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World TB Day — March 24, 2001

March 24, 2001, will mark the 19th annual World TB Day, which recognizes the collaborative efforts of all countries involved in eliminating tuberculosis (TB). TB is the second leading cause of death among infectious diseases worldwide. An estimated 2 billion persons—one third of the world's population—are infected with the bacteria that cause TB, and approximately 2 million persons die each year from TB.

After years of decline in the United States, the number of reported TB cases increased 20% during 1985–1992. This resurgence was associated with deterioration of the infrastructure for TB services; the human immunodeficiency virus epidemic, which substantially increased the risk for active TB among persons with latent TB infection; immigration of persons from countries where TB was endemic; TB transmission in congregate settings (e.g., hospitals and prisons); and development of multidrug-resistant TB. However, a renewed emphasis on TB control and prevention in the mid-to-late 1990s resulted in substantial declines in the disease. In 2000, the provisional number of TB cases decreased for the eighth straight year to an all-time low of 16,372 cases, a 7% decrease over the 17,531 cases reported in 1999.

In 2000, the Institute of Medicine (IOM) released a CDC-commissioned report on the feasibility of eliminating TB in the United States. The report supports a statement by the Advisory Council for the Elimination of Tuberculosis that commits to the goal of eliminating TB in the United States. The IOM report states that more aggressive and decisive action will be required for TB elimination. The report also recommends that the United States further engage in global TB prevention and control efforts. Some of CDC's efforts in this area, specifically projects in the Russia Federation, are highlighted in this issue of *MMWR*. Additional information on World TB Day and CDC's global TB activities are available on the World-Wide Web, http://www.cdc.gov.

Tuberculosis Treatment Interruptions — Ivanovo Oblast, Russian Federation, 1999

In the Russian Federation, the number of tuberculosis (TB) cases increased from 45,000 (34 per 100,000 population) in 1991 to 124,000 (85 per 100,000 population) in 1999 (1). In 1995, the World Health Organization (WHO) implemented a pilot TB control project in the Ivanovo oblast of the Russian Federation (1995 population: 1.3 million), located 175 miles northeast of Moscow. The project is based on the following five

TB Treatment Interruptions — Continued

elements of the WHO directly observed treatment, short-course (DOTS) strategy for controlling TB: government commitment, laboratory-based diagnosis, a reliable supply of anti-TB medications, direct supervision of standardized treatment, and a recording and reporting system that permits evaluation of treatment outcomes. In most settings, implementing this strategy has resulted in cure rates of ≥85% (2,3); however, little improvement occurred in cure rates in Ivanovo after implementation of this strategy in 1995 (4,5). Although 17% of these poor outcomes were attributed to primary multidrugresistant TB (MDR TB) (i.e., TB resistant to at least isoniazid and rifampin) (4), other factors that may have contributed to poor outcomes, such as treatment delay and interruption, were not quantified. To determine the extent of treatment interruption as a potential cause of poor outcomes among TB patients in Ivanovo, CDC reviewed TB treatment records for all newly diagnosed, never-treated pulmonary TB patients registered in Ivanovo from April through June 1999. This report summarizes the results of that analysis and indicates that approximately one fourth of highly infectious TB patients interrupted treatment for 2-8 weeks and nearly one fourth interrupted treatment for more than 8 weeks. On the basis of these results, TB project staff have increased efforts to reduce treatment interruption through use of incentives.

For each patient, the frequency and duration of treatment interruptions and treatment outcomes were recorded. The analysis was limited to new patients whose sputum smears were positive for acid-fast bacilli (AFB). TB treatment requires a minimum of 6 months of anti-TB medications: the first 2 months involve taking four anti-TB medications (i.e., intensive phase), and the following 4 months involve taking two anti-TB medications (i.e., continuation phase). Patients who discontinued medication for 2–8 consecutive weeks but eventually restarted treatment were considered to have interrupted treatment. Standard WHO definitions were used to assign mutually exclusive treatment outcomes for each patient; these definitions were dichotomized further into successful treatment versus poor outcome (5). Patients were considered to have had a successful treatment outcome if they completed 6 months of prescribed medication within 1 year of starting treatment. Patients were considered to have had a poor outcome if treatment failed (i.e., patient remained or again became AFB smear-positive following ≥5 months of treatment), they defaulted (i.e., interrupted treatment for >8 consecutive weeks), or they died for any reason during the course of TB treatment.

During April–June, 115 newly diagnosed, never-treated pulmonary TB patients were registered; 54 (47%) were AFB smear-positive. The median age of the smear-positive patients was 43 years (range: 17–85 years), and 34 (63%) were male. No patients were documented to have MDR TB by subsequent culture and susceptibility testing. Successful treatment outcomes were documented for 31 (57%) smear-positive patients. Of the remaining 23 with poor outcomes, treatment failed in six (26%) patients, 12 (52%) defaulted, and five (22%) died. Of the patients who died, three died within 1 month of starting treatment and two died in the second and third months of treatment, respectively.

Treatment interruption of 2–8 weeks occurred among 15 (28%) patients. Of patients who interrupted treatment, 13 (87%) were male, and 10 (67%) were aged \leq 50 years. The median number of interruptions per patient was two (range: one–six). Among patients who interrupted treatment, three (20%) interrupted during the intensive phase, 10 (67%) during the continuation phase, and two (13%) during both phases of treatment. The median duration of all interruptions was 3 weeks (range: 2–8 weeks); of 30 interruptions, 20 (67%) were 2–3 weeks and 10 (33%) were 4–8 weeks.

TB Treatment Interruptions — Continued

Of the 31 AFB smear-positive patients who completed treatment, the median duration of treatment was 10 months (range: 6–18 months). Sixteen (52%) completed 6 months of prescribed medication within 6–9 months, eight (26%) within 10–12 months, and seven (23%) within 13–18 months.

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Editorial Note: The incidence of adult TB cases in Ivanovo remained stable from 1996 to 1998 at approximately 45 per 100,000 annually (WHO, unpublished data, 1998). However, primary MDR TB more than doubled from 3.8% in 1996 to 9.4% in 1998 (4). Patients who default are at high risk for developing drug resistance or disease progression (6,7). However, interruptions of shorter duration also are of concern because patient adherence is important for treatment success (8) and to prevent transmission (9).

In Ivanovo, the rates of treatment default and interruption were high. Approximately one third interrupted treatment during the intensive phase, when patients with a high bacillary load are at greatest risk for developing drug resistance and for spreading untreated disease in the community. Half of the patients interrupted treatment more than once, and the median duration of interruption was long, resulting in considerable delays in treatment completion and increasing the workload of staff responsible for tracking patients who interrupted or defaulted. Reasons for treatment interruption included both patient and program factors such as cost of transportation and length of hospital stay required for treatment.

The findings in this report are subject to at least three limitations. First, the sample size of the population was small, limiting statistical power to detect significant differences in outcomes among groups. Second, other risk factors (e.g., human immunodeficiency virus infection and excessive alcohol consumtion) that may have affected the likelihood of both treatment interruption and poor outcomes could not be assessed in the treatment record review. Finally, not all patients were evaluated following treatment completion, and their final treatment outcome was not available.

On the basis of this study and another study examining reasons for treatment interruption (10), the TB project staff were encouraged to concentrate human and financial resources on treatment completion. To improve patient adherence and reduce treatment interruption, patients are now receiving food supplements or free transportation to the clinic. Aggressive efforts are being made to locate and restart treatment in patients who interrupt before completion. Vehicles, fuel, and public transportation passes have been provided to the TB project staff to enable them to find patients who interrupt treatment. Finally, health-care providers are receiving performance-based rewards if their patients complete treatment.

- Shilova MV. Tuberculosis in Russia in 1999. Moscow, Russia: Ministry of Health of Russia, Sechenov Moscow Medical Academy, Scientific-Research Institute of Phthysiopulmonology, 2000.
- 2. China Tuberculosis Control Collaboration. Results of directly observed short-course chemotherapy in 112,842 Chinese patients with smear-positive tuberculosis. Lancet 1996; 347:358–62.

