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MORBIDITY AND MORTALITY WEEKLY REPORT

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Outbreak of *Campylobacter* Enteritis Associated with Cross-Contamination of Food — Oklahoma, 1996

On August 29, 1996, the Jackson County Health Department (JCHD) in southwestern Oklahoma notified the Oklahoma State Department of Health (OSDH) of a cluster of *Campylobacter jejuni* infections that occurred during August 16–20 among persons who had eaten lunch at a local restaurant on August 15. This report summarizes the investigation of these cases and indicates that *C. jejuni* infection was most likely acquired from eating lettuce cross-contaminated with raw chicken. This report also emphasizes the need to keep certain foods and cooking utensils separate during food handling.

A case was defined as illness in a person who had eaten lunch at the restaurant on August 15, 1996, and had onset of diarrhea (i.e., three or more loose stools during a 24-hour period) or vomiting during August 16–20. Of 25 persons available for interview who had eaten lunch at the restaurant on August 15, a total of 14 (56%) had had an illness that met the case definition. The median age of patients was 33 years (range: 5–52 years); 10 (71%) were female. All patients reported diarrhea; 13 (93%), fever; 13 (93%), abdominal cramps; 11 (79%), nausea; five (36%), vomiting; and three (21%), visible blood in their stools. The median incubation period was 3 days (range: 1–5 days). Two (14%) patients were hospitalized. Stool specimens were collected from 10 patients; all yielded *C. jejuni*. No food items were available for testing.

To identify risk factors for illness, OSDH, in collaboration with JCHD, conducted a case-control study of 14 patients and 11 controls (i.e., persons who had eaten lunch with patients at the implicated restaurant on August 15 but did not become ill). Health department staff visited the restaurant to obtain information about menu items, to observe food preparation, and to inspect the kitchen.

All 14 patients and four (36%) controls reported eating lettuce (odds ratio [OR]=48.3; 95% confidence interval [CI]=2.3–∞; $p<0.01$). Eleven (79%) patients and three (27%) controls had eaten lasagna (OR=6.7; 95% CI=1.1–42.7; $p<0.05$). Both lettuce and lasagna were statistically associated with illness. Lettuce consumption accounted for all cases, and lasagna consumption accounted for 79% of cases.

Inspection of the restaurant indicated that the countertop surface area was too small to separate raw poultry and other foods adequately during preparation. The cook reported cutting up raw chicken for the dinner meals before preparing salads, lasagna, and sandwiches as luncheon menu items. Lettuce for salads was shredded

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with a knife, and the cook wore a towel around her waist that she frequently used to dry her hands. Bleach solution at the appropriate temperature (>75 F [>24 C]) and concentration (>50 ppm) was present to sanitize tables surfaces, but it was uncertain whether the cook had cleaned the countertop after cutting up the chicken. The lettuce or lasagna was probably contaminated with *C. jejuni* from raw chicken through unwashed or inadequately washed hands, cooking utensils, or the countertop.

JCHD recommended that the restaurant enlarge its food-preparation table and install a disposable hand towel dispenser and that food handlers wash hands and cooking utensils between use while preparing different foods.

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Editorial Note: *Campylobacter* is one of the most common causes of foodborne disease in the United States, causing approximately 2 million cases of gastroenteritis each year (1). Illness associated with *Campylobacter* infection is usually mild, but can be severe and even fatal. Although it did not occur in this outbreak, Guillain-Barré syndrome (GBS), a demyelinating disorder resulting in acute neuromuscular paralysis, is a serious sequela of *Campylobacter* infection (2). Up to 40% of patients with GBS have evidence of *Campylobacter* infection before onset of symptoms (2).

Most illnesses associated with *Campylobacter* infection are sporadic. Common source outbreaks occur, and most have been traced to unpasteurized milk and contaminated drinking water (1). In comparison, most sporadic cases, and those in this outbreak, are associated with improper handling and preparing of poultry (1). *Campylobacter* has been found in up to 88% of broiler chicken carcasses in the United States (1,3). The infectious dose of *Campylobacter* is low; ingestion of only 500 organisms, easily present in one drop of raw chicken juice, can result in human illness (1). Therefore, contamination of foods by raw chicken is an efficient mechanism for transmission of this organism.

Restaurants provide opportunities for outbreaks of foodborne disease because large quantities of different foods are handled in the same kitchen. Failure to wash hands, utensils, or countertops can lead to contamination of foods that will not be cooked. The food handler involved in this outbreak had not received training in food safety. The Food and Drug Administration has developed guidelines for food handlers to prevent cross-contamination of foods; however, states are not required to adopt these guidelines (4).

Laws mandating certification of food-service employees differ by state. Twelve states have requirements for certification of food-service managers in all jurisdictions, 21 states have requirements in some jurisdictions, and 17 states have no requirements (5). Of 33 states for which information is available, only two have statewide requirements for training of food handlers (5).

States can reduce the risk for foodborne illness in restaurants by ensuring that restaurant employees receive training in food safety. For example, food handlers should be aware that pathogens can be present on raw poultry and meat and that foodborne disease can be prevented by adhering to the following measures: 1) raw poultry and meat should be prepared on a separate countertop or cutting board from other food items; 2) all utensils, cutting boards, and countertops should be cleaned with hot

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water and soap after preparing raw poultry or meat and before preparing other foods; 3) hands should be washed thoroughly with soap and running water after handling raw poultry or meat; and 4) poultry should be cooked thoroughly to an internal temperature of 180 F (82 C) or until the meat is no longer pink and juices run clear.

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Use of Folic Acid-Containing Supplements Among Women of Childbearing Age — United States, 1997

Each year in the United States, approximately 4000 pregnancies result in spina bifida or anencephaly. Babies born with spina bifida usually survive, often with serious disability, but anencephaly is invariably fatal. The B vitamin folic acid can reduce the occurrence of spina bifida and anencephaly by at least 50% when taken daily before conception and during early pregnancy (1,2). In 1992, the Public Health Service (PHS) recommended that all women of childbearing age who are capable of becoming pregnant consume 400 µg of folic acid daily (3). This report summarizes findings from a survey conducted during January and February 1997 and indicates that only one third of women of childbearing age consume a supplement containing the recommended amount of folic acid daily.

In 1997, the March of Dimes contracted the Gallup Organization to conduct a random-digit-dialed telephone survey of a stratified national sample of 2001 U.S. women aged 18–45 years to assess knowledge about folic acid and use of vitamin supplements (4). The response rate was 50%. Statistical estimates were weighted to reflect the total population of women aged 18–45 years in the contiguous United States who resided in households with telephones. The margin of error for estimates based on the total sample size was ±2%. The questionnaire and methods used in 1997 were identical to those used in a 1995 survey (5).

Overall, 64.4% of women of childbearing age reported taking some form of vitamin supplement: 44.3% used a folic acid-containing supplement (32.2% daily and 12.1% less than daily), and 20.1% used a supplement that did not contain folic acid (12.5% daily and 7.6% less than daily).

Daily use of a folic acid-containing supplement was 22.8% among women aged <25 years, 19.6% among those with less than a high school education, 22.5% among those with household incomes <\$25,000, 26.1% among those who were unmarried, 28.8% among those who had not heard of the PHS recommendation for use of folic

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acid, and 24.3% among those who were of races other than white (Table 1). Among women who had heard of the PHS recommendation about folic acid, 45.2% reported taking a folic acid-containing supplement daily, compared with 28.8% of women who had not heard about the recommendation.

