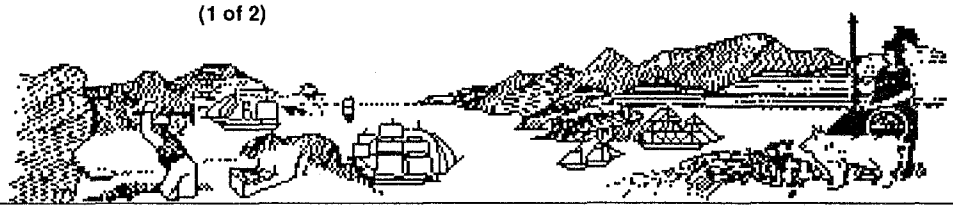
State of California - Health and Welfare Agency
PETE WILSON, Governor

July 15, 1994
#27/#28
(1 of 2)

Department of Health Services
S. Kimberly Belshe', Director

California Morbidity

Biweekly Report from the
Division of Communicable Disease Control
2151 Berkeley Way, Berkeley, CA 94704-1011
(510) 540-2566 After Hours (510) 540-2308
Contributions are Welcome



A YEAR'S EXPERIENCE WITH HANTAVIRUS PULMONARY SYNDROME IN CALIFORNIA

Background: One year ago, the Centers for Disease Control and Prevention (CDC) and local health officials investigated an outbreak of a severe respiratory disease in persons living in the four corners region of southwestern United States. The investigation led to the discovery of a newly recognized strain of hantavirus in North America.[1] Because previously known human hantavirus infections typically involved damage to the kidneys (hemorrhagic fever with renal syndrome), rather than the lungs, investigators were surprised to identify a hantavirus as the cause of the cluster. The disease in humans is now referred to as hantavirus pulmonary syndrome (HPS). Through mid-May 1994, there have been 72 laboratory-confirmed cases of HPS and 48 deaths (58% case fatality rate) in 17 states. The first recognized HPS case in California occurred in July 1993 and, subsequently, four additional cases in the State were identified. This article provides an update regarding HPS in California one year after the disease was identified.

Demographic and Clinical Picture: Most cases of HPS have been previously healthy. The mean age is 33 years and both males and females are affected equally; notably, no children under 12 years of age have been diagnosed with HPS. The majority of cases have been whites and Native Americans.[2]

HPS is characterized by a prodrome consisting of fever, chills, and myalgias. Gastrointestinal symptoms such as abdominal pain, nausea, vomiting, and diarrhea may occur early in the course of the illness. Less frequent symptoms are shortness of breath, dizziness, arthralgia, back or chest pain, and diaphoresis. The prodrome may be followed by a rapid onset of severe respiratory distress caused by pulmonary edema. Mechanical ventilation is often necessary within the first 24 hours after admission.[3]

Important findings at admission include hemoconcentration (typically, hematocrit ≥50% in males and ≥45% in females), coagulopathy, hypotension, pronounced pulmonary edema (ARDS), and cardiogenic shock. The combination of hemoconcentration, profound hypotension, and the rapid onset of ARDS are very characteristic of HPS and help distinguish it from other causes of respiratory distress. Other abnormal laboratory findings commonly seen at admission include leukocytosis (≥10,000), bandemia (≥10%), metamyelocytes, thrombocytopenia (≤150,000), and elevated lactate dehydrogenase (LDH).[3]

Diagnosis and Treatment: Laboratory confirmation is based on 1) IgM or rising IgG titer by ELISA serology, 2) positive polymerase chain reaction (PCR) on fresh or frozen tissue, or 3) positive immunohistochemistry on autopsy tissue. There is no specific treatment; ribavirin has been used experimentally but does not appear to be effective. However, ribavirin is still available from CDC for patients who meet the enrollment criteria. For more information, contact your local health department or CDC, at (404) 639-2888.

Mode of Transmission: Recognized hantavirus strains are each associated with a primary rodent reservoir.[4] Studies in the four corners region identified the deer mouse (Peromyscus maniculatus) as the reservoir host for the new hantavirus strain.[5,6] Hantaviruses are excreted in the urine, feces, and saliva of their reservoir hosts.[4] Engaging in activities that result in exposure to rodents, particularly deer mice, is considered a primary risk factor.[2] Occupying poorly ventilated places with heavy rodent infestations, such as cabins and trailers, may be particularly hazardous.