TB Treatment Interruptions — Continued

- 3. Kumaresan JA, Ahsan Ali AK, Parkkali LM. Tuberculosis control in Bangladesh: success of the DOTS strategy. Int J Tuberc Lung Dis 1998;2:992–8.
- 4. CDC. Primary multidrug-resistant tuberculosis—Ivanovo oblast, Russia, 1999. MMWR 1999;48:661–4.
- 5. World Health Organization. Treatment of tuberculosis: guidelines for national programmes. Geneva, Switzerland: World Health Organization, 1997.
- 6. Mitchison DA. How drug resistance emerges as a result of poor compliance during short course chemotherapy for tuberculosis. Int J Tuberc Lung Dis 1998;2:10–5.
- 7. Laserson KF, Osorio L, Sheppard JD, et al. Clinical and programmatic mismanagement rather than community outbreak as the cause of chronic, drug-resistant tuberculosis in Buenaventura, Colombia, 1998. Int J Tuberc Lung Dis 2000;4:673–83.
- 8. Addington WW. Patient compliance: the most serious remaining problem in control of tuberculosis in the US. Chest 1979;76:741–3.
- 9. Pablos-Mendez A, Knirsch CA, Barr RG, Lerner BH, Frieden TR. Nonadherence in tuberculosis treatment: predictors and consequences in New York City. Am J Med 1997;102:164–70.
- Larson JL, Danilova ID, Caudill C, et al. Factors associated with tuberculosis treatment delay and interruption, Ivanovo, Russia—1999 [Abstract]. Presented at the EIS Conference, Atlanta, Georgia, April 2000.

Evaluation of a Directly Observed Therapy Short-Course Strategy for Treating Tuberculosis — Orel Oblast, Russian Federation, 1999–2000

During the 1990s, the number of tuberculosis (TB) cases increased dramatically in the Russian Federation (1–3), and the rise paralleled concomitant increases in TB-associated mortality (2,3). In November 1998, the World Health Organization (WHO), the U.S. Agency for International Development, and CDC, in collaboration with the Central Tuberculosis Research Institute of the Russian Academy of Medical Sciences and the Russian Ministry of Health, identified three regions as demonstration sites for implementing a WHO control strategy program of directly observed treatment short-course (DOTS). The program was designed to provide comprehensive TB care to both civilian and prison populations within each region (oblast), and periodic cohort analyses of treatment outcomes were recommended to evaluate its progress. This report summarizes evaluations of treatment outcomes for patients enrolled during the first 6 months of the project in Orel oblast and indicates that treatment success rates among TB patients in Orel were high. These findings support the use of DOTS as a control strategy in the Russian Federation.

Orel (1999 population: 900,000) is located approximately 200 miles southwest of Moscow. In 1999, the TB rate for Orel was 72 per 100,000 population, and 3.7% of newly diagnosed, smear-positive patients had primary multidrug-resistant TB (MDR TB) (i.e., TB resistant to at least isoniazid and rifampin). Case finding for TB followed existing national directives, which include the passive detection of symptomatic cases, active case finding among household contacts, and regular screening of groups considered to be at risk (e.g., prisoners, teachers, and health-care workers). In the Russian Federation, TB is generally diagnosed by chest radiograph and clinical findings; however, in the oblasts where the demonstration projects have been implemented, smear microscopy and mycobacterial culture are used by clinicians to diagnose TB. In Orel, clinicians use the standard WHO-recommended short course chemotherapy regimen (isoniazid, rifampin, ethambutol, and pyrazidamine for 2 months followed by isoniazid and rifampin for 4 months) for patients not treated previously for TB.

Treating TB Disease — Continued

Prospective data collection began in October 1999 on all Orel TB patients without a history of TB treatment. Sputum conversion and treatment outcomes for patients registered during October–December 1999 and January–March 2000 are presented in this report. Sputum conversion was defined as achieving three consecutive negative sputum smear and/or culture specimens from a previously positive patient. WHO/International Union Against Tuberculosis and Lung Disease definitions for six mutually exclusive treatment outcomes were used.* Prison patients and retreatment patients (i.e., patients who had previously been treated for TB) were enrolled beginning in January 2000 and were included in the analysis of second quarter outcomes.

A total of 349 patients were enrolled in the study: 128 during October–December 1999 and 221 during January–March 2000; 331 (95%) had pulmonary TB, and 265 (76%) were men. Mean age at diagnosis was 40 years (range: 15–89 years). Enrollment was higher in the second quarter, in part because of the inclusion of prisoners (n=39) and retreatment case-patients (n=six). Of the 310 civilian patients, 182 (52%) had positive smears or cultures for *Mycobacterium tuberculosis* before treatment, and 128 (41%) had negative bacteriologic findings; 146 (47%) reported having symptoms at TB diagnosis, and 164 (53%) were asymptomatic and were identified through routine screening. Culture confirmation of TB diagnosis was significantly higher in symptomatic patients than in those diagnosed through a screening procedure (77% versus 56%; p<0.001). In prisoners, routine biannual screening is mandatory. Fifteen (39%) prison case-patients had positive smears, and 20 (51%) were bacteriologically confirmed.

Of isolates from 179 culture-positive patients tested for susceptibility to five anti-TB drugs, 55 (31%) were resistant to streptomycin, 27 (15%) to isoniazid, 20 (11%) to kanamycin, five (3%) to rifampin, and five (3%) to ethambutol. Six (3%) patients had MDR TB, and all were civilians. MDR TB prevalence was 1% among patients with no history of previous TB treatment (five of 343) and 17% among retreatment cases (one of six).

Treatment success (i.e., patients with bacteriologically documented cure and those who completed treatment) was attained for 88% of new and 60% of retreatment TB patients. Among new, culture-positive pulmonary case-patients, 88% were either cured or completed treatment; this proportion declined to 81% for patients identified as smear-positive at diagnosis. Cure and completion rates among prisoners were high (97%), with no prison patients defaulting. Overall, case-fatality rates were high in Orel (5%), particularly among smear-positive patients (12%).

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^{*}WHO treatment outcomes include bacteriologic cure: patients with a positive smear or culture before treatment and negative bacteriologic results at the end of therapy; treatment completion: patients who complete treatment without bacteriologic proof of cure or failure; treatment failure: patients who fail to achieve bacteriologic conversion within 5 months after the start of treatment, who become smear- or culture-positive again during treatment after a previous conversion, or who are identified with multidrug-resistant TB (i.e., resistant to isoniazid and rifampin with pretreatment positive culture); death: patients who die of any cause during the course of treatment; default: patients who interrupt treatment for ≥2 months after completing at least one month of therapy or patients whose drug intake is <80% of the prescribed doses at any given month during treatment; transferred out: patients who are transferred to another reporting unit before completion of therapy (4).

Treating TB Disease — Continued

Editorial Note: The findings in this report indicate that treatment success rates among TB patients in Orel were high. Although rates for smear-positive patients during the first 6 months of the project were slightly lower than the WHO global target of 85%, these findings are consistent with expected success rates for a newly implemented DOTS project. The higher treatment success rates among Orel patients in whom asymptomatic TB was diagnosed using chest radiograph (without bacteriologic confirmation) compared with those with bacteriologic confirmation may reflect either early diagnosis of disease or incorrect diagnosis. The higher proportion of cases among prisoners identified through asymptomatic radiographic screening in Orel and the lack of defaulters in this group may account for their better outcomes compared with civilians.

The treatment success rates reported here were higher than those reported in the other project areas of the Russian Federation that implemented the DOTS strategy (5–7). Reasons for the higher treatment success rates in Orel may include earlier clinical presentation of patients and efforts by local staff to ensure that patients remained on treatment. Another factor may be the lower rates of MDR TB; studies in other areas of the Russian Federation have documented rates of 5%–22% in new TB patients (5–7). The higher proportion of deaths among Orel TB patients may indicate delays in treatment of TB disease, raising concern about sustained community transmission from unidentified infectious cases, the potential lack of education about TB symptoms in the general population, and the possibility of delayed recognition by physicians.