Among the 12.1% of women who were less-than-daily users of vitamins containing folic acid, 43.4% reported taking vitamins less than once a week; 53.1%, one to four times per week; and 3.2%, five to six times per week. Forgetting to take a vitamin was

TABLE 1. Percentage of women of childbearing age who reported taking either a folic acid-containing supplement or a supplement not containing folic acid, by selected sociodemographic characteristics — United States, 1997

Characteristic	Used a vitamin supplement			Did not use a vitamin supplement
	Contains folic acid		Does not contain folic acid	
	Daily	Less than daily		
Age group (yrs)				
18–24	22.8%	9.6%	23.7%	43.9%
25–34	35.5%	13.8%	15.8%	34.9%
35–45	34.6%	11.9%	21.2%	32.3%
Education				
Less than high school	19.6%	8.3%	21.1%	51.0%
High school	29.6%	12.5%	17.8%	40.1%
College or above	36.7%	12.6%	20.6%	30.1%
Annual household income				
<\$25,000	22.5%	11.3%	21.8%	44.4%
\$25,000–\$39,999	32.2%	15.0%	18.2%	34.6%
\$40,000–\$49,999	41.0%	7.0%	22.4%	29.6%
≥\$50,000	42.9%	10.8%	18.1%	32.4%
Marital status				
Married	36.7%	12.8%	18.1%	32.4%
Unmarried	26.1%	11.2%	22.3%	40.4%
Race				
White	34.8%	12.7%	19.1%	33.4%
Other	24.3%	9.6%	22.2%	43.9%
Ethnicity				
Hispanic	31.8%	7.1%	21.1%	40.0%
Non-Hispanic	32.5%	12.5%	19.8%	35.2%
Have children				
Yes	32.5%	12.8%	19.3%	35.4%
No	32.1%	10.7%	21.1%	36.1%
Aware of folic acid				
Yes	36.3%	12.2%	21.2%	30.3%
No	24.8%	11.9%	17.7%	45.6%
Heard folic acid recommendation				
Yes	45.2%	11.3%	18.6%	24.9%
No	28.8%	12.3%	20.3%	38.6%
Total	32.2%	12.1%	20.1%	35.6%

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the main reason for less-than-daily use (49.0%). Among those who did not use any vitamins, 55.8% either felt they did not need them or had "no particular reason" for not taking vitamins, and 14.4% reported that they did not need them because they believed their diets were sufficient.

Overall, 57.8% of women who did not take supplements daily reported that they needed more information about vitamin and mineral supplements. This opinion was more common among Hispanics (71.4%) and women of races other than white (74.6%).

Overall, 59.8% of women who did not take supplements daily reported that cost may be the reason for not taking vitamins (71.9% of women with incomes <\$25,000 per year versus 46.4% with incomes \geq \$50,000). However, 3.8% of women who reported taking any vitamin or mineral supplements indicated that "vitamins cost too much."

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Editorial Note: The findings in this report indicate that less than one third (32.2%) of women of childbearing age consume daily a supplement containing folic acid. Among the 67.8% of women who did not take a folic acid-containing supplement daily, approximately half (32.2%) used a supplement but either did not take one daily or took a supplement that did not contain folic acid. Because these women apparently believe they need a supplement and are already taking one, they may be easily persuaded to use a folic acid-containing supplement daily and could especially be targeted in educational and advertising campaigns.

Periconceptional use of multivitamins containing folic acid reduces the risk for neural tube defects and may reduce the risk for other birth defects (6,7). The finding that most women felt they needed more information about supplements underscores the need for more health education about the role of folic acid and multivitamins in preventing birth defects. In addition, the finding that vitamin use was lowest among women in minority groups and among those with the lowest incomes suggests that providing multivitamins at reduced or no cost may enhance the consumption of multivitamins among these women.

The findings in this report are subject to at least one important limitation. The response rate for this telephone survey was low (50%). Knowledge and behavior patterns of nonparticipants may have been different from those of participants.

As of January 1, 1998, the Food and Drug Administration requires that all enriched cereal grains be fortified with folic acid. To obtain the PHS recommended amount of folic acid, women will need to either take a folic acid supplement daily, eat a fortified breakfast cereal containing 100% of the daily value of folic acid, or increase their consumption of foods fortified with folic acid (e.g., cereal, bread, rice, and pasta) and foods naturally rich in folates (e.g., orange juice and green vegetables).

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Health-Related Quality of Life and Activity Limitation — Eight States, 1995

Since January 1993, CDC's Behavioral Risk Factor Surveillance System (BRFSS) has included four general questions concerning health-related quality of life (HRQOL) (1). The results of these HRQOL measures are useful for population health assessment, epidemiologic research, and policy development (2,3), but they are less useful for identifying specific public health interventions because they track general deficiencies such as poor health. Since 1995, state health departments have had the option of including in the BRFSS an expanded set of 14 HRQOL questions; these questions ask about specific types of activity limitation and common physical and emotional symptoms. This report summarizes preliminary findings from the eight states (i.e., Delaware, Indiana, Kansas, Mississippi, Missouri, New Mexico, North Carolina,* and Tennessee) in which these other questions were included in the 1995 BRFSS.

The BRFSS is an ongoing, state-based, random-digit-dialed telephone survey of noninstitutionalized persons aged ≥ 18 years in the United States. The surveillance system tracks the prevalence of key health- and safety-related behaviors. The 14 HRQOL questions[†] ask about general self-rated health and the number of days during the preceding 30 days when physical health was not good, mental health was not good, and usual activities were limited. The questions also ask about the presence of any activity limitation resulting from an impairment or health problem and about the cause, duration, and severity of the limitation (e.g., requiring assistance to perform routine daily activities).

Other questions include the number of days during the preceding 30 days when respondents felt very healthy and full of energy (i.e., had "vitality") and the number of days health and activity were affected by pain, depression, anxiety, or sleeplessness. To allow comparisons among states and between individual states and all respondents, the results were weighted to account for the complex sample survey design (4).

In the eight states, 13,244 persons participated in the 1995 BRFSS (Table 1). During the 30 days preceding participation in the survey, respondents averaged 1.8 days of activity limitation because of poor physical or mental health, 2.8 days of poor mental health, 2.8 days of pain, 3.2 days of poor physical health, 3.2 days of depression, 5.4 days of anxiety, 7.8 days of sleeplessness, and 18.6 days of vitality. The range of state-specific means was <1 day for poor physical health, activity limitation, and

*In North Carolina, the HRQOL questions were included only during June–August 1995.

[†]An earlier version of these HRQOL questions was used in the 1994 Missouri BRFSS.

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depression; 1–2 days for mental health, pain, and anxiety; and ≥ 2 days for sleeplessness and vitality. In comparison with men, women reported more days of poor health on every measure; the largest differences were for mental health, depression, anxiety, and vitality—a finding that did not change when data were age-adjusted. Persons aged ≥ 60 years reported more days of poor physical health, activity limitation, and pain than did persons aged < 60 years; but persons aged < 60 years reported more days of poor mental health, anxiety, and sleeplessness.

Compared with all respondents, persons whose annual household incomes were $< \$10,000$ reported at least twice as many days of activity limitation (4.8 days), pain (5.6 days), and poor physical health (6.9 days). Persons who identified their marital status as separated[§] reported more than twice as many days of poor mental health (5.8 days) and depression (7.3 days).

For the eight states, the prevalence of any activity limitation ranged from 17% to 22% (overall mean: 19%). In each state, persons with differing severity of current activity limitation (i.e., ranging from no limitation to needing assistance with personal care) had progressively poorer HRQOL than persons with less severe limitations.

