CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

January 15, 1993 / Vol. 42 / No. 1

MMWR
MORBIDITY AND MORTALITY WEEKLY REPORT

Epidemiologic Notes and Reports

Hepatitis E Among U.S. Travelers, 1989–1992

Outbreaks of hepatitis E (i.e., enterically transmitted non-A, non-B hepatitis) have occurred in some parts of the world and have generally been related to contaminated water supplies. Until recently, when research-based serologic tests (*1,2*) were developed to test for antibody to hepatitis E virus (anti-HEV), no serologic test was available to identify HEV infection, and diagnosis depended on a history of exposure in an appropriate epidemiologic setting and the exclusion of other causes of viral hepatitis. During 1989–1992, acute HEV infection was documented among six persons in the United States who had returned from international travel. This report summarizes CDC's serologic documentation of acute HEV infection—presumed to have been acquired during international travel—in four of these persons.

Patient 1

On February 23, 1991, a woman from Denver traveled to Rosarito Beach, Mexico, for 1 day (*3*). On March 17, she developed headache and nausea, and on March 23, became jaundiced. A serum specimen obtained on March 23 demonstrated a serum aspartate aminotransferase (AST) level of 2100 U/L (normal: 0–35 U/L), an alkaline phosphatase level of 516 U/L (normal: 110–295 U/L), and a total bilirubin level of 7.5 mg/dL (normal: 0–1 mg/dL). Physical examination was normal except for jaundice. Tests for serologic markers for hepatitis A, B, and C were negative, and an ultrasonogram of the liver was normal. Serum samples obtained on April 18 and May 31 were positive for anti-HEV by fluorescent antibody (FA) blocking assay (titers of 1:512 and 1:128, respectively) and by a Western blot assay.

The patient had no underlying medical problems and denied excessive alcohol consumption, injecting-drug use (IDU), blood transfusions, or contact with anyone known to have hepatitis during the 6 months before onset of her illness. Although the source of infection for this patient was not clearly established, she reported drinking margaritas with crushed ice at two restaurants and eating salsa and chips while in Mexico; she denied drinking water or eating other uncooked food. The patient recovered fully.

Although her three traveling companions also consumed margaritas with ice, they did not become ill, and serum samples from all three were negative for anti-HEV.

Hepatitis E — Continued

Patient 2

During June 1991, a high school student, who had been born in India but lived in the United States since the age of 1 year, traveled to Varanasi, India. Before his trip he received prophylactic immune globulin. Approximately 4 weeks after his arrival in India, he developed diarrhea, sore throat, fever, and general malaise and subsequently had weight loss of 20 pounds. On return to the United States, 1 week after onset of his symptoms, physical examination revealed scleral icterus and a mildly tender and enlarged liver. Serum samples included AST of 1262 U/L (normal: 15–37 U/L), total bilirubin of 5.5 mg/dL (normal: 0–1 mg/dL), and an alkaline phosphatase of 245 U/L (normal: 50–136 U/L). Although serologic markers for hepatitis A, B, and C were negative, anti-HEV was detected by FA blocking assay.

The patient denied a history of alcohol abuse, IDU, blood transfusions, or known contact with anyone diagnosed with hepatitis. The patient reported that during his stay in Varanasi, most of the drinking water he consumed was boiled or commercially filtered. However, he reported he occasionally drank unboiled or unfiltered water, and he swam in the Ganges River. The patient recovered fully.

Patient 3

From mid-June through the end of July 1989, a male college student traveled to Pakistan, Nepal, and India. Before his trip, he received prophylactic immune globulin. After his return to the United States, he developed nausea, fever, epigastric discomfort, and marked fatigue. Physical examination revealed scleral icterus and a mildly tender and enlarged liver. Serum samples included an AST of 2256 U/L (normal: 9–53 U/L), total bilirubin of 6.4 mg/dL (normal: 0.2–1.4 mg/dL), and an alkaline phosphatase of 258 U/L (normal: 30–125 U/L). Although tests for serologic markers for hepatitis A, B, and C were negative, anti-HEV was detected by FA blocking assay at a titer of 1:1024.

The patient denied a history of alcohol abuse, IDU, blood transfusions, or known contact with anyone diagnosed with hepatitis. The patient reported that during his trip abroad he did not boil his drinking water (he treated the water with iodine), and he swam in the Ganges River. The patient recovered fully.

Patient 4.

From June through August 1991, a woman who had lived in India until 1988 (when she moved to the United States) traveled to India. Approximately 1 month following her return to the United States, she developed fever, nausea, intermittent vomiting, anorexia, fatigue, and abdominal discomfort. Serum specimens included an AST of 1717 U/L (normal: 15–47 U/L), total bilirubin of 2.5 mg/dL (normal: 0–1 mg/dL), alanine aminotransferase of 1580 (normal: 30–65 U/L), and alkaline phosphatase of 172 U/L (normal: 50–136 U/L). Although tests for serologic markers for hepatitis A, B, and C were negative during her acute illness, both IgM and IgG class anti-HEV were detected by Western blot assay. The patient denied a history of alcohol abuse, IDU, blood transfusions, or known contact with anyone diagnosed with hepatitis. Information was not available regarding her risk exposure (e.g., food and water consumed) while in India.

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Hepatitis E — Continued

Editorial Note: The first documented outbreak of hepatitis E (diagnosed retrospectively) occurred in New Delhi, India, in 1955, when 29,000 cases occurred following fecal contamination of the city water supply (*4*). Outbreaks also have been confirmed in Africa and in the central Asian republics of the former Soviet Union, Afghanistan, Bangladesh, Borneo, Burma, China, India, Mexico, Mongolia, Nepal, Pakistan, and several countries in the Middle East (*4,5*). The estimated numbers of persons affected in these outbreaks have ranged from fewer than 100 to 29,000. Recent reports from Sudan, Ethiopia, and Egypt have suggested that HEV infection may account for a substantial proportion of acute sporadic hepatitis in adults and children in these countries (*6–8*). The confirmation of HEV infection in persons in Mexico suggests that HEV infection may be more widespread, particularly along the United States–Mexico border.

Endemic HEV transmission has not yet been documented in the United States. Although the sources of infection could not be established for the four persons described in this report, these persons represent the first serologically documented cases of HEV infection among U.S. residents who have returned from travel abroad.

Transmission of HEV occurs by the fecal-oral route; fecally contaminated drinking water has been the most commonly implicated vehicle of transmission. The incubation period ranges from 2 to 9 weeks with a mean of approximately 45 days (*4*). Attack rates during outbreaks have been highest in persons aged 15–40 years. The average case-fatality rate among pregnant women is 15%–20%.

Hepatitis A is the most common cause of viral hepatitis among U.S. residents who travel abroad—particularly among persons who have traveled to countries with endemic hepatitis A and who have not received prophylactic immune globulin. Immune globulin prophylaxis for prevention of hepatitis A is recommended for U.S. residents who travel to developing countries (*9*). However, prophylaxis with immune globulin prepared from plasma collected in the United States is unlikely to prevent HEV infection, and travelers must diligently avoid food and water that is potentially contaminated with human feces.

