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Update: Severe Acute Respiratory Syndrome — United States, 2003

CDC continues to work with the World Health Organization (WHO) and other partners to investigate cases of severe acute respiratory syndrome (SARS). This report updates information on reported SARS cases worldwide and among U.S. residents and summarizes information on one additional case with laboratory evidence of infection with the SARS-associated coronavirus (SARS-CoV).

During November 1, 2002–April 23, 2003, a total of 4,288 SARS cases were reported to WHO from 25 countries, including the United States; 251 deaths (case-fatality proportion: 5.8%) have been reported (*1*). In the United States as of April 23, a total of 245 SARS cases were reported to CDC from 37 states (Figure). Of these, 39 (16%) had illnesses characterized by the presence of pneumonia or acute respiratory distress syndrome consistent with the interim U.S. surveillance case definition for probable SARS (*2*). The remaining 206 (84%) had fever and respiratory symptoms (Table). Of the 39 probable SARS patients, 37 (94%) had traveled to mainland China, Hong Kong, Singapore, Hanoi, or Toronto; one (3%) was a health-care worker (HCW) who provided care to a SARS patient, and one (3%) was a household contact of a SARS patient. Twenty-seven (69%) of the probable SARS patients were hospitalized, and one (3%) required mechanical ventilation.

As of April 23, of the 245 reported SARS cases, 45 (18%) have diagnostic SARS-CoV laboratory findings (i.e., positive findings based on detection of antibody to SARS-CoV in serum or evidence of virus in respiratory specimens by reverse transcriptase polymerase chain reaction analysis, or negative findings based on absence of antibody to SARS-CoV in convalescent serum obtained >21 days after symptom onset). Thirty-nine reported cases (32 suspect and seven probable based on SARS case definition) tested negative for SARS-CoV; six have been identified with laboratory-confirmed SARS-CoV infection, all of which were classified as probable cases. Five of these six patients were described previously (*3*). Clinical information for the one additional patient and the related public health investigation and actions are summarized below.

Pennsylvania

On April 3, a man aged 52 years had onset of symptoms including fatigue, myalgia, headache, chills, and diaphoresis (sweating). The patient had diarrhea on April 5 and sought care at the emergency department (ED) of hospital A on April 6. A temperature of 100.7° F (38.2° C) was recorded, but diagnostic testing was not performed and he was discharged with a diagnosis of acute viral syndrome. By April 10, despite initiation of oral amoxicillin, his symptoms progressed to include a dry cough, prompting him to visit his primary-care provider. He had no fever or abnormal findings on physical examination. The patient had a chest radiograph at hospital B and phlebotomy at an outpatient laboratory. The chest radiograph was normal. On April 14, the patient went to the ED of hospital B with dehydration, cough, and severe shortness of breath. Bilateral interstitial infiltrates were present on chest radiograph. In the ED, he was identified as a suspect SARS patient approximately 2.5 hours after arrival. He was subsequently admitted to the hospital with a diagnosis of

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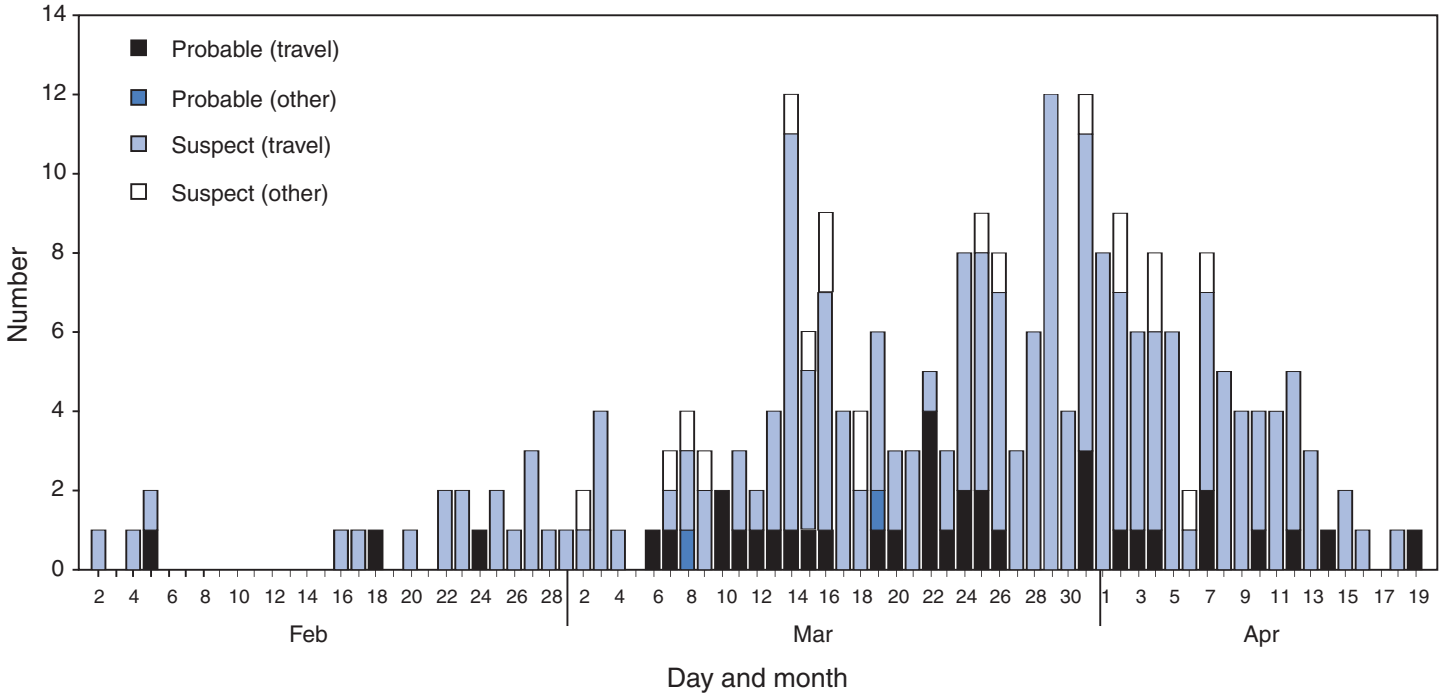
atypical pneumonia and possible SARS, and was placed in an isolation room with negative pressure. Serum samples collected on April 15 (day 12 of illness) demonstrated SARS-CoV antibodies. The patient received supportive care and antibiotic treatment (e.g., levofloxacin for pneumonia and metronidazole for diarrhea associated with laboratory-confirmed *Clostridium difficile*). By April 17, the patient's shortness of breath improved considerably, and he was discharged on April 21.

