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Two Fatal Cases of Adenovirus-Related Illness in Previously Healthy Young Adults — Illinois, 2000

Adenoviruses are common pathogens that often are associated with respiratory and gastrointestinal illness and/or conjunctivitis in young persons. Adenovirus serotypes 4 and 7 have caused outbreaks of self-limited febrile respiratory illness in young adults in basic military training. During the 1950s and 1960s, up to 10% of recruits were infected with adenovirus, and these pathogens were responsible for approximately 90% of pneumonia hospitalizations (*1*). Beginning in 1971, all military recruits received oral, live, enteric-coated vaccines that were licensed by the Food and Drug Administration as safe and effective in preventing illness from adenovirus serotypes 4 and 7. In 1996, the sole manufacturer ceased production of adenoviral vaccines and, as supplies dwindled during the next few years, outbreaks of adenoviral respiratory illness reemerged in military settings (*2*). Since 1999, approximately 10%–12% of all recruits have become ill with adenovirus infection in basic training, similar to the prevaccine era. This report describes the first two deaths probably associated with adenovirus infection identified in military recruits since the vaccines became unavailable. The military has requested proposals for a new adenovirus vaccine manufacturer; however, these deaths suggest that efforts by policymakers and pharmaceutical companies to reestablish adenoviral vaccine production should be intensified.

Case Reports

Case 1. A healthy 21-year-old man arrived at Navy basic training in Great Lakes, Illinois, on May 19, 2000. His medical history was negative for underlying illnesses. He took no medications and denied alcohol or tobacco use. Within one week of arrival, he received several standard vaccinations, including meningococcal vaccine. On June 20–23, he presented to the medical clinic with upper respiratory symptoms. His clinical evaluations did not suggest severe illness, and two bacterial throat cultures were negative. On June 23, he was prescribed a 5-day course of azithromycin for suspected bronchitis. On June 24, he was found unconscious in the barracks. He was transported to a local hospital where he had tonic clonic seizures and respiratory failure that required a ventilator. A chest radiograph revealed a right upper lobe infiltrate, and computer tomography of the head was positive for sinusitis. Examination of cerebrospinal fluid revealed elevated protein levels, but no identifiable pathogens. Blood cultures were negative. He was treated with broad-spectrum antibacterial agents (i.e., vancomycin, ceftriaxone, and metronidazole) and antivirals (i.e., acyclovir and foscarnet). He did not regain consciousness and he died on July 3 from complications of encephalitis.

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Autopsy findings included histologic changes in the brain and spinal cord consistent with viral encephalitis. Both lungs showed bronchiolitis obliterans and organizing pneumonia. Cultures, special stains, and electron microscopy of autopsy specimens did not identify specific pathogens. Molecular testing by polymerase chain reaction (PCR) assay of lung and brain tissue was positive for adenovirus DNA using multiple primer sets (*3,4*). Analysis of premorbid and postmortem serum specimens showed a greater than fourfold rise in neutralizing antibody titers to both adenovirus types 4 and 7.

Case 2. A healthy 18-year-old man arrived at Navy basic training in Great Lakes, Illinois, on August 1. He took no medication and did not use tobacco products. Within one week of arrival, he received several standard vaccinations and benzathine penicillin G (1.2 mu intramuscularly) as prophylaxis for group A streptococcal infections. On August 17, 29, and September 17, he presented to the medical clinic with upper respiratory symptoms. Examinations disclosed no severe illness; he was given acetaminophen and decongestants. On September 18, he presented to the medical clinic with severe dyspnea, weakness, and a petechial rash on the legs. A chest radiograph identified multilobar infiltrates, and he was admitted to a local hospital where his condition rapidly deteriorated. He was given intravenous ceftriaxone and erythromycin and respiratory and hemodynamic support. He died 9 hours after admission with a clinical diagnosis of acute respiratory distress syndrome.

A culture of expectorated sputum collected the day of admission was later positive for group A streptococcus. An autopsy revealed diffuse hemorrhagic pneumonia and diffuse alveolar injury. Cultures and special stains of autopsy materials failed to identify specific pathogens. Electron microscopy indicated intracellular cocci in leukocytes of the lung tissue; no viruses were identified. PCR testing of lung tissue was positive for adenovirus DNA at two laboratories using multiple primer sets (*3,4*). Serologic studies were not performed.

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Editorial Note: These cases illustrate that severe morbidity and mortality are possible from adenovirus infections in previously healthy young adults. Serious adenoviral infections were reported in the U.S. military before vaccines were developed (*5*) and in unvaccinated civilians (*6,7*). In 1996, disease surveillance was established in response to impending loss of vaccine in the military.

Case 1 demonstrates the rare manifestation of central nervous system involvement by adenovirus. Although the serotype is impossible to identify, serotype 7 has been associated most commonly with meningitis and encephalitis (*8*). Surveillance has shown serotype 7 adenovirus as a pathogen identified among the approximately 30 new cases of respiratory illness seen at this training site each week (*2*); the number of cases of illness was slightly higher when the case 1 recruit was in training.

Adenovirus — Continued

Because the pathogen was not detected until postmortem examination, case 2 may have been an occult adenovirus infection. The clinical course met the criteria for probable streptococcal toxic shock syndrome, with hypotension, rash, acute respiratory distress syndrome, and group A streptococcus isolated from a nonsterile site (*9*). Adenovirus may not have been the primary source of illness but a co-morbidity factor (*10*).

In both cases, the postmortem diagnosis of adenovirus was made on limited evidence; PCR and serology indicated the presence of adenoviruses in case 1, and PCR alone was the basis for adenoviral detection in case 2. Isolating adenovirus in culture would have been stronger evidence of infection, but negative culture results can be expected when only postmortem specimens are available. The lack of adenovirus changes on electron microscopy may have been the result of the low sensitivity of this technique on limited tissue samples. Despite these limitations, the viral changes on autopsy, lack of identification of other viral pathogens, and PCR evidence support the diagnoses of adenovirus-related illnesses.

These are the first two deaths probably associated with adenovirus infection in the U.S. military since 1972. Until vaccines become available again, support should be given to ongoing surveillance efforts with appropriate laboratory techniques to identify adenoviral infections. Approximately 200,000 young persons begin U.S. military enlisted careers each year; therefore, clinicians should consider adenovirus infection in severely ill young persons in the military. Policymakers and pharmaceutical companies should consider reestablishing adenovirus vaccine production.

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Health-Related Quality of Life — Los Angeles County, California, 1999

The overall goals of the national health objectives for 2010 are to increase the quality and years of healthy life and eliminate health disparities in the U.S. population (*1*). To assess progress in achieving these goals, the Behavioral Risk Factor Surveillance System (BRFSS) includes a core set of four health-related quality of life (HRQOL) questions that have been used since 1993 to track adults' perceptions of their physical and mental health and level of function (*2*). Data on HRQOL have been reported nationwide (*2*) and by state (*3*) but typically not at the county or community level. This report summarizes findings of the 1999–2000 Los Angeles County Health Survey (LACHS) on HRQOL in the county's adult population and describes variations in HRQOL across population groups in the county. The findings have been published in a county health report and are being used by public health officials to highlight the significant disparities in HRQOL across demographic and socioeconomic populations in Los Angeles County and to guide program planning and resource allocation decisions.

LACHS is a random-digit–dialed telephone survey of the noninstitutionalized population in Los Angeles County (*4*). The adult (persons aged ≥18 years) component of the survey was conducted during September–December 1999. Of 15,301 adults eligible for participation, 8354 (54.6%) completed the survey. Interviews were offered in English, Spanish, Cantonese, Mandarin, Korean, and Vietnamese. All respondents were asked 1) "Would you say that in general your health is excellent, very good, good, fair, or poor?"; 2) "Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?"; 3) "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"; and 4) "During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?"

Responses were analyzed to estimate the percentage of adults who report poor or fair health, the mean number of days of impaired physical or mental health during the preceding 30 days* (i.e., unhealthy days), and the mean number of days when activities were limited because of poor health during the preceding 30 days (i.e., activity limitation days). Data were weighted to reflect the age, sex, and racial/ethnic distribution of the county population using 1999 census projections. Results were stratified by sex, age, race/ethnicity, poverty level based on household income, education, and whether the respondent had ever been diagnosed with selected common chronic health conditions (i.e., heart disease, diabetes, depression, arthritis, and asthma†). To enable comparisons within and across these strata, results were age-standardized to the 2000 U.S. population aged ≥18 years.