HEV infection should be considered in any person who has traveled abroad but is negative for serologic markers for hepatitis A, B, or C—even though seroconversion to anti-HCV may not be detected until 6 months after onset of symptoms. Health-care professionals should obtain a detailed history regarding sources of drinking water, uncooked food, and contact with persons with hepatitis from all international travelers returning to the United States who have signs and symptoms of viral hepatitis. All cases of acute viral hepatitis should be reported to state health departments. Health-care professionals who require additional information concerning serologic testing of travelers returning to the United States with evidence of non-A, non-B, or non-C hepatitis should contact CDC's Hepatitis Branch, Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases, telephone (404) 639-3048.

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Hepatitis E — Continued

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Surveillance of Deaths Attributed to a Nor'easter — December 1992

During December 10–13, 1992, a severe weather system of snow, sleet, rain, and high winds struck Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island, Virginia, and West Virginia. The highest recorded winds from this winter storm, called a nor'easter, were 80 miles per hour (mph) gusts at Cape May, New Jersey, with sustained winds of 20–30 mph. The tidal surge was 1–4 feet above normal, and wave heights were 20–25 feet near the shore. The 24-hour snowfall was 27 inches in the hills west of Boston. Flooding was recorded at 4–5 feet in both Boston and New York City. In the Berkshire Mountains in western Massachusetts, 4 feet of snow fell, with drifts as high as 10 feet. This report summarizes findings of surveillance for deaths associated with this storm and is based on information obtained from medical examiner (ME) offices.

To assess mortality associated with this storm, during December 10–13, CDC officials contacted ME offices in Connecticut, Delaware, Maryland, Massachusetts, New Jersey, and Rhode Island; Suffolk, Westchester, and Nassau counties in New York; and New York City (which includes Bronx, Kings, New York, Queens, and Richmond counties); and Philadelphia County, Pennsylvania. These offices were asked to report, retrospectively, any deaths occurring in their jurisdictions that they attributed to the storm. If deaths occurred, the office was asked to report demographic information about the decedent and the manner, cause, and circumstance of death. These jurisdictions have a combined population of 35,877,048 (Bureau of the Census, 1990).

MEs in this region attributed three deaths on December 11 and one on December 13 to the nor'easter. In Hudson County, New Jersey, a 38-year-old woman died from multiple blunt force injuries; she had been walking on a sidewalk when the roof of an apartment building blew off during high winds and crushed her. In Westchester County, New York, a 73-year-old man drowned on the premises of a country club in Mamaroneck (northeast of New York City on Long Island Sound) when, because of high winds, he lost his grip while holding on to a tree to escape rising flood waters. In Connecticut, a 40-year-old man drowned in the incoming tide. On December 13, a young female died in Rhode Island as a result of a snow storm; because death investigation records are not public in Rhode Island, additional details about this death are unavailable.

Deaths Attributed to a Nor'easter — Continued

A possible storm-related death, reported by the Connecticut ME's office, is pending further investigation. No information was available from the Massachusetts ME's office.

Reported by: Offices of the medical examiner in Connecticut, Delaware, Maryland, New Jersey, and Rhode Island; Suffolk, Westchester, and Nassau counties and New York City, New York; and Philadelphia County, Pennsylvania. Northeast Regional Climate Center, Ithaca, New York. Surveillance and Programs Br, Div of Environmental Hazards and Health Effects, National Center for Environmental Health, CDC.

Editorial Note: Surveillance efforts using information from ME and coroner (ME/C) offices have provided timely information about deaths associated with natural disasters (*1–6*). Although the findings of mortality surveillance suggest that the public health impact of this storm was minimal, the media reported considerably more deaths than did the MEs. The discrepancy may be due, in part, to the lack of a widely accepted definition of weather-related deaths. Some ME/Cs define weather-related deaths as those resulting from environmental forces such as wind and rising water. However, other ME/Cs include deaths from circumstances such as motor-vehicle collisions and stress-induced cardiovascular events in their definition of weather-related deaths.

A standard definition for weather-related morbidity and mortality should assist health officials in assessing the public health impact associated with severe weather systems and other natural disasters. CDC is developing a definition for deaths related to natural disasters. Until this definition is available, CDC recommends that reports of disaster-related deaths either include selection criteria for disaster-related injuries and fatalities or cite the source of the case reports.

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Current Trends

Respiratory Syncytial Virus Outbreak Activity — United States, 1992

The National Respiratory and Enteric Virus Surveillance System (NREVSS) was established in 1989 to monitor trends in respiratory syncytial virus (RSV), parainfluenza viruses, adenoviruses, and rotaviruses in the United States and to provide information to public health officials and health-care providers about the presence of these viruses in their communities. Based on reports of RSV detections to the NREVSS, during the 1992–93 season, outbreaks of RSV had occurred in all regions of the United States by December 1992. This report summarizes surveillance results for RSV-antigen detec-

Respiratory Syncytial Virus Outbreak — Continued

tions from June 27, 1992, through December 12, 1992, and assesses trends in RSV from July 1, 1990, through December 12, 1992.

Participating laboratories (e.g., hospital-based, public-health, and free-standing) report to CDC weekly the number of specimens tested for RSV by antigen-detection and virus-isolation methods and the number of positive results. Data are analyzed as the percentage of specimens tested positive. Since July 1992, 61 laboratories in 36 states tested 7195 specimens by antigen-detection methods; of these, 451 (6%) were positive. The overall rate of detection from July–August 1992 for all reporting laboratories was less than 5%. From September through November, the rate increased steadily to 10% and reached 25% in December. During 1992, onset of outbreak activity (defined by NREVSS as weeks with more than 10% of specimens positive) was noted first in laboratories in the Northeast during September and in all other regions by December.

During the 1990–91 season, the onset of outbreak activity nationally occurred in early October and peaked in late January 1991. During the 1991–92 season, the onset was in late September 1991 and peaked in mid-February 1992. Although the timing of the peak in the percentage of specimens positive for individual laboratories varied, these peaks usually occurred within 1 month of the national peak. In both previous seasons, RSV outbreak activity was reported by individual laboratories for up to 6 months.

Reported by: Emory Univ School of Public Health, Atlanta. National Respiratory and Enteric Virus Surveillance System laboratories. Respiratory and Enterovirus Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: The findings in this report indicate that RSV outbreak activity has begun for the 1992–93 winter respiratory season in the United States. RSV outbreak activity is important for patient management because antiviral chemotherapy may be indicated for some patients, and nosocomial transmission can be prevented by infection-control procedures (*1,2*).

RSV causes communitywide outbreaks of acute respiratory disease each year throughout the United States and has been associated with increases in hospitalizations and deaths from lower respiratory tract disease in infants and young children (*3*). Outbreaks usually begin in late fall or early winter and persist until spring. Children aged 2–6 months are at greatest risk for serious manifestations (e.g., pneumonia and bronchiolitis) of infection with RSV; however, children of any age with underlying cardiac or pulmonary disease or who are immunocompromised are at risk for serious complications of this infection (*4–7*). RSV causes repeated symptomatic infections throughout life. In adults, RSV usually causes upper respiratory tract manifestations but can cause serious lower respiratory tract disease, especially in the elderly and in persons with compromised immune systems (*8,9*).

The presence of RSV in a community should alert health-care workers to the risk for nosocomial transmission. RSV is a common but preventable nosocomial infection. The source of nosocomially acquired infection can be infected patients, staff, visitors, or fomites; the risk for transmission is present throughout the period of community outbreaks. Nosocomial RSV can be controlled with strict attention to contact-isolation procedures (*2,10*).

