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Monitoring Hospital-Acquired Infections to Promote Patient Safety — United States, 1990–1999

Hospital-acquired infections are adverse patient events that affect approximately 2 million persons annually (*1*). National Nosocomial Infections Surveillance (NNIS) is a voluntary, hospital-based reporting system established to monitor hospital-acquired infections and to guide the prevention efforts of infection control practitioners (ICPs). The NNIS approach may be a model for future programs aimed at preventing other adverse patient events (*2*). This report describes the decrease in infection rates reported in NNIS hospitals during 1990–1999, presents the results of a survey of ICP responsibilities, and discusses the importance of NNIS for monitoring adverse patient events.

NNIS began in 1970 with 62 participating hospitals in 31 states. In 1999, 285 hospitals in 42 states participated in NNIS (*1*). All NNIS hospitals have ≥100 beds and tend to be larger than other U.S. hospitals (median size: 360 beds versus 210 beds); however, both NNIS and non-NNIS hospitals have a similar geographic distribution. The purposes of NNIS are to establish national risk-adjusted benchmarks for hospital-acquired infection rates and for device use ratios (*3*) by using uniform case definitions and data collection methods and computerized data entry and analysis. To promote the use of standardized data collection and analysis methods, ICPs receive 28 hours of training at CDC and are invited to attend a biennial conference.

Trends in Nosocomial Infection Rates

Patients in intensive care units (ICUs) are at high risk for nosocomial infections. By ICU type, these patients have been monitored using site-specific, risk-adjusted infection rates (*4,5*). During 1990–1999, risk-adjusted infection rates decreased for all three body sites (i.e., respiratory tract, urinary tract, and bloodstream) monitored in ICUs (Figure 1) (*6*). Bloodstream infection rates decreased substantially in medical (nonsurgical) ICUs (44%), coronary ICUs (43%), pediatric ICUs (32%), and surgical ICUs (31%). NNIS uses data from 1997 to 1999 as its benchmark (Table 1). Device use ratios, the proportion of days spent in the ICU in which the patient's treatment included invasive devices, also were calculated. Urinary catheter-associated urinary tract infection (UTI) rates were highest in medical (nonsurgical) ICUs (6.5 UTIs per 1000 days a catheter was used) and lowest in pediatric ICUs (5.6 UTIs per 1000 days a catheter was used). Central line-associated bloodstream infection (BSI) rates were highest in pediatric ICUs (7.7 BSIs per 1000 days a central line was used) and lowest in coronary ICUs (4.3 BSIs per 1000 days a central line

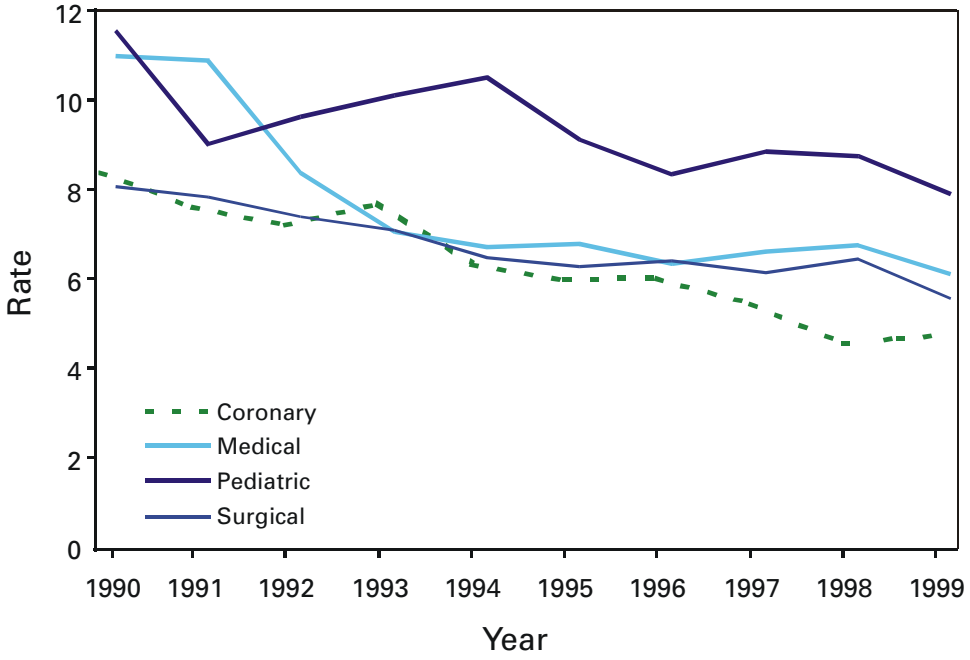
Hospital-Acquired Infections — Continued

was used). Ventilator-associated pneumonia (VAP) rates were highest in surgical ICUs (13.0 cases of pneumonia per 1000 days a ventilator was used) and were lowest in pediatric ICUs (5.0 cases of pneumonia per 1000 days a ventilator was used). The percentiles (Table 1) represent a measure of the variations in device-associated rates in NNIS ICUs. For example, the 25th percentile for VAP rates in the medical (nonsurgical) ICU was 4.1, (i.e., 25% of reporting medical [nonsurgical] ICUs had a VAP rate of ≥4.1). Device use ratios ranged from 0.22 for ventilators in coronary ICUs to 0.85 for urinary catheters in surgical ICUs.

Survey of Infection Control Practitioners

ICPs are usually registered nurses but also may be microbiologists, epidemiologists, or medical technologists. ICPs collect and interpret data, identify problems, and implement interventions to prevent infections and improve patient safety; hospitals should have at least one full-time ICP for every 250 occupied hospital beds (*1,7,8*). In 1999, participating NNIS hospitals were surveyed using a mailed questionnaire to determine the number of ICPs in each hospital and the spectrum of ICP activities. Of 285 NNIS hospitals surveyed, 225 (79%) reported data on ICPs in their facilities; 221 (96%) respondents reported a ratio of at least one ICP to 250 occupied hospital beds (median: one ICP per 115 beds; range: one ICP per 21 beds–one ICP per 382 beds). Although 68% of ICP work hours were devoted to inpatient infection-control activities, including surveillance, ICPs reported other responsibilities, such as noninfection-related quality improvement (6%), occupational health (4%), and administration or clinical duties (12%).

FIGURE 1. Trends in bloodstream infection rates*, by intensive care unit type and year — National Nosocomial Infection Surveillance System, United States, 1990–1999



*Per 1000 days a central line was used.

TABLE 1. Device-associated infection rates, by type of device and type of intensive care unit (ICU) — National Nosocomial Infection Surveillance system, United States, 1997–1999

ICU/Type of infection	No. units	Total no. of days patient in ICU	Device days*	DU†	Device-associated infection rates					
						Percentiles				
					Mean	10th	25th	50th	75th	90th
Coronary		898,305								
Catheter-associated urinary tract infection§	112		413,686	0.46	6.5	1.0	3.1	5.5	9.8	13.4
Central line-associated bloodstream infection¶	112		257,793	0.29	4.8	0.0	1.7	4.0	6.3	8.6
Ventilator-associated pneumonia **	108		174,688	0.19	9.2	0.3	3.9	7.1	12.2	16.4
Medical (nonsurgical)		1,276,794								
Catheter-associated urinary tract infection	135		914,016	0.72	7.3	1.9	3.6	6.4	8.8	11.6
Central line-associated bloodstream infection	136		651,238	0.51	6.1	1.6	3.6	5.3	7.1	9.9
Ventilator-associated pneumonia	133		619,173	0.48	7.8	1.9	4.1	6.8	9.9	14.8
Pediatric		658,404								
Catheter-associated urinary tract infection	70		212,765	0.32	5.1	0.0	2.0	4.8	7.0	9.8
Central line-associated bloodstream infection	73		297,494	0.45	7.9	1.0	4.1	6.9	9.3	12.6
Ventilator-associated pneumonia	73		304,255	0.46	5.4	0.0	1.2	4.0	7.6	10.9
Surgical		1,451,793								
Catheter-associated urinary tract infection	157		1,215,152	0.84	5.5	1.2	3.3	4.6	7.6	9.4
Central line-associated bloodstream infection	157		974,157	0.67	5.6	1.3	2.6	5.1	7.0	9.2
Ventilator-associated pneumonia	157		678,520	0.47	14.4	5.5	8.4	12.5	16.0	24.0

*Number of days a urinary catheter, central line, or ventilator was used by all patients.

†Device utilization ratio (device days divided by total number of days patient was in ICU).

§Number of urinary catheter-associated urinary tract infections divided by number of days a urinary catheter was used multiplied by 1000.

¶Number of central line-associated bloodstream infections divided by number of days a central line was used multiplied by 1000.

**Number of ventilator-associated cases of pneumonia divided by number of days a mechanical ventilator was used multiplied by 1000.

Hospital-Acquired Infections — Continued

Reported by: Nosocomial Infections Surveillance Activity, Hospital Infections Program, National Center for Infectious Diseases; and an EIS Officer, CDC.

