CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

July 24, 1998 / Vol. 47 / No. 28

MMWR™
MORBIDITY AND MORTALITY WEEKLY REPORT

Outbreak of Acute Febrile Illness Among Athletes Participating in Triathlons — Wisconsin and Illinois, 1998

On July 14, 1997, the Wisconsin Division of Health (WDOH) was notified by the City of Madison Health Department that three athletes were hospitalized with an acute febrile illness. The illness was characterized by fever, myalgia, and headache with illness onset on July 6, 7, and 10, respectively. One of these three athletes had acute renal failure. Two of the athletes had participated in a triathlon* held in Madison, Wisconsin, on July 5 (692 registered participants) and all three had participated in a June 21 triathlon in Springfield, Illinois (961 registered participants). Eighty persons were registered for both events. Leptospirosis was suspected by WDOH staff as a likely cause of the illness and CDC was notified. Acute-phase serum specimens from two of the three hospitalized athletes obtained 4 and 8 days following onset of fever have been tested at CDC for leptospirosis using the PanBio enzyme-linked immunosorbent assay (ELISA) IgM screening test (PanBio, Brisbane, Australia)†; one specimen tested positive. This report presents preliminary findings of an ongoing investigation to identify additional cases of acute febrile illness among athletes participating in these two triathlons and to determine the cause of the illness.

To identify additional cases of febrile illness, triathlon participant lists were obtained from the race organizers; athletes from 44 states participated in at least one of the two events. A telephone survey of participants identified additional athletes with unexplained febrile illness. On July 17, CDC issued an advisory about the probable leptospirosis outbreak to increase awareness among health-care providers, athletes who participated in the Wisconsin and Illinois triathlons, and residents of the communities in which these events were held, and to request such illnesses be reported to CDC and state and local health departments.

Through July 20, a total of 639 triathlon participants from 39 states had been interviewed by telephone using a standardized questionnaire. Interviews have been completed for 588 (61%) of the Illinois participants and for 126 (18%) of the Wisconsin participants. A case was defined as onset of fever during June 21–July 20 in a triathlon participant that was associated with at least two of the following symptoms or signs:

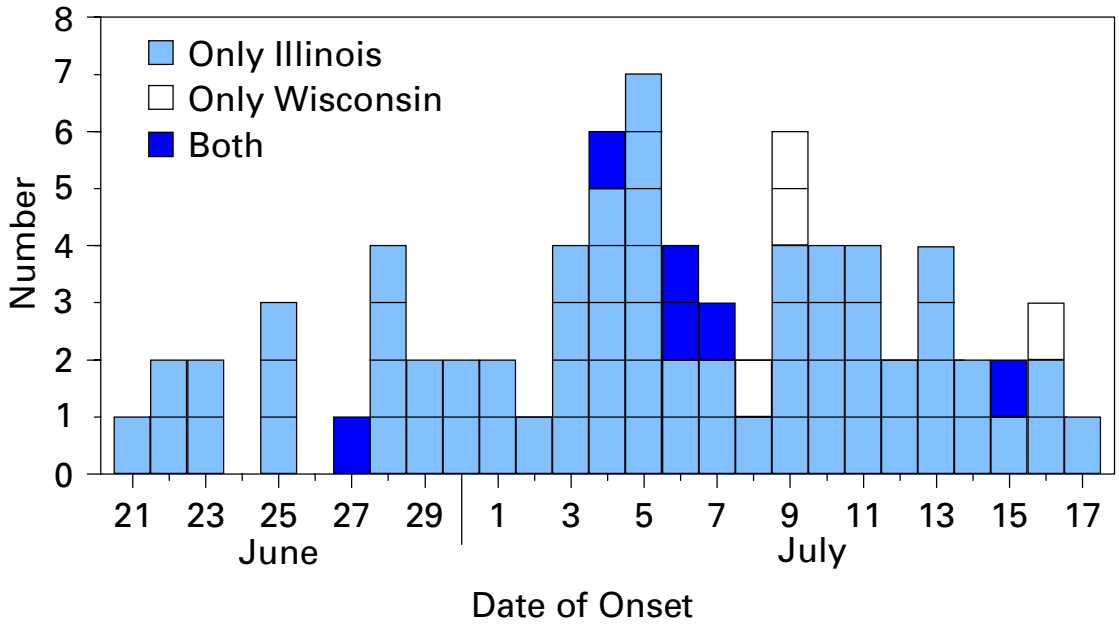
*A triathlon is a race consisting of swimming, biking, and running competitions.
†Use of trade names and commercial sources is for identification only and does not imply endorsement by CDC or the U.S. Department of Health and Human Services.

Acute Febrile Illness Among Athletes — Continued

chills, headache, myalgia, diarrhea, eye pain, or red eyes (Figure 1). Seventy-four (12%) participants interviewed had an illness that met the case definition. The median age of these case-patients was 36 years (range: 15–80 years); 80% were male. Case-patients were similar in age and sex to athletes who were not ill. Among case-patients, symptoms and signs of illness were chills (89%), headache (77%), myalgia (73%), diarrhea (58%), eye pain (43%), and red eyes (26%). Fifty-four (73%) sought medical care; 21 (39%) of those were hospitalized. Among hospitalized patients, two had acute renal failure, two had abdominal surgery for suspected acute abdomen, and two had neurologic illnesses; one had suspected leptospirosis diagnosed.

Among the 74 case-patients, 64 (86%), four (5%), and six (8%) participated in the Illinois triathlon, the Wisconsin triathlon, or both, respectively. Signs and symptoms of illness did not differ significantly between athletes who participated exclusively in either the Illinois or Wisconsin triathlons (two-tailed Fisher exact; all $p>0.10$). Acute-phase serum samples obtained from an additional 16 case-patients identified as a result of the investigation have been tested at CDC for leptospirosis using Pan-Bio ELISA IgM. Specimens from two case-patients, both of whom participated in only the Illinois triathlon, tested positive. One of the 16 case-patients, who also participated in only the Illinois triathlon and whose serum specimen tested negative, had a cholecystectomy because of acute abdomen. No histopathologic evidence of cholecystitis was seen. Immunohistochemical staining of the gall bladder at CDC using rabbit polyclonal reference antiserum reactive with 16 different leptospiral strains was positive for leptospirosis (*1*). Leptospiral antigens were seen as intact leptospira, thread-like filaments, and granular forms (*2*). Paired, 2-week convalescent serum specimens are being obtained for the 18 patients (these 16 patients and the first two patients) whose acute-phase serum specimens (three positive and 15 negative) have been tested.

FIGURE 1. Onset of fever among triathlon athletes, by date — Madison, Wisconsin, and Springfield, Illinois, June 21–July 17, 1998



Acute Febrile Illness Among Athletes — Continued

CDC in collaboration with state and local health departments is continuing to conduct epidemiologic, laboratory, and environmental investigations to characterize further this outbreak. The objectives of these investigations are to identify additional cases, to determine the etiology of illness among athletes who participated in triathlons in both Illinois and Wisconsin, to identify the source and mode of transmission, and to develop prevention and control measures.

Reported by: Wisconsin Outbreak Investigation Team, Wisconsin Div of Health; City of Madison Health Dept. B Davis, Springfield Dept of Public Health, Springfield; Illinois Outbreak Investigation Team, Illinois Dept of Public Health. Council of State and Territorial Epidemiologists, Atlanta, Georgia. Infectious Disease Pathology Activity, Div of Viral and Rickettsial Diseases, and Meningitis and Special Pathogens Br, Div of Bacterial and Mycotic Diseases, National Center for Infectious Diseases; and EIS officers, CDC.

Editorial Note: The clinical signs and symptoms of illness among athletes meeting the case definition, the serologic and immunohistochemical testing, and the epidemiologic association with prolonged water exposure (1.5-mile lake swim) among these athletes suggest that leptospirosis, a water-borne disease, most likely is the cause of this outbreak. Because the signs and symptoms of leptospirosis are nonspecific, the case definition was purposefully broad and, as a result, may be detecting illness attributable to other causes. Although current epidemiologic data suggest that an environmental exposure probably occurred in the Illinois triathlon, additional laboratory and epidemiologic investigations are needed to exclude illness attributable to more than one exposure. As a precautionary measure, the city of Springfield and the Illinois Department of Public Health have issued an advisory not to swim, water-ski, or use personal watercraft at the site on the lake where the Illinois triathlon was held. Because only 18% of the Wisconsin participants had been interviewed, further interviews and laboratory evaluation of clinical specimens among athletes who participated in the Wisconsin triathlon are needed to evaluate the possibility of illness attributable to leptospirosis and to other pathogens.