The patient had traveled to Toronto, Canada, for a religious retreat during March 29–30; the event has been linked to subsequent SARS cases among the attendees (*4*). On April 17, a CDC team traveled to Pennsylvania to assist the Pennsylvania Department of Health in its investigation of this patient and his contacts. Twenty-three HCWs (from hospitals A and B, the physician's office, and the outpatient laboratory) who had contact with the patient before his placement in an isolation room in the hospital were evaluated for their types and durations of contact with the patient, their use of personal protective equipment, and their subsequent health status. Six HCWs with unprotected, close contact were furloughed for 10 days after exposure and advised to monitor their temperatures twice daily and to report fever and respiratory symptoms to the hospital's occupational health clinic. The six furloughed HCWs included three persons from hospital B exposed on April 10 and three persons from hospital B exposed on April 14. While furloughed, two HCWs had mild symptoms (sore throat, rhinorrhea, mild cough, or headache), which resolved without treatment. Two additional HCWs (one each from hospital B and the outpatient laboratory) who had mild respiratory symptoms subsequently were furloughed from work, although neither had fever >100.4º F (>38.0º C) or evidence of SARS on clinical evaluation. After the man was identified as a potential SARS patient, HCWs in hospital B used fit-tested N95 respirators and wore gowns and gloves but did not wear eye protection.

The patient had close contact with four family members before SARS was diagnosed. Beginning April 9, the patient and his family members reported intermittently wearing surgical masks during close contact. One family member reported illness consistent with the case definition for suspect SARS; however, symptom onset occurred before contact with the index patient; this family member's illness has resolved and persons who had contact with this family member are being monitored. Among six additional nonfamily contacts, one reported new respiratory symptoms since exposure, but continues to be without fever or other symptoms of SARS. The investigation is ongoing and SARS-CoV testing of specimens from all contacts is under way.

FIGURE. Number of reported cases* of severe acute respiratory syndrome, by classification, exposure category,† and date of illness onset — United States, 2002



*N = 245.
†Reference 2.

Reported by: *State and local health departments. SARS Investigative Team; A Peck, MD, C Newbern, PhD, EIS officers, CDC.*

Editorial Note: The majority of suspect and probable cases of SARS in the United States continue to be travel associated, with only limited secondary spread to contacts such as family members and HCWs. Toronto has been added to the list of areas with suspected or documented community transmission of SARS included in the interim U.S. SARS case definition (*2*). SARS transmission in Toronto has been limited to a small number of hospitals, households, and specific community settings. In particular, cases of SARS have been documented among some members of a religious community who attended a large gathering in Toronto in late March; some of these persons infected members of their households and other close contacts (*4*). In response to these reports, CDC recommended that U.S. travelers to Toronto observe precautions to safeguard their health, including avoidance of places in which SARS is most likely to be transmitted (e.g., Toronto health-care facilities) (*5*). The Pennsylvania resident who attended this religious meeting is the only reported U.S. patient with SARS associated with travel to Toronto.

The availability of diagnostic testing for SARS-CoV is critical to more precisely characterize the epidemiology and clinical spectrum of the SARS epidemic, both worldwide and in the United States. Many U.S. patients, particularly those with milder clinical illness, have tested negative for SARS-CoV, reflecting the low specificity of the current case definition, which captures persons with respiratory infections caused by other infectious agents, and underscoring the importance of obtaining convalescent serum samples to make a final determination about infection with SARS-CoV. CDC is planning to update its interim surveillance case definition for SARS to include laboratory criteria in addition to the clinical and epidemiologic criteria.

Careful attention to infection-control precautions, both in home and health-care settings, remains critical to containment of SARS. Symptomatic persons should use infection-control precautions to minimize the potential for transmission and should seek health-care evaluation (*6*). Patients should inform health-care providers about the symptoms in advance so arrangements can be made, if necessary, to prevent potential transmission to others in the health-care setting. Patients in ambulatory settings should be screened promptly for fever, respiratory symptoms, recent travel, and close contact with SARS patients (*7*). The investigations summarized in this report suggest that, although both patients and health-care providers are aware of appropriate infection-control precautions, additional efforts are needed to ensure that

TABLE. Number* and percentage of reported severe acute respiratory syndrome (SARS) cases, by selected characteristics — United States, 2003