The public health system in the Russian Federation is struggling to control the newly re-emergent TB epidemic. Although the DOTS strategy is an inexpensive and effective method of TB control in other high-burden countries (1), the adoption of DOTS in the Russian Federation has begun only recently. Because aspects of the strategy depart from long-standing Russian TB control traditions, convincing TB physicians to adopt DOTS has been difficult. The findings in this report suggest that the successful implementation of DOTS in the Russian Federation is possible despite these historic differences in TB control, and that treatment success rates above the WHO global target of 85% can be achieved.

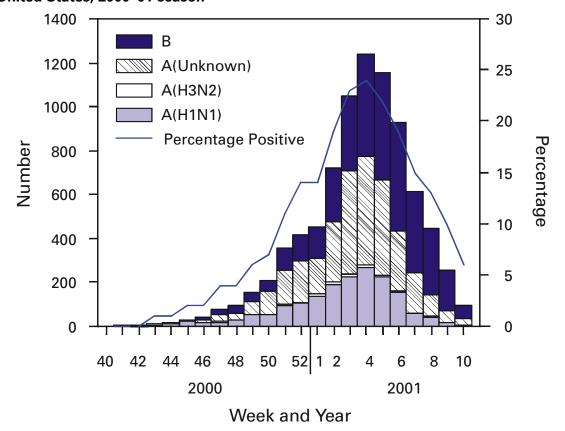
- 1. Shilova MV. Tuberculosis in Russia in 1999. Moscow, Russia: Ministry of Health of Russia, Sechenov Moscow Medical Academy, Scientific-Research Institute of Phthysiopulmonology, 2000.
- 2. Shilova MV. Tuberculosis in Russia in 1998. Moscow, Russia: Ministry of Health of Russia, Sechenov Moscow Medical Academy, Scientific-Research Institute of Phthysiopulmonology, 1999.
- 3. Perelman MI. Tuberculosis in Russia. Int J Tuberc Lung Dis 2000;4:1097-103.
- 4. World Health Organization. Treatment of tuberculosis: guidelines for national programmes. Geneva, Switzerland: WHO Global Tuberculosis Program, 1997.
- 5. Kimmerling ME, Kluge H, Vezhina N, et al. Inadequacy of the current WHO re-treatment in a central Siberian prison: treatment failure and MDR TB. Int J Tuberc Lung Dis 1999;3:451–3.
- Espinal MA, Sang JK, Suarez PG, et al. Standard short-course chemotherapy for drugresistant tuberculosis: treatment outcomes in 6 countries. JAMA 2000;283:2537–45.
- 7. CDC. Primary multidrug-resistant tuberculosis—Ivanovo Oblast, Russia, 1999. MMWR 1999;48:661–3.

Influenza Activity — United States, 2000-01 Season

This report summarizes influenza activity in the United States during October 1, 2000–March 10, 2001 (1)*. Influenza activity increased in December and January and peaked at the end of January. The most frequently isolated viruses were influenza A (H1N1); however, influenza B viruses have been co-circulating and appear to be increasing.

During October 1, 2000–March 10, 2001, the World Health Organization (WHO) collaborating laboratories and National Respiratory and Enteric Virus Surveillance System (NREVSS) laboratories tested 64,840 specimens for influenza, and 8386 (13%) were positive. Of these, 4885 (58%) were influenza type A and 3501 (42%) were influenza type B. Of the 4885 influenza A viruses identified, 1826 (37%) were subtyped: 1746 (96%) were A (H1N1) and 80 (4%) were A (H3N2). The percentage of specimens positive for influenza infections, an indicator of influenza activity, peaked at 24% during the week ending January 27, 2001. For the week ending March 10, 6% of tested specimens were positive for influenza (Figure 1).

FIGURE 1. Number* and percentage of respiratory specimens testing positive for influenza reported by World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories, by week and year — United States, 2000–01 season



^{*}The four components of the influenza surveillance system have been described (1). Data reported as of March 15, 2001.

Influenza Activity — Continued

CDC antigenically characterized 436 influenza viruses received from U.S. laboratories since October 1. Of the 259 influenza A (H1N1) isolates characterized, 246 (95%) were similar to A/New Caledonia/20/99, the H1N1 component of the 2000–01 influenza vaccine, and 13 (5%) were similar to A/Bayern/07/95. Although A/Bayern-like viruses are antigenically distinct from A/New Caledonia-like viruses, the A/New Caledonia/20/99 vaccine strain produces high titers of antibody that cross-react with A/Bayern/07/95-like viruses (2). Of the 16 influenza A (H3N2) characterized viruses, all were antigenically similar to the vaccine strain A/Panama/2007/99. Of the 161 influenza B viruses characterized, 29 (18%) were similar to the vaccine strain B/Beijing/184/93, and 132 (82%) were more closely related antigenically to the B/Sichuan/379/99 reference strain than to the current vaccine strain. The B/Sichuan virus exhibited cross-reactivity with the vaccine strain.

During October 1–March 10, the percentage of patient visits to U.S. sentinel physicians for influenza-like illness (ILI)[†] peaked at 4.1% during the week ending January 27. During that week, the percentage of patient visits for ILI was elevated above baseline levels (0–3%) in six of nine surveillance regions. For the week ending March 10, 1.6% of patient visits to U.S. sentinel physicians were the result of ILI.

As reported by state and territorial epidemiologists, influenza activity[§] peaked during the weeks ending February 3 and 10, 2001, when 38 states reported regional or widespread influenza activity. For the week ending March 10, one state reported widespread activity, 12 states reported regional activity, 35 states reported sporadic activity, one state reported no activity, and one state did not report.

For the week ending March 10, the 122 Cities Mortality Reporting System attributed 8.0% of recorded deaths to pneumonia and influenza (P&I). This percentage was below the epidemic threshold[¶] of 8.7% for this week. The percentage of P&I deaths remained below the epidemic threshold each week since October 1.

Reported by: Participating state and territorial epidemiologists and state public health laboratory directors. WHO collaborating laboratories. National Respiratory and Enteric Virus Surveillance System laboratories. Sentinel Physicians Influenza Surveillance System. Surveillance Systems Br, Div of Public Health Surveillance and Informatics, Epidemiology Program Office; WHO Collaborating Center for Reference and Research on Influenza, Influenza Br and Respiratory and Enteric Virus Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: Influenza activity during the 2000–01 season was moderate and lower than the previous three seasons. Three surveillance system components (i.e., WHO/NREVSS laboratories, U.S. sentinel physicians, and state and territorial epidemiologists' reports) indicated that activity peaked during late January and early February. The predominant influenza strain circulating this season has been influenza A (H1N1); however, the proportion of influenza B virus isolates has been increasing. During the

[†] Temperature of >100.0 F (>37.8 C) and either cough or sore throat in the absence of a known cause.

Levels of influenza activity are 1) no activity; 2) sporadic—sporadically occurring ILI or culture-confirmed influenza with no outbreaks detected; 3) regional—outbreaks of ILI or culture-confirmed influenza in counties with a combined population of <50% of the state's population; and 4) widespread—outbreaks of ILI or culture-confirmed influenza in counties with a combined population of >50% of the state's population.

The epidemic threshold is 1.654 standard deviations above the seasonal baseline. The expected seasonal baseline is projected using a robust regression procedure in which a periodic regression model is applied to observed percentages of deaths from P&I since 1983.

Influenza Activity — Continued

weeks ending February 24, March 3, and 10, 70% of isolates nationwide were influenza B, and during those weeks influenza B viruses predominated (range: 61%–93%) in eight of nine surveillance regions.

