officer, Pima County Health Department; Frank J. Marks, Epidemiological Assistant, Philip M. Hotchkiss, D.V.M., State Epidemiologist, H. Gilbert Crecelius, Ph.D., Director, State Laboratory, Arizona State Department of Health; Frank Watts, D.V.M., Communicable Disease Officer, Multnomah County Medical Services, Portland, Oregon; and Monroe A. Holmes, D.V.M., Assistant Epidemiologist, Oregon State Health Division.)

Case 3 (Arizona): On May 31, 1972, a 13-year-old boy in Tucson, Arizona, was admitted to the Tucson Medical Center with a 7-day history of headache, vomiting, chills, and spiking temperatures to 104.6°F. Admission physical examination revealed splenomegaly and minimal meningismus; no rose spots were noted. The white blood cell count was 2,600. Several blood cultures and a bone marrow culture were positive for *S. typhi* which was resistant to chloramphenicol, streptomycin, sulfadiazine, and tetracycline. The patient was treated intravenously with 200 mg/kg ampicillin daily in divided doses and by June 4, he was afebrile.

On May 16, the patient and his family had returned to their home in Tucson after a 3-month visit to Mexico. They spent most of their time in Mexico City, but they also visited several nearby towns and cities.

(Reported by Gilbert Burkel, M.D., Joseph B. Seagle, M.D., private physicians, Tucson, Arizona; Vincent Fulginetti, M.D., Chairman, Department of Pediatrics, University of Arizona Medical School, Tucson; Clarence L. Robbins, M.D., Communicable Disease Officer, Pima County Health Department; Frank J. Marks, Epidemiological Assistant, Philip M. Hotchkiss, D.V.M., State Epidemiologist, and H. Gilbert Crecelius, Ph.D., Director, State Laboratory, Arizona State Department of Health.)

Editorial Note

The fact that only three cases of typhoid have been reported so far among the hundreds of thousands of American travelers who have visited in Mexico since early 1972 emphasizes the minimal risk of this disease to travelers. This risk can be made even smaller if travelers exercise caution in selecting food and drink.

Cases 1 and 3 are the first reports of typhoid fever in American tourists infected with the chloramphenicol-resistant strain responsible for the outbreak in Mexico. The strains of *S. typhi* isolated from these patients have an antibiogram identical to the multiply-resistant strain of *Shigella dysenteriae* 1, the etiologic agent of the Central American epidemic of bacillary dysentery. This pattern of drug resistance is mediated by an episome and is characterized by resistance to chloramphenicol, tetracycline, streptomycin, and sulfadiazine and by sensitivity to most other commonly used drugs. This antibiogram has served as a useful epidemiologic marker. Chloramphenicol resistance should be determined for all isolates of *S. typhi* not only for the epidemiologic evaluation but also because therapeutic failures with chloramphenicol in Mexican typhoid cases have been reported *(1)*. Patients who experience disease clinically compatible with typhoid fever and who give a history of exposure in the typhoid epidemic focus in Mexico within the recognized incubation period should be treated with ampicillin parenterally pending sensitivity tests. The report of Case 2 indicates that typhoid acquired in Mexico can be caused by endemic or multiply-sensitive strains, as well as epidemic strains.

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RECOMMENDATION OF THE PUBLIC HEALTH SERVICE ADVISORY COMMITTEE ON IMMUNIZATION PRACTICES

IMMUNE SERUM GLOBULIN FOR PROTECTION AGAINST VIRAL HEPATITIS

INTRODUCTION

The term "viral hepatitis" as commonly used applies to 2 diseases that are clinically quite similar but virologically, immunologically, and epidemiologically distinct. These diseases are hepatitis-A (formerly infectious hepatitis) and hepatitis-B (formerly serum hepatitis). Any other viral infection that affects the liver, producing an inflammatory response or "hepatitis" is not customarily included under the term viral hepatitis.

Immune serum globulin (ISG) is highly effective protection against the clinical manifestations of hepatitis-A but ineffective for hepatitis-B. Therefore, accurate diagnosis of the

kind of viral hepatitis, insofar as is possible with methods presently available, is crucial to the effective use of ISG. Clinically, it is extremely difficult to distinguish between individual cases of hepatitis-A and hepatitis-B, but discrimination between these diseases often is possible, based on careful evaluation of epidemiologic evidence and blood tests for hepatitis-B.

Viral hepatitis is often acquired as a result of a particular kind of exposure, and terms such as "transfusion-associated," "hemodialysis-associated," "chimpanzee-associated," and "syringe-" or "needle-associated" help characterize the mode of transmission.

Hepatitis-A

Hepatitis-A is thought to be caused by a virus transmitted principally by the fecal-oral route under conditions of poor sanitation and close contact with infected persons. Characteristically, the illness produced is of abrupt onset with fever, malaise, anorexia, nausea, abdominal discomfort, and jaundice. Morbidity is variable and mortality quite low (less than 1 percent). The usual incubation period of hepatitis-A is 15-50 days (average 25-30). Stools from patients with hepatitis-A have been shown to be infective as long as 2-3 weeks before and 2 weeks after the onset of jaundice. Blood is infective at least 2 weeks before but less than 1 week after the appearance of jaundice, so parenteral transmission of hepatitis-A is also possible.

Hepatitis-B

Hepatitis-B is thought to be caused by a virus, distinctive from that associated with hepatitis-A, transmitted principally by parenteral routes. Insidious onset of illness, anorexia, malaise, nausea, vomiting, abdominal discomfort, and jaundice are characteristic. Morbidity is variable; mortality exceeds that of hepatitis-A. Exposure is usually through blood transfusion or contaminated needles. The incubation period is characteristically long, usually 2-6 months; however, some hepatitis-B cases with incubation periods as short as 1-2 months have been observed. Non-parenteral transmission of hepatitis-B also occurs and probably contributes to the occupational hazard for those who work in blood banks, or renal dialysis units, or are otherwise in direct contact with infective blood. The exact mechanism and frequency of these non-parenteral transmissions are under intensive study.

Virus-like particles, termed the hepatitis-B antigen (HBAg), have been detected in the serum of many patients with hepatitis-B. These particles (which were originally tagged "Australia antigen" and then "hepatitis-associated antigen") appear to persist from about 4 weeks before onset of jaundice to 4-5 weeks or more after onset. In a small proportion of patients, an HBAg-carrier state develops. HBAg is found in a large proportion of patients with transfusion-associated hepatitis and with hepatitis associated with parenteral drug abuse. It is detectable in hepatitis patients who cannot recall any possible parenteral exposure and in some completely asymptomatic persons.