California HPS Cases: Five cases of HPS have been identified to date in California residents. Three of the cases are presumed to have had their exposures outside of the State, and all but one case was fatal. Three persons (Cases 1, 2, and 3) were diagnosed, retrospectively, by examination of preserved tissues.

Case 1. A 22-year-old white male from San Francisco County died in February 1980 after a flu-like illness, followed by the sudden onset of unexplained ARDS. He had visited New Mexico and stayed in a rodent-infested adobe-type house prior to onset of illness.

Case 2. A 29-year-old Hispanic male from Santa Barbara County, who died in September 1992 with a clinical picture similar to Case 1, was a farm worker who frequently trapped and hunted rodents.

Case 3. A 49-year-old white female from Alameda County died in August 1992 after having gastrointestinal illness for approximately one week, followed by fever, headache, cough, and shortness of breath. Shortly after hospitalization, she developed ARDS and died one week later. She had gone backpacking in Washington State and several areas of California prior to onset of illness.

Case 4. A 27-year-old white female from Mono County died in July 1993 after a short flu-like prodrome (fever, headache, myalgias, dizziness, and fatigue), followed by ARDS; she died within 24 hours after hospitalization. She was a graduate student living in a rodent-infested log cabin in Mammoth Lakes, who also spent considerable time outside studying bird behavior.

Case 5. A 42-year-old white female from San Bernardino County became ill with flu-like symptoms in March 1994 and recovered after being placed in an intensive care unit on a ventilator for approximately one week. She had visited Santa Fe, New Mexico and cleaned a garage prior to onset of illness. Other possible exposure sites are still under investigation.

CALIFORNIA DEPARTMENT OF HEALTH SERVICES - DIVISION OF COMMUNICABLE DISEASE CONTROL - SURVEILLANCE AND STATISTICS SECTION
CALIFORNIA, SELECTED REPORTABLE DISEASES
WEEK 27 ENDING 07/09/1994

	CASES REPORTED FOR PERIOD			CASES REPORTED TO DATE		
D I S E A S E	1994	1993	1992	1994	1993	1992
AIDS /1	-	-	-	6736	12381	4233
AMEBIASIS	29	17	22	503	614	595
ANTHRAX	-	-	-	-	-	-
BOTULISM:						
- FOODBORNE	-	-	-	2	1	-
- INFANT /1	-	-	-	14	13	16
- WOUND /2	-	-	-	6	2	-
BRUCELLOSIS	6	1	-	20	10	15
CAMPYLOBACTERIOSIS	248	258	137	3790	3491	3382
CHANCROID	-	2	1	16	95	18
CHLAMYDIAL INFECTNS.	708	2261	961	28778	37238	24513
CHOLERA	-	-	-	7	6	3
COCCIDIOIDOMYCOSIS	39	11	9	1753	2016	914
CONJUNCT. NEWBORN	3	-	1	24	23	23
CRYPTOSPORIDIOSIS	8	11	3	221	190	118
CYSTICERCOSIS	1	6	4	77	78	74
DENGUE	-	-	-	2	2	3
DIARRHEA, NWB. O/B	-	-	-	-	-	-
DIPHTHERIA	-	-	-	-	-	-
ENCEPHALITIS:						
- ARBOVIRAL /3	-	-	-	-	-	-
- PRIMARY & OTHER	2	1	1	57	71	63
- POST-INFECTIOUS	-	1	-	4	16	3
E. COLI (0157:H7) /3	3	-	-	31	24	-
FOODBORNE ILLNESS:						
- OUTBREAKS	1	-	-	24	25	12
- CASES	41	-	-	556	379	954
GIARDIASIS	105	145	137	2974	3462	3440
GONOCOCCAL INFECTNS.	274	1275	731	13018	16373	20560
GRANULOMA INGUINALE	-	-	-	-	1	1
HAEMOPHILUS INFLNZ.	-	2	1	91	104	166
HEPATITIS:						
- TYPE A	96	107	98	3137	2782	2585
- TYPE B	41	18	58	1109	1107	1451
- TYPE D	-	-	-	4	7	7
- NON-A / NON-B	17	13	5	309	356	667
- UNSPECIFIED	5	3	5	92	98	95
KAWASAKI SYNDROME	5	1	-	64	124	86
LEGIONELLOSIS	2	1	5	32	78	43
LEPROSY	1	-	-	21	47	24
LEPTOSPIROSIS	-	-	-	-	-	-
LISTERIOSIS	2	1	-	42	62	65
LYME DISEASE	-	2	7	40	72	106
LYMPHOGRANULOMA VEN.	-	-	-	6	6	6
MALARIA	8	5	3	113	142	89