Influenza activity as reported by WHO/NREVSS laboratories and U.S. sentinel physicians peaked during the week ending January 27, when 24% of specimens tested were positive for influenza and 4.1% of visits to U.S. sentinel physicians were the result of ILI. During the previous three seasons, the peak percentage of specimens testing positive for influenza ranged from 28% to 32% and the timing of the peak varied from as early as mid-to-late December during the 1999–2000 season to as late as the middle of February during the 1998–99 season. The peak percentage of patient visits to sentinel physicians for ILI ranged from 4.9% in late December of the 1997–98 season to 5.6% during early February of the 1999–2000 season.

As reported by state and territorial epidemiologists, influenza activity peaked during the weeks ending February 3 and 10, when 38 states reported regional or widespread influenza activity. This peak was lower than those reported during the 1997–98, 1998–99, and 1999–2000 seasons, when 46, 43, and 44 states reported regional or widespread influenza activity, respectively. Similar to the laboratory and sentinel physician data, the peak number of states reporting regional or widespread activity during the 1999–2000 season occurred earlier (mid-January) than this season and either of the previous two seasons.

As reported by the 122 Cities Mortality Reporting System, the percentage of total deaths that resulted from P&I remained below the epidemic threshold each week since October 1. During the previous three seasons, the percentage of deaths attributed to P&I was above epidemic threshold for 10 consecutive weeks each season.

Influenza A (H1N1) viruses, the predominant strain this year, last circulated widely in the United States during the 1995–96 and 1988–89 seasons. Influenza A (H1N1) viruses circulated during 1918–1957, then disappeared for 20 years. The influenza A (H1N1) virus that reappeared in 1977 was antigenically and genetically similar to strains isolated in 1950 and 1951. Since their reappearance in 1977, influenza A (H1N1) viruses have had less impact on persons born during or before the mid-1950s than on those born after that time probably because immunity developed during the 1940s and 1950s (3).

CDC collects and reports U.S. influenza surveillance data during October–May. This information is updated weekly and is available through CDC's voice information system, telephone (888) 232-3228, the fax information system, telephone (888) 232-3299 (request document number 361100), or on the World-Wide Web, http://www.cdc.gov/ncidod/diseases/flu/weekly.htm.

- 1. CDC. Influenza activity—Unites States, 1999-2000 season. MMWR 1999;48:1039-42.
- 2. CDC. Influenza activity—United States and worldwide, April-October 2000. MMWR 2000;49:1006-8.
- 3. Noble GR. Epidemiologic and clinical aspects of influenza. In: Beare AS, ed. Basic and applied influenza research. Boca Raton, Florida: CRC Press, 1982:11–50.

Notice to Readers

World Water Day — March 22, 2001

In 1992, the United Nations Conference on Environment and Development designated March 22 of each year World Water Day. This year's theme, "Water and Health," will be organized by the World Health Organization (WHO). The objectives of World Water Day are to focus attention on the problems related to the drinking water supply; the importance of conservation, preservation, and protection of water resources; and to increase participation by governments, international agencies, nongovernment organizations, and the private sector in World Water Day activities (1).

Approximately 1.1 billion persons do not have access to potable water, and 2.4 billion persons do not have acceptable sanitation. Diarrhea causes 4 billion episodes of illness and 2.2 million deaths every year; the greatest burden of illness occurs among children aged <5 years. Safe water, adequate sanitation, and hygiene education can reduce diarrheal disease mortality by an estimated average of 65% and related morbidity by 26% (2).

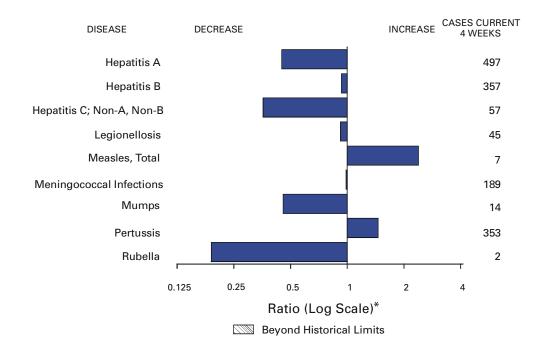
In response to the need for safe drinking water, CDC, in collaboration with the CARE/CDC Health Initiative, the Rotary Club of Estes Park, Colorado, the Gangarosa International Health Foundation, the CDC Foundation, and CARE has produced *Safe Water Systems for the Developing World: A Handbook for Implementing Household-Based Water Treatment and Safe Storage Projects*. This handbook was developed as a resource for program managers, technical staff, and other personnel in organizations involved in water and sanitation projects. The Safe Water System is a water quality intervention that uses simple, inexpensive technologies to improve water quality at the point of use.

Additional information about World Water Day is available from WHO and the International Water and Sanitation Centre's World-Wide Web site, http://www.worldwaterday.org*. Information about the Safe Water System is available from the Foodborne and Diarrheal Diseases Branch, National Center for Infectious Diseases, CDC, e-mail: safewater@cdc.gov, telephone (404) 639-2206, and on the World-Wide Web, http://www.cdc.gov/safewater.

- 1. IRC International Water and Sanitation Centre. World Water Day objectives. Available at http://www.worldwaterday.org. Accessed March 2001.
- 2. World Health Organization and United Nations Children's Fund. Global water supply and sanitation assessment 2000 report. Geneva, Switzerland and New York, New York: World Health Organization and United Nations Children's Fund, 2000.

^{*}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.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending March 17, 2001, with historical data



^{*} 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 March 17, 2001 (11th Week)

	Cum. 2001		Cum. 2001
Anthrax	-	Poliomyelitis, paralytic	-
Brucellosis*	12	Psittacosis*	3
Cholera	-	Q fever*	2
Cyclosporiasis*	25	Rabies, human	-
Diphtheria	-	Rocky Mountain spotted fever (RMSF)	18
Ehrlichiosis: human granulocytic (HGE)*	3	Rubella, congenital syndrome	-
human monocytic (HME)*	2	Streptococcal disease, invasive, group A	596
Encephalitis: California serogroup viral*	-	Streptococcal toxic-shock syndrome*	15
eastern equine*	-	Syphilis, congenital [¶]	5
St. Louis*	-	Tetanus	1
western equine*	-	Toxic-shock syndrome	29
Hansen disease (leprosy)*	9	Trichinosis	2
Hantavirus pulmonary syndrome*†	2	Tularemia*	3
Hemolytic uremic syndrome, postdiarrheal*	11	Typhoid fever	29
HIV infection, pediatric*§	37	Yellow fever	-
Plague	-		

^{-:} 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 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 February 27, 2001. Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending March 17, 2001, and March 18, 2000 (11th Week)