Leptospirosis is a widespread zoonosis that is endemic in most temperate and tropical climates. Leptospires infect various animals that excrete the organism in their urine; the bacteria then persist in fresh water, damp soil, vegetation, and mud. Human infection occurs through exposure to water or soil contaminated by infected animal urine and has been associated with wading, swimming, and white-water rafting in contaminated lakes and rivers (*1,3–5*). Leptospires may enter the body through cut or abraded skin, mucous membranes, and conjunctivae. The incubation period is a few days to 4 weeks, and illness usually begins abruptly with fever, chills, rigors, myalgia, and headache, and may include conjunctivitis, abdominal pain, vomiting, diarrhea, and meningeal symptoms (*6*). Muscle pain, often severe, is most notable in the calf and lumbar areas. Skin rashes may occur. Leptospirosis can be a bi-phasic disease with an acute septicemic phase and a secondary phase of severe disease characterized by jaundice, renal failure, hemorrhage, or hemodynamic collapse (*7*).

The organism may be isolated from samples of blood and cerebrospinal fluid obtained during the first 10 days of illness, and in the urine following the first week of illness. The microagglutination test (MAT), the standard for serologic diagnosis of leptospirosis, is time-consuming and difficult to perform (*8*). Therefore, the Pan-Bio ELISA is being used as a screening test in this investigation; serum specimens positive by Pan-Bio ELISA are being confirmed by MAT.

Acute Febrile Illness Among Athletes — Continued

Mild infections can be treated with oral doxycycline; patients requiring hospitalization should be treated with intravenous penicillin (*6*). Additional information is available from CDC, telephone (888) 688-2732 ([888] OUTBREAK), on the World-Wide Web site, http://www.cdc.gov, or through state and local health departments.

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Wild Poliovirus Transmission in Bordering Areas of Iran, Iraq, Syria, and Turkey, 1997–June 1998

The European and Eastern Mediterranean regions of the World Health Organization (WHO) have made substantial progress toward the goal of eradicating poliomyelitis by 2000 (*1–3*). As of June 1998, only two foci of known wild poliovirus transmission remained in the border areas of these two WHO regions: southeastern Turkey/northern Iraq and Tadjikistan/Afghanistan. This report summarizes progress toward interruption of wild poliovirus transmission in the bordering areas of the Islamic Republic of Iran, the Republic of Iraq, the Syrian Arab Republic, and Turkey.

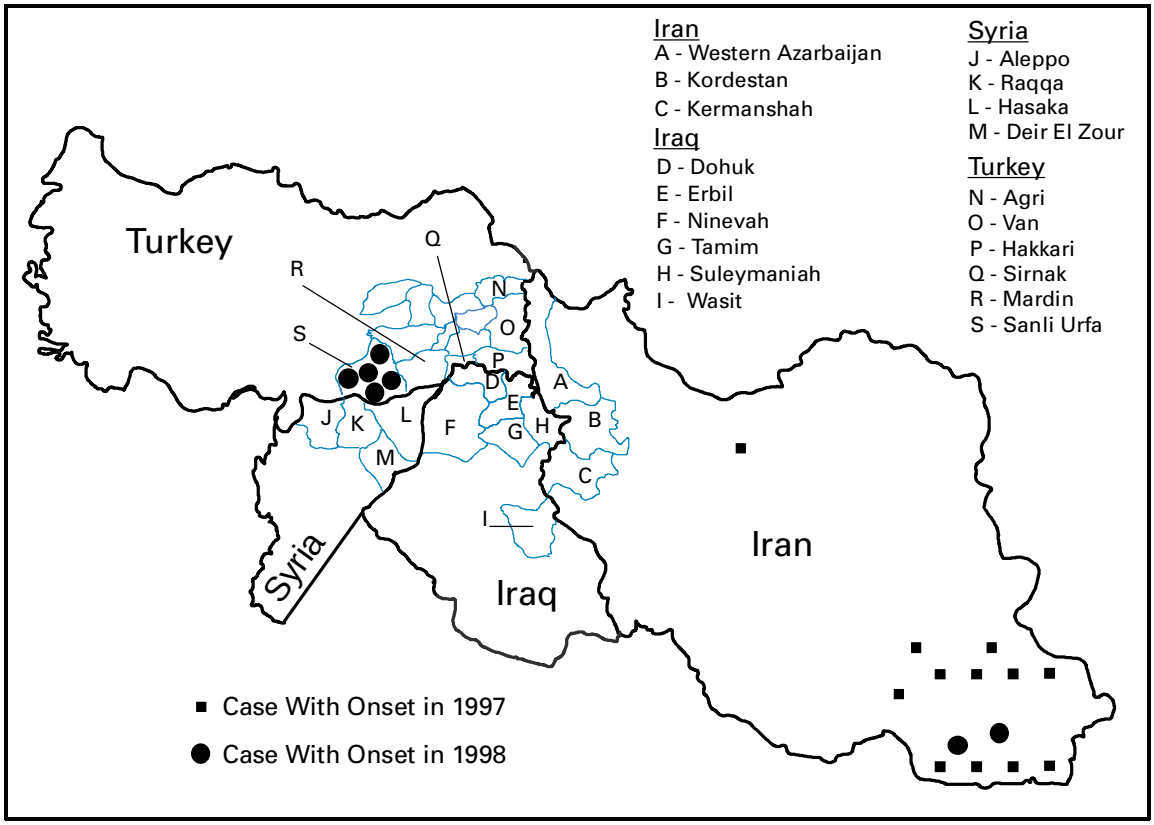
Iran. Since 1992, Iran has consistently reported high routine vaccination coverage of infants (≥94%) with three doses of oral poliovirus vaccine (OPV3). Annual National Immunization Days (NIDs)* since 1994 achieved high coverage (>98%) among children aged <5 years. Supplementary rounds in selected high-risk provinces covered approximately 3 million children in 1996 and 1997. During October–November 1997, approximately 200,000 children were targeted during cross-border mopping-up vaccination campaigns† in the three Iranian provinces bordering Turkey and northern Iraq (West Azarbaijan, Kordestan, and Kermanshah) (Figure 1).

*Mass campaigns over a short period (days to weeks) in which two doses of oral poliovirus vaccine are administered to all children aged <5 years, regardless of prior vaccination history, with an interval of 4–6 weeks between doses.

†Focal mass campaign in high-risk areas over a short period (days to weeks) in which two doses of OPV are administered during house-to-house visits to all children in the target age group, regardless of previous vaccination history, with an interval of 4–6 weeks between doses.

Wild Poliovirus Transmission — Continued

FIGURE 1. Location of provinces/governorates on borders of Iran, Iraq, Syria, and Turkey and distribution of virologically confirmed poliomyelitis cases, January 1997–June 1998



Since 1995, the rate of reported cases of nonpolio acute flaccid paralysis (AFP) in Iran has exceeded 1.0 case per 100,000 children aged <15 years, the WHO-established minimum nonpolio AFP rate (*4*). The three border provinces achieved nonpolio AFP rates of 0.9–1.3 cases per 100,000 in 1997. In the same year, the percentage of persons with AFP from whom adequate stool specimens[§] were collected was 73% in Iran overall and 81% in the three border provinces (Table 1).

The number of reported virologically confirmed cases of wild poliovirus was 12 in 1996, 13 in 1997, and two as of June 1998. During 1997–June 1998, a total of 13 of 15 wild-virus associated cases were reported from southeastern Iranian provinces and were frequently linked epidemiologically to Afghanistan and Pakistan. Wild poliovirus type 1 (P1) was isolated from one case in 1997 reported from West Azarbaijan, bordering Turkey and northern Iraq, and from one case in Teheran. Wild P1 strains isolated from Iran in 1997, including the isolate from West Azarbaijan, were closely related genetically to isolates obtained during 1997 in Pakistan.