Compared with HRQOL for all respondents, HRQOL was poorer for persons who reported an activity limitation from particular common causes (Table 2). Persons with arthritis or rheumatism reported substantially more days of pain; persons with a back or neck problem, more days of pain and sleeplessness; persons who had had a stroke, more days of depression and anxiety; persons with diabetes, more days of poor physical health; persons with cancer, more days of poor physical and mental health and activity limitation; and persons with an emotional problem, more days of poor mental health, activity limitation, depression, anxiety, and sleeplessness. Limitations associated with the fewest days of vitality were emotional problems (4.0 days), diabetes (8.1 days), and cancer (8.1 days). In comparison with all respondents, persons who had been told by a physician that they had diabetes also reported low HRQOL (i.e., poor physical health, activity limitation, pain, and lack of vitality).

The internal consistency of the HRQOL results was demonstrated by several findings. In comparison with all respondents and other demographic subgroups, persons who reported being unable to work also reported low HRQOL, especially poor physical health (18.0 days), activity limitation (13.5 days), pain (15.5 days), depression (10.2 days), anxiety (11.7 days), and fewer days of vitality (8.0 days) (Table 1). For all respondents, as the gradient of excellent to poor self-rated health worsened, the number of days of poor HRQOL increased. Conversely, persons who rated their general health status as excellent had a greater number of days of vitality (22.4 days) than did persons who rated this status as poor (5.1 days). HRQOL is measured by validated survey methods. A comparison of the BRFSS measures and the widely used and validated Medical Outcomes Study Short Form 36 (SF-36) indicated that the 14-item HRQOL had acceptable construct, criterion, and known-groups validity (5).

Reported by the following state BRFSS coordinators: F Breukelman, Delaware; K Horvath, Indiana; M Perry, Kansas; D Johnson, Mississippi; T Murayi, PhD, Missouri; W Honey, MPH, New Mexico; K Passaro, PhD, North Carolina; D Ridings, Tennessee. J Jackson-Thompson, PhD, Missouri Dept of Health. Health Care and Aging Studies Br, Div of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

[§]Persons who were married but no longer living at the same residence.

TABLE 1. Health-related quality-of-life measures, by selected characteristics — eight states, Behavioral Risk Factor Surveillance System, 1995

Characteristic	No. [†]	Mean no. of days*							Very healthy and full of energy
		Physical health not good	Mental health not good	Usual activity limited [§]	Pain	Depression	Anxiety	Sleeplessness	
State									
Delaware	2,042	3.0	2.9	1.8	3.0	2.8	5.0	7.4	19.9
Indiana	2,270	3.5	3.6	1.7	3.4	3.4	6.1	9.0	18.4
Kansas	1,744	3.1	3.0	1.7	2.8	2.9	5.7	7.8	18.8
Mississippi	1,470	3.3	2.6	2.2	3.2	3.5	4.7	6.7	20.2
Missouri	1,488	2.9	3.1	1.7	2.6	2.9	5.3	7.9	18.5
New Mexico	1,250	3.7	2.8	2.1	2.3	3.0	5.4	7.2	20.3
North Carolina [¶]	1,289	2.8	1.8	1.4	2.2	2.9	4.2	6.9	17.5
Tennessee	1,689	3.6	2.5	1.8	2.5	3.5	5.6	7.6	17.7
Sex									
Men	5,417	2.8	2.2	1.6	2.6	2.5	4.7	7.2	19.3
Women	7,827	3.6	3.5	2.0	3.0	3.8	6.0	8.3	17.9
Age group (yrs)									
18–39	5,587	2.1	3.1	1.2	1.7	3.2	6.2	9.8	18.3
40–59	4,191	3.3	3.1	1.9	3.2	3.3	5.5	7.5	19.0
60–74	2,394	5.1	1.9	2.2	3.8	3.0	3.7	4.2	19.1
≥75	1,030	6.6	2.2	3.7	5.3	3.5	3.6	4.0	17.2
Selected demographic group									
Less than high school education	2,031	6.2	3.5	3.7	5.4	5.2	6.4	8.0	15.9
<\$10,000 annual household income	1,000	6.9	5.0	4.8	5.6	6.1	8.2	7.4	15.7
Uninsured	1,525	3.1	4.0	2.0	2.7	4.8	7.2	9.1	17.5
Out of work	396	4.2	4.9	3.5	3.3	6.0	8.6	7.9	17.8
Unable to work	506	18.0	8.6	13.5	15.5	10.2	11.7	12.3	8.0
Separated marital status ^{**}	342	3.8	5.8	2.8	3.4	7.3	8.9	10.0	16.6
Selected health condition or risk group									
Had or have breast cancer ^{††}	105	7.0	4.9	3.1	5.0	4.8	5.9	6.6	17.7
Told have diabetes	799	8.5	4.6	4.8	7.0	5.6	7.4	8.3	14.0
Told have high blood pressure (on ≥2 occasions)	2,560	6.2	3.7	3.6	5.4	4.9	6.7	7.6	15.7
Smoke cigarettes	3,259	3.6	4.1	2.4	3.4	4.8	7.6	10.0	17.0
Severely obese ^{§§}	603	5.4	4.5	3.4	5.8	5.0	7.9	9.4	14.7

General health status									
Excellent	2,934	0.9	1.7	0.5	0.9	1.8	3.9	6.8	22.4
Very good	4,386	1.3	2.2	0.6	1.3	2.2	4.5	7.4	20.5
Good	3,749	2.6	2.9	1.3	2.6	3.2	5.5	7.9	17.8
Fair	1,469	7.8	4.9	4.2	6.3	5.8	8.1	9.2	12.1
Poor	648	22.2	8.3	13.9	15.7	11.1	11.6	11.3	5.1
Activity limitation^{¶¶}									
None	10,698	1.6	2.3	0.7	1.1	2.4	4.6	7.3	20.2
Limited, but no help needed	1,710	7.7	4.2	3.8	7.7	5.4	7.8	9.2	13.0
Need help with routine needs	512	15.9	7.7	11.3	15.7	8.5	10.9	11.0	7.7
Need help with personal care	295	18.4	9.0	15.9	18.0	11.3	13.4	11.6	7.0
Total	13,244	3.2	2.8	1.8	2.8	3.2	5.4	7.8	18.6

*During the 30 days preceding the survey.

[†]Weighted to account for different probabilities of selection and to adjust for the age, sex, and racial distribution of the population in each state (4). Persons for whom data were missing were excluded from the analysis.

[§]A value of 0 days was imputed for all respondents who reported no days when their physical or mental health was not good.

[¶]Survey conducted during June–August 1995.

**Persons who were married but no longer living at the same residence (e.g., legally separated).

^{††}Women who reported having had breast cancer as the reason for their last mammogram or clinical breast examination.

^{§§}Body mass index ≥ 35.0 .

^{¶¶}Based on response to the question, “Are you limited in any way in any activities because of an impairment or health problem?”