Overall, 21.9% of respondents rated their health as poor or fair (Table 1). The percentage of persons who reported poor or fair health was highest for those who had annual household incomes below the 1999 federal poverty level§ (FPL) (42.3%), had less than a

*Calculated by adding the number of impaired physical health days and impaired mental health days up to a maximum of 30 days (*2*).

† Included adults ever diagnosed with asthma and who had one or more wheezing episodes during the preceding 12 months.

§ For example, the federal poverty level for a family of two adults and two dependents in 1999 was an annual household income of $16,895.

Health-Related Quality of Life — Continued

TABLE 1. Percentage of poor to fair self-rated health and mean number of unhealthy days and activity limitation days among adults during the 30 days preceding the survey, by demographic and health characteristics — Los Angeles County Health Survey, Los Angeles County, California, 1999

Characteristic	No.*	Poor to fair health (%)	Poor to fair health (95% CI†)	Unhealthy days Mean no.	Unhealthy days (95% CI)	Activity limitation days Mean no.	Activity limitation days (95% CI)
Sex							
Male	3379	(19.6)	(18.0–21.2)	5.7	(5.4– 6.0)	2.3	(2.1–2.5)
Female	4975	(24.0)	(22.6–25.4)	7.3	(7.0– 7.6)	2.7	(2.5–2.9)
Age group (yrs)							
18–29	2128	(14.0)	(12.3–15.7)	5.7	(5.3– 6.1)	1.9	(1.7–2.1)
30–49	3582	(18.9)	(17.4–20.4)	6.1	(5.8– 6.4)	2.3	(2.1–2.5)
50–64	1442	(27.9)	(25.1–30.7)	7.6	(7.0– 8.2)	3.1	(2.7–3.5)
≥65	1202	(30.2)	(27.2–33.2)	6.8	(6.2– 7.4)	2.9	(2.5–3.3)
Race/Ethnicity§							
White	3376	(13.1)	(11.7–14.5)	7.1	(6.7– 7.5)	2.7	(2.5–2.9)
Hispanic	3267	(35.6)	(33.7–37.5)	6.3	(6.0– 6.6)	2.4	(2.2–2.6)
Black	835	(21.2)	(18.1–24.3)	8.3	(7.5– 9.1)	3.5	(3.0–4.0)
Asian/Pacific Islander	716	(15.3)	(12.4–18.2)	4.7	(4.1– 5.3)	1.7	(1.3–2.1)
Household income							
<100% FPL¶	1426	(42.3)	(39.4–45.2)	8.5	(7.9– 9.1)	3.3	(2.9–3.7)
100%–199% FPL	1910	(32.3)	(29.9–34.7)	7.6	(7.1– 8.1)	3.5	(3.2–3.8)
200%–299% FPL	1665	(19.8)	(17.5–22.1)	6.8	(6.3– 7.3)	2.6	(2.3–2.9)
≥300% FPL	3353	(9.4)	(8.3–10.5)	5.2	(4.9– 5.5)	1.7	(1.5–1.9)
Education							
<High school graduate	1757	(41.7)	(39.1–44.3)	7.1	(6.6– 7.6)	2.8	(2.5–3.1)
High school graduate	1751	(21.3)	(19.2–23.4)	6.8	(6.3– 7.3)	2.8	(2.5–3.1)
Some college	2396	(16.1)	(14.4–17.8)	7.0	(6.6– 7.4)	2.7	(2.4–3.0)
College graduate	2410	(9.2)	(7.9–10.5)	5.5	(5.1– 5.9)	1.7	(1.5–1.9)
Chronic disease							
Heart disease							
Yes	608	(42.7)	(38.2–47.2)	12.5	(11.4–13.6)	5.3	(4.5–6.1)
No	7734	(19.3)	(18.3–20.3)	5.9	(5.7– 6.1)	2.2	(2.1–2.3)
Diabetes							
Yes	524	(50.0)	(45.1–54.9)	12.4	(11.2–13.6)	4.5	(3.7–5.3)
No	7804	(19.1)	(18.1–20.1)	6.0	(5.8– 6.2)	2.3	(2.2–2.4)
Arthritis							
Yes	1427	(34.2)	(31.2–37.2)	11.8	(11.1–12.5)	5.1	(4.6–5.6)
No	6893	(18.2)	(17.1–19.3)	5.4	(5.2– 5.6)	1.9	(1.8–2.0)
Depression							
Yes	724	(41.5)	(37.3–45.7)	16.7	(15.8–17.6)	7.5	(6.7–8.3)
No	7608	(19.7)	(18.7–20.7)	5.5	(5.3– 5.7)	2.0	(1.9–2.1)
Asthma							
Yes	346	(37.9)	(32.0–43.8)	13.4	(12.0–14.8)	5.9	(4.8–7.0)
No	7999	(21.1)	(20.1–22.1)	6.2	(6.0– 6.4)	2.4	(2.3–2.5)
Total	**8354**	**(21.9)**	**(20.9–22.9)**	**6.5**	**(6.3– 6.7)**	**2.5**	**(2.4–2.6)**

* Persons with missing information were excluded.
† Confidence interval.
§ Those classified as "Hispanic" were excluded from the other three groups. American Indians/Alaska Natives were not included because of insufficient sample size.
¶ Based on the 1999 federal poverty level (FPL); for example, the FPL for a family of two adults and two dependents in 1999 was an annual household income of $16,895.

Health-Related Quality of Life — Continued

high school education (41.7%), were Hispanic (35.6%), and were aged ≥65 years (30.2%). Among persons ever diagnosed with one of the chronic health conditions, the percentage that reported poor or fair health was highest for those ever diagnosed with diabetes (50.0%).

The mean number of unhealthy days during the preceding 30 days was 6.5 for all respondents and was highest for those who had annual household incomes below the FPL (8.5), for blacks (8.3), and for those aged 50–64 years (7.6). The mean number of unhealthy days was higher for women (7.3) than for men (5.7), and was higher for those who had less than a college education (6.9) than for those who were college graduates (5.5). The mean number of unhealthy days was three times higher for those ever diagnosed with depression (16.7) than for those not diagnosed with depression (5.5). The mean number of unhealthy days was significantly higher for persons diagnosed with each of the other chronic health conditions studied than for those not diagnosed with the condition.

The mean number of activity limitation days during the preceding 30 days was 2.5 days overall, and was highest for blacks (3.5), those with annual household incomes <200% of FPL (3.4), and those aged 50–64 years (3.1). The mean number of activity limitation days was higher for those with less than a college education (2.8) than for those who were college graduates (1.7). The mean number of activity limitation days was more than three times higher for those ever diagnosed with depression (7.5) than for those not diagnosed with depression (2.0). The mean number of activity limitation days was significantly higher for persons diagnosed with each of the other chronic health conditions studied than for those not diagnosed with the condition.

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Editorial Note: Local health departments (LHDs) and their community partners require population health data at the municipal level and below to guide program planning, resource allocation, and policy development. HRQOL data are an important adjunct to more traditional measures of morbidity and mortality often used by LHDs to assess population health (*5*). This study identified important variations in HRQOL within the Los Angeles County adult population. Disparities in HRQOL were greatest across socioeconomic strata and were consistent with studies that have documented strong associations between lower socioeconomic status and poorer health outcomes, including shorter life expectancy and higher rates of many infectious and noninfectious diseases (*6*). Stratified multivariate analyses of these data are planned to examine whether other subgroup disparities occurred that were independent of socioeconomic status.

The findings also quantify the perceived burden of selected chronic health conditions on HRQOL in the county's adult population. Because locally acquired HRQOL data reflect personal and community health concerns and are intuitively understandable by the general population, these data can be an important tool for mobilizing public health and community stakeholders, health-care providers, and policymakers to increase resource allocations, improve access to services, and identify more effective chronic disease prevention and treatment interventions (*7*). HRQOL measures also can be used to assess the effectiveness of these efforts, including the quality of health-care services

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and the impact of public health interventions (*8*). Use of the standard set of CDC HRQOL measures may enable population comparisons with public domain data (e.g., from BRFSS) and findings from prevention research based on these measures.