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Respiratory Syncytial Virus Outbreak — Continued

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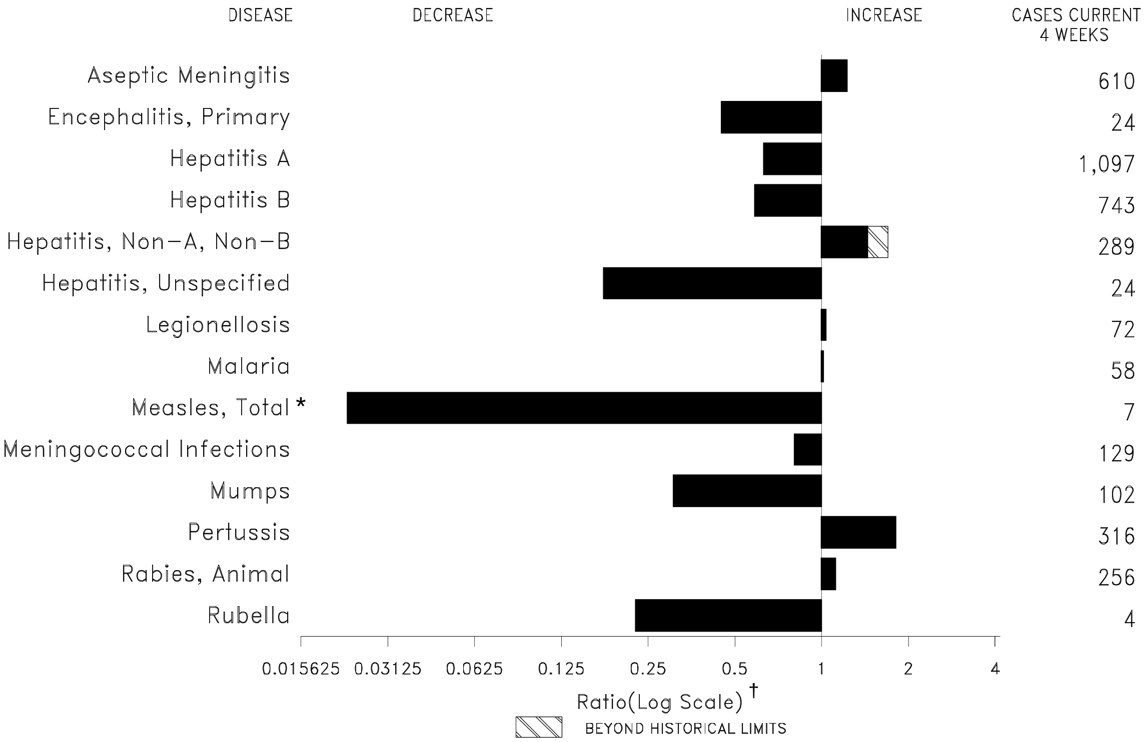
Condom Use and Sexual Identity Among Men Who Have Sex With Men — Dallas, 1991

Safer sex practices intended to reduce the risk for human immunodeficiency virus (HIV) infection have been vigorously promoted among men who are homosexual or bisexual (i.e., men who have sex with men). Such efforts have emphasized personal responsibility and protection of partners, and many of these men appear to have adopted risk-reducing behaviors (*1*). However, it is unknown whether these safer sex practices and norms have been adopted by men who have sex with men but conceal their sexual orientations or do not self-identify as homosexual or bisexual (*2–7*). To characterize the relation between the adoption of safer sex practices among men who have sex with men and sexual self-identity, as well as HIV information-seeking, exposure to the homosexual or bisexual community culture, and comfort in disclosing sexual identity, the Dallas County (Texas) Health Department (DCHD) conducted a survey among men who have sex with men. This report summarizes survey findings for men who reported having had sex with men and who visited DCHD clinics for anonymous HIV counseling and testing from January through June 1991.

During the survey period, a self-administered questionnaire was provided to all men who were waiting to see a counselor. Only those men who reported ever having had anal sex with a man (n=229 [42%] of 540) were included in this analysis. Reported condom use was assessed by one question regarding frequency of condom use while engaging in anal sex. The questionnaire also addressed respondents' self-perceived sexual identity (i.e., "straight" [i.e., heterosexual], homosexual, or bisexual), frequency of seeking information on HIV/acquired immunodeficiency syndrome (AIDS), exposure to print media addressing homosexual issues (i.e., reading specific magazines), and comfort in disclosing having had sex with a man to family members.

(Continued on page 13)

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending January 9, 1993, with historical data — United States



*The large apparent decrease in reported cases of measles(total) reflects dramatic fluctuations in the historical baseline.

† Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where thehatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending January 9, 1993 (1st Week)

	Cum. 1993		Cum. 1993
AIDS*	-	Measles: imported	-
Anthrax	-	indigenous	1
Botulism: Foodborne	-	Plague	-
Infant	-	Poliomyelitis, Paralytic†	-
Other	-	Psittacosis	-
Brucellosis	1	Rabies, human	-
Cholera	-	Syphilis, primary & secondary	270
Congenital rubella syndrome	-	Syphilis, congenital, age < 1 year	-
Diphtheria	-	Tetanus	-
Encephalitis, post-infectious	-	Toxic shock syndrome	1
Gonorrhea	4,219	Trichinosis	-
Haemophilus influenzae (invasive disease)	15	Tuberculosis	158
Hansen Disease	-	Tularemia	3
Leptospirosis	-	Typhoid fever	6
Lyme Disease	21	Typhus fever, tickborne (RMSF)	2

*AIDS case reports are updated monthly rather than weekly (*MMWR* Vol. 41, No. 18, p. 325). Case reports for January 1993 will be added to this table during the first week of February.

†No cases of suspected poliomyelitis have been reported in 1993; 4 cases of suspected poliomyelitis were reported in 1992; 6 of the 9 suspected cases with onset in 1991 were confirmed; all were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending January 9, 1993, and January 4, 1992 (1st Week)