Iraq. Since 1995, routine OPV3 coverage in Iraq has been >90%. Dohuk, Erbil, Ninevah, Suleymaniyah, and Tamim governorates in northern Iraq border with Iran, Syria, and Turkey. Since 1993, routine OPV3 coverage in Dohuk, Erbil, and Suleymani-

[§]Two stool specimens collected at an interval of at least 24 hours within 14 days of onset of paralysis. The WHO-recommended target is collection of adequate stool specimens from at least 80% of persons with AFP.

TABLE 1. Number of reported cases of acute flaccid paralysis (AFP) and confirmed poliomyelitis*, nonpolio AFP rate, and percentage of persons with reported AFP with two stool specimens, by year, country, and selected provinces/governorates — Iran, Iraq, Syria, and Turkey, January 1997–June 15, 1998

	1997				1998			
Country/ Province/Governorate	No. AFP cases	No. confirmed cases†	Nonpolio AFP rate§	% persons with AFP with two stool specimens¶	No. AFP cases	No. confirmed cases†	Annualized Nonpolio AFP rate§	% Persons with AFP with two stool specimens
Iran	415	13 (13)	1.4	73%	155	2 (2)	1.3	68%
Kermanshah	8	0	1.1	88%	2	0	0.9	100%
Kordestan	8	0	1.3	100%	2	0	1	100%
W. Azarbaijan	16	1 (1)	0.9	69%	5	0	0.9	60%
Iraq	162	21 (2)	1.5	76%	59	0	1.6	75%
Dohuk	1	0	0.3	0	0	0	0	—
Erbil	6	0	1	83%	1	0	0.5	100%
Suleymaniyah	0	0	0	—	0	0	0	—
Ninevah	18	10 (1)	1	55%	5	0	1.5	100%
Tamim	4	1	1	75%	1	0	0.8	100%
Syria	80	0	1.3	55%	38	0	1.4	75%
Aleppo	11	0	0.9	80%	5	0	1.2	80%
Dar El Zour	3	0	1	67%	0	0	0	—
Hasakah	7	0	1.4	86%	0	0	0	—
Raqqa	2	0	1	50%	1	0	1.5	0
Turkey	141	6 (6)	0.6	65%	105	5 (5)	1.1	71%
Agri	0	0	0	—	0	0	0	—
Hakkari	0	0	0	—	0	0	0	—
Mardin	9	6 (6)	1.4	22%	3	0	3.1	33%
Sanli Urfa	7	0	1.7	71%	14	5 (5)	4.8	89%
Sirnak	0	0	0	—	2	0	4.2	50%
Van	1	0	0.4	100%	1	0	0.9	100%
Other high risk provinces / governorates	5	0	0.5	60%	13	—	2.6	50%

*A confirmed case of polio is defined as AFP and at least one of the following: 1) laboratory-confirmed wild poliovirus infection, 2) residual paralysis at 60 days, 3) death, or 4) no follow up investigation at 60 days. In Turkey and Iran, a confirmed case was laboratory-confirmed wild poliovirus infection.
†Numbers in paranthesis are laboratory-confirmed cases.
§Number of AFP cases per 100,000 population aged <15 years. Minimum expected rate is 1 case of nonpolio AFP per 100,000 per year.
¶Two stool specimens collected at an interval of at least 24 hours within 14 days of paralysis onset.

Wild Poliovirus Transmission — Continued

yah has been 60%–70%, and coverage in Ninevah and Tamim has been 80%–90%. Since 1995, reported annual NIDs coverage has been >90% in Iraq. In Erbil, Dohuk, and Suleymaniyah, reported NIDs coverage was 70%–80% during 1995–1997 and >80% for the 1998 NIDs. During November–December 1997, two rounds of cross-border vaccination in these three northern governorates achieved coverage of 58% and 73%, respectively.

Iraq reported a nonpolio AFP rate of 1.5 in 1997, compared with 0.4 in 1996. Three of the five northern governorates (Erbil, Ninevah, and Tamim) met or exceeded a rate of 1.0; AFP surveillance in Dohuk and Suleymaniyah is not yet functional (Table 1). In 1997, adequate stool specimens were collected from 76% of persons with AFP nationwide and from 62% of persons with AFP in the northern governorates.

All 24 polio cases reported from Iraq in 1996 were confirmed clinically. Two of 28 cases reported in 1997 were confirmed by isolation of wild P1; one of these two cases was reported from Ninevah governorate in the north and was linked genetically with 1997 isolates from Mardin province, southeastern Turkey. As of mid-June 1998, no cases of polio or wild poliovirus isolates had been reported from Iraq.

Syria. Routine OPV3 coverage in Syria has been reported at >90% since 1995, and high coverage (>95%) has been achieved during annual NIDs since 1993. Supplementary rounds of OPV vaccination were conducted in four high-risk governorates during 1996–1997. As part of cross-border vaccination activity during October–November 1997, Syria conducted extensive house-to-house mopping-up vaccination campaigns in selected districts of four governorates bordering Turkey and Iraq. In 1997, of these four governorates, only Aleppo reported a nonpolio AFP rate of <1.0 (Table 1). In 1997, the percentage of AFP cases with adequate stool specimens collected was 55% overall and 78% in the four border governorates. No cases of polio have been reported from Syria during 1996, 1997, and through mid-June 1998.

Turkey. OPV3 coverage was 79% in 1997, with substantial variation among the 80 provinces. In six southeastern provinces bordering Syria, Iraq, and Iran, OPV3 coverage increased overall in 1997, but ranged from 8% in Hakkari to 67% in Sanli Urfa. NIDs coverage >80% was achieved in at least 58 of 80 provinces each year during 1995–1997. In 1998, NID coverage nationally was ≥93% for each round, and in Mardin and Sanli Urfa provinces combined was 79% and 81% for each round, respectively. In October and November 1997, mopping-up campaigns were conducted in 28 provinces along the border and other high-risk provinces throughout Turkey, with overall reported coverage of >80%. However, coverage was <80% in nine (32%) of the participating provinces.

In 1997, the nonpolio AFP rate was 0.6 overall and 1.1 in the border and other high-risk provinces (Table 1). Through June 1998, the national annualized nonpolio AFP rate was 1.1.

In 1997, six polio cases with wild P1 were reported in the southeast province of Mardin. Through June 1998, five additional cases with wild P1 were reported from Sanli Urfa. These isolates were genetically similar to the 1997 isolate from northern Iraq and the 1994 isolates from Turkey.

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Wild Poliovirus Transmission — Continued

ettsial Diseases, National Center for Infectious Diseases; Vaccine Preventable Disease Eradication Div, National Immunization Program, CDC.

Editorial Note: Since 1995, Iran, Iraq, Syria, and Turkey have participated in Operation MECACAR, a concerted effort to synchronize NIDs among 18 contiguous countries of the European and Eastern Mediterranean regions (*5*). These four countries conducted supplementary vaccination campaigns in adjoining border provinces and governorates during October–December 1997. These coordinated efforts, along with improved AFP surveillance, have reduced substantially transmission of wild poliovirus. Within these four countries, one area of transmission remains in southeastern Turkey/northern Iraq.

Genomic sequencing data indicate that southeastern Turkey and northern Iraq share a common reservoir of wild P1 along their national borders. Challenges to polio eradication in this area include ongoing armed conflict, frequent population movements, difficult terrain, and poor access to health-care services. In addition to Turkey and Iraq, culturally linked population groups also reside in adjacent border areas of Iran and Syria. Despite improvements in AFP surveillance, particularly in the border governorates, wild poliovirus has not been isolated in Syria since 1995. Genetic analysis of viral isolates obtained from Iran during 1997 suggests that wild-virus–associated cases are associated with reintroduction of wild poliovirus from neighboring Afghanistan and Pakistan, where wild poliovirus circulation is still widespread.

In the border provinces of southeastern Turkey and the three governorates of northern Iraq, measures are being taken by the respective ministries of health, WHO, and United Nations Children's Fund (UNICEF) to increase the effectiveness of both routine and supplementary OPV vaccination and to strengthen AFP surveillance. Interruption of poliovirus transmission in this area will require high levels of commitment within the countries and among the coalition of partner agencies¶. Intensive, synchronized supplementary vaccination in these and other border areas with poliovirus transmission is necessary to eliminate remaining poliovirus reservoirs.