Editorial Note: The Institute of Medicine reports that preventable adverse patient events, including hospital-acquired infections, are responsible for 44,000–98,000 deaths annually at a cost of $17–$29 billion (*2*). In 1990, one of the national health objectives for 2000 was to reduce by at least 10% the incidence of surgical wound infections and nosocomial infections in ICU patients in U.S. hospitals (objective 20.5). NNIS data indicate that almost all goals have been achieved or surpassed (*6*).

This report demonstrates the value of NNIS as a model to prevent hospital-acquired infections. The elements of NNIS critical for rate reduction included 1) voluntary participation and confidentiality for NNIS hospitals; 2) standard definitions and protocols; 3) targeted, high-risk populations (e.g., intensive care and surgical patients); 4) site-specific, risk-adjusted infection rates comparable across institutions; 5) adequate numbers of trained ICPs; 6) data dissemination to health-care providers; and 7) links between monitored rates and prevention efforts (*3,8,9*).

The findings in this report are subject to at least three limitations. First, the improvements in NNIS hospitals may reflect other national efforts to prevent infections (e.g., new research findings and prevention guidelines). Second, some rate reductions may be attributable to the shift in the U.S. health-care system from hospital-based care to nonhospital settings. Third, most events reported to CDC are obtained from patient record review. More efficient methods that use electronic information could save substantial time, and financial and personnel resources; however, these methods have not been validated for most infections and other adverse health events (*10*).

Although reductions in hospital-acquired infections were substantial, the wide range of infection-rate percentiles suggests that a better understanding of this variability is needed. Also, NNIS has not conducted surveillence in nonhospital settings. Efforts are needed in these locations to determine the extent of health-care–related infection rates and where to target prevention efforts. The key to NNIS is having ICPs who use monitoring data to implement prevention activities. Any new system for preventing adverse health events will need to develop professionals at the health-care facility to design and implement appropriate interventions.

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Corporate Action to Reduce Air Pollution — Atlanta, Georgia, 1998–1999

Ground-level ozone, a colorless gas, is a major constituent of smog. Since the early 1980s, controlled studies have demonstrated that exposure to elevated levels of ozone reduces inspiratory capacity in humans (*1*). In addition, ecologic analyses have indicated that daily emergency department visits for asthma exacerbations are elevated following days of high ozone pollution (*1–4*). The Partnership for a Smog-Free Georgia (PSG) is a state-sponsored program to reduce the number of days that ground-level ozone exceeds the national ambient air quality standard (NAAQS) in metropolitan Atlanta by providing federal and state subsidized commuting alternatives for local business employees. This report summarizes commuter data from three PSG partners to estimate reductions in emissions and monthly vehicle miles traveled that were associated with enrollment in PSG.

NAAQS for ground-level ozone is 0.12 parts per million during a 1-hour period. From May 1 through September 30, 1999, ambient ozone levels in Atlanta exceeded this standard on 24 days, maintaining the 13-county metropolitan-Atlanta region as an area of "serious" nonattainment of NAAQS. In December 1997, the Georgia governor's office issued an executive order requiring all state agencies to reduce single-occupancy vehicle commutes by at least 20% on days when NAAQS is expected to be exceeded. PSG was instituted during the summer of 1997 to help achieve this goal. Results of a study of three PSG partners were calculated using vehicle-miles–traveled formulas and emissions factors provided by the U.S. Environmental Protection Agency (*5*).

Georgia Department of Transportation. On May 1, 1998, the Georgia Department of Transportation introduced a comprehensive smog-reduction program to its 1900 employees (Table 1). Baseline rates of commuter behaviors were assessed in April 1998 by a departmentwide survey asking employees how they "usually" commuted to work during the preceding year. Commuting behaviors were then assessed as part of the daily log-in procedure at each employee's computer terminal. Before PSG program initiation on May 1, 91.4% of Georgia Department of Transportation employees reported that their "usual" method of commuting was in a single-occupancy vehicle. During this baseline period, employees commuted an estimated 1033 vehicle miles per month, volatile organic compound emissions were an estimated 393 pounds per 100 employees per month, and nitrogen oxide emissions were an estimated 351 pounds per 100 employees per month (*5*). During May–August 1999, the percentage of all daily commutes in a single-occupancy vehicle decreased to 73.6% (a relative decrease of 19%), and vehicle miles traveled and their associated emissions decreased 11%.

Air Pollution — Continued

TABLE 1. Alternative commuting options and incentives provided by Partnership for a Smog-Free Georgia partners — Atlanta, Georgia, 1999

Option	Georgia Department of Transportation	Georgia Board of Workers' Compensation	Georgia Power/ Southern Company
Carpool program/database	X	X	X
Vanpool program	X	X	X
Vans provided to employees			X
Teleworking scheduling options	X	X	X
Compressed workweek option	X	X	X
Guaranteed ride home program	X	X	X
Smog alert notification system	X	X	X
Shuttle to transit station			X
100% subsidized transit passes			X
Partially subsidized transit passes	X	X	
Company rideshare fairs/meetings	X	X	X
Electric cars for local commutes			X
Parking incentives for carpoolers			X
Shower facilities for bikers/walkers			X
Gift incentives for carpoolers	X	X	X

Georgia Board of Workers' Compensation. The Georgia Board of Workers' Compensation, which has 117 employees, became a PSG partner in May 1998 (Table 1). The agency conducted a baseline survey of their employees' "usual" commuting behaviors during March 1998. Beginning in May 1998, all employees completed a daily survey of commuting behavior. Most (62.1%) employees usually commuted using a single-occupancy vehicle before initiation of the PSG program. Before PSG implementation, Georgia Board of Workers' Compensation employees commuted an estimated 799 miles per employee per month, emitted 303 pounds of volatile organic compounds per 100 employees per month and 272 pounds of nitrogen oxides per 100 employees per month. During May–July 1999, the percentage of all commutes in a single-occupancy vehicle was 44.9% (a relative decrease of 28%). In addition, PSG program implementation was associated with a monthly decrease of 145 vehicle miles traveled per employee per month and an estimated 18% decrease in emissions.

Georgia Power/Southern Company. Georgia Power/Southern Company has been conducting a prospective monthly survey of employee commuter behaviors since April 1997. During the baseline period of March–April 1998, an average of 587 (20%) of 2885 employees participated in the alternative commuting program (Table 2). Following the repetition of seasonal promotional activities in April 1999, the average increased to 41.5% during May–July 1999 (a relative increase of 52%), and emissions were reduced 12%. To rule out any influence of seasonality on observed findings, participation rates for March–April 1999 were compared with those from March–April 1998. The employee participation rate increased 32%.

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Air Pollution — Continued

Editorial Note: The metropolitan-Atlanta area ranks first in the United States in annual vehicle miles traveled per household (*6*). Because 53% of all nitrogen oxide emissions comes from mobile sources of pollution (*7*), programs that successfully reduce vehicle miles traveled in Atlanta may substantially reduce ozone-producing emissions and ozone-related health effects. Data provided by the PSG partners in this report suggest that PSG program implementation occurred concurrently with an 18%–21% decrease in single-occupancy commute rates and an 11%–18% decrease in monthly commute miles traveled and associated emissions.

The lack of a standard evaluation method among the PSG partners was an important limitation to these analyses. Georgia Power/Southern Company conducted a prospective survey to establish a baseline of commuter behaviors, and the other PSG partners conducted a retrospective survey. In surveys, employees selected one commuting option that was their "usual" method of commute. In these cases, pre- and post-intervention rates are not directly comparable, since post-intervention data reflect the proportional contribution of alternative commuting days to all commute days. However, Georgia Power/Southern Company estimated vehicle-mile reductions for their employees that were similar to those estimated for the other PSG partners. Subsequent analyses of employee commuting behaviors will be facilitated by a standardized approach to evaluation and by standard metrics to calculate vehicle miles traveled by PSG partners.

These PSG partners may have achieved the 20% reduction in single-occupancy commute rates mandated by the Georgia governor's office; however, how similar success can be achieved in a larger percentage of Atlanta's workforce is unclear. PSG can be expanded to include a greater number of local businesses. However, half of all employees of the three PSG partners in this report are not participating in the alternative commuting programs, although the average distance from these PSG partners to the nearest mass transit station is <1 mile. Increases in alternative commute rates beyond those already achieved may be facilitated by programs that continue to make alternative commuting options viable and accessible to working populations.

Future interventions also need to target commuting behaviors other than those related to the daily commute to work. Atlanta residents drive approximately 100 million miles per day, but only 21% of all automobile trips occur between the home and the workplace (*8*). Industrial emissions and nonwork-related behaviors (e.g., noncommute driving, lawn-care practices, and gasoline and chemical solvent use) also contribute substantially to ground-level ozone and related health effects. Research is needed to evaluate whether employer-based programs like PSG also can reduce noncommute emissions among employee participants, their families, and co-workers. The integration of questions that incorporate day-to-day commuter behavior into state-based tracking surveys, such as the Behavioral Risk Factor Surveillance System, might provide an opportunity for this type of population-based program evaluation.