	CASES REPORTED FOR PERIOD			CASES REPORTED TO DATE		
D I S E A S E	1994	1993	1992	1994	1993	1992
MEASLES:						
TOTAL	1	7	-	48	78	47
- INDIGENOUS	1	7	-	42	75	41
- IMPORTED	-	-	-	6	3	6
MENINGITIS, VIRAL	53	35	47	652	927	703
MENIGOCOCCAL INF.	2	4	2	234	178	214
MUMPS	8	6	6	152	171	164
N G U	125	213	143	3355	4641	4262
PERTUSSIS	10	30	11	286	242	163
P I D	27	54	56	1037	1370	1115
PLAGUE	-	-	-	1	-	-
POLIOMYELITIS	-	-	-	-	-	-
PSITTACOSIS	-	-	-	3	2	6
Q FEVER	-	-	-	4	4	-
RABIES:						
- ANIMAL	-	7	4	99	200	259
- HUMAN	-	-	-	-	-	-
RELAPSING FEVER	-	-	-	-	1	1
REYE SYNDROME	-	-	-	4	-	3
RHEUMATIC FEVER	-	-	-	7	11	6
ROCKY MTN SPOT FVR	-	-	-	-	-	1
RUBELLA	2	2	-	20	34	36
RUBELLA, CONGENITAL	-	-	-	2	2	2
SALMONELLOSIS	149	104	113	2575	2882	2197
SHIGELLOSIS:						
TOTAL	54	92	107	1616	1824	1793
- GROUP A	1	-	-	27	23	27
- GROUP B	23	35	24	597	674	759
- GROUP C	1	3	2	28	37	63
- GROUP D	23	43	57	700	819	681
- GRP. UNSPECIFIED	6	11	24	264	271	263
SYPHILIS: /1						
TOTAL	-	-	-	3197	5695	7199
- PRIMARY	-	-	-	179	291	474
- SECONDARY	-	-	-	188	431	578
- EARLY LATENT	-	-	-	881	1716	2442
- LATE & LATE LTN.	-	-	-	1872	3081	3302
- CONGENITAL	-	-	-	77	176	403
TETANUS	-	-	-	2	1	1
TOXIC SHOCK SYNDROME	-	-	-	32	17	21
TRICHINOSIS	-	-	-	10	1	1
TUBERCULOSIS	52	144	134	2473	2431	2227
TULAREMIA	-	-	-	-	1	-
TYPHOID FEVER	5	4	-	43	59	50
TYPHUS FEVER	1	-	-	14	1	1
VIBRIO INFECTIONS	2	2	2	11	8	4
YELLOW FEVER	-	-	-	-	-	-

/1 Reported monthly only. See monthly summary.
/2 Reports prior to 1993 reflect Botulism, wound and unspecified.
/3 Not tabulated prior to January, 1993.

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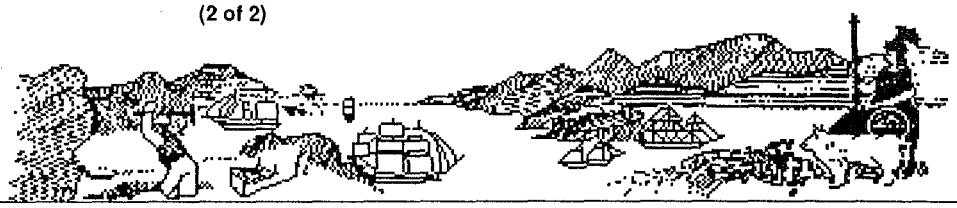

HANTAVIRUS: CONTINUED

California Studies: California ARDS database. Active surveillance statewide from December 1992 to December 1993 for unexplained ARDS (n=104) patients failed to reveal additional cases of HPS.