Reporting Area	AIDS*	Aseptic Menin-gitis	Encephalitis Primary	Encephalitis Post-in-fectious	Gonorrhea		Hepatitis (Viral), by type A	B	NA,NB	Unspeci-fied	Legionel-losis	Lyme Disease
	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993
UNITED STATES	-	43	3	-	4,219	7,171	144	90	24	1	13	21
NEW ENGLAND	-	1	-	-	132	66	20	5	-	-	2	7
Maine	-	-	-	-	-	-	-	-	-	-	1	-
N.H.	-	1	-	-	-	-	1	1	-	-	-	-
Vt.	-	-	-	-	3	-	-	-	-	-	-	-
Mass.	-	-	-	-	129	65	7	2	-	-	1	-
R.I.	-	-	-	-	-	-	12	2	-	-	-	7
Conn.	-	-	-	-	-	1	-	-	-	-	-	-
MID. ATLANTIC	-	2	-	-	151	636	4	2	-	-	1	10
Upstate N.Y.	-	-	-	-	-	11	-	-	-	-	-	-
N.Y. City	-	-	-	-	-	333	-	-	-	-	-	-
N.J.	-	-	-	-	-	292	-	-	-	-	-	-
Pa.	-	2	-	-	151	-	4	2	-	-	1	10
E.N. CENTRAL	-	7	1	-	949	1,234	12	14	13	-	3	1
Ohio	-	-	1	-	472	952	6	3	1	-	1	1
Ind.	-	-	-	-	89	93	3	-	2	-	-	-
Ill.	-	-	-	-	214	-	-	-	-	-	-	-
Mich.	-	7	-	-	159	149	3	11	10	-	2	-
Wis.	-	-	-	-	15	40	-	-	-	-	-	-
W.N. CENTRAL	-	4	-	-	191	769	3	1	1	-	-	-
Minn.	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	4	-	-	62	-	1	1	1	-	-	-
Mo.	-	-	-	-	127	766	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	1	-	-	-	-	-	-
S. Dak.	-	-	-	-	2	1	2	-	-	-	-	-
Nebr.	-	-	-	-	-	1	-	-	-	-	-	-
Kans.	-	-	-	-	-	-	-	-	-	-	-	-
S. ATLANTIC	-	12	-	-	1,478	2,756	1	3	4	-	-	-
Del.	-	-	-	-	27	13	-	-	3	-	-	-
Md.	-	-	-	-	-	95	-	-	-	-	-	-
D.C.	-	1	-	-	213	150	-	1	-	-	-	-
Va.	-	-	-	-	120	275	-	-	-	-	-	-
W. Va.	-	2	-	-	19	20	-	-	-	-	-	-
N.C.	-	-	-	-	-	-	-	-	-	-	-	-
S.C.	-	-	-	-	231	263	-	-	-	-	-	-
Ga.	-	-	-	-	279	1,355	-	-	1	-	-	-
Fla.	-	9	-	-	589	585	1	2	-	-	-	-
E.S. CENTRAL	-	9	-	-	497	83	3	15	-	-	2	-
Ky.	-	3	-	-	66	38	2	2	-	-	1	-
Tenn.	-	1	-	-	207	45	1	11	-	-	1	-
Ala.	-	5	-	-	38	-	-	2	-	-	-	-
Miss.	-	-	-	-	186	-	-	-	-	-	-	-
W.S. CENTRAL	-	-	-	-	469	202	9	1	3	1	1	1
Ark.	-	-	-	-	167	-	1	1	-	-	-	-
La.	-	-	-	-	165	202	-	-	-	-	-	-
Okla.	-	-	-	-	137	-	8	-	3	1	1	1
Tex.	-	-	-	-	-	-	-	-	-	-	-	-
MOUNTAIN	-	1	1	-	94	436	56	8	2	-	3	-
Mont.	-	-	-	-	8	-	4	-	-	-	-	-
Idaho	-	-	-	-	4	-	1	1	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	-
Colo.	-	-	1	-	-	68	42	-	-	-	-	-
N. Mex.	-	-	-	-	24	11	5	1	1	-	-	-
Ariz.	-	-	-	-	24	301	2	2	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-
Nev.	-	1	-	-	34	56	2	4	1	-	3	-
PACIFIC	-	7	1	-	258	989	36	41	1	-	1	2
Wash.	-	-	-	-	95	-	-	-	-	-	-	-
Oreg.	-	-	-	-	23	-	7	1	-	-	-	-
Calif.	-	7	1	-	123	958	29	40	1	-	1	2
Alaska	-	-	-	-	10	9	-	-	-	-	-	-
Hawaii	-	-	-	-	7	22	-	-	-	-	-	-
Guam	-	-	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	4	-	-	-	-	-	-	-
V.I.	-	-	-	-	3	-	-	1	-	-	-	-
Amer. Samoa	-	-	-	-	-	3	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-	-	-	-