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Air Pollution — Continued

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Developing and Expanding Contributions of the Global Laboratory Network for Poliomyelitis Eradication, 1997–1999

In 1988, the World Health Assembly resolved to eradicate poliomyelitis globally by 2000 (*1*). Substantial progress toward achieving this goal has been reported from all countries where polio is endemic (*2,3*), and three regions of the World Health Organization (WHO) (American Region, European Region, and Western Pacific Region) appear to be free of indigenous wild poliovirus transmission (*4–6*). One key strategy for polio eradication is establishing sensitive surveillance systems for polio (through notification of acute flaccid paralysis [AFP] cases) and poliovirus (*7*). To ensure that specimens from AFP cases undergo appropriate processing for viral isolation, WHO has established a global laboratory network. This report describes the proficiency of the network and provides updates on structure, accreditation, performance, expanding activities, and future plans.

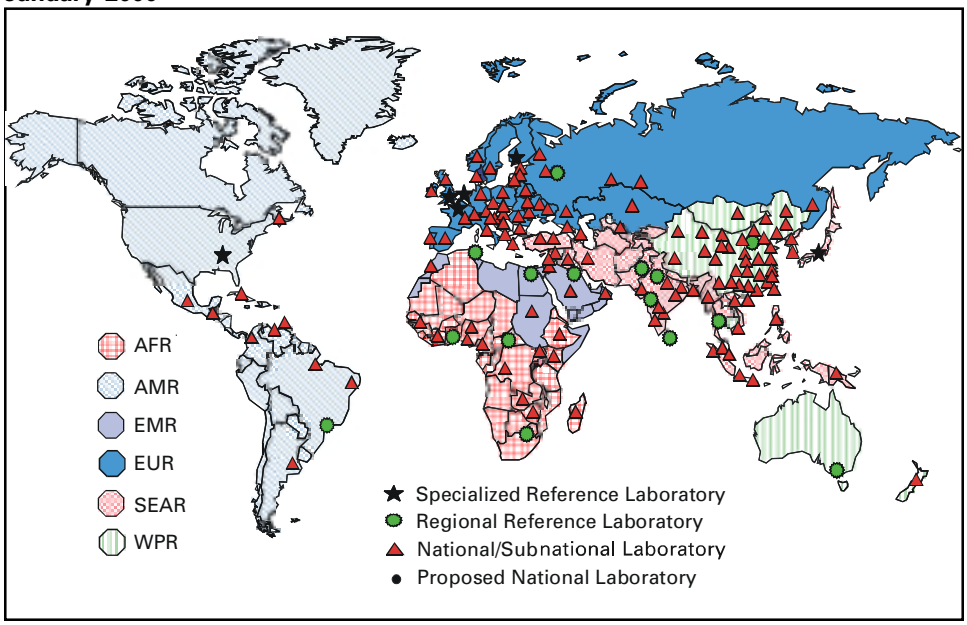
In December 1999, the network was operational in all six WHO regions encompassing 148 laboratories, including 126 national (or subnational) laboratories, 16 regional reference laboratories, and six global specialized laboratories (Figure 1). Standard guidelines, procedures, cell lines, and reagents have been established and implemented in laboratories at each level of the network. National and subnational laboratories perform primary poliovirus isolation and typing for poliovirus types 1, 2, or 3. Regional laboratories conduct intratypic differentiation of poliovirus isolates as wild or vaccine-derived, and specialized laboratories conduct genomic sequencing to determine the molecular relation of poliovirus genotypes and to determine whether the viruses are indigenous or imported. A global laboratory network coordinator and regional coordinators in each region ensure technical and financial support* and the provision of standard reagents and equipment, if necessary.

During 1998–1999, the network's major focus was implementing an annual accreditation process formulated in 1997 to ensure high-quality laboratory support to the polio eradication initiative. Six accreditation criteria were used initially: 1) timeliness (proportion of test results reported within 28 days after receipt of specimens); 2) workload (process >150 stool specimens per year); 3) nonpolio enterovirus (NPEV) isolation rate; 4) serotyping of poliovirus isolates confirmed by regional reference laboratories; 5) proficiency testing; and 6) on-site review of operating procedures and work practices.

*Financial support for the network is provided by WHO; United Nations Children's Fund (UNICEF); Rotary International; UN Foundation; Department for International Development (DFID), United Kingdom; Japan International Cooperation Agency (JICA); the governments of Canada, Finland, Netherlands, Italy, the Republic of Korea, and the United States (through CDC and the U.S. Agency for International Development [USAID]); and American Association for World Health.

Poliomyelitis Eradication — Continued

FIGURE 1. Global laboratory network for poliomyelitis eradication, by region* January 2000†



*AFR (African Region); AMR (Region of the Americas); EMR (Eastern Mediterranean Region); EUR (European Region); SEAR (South East Asia Region); and WPR (Western Pacific Region).

†Designations and the presentation of material on this map do not imply the expression of any opinion on the part of the secretariat of the World Health Organization concerning the legal status of any country, territory, city, area, or the legal status of its authorities, or the delimitation of frontiers or boundaries. Dotted lines represent approximate border lines for which full agreement may not yet have been reached.

Recognizing that the NPEV isolation rate is affected by latitude, altitude, hygiene, and climate, this accreditation criterion was removed, but documenting appropriate internal control activities for cell culture sensitivity was added to the list. As of December 1999, 108 laboratories (73%) were fully accredited, 16 (11%) were provisionally accredited, 14 (9%) have been reviewed and could not be accredited, and 10 (7%) were pending review. To ensure that all specimens from AFP cases are processed in accredited laboratories, including those from countries without a laboratory, specimens should be shipped and processed in parallel in accredited laboratories. Only the Democratic People's Republic of Korea has no accredited laboratory nor access to such a laboratory outside the country.

To improve coordination among the laboratories in the network and timeliness of reporting results, another major focus was to ensure that each laboratory has adequate communication, including local communication to the respective ministries of health, and international communication by telephone, fax, or e-mail to other network laboratories and to the regional offices and headquarters of WHO. In December 1999, 123 (83%) laboratories had international telephone or fax lines and/or access to e-mail, but 25 (17%) laboratories had inadequate communication facilities.

Poliomyelitis Eradication — Continued

During 1997–1999, the workload of the network more than doubled. The network processed approximately 50,000 specimens for viral isolation during 1999 (including 48,370 stool specimens from AFP cases only [Table 1]), isolated approximately 5000 polioviruses and approximately 10,000 NPEVs, carried out serotyping and intratypic differentiation on all poliovirus isolates, and provided genomic sequencing information on most wild poliovirus isolates. India and Nigeria illustrate the dramatic increase in laboratory workload (in India, from 5864 specimens in 1997 to 15,800 specimens in 1999, and in Nigeria, from 71 specimens in 1997 to 2534 specimens in 1999).

Reported by: Vaccines and Biologicals Dept, World Health Organization, Geneva, Switzerland. Respiratory and Enteric Viruses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Vaccine Preventable Disease Eradication Div, National Immunization Program, CDC.

Editorial Note: During 1997–1999, the global laboratory network for polio eradication improved substantially. During 1999, almost all stool specimens from AFP cases were processed in WHO-accredited laboratories. The network exchanges information, standardizes techniques, and develops strategies to improve the information provided to eradication efforts. The accreditation process particularly has been useful in ensuring the quality of the procedures performed by network laboratories. Through these reviews, laboratories improve their adoption of standard procedures, improve data management, and identify methods to improve performance.

The polio laboratory network continues to evolve as the demands of the program change. To enhance further the timeliness of laboratory results, and recognizing the increased level of proficiency of many national laboratories, intratypic differentiation as wild or vaccine-derived poliovirus also has been carried out in selected national laboratories. These national laboratories have been provided with appropriate training and laboratory equipment and additional accreditation requirements. Whether a poliovirus

TABLE 1. Structure of the global laboratory network for poliomyelitis eradication and network performance (stool specimens and poliovirus isolates from acute flaccid paralysis [AFP] cases), by World Health Organization (WHO) region, 1997 and 1999

WHO regions*	1997			1999		
	Stool specimens†	Poliovirus isolates		Stool specimens	Poliovirus isolates	
		No.	(Wild)		No.	(Wild)
AFR	402	52	(32)	6,857	969	(340)
AMR	1,386	20	(0)	1,296	19	(0)
EMR	3,607	397	(270)	6,465	1,156	(837)
EUR	1,003	58	(6)	3,713	825	(0)
SEAR	5,864	869	(536)	22,421	1,836	(1,067)
WPR	8,604	290	(9)	7,618	208	(2)
Total	**20,866**	**1,686**	**(853)**	**48,370**	**5,013**	**(2,246)**

*AFR (African Region); AMR (Region of the Americas); EMR (Eastern Mediterranean Region); EUR (European Region); SEAR (South East Asia Region); and WPR (Western Pacific Region).

† Total number of specimens processed in the network laboratory is considerably higher than the number of specimens for AFP cases only (perhaps 1.5–2 times higher) because many countries also process stool specimens from contacts to AFP cases or from non-AFP cases, including aseptic meningitis cases.

Poliomyelitis Eradication — Continued

isolate is wild has considerable implications in polio-free countries, and early institution of control measures is critical to prevent or minimize subsequent poliovirus transmission. Similarly, in countries where polio is endemic and poliovirus transmission is reduced increasingly to focal areas, early notification of wild virus can target resources to the most appropriate areas.