The findings in this report are subject to at least four limitations. First, because households without telephones or with only cellular telephones were excluded from the sampling frame, the results do not include a segment of the population that may be at increased risk for reduced HRQOL. Second, the low response rate may have introduced bias (*9*). However, the distribution of respondents by age group, sex, race/ethnicity, and geographic region corresponded with that of independent county adult population estimates. Third, the sample may underrepresent severely impaired adults because effort and functional capacity are required to participate in the survey. Finally, the variation in HRQOL by race/ethnicity may, in part, reflect language and/or cultural differences in the interpretation of the survey questions (*10*).

Community HRQOL assessment data, when combined with demographic, mortality, morbidity, disability, behavioral risk, and related socioeconomic and environmental data, provide local health agencies with a vital planning and evaluation resource. This community health status assessment resource was envisioned in the Mobilizing for Action through Planning and Partnerships (MAPP) process developed by the National Association of County and City Health Officials. The HRQOL findings from the 1999 LACHS are being used by policymakers and in community discussions about the impact of physical and mental health problems in the county. To guide program planning and to compare with similar national and state population health assessments, local health agencies periodically should assess community HRQOL with standard measures.

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Outbreak of Listeriosis Associated With Homemade Mexican-Style Cheese — North Carolina, October 2000–January 2001

On November 13, 2000, health-care providers at a hospital in Winston-Salem, North Carolina, contacted the local health department about three cases of listeriosis within a 2-week period in recent Mexican immigrants. The North Carolina General Communicable Disease Control Branch, in collaboration with the Forsyth County Health Department, the North Carolina Departments of Agriculture and Consumer Services (NCDA&CS) and Environment and Natural Resources, the Food and Drug Administration (FDA), and CDC investigated this outbreak of *Listeria monocytogenes* infections. This report summarizes the results of the investigation, which implicated noncommercial, homemade, Mexican-style fresh soft cheese produced from contaminated raw milk sold by a local dairy farm as the causative agent. Culturally appropriate education efforts are important to reduce the risk for *L. monocytogenes* transmission through Mexican-style fresh soft cheese.

A case was defined as *L. monocytogenes* (isolated from a normally sterile site or with placental tissue staining positive using immunohistochemical techniques) in a mother of a stillborn or premature infant (<37 weeks' gestation), or a mother with a febrile illness, who was a Winston-Salem resident during October 24, 2000–January 1, 2001. Through active case finding, 12 cases were identified. On initial interview, most patients reported eating unlabeled Mexican-style fresh soft cheese bought at local markets or from door-to-door vendors. A case-control study was conducted to determine risk factors for illness; the questionnaire addressed symptoms, diet, and grocery-shopping histories during the month preceding illness. *L. monocytogenes* isolates from patients, raw milk, and cheese were tested using pulsed-field gel electrophoresis (PFGE). Environmental inspections of homes, local markets, and dairy farms were conducted.

All 12 patients were Hispanic; 11 were women with a median age of 21 years (range: 18–38 years), and one was a 70-year-old immunocompromised man. All but one infection were laboratory confirmed. The 11 women did not speak English, were born in Mexico, and had resided in the United States for a median of 2 years (range: 0–5 years). One had traveled outside Forsyth County during the month preceding illness. Ten women were pregnant, and infection with *L. monocytogenes* resulted in five stillbirths, three premature deliveries, and two infected newborns. The 11th woman was 5 months postpartum when she presented to a local hospital with meningitis caused by *L. monocytogenes*. She had no preexisting medical conditions. The male patient, who presented with a brain abscess, was receiving corticosteroid therapy after brain tumor surgery. On hospital admission, the 11 women reported symptoms that included fever (nine), chills (nine), headache (nine), abdominal cramps (five), stiff neck (five), vomiting (three), and photophobia (two).

The male patient was excluded from the case-control study because of difficulty finding suitable controls. In the case-control study, a mother and her fetus or newborn were counted as one case-patient. Controls were identified at a Women, Infants, and Children program office and through the county's record of women enrolled in the state's Baby Love Program, which provides outreach and prenatal-care home visits. A median of four controls (range: three to six controls) per case was selected. Controls were restricted to female Hispanic Winston-Salem residents and matched to patients by age and pregnancy status.

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Patients were more likely than controls to have eaten any cheese purchased from door-to-door vendors (matched odds ratio [MOR]=17.5; 95% confidence interval [CI]=2.0–152.5); queso fresco, a Mexican-style fresh soft cheese (MOR=7.3; 95% CI=1.4–37.5); and hotdogs (MOR=4.6; 95% CI=1.1–19.4). Illness was not associated with purchases at specific markets or supermarkets, eating raw fruits or vegetables, deli products, other cheeses (e.g., American, cheddar, mozzarella, and blue/Gorgonzola), or other dairy products.

Various members of the Hispanic immigrant community made the Mexican-style fresh soft cheese from raw milk in their homes. Inspectors found unlabeled homemade cheese in all three of the small local Latino grocery stores they visited in Winston-Salem. In addition, many persons regularly sold the cheese in parking lots and by going door-to-door. Owners of two local dairies reported selling raw milk. Milk samples were obtained from these two Forsyth County dairies and from three dairies in neighboring counties. *L. monocytogenes* isolates were obtained from nine patients, three cheese samples from two stores, one cheese sample from the home of a patient, and one raw milk sample from a manufacturing grade dairy. All 14 isolates had indistinguishable PFGE patterns, indicating a common link.

NCDA&CS conducted an investigation at a manufacturing grade dairy farm to determine the potential source of *L. monocytogenes* contamination. NCDA&CS collected milk samples from all 49 cows in the herd and samples from the bulk milk storage tanks. Milk from each cow was tested for somatic cell count to identify mastitic cows. Milk from each cow also was tested for presence of *L. monocytogenes*. Repeated testing did not identify any cow with milk confirmed positive for *L. monocytogenes,* suggesting that the cows were not infected and that *L. monocytogenes* may have originated from environmental contamination.

As a result of this outbreak, North Carolina health authorities stopped the sale of raw milk by the dairy farm to noncommercial processors and educated store owners that it is illegal to sell unregulated dairy products. Officials cited the outbreak as sufficient reason to strengthen laws prohibiting the sale of raw milk except to regulated processors. Using already established programs (e.g., Baby Love Program), North Carolina officials recommended reinforcing and expanding the community awareness of the hazards of eating unpasteurized fresh cheese while pregnant. Finally, steps were taken to add listeriosis to the list of reportable diseases in North Carolina.

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Editorial Note: The investigation of this outbreak implicated Mexican-style fresh soft cheese made from unpasteurized milk and hotdogs, two vehicles commonly identified as causes of *L. monocytogenes* outbreaks. The laboratory investigation resulted in isolation of *L. monocytogenes* from patients, cheese, and raw milk at a dairy farm. Molecular subtyping identified indistinguishable PFGE patterns, establishing the link between human disease, the cheese, and the source of the raw milk used to make the cheese.

Because of the health risks associated with the consumption of raw milk and raw milk products, FDA requires pasteurization of all dairy products sold across state lines except cheese made from raw milk that has to be aged a minimum of 60 days (*1,2*). Despite

Listeriosis — Continued

North Carolina laws prohibiting the sale and consumption of raw milk and raw milk products, such practices persist in some communities as a result of consumers' taste preferences and for cultural reasons. The popularity of queso fresco, a Mexican-style fresh soft cheese made from unpasteurized milk, has resulted in several outbreaks in Hispanic communities since the 1980s. In 1985, an outbreak of septic abortions attributed to *L. monocytogenes* occurred among Hispanics in Los Angeles and Orange counties, California (*3*). In 1997, three outbreaks of multidrug resistant *Salmonella* serotype Typhimurium DT104 complex strains occurred in Hispanic communities in northern California and Washington (*4,5*).

Because queso fresco in these communities is produced in private homes, food safety regulations are difficult to enforce. Education of milk and cheese producers and consumers about the increased risk for acquiring infections, particularly *L. monocytogenes*, from consuming unpasteurized milk or fresh soft cheese made from unpasteurized milk, complemented by regulatory action, are the keys to making cheese safe. Successful communication of public health messages to the Hispanic community about the risk for eating Mexican-style fresh soft cheese made from raw milk can be challenging because of language and other social barriers.