			011				Escherichia coli O157:H7* NETSS PHLIS					
	Cum.	Cum.	Chlan Cum.	Cum.	Cum.	Cum.	Cum.	Cum.	Cum.	Cum.		
Reporting Area UNITED STATES	2001 § 5,820	2000 6,226	2001 117,782	2000 140,712	2001 241	2000 264	2001 169	2000 286	2001 107	2000 225		
NEW ENGLAND Maine N.H. Vt. Mass. R.I. Conn.	200 3 12 9 118 24 34	500 6 6 - 360 17 111	4,222 197 203 123 1,788 632 1,279	4,863 284 227 118 2,029 487 1,718	7 - - 3 1 1 2	20 2 - 6 5 2	22 3 4 1 13	26 3 4 1 8	15 1 3 - 9 - 2	29 2 4 2 7		
MID. ATLANTIC Upstate N.Y. N.Y. City N.J. Pa.	1,180 29 740 241 170	1,591 65 985 387 154	6,797 N 4,232 781 1,784	12,689 N 5,368 2,748 4,573	19 8 11 -	20 12 4 1 3	12 12 - N	28 26 1 1 N	8 6 1 1	39 32 - 2 5		
E.N. CENTRAL Ohio Ind. III. Mich. Wis.	463 77 45 226 97 18	591 91 56 354 67 23	14,366 234 2,368 3,911 6,010 1,843	24,587 6,624 2,699 7,011 4,629 3,624	82 26 11 - 24 21	59 13 3 6 6 31	34 16 7 4 3 4	51 9 3 19 10	17 10 1 4 - 2	13 5 3 - 2 3		
W.N. CENTRAL Minn. Iowa Mo. N. Dak. S. Dak. Nebr. Kans.	110 29 15 38 1 - 9	147 31 10 67 - 2 7 30	5,723 1,213 610 1,439 193 396 619 1,253	8,011 1,731 774 2,840 209 389 718 1,350	8 - 4 1 - - 3	15 4 2 4 1 1 2	19 3 3 9 - 1 - 3	49 9 10 21 2 - 3 4	15 8 - 4 - 1 - 2	45 19 4 12 2 1 4 3		
S. ATLANTIC Del. Md. D.C. Va. W. Va. N.C. S.C. Ga. Fla.	1,673 37 131 166 137 12 101 171 187 731	1,508 25 154 113 113 7 74 153 180 689	25,481 645 2,723 647 3,302 457 4,134 2,590 4,822 6,161	26,322 607 2,461 593 3,300 440 4,001 3,498 4,883 6,539	53 - 12 3 3 - 10 - 12 13	38 - 4 - 1 - 3 - 22 8	23 - - 3 1 13 1 2	25 - 5 - 5 2 6 - 2 5	10 - - U 4 - 2 - 2 2	17 - 1 U 5 1 2 - 3 5		
E.S. CENTRAL Ky. Tenn. Ala. Miss.	360 51 132 95 82	279 37 104 91 47	9,636 1,812 2,963 2,506 2,355	10,447 1,682 2,977 3,384 2,404	4 - 1 2 1	9 - 1 6 2	7 - 4 3	14 5 4 1 4	3 2 1 -	14 4 8 - 2		
W.S. CENTRAL Ark. La. Okla. Tex.	629 45 188 36 360	532 20 91 17 404	20,561 1,877 3,716 2,095 12,873	21,121 994 4,003 1,813 14,311	4 2 1 1	14 1 2 1	13 - - 5 8	16 4 - 4 8	18 - 6 5 7	26 3 7 3 13		
MOUNTAIN Mont. Idaho Wyo. Colo. N. Mex. Ariz. Utah Nev.	241 5 5 - 40 15 93 23 60	210 3 3 1 52 25 55 58 43	6,434 366 390 175 576 1,136 2,685 237 869	8,103 271 421 164 2,252 991 2,729 469 806	20 - 2 - 12 3 1 2	18 1 1 1 6 1 2 6	13 - 2 - 7 - 4 -	29 8 4 2 10 - 3 1	8 - - - 4 - 3 1	12 - 1 2 5 - 3 1		
PACIFIC Wash. Oreg. Calif. Alaska Hawaii	964 117 38 798 2 9	868 101 22 721 - 24	24,562 2,879 1,041 19,507 493 642	24,569 2,670 1,005 19,685 501 708	44 N 8 36	71 U 2 69	26 4 3 19 -	48 5 7 32 - 4	13 5 1 5 - 2	30 8 6 13 - 3		
Guam P.R. V.I. Amer. Samoa C.N.M.I.	5 158 1 - -	7 150 5 -	960 U U U	U U U	- U U U	- U U U	N U U U	N 1 U U U	U U U U 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 February 27, 2001.

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending March 17, 2001, and March 18, 2000 (11th Week)

	Gonor		Hepati Non-A, I		Legione		Listeriosis		me ease
Reporting Area	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2001	Cum. 2000
UNITED STATES	55,257	73,139	311	700	117	135	60	418	854
NEW ENGLAND Maine N.H.	1,170 28 26	1,376 17 20	4 - -	5 - -	2	13 2 2	6 - -	116 - 42	127 - 15
Vt. Mass. R.I. Conn.	19 545 155 397	10 552 115 662	2 2 -	2 3 -	1 1 - -	7 - 2	- 4 - 2	1 14 - 59	30 - 82
MID. ATLANTIC Upstate N.Y. N.Y. City N.J. Pa.	4,446 1,295 1,898 476 777	7,248 1,131 2,347 1,553 2,217	18 11 - - 7	133 10 116 7	7 5 1 - 1	24 11 - - 13	6 3 1 - 2	195 161 - - 34	591 189 18 84 300
E.N. CENTRAL Ohio Ind. III. Mich. Wis.	6,974 185 1,042 1,815 3,316 616	14,784 3,737 1,227 4,869 3,377 1,574	40 4 - - 36	64 - - 8 56 -	39 20 4 - 11 4	41 17 5 4 8 7	8 2 - 5 1	10 10 - - - U	21 2 1 1 - 17
W.N. CENTRAL Minn. Iowa Mo. N. Dak. S. Dak.	2,455 395 202 1,013 9 43	3,342 648 193 1,643 10 57	44 - - 41 - -	96 - - 93 - -	10 1 2 4 -	5 1 2 2 -	2 - 1 -	10 7 - 3 -	14 6 - 3 - -
Nebr. Kans.	218 575	244 547	2 1	1 2	2 1	-	1	-	1 4
S. ATLANTIC Del. Md. D.C. Va. W. Va. N.C. S.C. Ga. Fla.	16,092 345 1,713 667 1,865 96 3,396 2,065 2,496 3,449	20,474 322 1,654 467 2,103 119 3,625 4,385 3,164 4,635	16 - 5 - - 4 2 - 5	16 1 2 - - 1 7 - - 5	22 - 7 1 2 N 2 - 1 9	26 2 8 - 3 N 3 2 - 8	8 - 1 - 1 1 - - 2 3	69 61 3 2 - 2 - 1	82 11 58 - 5 4 4 - -
E.S. CENTRAL Ky. Tenn. Ala. Miss.	6,377 732 2,007 2,139 1,499	7,480 682 2,311 2,594 1,893	43 1 11 - 31	103 10 21 3 69	8 5 2 1	3 1 1 1	4 1 2 1	2 2 - -	- - - -
W.S. CENTRAL Ark. La. Okla. Tex.	10,226 1,183 2,568 1,023 5,452	11,050 502 2,822 830 6,896	100 1 51 1 47	226 3 124 - 99	1 - 1 -	4 - 2 - 2	1 1 - -	-	3 - 2 - 1
MOUNTAIN Mont. Idaho Wyo. Colo. N. Mex. Ariz. Utah Nev.	2,032 18 18 15 751 184 732 24 290	2,240 2 22 16 763 186 903 70 278	17 - 1 3 5 6 - - 2	18 - - 9 4 4 - 1	7 - - 3 1 2 - 1	8 - 1 - 4 - - 3	5 - - 1 1 1 - 2	1 - - - - - - 1	- - - - - - -
PACIFIC Wash. Oreg. Calif. Alaska Hawaii	5,485 645 196 4,471 55 118	5,145 495 110 4,391 59 90	29 7 4 18 -	39 4 9 26	21 4 N 17 -	11 5 N 6 -	20 - 2 18 - -	15 2 13 - N	16 1 15 - N
Guam P.R. V.I. Amer. Samoa C.N.M.I.	263 U U U	97 U U U	- U U U	1 U U U	2 U U U	- U U U	- - - -	N U U	N 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 March 17, 2001, and March 18, 2000 (11th Week)