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¶WHO, UNICEF, Rotary International, U.S. Agency for International Development, CDC, and other national and international organizations.

Behavioral Risk Factors Among U.S. Air Force Active-Duty Personnel, 1995

Preventive medicine and public health policymakers need data to assess health-promotion efforts, track progress toward meeting national health goals, and focus interventions. To collect such data for U.S. Air Force (USAF) personnel, USAF's Office for Prevention and Health Services Assessment conducted a pilot project to measure the prevalence of behavioral risk factors and preventive health practices. Core questions were used from CDC's Behavioral Risk Factor Surveillance System (BRFSS). Minor changes were made to selected questions from the 1995 survey instrument. This report summarizes the results of the survey, which indicate that USAF personnel met several of the national health objectives. In addition, the report documents that a surveillance system designed to assess health behaviors and practices among the general population can be successfully adapted for a survey of a special population.

A stratified, random sample of all active-duty USAF personnel was selected, but the sampling frame excluded members in training, members in classified duty locations, members pending relocation, and general officers. After stratifying by echelon (major command), sex, and rank (a proxy for socioeconomic status), a random sample of 3930 members was selected. Members were interviewed by telephone during the workday at their worldwide duty locations during July–August 1995. Poststratification weighting (*1*) was used to adjust for differences in the sex and rank distribution between the sample and the entire USAF population. Data were analyzed by CDC using SESUDAAN (*2*). Prevalence estimates and 95% confidence intervals (CIs) were calculated for selected risk behaviors and health practices.

National health objectives for 2000 (*3*) have been set for some of the risk factors and preventive health measures examined. The USAF was considered to have met the objective if the USAF estimate significantly exceeded the objective level in the appropriate direction. Statistical significance was determined by whether the 95% CI around the USAF estimate excluded the objective level. Estimates for alcohol and smoking behaviors were adjusted demographically and compared with USAF results from the 1995 Department of Defense (DoD) Survey of Health Related Behaviors Among Military Personnel (*4*) and with findings from civilians in the 1994 National Household Survey on Drug Abuse (NHSDA) (*5*). The DoD survey included USAF members stationed only in the United States (including Alaska and Hawaii) rather than worldwide. Data for civilians in the NHSDA were standardized directly to the age, sex, education, race/ethnicity, and marital status distribution of the entire USAF in 1995.

Interviews were completed for 1931 (49%) persons. Many persons were unavailable for interview because of deployment, base closures, or natural disasters. However, of the persons contacted, few refused to be interviewed (98% response rate). The demographic characteristics of the respondents did not differ meaningfully from those of the sample, except that the respondent population contained a slightly smaller percentage of members located in Europe.

Of the 1931 respondents, 1460 (76%) rated their health as very good or excellent (Table 1). Respondents reported few days during the previous month when their physical or mental health was not good and few days during the previous month when their activity was limited because of health problems (Table 1). Current smoking (ever smoked 100 cigarettes and a smoker at the time of the survey) was reported by

Behavioral Risk Factors — Continued

TABLE 1. Prevalence or mean of United States Air Force Personnel who reported selected health measures or risk factors — Behavioral Risk Factor Surveillance System, 1995

Health measure/ Risk factor	Prevalence or mean	(95% CI*)	Health objective
General health status very good or excellent	75.6	(73.1–78.2)	No objective
Physical health not good (number of days)†	1.3	(1.1– 1.5)	No objective
Mental health not good (number of days)†	2.3	(2.0– 2.6)	No objective
Activities limited (number of days)§	1.8	(1.3– 2.2)	No objective
Current smoking¶	22.4	(19.7–25.0)	≤20%**
Binge drinking††	26.2	(23.5–28.9)	No objective
Chronic drinking§§	4.1	(2.9– 5.2)	No objective
Drinking and driving¶¶	2.6	(1.5– 3.7)	No objective
Overweight (body mass index)***	13.4	(11.3–15.4)	≤20%
Lack of safety-belt use†††	9.8	(8.0–11.6)	<15%
Child safety-belt use§§§	97.4	(95.4–99.4)	≥85%
Mammogram and clinical breast examination¶¶¶	93.1	(87.5–98.6)	≥80%
Ever had a Pap test****	98.8	(97.6–99.9)	≥95%
Had Pap test within preceding 3 years****	97.8	(96.4–99.3)	≥85%
Had cholesterol checked within past 5 years	71.6	(68.8–74.4)	≥75%
Child bicycle helmet use††††	55.3	(49.5–61.1)	≥50%

*Confidence interval.
†During the preceding 30 days.
§Number of days in preceding 30 days when activity was limited because of poor physical or mental health.
¶Ever smoked 100 cigarettes and was a smoker at time of survey.
**Specifically for military personnel.
††Five or more drinks on at least one occasion during the preceding month.
§§60 or more drinks during preceding month.
¶¶Driving after having too much to drink one or more times during preceding month.
***≥27.8 for men and ≥27.3 for women; from self-reported height and weight.
†††Does not always wear a safety belt when driving or riding in a car.
§§§Oldest child aged 5–14 years always or nearly always uses safety belt.
¶¶¶Ever had a mammogram and a clinical breast examination among women aged ≥40 years.
****Among women with intact uterus.
††††Oldest child aged 5–14 years always or nearly always uses helmet when riding bicycle.

22.4% of respondents. Binge drinking (five or more drinks on at least one occasion during the previous month) was reported by 26.2% of respondents, and chronic drinking (≥60 drinks during the previous month) was reported by 4.1%.

The USAF has met the 2000 health objectives in the following areas: overweight, safety-belt use, child safety-belt use, mammography and clinical breast examination, and Papanicolaou smears (Table 1). The USAF has not met the 2000 health objectives for current smoking and cholesterol testing (Table 1). Data were insufficient to determine whether the objective for child bicycle helmet use had been met.

Behavioral Risk Factors — Continued

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Editorial Note: The findings in this report indicated that USAF personnel reported generally good health despite some days of poor mental health and limited activity per month. The prevalence of current smoking (22.4%) was lower than that reported in the 1995 DoD survey (26.0) and the demographically adjusted estimate reported in the 1994 NHSDA (31.3%). Although the difference between the USAF and civilian populations in prevalences of current smoking is statistically significant, the USAF has not met the military-specific goal for 2000. The definition of binge drinking used in this survey was similar to that of heavy drinking (average of five or more drinks at a time at least once per week) reported by 9.4% of USAF respondents to the 1995 DoD survey. The prevalence of binge drinking among respondents to the 1994 NHSDA was 12.0%. As a result, both surveys reported substantially lower estimates than those reported by USAF personnel in the survey described in this report (26%). In general, preventive health practices (e.g., screening tests and the use of safety devices) were common among USAF members.

Many 2000 objectives were not set for military populations. For example, because the USAF has weight standards, the prevalence of overweight in the USAF was significantly below the national objective. In addition, because military security personnel strictly enforce infant and child safety-belt use on all military bases, the prevalence of such use is nearly 100% in the USAF survey.

The BRFSS survey instrument and methodology designed for use among the U.S. civilian population in home telephone interviews was successfully used to interview active-duty military personnel at their duty stations. Because each branch of the U.S. military has a complete listing of all active-duty personnel, probability sampling was also possible for this population.

The worldwide scope of this survey and the high mobility of active-duty personnel, particularly those deployed overseas, made this pilot project particularly challenging. For example, additional time was required to obtain international telephone codes, calling times were extended to reach personnel in overseas locations, and some personnel were difficult to reach because of overseas deployment. In addition, the exclusion of some categories of personnel was made before sampling, but these exclusions probably did not result in substantially biased estimates for several reasons. Inclusion of trainees could have biased the results because certain behaviors required of this group may not represent the usual behavior of members. At any given time, a substantial number of USAF members are pending relocation. Self-selection bias probably did not result from exclusion of these personnel because relocation caused by assignment changes affects all military members. Although the behavior patterns of general officers and members in classified duty locations may differ from those of other USAF personnel, these groups represent only a small proportion of the USAF. Thus, their exclusion probably did not affect the overall estimates.