At the final stages of polio eradication, in addition to the timeliness of intratypic differentiation, the rapid availability of genomic sequencing data is another priority. Arrangements are being made by WHO to ensure that wild poliovirus isolates are shipped in a timely manner to specialized laboratories that have the capacity to sequence the isolates. Viral isolation, serotyping, intratypic differentiation, and genomic sequencing data have become increasingly relevant and important to guide programmatic action.

Despite the progress achieved in the network, additional efforts will be necessary to absorb the increasing workload anticipated once countries reached the minimum level of AFP performance (≥1 case of nonpolio AFP per 100,000 population aged <15 years). Nigeria has demonstrated that laboratories need to be prepared to process huge numbers of additional specimens when surveillance activities improve substantially. Laboratories in Bangladesh and Ethiopia, where polio is endemic, have not yet been accredited. Although specimens from these countries can be processed in accredited laboratories elsewhere, these large countries should obtain the virologic capacity to process stool specimens.

The priorities in the network for 2000 are to establish intratypic differentiation in selected national laboratories, to sequence all wild-type poliovirus isolates, to complete the accreditation process, to improve the timeliness of all virologic procedures, and to contain wild poliovirus, a process that requires substantial, ongoing attention (*8*). The polio network has become a model for planning laboratory networks for other infectious disease-control initiatives. A measles laboratory network, functioning in the Region of the Americas, has an elimination target date of December 2000. Efforts are being made to develop such a network in the other regions of WHO, especially in the European and Eastern Mediterranean regions, both of which have adopted regional measles elimination target dates. Many of the laboratories selected for the polio eradication network will participate in the measles efforts. Similar efforts will be extended to rubella and other priority diseases.

Progress achieved by the network has demonstrated that high-quality virology in support of public health activities can be made accessible to all areas of the world, including war-torn countries and countries without organized government or health infrastructure. Although further development of the network is needed, the global capacity to process stool specimens can compensate for any national or regional bottlenecks. The improving capacity and performance quality of the network and accelerated vaccination efforts will provide critical data when wild poliovirus transmission has been interrupted globally.

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8. Department of Vaccines and Biologicals. WHO global action plan for laboratory containment of wild polioviruses. Geneva, Switzerland: World Health Organization, 1999 (Reference WHO/V&B/99.32).

Notice to Readers

Publication of Atlas of Geographic and Racial and Ethnic Disparities in Women's Heart Disease Death Rates

CDC and West Virginia University have released *Women and Heart Disease: An Atlas of Racial and Ethnic Disparities in Mortality*, the first publication to show heart disease death rates among women aged ≥35 years, county-by-county, throughout the United States (*1*). The atlas includes more than 200 national and state maps showing geographic patterns in heart disease deaths for 1991 through 1995 for American Indian and Alaska Native women, Asian and Pacific Islander women, black women, Hispanic women, white women, and women of all races and ethnicities combined. The maps show the substantial disparities in heart disease between racial and ethnic groups and the marked disparities by geographic region for each racial and ethnic group. State and local health departments and their partners in communities can use the information in the atlas to target heart-health programs and policies to the women with the greatest need. The atlas is available on the World-Wide Web at http://www.cdc.gov/nccdphp/cvd/womensatlas.

Reference

1. Casper ML, Barnett E, Halverson JA, et al. Women and heart disease: an atlas of racial and ethnic disparities in mortality. Morgantown, West Virginia: West Virginia University, Office for Social Environment and Health Research, December 1999.

Notice to Readers

Public Health Journalism Fellowship Offered at CDC

A new public health journalism fellowship program at CDC funded by the Knight Foundation and developed by the CDC Foundation is now accepting applications. Six mid-career journalists will work side-by-side with scientists and researchers at CDC as Knight Journalism Fellows. The fellowship program lasts 4 months, beginning in July 2000, and includes training with CDC's Epidemic Intelligence Service (EIS) officers. The fellows will explore epidemiology and biostatistics, study in depth a public health issue of

Notices to Readers — Continued

their choice, and experience public health activities in a local health department. Application deadline is April 1, 2000. Additional information and an application are available on the World-Wide Web site for the Knight Journalism Fellowships at CDC, http://www.cdcfoundation.org/kjf.*

*References to sites of non-CDC organizations on the World-Wide Web are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites.

Notice to Readers

Satellite Broadcast on Epidemiology and Prevention of Vaccine-Preventable Diseases

CDC's National Immunization Program (NIP) and the Public Health Training Network (PHTN) will co-sponsor a live satellite broadcast for physicians, nurses, nurse practitioners, physician assistants, pharmacists, residents, medical and nursing students, and their colleagues who either give vaccinations or set policy in their workplace. The four-part series, "Epidemiology and Prevention of Vaccine-Preventable Diseases," will be broadcast on March 23, March 30, April 6, and April 13, 2000, from noon to 3:30 p.m. eastern time.

The program will provide current information in the field of immunization. Session one will cover principles of vaccination, general recommendations on vaccination, and strategies to improve vaccination coverage levels; session two will cover diphtheria, tetanus, pertussis, pneumococcal disease (childhood), and poliomyelitis; session three will cover measles, mumps, rubella, and varicella; and session four will focus on hepatitis B, *Haemophilus influenzae* type b, influenza, and pneumococcal disease (adult).

Course instructors are medical epidemiologists William L. Atkinson, MD, MPH, and Sharon G. Humiston, MD, MPH. Participants will be able to interact with the instructors through toll-free phone, fax, and TTY lines. Continuing education for a variety of professions will be offered based on 14 hours of instruction. Pharmacy credit will be available. There will be a $10 processing fee for nonmembers of the American Pharmaceutical Association.

Information and registration are available through state or county health department immunization programs. A list of state immunization coordinators is available on the NIP World-Wide Web site, http://www.cdc.gov/nip. Course participants will be required to obtain their own copy of the primary course text, *Epidemiology and Prevention of Vaccine-Preventable Diseases*, 6th edition (2000). The text is available from the Public Health Foundation for $25; telephone (877) 252-1200. All other course materials will be provided on site.

Notice to Readers

Epidemiology in Action Course

CDC and Emory University's Rollins School of Public Health will co-sponsor a course, "Epidemiology in Action," during May 1–12, 2000, at Emory University. The course is designed for state and local public health professionals.

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, Epi Info software training, and discussions of selected prevalent diseases. There is a tuition charge.

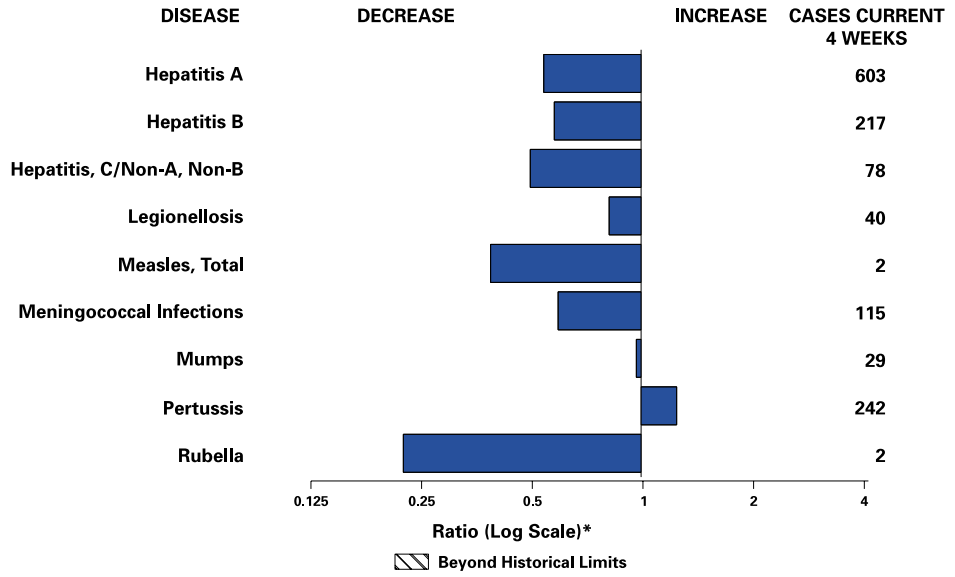
Deadline for application is April 1, 2000. Additional information and applications are available from Emory University, International Health Dept. (PIA), 1518 Clifton Rd. NE, Room 746, Atlanta, GA 30322; telephone (404) 727-3485; fax (404) 727-4590; World-Wide Web site http://www.sph.emory.edu/EPICOURSES/*; or e-mail pvaleri@sph.emory.edu.

*References to sites of non-CDC organizations on the World-Wide Web are provided as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites.

Erratum: Vol. 48, No. 17

In the article, "Mental Retardation Following Diagnosis of a Metabolic Disorder in Children Aged 3–10 Years—Metropolitan Atlanta, Georgia, 1991–1994," an error occurred in Table 1 on page 354. The line for "Classic galactosemia" should have read "Galactosemia, to include all types of galactosemia (classic and variant forms)." The indicated rate of 12.8 per 100,000 represents all forms of galactosemia identified in Georgia during 1981–1991. The one case of galactosemia found in the Metropolitan Atlanta Developmental Disabilities Surveillance Program was the classic form.

FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending February 26, 2000, 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 26, 2000 (8th Week)

	Cum. 2000		Cum. 2000
Anthrax	-	HIV infection, pediatric*§	9
Brucellosis*	3	Plague	2
Cholera	-	Poliomyelitis, paralytic	-
Congenital rubella syndrome	1	Psittacosis*	1
Cyclosporiasis*	2	Rabies, human	-
Diphtheria	-	Rocky Mountain spotted fever (RMSF)	21
Encephalitis: California* serogroup viral	1	Streptococcal disease, invasive Group A	403
eastern equine*	-	Streptococcal toxic-shock syndrome*	22
St. Louis*	-	Syphilis, congenital¶	-
western equine*	-	Tetanus	-
Ehrlichiosis human granulocytic (HGE)*	11	Toxic-shock syndrome	19
human monocytic (HME)*	1	Trichinosis	1
Hansen Disease*	6	Typhoid fever	35
Hantavirus pulmonary syndrome*†	-	Yellow fever	-
Hemolytic uremic syndrome, post-diarrheal*	7		

-: 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 from reports to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update January 30, 2000.
¶Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending February 26, 2000, and February 27, 1999 (8th Week)

Reporting Area	AIDS		Chlamydia[§]		Cryptosporidiosis		*Escherichia coli* O157:H7*			
							NETSS		PHLIS	
	Cum. 2000[†]	Cum. 1999	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999
UNITED STATES	2,750	6,948	61,088	100,465	131	193	174	162	74	113
NEW ENGLAND	289	354	2,910	3,240	5	8	15	28	14	26
Maine	3	5	193	99	1	1	1	1	-	-
N.H.	3	13	98	160	-	-	3	1	3	1
Vt.	1	4	88	69	4	1	1	1	2	-
Mass.	234	240	1,336	1,381	-	5	4	16	3	13
R.I.	6	20	-	341	-	-	-	-	-	-
Conn.	42	72	1,195	1,190	-	1	6	9	6	12
MID. ATLANTIC	795	1,492	591	11,748	13	36	20	10	-	2
Upstate N.Y.	21	76	N	N	8	14	20	7	-	-
N.Y. City	495	835	-	5,717	4	18	-	1	-	1
N.J.	194	370	217	1,866	-	1	-	2	-	1
Pa.	85	211	374	4,165	1	3	N	N	-	-
E.N. CENTRAL	143	489	11,738	16,420	12	39	17	34	4	20
Ohio	25	97	2,554	5,471	6	6	5	20	1	6
Ind.	26	52	1,773	1,679	3	2	1	5	1	6
Ill.	64	231	3,290	4,095	-	5	8	4	-	3
Mich.	19	81	3,027	3,241	3	4	3	5	1	2
Wis.	9	28	1,094	1,934	-	22	N	N	1	3
W.N. CENTRAL	49	161	3,050	6,233	5	11	44	28	23	15
Minn.	11	28	870	1,229	-	4	9	10	10	10
Iowa	7	13	396	299	-	-	9	5	1	2
Mo.	15	84	902	2,763	2	4	23	2	8	1
N. Dak.	-	3	-	136	-	-	1	2	1	1
S. Dak.	1	3	248	336	1	1	-	-	-	-
Nebr.	4	10	440	577	2	1	2	3	2	1
Kans.	11	20	194	893	-	1	-	6	1	-
S. ATLANTIC	588	1,833	12,383	21,727	17	20	17	14	10	8
Del.	15	31	450	476	-	-	-	1	-	-
Md.	92	252	839	2,076	1	3	5	1	1	-
D.C.	22	69	302	N	-	3	-	-	U	U
Va.	41	102	2,001	2,149	-	-	3	5	2	2
W. Va.	4	14	76	361	-	-	1	-	1	1
N.C.	27	125	2,560	3,613	3	1	5	2	1	3
S.C.	35	128	669	4,214	-	-	-	1	-	1
Ga.	97	207	1,882	4,261	7	12	1	1	3	U
Fla.	255	905	3,604	4,577	6	1	2	3	2	1
E.S. CENTRAL	140	300	6,549	5,963	5	2	10	14	3	4
Ky.	20	37	1,301	1,103	-	1	4	5	U	U
Tenn.	35	130	1,809	2,159	-	1	5	5	3	2
Ala.	50	69	1,927	2,016	5	-	1	2	-	1
Miss.	35	64	1,512	685	-	-	-	2	-	1
W.S. CENTRAL	276	980	8,676	12,719	5	14	8	6	7	8
Ark.	8	34	554	819	1	-	2	2	1	2
La.	45	67	2,232	1,041	-	11	-	2	5	1
Okla.	10	19	1,265	1,336	1	1	3	1	-	-
Tex.	213	860	4,625	9,523	3	2	3	1	1	5
MOUNTAIN	102	207	3,203	5,200	8	20	21	8	4	8
Mont.	1	3	-	186	-	1	5	-	-	-
Idaho	3	5	64	275	1	2	3	-	-	1
Wyo.	1	-	82	122	-	-	2	1	-	1
Colo.	34	56	538	1,008	1	2	6	2	1	1
N. Mex.	8	9	334	806	1	9	-	1	-	-
Ariz.	22	86	1,407	2,007	2	6	3	2	2	1
Utah	12	27	343	291	3	N	1	2	1	3
Nev.	21	21	435	505	-	-	1	-	-	1
PACIFIC	368	1,132	11,988	17,215	61	43	22	20	9	22
Wash.	48	58	1,912	1,928	N	N	1	1	3	8
Oreg.	11	32	454	904	1	3	3	10	3	8
Calif.	299	1,021	9,379	13,625	60	40	16	9	-	6
Alaska	-	5	243	279	-	-	-	-	-	-
Hawaii	10	16	-	479	-	-	2	-	3	-
Guam	-	1	-	67	-	-	N	N	U	U
P.R.	77	215	113	U	-	-	-	1	U	U
V.I.	-	3	-	U	-	U	-	U	U	U
Amer. Samoa	-	-	-	U	-	U	-	U	U	U
C.N.M.I.	-	-	-	U	-	U	-	U	U	U

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

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

† Updated monthly from reports to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update January 30, 2000.

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

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending February 26, 2000, and February 27, 1999 (8th Week)

Reporting Area	Gonorrhea		Hepatitis C/NA,NB		Legionellosis		Lyme Disease	
	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999
UNITED STATES	40,819	56,134	257	522	76	138	332	625
NEW ENGLAND	948	1,165	-	2	4	10	37	98
Maine	10	9	-	-	2	1	-	1
N.H.	10	13	-	-	-	1	11	-
Vt.	4	8	-	1	-	3	-	-
Mass.	391	465	-	1	1	2	26	62
R.I.	-	93	-	-	-	1	-	-
Conn.	533	577	-	-	1	2	-	35
MID. ATLANTIC	744	6,745	1	16	10	34	226	379
Upstate N.Y.	387	717	1	7	3	5	63	62
N.Y. City	-	2,866	-	-	-	6	1	14
N.J.	95	1,165	-	-	-	5	-	92
Pa.	262	1,997	-	9	7	18	162	211
E.N. CENTRAL	6,964	9,942	44	288	22	45	2	23
Ohio	1,481	2,599	-	-	15	14	2	8
Ind.	797	1,034	-	-	3	1	-	-
Ill.	2,051	3,024	3	5	-	10	-	1
Mich.	1,964	2,407	41	87	4	12	-	1
Wis.	671	878	-	196	-	8	U	13
W.N. CENTRAL	1,093	3,098	37	35	4	4	4	6
Minn.	354	475	-	-	1	-	2	-
Iowa	110	99	-	-	1	2	-	1
Mo.	367	1,882	36	32	2	1	2	2
N. Dak.	-	8	-	-	-	-	-	1
S. Dak.	33	26	-	-	-	-	-	-
Nebr.	141	263	1	1	-	1	-	-
Kans.	88	345	-	2	-	-	-	2
S. ATLANTIC	9,566	17,354	11	34	20	17	46	82
Del.	238	273	-	-	1	2	-	4
Md.	412	2,589	2	18	6	2	37	67
D.C.	312	1,281	-	-	-	-	-	1
Va.	1,446	1,811	-	6	3	2	1	-
W. Va.	22	104	1	2	N	N	2	-
N.C.	2,490	3,247	5	7	1	3	4	10
S.C.	574	2,080	-	1	2	4	-	-
Ga.	1,396	2,703	-	-	-	-	-	-
Fla.	2,676	3,266	3	-	7	4	2	-
E.S. CENTRAL	4,810	5,214	50	28	2	7	-	9
Ky.	553	584	4	3	-	4	-	-
Tenn.	1,469	1,782	15	21	1	3	-	2
Ala.	1,595	1,983	3	1	1	-	-	4
Miss.	1,193	865	28	3	-	-	-	3
W.S. CENTRAL	13,136	7,178	59	52	-	1	-	-
Ark.	319	381	-	1	-	-	-	-
La.	9,531	1,140	24	40	-	1	-	-
Okla.	594	718	-	1	-	-	-	-
Tex.	2,692	4,939	35	10	-	-	-	-
MOUNTAIN	1,262	1,538	26	42	5	10	1	1
Mont.	-	3	-	4	-	-	-	-
Idaho	4	19	-	3	1	-	-	-
Wyo.	5	6	13	16	-	-	-	-
Colo.	540	323	5	4	2	1	-	-
N. Mex.	62	160	4	6	-	1	-	1
Ariz.	440	789	4	8	-	-	1	-
Utah	50	32	-	1	2	5	-	-
Nev.	161	206	-	-	-	3	-	-
PACIFIC	2,296	3,900	29	25	9	10	16	27
Wash.	362	334	2	2	2	1	-	-
Oreg.	56	129	7	2	N	N	1	1
Calif.	1,849	3,295	20	21	7	9	15	26
Alaska	29	55	-	-	-	-	-	-
Hawaii	-	87	-	-	-	-	N	N
Guam	-	13	-	-	-	-	-	-
P.R.	28	51	-	-	-	-	N	N
V.I.	-	U	-	U	-	U	-	U
Amer. Samoa	-	U	-	U	-	U	-	U
C.N.M.I.	-	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 February 26, 2000, and February 27, 1999 (8th Week)