Blood with HBAg is very likely to be infective. Blood banks use HBAg detection in screening programs aimed at eliminating hepatitis-B transmission through blood transfusion. Antibody to HBAg (anti-HBAg or HBAb) in the serum of hepatitis-B patients during convalescence has been demonstrated. Its role in protection is under investigation.

Hepatitis Surveillance

Viral hepatitis has been a nationally reportable disease since 1952. Since 1966 the 2 kinds of hepatitis have been listed separately. The annual total number of viral hepatitis cases has varied somewhat cyclically between 14,922 (1957) and 72,651 (1961); there were peaks in 1954 and 1961 and a gradual increase in incidence since the most recent nadir in 1966 (34,356 cases). A total of 69,636 viral hepatitis cases were reported in 1971; 8,879 were presumed on epidemiologic grounds to be hepatitis-B. The other 60,757 were hepatitis-A and possibly other viral diseases or hepatitis-B cases that were epidemiologically unconfirmed.

In the last 5 years, several important changes in epidemiologic trends were observed in the characteristics of reported cases: hepatitis used to occur predominantly in winter and spring, but the seasonal variation has diminished remarkably; the age distribution has shifted from a peak in persons aged 5-14 to those 15-24; an equal proportion of cases between the sexes has changed to a 2:1 male preponderance among patients 15-24 years; and the general rural to urban trend has been notable. During the same 5-year period, the rate of increase in reported cases was greater for hepatitis-B than hepatitis-A. These changes have paralleled the recognized rise in illicit use of parenteral drugs.

IMMUNE SERUM GLOBULIN

Immune serum globulin* (ISG) is a sterile solution containing antibody derived from human blood for **intramuscular** use. It is 16.5 percent protein obtained by cold alcohol fractionation of large pools of blood plasma. It contains specified amounts of antibody against diphtheria, measles, and one type of poliovirus. Neither hepatitis-A nor hepatitis-B has been transmitted by ISG.

ISG and Hepatitis-A

Numerous field studies during the past 2 decades have documented the protection against hepatitis-A conferred by ISG administered before exposure or during the incubation period. Its relative effectiveness depends on timing and dose. When administered before or within 1-2 weeks after exposure to hepatitis-A in the appropriate dose, it prevents illness in 80-90 percent of those exposed. However, because ISG may not suppress inapparent infection, long-lasting, natural immunity may result.

The decision to give ISG is based on assessing the possible hepatitis exposure. If the exposure could have resulted in infection, ISG should be given.

ISG should be given as soon as possible after a known exposure. Its prophylactic value is greatest when given early in the incubation period and decreases with time after exposure. The use of ISG more than 6 weeks after exposure or after onset of clinical illness in a contact is not indicated.

Dosage

The dosage patterns of ISG in common use were derived primarily from field and clinical observations. Under most conditions of exposure, protection is afforded by intramuscular injection of 0.01 ml of ISG per pound of body weight (approximately 0.02 ml/kg) (Table 1).

Specific Recommendations

Household Contacts: Close personal contact, as among permanent and even temporary household residents, is important in the spread of hepatitis-A. Secondary attack rates are particularly high for children and teenagers. Rates are

*Official name: Immune Serum Globulin (Human)

IMMUNE SERUM GLOBULIN – Continued

Table 1
Guidelines for ISG Prophylaxis Against Hepatitis-A

Person's Weight (lb.)	ISG Dose (ml)*
< 50	0.5
50-100	1.0
> 100	2.0

*Within limits, larger doses of ISG provide longer-lasting but not necessarily more protection. More ISG is, therefore, prescribed under certain circumstances. (See **Institutional Contacts and Travelers to Foreign Countries**)

somewhat lower for adults, but illness tends to be more severe. ISG is recommended for all household contacts who have not already had hepatitis-A.

School Contacts: Although the highest incidence of hepatitis is among school-age children, contact at school is usually not an important means of transmitting this disease. Routine administration of ISG is not indicated for pupil or teacher contacts of a patient. However, when epidemiologic study has clearly shown that a school- or classroom-centered outbreak exists, it is reasonable to administer ISG to persons at risk.

Institutional Contacts: In contrast to schools, the conditions in institutions, such as prisons and facilities for the mentally retarded, favor transmission of hepatitis-A. Sporadic cases as well as epidemics in such institutions have been reported frequently. ISG administered to patient and staff contacts of hepatitis-A patients in the doses shown in Table 1 can effectively limit the spread of disease.

Where hepatitis-A is endemic, particularly in large institutions with high rates of admission and discharge, all who live and work there (residents and staff personnel) may be subject to continuing exposure. Under these circumstances, ISG has not resulted in eradication of hepatitis, but it has provided temporary protection against hepatitis-A when administered in doses of 0.02-0.05 ml/lb at the time of admission or employment. Re-administration of ISG in the same dose every 6 months may be necessary as long as the risk persists.

Hepatitis-B, which is not affected by ISG, may also be endemic in such institutions; therefore, the type of hepatitis should be identified by epidemiologic and serologic methods before considering routine, general use of ISG (see **ISG and Hepatitis-B**).

Hospital Contacts: Routine prophylactic administration of ISG to hospital personnel is not indicated. Emphasis should be placed on sound hygienic practices. Intensive, continuing education programs pointing out the risks of exposure to hepatitis-A and the recommended precautions should be directed toward hospital personnel who have close contact with patients or infective materials.

Hemodialysis: Most of the hepatitis affecting patients and the staff of renal hemodialysis units appears to be hepatitis-B and therefore not preventable by ISG (see **ISG and Hepatitis-B**).

Needle Exposure: For a person accidentally inoculated with blood or serum from a hepatitis patient, ISG prophylaxis should be used only if the inoculum is suspected of containing hepatitis-A. Then, ISG should be given in the dose specified in Table 1.

Office and Factory Contacts: Routine administration of ISG is not indicated for persons exposed in the usual office or factory situation to a fellow worker with hepatitis.

Common-Source Exposure: When food, water, or other such vehicle is clearly identified as a common source of infection for multiple hepatitis cases, administration of ISG should be considered for others exposed.

Exposure to Non-Human Primates: Sporadic cases and outbreaks of hepatitis have occurred among persons in close contact with recently imported non-human primates, primarily chimpanzees. Because of the similarity between chimpanzee-associated hepatitis and hepatitis-A, prophylactic ISG has been used with apparent success in doses of 0.02 ml/lb (0.05 ml/kg) administered every 4 months to those in close contact with newly imported animals. Emphasis should also be placed on other measures, such as scrupulous hygienic practices, use of protective clothing, and limitation of human contact with the animals.

Travelers to Foreign Countries: The risk of hepatitis-A for United States residents traveling abroad appears to be small; it varies with living conditions, the prevalence of hepatitis in the areas visited, and particularly the length of stay.