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of Northern Mariana Islands

*AIDS case reports are updated monthly rather than weekly (*MMWR* Vol. 41, No. 18, p. 325). Case reports for January 1993 will be added to this table during the first week of February.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending January 9, 1993, and January 4, 1992 (1st Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1993	1993	Cum. 1993	1993	Cum. 1993	Cum. 1992	Cum. 1993	1993	Cum. 1993	1993	Cum. 1993	Cum. 1992	1993	Cum. 1993	Cum. 1992
UNITED STATES	3	1	1	-	-	1	22	12	12	16	16	4	2	2	1
NEW ENGLAND	1	-	-	-	-	1	7	1	1	1	1	-	-	-	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.H.	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Vt.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mass.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
R.I.	1	-	-	-	-	-	2	1	1	1	1	-	-	-	-
Conn.	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
MID. ATLANTIC	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
Upstate N.Y.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.Y. City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.J.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pa.	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
E.N. CENTRAL	-	-	-	-	-	-	1	5	5	8	8	-	-	-	-
Ohio	-	-	-	-	-	-	-	3	3	7	7	-	-	-	-
Ind.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Ill.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mich.	-	-	-	-	-	-	-	2	2	1	1	-	-	-	-
Wis.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W.N. CENTRAL	-	-	-	-	-	-	1	1	1	1	1	1	-	-	-
Minn.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iowa	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-
Mo.	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nebr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kans.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
S. ATLANTIC	1	-	-	-	-	-	4	-	-	-	-	-	-	-	-
Del.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Md.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Va.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W. Va.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N.C.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S.C.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ga.	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Fla.	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
E.S. CENTRAL	-	-	-	-	-	-	3	3	3	3	3	-	-	-	-
Ky.	-	-	-	-	-	-	2	-	-	1	1	-	-	-	-
Tenn.	-	-	-	-	-	-	1	2	2	1	1	-	-	-	-
Ala.	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-
Miss.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W.S. CENTRAL	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-
Ark.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
La.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Okla.	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-
Tex.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MOUNTAIN	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Mont.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colo.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
N. Mex.	-	-	-	-	-	-	-	N	N	-	-	-	-	-	-
Ariz.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nev.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC	1	1	1	-	-	-	3	1	1	2	2	2	2	2	1
Wash.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oreg.	-	-	-	-	-	-	1	N	N	-	-	-	-	-	-
Calif.	1	1	1	-	-	-	2	1	1	-	-	2	2	2	1
Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
Guam	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
P.R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
C.N.M.I.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases include both out-of-state and international importations.
N: Not notifiable U: Unavailable † International § Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending January 9, 1993, and January 4, 1992 (1st Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic-Shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1992	Cum. 1993	Cum. 1993	Cum. 1993	Cum. 1993
UNITED STATES	270	329	1	158	261	3	6	2	66
NEW ENGLAND	15	11	-	-	-	-	-	-	21
Maine	-	-	-	-	-	-	-	-	-
N.H.	-	-	-	-	-	-	-	-	-
Vt.	-	-	-	-	-	-	-	-	-
Mass.	14	4	-	-	-	-	-	-	4
R.I.	-	-	-	-	-	-	-	-	-
Conn.	1	7	-	-	-	-	-	-	17
MID. ATLANTIC	-	6	-	21	41	-	5	-	16
Upstate N.Y.	-	-	-	-	-	-	-	-	5
N.Y. City	-	-	-	20	41	-	-	-	-
N.J.	-	6	-	-	-	-	-	-	11
Pa.	-	-	-	1	-	-	5	-	-
E.N. CENTRAL	14	37	1	18	-	1	-	-	2
Ohio	-	16	1	-	-	-	-	-	-
Ind.	12	4	-	3	-	-	-	-	-
Ill.	-	-	-	15	-	-	-	-	-
Mich.	1	8	-	-	-	1	-	-	-
Wis.	1	9	-	-	-	-	-	-	2
W.N. CENTRAL	25	70	-	-	1	-	-	-	-
Minn.	-	-	-	-	-	-	-	-	-
Iowa	3	-	-	-	1	-	-	-	-
Mo.	22	69	-	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-	-	-
Nebr.	-	1	-	-	-	-	-	-	-
Kans.	-	-	-	-	-	-	-	-	-
S. ATLANTIC	66	121	-	27	32	-	-	-	23
Del.	2	1	-	-	-	-	-	-	1
Md.	-	5	-	20	28	-	-	-	-
D.C.	7	44	-	-	-	-	-	-	-
Va.	2	9	-	-	-	-	-	-	13
W. Va.	1	-	-	2	3	-	-	-	2
N.C.	-	-	-	-	-	-	-	-	-
S.C.	9	8	-	5	1	-	-	-	-
Ga.	28	28	-	-	-	-	-	-	7
Fla.	17	26	-	-	-	-	-	-	-
E.S. CENTRAL	63	14	-	5	17	1	-	-	3
Ky.	-	-	-	-	-	-	-	-	-
Tenn.	7	2	-	-	-	-	-	-	-
Ala.	36	12	-	5	-	1	-	-	3
Miss.	20	-	-	-	17	-	-	-	-
W.S. CENTRAL	86	39	-	-	-	-	-	2	-
Ark.	21	-	-	-	-	-	-	-	-
La.	38	39	-	-	-	-	-	-	-
Okla.	27	-	-	-	-	-	-	2	-
Tex.	-	-	-	-	-	-	-	-	-
MOUNTAIN	-	29	-	4	-	-	-	-	-
Mont.	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-
Colo.	-	1	-	-	-	-	-	-	-
N. Mex.	-	-	-	-	-	-	-	-	-
Ariz.	-	7	-	1	-	-	-	-	-
Utah	-	-	-	-	-	-	-	-	-
Nev.	-	21	-	3	-	-	-	-	-
PACIFIC	1	2	-	83	170	1	1	-	1
Wash.	-	2	-	1	-	-	-	-	-
Oreg.	-	-	-	-	-	-	-	-	-
Calif.	-	-	-	80	166	1	1	-	-
Alaska	-	-	-	-	3	-	-	-	1
Hawaii	1	-	-	2	1	-	-	-	-
Guam	-	-	-	-	-	-	-	-	-
P.R.	11	-	-	-	-	-	-	-	-
V.I.	1	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending January 9, 1993 (1st Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	708	533	105	54	9	7	59
Boston, Mass.	178	110	41	22	2	3	18
Bridgeport, Conn.	47	40	3	4	-	-	4
Cambridge, Mass.	28	21	4	3	-	-	3
Fall River, Mass.	44	39	4	-	-	1	-
Hartford, Conn.	79	56	12	9	-	2	2
Lowell, Mass.	16	16	-	-	-	-	3
Lynn, Mass.	21	14	7	-	-	-	1
New Bedford, Mass.	30	23	4	2	1	-	2
New Haven, Conn.	35	26	4	4	1	-	3
Providence, R.I.	60	48	6	4	2	-	6
Somerville, Mass.	10	8	1	1	-	-	-
Springfield, Mass.	57	43	10	3	-	1	4
Waterbury, Conn.	25	21	4	-	-	-	2
Worcester, Mass.	78	68	5	2	3	-	11
MID. ATLANTIC	2,942	1,944	524	339	70	65	155
Albany, N.Y.	51	40	7	3	1	-	4
Allentown, Pa.	17	14	2	1	-	-	3
Buffalo, N.Y.	102	69	26	2	2	3	5
Camden, N.J.	52	32	4	9	1	6	5
Elizabeth, N.J.	27	19	4	4	-	-	3
Erie, Pa.§	64	50	11	-	2	1	6
Jersey City, N.J.	82	56	13	8	4	1	3
New York City, N.Y.	1,617	1,043	295	219	29	31	69
Newark, N.J.	64	35	12	9	4	4	4
Paterson, N.J.	34	24	4	4	1	1	-
Philadelphia, Pa.	306	170	71	44	13	8	15
Pittsburgh, Pa.§	102	70	20	9	1	2	12
Reading, Pa.	20	14	5	-	1	-	4
Rochester, N.Y.	155	118	19	10	6	2	9
Schenectady, N.Y.	25	13	6	4	2	-	-
Scranton, Pa.§	31	27	2	1	-	1	1
Syracuse, N.Y.	92	70	11	6	2	3	4
Trenton, N.J.	43	31	7	3	1	1	5
Utica, N.Y.	20	17	3	-	-	-	2
Yonkers, N.Y.	38	32	2	3	-	1	1
E.N. CENTRAL	2,930	1,861	536	338	125	70	168
Akron, Ohio	78	59	13	3	2	1	-
Canton, Ohio	59	45	12	1	-	1	6
Chicago, Ill.	695	293	143	160	87	12	20
Cincinnati, Ohio	176	125	28	13	3	7	20
Cleveland, Ohio	192	118	41	25	5	3	5
Columbus, Ohio	157	106	30	15	3	3	8
Dayton, Ohio	165	114	31	14	2	4	18
Detroit, Mich.	371	223	75	56	3	14	8
Evansville, Ind.	74	64	5	4	-	1	3
Fort Wayne, Ind.	45	32	9	1	2	1	-
Gary, Ind.	22	12	7	2	-	1	-
Grand Rapids, Mich.	69	52	11	3	1	2	7
Indianapolis, Ind.	217	159	40	9	4	5	24
Madison, Wis.	29	24	3	2	-	-	2
Milwaukee, Wis.	191	148	28	4	5	6	16
Peoria, Ill.	52	33	7	7	2	3	4
Rockford, Ill.	61	39	14	4	1	3	5
South Bend, Ind.	59	49	4	5	-	1	8
Toledo, Ohio	131	99	24	5	3	-	11
Youngstown, Ohio	87	67	11	5	2	2	3
W.N. CENTRAL	855	606	144	67	21	16	30
Des Moines, Iowa	52	35	13	4	-	-	1
Duluth, Minn.	38	30	5	2	1	-	1
Kansas City, Kans.	26	12	8	3	1	1	-
Kansas City, Mo.	137	92	28	10	3	4	4
Lincoln, Nebr.	44	29	10	5	-	-	3
Minneapolis, Minn.	169	129	13	18	2	7	11
Omaha, Nebr.	84	65	12	3	4	-	3
St. Louis, Mo.	164	121	24	12	5	2	-
St. Paul, Minn.	87	56	22	4	3	2	5
Wichita, Kans.	54	37	9	6	2	-	2
S. ATLANTIC	1,391	867	294	127	54	48	86
Atlanta, Ga.	138	81	37	14	5	1	4
Baltimore, Md.	279	171	57	35	9	6	30
Charlotte, N.C.	91	57	27	6	1	-	2
Jacksonville, Fla.	142	94	33	6	7	2	10
Miami, Fla.	94	57	20	9	5	3	1
Norfolk, Va.	87	51	13	9	7	7	6
Richmond, Va.	102	65	21	7	6	3	5
Savannah, Ga.	68	45	13	5	3	2	4
St. Petersburg, Fla.	82	58	12	5	1	6	2
Tampa, Fla.	159	108	31	15	2	3	12
Washington, D.C.	110	50	23	15	8	14	4
Wilmington, Del.	39	30	7	1	-	1	6
E.S. CENTRAL	742	475	161	70	21	14	58
Birmingham, Ala.	113	58	33	12	5	4	7
Chattanooga, Tenn.	60	35	12	10	2	1	7
Knoxville, Tenn.	102	67	23	8	3	1	12
Lexington, Ky.	79	56	17	1	1	4	8
Memphis, Tenn.	145	94	31	15	4	1	11
Mobile, Ala.	22	14	4	3	-	1	-
Montgomery, Ala.	71	51	12	7	1	-	1
Nashville, Tenn.	150	100	29	14	5	2	12
W.S. CENTRAL	1,542	990	294	162	55	41	95
Austin, Tex.	75	50	17	7	-	1	4
Baton Rouge, La.	46	29	8	7	1	1	-
Corpus Christi, Tex.	46	42	2	2	-	-	1
Dallas, Tex.	222	131	43	25	13	10	5
El Paso, Tex.	86	54	19	9	1	3	10
Ft. Worth, Tex.	101	71	12	5	6	7	4
Houston, Tex.	410	232	87	62	19	10	46
Little Rock, Ark.	78	53	14	6	4	1	3
New Orleans, La.	149	95	29	17	5	3	-
San Antonio, Tex.	149	97	33	12	5	2	11
Shreveport, La.	40	33	5	2	-	-	5
Tulsa, Okla.	140	103	25	8	1	3	6
MOUNTAIN	985	672	164	79	32	37	82
Albuquerque, N.M.	117	79	23	5	3	7	6
Colo. Springs, Colo.	75	55	11	6	1	2	10
Denver, Colo.	98	66	15	9	4	4	12
Las Vegas, Nev.	151	88	33	19	6	4	16
Ogden, Utah	25	20	1	3	1	-	1
Phoenix, Ariz.	238	164	36	15	8	15	14
Pueblo, Colo.	29	24	3	2	-	-	2
Salt Lake City, Utah	91	56	18	9	4	4	9
Tucson, Ariz.	161	120	24	11	5	1	12
PACIFIC	2,278	1,524	429	225	50	40	154
Berkeley, Calif.	31	21	7	1	-	2	3
Fresno, Calif.	83	44	21	10	4	4	5
Glendale, Calif.	29	21	2	5	-	-	3
Honolulu, Hawaii	82	56	20	2	3	1	3
Long Beach, Calif.	83	52	18	10	2	1	17
Los Angeles, Calif.	516	318	110	60	14	5	20
Pasadena, Calif.	50	32	10	2	4	2	6
Portland, Oreg.	104	85	12	6	-	1	7
Sacramento, Calif.	194	129	40	15	4	6	20
San Diego, Calif.	199	126	35	27	3	8	20
San Francisco, Calif.	243	146	52	39	3	3	5
San Jose, Calif.	235	168	42	19	3	3	22
Santa Cruz, Calif.	46	38	6	2	-	-	8
Seattle, Wash.	204	146	26	23	5	4	3
Spokane, Wash.	80	69	9	1	1	-	8
Tacoma, Wash.	99	73	19	3	4	-	4
TOTAL	14,373¶	9,472	2,651	1,461	437	338	887