TABLE 2. Health-related quality-of-life measures, by cause of activity limitation* — eight states, Behavioral Risk Factor Surveillance System, 1995

Cause of activity limitation	No. [§]	Mean no. of days [†]							Very healthy and full of energy
		Physical health not good	Mental health not good	Usual activity limited [¶]	Pain	Depression	Anxiety	Sleeplessness	
Arthritis or rheumatism	416	9.9	3.4	4.9	13.7	5.1	7.2	8.9	10.7
Back or neck problem	477	10.4	6.4	7.8	13.7	7.8	9.6	12.4	10.5
Fractures, bone or joint injury	239	9.2	5.1	5.6	12.4	5.9	8.9	9.9	13.9
Walking problem	187	8.6	3.5	5.3	10.9	4.5	7.5	6.4	13.2
Lung or breathing problem	188	13.6	5.6	7.8	5.9	6.9	9.5	9.4	9.6
Hearing problem	23	2.8	3.5	1.2	2.3	3.6	7.5	10.6	13.6
Eye or vision problem	82	7.8	5.0	2.7	3.7	5.6	6.0	6.8	18.2
Heart problem	223	11.7	4.1	7.1	7.5	5.7	8.1	9.4	10.2
Stroke	47	14.5	3.8	8.0	11.2	10.5	11.4	7.4	8.3
Hypertension or high blood pressure	31	10.1	5.2	8.7	8.4	7.6	7.5	6.9	9.8
Diabetes	73	15.0	5.1	7.3	8.6	8.7	8.7	9.3	8.1
Cancer	44	18.3	8.2	12.6	8.9	7.6	10.1	11.3	8.1
Depression, anxiety, or other emotional problem	44	9.4	17.5	12.2	7.8	22.1	23.1	16.7	4.0
Other impairment or problem	413	10.9	7.1	7.7	9.7	7.2	10.3	10.2	11.7

* Main causes of reported limitation were classified into these 14 categories by BRFSS interviewers.

[†] During the 30 days preceding the survey.

[§] Includes data from Delaware, Indiana, Kansas, Mississippi, Missouri, New Mexico, North Carolina, and Tennessee. Weighted to account for different probabilities of selection and to adjust for the age, sex, and racial distribution of the population in each state (4). Persons for whom data were missing were excluded from the analysis.

[¶] A value of 0 days was imputed for all respondents who reported no days when their physical or mental health was not good.

Health-Related Quality of Life — Continued

Editorial Note: Quality of life includes health, level of activity, spirituality, social support, and satisfaction with personal accomplishments, resources, and life situation (6). HRQOL focuses on self-perceived health and well-being and their determinants. Assessments of HRQOL in communities can assist in identifying vulnerable and underserved populations, motivating groups to act on health-related problems, guiding efforts to ensure that health resources match the needs of the community, and evaluating public health interventions.

The results presented in this report are subject to at least four limitations. First, data from only eight states might not be representative of all adults in the U.S. population. Second, the BRFSS excludes households without telephones. Third, the BRFSS may underrepresent persons who are at a low level of health and functioning, because time and functional capacity are needed to complete the survey. Fourth, because this analysis describes, rather than explains, the relations between HRQOL and demographic factors, the evaluation did not adjust for possible confounding variables, such as age.

Despite these limitations, the HRQOL measures provide information about the association between mental and physical health, behavioral and demographic characteristics, and disease and disability (7,8). This information will assist state and community efforts in measuring and assessing changes in the proportion of adults reporting good health and in the number of reported days when physical or mental health was not good (i.e., two of the 25 Community Profile Indicators recommended by the Institute of Medicine [9]).

Previous reports have indicated that a large segment of the U.S. population (i.e., approximately 41 million persons aged ≥ 18 years in 1994) is composed of persons who have disabilities and that these persons are at increased risk for other physical or psychological conditions (7,10). These findings were confirmed by results from the 14 HRQOL questions in the 1995 BRFSS. Persons who have chronic health conditions or disabilities are especially vulnerable to pain, depression, anxiety, sleeplessness, and lack of vitality. Secondary prevention strategies, such as providing improved access to treatment for pain and depression for persons who have disabilities, are needed to address these public health problems.

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Health-Related Quality of Life — Continued

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*Notice to Readers***Epidemiology in Action Course**

CDC and Emory University will cosponsor an applied epidemiology course designed for practicing state and local health department professionals. This course, "Epidemiology in Action," will be held at CDC during April 27–May 8, 1998. The course emphasizes the practical application of epidemiology to public health problems and will consist of lectures, workshops, classroom exercises (including actual epidemiologic problems), and roundtable discussions. Topics covered include descriptive epidemiology and biostatistics, analytic epidemiology, epidemic investigations, public health surveillance, surveys and sampling, computers and Epi Info software training, and discussions of selected prevalent diseases. There is a tuition charge.

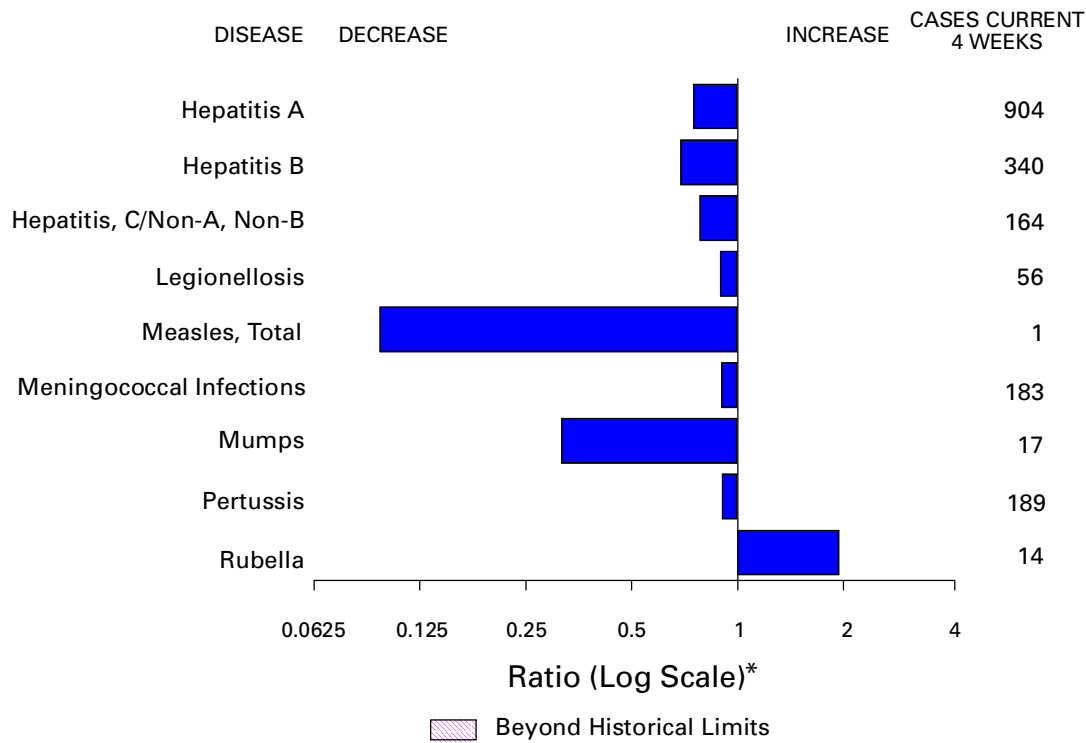
Deadline for application is April 24. Additional information and applications are available from Department PSB, Rollins School of Public Health, Emory University, 7th floor, 1518 Clifton Road, N.E., Atlanta, GA 30322; telephone (404) 727-3485; fax (404) 727-4590; email ogostan@sph.emory.edu.

*Notice to Readers***Introduction to Public Health Surveillance Course**

CDC and Emory University will cosponsor a course to provide practicing public health professionals with the theoretical and practical tools necessary to design, implement, and evaluate effective surveillance programs. "Introduction to Public Health Surveillance" will be held at Emory University in Atlanta during June 1–5, 1998. Topics include overview and history of surveillance systems; planning considerations; sources and collection of data; analysis, interpretation, and communication of data; surveillance systems technology; ethics and legalities; state and local concerns; and future considerations. There is a tuition charge.