The findings in this report are subject to at least four limitations. First, interviewers were not blinded to the status of the persons they were interviewing. Second, efforts were made to select controls from the same population as case-patients; however, controls were selected on the basis of use of public health service programs. Most controls were selected from a county registry for a free prenatal care program that does not require documentation to obtain service. Third, during the study, rumors spread in the community that the suspected vehicle of infection was homemade Mexican-style fresh soft cheese. Finally, patients may have had better recall of potential exposures than controls.

Following a listeriosis outbreak in Yakima County, Washington, an education program to train grandmothers, the primary cheese producers in that community, in the safe production of soft cheeses was introduced and was well received. A licensing requirement for commercial cheese makers and appropriate regulatory action also may curtail the sale of fresh soft cheese made from unpasteurized milk. Twenty-eight states permit the sale of raw milk directly from farmers to consumers (*6*). Until all states prohibit such sales, outbreaks associated with eating queso fresco and other unpasteurized dairy products may continue despite efforts to educate consumers, especially those who do not speak or read English and whose cultural dietary habits favor such products.

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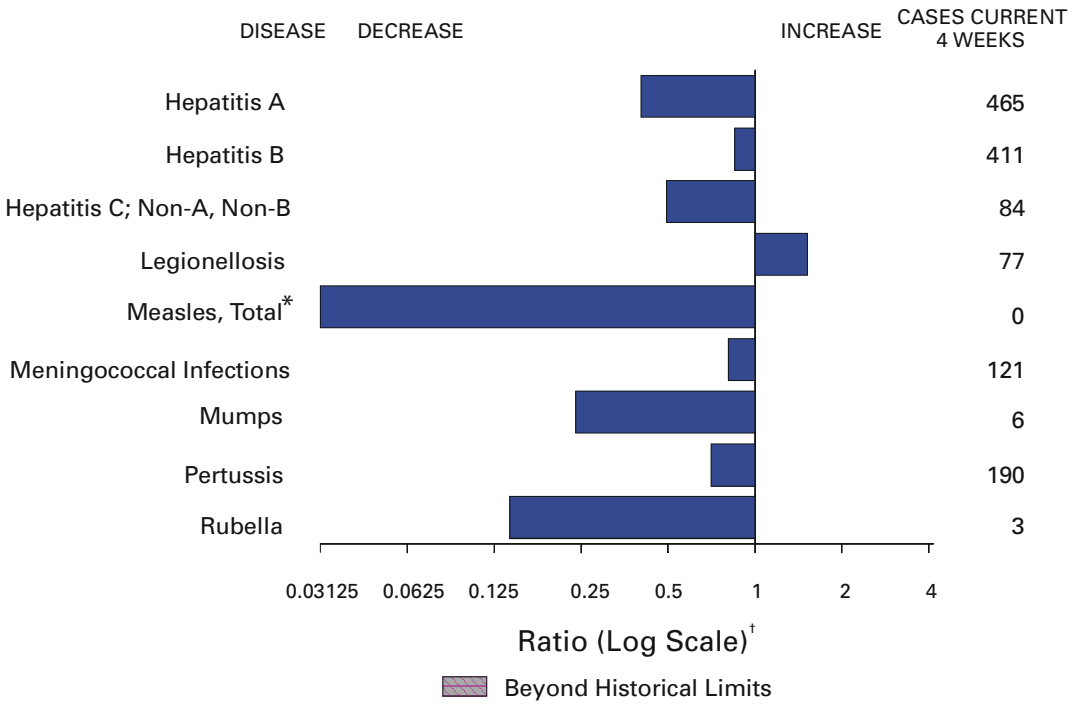
FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending June 30, 2001, with historical data



* No measles cases were reported for the current 4-week period yielding a ratio for week 26 of zero (0).

† 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 of provisional cases of selected notifiable diseases, United States, cumulative, week ending June 30, 2001 (26th Week)

	Cum. 2001		Cum. 2001
Anthrax	-	Poliomyelitis, paralytic	-
Brucellosis*	33	Psittacosis*	7
Cholera	2	Q fever*	8
Cyclosporiasis*	43	Rabies, human	-
Diphtheria	1	Rocky Mountain spotted fever (RMSF)	147
Ehrlichiosis: human granulocytic (HGE)*	39	Rubella, congenital syndrome	-
human monocytic (HME)*	19	Streptococcal disease, invasive, group A	1,912
Encephalitis: California serogroup viral*	1	Streptococcal toxic-shock syndrome*	32
eastern equine*	1	Syphilis, congenital¶	84
St. Louis*	-	Tetanus	12
western equine*	-	Toxic-shock syndrome	59
Hansen disease (leprosy)*	30	Trichinosis	5
Hantavirus pulmonary syndrome*†	4	Tularemia*	33
Hemolytic uremic syndrome, postdiarrheal*	35	Typhoid fever	122
HIV infection, pediatric*§	84	Yellow fever	-
Plague	2		

-: No reported cases.
*Not notifiable in all states.
† Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP). Last update May 29, 2001.
§ Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending June 30, 2001, and July 1, 2000 (26th Week)

Reporting Area	AIDS		Chlamydia†		Cryptosporidiosis		*Escherichia coli* O157:H7*			
							NETSS		PHLIS	
	Cum. 2001§	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000
UNITED STATES	15,380	20,052	320,972	341,748	800	767	742	1,202	541	1,058
NEW ENGLAND	586	1,199	11,256	11,446	35	47	91	119	64	126
Maine	18	16	604	698	3	9	11	7	12	14
N.H.	14	17	635	508	2	4	14	9	9	9
Vt.	10	17	284	266	13	13	2	4	1	6
Mass.	332	764	5,176	4,860	10	12	40	59	28	53
R.I.	44	48	1,339	1,290	3	2	4	6	4	8
Conn.	168	337	3,218	3,824	4	7	20	34	10	36
MID. ATLANTIC	3,108	4,824	34,680	32,619	90	141	61	139	46	105
Upstate N.Y.	182	538	6,136	549	42	35	47	94	33	38
N.Y. City	1,587	2,608	14,418	13,790	42	80	4	9	3	7
N.J.	746	985	4,548	6,315	3	6	10	36	10	32
Pa.	593	693	9,578	11,965	3	20	N	N	-	28
E.N. CENTRAL	1,163	2,013	46,217	58,761	247	173	179	239	117	169
Ohio	198	289	6,436	15,604	52	23	53	38	38	37
Ind.	119	188	7,368	6,454	29	12	30	27	11	31
Ill.	558	1,191	12,579	16,896	1	25	36	70	28	49
Mich.	224	254	15,122	11,623	65	27	25	35	23	31
Wis.	64	91	4,712	8,184	100	86	35	69	17	21
W.N. CENTRAL	355	480	16,645	19,192	79	56	92	149	91	168
Minn.	67	86	3,124	3,936	32	11	30	40	47	55
Iowa	40	52	1,858	2,440	23	16	18	26	7	26
Mo.	168	225	5,764	6,610	8	8	17	37	22	39
N. Dak.	1	1	464	451	3	5	1	7	5	8
S. Dak.	9	4	870	876	4	5	6	7	5	14
Nebr.	27	31	1,581	1,856	9	8	11	22	-	20
Kans.	43	81	2,984	3,023	-	3	9	10	5	6
S. ATLANTIC	4,910	5,298	61,078	63,106	148	117	74	92	36	77
Del.	84	94	1,445	1,446	1	4	1	1	-	-
Md.	591	597	5,907	6,604	26	6	4	12	-	1
D.C.	360	388	1,610	1,640	9	5	-	-	U	U
Va.	388	358	8,764	7,851	9	4	20	18	15	19
W. Va.	35	31	1,162	1,060	1	3	3	7	-	3
N.C.	212	311	8,087	11,192	15	11	25	17	11	19
S.C.	340	409	5,757	4,768	-	-	2	6	2	6
Ga.	579	605	11,768	12,544	52	58	10	13	2	14
Fla.	2,321	2,505	16,578	16,001	35	26	9	18	6	15
E.S. CENTRAL	836	966	24,130	24,744	18	25	35	46	26	38
Ky.	181	113	4,374	4,008	2	1	12	17	13	14
Tenn.	249	381	7,278	7,180	3	6	16	16	12	18
Ala.	182	255	6,789	7,501	6	10	6	4	-	4
Miss.	224	217	5,689	6,055	7	8	1	9	1	2
W.S. CENTRAL	1,617	1,837	50,369	51,827	17	36	32	133	47	161
Ark.	89	101	3,654	3,160	2	1	2	32	-	29
La.	403	318	8,401	9,508	7	8	2	10	20	23
Okla.	90	161	5,234	4,336	6	4	11	9	12	7
Tex.	1,035	1,257	33,080	34,823	2	23	17	82	15	102
MOUNTAIN	636	724	17,233	20,194	55	37	81	116	48	85
Mont.	12	9	1,015	757	5	6	5	13	-	-
Idaho	14	13	862	931	6	3	12	13	-	10
Wyo.	1	6	378	390	1	5	3	7	1	6
Colo.	126	157	1,794	6,007	17	10	33	48	25	29
N. Mex.	50	85	2,741	2,505	11	1	7	3	4	4
Ariz.	258	224	7,318	6,401	2	2	11	23	9	20
Utah	53	62	726	1,283	11	8	6	7	8	13
Nev.	122	168	2,399	1,920	2	2	4	2	1	3
PACIFIC	2,169	2,711	59,364	59,859	111	135	97	169	66	129
Wash.	247	281	6,820	6,391	N	U	26	52	13	72
Oreg.	104	88	1,779	3,615	6	9	18	28	14	32
Calif.	1,787	2,253	48,970	46,861	103	126	50	79	37	17
Alaska	9	10	1,261	1,245	-	-	1	2	-	1
Hawaii	22	79	534	1,747	2	-	2	8	2	7
Guam	9	13	-	248	-	-	N	N	U	U
P.R.	535	516	3,406	U	-	-	-	5	U	U
V.I.	2	21	53	-	-	-	-	-	U	U
Amer. Samoa	-	-	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	60	U	-	U	-	U	U	U