Characteristic	Probable cases† (n = 39) No.	(%)	Suspect cases† (n = 206) No.	(%)
Age (yrs)				
0–4	2	(5)	30	(15)
5–9	0	(0)	11	(5)
10–17	1	(3)	1	(0)
18–64	28	(72)	137	(67)
≥65	7	(18)	22	(11)
Unknown	1	(3)	5	(2)
Sex				
Female	19	(49)	100	(49)
Male	19	(49)	105	(51)
Unknown	1	(3)	1	(0)
Race				
White	19	(49)	112	(54)
Black	0	(0)	5	(2)
Asian	17	(44)	74	(36)
Other	0	(0)	1	(0)
Unknown	3	(8)	14	(7)
Exposure				
Travel§	37	(95)	187	(91)
Close contact	1	(3)	15	(7)
Health-care worker	1	(3)	4	(2)
Hospitalized >24 hrs¶				
Yes	27	(69)	47	(23)
No	11	(28)	156	(76)
Unknown	1	(3)	3	(1)
Required mechanical ventilation				
Yes	1	(3)	1	(0)
No	37	(94)	201	(98)
Unknown	1	(3)	4	(2)
SARS-associated novel coronarivus laboratory findings				
Positive	6	(15)	0	(0)
Negative	7	(18)	32	(15)
Pending**	26	(67)	174	(85)

* N = 245.
† Reference 2.
§ To mainland China, Hong Kong, Hanoi, Singapore, or Toronto.
¶ As of April 23, no deaths of SARS patients have been reported in the United States.
** Collection and/or laboratory testing of specimens in progress.

recommended precautions are instituted immediately when SARS is suspected and that such precautions are used consistently and correctly thereafter.

Acknowledgments

This report is based on data contributed by A Weltman, MD, Pennsylvania Dept of Health; S Stites, MT Temarantz, Northeastern District, Pennsylvania Dept of Health. T Burger, L Rhoades, MD, Lehigh Valley Hospital, Allentown; T Le, MD, Bethlehem, Pennsylvania.

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Update: Adverse Events Following Civilian Smallpox Vaccination — United States, 2003

During January 24–April 18, 2003, smallpox vaccine was administered to 33,444 civilian health-care and public health workers in 54 jurisdictions to prepare the United States for a possible terrorist attack using smallpox virus. This report updates information on vaccine-associated adverse events among civilians vaccinated since the beginning of the program and among contacts of vaccinees, received by CDC from the Vaccine Adverse Event Reporting System (VAERS) as of April 18.

In this vaccination program, CDC, the Food and Drug Administration, and state health departments are conducting surveillance for vaccine-associated adverse events among civilian vaccinees (*1*). As part of the vaccination program, civilian vaccinees receive routine follow-up, and reported adverse events after vaccination receive follow-up as needed. The U.S. Department of Defense is conducting surveillance for vaccine-associated adverse events among military vaccinees and providing follow-up care to those persons with reported adverse events.

Adverse events that have been associated with smallpox vaccination are classified on the basis of evidence supporting the reported diagnoses. Cases verified by virologic testing are classified as confirmed. Cases are classified as probable if possible alternative etiologies are investigated and excluded and supportive information for the diagnosis is found. Cases are classified as suspected if they have clinical features compatible

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(dis-'pach) 1 : a written message, particularly an official communication, sent with speed; see also *MMWR*.

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with the diagnosis, but either further investigation is required or investigation of the case did not provide supporting evidence for the diagnosis. All reports of events that follow vaccination are accepted (i.e., events associated temporally); however, reported adverse events are not necessarily associated causally with vaccination, and some or all of these events might be coincidental.

As of April 18, a total of 10 cases of myopericarditis have been reported (Table 1); one new report was received during April 14–18. During the same period, one new case of acute myocardial infarction (MI) was reported. Five cases of acute MI were previously reported (*1,2*)

Case 1. A woman aged 56 years with no history of heart disease was revaccinated on April 1. Approximately 1 week later, she had palpitations and was noted to have premature ventricular contractions on cardiac monitor. She did not report chest pain. On April 15, cardiac consultation indicated an effusion on her echocardiogram and mitral regurgitation. A working diagnosis of myocarditis/pericarditis was made. The patient was treated with nonsteroidal anti-inflammatory drugs and investigation continues.

Case 2. A man aged 49 years with no personal or family history of coronary artery disease was revaccinated on March 12. On the evening of April 7, he had an episode of chest pain that he attributed to indigestion. On April 8, while driving, he experienced increasingly severe chest pain, dyspnea, and diaphoresis. In the emergency department, an electrocardiogram showed nonspecific ST- and T-wave abnormalities and poor R-wave progression, all consistent with an anterior MI. Total creatine kinase and troponin-I assays were substantially elevated. Cardiac catheterization indicated an anterior MI caused by complete occlusion of the left anterior descending artery. Successful percutaneous transcoronary angioplasty and stent placement were performed, and the patient managed with aspirin, heparin, and intravenous beta-blockers. He is recovering at home.

During April 14–18, one new case of generalized vaccinia and two cases of inadvertent inoculation (nonocular) were reported. During the vaccination program, no cases of eczema vaccinatum, erythema multiforme major, fetal vaccinia, postvaccinial encephalitis or encephalomyelitis, progressive vaccinia, or pyogenic infection of the vaccination site have been reported (Table 1).

During April 14–18, in addition to the MI, nine other serious adverse events were reported, including one case of atypical chest pain and one case of anoxic encephalopathy (Table 2). Also during this period, 42 other nonserious events were reported (Table 2). Among the 369 vaccinees with reported other nonserious adverse events during January 24–April 18, the most common signs and symptoms were fever (n = 78), rash (n = 69), headache (n = 56), and pain (n = 56) (Table 2). All of these commonly reported events are consistent with mild expected reactions following receipt of smallpox vaccine. Some vaccinees reported multiple signs and symptoms.