Reporting Area	Malaria		Rabies, Animal		Salmonellosis*			
					NETSS		PHLIS	
	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999
UNITED STATES	96	185	459	681	2,814	3,672	1,453	3,442
NEW ENGLAND	-	3	60	96	181	201	167	210
Maine	-	-	14	16	17	23	-	13
N.H.	-	-	1	5	11	3	8	10
Vt.	-	-	4	15	5	9	3	9
Mass.	-	3	23	28	108	118	106	111
R.I.	-	-	-	8	3	8	12	16
Conn.	-	-	18	24	37	40	38	51
MID. ATLANTIC	10	60	104	143	222	545	165	434
Upstate N.Y.	6	12	80	90	54	97	24	130
N.Y. City	1	29	U	U	84	180	141	177
N.J.	-	14	13	32	-	132	-	123
Pa.	3	5	11	21	84	136	-	4
E.N. CENTRAL	5	23	1	1	360	583	173	518
Ohio	2	2	1	-	141	136	64	99
Ind.	-	4	-	-	35	29	21	38
Ill.	-	9	-	-	120	174	-	187
Mich.	3	5	-	1	59	143	65	143
Wis.	-	3	-	-	5	101	23	51
W.N. CENTRAL	3	7	39	85	125	180	128	229
Minn.	2	-	18	15	30	48	42	82
Iowa	-	2	7	14	14	27	8	26
Mo.	-	5	2	3	49	54	38	68
N. Dak.	-	-	6	15	-	1	10	7
S. Dak.	-	-	6	25	6	7	9	10
Nebr.	1	-	-	1	26	18	5	15
Kans.	-	-	-	12	-	25	16	21
S. ATLANTIC	28	41	186	261	498	661	293	622
Del.	-	-	7	3	8	15	7	13
Md.	16	15	42	70	86	90	50	74
D.C.	-	5	-	-	-	16	U	U
Va.	7	7	55	56	48	76	22	76
W. Va.	-	1	15	13	17	7	11	15
N.C.	4	1	39	56	115	160	67	129
S.C.	-	-	13	11	55	37	32	46
Ga.	-	5	-	28	56	125	104	188
Fla.	1	7	15	24	113	135	-	81
E.S. CENTRAL	4	4	23	31	149	237	67	115
Ky.	1	-	4	10	17	54	U	U
Tenn.	-	2	16	15	40	67	41	70
Ala.	3	2	3	6	58	71	23	38
Miss.	-	-	-	-	34	45	3	7
W.S. CENTRAL	1	9	8	10	177	240	160	364
Ark.	-	1	-	-	26	30	6	32
La.	1	6	-	-	18	43	41	55
Okla.	-	1	8	10	22	29	-	12
Tex.	-	1	-	-	111	138	113	265
MOUNTAIN	8	8	18	18	275	255	163	238
Mont.	-	1	9	7	11	3	-	1
Idaho	-	1	-	-	21	9	-	12
Wyo.	-	-	5	5	3	2	-	5
Colo.	4	1	-	1	50	70	34	66
N. Mex.	-	1	1	-	28	28	21	29
Ariz.	2	3	3	5	90	87	70	71
Utah	2	1	-	-	46	29	38	33
Nev.	-	-	-	-	26	27	-	21
PACIFIC	37	30	20	36	827	770	137	712
Wash.	2	2	-	-	23	31	59	97
Oreg.	4	5	-	-	42	54	49	82
Calif.	31	20	16	36	715	627	-	478
Alaska	-	-	4	-	10	6	2	4
Hawaii	-	3	-	-	37	52	27	51
Guam	-	-	-	-	-	13	U	U
P.R.	-	-	2	6	-	53	U	U
V.I.	-	U	-	U	-	U	U	U
Amer. Samoa	-	U	-	U	-	U	U	U
C.N.M.I.	-	U	-	U	-	U	U	U

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

*Individual cases may 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 February 26, 2000, and February 27, 1999 (8th Week)

Reporting Area	Shigellosis*				Syphilis (Primary & Secondary)		Tuberculosis	
	NETSS		PHLIS					
	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999†
UNITED STATES	1,687	1,898	650	1,039	1,039	1,046	838	1,617
NEW ENGLAND	42	38	34	46	7	11	28	37
Maine	2	-	-	-	-	-	-	1
N.H.	1	2	1	5	-	-	1	-
Vt.	1	1	-	1	-	1	-	-
Mass.	28	28	24	28	6	6	21	11
R.I.	4	3	4	6	-	1	2	13
Conn.	6	4	5	6	1	3	4	12
MID. ATLANTIC	48	139	37	96	11	37	155	227
Upstate N.Y.	18	30	3	17	-	3	7	12
N.Y. City	21	46	33	43	6	16	95	113
N.J.	-	40	1	36	2	12	47	64
Pa.	9	23	-	-	3	6	6	38
E.N. CENTRAL	264	382	85	153	154	139	66	166
Ohio	18	139	3	11	10	16	17	49
Ind.	24	14	5	6	65	37	3	12
Ill.	89	139	-	123	45	72	39	74
Mich.	129	40	75	1	23	7	3	25
Wis.	4	50	2	12	11	7	4	6
W.N. CENTRAL	99	92	60	81	13	50	46	44
Minn.	23	14	32	18	2	1	22	22
Iowa	16	1	7	3	5	1	3	-
Mo.	47	64	16	53	5	44	17	16
N. Dak.	-	-	-	1	-	-	-	-
S. Dak.	1	-	-	-	-	-	2	2
Nebr.	12	7	2	3	1	1	2	1
Kans.	-	6	3	3	-	3	-	3
S. ATLANTIC	141	253	18	48	231	398	129	201
Del.	-	4	-	1	1	1	-	2
Md.	13	16	4	3	38	81	14	26
D.C.	-	11	U	U	10	33	-	7
Va.	10	11	-	4	20	27	-	17
W. Va.	-	3	-	1	-	1	5	5
N.C.	12	44	5	10	78	90	18	37
S.C.	3	18	1	5	11	41	18	56
Ga.	6	30	3	10	23	72	47	47
Fla.	97	116	5	14	50	52	27	4
E.S. CENTRAL	83	245	37	143	126	195	60	101
Ky.	16	22	U	U	7	21	-	10
Tenn.	44	184	34	134	88	86	21	33
Ala.	5	25	1	9	17	54	39	48
Miss.	18	14	2	-	14	34	-	10
W.S. CENTRAL	150	282	132	362	425	147	13	287
Ark.	33	24	-	17	9	13	8	8
La.	15	22	17	20	351	11	-	U
Okla.	7	72	1	14	31	42	5	8
Tex.	95	164	114	311	34	81	-	271
MOUNTAIN	176	128	46	64	27	30	44	34
Mont.	-	3	-	-	-	-	-	-
Idaho	21	2	-	1	-	-	-	-
Wyo.	-	2	-	1	-	-	-	-
Colo.	22	26	12	18	3	-	5	U
N. Mex.	20	12	12	6	3	-	5	7
Ariz.	70	70	17	26	19	30	15	12
Utah	5	8	5	10	-	-	4	9
Nev.	38	5	-	2	2	-	15	6
PACIFIC	684	339	201	46	45	39	297	520
Wash.	126	9	162	25	8	1	21	19
Oreg.	70	8	35	9	1	1	-	14
Calif.	480	312	-	-	36	36	264	456
Alaska	2	-	-	-	-	-	1	6
Hawaii	6	10	4	12	-	1	11	25
Guam	-	2	U	U	-	-	-	-
P.R.	-	6	U	U	16	41	-	-
V.I.	-	U	U	U	-	U	-	U
Amer. Samoa	-	U	U	U	-	U	-	U
C.N.M.I.	-	U	U	U	-	U	-	U

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

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

†Cumulative reports of provisional tuberculosis cases for 1999 are unavailable ("U") for some areas using the Tuberculosis Information System (TIMS).