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

* Individual cases can be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

† Chlamydia refers to genital infections caused by *C. trachomatis*. Totals reported to the Division of STD Prevention, NCHSTP.

§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update May 29, 2001.

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending June 30, 2001, and July 1, 2000 (26th Week)

Reporting Area	Gonorrhea		Hepatitis C; Non-A, Non-B		Legionellosis		Listeriosis	Lyme Disease	
	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2001	Cum. 2000
UNITED STATES	145,622	169,380	1,107	1,706	354	381	197	1,725	4,829
NEW ENGLAND	3,095	3,173	14	14	19	25	24	522	1,183
Maine	67	41	-	1	1	2	-	-	-
N.H.	74	52	-	-	5	2	-	60	36
Vt.	39	29	6	3	4	2	-	2	9
Mass.	1,581	1,266	8	7	4	11	13	52	459
R.I.	345	313	-	3	1	3	1	56	42
Conn.	989	1,472	-	-	4	5	10	352	637
MID. ATLANTIC	15,855	18,211	42	366	41	100	30	751	2,818
Upstate N.Y.	3,910	3,306	29	16	28	30	13	573	722
N.Y. City	6,051	5,767	-	-	4	15	5	1	104
N.J.	1,409	3,589	-	326	5	9	7	84	1,260
Pa.	4,485	5,549	13	24	4	46	5	93	732
E.N. CENTRAL	24,593	34,041	113	133	99	99	24	58	294
Ohio	3,893	8,993	7	3	53	37	6	38	17
Ind.	3,036	2,960	1	-	10	16	4	2	6
Ill.	7,563	10,265	10	15	-	10	-	-	20
Mich.	8,642	8,353	95	115	25	17	13	-	9
Wis.	1,459	3,470	-	-	11	19	1	18	242
W.N. CENTRAL	6,826	8,312	402	295	30	20	6	65	61
Minn.	993	1,579	2	5	6	1	-	39	24
Iowa	428	533	-	1	6	4	-	11	1
Mo.	3,434	4,032	395	283	10	11	3	11	22
N. Dak.	15	35	-	-	1	-	-	-	-
S. Dak.	132	131	-	-	2	1	-	-	-
Nebr.	542	692	1	2	4	1	1	1	2
Kans.	1,282	1,310	4	4	1	2	2	3	12
S. ATLANTIC	37,721	43,978	52	45	62	64	31	253	383
Del.	819	811	-	2	-	4	-	17	73
Md.	3,240	4,406	9	4	15	18	3	157	245
D.C.	1,413	1,143	-	2	2	-	-	7	1
Va.	4,603	4,954	-	1	7	9	5	53	40
W. Va.	300	330	6	9	N	N	4	1	8
N.C.	7,492	8,850	9	13	5	8	-	7	9
S.C.	4,140	4,611	4	1	1	2	2	2	2
Ga.	6,367	7,788	-	2	6	4	9	-	-
Fla.	9,347	11,085	24	11	26	19	8	9	5
E.S. CENTRAL	15,373	17,528	114	244	32	12	9	11	17
Ky.	1,677	1,677	3	17	7	5	3	2	4
Tenn.	4,755	5,563	34	58	15	4	3	6	10
Ala.	5,288	5,828	2	7	8	2	3	3	2
Miss.	3,653	4,460	75	162	2	1	-	-	1
W.S. CENTRAL	24,241	26,772	161	487	5	17	5	7	28
Ark.	2,237	1,630	3	3	-	-	1	-	-
La.	5,793	6,667	74	256	2	7	-	1	3
Okla.	2,371	1,869	3	4	3	1	1	-	-
Tex.	13,840	16,606	81	224	-	9	3	6	25
MOUNTAIN	5,121	5,230	139	37	28	17	21	5	2
Mont.	53	26	1	2	-	-	-	-	-
Idaho	38	48	1	3	1	3	1	2	-
Wyo.	31	30	102	2	1	-	1	1	1
Colo.	1,612	1,605	12	5	8	6	3	1	-
N. Mex.	429	534	10	10	1	1	5	-	-
Ariz.	2,028	2,159	9	11	11	2	5	-	-
Utah	62	129	1	-	4	5	1	-	-
Nev.	868	699	3	4	2	-	5	1	1
PACIFIC	12,797	12,135	70	85	38	27	47	53	43
Wash.	1,462	1,112	16	12	6	10	3	2	-
Oreg.	253	465	8	16	N	N	1	3	3
Calif.	10,780	10,163	46	55	31	17	42	48	39
Alaska	167	168	-	-	-	-	-	-	1
Hawaii	135	227	-	2	1	-	1	N	N
Guam	-	26	-	1	-	-	-	-	-
P.R.	521	269	1	1	2	-	-	N	N
V.I.	6	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	-	U	U
C.N.M.I.	4	U	-	U	-	U	-	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending June 30, 2001, and July 1, 2000 (26th Week)