During the current reporting period, information was received about one inadvertent contamination of a vaccine vial when a vaccinator was observed placing a needle from a vaccinee back into the vial, then removing the needle from the vial and discarding it. The vial was then used to vaccinate additional persons, but new needles were used. The initial vaccinee was tested for hepatitis B virus, hepatitis C virus,

TABLE 1. Number of cases* of selected adverse events associated with smallpox vaccination among civilians, by type — United States, January 24–April 18, 2003

Adverse events	No. new cases (April 14–18)			Total (January 24–April 18)		
	Suspected†	Probable§	Confirmed¶	Suspected	Probable	Confirmed
Eczema vaccinatum	—**	—	—	—	—	—
Erythema multiforme major (Stevens-Johnson syndrome)	—	—	NA††	—	—	NA
Fetal vaccinia	—	—	—	—	—	—
Generalized vaccinia	1	—	—	8	—	1
Inadvertent inoculation (nonocular)	2	—	—	29	—	2
Myocarditis/Pericarditis	1	—	—	7	3	—
Ocular vaccinia	—	—	—	—	—	2
Postvaccinial encephalitis or encephalomyelitis	—	—	NA	—	—	NA
Progressive vaccinia	—	—	—	—	—	—
Pyogenic infection of vaccination site	—	—	—	—	—	—

* Under investigation or completed as of April 18, 2003; numbers and classifications of adverse events will be updated regularly in *MMWR* as more information becomes available.
† Events are classified as suspected if they have clinical features compatible with the diagnosis, but either further investigation is required or additional investigation of the case did not provide supporting evidence for the diagnosis and did not identify an alternative diagnosis.
§ Events are classified as probable if possible alternative etiologies are investigated and excluded and supportive information for the diagnosis is found.
¶ Events are classified as confirmed if virologic tests are positive.
** No cases reported.
†† Not applicable.

TABLE 2. Number of cases* of other adverse events reported after smallpox vaccination among civilians, by severity — United States, January 24–April 18, 2003

Adverse events	No. new cases (April 14–18)	Total (January 24–April 18)
Other serious adverse events†	10§	**45**
Other nonserious adverse events¶	42	**369**

* Under investigation or completed as of April 18, 2003; numbers and classifications of adverse events will be updated regularly in *MMWR* as more information becomes available.
† Events that result in hospitalization, permanent disability, life-threatening illness, or death. These events are temporally associated with vaccination but are not necessarily causally associated with vaccination.
§ Includes one case of atypical chest pain, one case of acute myocardial infarction, one case of unspecified noncardiac chest pain, one case of anoxic encephalopathy, one case of neuropathy, one case of headache, one case of sinusitis and viral syndrome, one case of transient global amnesia, one case of vertigo, and one case hospitalized for headache, vomiting, and fever.
¶ Include expected self-limited responses to smallpox vaccination (e.g., fatigue, headache, pruritis, local reaction at vaccination site, regional lymphadenopathy, lymphangitis, fever, myalgia and chills, and nausea); additional events are temporally associated with smallpox vaccination but are not necessarily causally associated with vaccination.

and human immunodeficiency virus; all tests were negative. Investigation is ongoing for evidence of any complications from this event.

During this reporting period, no vaccinia immune globulin was released for civilian vaccinees. No cases of vaccine transmission from civilian vaccinees to their contacts have been reported during the vaccination program (Table 3). A total of 14 cases of transmission from military personnel to civilian contacts have been reported. Surveillance for adverse events during the civilian and military smallpox vaccination programs is ongoing; regular surveillance reports will be published in *MMWR*.

Reported by: *Smallpox vaccine adverse events coordinators; National Immunization Program, CDC.*

Editorial Note: This report highlights the need to ensure proper infection-control procedures to avoid contamination of multidose vials. A recent supplement to the Advisory Committee on Immunization Practices (ACIP) recommendations for using smallpox vaccine states that the needle should not be reinserted into the vaccine vial (*3*). CDC's *Smallpox Fact Sheet* (http://www.bt.cdc.gov/agent/smallpox/vaccination/vaccination-method.asp) states that the same needle should never be dipped into the vaccine vial more than once to avoid contamination of the vaccine vial (*4*). Immediately after use, each presterilized needle should be disposed of in a biohazard waste container for sharp objects. Potentially contaminated vials should be discarded. Vaccinees who receive potentially contaminated vaccine should be offered follow-up testing for infectious diseases of concern, if possible, based on knowledge of test results from the initial vaccinee. Incidents of potentially inappropriate administration of smallpox vaccine should be reported to VAERS at http://www.vaers.org.

This report includes cases reported as of April 18 that are either under investigation or have a reported final diagnosis. Because of ongoing discussions of final case definitions, numbers and classifications of adverse events might change and will be updated regularly in *MMWR*.

TABLE 3. Vaccinia immune globulin release and vaccinia transmission to contacts — United States, January 24–April 18, 2003

Events	No. new cases (April 14–18)	Total (January 24–April 18)
Vaccinia immune globulin release	0	**1**
Vaccinia transmission to contacts*		
Health-care settings	0	**0**
Other settings	0	**0**

* No cases of transmission from civilian vaccinees have been reported.