Human case investigation (Case 4). Serum specimens and questionnaires were obtained from 43 co-workers with similar exposure histories to the case. One person had an equivocal serology result. Results from serological testing of health care providers were negative. Three years of patient records (n=360) at two tertiary hospitals in Reno, Nevada, where this patient had been hospitalized, were examined for evidence of potential HPS cases, but no unexplained cases of ARDS were identified.[7]

Other human studies. Between May 1993 and May 1994, a total of 140 persons identified by physicians and public health officials as suspect HPS cases were tested for antibody to hantaviruses. No asymptomatic or unrecognized cases of HPS in the State were found by serological testing of persons with extensive rodent exposure (n=50), including state and local Vector-Borne Disease Section personnel.

Rodent trapping (Cases 2 and 4). Rodent studies conducted by the California Department of Health Services (CDHS), in cooperation with the United States Army Medical Research Institute of Infectious Diseases, CDC, local health departments, and the University of California, led to the first isolation of the virus that causes HPS.[2] Studies were conducted utilizing high hazard protective measures. Six percent of the rodents tested (n=114) were ELISA or PCR positive, including six deer mice from Mammoth Lakes and one pinon mouse from Solvang.[8]

Other rodent studies. Over 2,000 rodent specimens (serum and/or tissue) were submitted by the State's Vector-Borne Disease Section, local agencies, universities, and the military for hantavirus testing. Evidence of hantavirus infection based on ELISA or PCR results was found in rodents from Butte, Contra Costa, Mendocino, Mono, Orange, Sacramento, San Diego, Santa Barbara, and Siskiyou Counties. The majority of the seropositive rodents were deer mice from rural and semi-rural habitats.

Prevention and Control:

1. Avoid settings of possible contact with wild rodents, especially indoors.
2. Do not live-trap, touch, or otherwise handle live rodents.
3. Do not allow rodents access to food and water in homes; clean dishes and store food in rodent-proof containers immediately after eating.
4. Spray dead rodents or areas contaminated with droppings and urine with a household disinfectant; dispose of these by wearing rubber gloves and placing the inverted glove containing the rodent or droppings in a plastic bag and discarding both in the trash.
5. Prevent rodent infestations by rodent-proofing buildings, removing debris, wood piles, and other rodent habitat away from homes, and by removing food sources.
6. Avoid creating aerosols while cleaning areas contaminated with rodent droppings. Instead, use a wet mop or moist towels with disinfectant. Do not sweep or vacuum.
7. Contact your local health department for additional recommendations on cleaning and eliminating heavily infested buildings, particularly in non-urban areas.

Educational Information: The following educational materials are available from CDHS or your local health department:

-Hantavirus Infection - California: Recommendations for Risk Reduction.

-Hantavirus Illness and How To Avoid It. Common Questions and Their Answers.

-Medical Information Sheet. Hantavirus-Associated Infection in California.

-A New Hantavirus. A Videotape for Health Professionals (Video and booklet produced by CDC in December 1993).

References:

1. Centers for Disease Control and Prevention. Outbreak of acute illness - Southwestern United States, 1993. MMWR 1993; 42:421-4.
2. Centers for Disease Control and Prevention. Hantavirus pulmonary syndrome - United States, 1993. MMWR 1994;43:45-8.
3. Duchin JS, Koster FT, Peters CJ, et al. Hantavirus pulmonary syndrome: A clinical description of 17 patients with a newly recognized disease. New Engl J Med 1994; 330:949-55.
4. Tsai TF. Hemorrhagic fever with renal syndrome: Mode of transmission to humans. Lab Anim Sci 1987; 37:428-30.
5. Nichol ST, Spiropoulou CF, Morzunov S, et al. Genetic identification of a hantavirus associated with an outbreak of acute respiratory illness. Science 1993; 262:914-7.
6. Hughes JM, Peters CJ, Cohen ML, Mahy BW. Hantavirus pulmonary syndrome: An emerging infectious disease. Science 1993; 262:850-1.
7. Shefer A, Tappero J, Bresee J, et al. Hantavirus pulmonary syndrome in California - Report of two cases and local risk assessment. Manuscript in preparation.
8. Turell MJ, Korch GW, Rossi CA, et al. Hantaviral infection in California rodents. Manuscript in press. Am J Trop Med Hyg.