Travelers may be at no greater risk than in the United States when their travel involves ordinary tourist routes and lasts less than 3 months; ISG is not routinely recommended for them. However, travelers to tropical areas and developing countries who bypass ordinary tourist routes may be at greater risk of acquiring hepatitis-A. If ISG is administered, the dosage schedule in Table 1 should apply.

Travelers planning to stay (3 or more months) in tropical areas or developing countries where hepatitis-A is common and where they may be exposed to infected persons and contaminated food and water are at greater risk of acquiring hepatitis. A single dose of ISG as shown in Table 2 is recommended for them. (Data are inadequate to specify precise boundaries.)

Table 2
Guidelines for U.S. Travelers Planning to Stay 3 or More Months in Tropical Areas or Developing Countries

Person's Weight (lb.)	ISG Dose (ml)
< 50	1.0
50-100	2.5
> 100	5.0

For persons residing abroad in tropical areas or developing countries, the risk of hepatitis appears to persist. Experience has shown that regular administration of ISG offers at least partial protection against hepatitis. It is recommended that prophylactic ISG be repeated every 4-6 months at doses indicated in Table 2.*

Pregnancy: Pregnancy is not a contraindication to using ISG as recommended.

Reactions

ISG should **not** be administered intravenously because of the possibility of severe hypersensitivity reactions.

Intramuscular administration of ISG rarely causes adverse reactions. Discomfort may occur at the site of injection, especially with larger volumes. A few instances of hypersensitivity have been reported, but in view of the very large number of persons who have received ISG, the risk is exceedingly small. Antibody against gamma globulin may appear following administration of ISG, although its significance is unknown. When ISG is indicated for the prophylaxis of

*Some agencies have used up to 0.05 ml/lb each 4 to 6 months rather than the 5 ml for adults recommended here.

hepatitis-A, this theoretical consideration should not preclude its administration.

ISG and Hepatitis-B

Numerous well-constructed studies have attempted to document the protective effect of standard immune serum globulin against hepatitis-B. Evidence indicates that there is no protective effect. Therefore, ISG should not be used for protection against so-called transfusion-associated hepatitis. It should not be administered routinely to patients and staff members of hemodialysis units, to other persons exposed to hepatitis B, or to hepatitis-B carriers. The lack of effect of ISG against hepatitis-B is presumably related to insufficient titer or complete absence of specific antibody against hepatitis-B in most lots of commercial ISG. Whether or not administration of hyperimmune globulin containing large amounts of HBAb will prove effective in modifying hepatitis-B has yet to be determined.

Published MMWR: Vol. 17, No. 31, 1968; revised Vol. 18, No. 43 – Supp. 1969.

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CURRENT TRENDS

SURVEILLANCE OF REQUESTS FOR AND DISTRIBUTION OF ZOSTER IMMUNE GLOBULIN United States – January-May 1972

The CDC program for the study and distribution of Zoster Immune Globulin (ZIG) established in 1971 (MMWR, Vol. 20, No. 39) began releasing ZIG in January 1972. This material, prepared from the plasma of healthy donors convalescing from herpes zoster, was demonstrated to be a safe and effective agent in the prevention of severe varicella (chickenpox) in susceptible children when given within 72 hours of household exposure. It is indicated for immunosuppressed patients (secondary to malignancies and/or medications), for whom varicella can be severe or fatal. Release of a 5 cc dose of ZIG by regional consultants is confined to persons who have no history of varicella [and a negative varicella-zoster (V-Z) complement fixation test, when available], who are significantly immunosuppressed, and who are closely exposed within the preceding 72 hours to persons with varicella or herpes zoster. Close exposure is defined as a prolonged, intimate contact, such as with a sibling or a regular daily playmate.

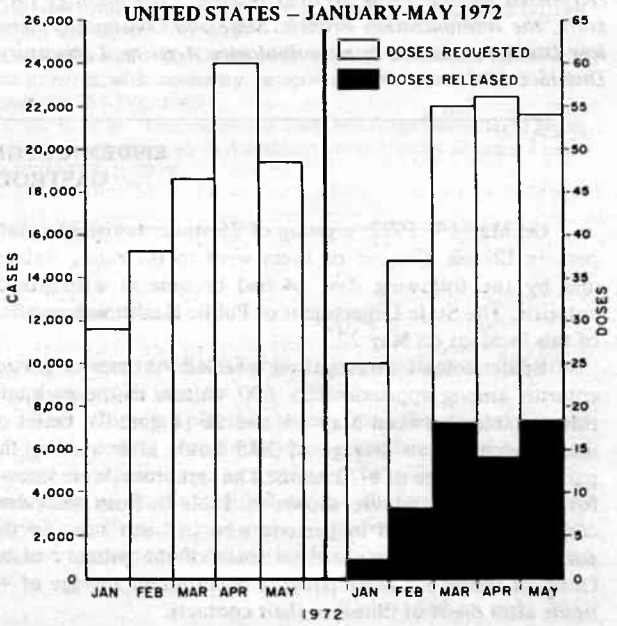
Between Jan. 1 and May 31, 1972, a total of 227 requests for ZIG were made to the regional consultants, and 60 doses of ZIG were released. Most of the requests were for single patients, but ZIG was occasionally requested for a group of exposed newborns or a cluster of patients with malignancies who were exposed on an oncology ward. As shown in Figure 1, the number of requests for ZIG and ZIG doses released paralleled reported cases of varicella for the same period.

The ages of patients for whom ZIG was requested ranged from 1 day to 85 years (Table 3). Nearly 75% of those receiving ZIG were in the 1-9 year age group, while 50% of the overall group of patients for whom ZIG was requested were ages 1-9 years. A total of 75% of all patients for whom ZIG was requested and 96.6% of ZIG recipients were under 20 years of age.

The most common indications for requesting ZIG were

Figure 1

CASES OF CHICKENPOX REPORTED AND DOSES OF ZIG REQUESTED AND RELEASED UNITED STATES – JANUARY-MAY 1972



ZIG – Continued

Table 3
Patients for Whom ZIG Was Requested, and ZIG Recipients, by Age
United States – Jan. 1-May 31, 1972

Age	Number of ZIG Requests	Percent	Number of ZIG Recipients	Percent
< 1 month	13	5.7	0	0.0
1 mo.-11 mos.	11	4.9	5	8.3
1 yr.-4 yrs.	51	22.3	15	25.0
5-9	65	28.5	29	48.3
10-14	23	10.2	6	10.0
15-19	8	3.6	3	5.0
20-29	12	5.4	1	1.7
30+	39	17.2	1	1.7
Unknown	5	2.2	0	0.0
Total	227	100.0	60	100.0

exposure to a case of varicella in a sibling, other household member, playmate, or school contact (Table 4). Exposure to a case of varicella or herpes zoster among hospitalized patients accounted for nearly one fifth of the requests. Among ZIG recipients, 46.7% had been exposed at home. For those patients with already established infection, approximately equal numbers had varicella and localized or disseminated herpes zoster.