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending February 26, 2000, and February 27, 1999 (8th Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
			A		B		Indigenous		Imported*		Total	
	Cum. 2000†	Cum. 1999	Cum. 2000	Cum. 1999	Cum. 2000	Cum. 1999	2000	Cum. 2000	2000	Cum. 2000	Cum. 2000	Cum. 1999
UNITED STATES	140	187	1,602	2,561	600	752	2	3	-	-	3	15
NEW ENGLAND	10	14	24	32	6	23	-	-	-	-	-	1
Maine	-	1	1	2	1	-	-	-	-	-	-	-
N.H.	2	2	5	2	3	2	U	-	U	-	-	1
Vt.	1	3	1	-	2	-	-	-	-	-	-	-
Mass.	7	7	5	12	-	11	-	-	-	-	-	-
R.I.	-	-	-	-	-	2	-	-	-	-	-	-
Conn.	-	1	12	16	-	8	-	-	-	-	-	-
MID. ATLANTIC	16	29	61	169	47	118	-	-	-	-	-	-
Upstate N.Y.	11	10	31	35	7	18	-	-	-	-	-	-
N.Y. City	-	7	30	56	40	34	-	-	-	-	-	-
N.J.	4	11	-	27	-	21	-	-	-	-	-	-
Pa.	1	1	-	51	-	45	-	-	-	-	-	-
E.N. CENTRAL	15	30	162	628	73	74	2	3	-	-	3	-
Ohio	9	13	61	110	17	18	2	2	-	-	2	-
Ind.	2	1	2	12	1	4	-	-	-	-	-	-
Ill.	2	15	13	130	-	-	-	-	-	-	-	-
Mich.	2	1	85	364	55	48	-	1	-	-	1	-
Wis.	-	-	1	12	-	4	U	-	U	-	-	-
W.N. CENTRAL	4	10	157	133	30	38	-	-	-	-	-	-
Minn.	-	1	18	2	-	2	-	-	-	-	-	-
Iowa	-	3	17	15	8	6	-	-	-	-	-	-
Mo.	2	2	114	93	17	21	-	-	-	-	-	-
N. Dak.	1	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	1	-	-	1	-	-	-	-	-	-	-
Nebr.	1	1	8	14	4	7	-	-	-	-	-	-
Kans.	-	2	-	9	-	2	U	-	U	-	-	-
S. ATLANTIC	40	33	170	198	115	107	-	-	-	-	-	-
Del.	-	-	-	-	-	-	-	-	-	-	-	-
Md.	18	18	22	62	19	35	-	-	-	-	-	-
D.C.	-	-	-	9	-	2	U	-	U	-	-	-
Va.	10	2	29	14	21	8	-	-	-	-	-	-
W. Va.	1	1	16	1	-	-	-	-	-	-	-	-
N.C.	3	4	44	25	45	31	-	-	-	-	-	-
S.C.	1	2	3	1	1	14	-	-	-	-	-	-
Ga.	6	2	15	64	2	11	-	-	-	-	-	-
Fla.	1	4	41	22	27	6	U	-	U	-	-	-
E.S. CENTRAL	3	13	66	75	44	62	-	-	-	-	-	-
Ky.	-	2	2	11	2	5	-	-	-	-	-	-
Tenn.	3	5	21	33	28	34	-	-	-	-	-	-
Ala.	-	4	12	21	4	14	-	-	-	-	-	-
Miss.	-	2	31	10	10	9	-	-	-	-	-	-
W.S. CENTRAL	11	17	260	317	33	76	-	-	-	-	-	2
Ark.	-	-	26	6	7	7	-	-	-	-	-	-
La.	2	6	5	29	16	27	U	-	U	-	-	-
Okla.	9	9	55	89	10	12	-	-	-	-	-	-
Tex.	-	2	174	193	-	30	-	-	-	-	-	2
MOUNTAIN	24	25	118	271	52	75	-	-	-	-	-	-
Mont.	-	1	1	2	2	1	-	-	-	-	-	-
Idaho	1	1	5	5	3	4	-	-	-	-	-	-
Wyo.	-	1	-	1	-	-	U	-	U	-	-	-
Colo.	7	1	31	59	13	15	-	-	-	-	-	-
N. Mex.	8	5	14	5	11	25	-	-	-	-	-	-
Ariz.	7	13	50	160	19	14	-	-	-	-	-	-
Utah	1	3	9	14	2	7	-	-	-	-	-	-
Nev.	-	-	8	25	2	9	-	-	-	-	-	-
PACIFIC	17	16	584	738	200	179	-	-	-	-	-	12
Wash.	2	-	19	47	6	2	-	-	-	-	-	2
Oreg.	4	5	37	36	13	11	-	-	-	-	-	8
Calif.	4	10	525	652	178	162	-	-	-	-	-	2
Alaska	1	1	3	2	2	3	-	-	-	-	-	-
Hawaii	6	-	-	1	1	1	-	-	-	-	-	-
Guam	-	-	-	2	-	2	U	-	U	-	-	-
P.R.	-	-	-	10	-	17	U	-	U	-	-	-
V.I.	-	U	-	U	-	U	U	-	U	-	-	U
Amer. Samoa	-	U	-	U	-	U	U	-	U	-	-	U
C.N.M.I.	-	U	-	U	-	U	U	-	U	-	-	U

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

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

†Of 37 cases among children aged <5 years, serotype was reported for 18 and of those, 3 were type b.

TABLE III. (Cont'd) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending February 26, 2000, and February 27, 1999 (8th Week)

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 2000	Cum. 1999	2000	Cum. 2000	Cum. 1999	2000	Cum. 2000	Cum. 1999	2000	Cum. 2000	Cum. 1999
UNITED STATES	357	385	4	59	57	58	497	607	-	2	2
NEW ENGLAND	20	23	-	-	3	6	110	89	-	1	1
Maine	2	3	-	-	-	-	7	-	-	-	-
N.H.	-	2	U	-	1	U	28	14	U	1	-
Vt.	1	2	-	-	-	2	39	9	-	-	-
Mass.	12	16	-	-	2	2	31	66	-	-	1
R.I.	1	-	-	-	-	2	4	-	-	-	-
Conn.	4	-	-	-	-	-	1	-	-	-	-
MID. ATLANTIC	27	46	-	3	7	2	34	40	-	-	-
Upstate N.Y.	7	7	-	1	2	2	24	22	-	-	-
N.Y. City	4	17	-	-	2	-	-	8	-	-	-
N.J.	8	12	-	-	-	-	-	2	-	-	-
Pa.	8	10	-	2	3	-	10	8	-	-	-
E.N. CENTRAL	39	57	-	5	3	7	113	82	-	-	-
Ohio	12	22	-	3	1	5	102	50	-	-	-
Ind.	8	5	-	-	-	-	3	4	-	-	-
Ill.	4	19	-	1	1	2	5	7	-	-	-
Mich.	14	7	-	1	1	-	3	10	-	-	-
Wis.	1	4	U	-	-	U	-	11	U	-	-
W.N. CENTRAL	39	36	-	8	1	-	15	15	-	-	-
Minn.	1	1	-	-	-	-	7	-	-	-	-
Iowa	7	8	-	3	1	-	6	5	-	-	-
Mo.	28	16	-	1	-	-	1	1	-	-	-
N. Dak.	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	2	4	-	-	-	-	1	1	-	-	-
Nebr.	1	3	-	4	-	-	-	1	-	-	-
Kans.	-	4	U	-	-	U	-	7	U	-	-
S. ATLANTIC	65	49	2	7	8	2	38	46	-	-	-
Del.	-	1	-	-	-	-	-	-	-	-	-
Md.	4	10	-	1	2	1	13	20	-	-	-
D.C.	-	1	U	-	1	U	-	-	U	-	-
Va.	11	5	1	1	1	-	1	7	-	-	-
W. Va.	1	1	-	-	-	-	-	-	-	-	-
N.C.	12	8	1	2	1	1	15	16	-	-	-
S.C.	6	8	-	3	2	-	9	3	-	-	-
Ga.	11	8	-	-	-	-	-	-	-	-	-
Fla.	20	7	U	-	1	U	-	-	U	-	-
E.S. CENTRAL	18	34	-	1	1	-	12	15	-	-	-
Ky.	3	6	-	-	-	-	7	4	-	-	-
Tenn.	7	10	-	-	-	-	1	6	-	-	-
Ala.	7	11	-	1	1	-	4	5	-	-	-
Miss.	1	7	-	-	-	-	-	-	-	-	-
W.S. CENTRAL	19	40	-	-	10	-	3	22	-	-	1
Ark.	1	6	-	-	-	-	3	2	-	-	-
La.	12	22	U	-	-	U	-	2	U	-	-
Okla.	6	10	-	-	1	-	-	3	-	-	-
Tex.	-	2	-	-	9	-	-	15	-	-	1
MOUNTAIN	17	42	-	3	4	30	136	126	-	1	-
Mont.	-	-	-	-	-	1	1	-	-	-	-
Idaho	2	5	-	-	-	7	23	65	-	-	-
Wyo.	-	1	U	-	-	U	-	1	U	-	-
Colo.	3	11	-	-	2	11	69	19	-	-	-
N. Mex.	3	7	-	1	N	6	24	7	-	-	-
Ariz.	6	13	-	-	-	4	14	16	-	-	-
Utah	3	3	-	-	1	1	4	17	-	1	-
Nev.	-	2	-	2	1	-	1	1	-	-	-
PACIFIC	113	58	2	32	20	11	36	172	-	-	-
Wash.	5	6	-	-	-	9	14	10	-	-	-
Oreg.	13	14	N	N	N	1	13	3	-	-	-
Calif.	93	31	2	31	16	1	7	150	-	-	-
Alaska	-	3	-	-	1	-	2	1	-	-	-
Hawaii	2	4	-	1	3	-	-	8	-	-	-
Guam	-	-	U	-	-	U	-	-	U	-	-
P.R.	-	2	U	-	-	U	-	-	U	-	-
V.I.	-	U	U	-	U	U	-	U	U	-	U
Amer. Samoa	-	U	U	-	U	U	-	U	U	-	U
C.N.M.I.	-	U	U	-	U	U	-	U	U	-	U