Behavioral risk factors in the active-duty USAF population should be measured continuously to enable observation of both healthful and deleterious trends. Objective data then become available to help policymakers direct resources and evaluate the

Behavioral Risk Factors — Continued

effect of health promotion and disease prevention programs among military personnel.

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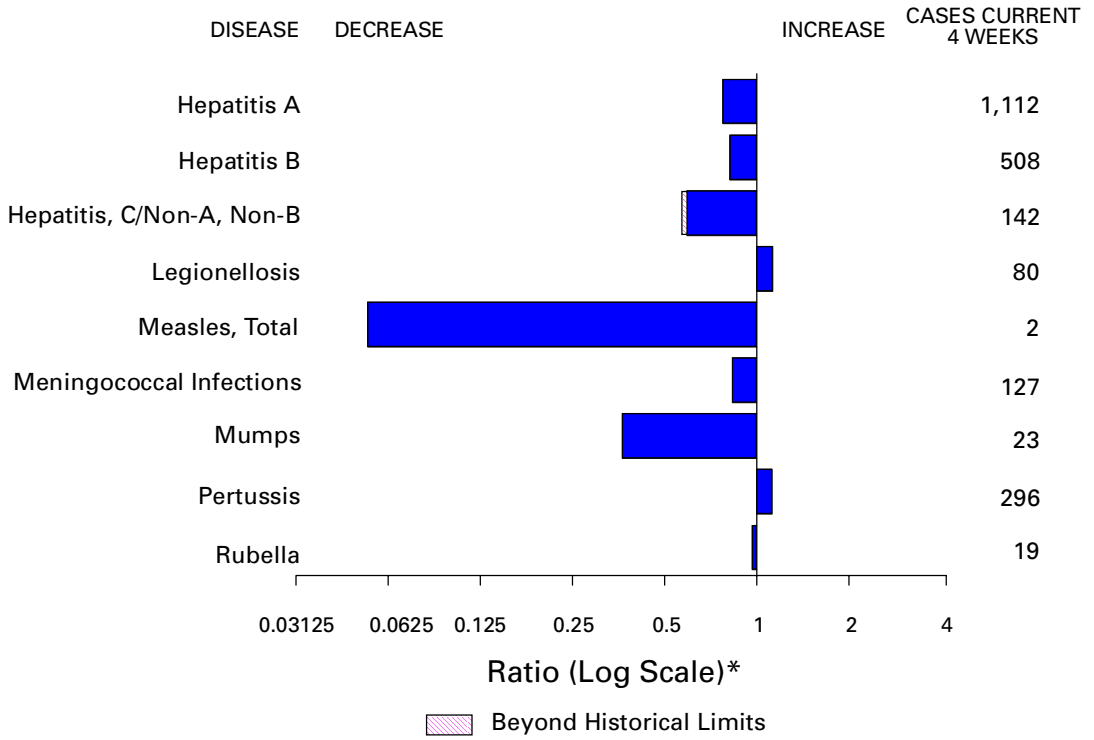
FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending July 18, 1998, with historical data — United States



*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 the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending July 18, 1998 (28th Week)

	Cum. 1998		Cum. 1998
Anthrax	-	Plague	3
Brucellosis	39	Poliomyelitis, paralytic	1
Cholera	6	Psittacosis	27
Congenital rubella syndrome	5	Rabies, human	-
Cryptosporidiosis*	996	Rocky Mountain spotted fever (RMSF)	115
Diphtheria	1	Streptococcal disease, invasive Group A	1,348
Encephalitis: California*	2	Streptococcal toxic-shock syndrome*	35
eastern equine*	-	Syphilis, congenital¶	131
St. Louis*	-	Tetanus	16
western equine*	-	Toxic-shock syndrome	70
Hansen Disease	60	Trichinosis	6
Hantavirus pulmonary syndrome*†	5	Typhoid fever	148
Hemolytic uremic syndrome, post-diarrheal*	20	Yellow fever	-
HIV infection, pediatric*§	127		

-:no reported cases
*Not notifiable in all states.
† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§ Updated monthly to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update June 28, 1998.
¶ Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending July 18, 1998, and July 12, 1997 (28th Week)

Reporting Area	AIDS		Chlamydia		*Escherichia coli* O157:H7		Gonorrhea		Hepatitis C/NA,NB	
					NETSS†	PHLIS§				
	Cum. 1998*	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1998	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997
UNITED STATES	23,929	31,393	283,518	239,135	1,040	468	163,996	151,165	2,097	1,828
NEW ENGLAND	830	1,270	10,984	9,157	139	98	3,058	3,118	31	36
Maine	18	28	560	500	16	-	36	29	-	-
N.H.	22	17	496	410	22	21	48	59	-	-
Vt.	10	24	215	207	7	4	15	26	-	1
Mass.	386	463	4,478	3,777	68	57	1,067	1,170	28	31
R.I.	67	83	1,311	1,067	5	1	186	251	3	4
Conn.	327	655	3,924	3,196	21	15	1,706	1,583	-	-
MID. ATLANTIC	6,951	9,906	33,106	28,880	96	22	18,476	18,643	217	172
Upstate N.Y.	849	1,620	N	N	72	-	3,215	3,148	167	125
N.Y. City	3,910	4,966	18,216	14,017	4	6	7,952	7,057	-	-
N.J.	1,232	2,090	5,208	5,205	20	15	2,880	3,861	-	-
Pa.	960	1,230	9,682	9,658	N	1	4,429	4,577	50	47
E.N. CENTRAL	1,768	2,169	46,186	38,755	189	85	31,449	23,439	277	340
Ohio	331	435	12,997	11,693	48	20	7,988	7,305	7	8
Ind.	326	360	3,078	4,673	54	25	1,958	3,129	3	10
Ill.	706	761	13,507	6,961	43	-	10,871	3,427	16	57
Mich.	305	473	11,612	9,672	44	20	8,620	7,202	251	246
Wis.	100	140	4,992	5,756	N	20	2,012	2,376	-	19
W.N. CENTRAL	444	614	16,585	16,766	137	67	8,170	7,563	118	38
Minn.	65	99	3,098	3,470	51	30	1,081	1,216	6	3
Iowa	49	69	2,010	2,459	44	7	638	667	11	19
Mo.	209	295	6,329	6,218	13	21	4,685	4,092	96	5
N. Dak.	4	6	290	453	2	5	29	34	-	2
S. Dak.	9	3	871	658	8	1	143	70	-	-
Nebr.	39	59	1,268	1,052	8	-	448	403	2	2
Kans.	69	83	2,719	2,456	11	3	1,146	1,081	3	7
S. ATLANTIC	5,900	7,791	58,501	50,169	77	32	47,358	48,589	108	120
Del.	75	144	1,349	-	-	1	733	616	-	-
Md.	718	954	4,536	3,789	13	4	5,197	6,187	5	3
D.C.	481	598	N	N	1	-	1,911	2,216	-	-
Va.	425	650	5,581	6,198	N	7	3,339	4,254	7	17
W. Va.	57	62	1,426	1,552	N	3	410	497	4	9
N.C.	390	429	11,679	8,972	14	10	9,821	8,622	14	30
S.C.	386	422	9,968	6,740	3	1	6,404	6,024	3	26
Ga.	616	970	13,160	9,334	24	-	10,854	10,636	9	-
Fla.	2,752	3,562	10,802	13,584	19	6	8,689	9,537	66	35
E.S. CENTRAL	936	1,019	19,225	18,073	54	13	18,142	18,025	84	198
Ky.	127	177	3,311	3,545	15	-	1,876	2,234	16	9
Tenn.	333	414	6,897	6,659	24	10	5,912	5,548	65	129
Ala.	274	239	5,357	4,352	15	2	6,666	6,219	3	6
Miss.	202	189	3,660	3,517	U	1	3,688	4,024	U	54
W.S. CENTRAL	2,899	3,184	42,035	29,751	64	8	23,878	19,777	526	220
Ark.	104	130	1,860	1,538	4	3	1,182	2,531	3	8
La.	512	562	7,513	4,627	3	2	6,174	4,301	15	116
Okla.	170	165	5,287	4,013	9	3	2,926	2,496	5	4
Tex.	2,113	2,327	27,375	19,573	48	-	13,596	10,449	503	92
MOUNTAIN	831	924	11,454	14,797	142	55	4,174	4,048	244	165
Mont.	15	22	655	559	6	-	25	23	5	12
Idaho	15	28	919	790	10	2	85	59	87	28
Wyo.	2	13	350	300	46	-	17	28	44	40
Colo.	147	224	-	3,234	28	20	1,224	1,113	15	18
N. Mex.	130	80	2,075	2,060	12	6	411	477	56	32
Ariz.	329	227	5,923	5,441	N	11	2,148	1,751	3	22
Utah	65	73	1,223	854	20	10	126	124	21	3
Nev.	128	257	309	1,559	7	6	138	473	13	10
PACIFIC	3,370	4,516	45,442	32,787	142	88	9,291	7,963	492	539
Wash.	236	377	5,903	4,740	28	22	1,023	998	10	17
Oreg.	93	162	3,023	2,570	35	28	424	394	2	2
Calif.	2,962	3,913	34,507	23,785	77	35	7,478	6,093	425	431
Alaska	12	28	991	775	2	-	163	215	1	-
Hawaii	67	36	1,018	917	N	3	203	263	54	89
Guam	-	2	8	193	N	-	2	27	-	-
P.R.	1,001	1,019	U	U	-	U	227	345	-	-
V.I.	17	51	N	N	N	U	U	U	U	U
Amer. Samoa	-	-	U	U	N	U	U	U	U	U
C.N.M.I.	-	1	N	N	N	U	14	16	-	2