		1	, _0	 	Salmonellosis*						
		laria		s, Animal		TSS		ILIS			
Reporting Area	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000			
UNITED STATES	160	181	812	997	3,728	4,884	2,908	4,255			
NEW ENGLAND	16	4	90	105	298	304	267 8	327			
Maine N.H.	- 1	1 -	14 2	22 2 6	13 24	28 20	19	15 21			
Vt. Mass.	- 5	3	20 22	6 33	16 189	14 186	15 144	20 188			
R.I. Conn.	10	-	9 23	5 37	11 45	6 50	28 53	18 65			
MID. ATLANTIC	19	33	128	171	297	702	393	792			
Upstate N.Y. N.Y. City	7 11	10 13	103	131 U	124 139	113 210	64 156	207 239			
N.J.	-	5	24	22	-	223	72	134			
Pa.	1	5	-	18	34	156	101	212			
E.N. CENTRAL Ohio	24 5	25 2	4	13 2	537 187	725 173	452 126	383 140			
Ind. III.	7	1 15	1	-	44 137	60 255	40 144	<i>7</i> 7 1			
Mich. Wis.	12	6 1	3	6 5	108 61	103 134	98 44	116 49			
W.N. CENTRAL	3	10	- 58	5 79	230	222	205	49 274			
Minn.	1	4	12	22	31	39 24	75	82			
lowa Mo.	1 1	- 1	13 3	7 2	40 82	71	3 85	28 79			
N. Dak. S. Dak.	-	-	11 9	10 22	1 21	2 11	5 12	16 15			
Nebr. Kans.	-	2 3	10	- 16	16 39	31 44	- 25	24 30			
S. ATLANTIC	43	44	355	365	975	809	674	699			
Del. Md.	1 19	21	- 74	10 78	16 124	12 138	13 96	15 135			
D.C.	4	-	-	-	15	-	U	U			
Va. W. Va.	8 -	12	64 30	81 25	100 3	81 21	79 13	84 17			
N.C. S.C.	1 1	4	108 18	97 23	205 123	159 <i>7</i> 6	115 150	112 68			
Ga.	1	-	24	2 8	142	122	180	202			
Fla. E.S. CENTRAL	8 7	7 7	37 9	23 34	247 249	200 240	28 97	66 184			
Ky.	1	2	2	5	47	47	30	29			
Tenn. Ala.	3 3	4	7 -	25 4	66 102	55 83	56 -	87 58			
Miss.	-	1	-	-	34	55	11	10			
W.S. CENTRAL Ark.	3	2	74 -	162 -	210 38	460 43	282 29	322 22			
La. Okla.	1 1	2	- 15	9	27 17	56 39	73 22	73 38			
Tex.	1	-	59	153	128	322	158	189			
MOUNTAIN Mont.	12 1	12 1	33 5	34 9	299 9	425 18	218	335			
ldaho	i	-	-	-	12	24	4	24			
Wyo. Colo.	6	6	10	16 -	9 86	6 112	6 66	4 88 39			
N. Mex. Ariz.	1 1	2	1 17	2 7	33 105	41 127	66 29 78	39 124			
Utah Nev.	i 1	2 1	-	-	30 15	63 34	35	56			
PACIFIC	33	44	- 61	34	633	997	320	939			
Wash.	1 5	2	-	-	53 43	50 55	37 41	119			
Oreg. Calif.	26	35	39	27	529	831	177	71 695			
Alaska Hawaii	1 -	2	22	7 -	8 -	12 49	65	14 40			
Guam	-	-	-	-	-	-	Ų	U			
P.R. V.I.	Ū	2 U	26 U	11 U	44 U	6 8 U	Ü	Ŭ U			
Amer. Samoa C.N.M.I.	U U	U U	U U	U U	U U	Ü	U U	U U			
J., 4.1VI.I.	<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 March 17, 2001, and March 18, 2000 (11th Week)

	veeks end			<u>01, and M</u>	<u>/larch 18, 2000 (11th Week)</u>							
	NET	Shige SS		PHLIS	Sy (Primary 8	philis & Secondary)	Tube	rculosis				
Reporting Area	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000				
UNITED STATES	1,870	3,053	987	1,957	909	1,336	1,321	2,067				
NEW ENGLAND	22	66	27	52	7	20	62	57				
Maine N.H.	-	2 1	-	- 1	-	-	6	2 1				
Vt. Mass.	- 17	1 47	- 19	36	4	- 17	34	- 35				
R.I. Conn.	 - 5	6 9	1 7	6 9	3	1 2	3 19	2 17				
MID. ATLANTIC	161	269	122	262	5 51	57	266	331				
Upstate N.Y.	87 60	71 126	2 56	82 102	3	2 29	33 106	26				
N.Y. City N.J.	-	45	21	36	36 7	10	79	194 79				
Pa.	14	27	43	42	5	16	48	32				
E.N. CENTRAL Ohio	301 86	515 26	169 43	181 23	117 13	275 16	159 21	187 3 8				
Ind. III.	56 74	57 198	8 6 8	10 2	26 15	91 96	14 79	14 111				
Mich. Wis.	6 8 17	175 59	48 2	140 6	57 6	56 16	26 19	13 11				
W.N. CENTRAL	219	169	162	124	8	23	63					
Minn. Iowa	66 39	39 22	104	47 23	5	3 6	34 9	85 32 7				
Mo.	8 9	86	4 4 1	37	2	11	14	35				
N. Dak. S. Dak.	4	1	1	1	-		1	3				
Nebr. Kans.	13 25	15 6	10	11 5	- 1	2 1	5 -	1 7				
S. ATLANTIC	303	313	101	116	370	422	257	309				
Del. Md.	2 21	1 24	4	2 8	1 42	2 81	- 25	40				
D.C. Va.	13 14	- 12	U 6	U 13	9 31	16 27	10 21	23				
W. Va. N.C.	3 91	1 18	6 47	2 10	102	1 111	6 22	9 49				
S.C.	22	3	11	1	54	36	14	18				
Ga. Fla.	24 113	23 231	23 4	51 29	38 93	70 78	50 109	73 97				
E.S. CENTRAL	149	137	37 16	101	107	188	110	156				
Ky. Tenn.	57 19	31 62	16 16	20 75	9 51	18 123	12 31	14 58				
Ala. Miss.	37 36	9 35	5	4 2	23 24	25 22	56 11	61 23				
W.S. CENTRAL	188	511	223	166	146	194	39	356				
Ark. La.	88 11	45 69	65 38	3 35	12 28	12 51	23	20 6				
Okla. Tex.	2 87	8 389	120	5 123	18 88	45 86	16 -	9 321				
MOUNTAIN	150	212	82	86	40	39	54	85				
Mont. Idaho	- 5	22	-	- 15	-	-	- 4	- -				
Wyo. Colo.	-	1	- 21	1 17	- 2	- 1	18	-				
N. Mex.	32 26 74	38 23 74 5	21 20 34	14	2 4	1 3	1	9 17 22				
Ariz. Utah	5		7	31 8	26 6	33	14 4	7				
Nev.	8	49	-	-	2	2	13	30				
PACIFIC Wash.	377 39	861 160	64 37	869 190	63 13	118 10	311 38	501 34				
Oreg. Calif.	21 316	79 609	19 -	46 624	2 45	2 106	266	1 437				
Alaska Hawaii	1 -	3 10	- 8	2 7	3	-	7	12 17				
Guam	-	_	U	U	-	-	-	-				
P.R. V.I.	3 U U	10 U	U U	U U	62 U	37 U	Ū	17 U				
Amer. Samoa C.N.M.I.	U U	U U	U U	U U	Ü U	U U	Ū U	Ŭ 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 March 17, 2001, and March 18, 2000 (11th Week)