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

U: Unavailable.

Condom Use and Sexual Identity — Continued

The mean* score for frequency of reported condom use for men who had anal sex with men and self-identified as homosexual or bisexual (mean [M]=2.7; 95% confidence interval [CI]=2.5–2.9) was significantly higher than for men who had anal sex with men and self-identified as straight (M=0.9; 95% CI=0.4–1.5) ($p<0.0001$). The percentage of men who reported never using condoms was 64% for those self-identified as straight (11% of the sample, n=25) compared with 16% for those self-identified as homosexual or bisexual (89% of the sample, n=203) ($p<0.001$). The mean score for reported frequency of condom use for men who indicated that they often sought HIV/AIDS information in newspapers, brochures, or leaflets (M=2.8) was significantly higher than for men who did not seek such information (M=2.3) (95% CI for the difference between means=0.1–0.9, $p<0.01$).

Respondents' reported comfort† in disclosing to family members that the respondents have had sex with a man correlated negatively with the consistency of condom use ($r=-0.16$, $p<0.02$) (i.e., men who felt more uncomfortable disclosing to family members tended to use condoms less consistently). Men indicating that they read materials dealing with homosexual issues used condoms more frequently (M=2.8; 95% CI=2.6–3.1) than those who reported not reading such materials (M=2.1; 95% CI=1.9–2.4) ($p<0.001$).

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Editorial Note: The findings in this report suggest that men who have anal sex with men but do not identify themselves as homosexual or bisexual are not adopting behaviors to reduce their risk for HIV infection with the same frequency as men who self-identify as homosexual or bisexual. Specifically, men who were clients of the DCHD and who sought information on HIV/AIDS and materials relating to homosexual issues (which may also reflect a connection to homosexual or bisexual culture) used condoms more consistently compared with men who did not seek this information. Consequently, men who had sex with men but did not self-identify as homosexual or bisexual may have been at greater risk for HIV infection than were men who were openly homosexual or bisexual.

Because the data in this report are based on a survey in a single facility and because of the limited sample size for self-identified straight men (n=25), these findings may not be generalizable. These findings do emphasize, however, that to reduce HIV transmission among men, public health officials may need to develop innovative outreach and risk-reduction strategies aimed at men who have sex with men but who do not self-identify as homosexual or bisexual. Surveys to further characterize the risk for HIV infection among this population are being conducted in Dallas; Denver; Long Beach, California; and Seattle (*8*).

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*Possible answers were: "never"=0, "almost never"=1, "sometimes"=2, "almost every time"=3, "every time"=4 to the question, "When you have anal sex with a man, how often is a condom used?"

† Disclosure comfort was measured on a scale ranging from 1 to 5, where 1="very comfortable" and 5="very uncomfortable."

Condom Use and Sexual Identity — Continued

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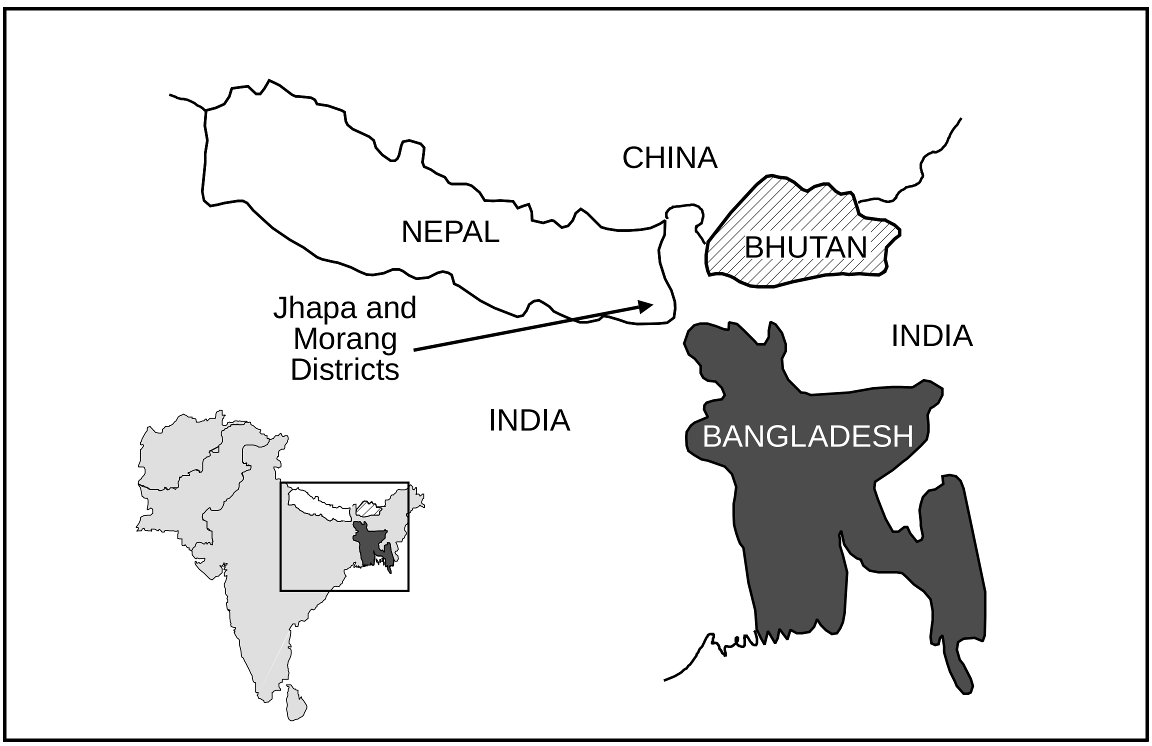
International Notes