Deadline for application is May 15. Additional information and applications are available from Department PSB, Rollins School of Public Health, Emory University, 7th floor, 1518 Clifton Road, N.E., Atlanta, GA 30322; telephone (404) 727-3485; fax (404) 727-4590; email ogostan@sph.emory.edu.

FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending February 21, 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 February 21, 1998 (7th Week)

	Cum. 1998		Cum. 1998
Anthrax	-	Plague	-
Brucellosis	3	Poliomyelitis, paralytic [¶]	-
Cholera	-	Psittacosis	6
Congenital rubella syndrome	-	Rabies, human	-
Cryptosporidiosis*	166	Rocky Mountain spotted fever (RMSF)	10
Diphtheria	-	Streptococcal disease, invasive Group A	198
Encephalitis: California*	2	Streptococcal toxic-shock syndrome*	11
eastern equine*	-	Syphilis, congenital**	-
St. Louis*	-	Tetanus	1
western equine*	-	Toxic-shock syndrome	10
Hansen Disease	9	Trichinosis	1
Hantavirus pulmonary syndrome* [†]	-	Typhoid fever	32
Hemolytic uremic syndrome, post-diarrheal*	1	Yellow fever	-
HIV infection, pediatric* [§]	22		

-: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 January 25, 1998.
[¶] One suspected case of polio with onset in 1998 has also been reported to date.
 **Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending February 21, 1998, and February 15, 1997 (7th Week)

Reporting Area	AIDS		Chlamydia		<i>Escherichia coli</i> O157:H7		Gonorrhea		Hepatitis C/NA,NB	
	Cum. 1998*	Cum. 1997	Cum. 1998	Cum. 1997	NETSS [†]	PHLIS [§]	Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997
					Cum. 1998	Cum. 1998				
UNITED STATES	3,171	7,045	52,657	53,918	83	33	34,830	35,585	243	337
NEW ENGLAND	64	201	2,516	2,252	9	6	732	790	1	6
Maine	2	13	139	109	-	-	7	6	-	-
N.H.	-	1	104	113	2	2	16	34	-	-
Vt.	5	7	36	54	-	-	1	9	-	-
Mass.	6	122	1,156	976	6	4	297	310	1	6
R.I.	12	26	343	266	1	-	46	71	-	-
Conn.	39	32	738	734	-	-	365	360	-	-
MID. ATLANTIC	902	2,312	7,439	7,003	2	-	4,259	4,412	25	21
Upstate N.Y.	114	384	N	N	2	-	198	673	23	12
N.Y. City	490	1,051	4,763	3,830	-	-	2,238	1,820	-	-
N.J.	135	572	119	1,421	-	-	522	936	-	-
Pa.	163	305	2,557	1,752	N	-	1,301	983	2	9
E.N. CENTRAL	203	389	10,118	8,587	19	5	7,685	5,620	55	88
Ohio	32	93	3,211	2,862	6	-	1,987	1,928	3	4
Ind.	39	25	1,061	1,110	5	3	789	879	1	1
Ill.	102	115	2,427	1,464	7	-	2,078	707	2	14
Mich.	15	118	3,081	1,662	1	-	2,677	1,469	49	69
Wis.	15	38	338	1,489	N	3	154	637	-	-
W.N. CENTRAL	55	188	3,411	3,851	7	3	1,312	1,702	6	16
Minn.	15	17	560	969	3	4	236	339	-	-
Iowa	6	37	334	606	1	-	90	158	2	1
Mo.	19	112	1,344	1,284	-	1	531	857	4	10
N. Dak.	-	2	1	120	-	-	1	8	-	1
S. Dak.	4	-	224	124	-	-	34	18	-	-
Nebr.	9	13	77	218	1	-	13	66	-	-
Kans.	2	7	871	530	2	-	407	256	-	4
S. ATLANTIC	793	2,043	12,129	10,233	16	2	10,547	10,930	16	23
Del.	13	20	295	-	-	-	204	146	-	-
Md.	53	308	959	649	8	1	1,066	1,606	2	3
D.C.	83	120	N	N	-	-	443	686	-	-
Va.	39	132	1,640	1,384	N	1	940	1,153	1	1
W. Va.	5	14	363	494	N	-	105	150	-	-
N.C.	45	60	2,544	2,502	4	-	2,228	2,240	5	8
S.C.	59	124	2,203	1,674	-	-	1,633	1,671	-	9
Ga.	116	187	2,178	711	2	-	2,255	1,024	-	-
Fla.	380	1,078	1,947	2,819	2	-	1,673	2,254	8	2
E.S. CENTRAL	156	187	4,756	4,176	4	2	4,943	4,643	13	33
Ky.	19	23	760	807	1	-	507	579	-	-
Tenn.	52	109	1,777	1,474	1	2	1,638	1,374	11	14
Ala.	56	38	1,286	1,068	2	-	1,752	1,568	2	1
Miss.	29	17	933	827	-	1	1,046	1,122	-	18
W.S. CENTRAL	382	483	3,134	4,861	-	-	2,759	3,838	-	22
Ark.	17	18	430	335	-	-	736	585	-	-
La.	67	126	1,674	760	-	-	1,446	917	-	14
Okla.	14	32	1,030	738	-	-	577	625	-	-
Tex.	284	307	-	3,028	-	-	-	1,711	-	8
MOUNTAIN	88	183	2,480	2,726	8	5	1,006	948	75	45
Mont.	6	7	107	85	-	-	6	6	4	3
Idaho	3	2	120	194	2	-	4	16	14	9
Wyo.	-	5	109	61	-	-	7	6	41	18
Colo.	21	39	-	168	1	1	391	274	3	5
N. Mex.	9	4	576	569	2	2	114	121	4	4
Ariz.	33	28	1,243	1,162	N	2	423	402	-	4
Utah	13	17	215	154	2	-	25	19	6	-
Nev.	3	81	110	333	1	-	36	104	3	2
PACIFIC	528	1,059	6,674	10,229	18	9	1,587	2,702	52	83
Wash.	34	45	1,423	1,194	1	3	254	316	1	1
Oreg.	12	31	380	600	5	2	71	91	1	1
Calif.	477	962	4,469	8,078	12	4	1,190	2,167	26	54
Alaska	-	16	167	190	-	-	29	72	-	-
Hawaii	5	5	235	167	N	1	43	56	24	27
Guam	-	-	8	36	N	-	2	4	-	-
P.R.	88	144	U	U	1	U	53	75	2	7
V.I.	1	4	N	N	N	U	-	-	-	-
Amer. Samoa	-	-	-	-	N	U	-	-	-	-
C.N.M.I.	-	-	N	N	N	U	7	4	-	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 January 25, 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 February 21, 1998, and February 15, 1997 (7th 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	105	120	241	390	99	171	805	1,176	566	1,402	765
NEW ENGLAND	6	8	24	85	4	6	11	17	21	26	136
Maine	-	-	-	-	-	-	-	-	U	2	18
N.H.	1	2	-	3	-	1	-	-	-	-	12
Vt.	-	2	-	2	-	-	-	-	-	-	3
Mass.	2	3	13	14	4	4	11	9	17	7	41
R.I.	3	-	2	9	-	1	-	-	4	4	13
Conn.	-	1	9	57	-	-	-	8	U	13	49
MID. ATLANTIC	16	19	124	257	20	30	37	49	37	154	208
Upstate N.Y.	9	4	32	22	9	3	1	8	U	15	124
N.Y. City	-	-	-	17	8	13	5	10	U	85	U
N.J.	-	2	-	76	-	12	10	23	37	34	32
Pa.	7	13	92	142	3	2	21	8	U	20	52
E.N. CENTRAL	33	51	14	1	7	19	117	109	38	164	3
Ohio	18	28	14	-	1	1	33	37	5	44	3
Ind.	3	5	-	-	1	2	34	24	U	14	-
Ill.	-	1	-	1	-	8	31	14	33	103	-
Mich.	11	16	-	-	5	7	15	14	U	-	-
Wis.	1	1	U	U	-	1	4	20	U	3	-
W.N. CENTRAL	9	8	1	1	2	3	11	27	17	37	60
Minn.	-	-	-	-	-	-	-	7	U	16	9
Iowa	-	-	1	-	1	1	-	1	U	4	20
Mo.	7	4	-	-	1	2	8	14	17	9	1
N. Dak.	-	-	-	-	-	-	-	-	U	1	17
S. Dak.	-	-	-	-	-	-	-	-	-	1	6
Nebr.	2	3	-	1	-	-	-	-	-	-	-
Kans.	-	1	-	-	-	-	3	5	U	6	7
S. ATLANTIC	22	14	59	30	32	38	334	463	95	158	297
Del.	1	1	-	2	1	1	-	3	-	6	-
Md.	5	7	53	23	16	13	62	137	23	17	72
D.C.	2	1	3	3	3	3	9	15	13	6	-
Va.	2	-	-	-	2	8	36	33	5	16	77
W. Va.	N	N	-	-	-	-	-	-	9	6	7
N.C.	3	3	-	1	4	1	93	96	45	26	75
S.C.	1	-	-	-	-	3	45	57	U	9	9
Ga.	-	-	2	1	4	7	61	87	U	31	26
Fla.	8	2	1	-	2	2	28	35	U	41	31
E.S. CENTRAL	1	5	6	11	4	5	162	266	-	109	18
Ky.	-	-	-	1	-	1	15	15	U	20	2
Tenn.	1	1	5	2	3	1	87	109	U	39	8
Ala.	-	1	1	-	1	1	36	70	U	36	8
Miss.	-	3	-	8	-	2	24	72	U	14	-
W.S. CENTRAL	-	1	-	-	2	-	83	174	5	210	22
Ark.	-	-	-	-	-	-	23	25	5	11	1
La.	-	-	-	-	2	-	52	71	-	6	-
Okla.	-	1	-	-	-	-	8	21	U	20	21
Tex.	-	-	-	-	-	-	-	57	U	173	-
MOUNTAIN	7	9	1	-	8	11	30	26	28	28	8
Mont.	-	-	-	-	-	1	-	-	-	-	3
Idaho	-	-	-	-	1	-	-	-	-	-	-
Wyo.	-	-	-	-	-	1	-	-	1	1	5
Colo.	2	3	-	-	3	6	2	-	U	10	-
N. Mex.	1	-	-	-	3	-	-	-	7	-	-
Ariz.	-	3	-	-	-	-	26	23	14	13	-
Utah	4	2	-	-	1	-	2	-	6	1	-
Nev.	-	1	1	-	-	3	-	3	U	3	-
PACIFIC	11	5	12	5	20	59	20	45	325	516	13
Wash.	-	1	-	-	-	-	3	-	U	32	-
Oreg.	-	-	-	2	5	2	1	1	U	16	-
Calif.	11	3	12	3	15	57	16	44	312	427	11
Alaska	-	-	-	-	-	-	-	-	3	12	2
Hawaii	-	1	-	-	-	-	-	-	10	29	-
Guam	-	-	-	-	-	-	-	-	-	7	-
P.R.	-	-	-	-	-	2	45	30	-	-	7
V.I.	-	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	-	1	-	8	-	-