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update June 28, 1998.

†National Electronic Telecommunications System for Surveillance.

§Public Health Laboratory Information System.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending July 18, 1998, and July 12, 1997 (28th Week)

Reporting Area	Legionellosis		Lyme Disease		Malaria		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal
	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998*	Cum. 1997	Cum. 1998
UNITED STATES	572	447	3,965	2,906	612	844	3,689	4,565	6,864	9,207	3,722
NEW ENGLAND	32	29	1,315	702	38	44	40	93	229	233	705
Maine	1	1	6	6	4	1	1	-	4	15	114
N.H.	3	4	21	7	3	2	1	-	6	9	34
Vt.	2	4	5	3	-	2	4	-	1	3	31
Mass.	10	10	251	142	11	21	24	43	122	128	230
R.I.	8	5	121	53	2	4	-	2	31	16	41
Conn.	8	5	911	491	18	14	10	48	65	62	255
MID. ATLANTIC	121	78	2,142	1,703	143	254	110	220	1,227	1,625	832
Upstate N.Y.	37	21	1,299	629	41	35	18	24	162	214	589
N.Y. City	19	4	10	92	67	161	29	46	770	834	U
N.J.	4	14	350	455	20	43	20	94	295	326	100
Pa.	61	39	483	527	15	15	43	56	U	251	143
E.N. CENTRAL	181	157	46	43	54	85	503	388	537	960	70
Ohio	77	69	40	13	3	10	75	117	5	165	39
Ind.	33	27	5	11	6	7	104	78	68	81	4
Ill.	14	6	-	6	18	37	188	47	292	504	5
Mich.	37	34	1	13	26	20	104	72	172	153	18
Wis.	20	21	U	U	1	11	32	74	U	57	4
W.N. CENTRAL	38	30	31	38	47	28	79	95	129	289	432
Minn.	3	1	16	20	24	10	5	14	U	74	74
Iowa	4	7	11	2	5	6	-	3	U	32	91
Mo.	14	4	1	12	10	6	61	54	86	115	19
N. Dak.	-	2	-	-	2	2	-	-	3	5	89
S. Dak.	2	2	-	-	-	-	1	-	14	7	90
Nebr.	12	11	1	1	-	1	4	1	8	12	3
Kans.	3	3	2	3	6	3	8	23	18	44	66
S. ATLANTIC	75	60	308	278	143	129	1,589	1,810	1,066	1,742	1,138
Del.	8	7	7	59	1	2	15	15	-	17	17
Md.	17	12	211	171	45	43	382	501	149	158	282
D.C.	5	3	4	7	10	9	43	71	62	57	-
Va.	7	13	27	11	26	34	89	147	144	165	351
W. Va.	N	N	6	1	-	-	2	3	24	29	46
N.C.	6	7	19	15	12	7	418	392	216	217	136
S.C.	5	2	3	1	4	9	170	218	171	194	86
Ga.	2	-	2	1	15	15	349	298	230	310	106
Fla.	24	16	29	12	30	10	121	165	70	595	114
E.S. CENTRAL	28	30	40	44	16	16	588	985	359	679	137
Ky.	15	7	8	8	2	4	63	85	-	100	21
Tenn.	10	16	21	18	10	4	303	416	197	248	84
Ala.	3	2	11	4	4	5	143	252	162	215	32
Miss.	U	5	U	14	U	3	79	232	U	116	U
W.S. CENTRAL	17	7	10	30	18	9	493	668	62	1,365	108
Ark.	-	1	5	9	1	2	66	103	62	118	21
La.	2	2	-	2	4	4	177	209	-	102	-
Okla.	6	1	-	5	2	3	32	60	U	118	87
Tex.	9	3	5	14	11	-	218	296	U	1,027	-
MOUNTAIN	34	29	6	6	27	42	121	87	226	296	86
Mont.	1	1	-	-	-	2	-	-	12	6	29
Idaho	-	2	1	2	3	-	-	-	8	7	-
Wyo.	1	1	-	1	-	2	1	-	2	2	42
Colo.	6	9	2	-	7	23	8	5	U	55	1
N. Mex.	2	1	2	-	11	5	12	4	28	25	2
Ariz.	7	7	-	1	5	4	95	68	114	144	9
Utah	16	5	-	-	1	2	3	3	33	11	3
Nev.	1	3	1	2	-	4	2	7	29	46	-
PACIFIC	46	27	67	62	126	237	166	219	2,929	2,018	214
Wash.	6	6	2	2	9	9	12	7	120	159	-
Oreg.	-	-	8	10	11	11	2	5	65	92	1
Calif.	39	20	56	50	104	209	152	205	2,634	1,615	193
Alaska	-	-	1	-	1	3	-	1	27	47	20
Hawaii	1	1	-	-	1	5	-	1	83	105	-
Guam	-	-	-	-	-	-	-	3	-	13	-
P.R.	-	-	-	-	-	3	117	124	46	112	29
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	-	-	-	-	98	9	54	2	-

N: Not notifiable U: Unavailable -: no reported cases

*Additional information about areas displaying "U" for cumulative 1998 Tuberculosis cases can be found in Notice to Readers, *MMWR* Vol. 47, No. 2, p. 39.