Surveillance of the Health Status of Bhutanese Refugees — Nepal, 1992

From February 1991 through July 1992, 67,000 Bhutanese of Nepalese ethnic origin entered the Jhapa and Morang districts of southeastern Nepal (Figure 1) because of ethnic persecution in Bhutan. Six refugee camps were established along the Nepal–

FIGURE 1. Location of Bhutanese refugee camps — Nepal, 1992



Health Status of Bhutanese Refugees — Continued

India border to accommodate the refugees. In July 1992, to assess the public health needs of these refugees, the Office of the United Nations High Commissioner for Refugees (UNHCR), the Save the Children Fund (SCF), and CDC established a surveillance system to monitor morbidity and mortality. This report describes the surveillance system implemented in these six camps in July 1992 and presents mortality data collected from March through July 1992.

Mortality surveillance was established for six major disease conditions (diarrhea, acute respiratory infections [ARI], measles, malaria, injuries, maternal deaths, and other/unknown). To encourage timely reporting of deaths, families of the deceased were offered free funeral shrouds and were assured that reporting would not result in a decrease of rations. To uniformly assign a cause of death, a single designated health worker collected mortality data at each camp by interviewing the families. Interviews were structured in a hierarchical fashion starting with the most specific and easily recognized causes of death (i.e., a verbal autopsy). The content and organization of these questions were validated by comparing the cause of death determined from the verbal autopsy with that from more detailed family interviews and reviews of clinical records. Morbidity surveillance was established in the major health center in each camp and was based on clinical case definitions for major causes of morbidity (bloody diarrhea, suspected cholera, other diarrhea, moderate–severe ARI, malaria, measles, suspected hepatitis, suspected encephalitis, injury, or other/unknown).

Mortality data for the period before the institution of systematic surveillance were compiled from camp administrative records. From March 25 through June 30, daily mortality rates for children aged <5 years (<5MR) averaged over each week were 2.3–8.8 deaths per 10,000 persons per day, a rate 2–8 times greater than the <5MR for nonrefugee children in Nepal (1.1 deaths per 10,000 per day) (*1*). Daily crude mortality rates (CMRs) averaged over each week for the entire camp population were 1.5 deaths per 10,000 per day (range: 1.0–3.0).

Use of verbal autopsies for mortality surveillance enabled determination of cause-specific death rates for the period immediately after surveillance began. Based on verbal autopsies of 89 deaths in persons of all ages during July 3–19, 49 (55%) deaths were due to ARI (0.5 deaths per 10,000 per day) and 25 (28%) were due to diarrhea (0.3 deaths per 10,000 per day). The ARI-specific <5MR (1.6 deaths per 10,000 per day) was more than five times greater than the ARI-specific mortality rate for persons aged ≥5 years (0.3 deaths per 10,000 per day).

From March 1 through April 30, 549 cases of measles were recorded at camp health centers (attack rate [AR]: 1.7 per 100 population). Following this outbreak, <5MRs increased to 4.4–8.8 deaths per 10,000 per day during April 1–May 16. In surveys conducted after a measles vaccination campaign in late May, measles vaccination coverage in children aged 6–59 months was estimated to be 64% (95% confidence interval=60%–69%). However, new cases of measles and measles-related deaths continued to be reported during the first 2 weeks of July 1992.

Multiple antibiotic-resistant *Shigella* dysentery was an important cause of morbidity. Nearly 12% of patients with diarrhea visiting health centers during July 3–19 had bloody diarrhea. A case of dysentery was defined as fever, more than four stools per day, and blood in the stools confirmed by a health worker. *S. flexneri* types 1, 2, and 3 were cultured from five of 13 (38%) patients meeting this surveillance case definition. All isolates were resistant to ampicillin, chloramphenicol, and trimethoprim-

Health Status of Bhutanese Refugees — Continued

sulfamethoxazole but sensitive to nalidixic acid. Before use of surveillance definitions, attempts to culture pathogens from patients with a presumed diagnosis of dysentery were unsuccessful, possibly because of misclassification of nonbloody diarrhea as dysentery.

All refugees with illnesses meeting the surveillance case definition for suspected malaria (i.e., fever and shaking chills) were screened using blood smears. From June 15 through July 19, in one camp that had been closed to new arrivals for 2 months, 38 (3.4%) of 1129 refugees with suspected malaria had blood smears slide-positive for *Plasmodium falciparum*, and 37 (3.3%) had blood smears positive for *P. vivax*. Most of these persons were probably infected during trips to India; however, some patients may have been infected through endemic transmission.

Systematic mortality and morbidity surveillance has been continued by UNHCR, SCF, and local health authorities. In addition, public health programs have been implemented for diarrheal disease prevention (e.g., improved water and sanitation), screening for malaria infection among new arrivals, and the use of standard guidelines for the appropriate case management of infectious diseases, including dysentery, malaria, and ARI.

Reported by: Program and Technical Support Section, Office of the United Nations High Commissioner for Refugees, Geneva. Save the Children Fund, London. WHO Expanded Programme on Immunization, Kathmandu, Nepal. Arbovirus Diseases Br, Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases; International Health Program Office, CDC.

Editorial Note: The findings in this report underscore the types of public health problems that uniquely affect refugees. For example, refugees may lack immunity to some diseases endemic in the host country (*2*). Specifically, Bhutanese refugees may lack immunity to Japanese encephalitis, which is endemic in Nepal. In addition, a sudden influx of refugees may place local residents of the host country at increased risk for epidemic diseases (*3*). Although falciparum malaria transmission has been dramatically reduced in southern Nepal since the 1950s, the influx of refugees with malaria poses a potential risk for reestablishing an endemic focus.

CMR is the most specific indicator of health status in refugee populations during the emergency relief phase (i.e., the period when CMRs exceed 1.0 deaths per 10,000 per day [*4–6*]). Average daily CMRs should be calculated each week to identify mortality trends during the emergency period because the death rate may fluctuate dramatically during this phase (*4,5*). Reported CMRs are often inaccurate or untimely unless active mortality surveillance is established early in a refugee camp. In the camps in Nepal, mortality rates may have been underestimated because of underreporting of deaths before institution of systematic surveillance (*4*).

Using simple surveillance case definitions, mortality and morbidity surveillance should be established as early as possible to guide public health planning. Collecting uniform surveillance data in all camps over time provides an important measurement of the efficacy of interventions and allows early recognition of impending epidemics (*7*). While routine malnutrition prevalence and immunization coverage estimates are essential during the emergency phase, these evaluations are best performed by community-based surveys because of biases involved in clinic-based surveillance.