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

*Additional information about areas displaying "U" (e.g., Tuberculosis) can be found in Notices to Readers, *MMWR* Vol. 47, No. 2, p. 39.

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending February 21, 1998, and February 15, 1997 (7th Week)

Reporting Area	<i>H. influenzae</i> , invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
	Cum. 1998*	Cum. 1997	A		B		Indigenous		Imported†		Total	
			Cum. 1998	Cum. 1997	Cum. 1998	Cum. 1997	1998	Cum. 1998	1998	Cum. 1998	Cum. 1998	Cum. 1997
UNITED STATES	119	149	1,839	3,231	710	934	-	-	-	2	2	11
NEW ENGLAND	8	12	42	73	4	25	-	-	-	1	1	-
Maine	-	2	8	2	-	1	-	-	-	-	-	-
N.H.	1	2	1	4	2	2	-	-	-	-	-	-
Vt.	-	-	2	3	-	1	-	-	-	-	-	-
Mass.	7	7	7	35	-	16	-	-	-	1	1	-
R.I.	-	1	4	2	2	1	-	-	-	-	-	-
Conn.	-	-	20	27	-	4	-	-	-	-	-	-
MID. ATLANTIC	13	20	84	300	92	163	-	-	-	1	1	4
Upstate N.Y.	5	1	41	12	30	16	-	-	-	1	1	2
N.Y. City	1	8	23	156	24	72	-	-	-	-	-	1
N.J.	7	8	2	54	-	33	-	-	-	-	-	1
Pa.	-	3	18	78	38	42	-	-	-	-	-	-
E.N. CENTRAL	15	25	297	372	94	171	-	-	-	-	-	1
Ohio	12	15	58	76	11	13	-	-	-	-	-	-
Ind.	2	2	39	35	5	18	-	-	-	-	-	-
Ill.	-	5	11	131	3	52	-	-	-	-	-	-
Mich.	-	3	178	97	74	78	-	-	-	-	-	1
Wis.	1	-	11	33	1	10	-	-	-	-	-	-
W.N. CENTRAL	1	5	207	226	51	70	-	-	-	-	-	-
Minn.	-	2	5	1	2	-	U	-	U	-	-	-
Iowa	-	1	81	31	5	3	-	-	-	-	-	-
Mo.	1	2	106	141	40	57	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	1	5	1	-	-	-	-	-	-	-
Nebr.	-	-	3	9	1	3	-	-	-	-	-	-
Kans.	-	-	11	39	2	7	-	-	-	-	-	-
S. ATLANTIC	33	26	176	203	101	78	-	-	-	-	-	-
Del.	-	-	-	6	-	1	-	-	-	-	-	-
Md.	8	9	49	65	15	24	-	-	-	-	-	-
D.C.	-	-	6	4	1	6	-	-	-	-	-	-
Va.	3	2	20	21	7	10	-	-	-	-	-	-
W. Va.	1	1	-	1	-	2	U	-	U	-	-	-
N.C.	3	6	13	30	41	16	-	-	-	-	-	-
S.C.	-	2	6	11	-	7	-	-	-	-	-	-
Ga.	7	3	27	28	12	-	-	-	-	-	-	-
Fla.	11	3	55	37	25	12	-	-	-	-	-	-
E.S. CENTRAL	6	12	57	96	61	75	-	-	-	-	-	1
Ky.	-	1	-	17	-	2	-	-	-	-	-	-
Tenn.	6	6	43	42	48	55	-	-	-	-	-	-
Ala.	-	5	14	19	13	5	-	-	-	-	-	1
Miss.	-	-	-	18	-	13	-	-	-	-	-	-
W.S. CENTRAL	7	5	68	326	16	28	-	-	-	-	-	-
Ark.	-	-	4	30	10	6	-	-	-	-	-	-
La.	3	-	3	6	3	3	-	-	-	-	-	-
Okla.	3	4	54	191	3	-	-	-	-	-	-	-
Tex.	1	1	7	99	-	19	-	-	-	-	-	-
MOUNTAIN	26	9	403	556	108	112	-	-	-	-	-	-
Mont.	-	-	6	18	1	-	-	-	-	-	-	-
Idaho	-	-	25	29	4	1	-	-	-	-	-	-
Wyo.	-	-	4	3	2	3	-	-	-	-	-	-
Colo.	1	1	44	77	12	32	-	-	-	-	-	-
N. Mex.	-	1	29	35	39	34	-	-	-	-	-	-
Ariz.	17	2	244	219	30	24	-	-	-	-	-	-
Utah	2	1	26	133	8	11	-	-	-	-	-	-
Nev.	6	4	25	42	12	7	-	-	-	-	-	-
PACIFIC	10	35	505	1,079	183	212	-	-	-	-	-	5
Wash.	-	-	46	48	14	4	-	-	-	-	-	-
Oreg.	9	6	48	66	14	15	-	-	-	-	-	-
Calif.	-	27	407	936	152	186	-	-	-	-	-	2
Alaska	-	-	-	5	1	4	-	-	-	-	-	-
Hawaii	1	2	4	24	2	3	-	-	-	-	-	3
Guam	-	-	-	-	-	1	U	-	U	-	-	-
P.R.	-	-	-	25	35	66	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	U	-	U	-	-	-
Amer. Samoa	-	-	-	-	-	-	U	-	U	-	-	-
C.N.M.I.	-	2	-	1	7	5	U	-	U	-	-	-