All of the ZIG recipients had malignant diseases or were receiving immunosuppressive medications (Table 5); acute lymphocytic leukemia was the most common underlying illness.

Available clinical follow-up information shows that varicella did not occur in 31 of 36 ZIG recipients. Varicella occurred in two recipients within 3 days following ZIG administration, and four patients contracted very mild varicella 10-16 days after receiving ZIG. Laboratory studies of all ZIG recipients are in progress to determine if there is laboratory evidence of infection.

(Reported by the Field Services Branch, Epidemiology Program, the Immunization Branch, State and Community Services Division, and the Immunobiologics Activity, Laboratory Division, CDC.)

Table 4
Patients for Whom ZIG Was Requested and ZIG Recipients, by Indication – United States – Jan. 1-May 31, 1972

Indication	All ZIG Requests	Percent	ZIG Recipients	Percent
Household exposure	48	21.5	28	46.7
Playmate or schoolroom exposure	55	24.1	24	40.0
Hospital exposure	45	19.8	7	11.7
Varicella	33	14.5	0	0.0
Herpes zoster	12	5.3	1	1.6
Disseminated herpes zoster	20	8.6	0	0.0
Fetus or newborn	12	5.3	0	0.0
Unknown	2	0.9	0	0.0
Total	227	100.0	60	100.0

Table 5
ZIG Recipients, by Underlying Illness
United States – Jan. 1-May 31, 1972

Illness	Number
Acute lymphocytic leukemia	25
Renal transplant	7
Nephrosis	6
Lymphomas	3
Immune deficiencies	5
Histiocytosis X	2
Idiopathic thrombocytopenic purpura	2
Other*	10
Total	60

*Includes rheumatic fever, adrenogenital syndrome, pemphigus, respiratory disease, dermatomyositis, congenital heart disease, rhabdomyosarcoma, regional enteritis.

Editorial Note

As of June 5, the CDC supply of ZIG had been exhausted. In order to make the interval in which no ZIG is nationally available as short as possible, plasma for immediate fractionation is urgently needed. In brief, plasma donors should be patients in otherwise good health who are convalescing from herpes zoster (1-4 weeks following onset of lesions); details regarding donor selection are available from the Vaccine Investigations and Evaluations Unit, CDC.

EPIDEMIOLOGIC NOTES AND REPORTS
GASTROENTERITIS – Illinois

On May 19, 1972, a group of 25 students visited a state park in Illinois. Sixteen of them went to the riding stables, and by the following day, 14 had become ill with gastroenteritis. The State Department of Public Health was notified of this incident on May 22.

Epidemiologic investigation revealed 90 cases of gastroenteritis among approximately 600 visitors to the park and riding stables between May 11 and 26 (Figure 2). Onset of illness occurred an average of 30.5 hours after visiting the park, with a range of 8-72 hours. The symptoms were known for 85 persons and are shown in Table 6. Four secondary cases were discovered in persons who had not been to the park but had been exposed to some of the primary cases. Onset of illness for these patients occurred an average of 48 hours after onset of illness in their contacts.

The epidemic curve strongly suggested a common-source outbreak. There was no concession stand or other source of food in common for those who visited the park between May 11 and 26. Further investigation revealed that the stable manager, his wife, and two children had moved into a trailer at the stables in late March, and all experienced gastroenteritis shortly after their arrival. Four employees at the stables were also interviewed, and two of them had been similarly ill. The 600 persons who had been in the park were asked whether they had consumed water from the drinking fountain or trailer at the stables. Their attack rates are shown in Table 7. Those interviewed included 243 girl scouts who camped in the park; 37 went to the stables to ride, but they brought and drank their own water. None of the girl scouts became ill. Many others who did not drink water at the stables did

Figure 2
CASES OF GASTROENTERITIS AMONG PARK VISITORS, BY DAY OF ONSET – ILLINOIS, MAY 1972

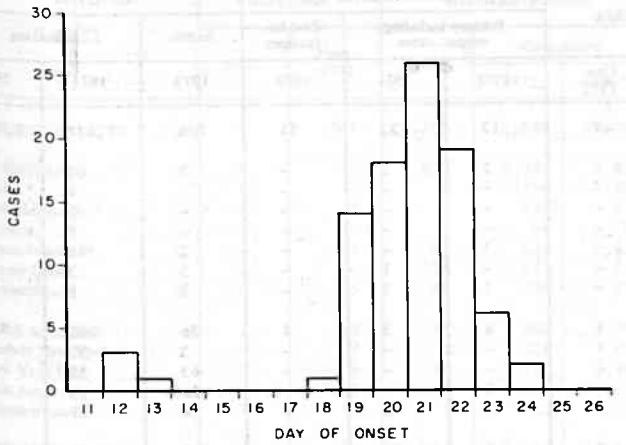


Table 6
Symptoms of 85 Persons with Gastroenteritis
Illinois Park – May 1972

Symptom	Percent Affected
Abdominal cramps	82
Malaise	82
Vomiting	79
Nausea	68
Headache	62
Diarrhea	46
Fever	41
Chills	24
Myalgia	5
Mucoid diarrhea	5
Bloody diarrhea	1

drink water from other wells in the park, and none of them became ill.

The riding stables with its well and septic tank had been built in the fall and winter of 1971-72. It was opened for business in March 1972, but only a few persons came to ride until after May 11, when many groups of scouts, school children, and others came. Questioning about the well and septic tank construction revealed that the hole for the septic tank had been placed an appropriate distance from the well; however, those digging the hole struck water 10 feet below

Table 7
Attack-Rates Among Patients with Gastroenteritis
Illinois – May 1972

	Persons Ill	Persons Not Ill	Percent Ill
Drank water	96	15	86.5
Did not drink water	3	499	0.6

the surface. The septic tank was placed in the hole nonetheless, and it was noted that water from the well turned muddy while the septic tank was being built. The water in the well was not chlorinated.

Water samples obtained on May 24 contained 1,100 fecal coliforms per ml. Shigella, salmonella, and *Escherichia coli* were not found in cultures of the water or of stools from ill persons. The well was shut down on May 25.

(Reported by R. J. Martin, D.V.M., Acting State Epidemiologist, Karl Langkop, Public Health Advisor, James Hundley, microbiologist, Merle King, Lynn Gamble, regional engineers, Muriel Matthews, R.N., regional advisory nurse, Illinois Department of Public Health; and an EIS Officer.)