Reporting Area	Malaria		Rabies, Animal		Salmonellosis*			
					NETSS		PHLIS	
	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000
UNITED STATES	441	577	2,854	3,261	12,845	15,252	10,407	13,596
NEW ENGLAND	31	23	306	355	1,051	932	942	973
Maine	3	4	36	71	101	62	78	61
N.H.	2	1	7	4	90	60	91	64
Vt.	-	2	37	33	35	56	37	56
Mass.	9	10	102	113	574	552	460	542
R.I.	3	4	28	16	56	40	74	63
Conn.	14	2	96	118	195	162	202	187
MID. ATLANTIC	81	129	422	567	1,353	2,256	1,676	2,322
Upstate N.Y.	21	27	328	341	467	512	479	589
N.Y. City	40	66	11	5	429	582	558	611
N.J.	14	19	76	75	295	567	218	440
Pa.	6	17	7	146	162	595	421	682
E.N. CENTRAL	47	71	36	40	1,831	2,187	1,428	1,341
Ohio	10	11	14	9	619	525	483	490
Ind.	11	3	1	-	194	250	168	264
Ill.	1	36	4	3	423	700	302	1
Mich.	17	15	11	20	345	409	313	427
Wis.	8	6	6	8	250	303	162	159
W.N. CENTRAL	17	25	168	297	796	984	845	1,126
Minn.	6	7	18	48	211	221	306	300
Iowa	1	1	39	41	137	130	95	144
Mo.	6	6	14	15	217	317	287	385
N. Dak.	-	2	24	74	14	27	25	40
S. Dak.	-	-	21	59	55	35	50	46
Nebr.	2	3	1	-	55	93	-	74
Kans.	2	6	51	60	107	161	82	137
S. ATLANTIC	122	127	1,019	1,138	3,031	2,596	1,809	2,266
Del.	1	3	18	20	35	44	36	59
Md.	48	43	115	222	329	337	328	328
D.C.	9	8	-	-	33	29	U	U
Va.	26	26	218	293	503	347	400	386
W. Va.	1	1	65	61	49	65	55	67
N.C.	2	11	296	293	461	356	272	373
S.C.	4	1	68	63	331	250	291	198
Ga.	8	4	135	123	463	430	351	648
Fla.	23	30	104	63	827	738	76	207
E.S. CENTRAL	11	19	105	93	766	759	487	606
Ky.	2	5	11	14	142	161	90	114
Tenn.	6	5	71	48	223	179	239	263
Ala.	3	8	23	31	242	201	109	193
Miss.	-	1	-	-	159	218	49	36
W.S. CENTRAL	6	35	502	494	1,117	1,832	979	1,091
Ark.	3	1	19	-	213	190	92	139
La.	1	4	-	1	249	305	274	228
Okla.	1	4	41	35	109	143	102	119
Tex.	1	26	442	458	546	1,194	511	605
MOUNTAIN	26	22	115	123	905	1,189	666	1,131
Mont.	2	1	18	34	37	58	-	-
Idaho	3	1	2	1	57	68	4	60
Wyo.	-	-	17	33	30	32	22	27
Colo.	12	11	-	-	248	364	225	352
N. Mex.	1	-	4	10	114	107	88	106
Ariz.	3	2	72	42	260	270	216	290
Utah	3	3	1	2	97	167	88	181
Nev.	2	4	1	1	62	123	23	115
PACIFIC	100	126	181	154	1,995	2,517	1,575	2,740
Wash.	4	11	-	-	209	206	205	294
Oreg.	5	22	-	2	90	159	142	200
Calif.	87	86	148	129	1,604	2,033	1,068	2,131
Alaska	1	-	33	23	21	25	2	22
Hawaii	3	7	-	-	71	94	158	93
Guam	-	-	-	-	-	14	U	U
P.R.	3	4	70	36	278	260	U	U
V.I.	-	-	-	-	-	-	U	U
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	5	U	U	U

N: Not notifiable. U: Unavailable. -: No reported cases.

* Individual cases can be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending June 30, 2001, and July 1, 2000 (26th Week)

Reporting Area	Shigellosis* NETSS Cum. 2001	Shigellosis* NETSS Cum. 2000	Shigellosis* PHLIS Cum. 2001	Shigellosis* PHLIS Cum. 2000	Syphilis (Primary & Secondary) Cum. 2001	Syphilis (Primary & Secondary) Cum. 2000	Tuberculosis Cum. 2001	Tuberculosis Cum. 2000
UNITED STATES	6,329	9,691	3,103	5,395	2,680	3,088	5,323	6,822
NEW ENGLAND	103	173	100	156	25	44	203	199
Maine	4	5	1	-	-	1	5	8
N.H.	2	3	2	6	1	1	11	5
Vt.	3	1	2	-	2	-	2	3
Mass.	67	123	63	109	14	30	110	116
R.I.	8	12	12	14	3	3	21	22
Conn.	19	29	20	27	5	9	54	45
MID. ATLANTIC	569	1,385	419	878	226	152	1,094	1,112
Upstate N.Y.	303	405	64	150	15	6	145	132
N.Y. City	174	622	223	413	127	64	583	593
N.J.	40	232	67	198	46	33	237	266
Pa.	52	126	65	117	38	49	129	121
E.N. CENTRAL	1,023	2,033	490	603	456	643	583	645
Ohio	486	139	233	105	44	36	92	142
Ind.	119	738	20	83	92	211	45	65
Ill.	186	567	117	2	109	229	305	291
Mich.	149	414	107	380	201	136	109	101
Wis.	83	175	13	33	10	31	32	46
W.N. CENTRAL	685	923	493	756	32	40	204	250
Minn.	217	245	252	266	16	4	106	80
Iowa	172	213	84	177	1	10	18	23
Mo.	127	350	88	247	7	21	52	92
N. Dak.	13	4	4	4	-	-	3	2
S. Dak.	83	2	48	1	-	-	6	9
Nebr.	32	32	-	22	-	2	19	11
Kans.	41	77	17	39	8	3	-	33
S. ATLANTIC	998	1,109	275	444	995	1,015	1,113	1,419
Del.	4	8	4	9	6	5	9	3
Md.	52	58	28	23	115	149	93	125
D.C.	23	15	U	U	21	21	15	7
Va.	93	157	38	170	63	69	114	136
W. Va.	5	3	6	3	-	2	14	18
N.C.	190	60	78	33	233	290	178	184
S.C.	126	63	48	52	135	109	117	146
Ga.	114	120	57	94	141	184	209	297
Fla.	391	625	16	60	281	186	364	503
E.S. CENTRAL	649	470	272	295	295	461	354	464
Ky.	259	136	134	47	23	51	60	57
Tenn.	48	205	48	223	166	283	116	176
Ala.	126	28	78	22	52	60	130	150
Miss.	216	101	12	3	54	67	48	81
W.S. CENTRAL	965	1,604	673	474	340	407	521	1,019
Ark.	336	100	155	33	21	48	67	100
La.	107	151	98	86	66	98	-	71
Okla.	19	59	8	20	34	66	67	67
Tex.	503	1,294	412	335	219	195	387	781
MOUNTAIN	379	427	227	286	120	112	181	246
Mont.	-	4	-	-	-	-	-	6
Idaho	17	29	-	21	-	1	4	4
Wyo.	-	2	-	2	-	1	1	1
Colo.	71	79	62	38	23	5	53	36
N. Mex.	55	44	35	26	9	9	11	28
Ariz.	183	161	99	109	78	91	68	96
Utah	24	34	23	37	6	1	9	22
Nev.	29	74	8	53	4	4	35	53
PACIFIC	958	1,567	154	1,503	191	214	1,070	1,468
Wash.	83	316	76	280	31	35	104	128
Oreg.	31	96	51	60	4	8	47	42
Calif.	828	1,127	-	1,142	154	170	877	1,168
Alaska	3	6	1	3	-	-	21	61
Hawaii	13	22	26	18	2	1	21	69
Guam	-	20	U	U	-	2	-	30
P.R.	6	16	U	U	134	90	51	70
V.I.	-	-	U	U	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	4	U	U	U	-	U	19	U

N: Not notifiable. U: Unavailable. -: No reported cases.

*Individual cases can be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending June 30, 2001, and July 1, 2000 (26th Week)