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

*Of 23 cases among children aged <5 years, serotype was reported for 11 and of those, 6 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 February 21, 1998, and February 15, 1997 (7th 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	379	547	10	40	52	35	405	608	3	17	6
NEW ENGLAND	30	34	-	-	2	4	82	212	-	-	-
Maine	3	3	-	-	-	-	4	4	-	-	-
N.H.	1	3	-	-	-	1	6	26	-	-	-
Vt.	1	-	-	-	-	1	15	75	-	-	-
Mass.	12	23	-	-	-	2	57	100	-	-	-
R.I.	3	1	-	-	1	-	-	7	-	-	-
Conn.	10	4	-	-	1	-	-	-	-	-	-
MID. ATLANTIC	31	48	-	1	7	1	27	35	2	12	2
Upstate N.Y.	12	6	-	1	-	1	27	17	2	12	-
N.Y. City	4	9	-	-	1	-	-	8	-	-	2
N.J.	15	8	-	-	2	-	-	3	-	-	-
Pa.	-	25	-	-	4	-	-	7	-	-	-
E.N. CENTRAL	51	79	1	5	8	6	42	71	-	-	3
Ohio	31	31	-	3	3	5	28	34	-	-	-
Ind.	8	9	-	-	2	-	2	-	-	-	-
Ill.	-	25	-	-	1	-	-	8	-	-	-
Mich.	8	5	1	2	2	1	8	17	-	-	-
Wis.	4	9	-	-	-	-	4	12	-	-	3
W.N. CENTRAL	33	47	-	-	2	1	25	22	-	-	-
Minn.	-	2	U	-	-	U	18	10	U	-	-
Iowa	6	10	-	-	2	1	5	5	-	-	-
Mo.	15	24	-	-	-	-	-	-	-	-	-
N. Dak.	-	-	-	-	-	-	-	1	-	-	-
S. Dak.	4	3	-	-	-	-	-	1	-	-	-
Nebr.	1	3	-	-	-	-	2	2	-	-	-
Kans.	7	5	-	-	-	-	-	3	-	-	-
S. ATLANTIC	76	100	3	12	2	9	44	39	-	1	-
Del.	-	2	-	-	-	-	-	-	-	-	-
Md.	11	10	-	2	-	1	7	30	-	-	-
D.C.	-	2	-	-	-	-	-	2	-	-	-
Va.	8	6	1	1	1	-	-	2	-	-	-
W. Va.	2	3	U	-	-	U	-	1	U	-	-
N.C.	14	20	-	4	-	-	23	-	-	1	-
S.C.	5	22	-	2	-	5	5	3	-	-	-
Ga.	21	18	-	-	-	-	-	-	-	-	-
Fla.	15	17	2	3	1	3	9	1	-	-	-
E.S. CENTRAL	16	52	-	-	6	-	11	17	-	-	-
Ky.	-	11	-	-	-	-	-	4	-	-	-
Tenn.	16	18	-	-	2	-	3	3	-	-	-
Ala.	-	18	-	-	2	-	8	6	-	-	-
Miss.	-	5	-	-	2	-	-	4	-	-	-
W.S. CENTRAL	23	20	2	8	3	2	14	8	-	1	-
Ark.	3	7	-	-	-	1	7	2	-	-	-
La.	7	2	-	-	-	-	-	-	-	-	-
Okla.	13	4	-	-	-	-	-	-	-	-	-
Tex.	-	7	2	8	3	1	7	6	-	1	-
MOUNTAIN	27	33	2	4	4	8	141	125	1	3	-
Mont.	1	1	-	-	-	-	1	-	-	-	-
Idaho	-	3	-	-	-	4	82	78	-	-	-
Wyo.	1	-	1	1	-	-	-	3	-	-	-
Colo.	11	2	-	-	1	-	12	32	-	-	-
N. Mex.	4	8	N	N	N	1	37	7	-	-	-
Ariz.	8	11	-	1	-	3	3	4	-	-	-
Utah	1	3	-	-	1	-	4	-	-	2	-
Nev.	1	5	1	2	2	-	2	1	1	1	-
PACIFIC	92	134	2	10	18	4	19	79	-	-	1
Wash.	12	10	-	-	2	4	11	13	-	-	-
Oreg.	28	36	N	N	N	-	8	4	-	-	-
Calif.	51	87	2	4	12	-	-	59	-	-	1
Alaska	1	-	-	2	-	-	-	1	-	-	-
Hawaii	-	1	-	4	4	-	-	2	-	-	-
Guam	-	-	U	-	1	U	-	-	U	-	-
P.R.	-	2	-	-	2	-	-	-	-	-	-
V.I.	-	-	U	-	-	U	-	-	U	-	-
Amer. Samoa	-	-	U	-	-	U	-	-	U	-	-
C.N.M.I.	-	-	U	-	-	U	-	-	U	-	-