Editorial Note

The disease described in this outbreak is commonly referred to as "sewage poisoning." Laboratory investigations of this and previous outbreaks have failed to identify an etiologic agent. There is speculation that a toxic product might be responsible *(1,2)*, but the more prevalent view is that the syndrome is caused by an infectious agent *(3)*. The occurrence of secondary cases in this and other similar outbreaks *(4)* support the latter view. In outbreaks such as this, a search for enteropathogenic *Escherichia coli*, non-cholera vibrios, and *Yersinia enterocoliticus* should be made. A recently developed virologic technique utilizing human fetal intestinal tissue offers new hope of identifying viral agents in such outbreaks *(5)*.

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INTERNATIONAL NOTES

INFLUENZA – United Kingdom

The 1971-72 winter outbreak of influenza appears to have been widespread but mild. Although a large number of infections were reported by laboratories over a relatively short period of time (December to March) and general practitioners also reported a fairly large number of cases, the effect on sickness-absence returns was not much greater than in the winter of 1970-71, when there was hardly any influenza in the country. Moreover, the number of deaths attributed to influenza reported to the Registrar General was not very large. In the two previous epidemics, a similar number of virus isolations were reported (Table 8), but the impact of the outbreaks was much greater.

The 1968-69 epidemic lasted from the end of December to the end of May and caused a moderate but sustained increase in morbidity, as expressed by sickness-absence returns and in deaths notified to the Registrar General. The 1969-70 epidemic lasted only from December to February but had a much more dramatic effect on the sickness-absence

(Continued on page 204)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JUNE 10, 1972 AND JUNE 12, 1971 (23rd WEEK) – Continued

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post Infectious	Serum	Infectious	
	1972	1972	1972	1972	Cum. 1972	1972	1971	1972	1972	1972	1971
UNITED STATES	52	4	4,118	2	49	17	33	11	206	1,114	1,111
NEW ENGLAND	–	–	733	–	–	2	2	–	9	67	92
Maine *	–	–	15	–	–	–	–	–	–	4	14
New Hampshire *	–	–	26	–	–	–	–	–	–	2	4
Vermont	–	–	32	–	–	–	–	–	–	8	8
Massachusetts	–	–	320	–	–	1	–	–	2	42	35
Rhode Island	–	–	112	–	–	–	1	–	5	3	14
Connecticut	–	–	228	–	–	1	1	–	2	8	17
MIDDLE ATLANTIC	9	–	471	–	1	6	3	1	76	162	158
Upstate New York	–	–	–	–	1	–	–	–	3	50	50
New York City	2	–	276	–	–	–	–	–	43	32	10
New Jersey *	7	–	NN	–	–	5	1	–	26	53	75
Pennsylvania	–	–	195	–	–	1	2	1	4	27	23
EAST NORTH CENTRAL	4	–	1,793	–	3	5	16	2	39	175	207
Ohio	2	–	316	–	–	2	7	–	4	44	56
Indiana	–	–	123	–	–	–	–	–	1	14	9
Illinois	1	–	–	–	2	1	3	2	16	48	53
Michigan	1	–	539	–	1	2	6	–	16	61	81
Wisconsin	–	–	815	–	–	–	–	–	2	8	8
WEST NORTH CENTRAL	–	1	184	–	9	–	1	–	9	52	29
Minnesota	–	–	39	–	–	–	–	–	–	4	3
Iowa	–	1	111	–	–	–	–	–	4	10	5
Missouri	–	–	9	–	–	–	–	–	2	16	8
North Dakota	–	–	8	–	–	–	–	–	–	3	2
South Dakota	–	–	2	–	6	–	–	–	1	2	2
Nebraska	–	–	–	–	3	–	–	–	–	3	–
Kansas	–	–	15	–	–	–	1	–	2	14	9
SOUTH ATLANTIC	7	3	375	1	9	1	4	3	23	160	167
Delaware	–	–	7	–	–	–	–	–	1	7	2
Maryland	–	–	55	1	1	–	–	–	4	20	15
District of Columbia	–	–	31	–	–	–	–	–	–	–	1
Virginia	3	3	28	–	–	–	1	1	7	29	61
West Virginia *	–	–	233	–	–	–	–	–	–	13	9
North Carolina	–	–	NN	–	–	–	1	–	6	25	15
South Carolina	–	–	19	–	1	–	–	–	1	9	9
Georgia	–	–	2	–	2	–	–	–	–	30	17
Florida	4	–	–	–	5	1	2	2	4	27	38
EAST SOUTH CENTRAL	1	–	100	–	1	–	2	–	2	64	46
Kentucky	–	–	75	–	–	–	–	–	–	23	18
Tennessee	–	–	NN	–	–	–	2	–	–	28	19
Alabama	1	–	23	–	1	–	–	–	2	6	6
Mississippi	–	–	2	–	–	–	–	–	–	7	3
WEST SOUTH CENTRAL	14	–	17	–	21	–	–	2	12	137	97
Arkansas	–	–	3	–	–	–	–	–	–	11	16
Louisiana	4	–	NN	–	4	–	–	–	–	14	4
Oklahoma	–	–	3	–	–	–	–	1	–	27	4
Texas	10	–	11	–	17	–	–	1	12	85	73
MOUNTAIN	–	–	191	1	5	–	–	–	8	67	74
Montana	–	–	61	–	–	–	–	–	–	1	4
Idaho	–	–	–	–	2	–	–	–	–	2	2
Wyoming	–	–	–	–	–	–	–	–	–	–	2
Colorado *	–	–	17	–	–	–	–	–	2	12	21
New Mexico	–	–	55	–	1	–	–	–	–	10	7
Arizona	–	–	46	1	2	–	–	–	2	32	20
Utah	–	–	5	–	–	–	–	–	4	10	18
Nevada	–	–	7	–	–	–	–	–	–	–	–
PACIFIC	17	–	254	–	–	3	5	3	28	230	241
Washington	–	–	248	–	–	–	–	–	2	28	20
Oregon	1	–	–	–	–	1	–	–	–	40	27
California	16	–	–	–	–	2	5	3	25	154	190
Alaska *	–	–	6	–	–	–	–	–	–	1	–
Hawaii *	–	–	–	–	–	–	–	–	1	7	4
Guam *	–	–	1	–	–	–	---	–	–	–	---
Puerto Rico	–	–	37	–	–	–	–	–	5	10	19
Virgin Islands	–	–	1	–	–	–	–	–	–	–	–

*Delayed reports: Chickenpox: Me. 32, N.H. 3, Alaska 9, Hawaii 1,180, Guam 17
Encephalitis, primary: W. Va. 1
Hepatitis B: Alaska 2
Hepatitis A: Me. 10, N.H. 6, N.J. delete 1, W. Va. delete 1, Colo. delete 1, Alaska 6