During the emergency phase in refugee camps, disease and injury surveillance should be simplified and target only the most important potential causes of mortality. Surveillance case definitions should rely on simple clinical diagnostic criteria unless

Health Status of Bhutanese Refugees — Continued

confirmatory laboratory tests are readily available. Surveillance information should be limited to data that will be routinely analyzed to support public health interventions. For example, systematic disease surveillance in these Bhutanese refugee camps led to the rapid recognition of a multiple *Shigella* outbreak and to the training of local health workers in the case management of ARI and diarrheal diseases. Routine surveillance can be supplemented with special reporting for diseases with epidemic potential during outbreaks (e.g., cholera, meningococcal meningitis, measles, and malaria). During outbreaks, more detailed individual case-report forms can be used to collect information to better guide public health interventions.

To prevent the spread of epidemic diseases to local residents and the refugee population, screening of newly arriving refugees and surveillance for epidemic diseases in refugee camps is essential. Vitamin A administration and measles vaccination should be routinely provided to newly arrived refugees aged <5 years to lessen the risk and consequences of epidemic measles. Measles vaccine should be administered in refugee settings even during outbreaks because of the continued influx of potentially susceptible children (*8*).

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Notice to Readers

Projections of the Number of Persons Diagnosed with AIDS and the Number of Immunosuppressed HIV-Infected Persons — United States, 1992–1994

CDC recently published new projections of the number of persons in the United States who will initially be diagnosed with a condition included in the 1987 acquired immunodeficiency syndrome (AIDS) surveillance case definition during 1992–1994 (*1*).* The report also presents estimates of the number of persons with human immunodeficiency virus (HIV)-related severe immunosuppression (defined as HIV-infected persons with CD4+ T-lymphocyte counts <200 cells/µL whose illnesses have not been diagnosed as conditions included in the 1987 surveillance definition) as well as esti-

*Single copies of the document will be available in January from the CDC National AIDS Clearinghouse, P.O. Box 6003, Rockville, MD 20849-6003; telephone (800) 458-5231.

Notice to Readers — Continued

mates on the effect of adding this measure of immunosuppression to the 1993 expanded AIDS surveillance case definition (*2*).

During 1991, approximately 58,000 persons in the United States had AIDS as defined by the 1987 AIDS surveillance criteria. During 1992–1994, the number of persons who have illnesses meeting these criteria is expected to increase by a few percent annually, with approximately 85% of those persons being reported to CDC with cases of AIDS. As in recent years, the rate of increase in reported AIDS cases in persons who acquired their HIV infection through heterosexual contact is expected to be greater than that in persons who acquired HIV through either injecting-drug use or male homosexual or bisexual contact.

CDC estimates that, as of January 1993, an additional 120,000–190,000 U.S. residents had HIV-related severe immunosuppression. However, not all of these persons were aware of their HIV infection, and of those who know their HIV infection status, not all have had an immunologic evaluation.

If AIDS surveillance criteria had remained unchanged, approximately 50,000–60,000 reported AIDS cases would have been expected in 1993. The expansion of the AIDS surveillance case definition to include HIV-related severe immunosuppression should increase reported cases by approximately 75%. In subsequent years, the effect of this expansion on the number of reported cases is expected to be smaller because in 1993 many prevalent as well as incident cases of immunosuppression will be reported as the expanded surveillance case definition is implemented. Accordingly, reported cases of AIDS may decline from 1993 through 1994. However, the number of AIDS cases reported in 1994 is still expected to exceed by 10%–20% the number that would have been reported if the 1987 surveillance criteria had remained in effect.

Reported by: Div of HIV/AIDS, National Center for Infectious Diseases, CDC.

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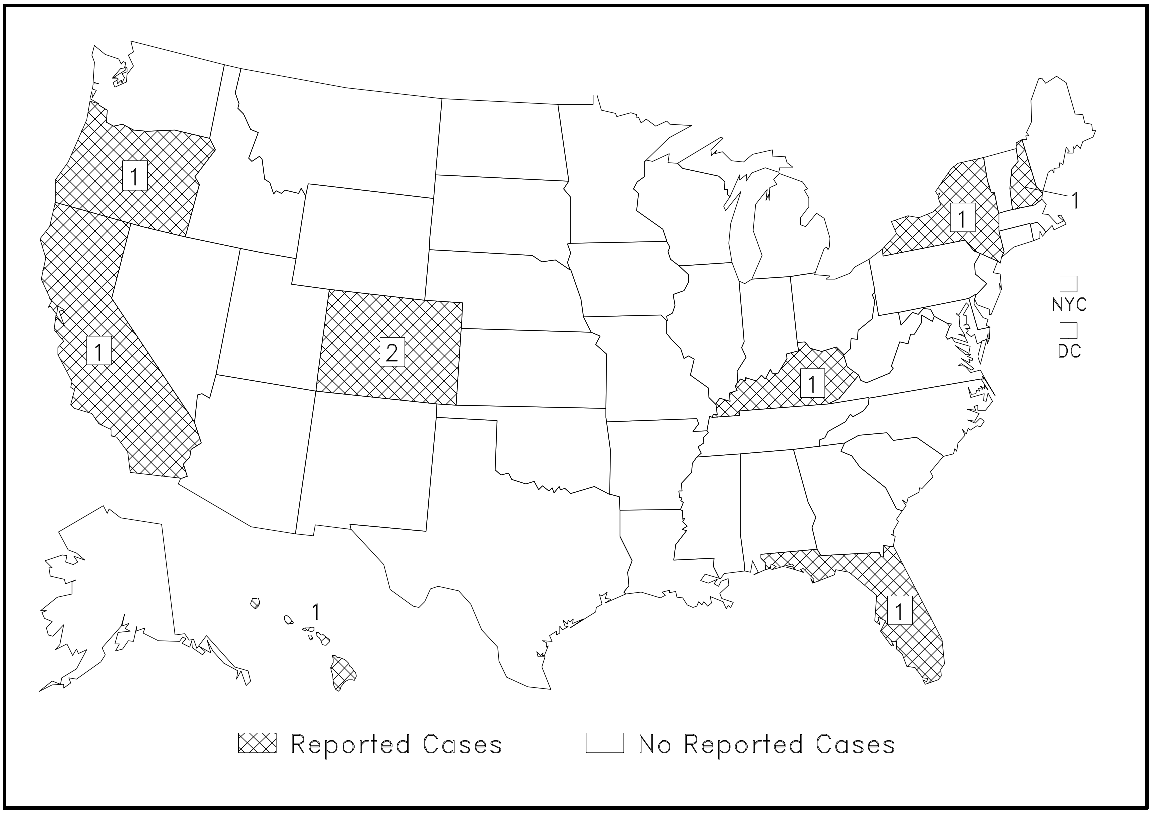
Addendum: Vol. 41, No. RR-3

In the *MMWR Recommendations and Reports*, "A Framework for Assessing the Effectiveness of Disease and Injury Prevention," dated March 27, 1992, the last paragraph on page 7 gives a formula for prevented fraction. In the formula, P_1 is the proportion of the cases that accepts the intervention, PF is the prevented fraction, and RR is the relative risk. The formula for a population-based study is PF=P(1-RR), where P is the proportion of the entire population that accepts the intervention.

Reported cases of measles, by state — weeks 49–53, 1992



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