N: Not notifiable

U: Unavailable

-: no reported cases

**TABLE IV. Deaths in 122 U.S. cities,* week ending
February 21, 1998 (7th Week)**

Reporting Area	All Causes, By Age (Years)						P&J† Total	Reporting Area	All Causes, By Age (Years)						P&J† Total
	All Ages	>65	45-64	25-44	1-24	<1			All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	722	549	125	26	10	12	76	S. ATLANTIC	1,146	778	234	76	31	26	82
Boston, Mass.	180	128	39	8	4	1	25	Atlanta, Ga.	U	U	U	U	U	U	U
Bridgeport, Conn.	35	26	7	-	1	1	1	Baltimore, Md.	144	83	36	13	4	8	10
Cambridge, Mass.	21	18	3	-	-	-	5	Charlotte, N.C.	115	79	23	8	2	3	19
Fall River, Mass.	40	33	7	-	-	-	2	Jacksonville, Fla.	179	125	32	11	8	3	5
Hartford, Conn.	64	48	9	4	-	3	5	Miami, Fla.	111	71	24	10	4	2	1
Lowell, Mass.	37	29	8	-	-	-	3	Norfolk, Va.	60	37	16	4	-	3	8
Lynn, Mass.	15	13	2	-	-	-	2	Richmond, Va.	94	66	14	9	4	1	9
New Bedford, Mass.	33	25	6	1	-	1	2	Savannah, Ga.	U	U	U	U	U	U	U
New Haven, Conn.	40	23	8	5	3	1	5	St. Petersburg, Fla.	114	89	20	3	2	-	8
Providence, R.I.	83	71	8	2	-	2	-	Tampa, Fla.	208	147	42	8	4	6	14
Somerville, Mass.	3	3	-	-	-	-	-	Washington, D.C.	101	66	25	7	3	-	8
Springfield, Mass.	44	32	8	2	1	1	2	Wilmington, Del.	20	15	2	3	-	-	-
Waterbury, Conn.	39	31	7	1	-	-	4	E.S. CENTRAL	925	648	186	54	15	22	90
Worcester, Mass.	88	69	13	3	1	2	20	Birmingham, Ala.	228	159	49	11	2	7	30
MID. ATLANTIC	2,453	1,739	465	169	45	35	166	Chattanooga, Tenn.	52	35	14	1	1	1	6
Albany, N.Y.	57	48	4	3	2	-	3	Knoxville, Tenn.	114	93	18	2	1	-	17
Allentown, Pa.	34	27	6	1	-	-	-	Lexington, Ky.	68	50	15	2	-	1	11
Buffalo, N.Y.	U	U	U	U	U	U	U	Memphis, Tenn.	166	118	26	10	6	6	15
Camden, N.J.	33	23	8	1	-	1	6	Mobile, Ala.	79	61	11	3	2	2	-
Elizabeth, N.J.	37	30	5	2	-	-	-	Montgomery, Ala.	61	39	14	6	-	2	8
Erie, Pa.	63	52	8	3	-	-	5	Nashville, Tenn.	157	93	39	19	3	3	3
Jersey City, N.J.	52	28	13	7	4	-	2	W.S. CENTRAL	1,475	983	288	103	69	32	102
New York City, N.Y.	1,263	869	263	91	21	19	59	Austin, Tex.	77	50	17	4	5	1	4
Newark, N.J.	75	41	20	12	2	-	7	Baton Rouge, La.	62	41	12	7	1	1	1
Paterson, N.J.	46	36	4	3	2	1	-	Corpus Christi, Tex.	62	51	8	3	-	-	4
Philadelphia, Pa.	298	188	75	22	4	9	28	Dallas, Tex.	198	120	46	13	12	7	11
Pittsburgh, Pa.‡	74	59	11	2	1	1	5	El Paso, Tex.	47	35	3	7	1	1	7
Reading, Pa.	47	40	5	2	-	-	3	Ft. Worth, Tex.	127	94	18	10	4	1	9
Rochester, N.Y.	160	122	24	7	6	1	22	Houston, Tex.	317	193	80	20	19	5	22
Schenectady, N.Y.	31	25	2	3	1	-	3	Little Rock, Ark.	68	48	14	4	-	2	5
Scranton, Pa.	31	26	3	2	-	-	3	New Orleans, La.	102	50	15	12	19	6	-
Syracuse, N.Y.	102	87	6	4	2	3	17	San Antonio, Tex.	196	144	35	11	3	3	14
Trenton, N.J.	21	12	5	4	-	-	1	Shreveport, La.	80	60	12	3	3	2	8
Utica, N.Y.	29	26	3	-	-	-	2	Tulsa, Okla.	139	97	28	9	2	3	17
Yonkers, N.Y.	U	U	U	U	U	U	U	MOUNTAIN	1,095	781	189	75	29	20	115
E.N. CENTRAL	2,327	1,632	424	172	40	59	194	Albuquerque, N.M.	126	89	17	10	7	3	11
Akron, Ohio	68	53	8	6	-	1	1	Boise, Idaho	37	27	7	-	-	3	-
Canton, Ohio	39	30	7	1	1	-	1	Colo. Springs, Colo.	69	51	13	3	1	1	7
Chicago, Ill.	450	287	99	45	7	12	36	Denver, Colo.	132	86	31	11	1	3	20
Cincinnati, Ohio	123	85	18	10	4	6	14	Las Vegas, Nev.	308	220	61	17	7	3	25
Cleveland, Ohio	138	85	34	11	5	3	6	Ogden, Utah	16	12	3	1	-	-	3
Columbus, Ohio	202	131	48	14	2	7	22	Phoenix, Ariz.	114	67	25	9	9	3	11
Dayton, Ohio	120	98	17	4	-	1	11	Pueblo, Colo.	38	33	3	2	-	-	7
Detroit, Mich.	259	172	56	23	6	2	14	Salt Lake City, Utah	97	70	14	9	1	3	11
Evansville, Ind.	46	39	3	4	-	-	2	Tucson, Ariz.	158	126	15	13	3	1	20
Fort Wayne, Ind.	57	45	8	4	-	-	2	PACIFIC	1,331	1,020	197	77	21	16	165
Gary, Ind.	19	9	5	2	1	2	-	Berkeley, Calif.	12	8	2	2	-	-	2
Grand Rapids, Mich.	79	57	11	5	2	4	13	Fresno, Calif.	U	U	U	U	U	U	U
Indianapolis, Ind.	217	158	35	13	6	5	21	Glendale, Calif.	U	U	U	U	U	U	U
Lansing, Mich.	57	41	8	5	-	3	3	Honolulu, Hawaii	86	70	9	5	1	1	10
Milwaukee, Wis.	136	101	22	10	2	1	13	Long Beach, Calif.	57	45	7	4	-	1	12
Peoria, Ill.	52	27	10	10	1	4	9	Los Angeles, Calif.	U	U	U	U	U	U	U
Rockford, Ill.	59	42	10	1	2	4	5	Pasadena, Calif.	22	16	4	1	-	1	1
South Bend, Ind.	59	52	4	2	1	-	8	Portland, Oreg.	121	92	17	6	6	-	9
Toledo, Ohio	84	69	12	2	-	1	8	Sacramento, Calif.	200	159	29	7	2	3	40
Youngstown, Ohio	63	51	9	-	-	3	5	San Diego, Calif.	137	105	20	7	4	1	15
W.N. CENTRAL	782	595	121	29	13	17	71	San Francisco, Calif.	130	95	21	11	3	-	20
Des Moines, Iowa	U	U	U	U	U	U	U	San Jose, Calif.	232	181	34	13	2	2	30
Duluth, Minn.	43	40	2	1	-	-	5	Santa Cruz, Calif.	30	23	4	2	1	-	4
Kansas City, Kans.	25	17	5	1	1	1	1	Seattle, Wash.	129	85	32	8	2	2	6
Kansas City, Mo.	106	67	24	4	4	-	6	Spokane, Wash.	73	56	8	6	-	3	9
Lincoln, Nebr.	43	33	8	2	-	-	6	Tacoma, Wash.	102	85	10	5	-	2	7
Minneapolis, Minn.	189	146	32	5	2	4	27	TOTAL	12,256‡	8,725	2,229	781	273	239	1,061
Omaha, Nebr.	91	66	17	3	1	4	9								
St. Louis, Mo.	131	103	12	7	3	6	-								
St. Paul, Minn.	89	72	11	3	1	2	13								
Wichita, Kans.	65	51	10	3	1	-	4								

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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