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JUNE 10, 1972 AND JUNE 12, 1971 (23rd WEEK) – Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1972	Cum. 1972	1972	Cumulative 1972	Cumulative 1971	1972	Cumulative 1972	Cumulative 1971	1972	Cum. 1972	1972	Cum. 1972
UNITED STATES	7	561	1,208	22,649	59,064	21	745	1,416	1,656	48,189	650	17,842
NEW ENGLAND	–	13	203	2,387	2,870	1	32	63	90	1,978	20	823
Maine*	–	–	4	219	1,293	–	3	7	4	221	–	59
New Hampshire*	–	3	9	195	171	–	2	10	5	159	–	31
Vermont	–	–	–	98	98	–	–	–	19	97	–	63
Massachusetts*	–	5	41	431	202	1	16	26	18	495	7	402
Rhode Island	–	–	54	473	203	–	9	2	7	331	3	72
Connecticut	–	5	95	971	903	–	2	18	37	675	10	196
MIDDLE ATLANTIC	2	40	16	804	6,503	7	92	184	158	2,296	92	1,587
Upstate New York	–	7	3	108	450	–	22	45	NN	NN	1	184
New York City	1	6	10	186	3,293	2	27	39	80	1,115	12	157
New Jersey	–	12	2	463	1,034	1	20	45	7	597	72	1,006
Pennsylvania	1	15	1	47	1,726	4	23	55	71	584	7	240
EAST NORTH CENTRAL	1	53	673	9,215	12,649	3	100	152	535	13,340	191	4,829
Ohio	–	7	5	215	3,432	1	35	43	86	1,898	37	335
Indiana	–	1	34	1,124	2,321	–	10	11	21	854	14	542
Illinois	–	19	305	3,419	2,571	2	24	45	130	2,412	22	892
Michigan	1	24	96	1,607	1,651	–	27	43	99	2,322	50	1,121
Wisconsin	–	2	233	2,850	2,674	–	4	10	199	5,854	68	1,939
WEST NORTH CENTRAL	–	39	4	894	5,811	–	60	117	71	7,970	30	1,213
Minnesota*	–	4	1	16	49	–	13	19	15	653	16	470
Iowa	–	3	1	634	2,150	–	2	7	43	5,590	9	372
Missouri	–	10	1	153	2,095	–	18	43	9	395	–	97
North Dakota	–	1	1	48	204	–	–	5	2	290	1	21
South Dakota	–	4	–	4	196	–	2	5	1	107	–	12
Nebraska	–	3	–	18	58	–	9	14	1	237	–	50
Kansas	–	14	–	21	1,059	–	16	24	–	698	4	191
SOUTH ATLANTIC	2	79	121	1,850	6,070	5	164	231	127	4,225	21	1,281
Delaware	–	–	15	35	33	–	1	2	5	57	1	6
Maryland	–	2	1	13	364	–	28	33	19	220	–	38
District of Columbia	–	1	–	2	12	–	7	8	3	10	–	4
Virginia	–	3	1	55	1,041	–	38	18	12	749	–	60
West Virginia	–	1	5	210	425	–	6	5	48	2,113	6	342
North Carolina	–	33	–	28	1,771	1	23	38	NN	NN	1	20
South Carolina	–	10	–	206	836	–	14	18	3	144	1	48
Georgia	–	19	4	135	183	–	3	21	–	2	1	34
Florida	2	10	95	1,166	1,405	4	44	88	37	930	11	729
EAST SOUTH CENTRAL	1	157	8	962	7,520	–	59	130	110	2,500	36	1,318
Kentucky	–	138	3	480	3,588	–	20	37	10	391	4	762
Tennessee	–	–	–	183	880	–	22	48	77	1,566	24	431
Alabama	1	15	1	127	1,677	–	11	26	22	444	2	35
Mississippi	–	4	4	172	1,375	–	6	19	1	99	6	90
WEST SOUTH CENTRAL	–	63	45	1,256	11,518	3	91	118	158	3,912	25	1,217
Arkansas	–	4	1	12	744	1	8	5	1	152	–	27
Louisiana*	–	4	1	79	1,577	1	27	41	17	233	–	81
Oklahoma	–	3	–	9	731	–	6	6	2	153	1	32
Texas	–	52	43	1,156	8,466	1	50	66	138	3,374	24	1,077
MOUNTAIN	–	39	37	1,552	2,830	–	13	44	44	2,494	23	947
Montana	–	2	–	12	897	–	2	3	2	149	–	28
Idaho	–	3	–	17	232	–	3	6	–	183	1	22
Wyoming	–	1	–	45	83	–	1	2	–	217	1	7
Colorado	–	26	12	470	767	–	2	7	12	663	16	499
New Mexico	–	1	2	98	270	–	1	3	8	492	–	78
Arizona	–	5	23	758	331	–	1	8	17	645	5	291
Utah	–	1	–	152	247	–	2	12	5	100	–	19
Nevada	–	–	–	–	3	–	1	3	–	45	–	3
PACIFIC	1	78	101	3,729	3,293	2	134	377	363	9,474	212	4,627
Washington	–	–	29	883	791	–	11	18	83	3,385	20	795
Oregon	–	8	–	44	300	–	11	27	62	1,183	7	310
California	–	59	69	2,709	1,952	1	104	327	209	4,657	182	3,461
Alaska*	–	2	–	5	51	1	5	–	1	94	–	15
Hawaii	1	9	3	88	199	–	3	5	8	155	3	46
Guam*	–	2	–	2	---	2	11	---	–	2	–	5
Puerto Rico	–	3	29	432	307	1	4	2	65	518	–	12
Virgin Islands	–	–	–	1	7	–	2	–	–	117	–	3

*Delayed reports: Measles: Me. 31, Mass. delete 5
Meningococcal infections: Guam 3
Mumps: Me. 9, N.H. 5, La. delete 1, Alaska 1
Rubella: Minn. 390

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JUNE 10, 1972 AND JUNE 12, 1971 (23rd WEEK) – Continued