	U infl	ienzae,	1	epatitis (Vi		T VVE	Measles (Rubeola)						
		<i>ienzae,</i> isive	A	epatitis (Vi	гаг, ву гуј В	Je	Indige	nous	Impo		Tota		
Reporting Area	Cum. 2001 [†]	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	2001	Cum. 2001	2001	Cum. 2001	Cum. 2001	Cum. 2000	
UNITED STATES	266	293	1,669	2,704	973	1,197	-	13	2	9	22	15	
NEW ENGLAND	11	28	83	76	12	23	-	3	-	1	4	-	
Maine N.H.	-	1 4	1 3	3 7	1 4	1 6	-	-	-	-	-	-	
Vt. Mass.	11	3 17	2 31	2 33	1 2	2 1	-	1 2	-	1	1 3	-	
R.I. Conn.	-	3	3 43	2 29	4	1 12	-	-	-	-	-	-	
MID. ATLANTIC	28	43	85	170	106	209	-	1	1	2	3	6	
Upstate N.Y. N.Y. City	11 9	17 14	32 43	52 86	20 77	21 109	-	-	1 -	2	2	- 6	
N.J. Pa.	7 1	10 2	10	7 25	- 9	10 69	-	- 1	-	-	- 1	-	
E.N. CENTRAL	30	50	189	390	129	120	-		1	3	3	3	
Ohio Ind.	20 5	16 3	58 7	90 11	27 3	24 5	-	-	-	-	-	2	
III. Mich.	2	19 3	40 84	164 112	9 90	2 88	-	-	1	3	3	- 1	
Wis.	3	9	-	13	-	1	-	-	-	-	-	-	
W.N. CENTRAL Minn.	5	11 6	112	226	41 1	73 3	-	3	-	-	3	-	
lowa	1	-	5 9	21 25	5	11	-	-	-	-	-	-	
Mo. N. Dak.	3 -	4 1	33	140	28 -	47 -	-	3	-	-	3 -	-	
S. Dak. Nebr.	- 1	-	1 17	- 6	1 4	- 8	-	-	-	-	-	-	
Kans.	-	-	47	34	2	4	-	-	-	-	-	-	
S. ATLANTIC Del.	100	64 -	311 -	254 5	207	182 2	-	2	-	1 -	3	-	
Md. D.C.	26	23	50 12	34	26 3	34	-	2	-	1 -	3	-	
Va. W. Va.	8 4	13 1	27	42 23	16 3	28	U	-	U	-	-	-	
N.C. S.C.	16 2	5 1	23 13	56 3	51 1	73 2	-	-	-	-	-	-	
Ga.	16	17	80	32	58	10	-	-	-	-	-	-	
Fla. E.S. CENTRAL	28 16	4 14	106 60	59 115	49 68	33 87	-	-	-	-	-	-	
Ky.	-	8	9	8	5	14	-	-	-	-	-	-	
Tenn. Ala.	9	4 2	31 19	38 15	27 23	39 6	-	-	-	-	-	-	
Miss. W.S. CENTRAL	1 5	- 19	1 205	54 518	13 45	28 116	-	-	-	-	-	-	
Ark.	-	-	16	41	16	15	-	1 -	-	-	1 -	-	
La. Okla.	1 4	6 13	13 36	20 79	12 16	33 9	-	-	-	-	-	-	
Tex.	-	-	140	378	1	59	-	1	-	-	1	-	
MOUNTAIN Mont.	57 -	38	197 4	168 1	115 1	94 3	-	-	-	1 -	1	-	
ldaho Wyo.	1 -	2	23 1	8 2	4 -	4 -	-	-	-	1 -	1 -	-	
Colo. N. Mex.	10 10	10 11	25 6	40 21	26 33 36	23 28	-	-	-	-	-	-	
Ariz. Utah	33 1	11 2	95 17	68 13	36 4	28 3	-	-	-	-	-	-	
Nev.	2	2	26	15	11	5	-	-	-	-	-	-	
PACIFIC Wash.	14 -	26 2	427 16	787 3 9	250 18	293 7	-	3	-	1	4	6 3	
Oreg. Calif.	12 1	8 5	22 381	57 684	39 192	26 254	-	2 1	-	- 1	2 2	3	
Alaska	i	1	8	3	1	3	-	-	-	-	-	-	
Hawaii Guam	-	10	-	4	-	3	- U	_	- U	-	-	-	
P.R.		1	19	82	10	59 11	-		-		-	-	
V.I. Amer. Samoa	U	U U	U	U U	U	U U	U	U	U	U	U	U	
C.N.M.I.	U	U	U	U	U	U	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 49 cases among children aged <5 years, serotype was reported for 20, and of those, four were type b.

TABLE III. (Cont'd) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending March 17, 2001, and March 18, 2000 (11th Week)

	Mening	lococcal	liu ivia	ren 18,	2000 ((VEEK)		1			
	Dise	Disease		Mumps			Pertussis			Rubella		
Reporting Area	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000	
UNITED STATES	613	603	6	29	101	51	1,040	1,044	1	2	12	
NEW ENGLAND Maine	44	35 3	-	-	1 -	5	187	294 7	-	-	4	
N.H.	4	3	-	-	-	2	16	42	-	-	1	
Vt. Mass.	4 24	1 21	-	-	-	2	19 146	48 189	-	-	3	
R.I. Conn.	- 12	1 6	-	-	1	- 1	- 6	4 4	-	-	-	
MID. ATLANTIC	46	49	_	_	7	7	65	92	_	1	4	
Upstate N.Y.	17 10	10 16	-	-	3 2	7	57	46 20	-	1	2 2	
N.Y. City N.J.	18	10	-	-	-	-	-	_	-	-	-	
Pa.	1	13	-	_	2	-	8	26	-	-	-	
E.N. CENTRAL Ohio	51 26	105 17	2	5 1	13 4	2 2	121 98	169 108	1 -	1 -	-	
Ind. III.	1	15 31	2	3	3	-	3 6	8 14	- 1	- 1	-	
Mich.	15	28	-	1	6	-	13	6	-	-	-	
Wis.	9	14	-	-	-	-	1	33	-	-	-	
W.N. CENTRAL Minn.	39 -	38 3	-	2	5 -	1 -	32 -	28 9	-	-	-	
lowa Mo.	13 13	9 21	-	-	3 1	-	3 17	6 4	-	-	-	
N. Dak. S. Dak.	2 2	1 2	-	-		-	2	1	-	-	-	
Nebr.	2	1	-	-	1	-	-	1 2	-	-	-	
Kans.	7	1	-	2	-	1	10	5	-	-	-	
S. ATLANTIC Del.	126	88	1 -	3	12 -	7 -	42 -	56 1	-	-	1 -	
Md. D.C.	17	9	1	2	4	-	10	14	-	-	-	
Va.	12	16	U	1	1	U	6	3	U	-	-	
W. Va. N.C.	4 33	2 16	-	-	2	5	1 15	- 15	-	-	-	
S.C. Ga.	9 15	6 18	-	-	4	1	6	11 9	-	-	-	
Fla.	36	21	-	-	1	1	4	3	-	-	1	
E.S. CENTRAL Ky.	45 7	32 7	-	-	1	-	22 5	30 20	-	-	-	
Tenn.	17	13	-	-	-	-	13	2	-	-	-	
Ala. Miss.	17 4	10 2	-	-	1 -	-	2 2	7 1	-	-	-	
W.S. CENTRAL	93	75	1	2	11	-	4	13	-	-	3	
Ark. La.	8 26	3 22	1 -	1 1	2	-	2	4 2	-	-	-	
Okla. Tex.	11 48	8 42	-	-	- 9	-	1 1	- 7	-	-	- 3	
MOUNTAIN	31	36	_	4	3	25	516	194	_	_	-	
Mont.	-	1	-	-	-	-	3	1	-	-	-	
ldaho Wyo.	3	4 -	-	1	-	18 -	132 -	31 -	-	-	-	
Colo. N. Mex.	11 6	10 4	-	1 2	- 1	4 1	108 12	119 26	-	-	-	
Ariz. Utah	6 2	11 5	-	=	-	1 1	255 6	11 4	-	-	-	
Nev.	3	1	-	-	2	-	-	2	-	-	-	
PACIFIC	138	145	2	13	48	4	51	168	-	-	-	
Wash. Oreg.	21 18	10 14	N	N	2 N	3 1	16 4	27 17	-	-	-	
Calif. Alaska	98 1	117 1	1 1	12 1	41 -	-	31 -	116 2	-	-	-	
Hawaii	-	3	-		5	-	-	6	-	-	-	
Guam P.R.	- 1	3	U	-	-	U	-	-	U	-	-	
V.I.	U	U	U	U	U	U	Ü	U	U	Ü	Ü	
Amer. Samoa C.N.M.I.	U U	U U	U U	U U	U U	U U	U U	U U	U U	U U	U U	

N: Not notifiable.