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

TABLE IV. Deaths in 122 U.S. cities,* week ending February 26, 2000 (8th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	578	443	85	33	4	13	72
Boston, Mass.	156	113	25	14	1	3	23
Bridgeport, Conn.	39	28	7	3	-	1	-
Cambridge, Mass.	25	21	3	-	-	1	2
Fall River, Mass.	31	27	4	-	-	-	3
Hartford, Conn.	U	U	U	U	U	U	U
Lowell, Mass.	38	33	4	1	-	-	4
Lynn, Mass.	8	6	-	2	-	-	-
New Bedford, Mass.	35	31	4	-	-	-	3
New Haven, Conn.	44	34	5	2	1	2	7
Providence, R.I.	77	61	9	1	2	4	8
Somerville, Mass.	4	3	-	1	-	-	1
Springfield, Mass.	39	28	6	5	-	-	6
Waterbury, Conn.	24	17	6	1	-	-	2
Worcester, Mass.	58	41	12	3	-	2	13
MID. ATLANTIC	2,492	1,811	446	156	44	34	145
Albany, N.Y.	48	34	9	3	1	1	2
Allentown, Pa.	U	U	U	U	U	U	U
Buffalo, N.Y.	123	88	20	9	2	3	11
Camden, N.J.	33	18	9	6	-	-	1
Elizabeth, N.J.	21	17	4	-	-	-	-
Erie, Pa.§	39	32	7	-	-	-	2
Jersey City, N.J.	52	36	13	2	-	1	-
New York City, N.Y.	1,193	868	214	79	18	14	44
Newark, N.J.	72	29	27	8	5	3	-
Paterson, N.J.	20	14	3	1	2	-	2
Philadelphia, Pa.	427	307	76	34	9	1	31
Pittsburgh, Pa.§	82	56	19	-	3	4	7
Reading, Pa.	41	32	5	3	-	1	7
Rochester, N.Y.	126	99	19	3	1	4	9
Schenectady, N.Y.	26	22	4	-	-	-	5
Scranton, Pa.§	45	40	2	3	-	-	5
Syracuse, N.Y.	93	78	9	2	3	1	15
Trenton, N.J.	33	27	2	3	-	1	4
Utica, N.Y.	18	14	4	-	-	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,273	1,598	450	145	31	46	207
Akron, Ohio	65	46	15	-	2	2	7
Canton, Ohio	39	32	3	3	-	1	7
Chicago, Ill.	467	296	106	45	10	8	56
Cincinnati, Ohio	106	77	17	5	-	7	11
Cleveland, Ohio	157	104	33	15	2	3	7
Columbus, Ohio	181	132	38	8	-	3	18
Dayton, Ohio	133	104	22	6	-	1	15
Detroit, Mich.	223	138	54	20	7	3	20
Evansville, Ind.	64	49	14	-	1	-	4
Fort Wayne, Ind.	73	51	14	3	2	3	2
Gary, Ind.	20	10	3	6	1	-	-
Grand Rapids, Mich.	66	49	15	2	-	-	4
Indianapolis, Ind.	186	132	30	14	3	7	14
Lansing, Mich.	41	32	6	3	-	-	4
Milwaukee, Wis.	124	95	23	3	1	2	13
Peoria, Ill.	46	36	8	-	1	1	1
Rockford, Ill.	53	41	9	3	-	-	2
South Bend, Ind.	51	38	11	1	-	1	4
Toledo, Ohio	102	78	16	5	-	3	11
Youngstown, Ohio	76	58	13	3	1	1	7
W.N. CENTRAL	810	597	130	50	18	15	76
Des Moines, Iowa	68	59	5	3	1	-	12
Duluth, Minn.	31	25	5	1	-	-	1
Kansas City, Kans.	35	21	5	7	2	-	2
Kansas City, Mo.	87	64	14	4	4	1	5
Lincoln, Nebr.	45	37	6	1	-	1	3
Minneapolis, Minn.	183	131	35	12	3	2	22
Omaha, Nebr.	74	50	15	5	1	3	5
St. Louis, Mo.	97	71	15	7	1	3	-
St. Paul, Minn.	90	74	11	3	-	2	15
Wichita, Kans.	100	65	19	7	6	3	11
S. ATLANTIC	1,090	695	227	106	21	34	97
Atlanta, Ga.	U	U	U	U	U	U	U
Baltimore, Md.	159	96	36	22	3	2	11
Charlotte, N.C.	119	80	22	12	2	3	19
Jacksonville, Fla.	145	98	34	12	1	-	5
Miami, Fla.	105	72	18	13	2	-	6
Norfolk, Va.	71	48	16	4	2	1	3
Richmond, Va.	84	54	21	7	1	1	10
Savannah, Ga.	52	40	9	3	-	-	2
St. Petersburg, Fla.	67	46	10	6	5	-	11
Tampa, Fla.	186	133	37	12	4	-	27
Washington, D.C.	102	28	24	15	1	27	3
Wilmington, Del.	U	U	U	U	U	U	U
E.S. CENTRAL	876	623	170	46	18	18	101
Birmingham, Ala.	173	123	32	9	3	5	21
Chattanooga, Tenn.	50	37	8	4	1	-	4
Knoxville, Tenn.	82	59	16	5	-	2	11
Lexington, Ky.	71	54	11	3	1	2	12
Memphis, Tenn.	177	119	45	6	4	3	23
Mobile, Ala.	99	72	13	10	2	2	5
Montgomery, Ala.	75	58	12	3	2	-	15
Nashville, Tenn.	149	101	33	6	5	4	10
W.S. CENTRAL	1,705	1,145	328	158	41	32	144
Austin, Tex.	74	53	10	9	-	2	7
Baton Rouge, La.	75	62	6	6	1	-	3
Corpus Christi, Tex.	62	52	7	1	1	1	9
Dallas, Tex.	182	113	42	19	4	4	5
El Paso, Tex.	132	85	32	10	1	4	4
Ft. Worth, Tex.	135	90	27	14	1	3	11
Houston, Tex.	388	249	84	47	5	3	33
Little Rock, Ark.	90	59	20	6	4	1	8
New Orleans, La.	72	36	6	10	13	6	3
San Antonio, Tex.	254	183	44	19	6	2	30
Shreveport, La.	97	67	20	8	2	-	18
Tulsa, Okla.	144	96	30	9	3	6	13
MOUNTAIN	1,073	747	203	71	24	27	78
Albuquerque, N.M.	115	75	30	7	1	2	7
Boise, Idaho	43	33	7	2	-	1	5
Colo. Springs, Colo.	57	47	7	-	3	-	6
Denver, Colo.	125	77	23	15	3	7	9
Las Vegas, Nev.	240	163	56	14	4	3	15
Ogden, Utah	31	26	1	2	1	1	4
Phoenix, Ariz.	157	102	26	14	7	7	15
Pueblo, Colo.	29	26	3	-	-	-	1
Salt Lake City, Utah	100	73	12	11	2	2	11
Tucson, Ariz.	176	125	38	6	3	4	5
PACIFIC	1,168	864	194	64	19	23	122
Berkeley, Calif.	21	16	2	2	-	1	3
Fresno, Calif.	109	84	17	6	-	2	15
Glendale, Calif.	U	U	U	U	U	U	U
Honolulu, Hawaii	57	40	9	4	2	2	3
Long Beach, Calif.	63	45	11	4	2	1	7
Los Angeles, Calif.	U	U	U	U	U	U	U
Pasadena, Calif.	30	19	6	2	2	1	1
Portland, Oreg.	137	107	23	4	1	2	9
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	150	101	27	10	3	7	13
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	176	127	33	12	3	1	22
Santa Cruz, Calif.	30	24	4	1	-	1	2
Seattle, Wash.	122	93	15	11	1	2	16
Spokane, Wash.	48	38	6	3	-	1	7
Tacoma, Wash.	225	170	41	5	5	2	24
TOTAL	12,065¶	8,523	2,233	829	220	242	1,042

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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