AREA	TETANUS	TB (New Active)	TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
									GONORRHEA	SYPHILIS (Pri. & Sec.)		
	1972	1972	1972	Cum. 1972	1972	Cum. 1972	1972	Cum. 1972	1972	1972	1972	Cum. 1972
UNITED STATES	1	598	2	45	5	129	15	89	13,758	536	92	1,968
NEW ENGLAND	–	16	–	–	–	5	–	–	173	10	2	69
Maine	–	3	–	–	–	–	–	–	12	–	2	57
New Hampshire *	–	–	–	–	–	–	–	–	10	–	–	1
Vermont	–	–	–	–	–	–	–	–	11	–	–	8
Massachusetts	–	6	–	–	–	3	–	–	–	–	–	–
Rhode Island	–	3	–	–	–	–	–	–	13	2	–	1
Connecticut	–	4	–	–	–	2	–	–	127	8	–	2
MIDDLE ATLANTIC	–	110	–	1	1	28	–	3	2,730	135	6	43
Upstate New York	–	25	–	–	–	9	–	–	362	2	1	17
New York City	–	36	–	–	1	15	–	–	1,234	114	–	–
New Jersey	–	25	–	1	–	3	–	1	455	13	–	–
Pennsylvania *	–	24	–	–	–	1	–	2	679	6	5	26
EAST NORTH CENTRAL	–	84	–	1	–	12	2	4	1,134	21	7	210
Ohio	–	35	–	1	–	5	2	4	357	4	–	68
Indiana	–	11	–	–	–	–	–	–	171	3	2	50
Illinois *	–	16	–	–	–	2	–	–	131	–	1	37
Michigan	–	20	–	–	–	4	–	–	349	12	1	3
Wisconsin	–	2	–	–	–	1	–	–	126	2	3	52
WEST NORTH CENTRAL	1	27	–	8	–	4	–	1	937	8	28	474
Minnesota	–	5	–	–	–	–	–	–	187	–	2	119
Iowa	–	4	–	–	–	–	–	–	102	2	17	141
Missouri	1	13	–	8	–	3	–	–	222	4	2	45
North Dakota	–	–	–	–	–	–	–	–	13	–	3	74
South Dakota	–	2	–	–	–	–	–	–	27	–	–	31
Nebraska	–	2	–	–	–	–	–	–	105	1	–	8
Kansas	–	1	–	–	–	1	–	1	281	1	4	56
SOUTH ATLANTIC	–	130	–	6	2	17	10	55	3,225	196	7	164
Delaware	–	1	–	–	–	–	–	–	26	–	–	–
Maryland	–	25	–	–	–	2	2	12	299	13	–	5
District of Columbia	–	14	–	–	–	2	–	–	348	19	–	–
Virginia	–	28	–	4	1	6	2	15	449	51	2	49
West Virginia	–	8	–	–	–	1	–	–	36	–	1	37
North Carolina	–	17	–	–	–	–	3	18	287	27	–	–
South Carolina	–	–	–	–	–	1	1	6	789	18	–	–
Georgia	–	17	–	1	–	–	2	4	392	43	2	42
Florida	–	20	–	1	1	5	–	–	599	25	2	31
EAST SOUTH CENTRAL	–	53	–	3	–	12	2	10	1,279	34	14	424
Kentucky *	–	16	–	–	–	4	–	–	169	8	9	157
Tennessee	–	17	–	2	–	3	2	9	677	5	5	222
Alabama	–	10	–	1	–	–	–	1	309	10	–	44
Mississippi	–	10	–	–	–	5	–	–	124	11	–	1
WEST SOUTH CENTRAL	–	70	2	23	2	14	1	16	1,845	59	16	431
Arkansas	–	13	2	15	–	6	–	3	132	3	2	62
Louisiana *	–	–	–	1	2	3	–	–	329	19	–	20
Oklahoma	–	10	–	4	–	1	1	11	160	5	5	185
Texas	–	47	–	3	–	4	–	2	1,224	32	9	164
MOUNTAIN	–	36	–	2	–	3	–	–	473	12	2	31
Montana	–	–	–	–	–	–	–	–	25	–	–	–
Idaho	–	2	–	–	–	–	–	–	24	–	–	–
Wyoming	–	–	–	–	–	–	–	–	5	3	–	–
Colorado	–	16	–	1	–	–	–	–	150	1	–	–
New Mexico	–	–	–	–	–	1	–	–	70	7	1	6
Arizona	–	18	–	1	–	1	–	–	131	1	1	25
Utah	–	–	–	–	–	1	–	–	49	–	–	–
Nevada	–	–	–	–	–	–	–	–	19	–	–	–
PACIFIC	–	72	–	1	–	34	–	–	1,962	61	10	122
Washington	–	2	–	–	–	2	–	–	149	1	–	–
Oregon	–	5	–	–	–	–	–	–	201	–	–	–
California	–	63	–	–	–	29	–	–	1,556	60	8	116
Alaska *	–	–	–	1	–	–	–	–	32	–	2	6
Hawaii *	–	2	–	–	–	3	–	–	24	–	–	–
Guam *	–	2	–	–	–	–	–	–	4	–	–	–
Puerto Rico	–	35	–	–	1	4	–	–	63	6	2	29
Virgin Islands	–	–	–	–	–	–	–	–	–	–	–	–

*Delayed reports: Tuberculosis: N.H. delete 1, Ill. 22, Ky. delete 1, La. delete 1, Guam 3
Gonorrhea: Pa. delete 1, Alaska 28, Hawaii 832, Guam 15
Syphilis: Hawaii 17, Guam 1