U: Unavailable.

TABLE IV. Deaths in 122 U.S. cities,* week ending March 17, 2001 (11th Week)

March 17, 2001 (11th Week) All Causes, By Age (Years) All Causes, By Age (Years)															
		All Cau	ises, By	Age (Yo	ears)		P&I⁺			All Cau	ises, By	/ Age (Y	ears)		P&I⁺
Reporting Area	All Ages	≥65	45-64	25-44	1-24	<1	Total	Reporting Area	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND Boston, Mass. Bridgeport, Conn Cambridge, Mass Fall River, Mass. Hartford, Conn. Lowell, Mass. Lynn, Mass. New Bedford, Ma New Haven, Conn Providence, R.I. Somerville, Mass. Springfield, Mass Waterbury, Conn. Worcester, Mass. MID. ATLANTIC Albany, N.Y. Allentown, Pa. Buffalo, N.Y. Camden, N.J. Elizabeth, N.J.	. 26 31 34 10 ss. 31 . 46 . 41 48 73 2,312 53 20 103 31 27	451 103 26 16 24 57 23 8 28 31 U 6 6 1,598 36 17 71 118 21	7 10 3 14 6 1 2 10 U - 14 4 5 472 14 2 23 45	37 7 3 4 3 5 1 1 3 U - 4 4 2 160 2 1 2 4	8 2 1 1 5 49 1 2 1 1	6 1 1 - - 2 - - - 2 U	89 18 4 3 2 11 7 2 2 3 3 0 - 1 1 9 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S. ATLANTIC Atlanta, Ga. Baltimore, Md. Charlotte, N.C. Jacksonville, Fla Miami, Fla. Norfolk, Va. Richmond, Va. Savannah, Ga. St. Petersburg, F Tampa, Fla. Washington, D.t Wilmington, De E.S. CENTRAL Birmingham, Al. Chattanooga, Te Knoxville, Tenn. Lexington, Ky. Memphis, Tenn. Mobile, Ala. Montgomery, A	89 55 73 3 Fla. 82 190 C. 101 I. U 1,004 a. 208 enn. 97 126 62 . 216 87 Ia. 53	870 87 174 81 116 55 37 52 14 141 62 U 650 138 81 39 133 64 35	288 44 65 17 44 21 9 15 1 12 31 29 U 235 41 24 33 13 55 16 15	125 22 40 5 14 12 5 3 5 11 8 0 63 11 3 8 6 14 7 7	36 6 11 2 9 - 1 1 1 1 1 2 3 1 1 2 3 1 1 2 3 1 1 1 2 3 1 1 1 1	19 5 2 - 1 3 1 U 32 6 1 3 1 1 4 -	106 2 31 19 11 8 5 7 - 8 13 2 U 94 23 11 6 10 8 2
Erie, Pa. Sersey City, N.J. New York City, N.Y. Newark, N.J. Paterson, N.J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N.Y. Schenectady, N.Y. Scranton, Pa. Syracuse, N.Y. Trenton, N.J. Utica, N.Y. Yonkers, N.Y.	80 18 256 38 26 138 U 30 80 34 28 U	29 26 866 29 13 181 26 23 109 U 28 61 21 23 U	19 1 48 10 1 20 U 2 10 8 3 U	1 4 86 20 2 19 - 2 6 U - 4 4 2 U	24 7 2 6 2 - 1 U	10 5 - 2 - 2 U	1 50 5 3 12 6 1 6 1 3 1 4 1 4 1	Nashville, Tenn. W.S. CENTRAL Austin, Tex. Baton Rouge, La Corpus Christi, Dallas, Tex. El Paso, Tex. Ft. Worth, Tex. Houston, Tex. Little Rock, Ark. New Orleans, La San Antonio, Te Shreveport, La. Tulsa, Okla.	Tex. 75 224 84 113 372 83 . U x. 268 119 164	91 1,103 66 37 49 127 58 82 225 56 U 201 80 122	38 344 24 15 15 56 18 21 76 14 U 50 24 31	12 134 13 1 4 21 6 5 47 9 U 14 7 7	7 49 2 1 5 10 2 3 13 2 U 3 5 3	7 40 8 1 2 10 - 2 11 2 U - 3	22 124 6 - 5 15 3 10 36 3 U 18 14 14
E.N. CENTRAL Akron, Ohio Canton, Ohio Canton, Ohio Chicago, III. Cincinnati, Ohio Cleveland, Ohio Columbus, Ohio Dayton, Ohio Detroit, Mich. Evansville, Ind. Fort Wayne, Ind. Grand Rapids, Mi Indianapolis, Ind. Lansing, Mich. Milwaukee, Wis. Peoria, III. Rockford, III. South Bend, Ind. Toledo, Ohio Youngstown, Ohi W.N. CENTRAL Des Moines, Iowa Duluth, Minn. Kansas City, Kans Kansas City, Kans Kansas City, Mo. Lincoln, Nebr. Minneapolis, Min Omaha, Nebr. St. Louis, Mo. St. Paul, Minn. Wichita, Kans.	340 38 108 50 41 137 0 57 881 90 35 . 20 45	1,422 30 29 0 44 107 195 106 130 38 42 11 55 244 27 87 34 92 27 12 93 33 154 48 46 83 56	38 40 23 62 10 12 60 8 12 4 11 5 29 4 173 14 5 4 21 7 38 17 34 15	133 4 7 U 3 13 19 11 19 3 2 2 3 21 1 1 1 1 2 2 5 3 4 1 1 4 6 4 1 1 1 2 6 5 6 5 6 7 1 7 1 8 1 1 1 1 2 6 6 7 1 7 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	35 - U - 5 3 4 10 - 2 2 2 1 1 1 1 3 2 2 1 3 7 2 5	46 1 3 0 4 6 2 1 1 1 1 1 1 1 1 1 2 1 2 1 3 1 3 1 3 1	132 3 6 U 8 · 28 8 17 5 5 2 6 14 2 10 1 3 1 13 · 64 8 3 1 12 1 22 4 · 7 6	MOUNTAIN Albuquerque, N Boise, Idaho Colo. Springs, C Denver, Colo. Las Vegas, Nev. Ogden, Utah Phoenix, Ariz. Pueblo, Colo. Salt Lake City, U Tucson, Ariz. PACIFIC Berkeley, Calif. Fresno, Calif. Glendale, Calif. Honolulu, Hawa Long Beach, Cal Los Angeles, Cal Pasadena, Calif. Portland, Oreg. Sacramento, Cal San Diego, Calif. Santa Trancisco, C San Jose, Calif. Santa Cruz, Calif. Seattle, Wash. Spokane, Wash. Tacoma, Wash. TOTAL	44 44 127 128 129 129 129 129 129 129 129 129 129 129	750 127 34 42 80 128 25 106 23 75 110 1,246 127 60 55 259 31 148 U U 152 61 86 87,711	224 40 7 10 25 48 1 33 62 23 267 4 25 1 17 10 63 4 23 29 8 8 8 2 24 8 25 1 1 26 26 1 1 26 26 1 27 1 28 29 29 29 29 29 29 29 29 29 29 29 29 29	93 18 2 10 16 2 14 31 7 9 2 12 1 7 2 34 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	30 4 - 1 2 4 1 11 - 5 2 36 - 6 - 5 3 6 1 1 U 4 U 2 - 2 2 2 4 286	17 2 1 1 4 4 - 3 1 1 23 - 4 4 - 2 U 2 U 4 4 - 2 2 228	96 16 4 2 13 13 3 13 14 18 154 3 2 2 9 9 11 20 19 6 10 6 7 966

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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