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Nationwide Measles Vaccination Campaign for Children Aged 6 Months–12 Years — Afghanistan, 2002

The public health infrastructure in Afghanistan has been devastated by 23 years of civil war, and both the infant mortality rate (165 per 1,000 live-born infants) and the mortality rate for children aged <5 years (256 per 1,000 live-born infants) are among the highest in the world (*1,2*). The major causes of death among children aged <10 years are diarrhea (32%), measles (25%), respiratory tract infections (13%), and other causes (30%), including malnutrition, scurvy, chronic diseases, and fever of unknown origin (*3*). Measles accounts for an estimated 30,000–35,000 deaths each year in Afghanistan (*4*). To reduce measles-related mortality, during 2002, the Ministry of Health (MoH) of the Interim Government of Afghanistan, with the support of international organizations, organized a nationwide measles vaccination campaign for children aged 6 months–12 years. This report describes the planning, implementation, and impact of this campaign. The

findings suggest that the campaign had a major impact on reducing measles-related mortality. Similar campaigns might be feasible in countries affected by complex emergencies.

Before implementation of the campaign, routine measles vaccination coverage was low. During 1998–2001, reported coverage with 1 dose of measles vaccine among infants in Afghanistan was 40%–47% (MoH/United Nations Children's Fund [UNICEF] country office, Afghanistan, unpublished data, 2002) (Figure). During 2001, among infants in Afghanistan, reported coverage was 45% for 3 doses of combined diphtheria-tetanus-pertussis (DTP) vaccine, 46% for 3 doses of oral poliovirus vaccine (OPV), and 47% for measles vaccine (*5*).

Polio National Immunization Days (NIDs)* served as a model for the measles vaccination campaign. Polio NIDs have been conducted throughout Afghanistan since April 1997 and subnational immunization days (SNIDs)† in some provinces since 1994 (*6*). Reported coverage achieved by NIDs has increased from 80% in 1997 to 99% in 2002 (MoH/UNICEF country office, Afghanistan, unpublished data, 2002). Because of the success of NIDs in reaching children, confirmed polio cases declined from 150 in 1999 to 11 in 2001 and 10 in 2002 (*7,8*).

Measles sentinel surveillance data were used to determine the target age group for the nationwide measles vaccination campaign. During 2001, a total of 8,762 cases of measles were reported through the country's 356 sentinel surveillance sites (*9*) (Figure). Of these 8,762 persons with measles, 8,356 (95%) were children aged ≤12 years (age distribution: aged <1 year, 8%; aged 1–5 years, 57%; aged 5–12 years, 35%) (World Health Organization [WHO], Afghanistan, unpublished data, 2001). This age group was targeted because measles vaccination campaigns in Africa have indicated that targeting only children aged 9 months–5 years might allow transmission to continue among children aged >5 years, who then spread the measles virus to susceptible younger siblings, resulting in ongoing mortality from measles (*10*).

In late 2001, an influx of approximately 2 million refugees returning from Pakistan and other neighboring countries was anticipated in Afghanistan in 2002. Acute and chronic malnutrition were prevalent and outbreaks of measles resulting in thousands of deaths were anticipated. In response, MoH, UNICEF, and WHO targeted children aged 6 months–12 years for measles vaccination and raised $8 million§ to support the campaign.

Because the large influx of returning refugees increased uncertainty about the size of the target population, data from the most recent polio NIDs (2001–2002) were used to estimate the population aged 6 months–12 years. The number of children aged <5 years vaccinated during NIDs was used to estimate the denominator of children aged 5–12 years by assuming equal annual birth cohort sizes among children of both age groups.

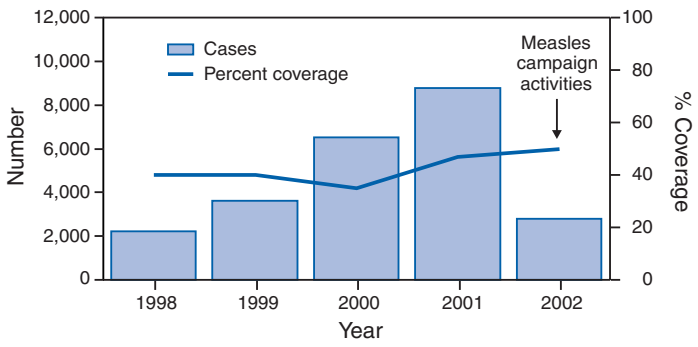
To reinforce safe vaccine handling, injection technique, and waste management, training sessions were organized for 30 trainers who were responsible for training vaccination teams. Each trainer was responsible for training approximately 500 vaccinators (estimated total: >15,000 vaccinators). To ensure the safety and quality of the campaign, vaccination teams were instructed to vaccinate ≤200 children per day in urban areas and ≤70 in rural areas. Auto-disable syringes and safety boxes were used at all vaccination sites.

The nationwide measles vaccination campaign was conducted throughout 2002, initially targeting high-risk districts and cities with the largest number of susceptible children, and subsequently the most remote and inaccessible villages. Vaccination sites were established in local mosques with the support of the community and religious leaders. Incoming refugees were vaccinated on entry at registration points along the borders with Iran and Pakistan. Approximately 40 international agencies and nongovernment organizations assisted with the transport of teams and supplies to an estimated 1,200 fixed vaccination sites (e.g., markets, mosques, and health centers) and 3,000 mobile clinics.

* Mass campaigns over a short period (days to weeks) in which 2 doses of OPV is administered to all children in the target group (usually aged 0–4 years) regardless of previous vaccination history, with an interval of 4–6 weeks between doses.