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending July 18, 1998, and July 12, 1997 (28th Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
			A		B		Indigenous		Imported†		Total	
	Cum. 1998*	Cum. 1997	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	1998	Cum. 1998	1998	Cum. 1998	Cum. 1998	Cum. 1997
UNITED STATES	610	653	11,696	14,778	4,312	4,946	-	26	1	14	40	84
NEW ENGLAND	33	36	146	366	75	91	-	1	1	2	3	12
Maine	2	3	13	42	2	6	-	-	-	-	-	-
N.H.	5	5	8	19	10	5	-	-	-	-	-	1
Vt.	2	3	13	7	1	5	-	-	1	1	1	-
Mass.	22	22	44	162	19	39	-	1	-	1	2	10
R.I.	2	2	9	65	43	9	-	-	-	-	-	-
Conn.	-	1	59	71	-	27	-	-	-	-	-	1
MID. ATLANTIC	84	89	744	1,214	610	705	-	9	-	2	11	20
Upstate N.Y.	35	24	185	171	172	133	-	2	-	-	2	5
N.Y. City	16	23	194	546	157	277	-	-	-	-	-	7
N.J.	28	28	161	185	105	134	U	7	U	1	8	3
Pa.	5	14	204	312	176	161	U	-	U	1	1	5
E.N. CENTRAL	95	108	1,502	1,564	438	831	-	11	-	3	14	8
Ohio	35	59	191	207	42	47	-	-	-	1	1	-
Ind.	27	10	94	159	49	60	-	2	-	1	3	-
Ill.	29	25	261	403	89	163	-	-	-	-	-	6
Mich.	-	14	854	679	242	242	-	9	-	1	10	2
Wis.	4	-	102	116	16	319	-	-	-	-	-	-
W.N. CENTRAL	59	31	933	1,100	238	276	-	-	-	-	-	11
Minn.	45	22	78	100	21	23	-	-	-	-	-	2
Iowa	1	3	376	184	36	21	-	-	-	-	-	-
Mo.	8	3	379	587	149	201	-	-	-	-	-	1
N. Dak.	-	-	3	10	4	3	-	-	-	-	-	-
S. Dak.	-	2	17	14	1	-	-	-	-	-	-	8
Nebr.	-	1	16	43	7	8	-	-	-	-	-	-
Kans.	5	-	64	162	20	20	-	-	-	-	-	-
S. ATLANTIC	129	104	1,002	793	626	584	-	2	-	5	7	6
Del.	-	-	2	16	-	4	-	-	-	1	1	-
Md.	41	44	185	122	94	93	-	-	-	1	1	1
D.C.	-	-	30	14	6	22	-	-	-	-	-	1
Va.	13	7	137	105	56	72	-	-	-	2	2	1
W. Va.	4	3	1	6	3	9	U	-	U	-	-	-
N.C.	18	17	59	108	115	134	-	-	-	-	-	1
S.C.	4	3	17	67	16	60	-	-	-	-	-	-
Ga.	24	21	264	189	96	57	-	-	-	1	1	-
Fla.	25	9	307	166	240	133	-	2	-	-	2	2
E.S. CENTRAL	36	37	203	358	208	373	-	-	-	-	-	1
Ky.	4	4	13	46	23	24	-	-	-	-	-	-
Tenn.	24	23	142	218	152	249	-	-	-	-	-	-
Ala.	8	8	48	55	33	41	-	-	-	-	-	1
Miss.	U	2	U	39	U	59	U	U	U	U	U	-
W.S. CENTRAL	34	29	2,198	3,038	711	616	-	-	-	-	-	4
Ark.	-	2	53	131	48	45	-	-	-	-	-	-
La.	16	6	44	116	54	80	-	-	-	-	-	-
Okla.	16	19	317	894	45	21	-	-	-	-	-	-
Tex.	2	2	1,784	1,897	564	470	-	-	-	-	-	4
MOUNTAIN	68	69	1,845	2,230	469	471	-	-	-	-	-	7
Mont.	-	-	63	51	3	5	-	-	-	-	-	-
Idaho	-	1	149	81	18	15	-	-	-	-	-	-
Wyo.	1	1	24	20	2	14	-	-	-	-	-	-
Colo.	14	10	146	242	59	88	-	-	-	-	-	-
N. Mex.	5	7	87	178	200	155	-	-	-	-	-	-
Ariz.	38	26	1,185	1,077	121	107	-	-	-	-	-	5
Utah	4	3	122	350	41	55	-	-	-	-	-	-
Nev.	6	21	69	231	25	32	U	-	U	-	-	2
PACIFIC	72	150	3,123	4,115	937	999	-	3	-	2	5	15
Wash.	4	2	601	295	66	43	-	-	-	1	1	-
Oreg.	30	24	214	211	62	60	-	-	-	-	-	-
Calif.	30	117	2,271	3,508	798	877	-	3	-	1	4	11
Alaska	1	1	14	23	6	11	-	-	-	-	-	-
Hawaii	7	6	23	78	5	8	U	-	U	-	-	4
Guam	-	-	-	-	-	3	U	-	U	-	-	-
P.R.	2	-	25	184	252	416	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	6	1	1	28	31	U	-	U	-	-	1

N: Not notifiable U: Unavailable -: no reported cases

*Of 140 cases among children aged <5 years, serotype was reported for 78 and of those, 32 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending July 18, 1998, and July 12, 1997 (28th Week)