Reporting Area	*H. influenzae*, Invasive		Hepatitis (Viral), By Type				Measles (Rubeola)					
			A		B		Indigenous		Imported*		Total	
	Cum. 2001†	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	2001	Cum. 2001	2001	Cum. 2001	Cum. 2001	Cum. 2000
UNITED STATES	702	704	4,492	6,352	3,023	3,458	-	42	-	25	67	50
NEW ENGLAND	38	57	214	166	45	54	-	4	-	1	5	3
Maine	1	1	5	9	5	5	-	-	-	-	-	-
N.H.	-	9	7	16	11	10	-	-	-	-	-	-
Vt.	1	4	6	4	2	5	-	1	-	-	1	3
Mass.	28	29	63	64	3	4	-	2	-	1	3	-
R.I.	2	1	8	7	12	9	-	-	-	-	-	-
Conn.	6	13	125	66	12	21	-	1	-	-	1	-
MID. ATLANTIC	87	131	396	657	437	587	-	2	-	5	7	15
Upstate N.Y.	40	49	129	110	73	62	-	1	-	4	5	4
N.Y. City	24	37	168	252	257	275	-	-	-	-	-	10
N.J.	21	26	70	112	64	99	U	-	U	1	1	-
Pa.	2	19	29	183	43	151	-	1	-	-	1	1
E.N. CENTRAL	90	105	507	821	372	376	-	-	-	10	10	6
Ohio	46	33	126	141	59	63	-	-	-	3	3	2
Ind.	22	11	44	27	21	26	-	-	-	4	4	-
Ill.	10	39	141	350	51	59	-	-	-	3	3	3
Mich.	6	7	161	256	241	211	-	-	-	-	-	1
Wis.	6	15	35	47	-	17	-	-	-	-	-	-
W.N. CENTRAL	34	33	200	448	108	151	-	4	-	-	4	1
Minn.	18	16	14	123	13	19	-	2	-	-	2	1
Iowa	-	-	18	44	13	15	-	-	-	-	-	-
Mo.	10	10	56	196	56	77	-	2	-	-	2	-
N. Dak.	4	2	2	2	-	2	U	-	U	-	-	-
S. Dak.	-	-	1	-	1	-	-	-	-	-	-	-
Nebr.	1	3	25	19	12	24	-	-	-	-	-	-
Kans.	1	2	84	64	13	14	-	-	-	-	-	-
S. ATLANTIC	222	162	959	632	655	582	-	3	-	1	4	-
Del.	-	-	-	10	-	8	-	-	-	-	-	-
Md.	50	44	126	76	72	68	-	2	-	1	3	-
D.C.	-	-	21	11	8	16	U	-	U	-	-	-
Va.	17	28	67	71	76	74	-	-	-	-	-	-
W. Va.	6	4	6	44	14	6	-	-	-	-	-	-
N.C.	29	15	64	90	109	137	-	-	-	-	-	-
S.C.	5	5	30	28	13	5	-	-	-	-	-	-
Ga.	58	45	381	92	172	97	-	1	-	-	1	-
Fla.	57	21	264	210	191	171	-	-	-	-	-	-
E.S. CENTRAL	56	31	162	239	207	244	-	2	-	-	2	-
Ky.	2	11	27	29	17	50	-	2	-	-	2	-
Tenn.	28	13	73	89	108	109	-	-	-	-	-	-
Ala.	25	5	54	30	43	25	-	-	-	-	-	-
Miss.	1	2	8	91	39	60	U	-	U	-	-	-
W.S. CENTRAL	27	40	594	1,153	344	526	-	1	-	-	1	-
Ark.	-	-	33	89	53	58	-	-	-	-	-	-
La.	3	12	46	44	27	80	-	-	-	-	-	-
Okla.	24	26	82	144	52	67	-	-	-	-	-	-
Tex.	-	2	433	876	212	321	-	1	-	-	1	-
MOUNTAIN	96	74	412	437	279	252	-	-	-	1	1	12
Mont.	-	-	6	2	2	3	-	-	-	-	-	-
Idaho	1	3	36	17	6	4	-	-	-	1	1	-
Wyo.	4	1	16	4	16	-	-	-	-	-	-	-
Colo.	23	14	35	98	56	45	-	-	-	-	-	2
N. Mex.	13	16	14	40	72	77	-	-	-	-	-	-
Ariz.	42	31	229	210	92	86	-	-	-	-	-	-
Utah	6	6	37	31	14	14	U	-	U	-	-	3
Nev.	7	3	39	35	21	23	U	-	U	-	-	7
PACIFIC	52	71	1,048	1,799	576	686	-	26	-	7	33	13
Wash.	1	3	52	146	59	41	-	13	-	2	15	3
Oreg.	15	21	40	117	29	52	-	3	-	-	3	-
Calif.	32	27	944	1,515	482	581	-	8	-	4	12	7
Alaska	3	2	12	10	4	5	U	-	U	-	-	1
Hawaii	1	18	-	11	2	7	U	2	U	1	3	2
Guam	-	1	-	1	-	9	U	-	U	-	-	-
P.R.	1	3	57	164	95	136	U	-	U	-	-	2
V.I.	-	-	-	-	-	-	U	-	U	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	19	U	-	-	-	-	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
*For imported measles, cases include only those resulting from importation from other countries.
† Of 148 cases among children aged <5 years, serotype was reported for 66, and of those, 10 were type b.

TABLE III. (Cont'd) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending June 30, 2001, and July 1, 2000 (26th Week)

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000
UNITED STATES	1,291	1,301	2	85	194	42	2,129	2,789	2	13	76
NEW ENGLAND	77	77	-	-	3	-	235	766	-	-	11
Maine	1	6	-	-	-	-	-	14	-	-	-
N.H.	10	9	-	-	-	-	21	62	-	-	2
Vt.	4	2	-	-	-	-	22	149	-	-	-
Mass.	43	44	-	-	1	-	176	503	-	-	8
R.I.	2	5	-	-	1	-	2	9	-	-	-
Conn.	17	11	-	-	1	-	14	29	-	-	1
MID. ATLANTIC	105	143	-	5	12	-	140	237	-	4	8
Upstate N.Y.	42	38	-	1	5	-	100	124	-	1	1
N.Y. City	26	29	-	4	4	-	23	39	-	2	7
N.J.	29	26	U	-	-	U	8	-	U	1	-
Pa.	8	50	-	-	3	-	9	74	-	-	-
E.N. CENTRAL	160	226	1	11	17	12	254	309	-	3	1
Ohio	57	48	-	1	7	11	157	165	-	-	-
Ind.	26	25	-	1	-	-	20	27	-	1	-
Ill.	20	60	1	8	5	-	28	23	-	2	1
Mich.	29	71	-	1	4	1	25	35	-	-	-
Wis.	28	22	-	-	1	-	24	59	-	-	-
W.N. CENTRAL	95	86	-	5	10	-	109	139	-	2	1
Minn.	14	7	-	2	-	-	31	65	-	-	-
Iowa	20	19	-	-	5	-	15	22	-	1	-
Mo.	35	44	-	-	2	-	45	25	-	-	-
N. Dak.	5	2	U	-	-	U	-	1	U	-	-
S. Dak.	4	5	-	-	-	-	3	3	-	-	-
Nebr.	8	4	-	1	1	-	2	3	-	-	1
Kans.	9	5	-	2	2	-	13	20	-	1	-
S. ATLANTIC	236	180	-	17	28	6	113	195	2	3	31
Del.	1	-	-	-	-	-	-	4	-	-	-
Md.	29	19	-	4	6	2	17	48	-	-	-
D.C.	-	-	U	-	-	U	1	1	U	-	-
Va.	25	29	-	2	5	-	12	21	-	-	-
W. Va.	6	8	-	-	-	-	1	-	-	-	-
N.C.	50	29	-	1	3	1	40	49	-	-	23
S.C.	24	15	-	1	9	3	22	19	2	2	6
Ga.	34	32	-	7	2	-	6	20	-	-	-
Fla.	67	48	-	2	3	-	14	33	-	1	2
E.S. CENTRAL	89	92	-	2	4	3	45	57	-	-	4
Ky.	14	19	-	1	-	1	11	30	-	-	1
Tenn.	38	38	-	-	2	-	18	14	-	-	-
Ala.	29	26	-	-	2	2	13	10	-	-	3
Miss.	8	9	U	1	-	U	3	3	U	-	-
W.S. CENTRAL	160	143	-	7	22	9	145	129	-	-	6
Ark.	10	7	-	1	1	3	7	13	-	-	1
La.	52	34	-	2	4	-	2	7	-	-	1
Okla.	18	21	-	-	-	-	1	9	-	-	-
Tex.	80	81	-	4	17	6	135	100	-	-	4
MOUNTAIN	71	60	-	7	13	9	875	376	-	-	2
Mont.	2	1	-	-	1	1	9	8	-	-	-
Idaho	7	6	-	-	-	1	164	41	-	-	-
Wyo.	5	-	-	1	1	-	1	1	-	-	-
Colo.	25	20	-	1	-	1	152	211	-	-	1
N. Mex.	10	6	-	2	1	1	58	65	-	-	-
Ariz.	11	18	-	1	3	5	460	34	-	-	1
Utah	7	6	U	1	4	U	22	10	U	-	-
Nev.	4	3	U	1	3	U	9	6	U	-	-
PACIFIC	298	294	1	31	85	3	213	581	-	1	12
Wash.	44	30	-	1	2	3	69	189	-	-	7
Oreg.	20	34	N	N	N	-	19	54	-	-	-
Calif.	230	217	1	24	66	-	120	303	-	-	5
Alaska	2	5	U	1	7	U	1	11	U	-	-
Hawaii	2	8	U	5	10	U	4	24	U	1	-
Guam	-	-	U	-	9	U	-	3	U	-	1
P.R.	3	7	U	-	-	U	2	4	U	-	-
V.I.	-	-	U	-	-	U	-	-	U	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	-	U	-	-	U	-	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.