† Campaigns similar to NIDs but confined to part of the country.

FIGURE. Reported routine measles vaccination coverage among children aged <1 year and reported measles cases from sentinel surveillance sites — Afghanistan, 1998–2002*



*As of December 31, 2002.

§ In addition to the United Nations Foundation, donor countries for the measles campaign in Afghanistan were Australia, Canada, Finland, Germany, Italy, Japan, Poland, the United Kingdom, and the United States.

In October 2002, a review was performed in each district to determine measles vaccination coverage by using a range of denominators, including projected populations from the 1979 census and the 2002 polio NIDs. All children in districts with a mean coverage of <80% (using projections from 2002 NIDs) during the campaign were revaccinated, regardless of previous vaccination.

As of December 31, 2002, a total of 10,299,878 children were reported to have been vaccinated, representing 82% of the national target population (Table). During 2001–2002, the number of reported measles cases decreased from 8,762 to 2,574. The cost of the campaign was approximately $0.78 per child vaccinated (external donor costs only).

No deaths associated with measles vaccination were reported during the campaign. However, because a monitoring system for adverse events had not yet been established, some adverse events might have been missed. In one village, a cluster of 150 children with abscesses at the vaccine injection site attributable to poor vaccination technique was reported (MoH/UNICEF country office, Afghanistan, unpublished data, 2002).

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Editorial Note: This is the first nationwide measles vaccination campaign for a broad age range (children aged 6 months–12 years) implemented in a country affected by a complex emergency. The marked reduction of reported measles cases and the estimated high vaccination coverage indicate that the campaign probably had a major impact on reducing measles-related mortality. Similar campaigns might be feasible in other countries affected by complex emergencies if adequate resources are provided and careful planning and appropriate training are conducted. A better understanding of the campaign's impact in reducing measles cases and deaths is expected when measles incidence data for 2003 become available.

Rapid identification and training of vaccination teams for the measles campaign in Afghanistan was made feasible by the existing network of vaccinators trained through the polio eradication program. Training sessions for additional vaccinators were conducted (1 week per team), and detailed plans were drafted at the provincial and district level to implement the campaign. In addition, the measles campaign supported the November 2002 polio NIDs by identifying children who had not been vaccinated previously against polio.

The measles campaign faced many challenges, including 1) inadequate security in some areas; 2) difficulty in accessing several regions in the country, particularly during the winter; and 3) the lack of an adverse events surveillance system. Previous experiences gained during NIDs, including detailed mapping of population settlements, helped to identify communities with the largest target populations.

Additional benefits of the campaign that might strengthen the routine vaccination program include the improvement of the cold chain and increased social awareness about disease prevention through vaccination. Finally, the social mobilization necessary for the success of this public health initiative throughout markets and mosques in every district of the country might contribute to other public health efforts in Afghanistan. Future plans to strengthen measles control in Afghanistan include improved surveillance for vaccine-preventable diseases and strengthening the routine measles vaccination program by applying strategies used in this campaign (e.g., mosque-to-mosque vaccination) to improve routine coverage in remote areas.

TABLE. Estimated population and number and percentage of children aged 6 months–12 years who received measles vaccination, by region — Afghanistan, 2002*

Region	2002 Population	No. children aged 6 months–12 years	Children vaccinated No.	Children vaccinated (%)
Central	5,680,750	2,272,300	2,036,839	(90)
Southeast	3,174,450	1,269,780	1,102,962	(87)
East	2,862,020	1,144,808	1,137,742	(99)
Northeast	3,869,900	1,760,634	1,113,470	(63)
North	4,401,584	1,808,182	1,216,363	(67)
West	4,949,360	1,979,744	1,742,136	(88)
Central west	557,020	222,808	170,600	(77)
South	5,082,241	2,032,896	1,779,766	(88)
Total	**30,577,325**	**12,491,152**	**10,299,878**	**(82)**

* As of December 31, 2002.

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Progress Toward Global Eradication of Poliomyelitis, 2002

Since the 1988 World Health Assembly resolution to eradicate poliomyelitis globally (*1*) through 2002, the number of countries where polio is endemic declined from 125 to seven, and the estimated incidence of polio decreased >99% (*2*). In 2002, the European Region became the third World Health Organization (WHO) region certified as polio-free, joining the Region of the Americas and the Western Pacific Region, certified polio-free in 1994 and 2000, respectively (*3–5*). Despite these achievements, a provisional total of 1,920 polio cases were reported during 2002, a substantial increase from 483 in 2001, reflecting primarily the large polio epidemic in India (*6*). This report summarizes global progress achieved in polio eradication during 2002 and describes remaining challenges.

Implementation of Polio Eradication Strategies

Coverage among infants with 3 doses of oral poliovirus vaccine (OPV3) in 2001 was estimated at 75% globally, a decrease from 82% in 2000.* Coverage varied among WHO regions, from 54% in the African Region to 95% in the European Region. Except for Egypt, reported routine vaccination coverage in 2002 continues to be low in the remaining countries where polio is endemic.

All countries where polio is endemic and many countries where polio was recently endemic conducted supplemental immunization activities (SIAs) during 2002. An estimated 500 million children were vaccinated during 266 rounds of National Immunization Days (NIDs)†, sub-NIDs (SNIDs)§, or mopping-up activities. All countries used house-to-house vaccination in part or all of the SIA target areas. SIA monitoring data confirmed low vaccination coverage for some SIAs, particularly in Uttar Pradesh (India) and northern Nigeria, where poliovirus transmission remained intense.