State of California - Health and Welfare Agency
PETE WILSON, Governor

July 30, 1993
#29/#30

Department of Health Services
Molly Joel Coye, M.D., M.P.H., Director

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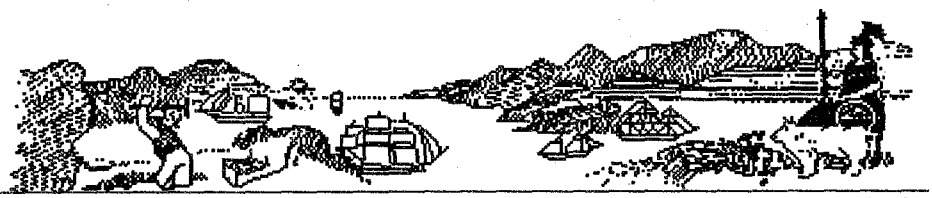

HANTAVIRUS INFECTION IN CALIFORNIA: REPORT OF TWO CASES AND ANNOUNCEMENT OF THE AVAILABILITY OF RESOURCE INFORMATION

HANTAVIRUS INFECTION IN CALIFORNIA

Cases of adult respiratory distress syndrome associated with acute hantavirus infection have primarily been reported from the four-corners area of New Mexico, Colorado, Arizona, and Utah since May 1993. As of August 13, 1993, laboratory evidence of acute hantavirus infection has been confirmed in 29 persons. Of these 29, 22 (76 %) resided in the four-corners area, one had traveled to New Mexico, and six others appeared to have acquired their infections in states outside the four-corners area (California, Nevada, Texas, and Louisiana). Described below are two California cases of fatal adult respiratory distress syndrome in California that were recently found by testing at the Centers for Disease Control and Prevention (CDC) to have evidence of hantavirus infection.

#5 Case 1: On July 28, 1993, a 27-year-old field biologist, working at a University of California natural reserve 1.5 miles from Mammoth Lakes in Mono County, had acute onset of fever, myalgias, and headache that persisted for two days. She developed rapidly progressive bilateral interstitial infiltrates and hypoxemia, and she died on the third day. Hantavirus infection was confirmed by serology and immunohistochemistry stains of the lung. During the two months preceding the illness, she had occupied a 60-year-old log cabin that was infested with rodents; she had also conducted research on bird behavior that required spending prolonged periods of time outside, walking in the woods, and sitting on the ground.

#3 Case 2: A 30-year-old ranch worker in Santa Barbara County died of rapidly progressive respiratory failure in September 1992 following three days of fever, myalgias, and cough. Immunohistochemistry of preserved autopsy tissues revealed positive stains for hantavirus antigen. He had trapped and skinned rodents for feeding cats on the ranch.

Animal specimens have been collected from the two sites. Testing of these and additional specimens will help determine the possible reservoir hosts for hantavirus in California. Rodents are the primary reservoir hosts of hantaviruses elsewhere. Each hantavirus appears to have a preferential rodent host, but other small mammals can be infected as well. Available data strongly suggest that the deer mouse *(Peromyscus maniculatus)* is the primary reservoir of the newly recognized hantavirus in the Southwestern United States. Serologic evidence of infection has also been found in the Southwest in piñon mice *(P. truei)*, brush mice *(P. boylii)*, and western chipmunks *(Tamias spp.)*. The deer mouse is found throughout California, except in urban centers. Serologic evidence of infection has been found in the past in a variety of species in California, but the interpretation of these past results in relationship to the hantavirus currently associated with this disease in the United States is uncertain. Genetic analysis of the materials found in California suggests that the hantavirus here may be a somewhat different strain from that in the four-corners area. The Louisiana case-patient, a 58-year-old bridge inspector who died in June 1993 with renal manifestations in addition to respiratory disease, appears to have been infected with a new hantaviral species. Also, the deer mouse is not known to exist in the area of Louisiana in which he was exposed.