Week No. 23

TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING JUNE 10, 1972

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

Area	All Causes			Pneumonia and Influenza	Area	All Causes			Pneumonia and Influenza
	All Ages	65 years and over	Under 1 year	All Ages		All Ages	65 years and over	Under 1 year	All Ages
NEW ENGLAND	675	390	24	28	SOUTH ATLANTIC	1,252	694	79	43
Boston, Mass.	200	104	12	10	Atlanta, Ga.	115	55	5	4
Bridgeport, Conn.	43	28	–	3	Baltimore, Md.	204	114	7	2
Cambridge, Mass.	18	11	–	3	Charlotte, N. C.	52	28	3	–
Fall River, Mass.	26	19	–	–	Jacksonville, Fla.	78	35	4	–
Hartford, Conn.	54	23	4	–	Miami, Fla.	99	65	4	2
Lowell, Mass.	23	15	–	1	Norfolk, Va.	62	39	1	4
Lynn, Mass.	22	16	2	1	Richmond, Va.	101	56	1	7
New Bedford, Mass.	34	20	–	2	Savannah, Ga.	43	24	4	4
New Haven, Conn.	49	29	3	–	St. Petersburg, Fla.	88	74	1	–
Providence, R. I.	61	36	–	3	Tampa, Fla.	77	49	1	7
Somerville, Mass.	13	8	–	1	Washington, D. C.	286	132	46	13
Springfield, Mass.	36	26	–	1	Wilmington, Del.	47	23	2	–
Waterbury, Conn.	35	20	2	–					
Worcester, Mass.	61	35	1	3	EAST SOUTH CENTRAL	706	395	37	34
					Birmingham, Ala.	102	57	8	–
MIDDLE ATLANTIC	3009	1,817	94	102	Chattanooga, Tenn.	65	36	3	4
Albany, N. Y.	48	22	3	1	Knoxville, Tenn.	44	29	1	1
Allentown, Pa.	28	20	–	1	Louisville, Ky.	118	71	5	10
Buffalo, N. Y.	140	89	4	6	Memphis, Tenn.	152	85	7	5
Camden, N. J.	50	31	3	2	Mobile, Ala.	67	34	2	–
Elizabeth, N. J.	32	20	–	1	Montgomery, Ala.	54	27	1	4
Erie, Pa.	28	19	1	2	Nashville, Tenn.	104	56	10	10
Jersey City, N. J.	69	50	3	2					
Newark, N. J.	96	44	1	1	WEST SOUTH CENTRAL	1,170	592	54	29
New York City, N. Y.†	1,465	878	34	40	Austin, Tex.	25	13	2	2
Paterson, N. J.	44	29	1	2	Baton Rouge, La.	45	26	2	3
Philadelphia, Pa.	397	218	16	4	Corpus Christi, Tex.	20	12	–	–
Pittsburgh, Pa.	191	115	10	13	Dallas, Tex.	158	62	14	4
Reading, Pa.	33	24	2	3	El Paso, Tex.	44	23	2	2
Rochester, N. Y.	129	91	1	12	Fort Worth, Tex.	101	45	5	1
Schenectady, N. Y.	29	17	1	2	Houston, Tex.	234	112	11	1
Scranton, Pa.	41	31	–	1	Little Rock, Ark.	43	27	–	3
Syracuse, N. Y.	81	53	8	3	New Orleans, La.	143	69	1	2
Trenton, N. J.	50	28	4	1	Oklahoma City, Okla. **	84	46	4	1
Utica, N. Y.	33	22	1	3	San Antonio, Tex.	134	66	6	2
Yonkers, N. Y.	25	16	1	2	Shreveport, La.	51	31	2	1
					Tulsa, Okla.	88	60	5	7
EAST NORTH CENTRAL	2,704	1,525	96	79					
Akron, Ohio	69	35	2	–	MOUNTAIN	476	276	14	22
Canton, Ohio	37	23	1	–	Albuquerque, N. Mex.	40	24	–	4
Chicago, Ill.	722	397	23	22	Colorado Springs, Colo.	27	12	4	7
Cincinnati, Ohio	201	116	9	2	Denver, Colo.	113	71	3	4
Cleveland, Ohio	211	111	4	1	Ogden, Utah	28	14	1	2
Columbus, Ohio	131	87	5	3	Phoenix, Ariz.	106	61	3	–
Dayton, Ohio	116	62	7	1	Pueblo, Colo.	16	12	–	1
Detroit, Mich.	326	165	11	16	Salt Lake City, Utah	64	39	1	–
Evansville, Ind.	45	30	–	3	Tucson, Ariz.	82	43	2	4
Flint, Mich. **	54	29	3	2					
Fort Wayne, Ind.	54	31	3	5	PACIFIC	1,586	987	53	36
Gary, Ind. **	38	20	2	3	Berkeley, Calif.	21	18	1	1
Grand Rapids, Mich.	60	38	3	2	Fresno, Calif.	49	25	3	–
Indianapolis, Ind.	167	100	9	3	Glendale, Calif.	26	15	1	–
Madison, Wis.	34	22	1	4	Honolulu, Hawaii	55	37	2	–
Milwaukee, Wis.	136	87	1	4	Long Beach, Calif.	105	61	1	–
Peoria, Ill.	40	23	3	–	Los Angeles, Calif.	446	287	18	9
Rockford, Ill.	49	29	2	4	Oakland, Calif.	85	43	6	–
South Bend, Ind.	38	25	1	2	Pasadena, Calif.	38	28	1	–
Toledo, Ohio	101	55	3	1	Portland, Oreg.	126	83	3	3
Youngstown, Ohio	75	40	3	1	Sacramento, Calif.	66	34	4	2
					San Diego, Calif.	104	68	2	2
WEST NORTH CENTRAL	799	491	28	19	San Francisco, Calif.	156	92	7	4
Des Moines, Iowa	72	41	–	1	San Jose, Calif.	44	28	1	2
Duluth, Minn.	23	18	–	3	Seattle, Wash.	156	94	3	5
Kansas City, Kans.	32	15	2	–	Spokane, Wash.	61	40	–	6
Kansas City, Mo.	114	77	3	1	Tacoma, Wash.	48	34	–	2
Lincoln, Nebr.	27	19	–	4					
Minneapolis, Minn.	118	76	4	2	Total	12,377	7,167	479	392
Omaha, Nebr.	73	45	5	1	Expected Number	12,557	7,137	559	425
St. Louis, Mo.	230	131	9	5	Cumulative Total (includes reported corrections for previous weeks)	302,364	177,299	11,684	13,352
St. Paul, Minn.	77	55	–	1					
Wichita, Kans.	33	14	5	1					
Las Vegas, Nev.*	22	11	2	–					

*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 ending June 3, 1972

**Estimate based on average percent of divisional total

INFLUENZA – Continued

returns and on the number of deaths reported. However, the overall effect on morbidity and mortality of the epidemics in these two years was probably not dissimilar *(1)*.

The virus strain responsible for influenza in 1971-72 was the Hong Kong strain which made its first appearance in the British Isles in 1968-69 [A/Hong Kong/1/68 (H3N2)] and has been responsible for almost all the winter influenza since. The recent outbreak may, therefore, have been a mild one, because our population had built up some immunity to this strain. However, if this were so, the outbreak of 1968-69, when the country was first exposed to this virus strain, might have been expected to have had a greater effect on morbidity and mortality than in any subsequent year, whereas in fact the 1969-70 outbreak was more severe.

Table 9 shows the age distribution of the cases of influenza reported by laboratories from Oct. 9, 1971, to April 2, 1972. Compared with previous outbreaks, fewer of the reported infections last winter were in adults between 25 and 65 years of age, and this unusual age distribution might account in part for the small impact of the recent outbreak on sickness-absence reports. It cannot, however, account for the relatively small effect on mortality.

Table 8
Influenza A Identifications, by Epidemiologic Year (Weeks 40-39)
United Kingdom

Year	Number
1967-68	1,025
1968-69	2,010
1969-70	2,131
1970-71	295
1971-72 (Weeks 40-16)	2,223

Table 9
Influenza A Identifications, by Age
United Kingdom – 1971-72

Age	Cases
< 1	120
1-4	303
5-9	150
10-14	150
15-24	311
25-34	178
35-44	165
45-54	179
55-64	212
65+	294
"Child"	37
"Adult"	40
Not stated	84
Total	2,223

(From notes based on reports to the Public Health Laboratory Service from Public Health and Hospital Laboratories in the United Kingdom and Republic of Ireland, published in the British Medical Journal, *June 10, 1972.)*

Reference

1. Miller DL, Pereira MS, Clarke M: Epidemiology of the Hong Kong/68 variant of Influenza A2 in Britain. Brit Med J 1:475-479, 1971

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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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