TABLE IV. Deaths in 122 U.S. cities,* week ending June 30, 2001 (26th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	434	306	75	33	9	11	46
Boston, Mass.	125	89	19	11	1	5	18
Bridgeport, Conn.	32	21	7	3	1	-	-
Cambridge, Mass.	13	9	2	1	1	-	-
Fall River, Mass.	22	19	3	-	-	-	2
Hartford, Conn.	26	14	5	6	-	1	2
Lowell, Mass.	25	18	6	1	-	-	3
Lynn, Mass.	12	6	5	1	-	-	-
New Bedford, Mass.	20	15	3	2	-	-	3
New Haven, Conn.	32	20	8	3	1	-	1
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	6	2	2	1	1	-	-
Springfield, Mass.	38	29	3	1	3	2	2
Waterbury, Conn.	22	17	3	1	1	-	4
Worcester, Mass.	61	47	9	2	-	3	11
MID. ATLANTIC	2,235	1,568	447	146	39	32	98
Albany, N.Y.	34	23	9	2	-	-	5
Allentown, Pa.	16	14	2	-	-	-	-
Buffalo, N.Y.	80	58	18	1	3	-	9
Camden, N.J.	32	20	7	3	1	1	-
Elizabeth, N.J.	15	12	3	-	-	-	-
Erie, Pa.§	48	28	15	3	-	2	4
Jersey City, N.J.	42	26	12	3	1	-	-
New York City, N.Y.	1,168	815	233	87	17	13	42
Newark, N.J.	U	U	U	U	U	U	U
Paterson, N.J.	25	11	9	5	-	-	-
Philadelphia, Pa.	433	294	87	31	10	11	19
Pittsburgh, Pa.§	43	34	6	1	2	-	3
Reading, Pa.	30	18	8	2	1	1	2
Rochester, N.Y.	134	107	17	5	2	3	7
Schenectady, N.Y.	19	17	1	-	-	1	-
Scranton, Pa.§	27	25	2	-	-	-	2
Syracuse, N.Y.	55	41	10	2	2	-	5
Trenton, N.J.	22	14	7	1	-	-	-
Utica, N.Y.	12	11	1	-	-	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	1,792	1,216	360	133	45	38	139
Akron, Ohio	58	43	9	2	1	3	4
Canton, Ohio	36	34	1	1	-	-	4
Chicago, Ill.	U	U	U	U	U	U	U
Cincinnati, Ohio	97	61	27	7	-	2	5
Cleveland, Ohio	162	101	27	15	9	10	18
Columbus, Ohio	262	183	54	15	8	2	18
Dayton, Ohio	140	98	28	10	1	3	13
Detroit, Mich.	222	118	70	24	9	1	18
Evansville, Ind.	59	49	6	4	-	-	5
Fort Wayne, Ind.	61	45	11	5	-	-	2
Gary, Ind.	17	6	6	2	1	2	-
Grand Rapids, Mich.	43	26	11	5	1	-	7
Indianapolis, Ind.	174	121	29	13	6	5	8
Lansing, Mich.	33	19	6	5	-	3	1
Milwaukee, Wis.	109	80	19	7	2	1	7
Peoria, Ill.	47	31	11	2	3	-	9
Rockford, Ill.	60	40	13	6	-	1	3
South Bend, Ind.	43	31	5	2	3	2	2
Toledo, Ohio	118	89	21	5	1	2	15
Youngstown, Ohio	51	41	6	3	-	1	-
W.N. CENTRAL	846	600	153	53	23	16	55
Des Moines, Iowa	79	61	12	5	1	-	8
Duluth, Minn.	31	23	6	1	1	-	3
Kansas City, Kans.	33	26	6	1	-	-	3
Kansas City, Mo.	98	61	26	4	3	3	8
Lincoln, Nebr.	37	29	4	1	1	2	1
Minneapolis, Minn.	156	121	21	9	1	4	13
Omaha, Nebr.	81	53	16	8	2	2	4
St. Louis, Mo.	120	73	30	8	8	1	-
St. Paul, Minn.	88	63	15	6	2	2	6
Wichita, Kans.	123	90	17	10	4	2	9
S. ATLANTIC	1,300	816	277	123	46	38	64
Atlanta, Ga.	182	97	52	21	6	6	6
Baltimore, Md.	152	83	41	22	3	3	12
Charlotte, N.C.	98	70	16	7	4	1	8
Jacksonville, Fla.	122	76	25	12	4	5	11
Miami, Fla.	96	59	23	6	4	4	5
Norfolk, Va.	67	38	14	5	5	5	-
Richmond, Va.	57	38	11	6	2	-	7
Savannah, Ga.	75	50	13	4	5	3	3
St. Petersburg, Fla.	64	50	9	2	3	-	3
Tampa, Fla.	176	120	29	13	6	8	7
Washington, D.C.	199	123	44	25	4	3	2
Wilmington, Del.	12	12	-	-	-	-	-
E.S. CENTRAL	989	648	210	79	29	23	59
Birmingham, Ala.	212	122	56	17	7	10	14
Chattanooga, Tenn.	80	61	12	1	2	4	8
Knoxville, Tenn.	119	81	27	8	2	1	6
Lexington, Ky.	75	52	11	7	4	1	4
Memphis, Tenn.	206	142	39	17	2	6	11
Mobile, Ala.	92	60	16	11	4	1	6
Montgomery, Ala.	47	31	6	8	2	-	6
Nashville, Tenn.	158	99	43	10	6	-	4
W.S. CENTRAL	1,473	895	316	145	76	41	68
Austin, Tex.	108	66	22	12	5	3	5
Baton Rouge, La.	78	55	17	5	-	1	2
Corpus Christi, Tex.	53	35	10	4	2	2	4
Dallas, Tex.	210	126	42	22	15	5	11
El Paso, Tex.	77	52	13	8	2	2	2
Ft. Worth, Tex.	126	72	29	12	6	7	8
Houston, Tex.	343	183	72	42	34	12	15
Little Rock, Ark.	49	28	13	4	2	2	1
New Orleans, La.	62	28	19	9	6	-	1
San Antonio, Tex.	194	126	42	17	3	6	6
Shreveport, La.	36	22	9	5	-	-	3
Tulsa, Okla.	137	102	28	5	1	1	10
MOUNTAIN	1,063	705	237	70	25	24	78
Albuquerque, N.M.	119	80	26	11	-	2	7
Boise, Idaho	46	29	10	4	2	1	3
Colo. Springs, Colo.	52	38	11	1	2	-	3
Denver, Colo.	115	71	26	10	1	7	13
Las Vegas, Nev.	212	136	58	11	5	2	12
Ogden, Utah	32	27	4	-	1	-	5
Phoenix, Ariz.	161	98	35	16	4	6	9
Pueblo, Colo.	22	18	3	1	-	-	3
Salt Lake City, Utah	144	98	29	8	5	4	13
Tucson, Ariz.	160	110	35	8	5	2	10
PACIFIC	1,833	1,322	314	126	37	32	145
Berkeley, Calif.	12	9	2	1	-	-	1
Fresno, Calif.	166	112	33	18	2	1	8
Glendale, Calif.	23	18	3	2	-	-	5
Honolulu, Hawaii	72	55	12	4	-	1	6
Long Beach, Calif.	46	37	5	1	1	2	7
Los Angeles, Calif.	529	395	83	28	13	10	34
Pasadena, Calif.	28	21	6	1	-	-	4
Portland, Oreg.	163	117	29	11	2	4	11
Sacramento, Calif.	174	126	29	13	6	-	17
San Diego, Calif.	160	105	26	14	7	8	21
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	166	122	34	8	2	-	17
Santa Cruz, Calif.	36	27	6	3	-	-	3
Seattle, Wash.	128	80	27	15	2	4	1
Spokane, Wash.	53	41	8	1	1	2	8
Tacoma, Wash.	77	57	11	6	1	-	2
TOTAL	11,965¶	8,076	2,389	908	329	255	752

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. 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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