The California Department of Health Services has been assisting local health departments in the surveillance of cases of unexplained adult respiratory distress syndrome since the outbreak in the four-corners area was identified. Previously healthy persons with prodromal illness (of headache, myalgia, fever and sometimes conjunctivitis or cough) who developed respiratory distress syndrome or rapidly progressive bilateral pulmonary interstitial infiltrates and poor oxygenation requiring intubation and assisted ventilation, especially if they visited the Southwest, have been considered for serologic testing for evidence of hantavirus infection. Laboratory investigation has been completed for 12 California patients to date, and all have been negative with the exception of the two cases described above. A third California case had compatible illness after visiting Albuquerque, New Mexico, in February and March 1993 and later showed IgG to hantavirus. Albuquerque is not near the four-corners area, and it is not known how old that IgG titer may be. An additional 23 cases are under investigation, with laboratory results pending. Forty field personnel who worked at the same natural reserve area at Mammoth Lakes as Case #1 over the past two months are also being examined for serologic evidence of infection. Additional studies of persons with intense rodent exposure in California (e.g., State vector control personnel) are being planned. Doctors who have suspect cases should contact their county health department to report the case and arrange to have blood specimens sent to the State Department of Health Services. A case report form, available from county health departments, must be filled out for all patients before blood specimens are accepted for testing.

AVAILABILITY OF RESOURCE INFORMATION

The California Department of Health Services has produced and made available to county health departments the following three documents:

1. MEDICAL INFORMATION SHEET
   HANTAVIRUS-ASSOCIATED INFECTION IN CALIFORNIA

   This document is intended to provide a brief summary of clinical information, derived primarily from patients with confirmed infection in the four-corners region, which would be helpful to physicians in the evaluation and laboratory diagnosis of California patients with suspected hantavirus disease.

2. HANTAVIRUS ILLNESS AND HOW TO AVOID IT
   COMMON QUESTIONS AND THEIR ANSWERS

   This fact sheet, written in Q and A format, is intended to provide information to the public on commonly asked questions.

3. HANTAVIRUS INFECTION - CALIFORNIA
   RECOMMENDATIONS FOR RISK REDUCTION

   This document provides recommendations for the prevention of exposure to hantavirus infections of rodents in California. They are based on established principles of rodent control and infection control. It contains specific recommendations for 1) reducing rodent shelter and food sources in and around the home, 2) eliminating rodents and their excreta inside the home and preventing rodents from entering the home, 3) preventing hantavirus exposure while cleaning up rodent-contaminated areas, 4) preventing infection in persons who have occupational exposure to wild rodents, and 5) preventing infection in campers and hikers. Much of the document is based on the report *Hantavirus Infection - Southwest: Recommendations for Risk Reduction (MMWR July 30/1993/Vol. 42/No. RR-11)* recently issued by the U.S. Centers for Disease Control and Prevention (CDC) to prevent hantavirus infection in the four-corners area. We have modified and expanded that document to address California's more varied ecosystems and types of exposure.

CALIFORNIA DEPARTMENT OF HEALTH SERVICES - DIVISION OF COMMUNICABLE DISEASE CONTROL - OFFICE OF STATISTICS AND SURVEILLANCE
CALIFORNIA, SELECTED REPORTABLE DISEASES
WEEK 29 ENDING 07/24/1993