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997	1998	Cum. 1998	Cum. 1997
UNITED STATES	1,617	2,099	6	260	367	66	2,382	2,828	4	283	92
NEW ENGLAND	72	129	-	1	7	8	418	576	1	36	1
Maine	5	13	-	-	-	-	5	6	-	-	-
N.H.	4	12	-	-	-	-	39	67	-	-	-
Vt.	1	2	-	-	-	3	41	177	-	-	-
Mass.	34	67	-	1	2	3	312	303	-	6	1
R.I.	3	9	-	-	4	2	5	12	1	1	-
Conn.	25	26	-	-	1	-	16	11	-	29	-
MID. ATLANTIC	148	216	-	16	43	2	288	222	3	118	28
Upstate N.Y.	38	59	-	3	9	2	146	82	1	107	5
N.Y. City	17	38	-	4	3	-	8	53	2	6	23
N.J.	40	43	U	1	7	U	5	11	U	4	-
Pa.	53	76	U	8	24	U	129	76	U	1	-
E.N. CENTRAL	246	313	-	43	44	6	211	266	-	-	5
Ohio	88	114	-	19	17	3	76	78	-	-	-
Ind.	46	34	-	5	4	2	68	30	-	-	-
Ill.	60	90	-	2	8	1	16	35	-	-	1
Mich.	28	47	-	17	12	-	34	31	-	-	-
Wis.	24	28	-	-	3	-	17	92	-	-	4
W.N. CENTRAL	136	153	-	20	12	1	190	163	-	26	-
Minn.	24	25	-	10	5	-	115	101	-	-	-
Iowa	23	34	-	6	6	-	40	9	-	-	-
Mo.	52	69	-	3	-	1	16	29	-	2	-
N. Dak.	2	1	-	1	-	-	-	1	-	-	-
S. Dak.	6	4	-	-	-	-	5	3	-	-	-
Nebr.	5	6	-	-	1	-	5	4	-	-	-
Kans.	24	14	-	-	-	-	9	16	-	24	-
S. ATLANTIC	287	355	2	37	41	8	145	252	-	8	29
Del.	1	5	-	-	-	-	2	-	-	-	-
Md.	23	35	-	-	1	1	29	80	-	-	-
D.C.	-	5	-	-	-	-	1	3	-	-	-
Va.	23	35	-	5	6	1	7	31	-	-	1
W. Va.	9	14	U	-	-	U	1	5	U	-	-
N.C.	42	66	-	9	7	2	50	68	-	5	22
S.C.	41	38	-	4	10	1	16	11	-	-	6
Ga.	62	66	-	1	5	-	6	6	-	-	-
Fla.	86	91	2	18	12	3	33	48	-	3	-
E.S. CENTRAL	113	154	-	1	19	2	56	56	-	-	1
Ky.	17	38	-	-	3	2	22	14	-	-	-
Tenn.	43	53	-	1	3	-	18	21	-	-	-
Ala.	53	46	-	-	6	-	16	15	-	-	1
Miss.	U	17	U	U	7	U	U	6	U	U	-
W.S. CENTRAL	187	195	1	40	44	15	181	98	-	77	3
Ark.	23	25	-	-	1	2	26	7	-	-	-
La.	38	41	-	8	11	-	2	12	-	-	-
Okla.	29	23	-	-	-	5	18	13	-	-	-
Tex.	97	106	1	32	32	8	135	66	-	77	3
MOUNTAIN	90	122	-	23	47	21	530	713	-	5	5
Mont.	3	7	-	-	-	1	3	8	-	-	-
Idaho	4	8	-	3	2	-	194	444	-	-	1
Wyo.	4	1	-	1	1	-	7	5	-	-	-
Colo.	19	32	-	5	3	3	105	186	-	-	-
N. Mex.	16	19	N	N	N	1	67	36	-	1	-
Ariz.	31	31	-	5	30	16	114	20	-	1	4
Utah	10	11	-	3	6	-	28	4	-	2	-
Nev.	3	13	U	6	5	U	12	10	U	1	-
PACIFIC	338	462	3	79	110	3	363	482	-	13	20
Wash.	45	55	-	5	13	-	149	207	-	9	5
Oreg.	55	92	N	N	N	3	26	22	-	-	-
Calif.	233	312	3	59	80	-	182	236	-	2	8
Alaska	1	1	-	2	5	-	2	4	-	-	-
Hawaii	4	2	U	13	12	U	4	13	U	2	7
Guam	-	1	U	-	1	U	-	-	U	-	-
P.R.	5	8	-	1	5	-	2	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	U	2	4	U	1	-	U	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE IV. Deaths in 122 U.S. cities,* week ending July 18, 1998 (28th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	553	368	104	59	10	12	31
Boston, Mass.	133	91	23	17	-	2	11
Bridgeport, Conn.	45	30	10	3	1	1	1
Cambridge, Mass.	21	17	3	-	-	1	2
Fall River, Mass.	26	21	5	-	-	-	-
Hartford, Conn.	55	27	13	10	3	2	-
Lowell, Mass.	19	15	2	2	-	-	2
Lynn, Mass.	11	7	4	-	-	-	-
New Bedford, Mass.	26	25	-	1	-	-	-
New Haven, Conn.	33	15	8	6	4	-	2
Providence, R.I.	59	35	11	7	2	4	-
Somerville, Mass.	4	3	1	-	-	-	-
Springfield, Mass.	44	28	8	7	-	1	7
Waterbury, Conn.	27	19	5	2	-	1	2
Worcester, Mass.	50	35	11	4	-	-	4
MID. ATLANTIC	2,093	1,411	415	178	52	37	116
Albany, N.Y.	31	21	7	1	2	-	-
Allentown, Pa.	17	9	5	2	1	-	-
Buffalo, N.Y.	98	68	15	10	2	3	10
Camden, N.J.	24	15	6	3	-	-	4
Elizabeth, N.J.	17	13	2	2	-	-	1
Erie, Pa.	28	21	5	1	-	1	1
Jersey City, N.J.	30	16	6	6	1	1	-
New York City, N.Y.	1,129	774	231	95	19	10	54
Newark, N.J.	55	23	11	11	3	7	5
Paterson, N.J.	28	19	3	1	-	5	-
Philadelphia, Pa.	300	178	72	33	11	6	17
Pittsburgh, Pa.§	37	31	4	-	2	-	2
Reading, Pa.	26	20	4	-	2	-	2
Rochester, N.Y.	102	72	18	6	4	2	9
Schenectady, N.Y.	16	13	3	-	-	-	1
Scranton, Pa.	24	20	3	1	-	-	-
Syracuse, N.Y.	96	70	15	4	5	2	7
Trenton, N.J.	19	15	2	2	-	-	3
Utica, N.Y.	16	13	3	-	-	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,070	1,386	393	160	61	54	94
Akron, Ohio	44	28	8	3	2	3	-
Canton, Ohio	39	27	9	3	-	-	5
Chicago, Ill.	415	258	83	43	13	16	25
Cincinnati, Ohio	76	52	15	3	5	1	6
Cleveland, Ohio	175	108	46	15	3	3	2
Columbus, Ohio	167	113	33	10	5	6	13
Dayton, Ohio	122	95	18	7	-	2	9
Detroit, Mich.	196	107	49	22	12	6	6
Evansville, Ind.	54	42	11	1	-	-	2
Fort Wayne, Ind.	57	40	2	-	-	1	4
Gary, Ind.	10	5	1	2	2	-	-
Grand Rapids, Mich.	69	50	9	9	1	-	7
Indianapolis, Ind.	183	123	33	15	5	7	-
Lansing, Mich.	40	33	5	2	-	-	1
Milwaukee, Wis.	118	78	27	9	1	3	6
Peoria, Ill.	48	42	3	3	-	-	1
Rockford, Ill.	51	33	13	2	2	1	2
South Bend, Ind.	61	41	10	2	6	2	2
Toledo, Ohio	83	63	9	6	4	1	2
Youngstown, Ohio	62	48	9	3	-	2	1
W.N. CENTRAL	734	501	123	52	28	21	35
Des Moines, Iowa	U	U	U	U	U	U	U
Duluth, Minn.	37	28	7	-	1	1	1
Kansas City, Kans.	34	23	5	5	-	1	-
Kansas City, Mo.	83	54	14	3	1	2	2
Lincoln, Nebr.	51	35	12	3	-	1	6
Minneapolis, Minn.	112	85	17	5	1	4	7
Omaha, Nebr.	101	66	17	9	4	5	11
St. Louis, Mo.	115	69	26	11	8	1	-
St. Paul, Minn.	95	69	12	6	6	2	5
Wichita, Kans.	106	72	13	10	7	4	3
S. ATLANTIC	1,130	729	216	117	35	28	61
Atlanta, Ga.	U	U	U	U	U	U	U
Baltimore, Md.	162	97	30	28	6	1	15
Charlotte, N.C.	109	68	26	14	-	1	6
Jacksonville, Fla.	156	103	31	16	1	4	3
Miami, Fla.	133	84	26	18	4	1	-
Norfolk, Va.	59	39	11	4	3	2	4
Richmond, Va.	61	40	9	5	3	4	1
Savannah, Ga.	54	41	10	3	-	-	9
St. Petersburg, Fla.	63	52	5	2	2	2	5
Tampa, Fla.	170	112	31	12	8	3	11
Washington, D.C.	151	90	31	12	8	10	7
Wilmington, Del.	12	3	6	3	-	-	-
E.S. CENTRAL	843	582	165	54	31	9	54
Birmingham, Ala.	186	132	32	10	8	2	10
Chattanooga, Tenn.	70	48	16	4	1	1	6
Knoxville, Tenn.	99	63	26	7	3	-	7
Lexington, Ky.	79	53	13	10	3	-	8
Memphis, Tenn.	186	130	36	7	10	3	15
Mobile, Ala.	84	60	15	7	2	-	2
Montgomery, Ala.	38	26	6	4	1	1	2
Nashville, Tenn.	101	70	21	5	3	2	4
W.S. CENTRAL	1,462	929	311	135	48	38	69
Austin, Tex.	82	55	20	4	1	2	3
Baton Rouge, La.	53	32	11	7	3	-	3
Corpus Christi, Tex.	54	41	7	4	2	-	4
Dallas, Tex.	207	126	43	22	12	4	3
El Paso, Tex.	74	48	17	4	-	5	1
Ft. Worth, Tex.	87	59	19	4	1	4	5
Houston, Tex.	361	218	80	42	14	7	20
Little Rock, Ark.	76	42	16	9	5	4	5
New Orleans, La.	99	52	28	11	6	2	-
San Antonio, Tex.	212	148	40	14	1	8	12
Shreveport, La.	52	34	11	5	1	1	4
Tulsa, Okla.	105	74	19	9	2	1	9
MOUNTAIN	887	595	163	75	29	25	43
Albuquerque, N.M.	109	72	16	13	3	5	3
Boise, Idaho	33	25	6	-	1	1	-
Colo. Springs, Colo.	54	34	14	2	3	1	1
Denver, Colo.	114	70	27	8	5	4	9
Las Vegas, Nev.	220	152	38	21	6	3	7
Ogden, Utah	31	19	6	5	1	-	3
Phoenix, Ariz.	68	52	8	5	2	1	1
Pueblo, Colo.	18	11	3	3	1	-	1
Salt Lake City, Utah	86	60	14	5	4	3	5
Tucson, Ariz.	154	100	31	13	3	7	13
PACIFIC	1,865	1,319	340	138	35	32	150
Berkeley, Calif.	21	15	6	-	-	-	-
Fresno, Calif.	111	84	12	9	3	3	11
Glendale, Calif.	39	33	3	2	-	1	3
Honolulu, Hawaii	66	52	8	4	1	1	4
Long Beach, Calif.	49	33	13	2	-	1	4
Los Angeles, Calif.	651	444	122	56	20	9	36
Pasadena, Calif.	30	23	6	-	-	1	1
Portland, Oreg.	U	U	U	U	U	U	U
Sacramento, Calif.	208	151	31	17	4	5	29
San Diego, Calif.	161	114	30	13	-	3	16
San Francisco, Calif.	121	78	25	14	1	3	12
San Jose, Calif.	164	117	33	11	1	2	21
Santa Cruz, Calif.	41	33	7	1	-	-	4
Seattle, Wash.	150	102	32	8	5	3	6
Spokane, Wash.	53	40	12	1	-	-	3
Tacoma, Wash.	U	U	U	U	U	U	U
TOTAL	11,637¶	7,820	2,230	968	329	256	653

U: Unavailable -: no reported cases

*Mortality data in this table are voluntarily reported from 122 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 this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

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