All WHO regions have achieved certification-standard acute flaccid paralysis (AFP) surveillance consisting of 1) an annual nonpolio AFP detection rate of ≥1 per 100,000 persons aged <15 years and 2) at least two adequate stool specimens¶ collected from ≥80% of persons with AFP (Table). The African Region reached certification-standard AFP surveillance quality for the first time in 2002, with a nonpolio AFP detection rate of 3.1 and adequate specimens collected from 81% of persons with AFP. Globally, the nonpolio AFP rate increased from 1.6 in 2001 to 1.9 in 2002. The proportion of persons with AFP from whom adequate stool specimens were collected increased from 82% in 2001 to 87% in 2002. Except for Somalia (adequate specimens from 67% of persons with AFP), all other countries where polio is endemic achieved certification-standard AFP surveillance in 2002.

In 2002, a total of 97% of the 145 poliovirus laboratories in the global network were formally accredited by WHO. Global network laboratories tested approximately 70,000 fecal samples, a 12% increase over 2001. Despite a fourfold increase in the isolation of wild virus from 2001 to 2002 (Table), timeliness of reporting of laboratory results improved. Primary isolation results were available within 28 days of receipt in the national laboratory for 90% of samples, and intratypic differentiation was available within 28 days of isolate receipt in the regional reference laboratory for 88% of isolates.

Impact on Wild Poliovirus Transmission

The number of countries where polio is endemic decreased from 10 in 2001 to seven in 2002. Of the 1,920 polio cases reported in 2002, a total of 1,893 (99%) were reported from three countries: India (1,599), Nigeria (201), and Pakistan (93) (Figure). Despite certification-standard surveillance, few cases were reported in Afghanistan (11), Egypt (seven), Niger (three), and Somalia (three). Virus importations were detected in Zambia (two cases) and Burkina Faso (one case). Recently endemic poliovirus reservoir (Ethiopia, Angola, and Sudan) reported no cases in 2002 in the presence of sensitive surveillance.

A substantial increase in polio occurred in India, from 268 cases reported in 2001 to 1,599 cases in 2002, representing >83% of the globally reported cases in 2002. The states of Uttar Pradesh and Bihar accounted for 1,241 (78%) and 121

*This decrease is primarily the result of a change in the methodology used to produce official national estimates in two countries (India and China).
†Nationwide mass campaigns during a short period (days to weeks) in which 2 doses of OPV are administered to all children (usually aged <5 years), regardless of previous vaccination history, with an interval of 4–6 weeks between doses.
§Campaigns similar to NIDs but confined to parts of the country.
¶Two specimens collected at an interval of at least 24 hours, within 14 days of paralysis onset, and adequately shipped to the laboratory.

TABLE. Performance indicators for acute flaccid paralysis (AFP) surveillance — World Health Organization regions, 2001–2002*

Region/Country†	No. reported AFP cases		Nonpolio AFP rate§		% persons with AFP with adequate specimens¶		Confirmed (clinical and virologic)		Virus-confirmed cases	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
African	8,542	8,540	3.0	3.1	72	81	69	220	69	207
Nigeria	1,937	3,010	3.8	5.8	67	83	56	201	56	201
Niger	229	152	4.4	2.9	81	86	6	3	6	3
Eastern Mediterranean	3,865	4,596	1.9	2.3	83	88	143	114	143	114
Pakistan	1,573	1,798	2.3	2.7	84	87	119	93	119	93
Afghanistan	214	310	1.7	2.5	73	81	11	11	11	11
Egypt	257	576	11.9	2.4	91	91	5	7	5	7
Somalia	129	108	4.1	3.6	59	67	7	3	7	3
South-East Asian	10,612	12,914	1.9	2.0	83	83	268	1,599	268	1,599
India	7,470	9,718	1.9	2.0	84	82	268	1,599	268	1,599
American	2,192	2,119	1.2	1.3	91	91	10	0	0	0
European	1,764	1,775	1.2	1.2	81	83	4	0	3	0
Western Pacific	6,529	6,231	1.4	1.3	88	88	3	0	0	0
Total	**33,504**	**36,175**	**1.6**	**1.9**	**82**	**87**	**497**	**1,933**	**483**	**1,920**

*2002 data are provisional as of April 9, 2003.
†Data presented only from countries with indigenous poliomyelitis during 2002 and do not add to regional and global totals.
§Per 100,000 children aged <15 years.
¶Two stool specimens collected at an interval of at least 24 hours, within 14 days of paralysis onset, and adequately shipped to the laboratory.

(8%) of the total cases in India, respectively. During 2001–2002, the number of genetic lineages of wild poliovirus circulating in India remained the same for wild poliovirus type 1 (P1) (three major lineages) and wild poliovirus type 3 (P3) (four major lineages). Analysis of genetic data demonstrated that all lineages identified in India in 2002 were derived from strains that circulated in Utter Pradesh during 2000–2001.

In Nigeria, the increased number of reported wild poliovirus cases was in part caused by improved AFP surveillance. Despite the increase, poliovirus circulation was restricted geographically, with seven states in northern Nigeria reporting >80% of cases; southern Nigeria remained largely poliovirus-free. Pakistan reported 22% fewer cases in 2002 (93) compared with 2001 (119). In addition, transmission was more focal in 2002 compared with 2001. Genetically related P3 clusters decreased from six in 2001 to one in 2002.