	CASES REPORTED FOR PERIOD			CASES REPORTED TO DATE		
D I S E A S E	1993	1992	1991	1993	1992	1991
AIDS /1	-	-	-	-	-	-
AMEBIASIS	17	33	23	646	642	833
ANTHRAX	-	-	-	-	-	-
BOTULISM:						
- FOODBORNE	-	-	-	1	-	-
- INFANT /1	-	-	-	16	18	26
- WOUND /2	-	-	-	2	-	-
BRUCELLOSIS	-	4	-	11	19	15
CAMPYLOBACTERIOSIS	188	206	169	3833	3729	3832
CHANCROID	-	-	-	60	18	27
CHLAMYDIAL INFECTNS.	830	928	692	35033	26014	27776
CHOLERA	-	3	-	7	6	-
COCCIDIOIDOMYCOSIS	9	104	4	2022	1025	250
CONJUNCT. NEWBORN	2	-	6	25	23	57
CRYPTOSPORIDIOSIS	11	3	1	202	128	96
CYSTICERCOSIS	2	2	4	72	76	83
DENGUE	-	-	-	2	3	1
DIARRHEA, NWB. O/B	-	-	-	-	-	1
DIPHTHERIA	-	-	-	-	-	1
ENCEPHALITIS:						
- ARBOVIRAL /3	-	-	-	-	-	-
- PRIMARY & OTHER	-	4	4	70	70	57
- POST-INFECTIOUS	-	-	-	16	3	4
E. COLI (0157:H7) /3	1	-	-	24	-	-
FOODBORNE ILLNESS:						
- OUTBREAKS	1	-	1	32	14	18
- CASES	1	-	20	462	1033	400
GIARDIASIS	142	163	83	3619	3769	3403
GONOCOCCAL INFECTNS.	480	749	609	16738	21885	23730
GRANULOMA INGUINALE	-	-	-	1	1	1
HAEMOPHILUS INFLNZ.	-	6	6	100	190	325
HEPATITIS:						
- TYPE A	103	96	81	2936	2763	2998
- TYPE B	19	52	44	1163	1541	1426
- TYPE D	-	-	-	7	7	5
- NON-A / NON-B	1	8	15	368	684	217
- UNSPECIFIED	1	4	2	105	103	234
- HEP. B CARRIERS	265	156	180	5911	5616	3363
KAWASAKI SYNDROME	2	19	4	130	107	25
LEGIONELLOSIS	1	1	-	46	47	39
LEPROSY	1	-	-	42	24	27
LEPTOSPIROSIS	-	-	-	-	-	1
LISTERIOSIS	5	3	2	70	72	80
LYME DISEASE	1	4	13	58	114	177
LYMPHOGRANULOMA VEN.	-	-	-	2	6	12
MALARIA	11	6	5	144	103	174

	CASES REPORTED FOR PERIOD			CASES REPORTED TO DATE		
D I S E A S E	1993	1992	1991	1993	1992	1991
MEASLES:						
TOTAL	4	1	66	81	49	1717
- INDIGENOUS	3	-	65	77	42	1706
- IMPORTED	1	1	1	4	7	11
MENINGITIS, VIRAL	56	77	37	1022	864	468
MENIGOCOCCAL INF.	4	1	2	184	237	239
MUMPS	3	6	10	181	177	346
N G U	96	191	164	4675	4629	5058
PERTUSSIS	13	14	7	242	185	130
P I D	29	59	54	1394	1199	1368
PLAGUE	-	-	-	-	-	-
POLIOMYELITIS	-	-	-	-	-	-
PSITTACOSIS	-	-	-	2	6	5
Q FEVER	-	-	-	4	-	1
RABIES:						
- ANIMAL	2	3	12	185	266	240
- HUMAN	-	-	-	-	-	-
RELAPSING FEVER	-	-	-	-	1	-
REYE SYNDROME	-	1	-	-	4	4
RHEUMATIC FEVER	-	1	-	10	7	10
ROCKY MTN SPOT FVR	-	1	-	-	3	-
RUBELLA	1	2	4	35	38	161
RUBELLA, CONGENITAL	1	-	-	3	2	9
SALMONELLOSIS	114	116	89	3033	2397	2304
SHIGELLOSIS:						
TOTAL	103	126	61	1959	1985	1788
- GROUP A	1	3	-	25	30	33
- GROUP B	29	40	31	715	823	807
- GROUP C	2	8	1	40	73	62
- GROUP D	52	57	19	888	769	569
- GRP. UNSPECIFIED	19	18	10	291	290	317
SYPHILIS: /1						
TOTAL	-	-	-	4541	7199	5816
- PRIMARY	-	-	-	231	474	677
- SECONDARY	-	-	-	360	578	719
- EARLY LATENT	-	-	-	1413	2442	2095
- LATE & LATE LTN.	-	-	-	2399	3302	2237
- CONGENITAL	-	-	-	138	403	88
TETANUS	-	-	-	1	1	1
TOXIC SHOCK SYNDROME	1	1	1	20	22	18
TRICHINOSIS	-	1	-	1	2	-
TUBERCULOSIS	41	90	101	2628	2413	2289
TULAREMIA	-	-	-	1	1	1
TYPHOID FEVER	2	7	2	61	58	61
TYPHUS FEVER	-	-	-	2	1	7
VIBRIO INFECTIONS	-	1	1	7	6	7
YELLOW FEVER	-	-	-	-	-	-

/1 Reported monthly only. See monthly summary.
/2 Reports prior to 1993 reflect Botulism, wound and unspecified.
/3 Not reportable prior to January, 1993.