Egypt continued to report P1 in 2002. Since 2000, environmental surveillance has detected evidence of widespread P1 transmission in Upper and Lower Egypt, compared with AFP surveillance, which detected few poliovirus-confirmed cases. During the second half of 2002, seven cases of polio were detected from Upper and Lower Egypt, including the greater Cairo area.

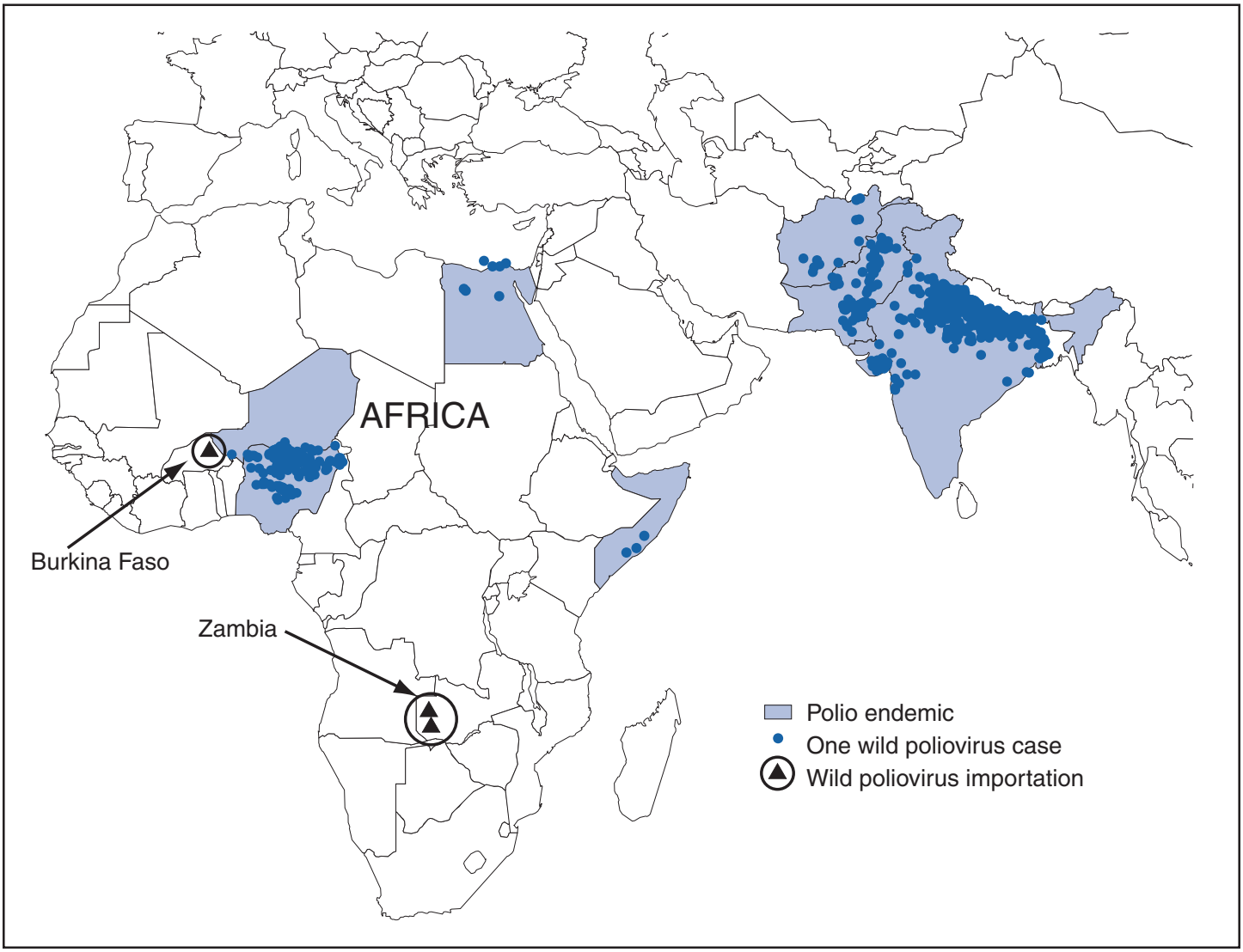
In Somalia, the last polio case was reported in October 2002 and was caused by P3. Only eleven poliovirus-confirmed cases were reported in 2002 in Afghanistan, despite the recent war and return of approximately 2 million refugees. Genetic sequencing data indicate that the only remaining area of endemic transmission in Afghanistan is in the south, near Kandahar. Low-intensity poliovirus transmission continued in Niger in 2002. Although polioviruses detected are related closely to Nigerian polioviruses, evidence exists of independent low-level wild poliovirus transmission in southern Niger. Vaccination campaigns were conducted in response to virus importations into Burkina Faso and Zambia with no subsequent spread.

Following episodes of circulating vaccine-derived poliovirus (cVDPV) type 1 in Haiti, the Dominican Republic (2000–2001), and the Philippines (2001), another outbreak (four cases) of cVDPV type 2 was detected during March–April 2002 in Madagascar, a country where OPV3 coverage in 2000 was 34% (*7,8*). No additional cases were detected in Madagascar after NIDs were conducted in mid-2002. The global polio laboratory network continues to screen for cVDPV isolates. Regional reference laboratories immediately refer suspected isolates to specialized laboratories for genetic sequencing studies. Since 2000, approximately 3,400 Sabin viruses from AFP cases have been screened without finding additional cVDPVs.

Preparations for Post-Eradication Activities

Progress has been made toward laboratory containment of wild polioviruses (*9*). Of 207 countries and territories where polio is not endemic, 155 (75%) have established a national task force and a national plan of action for laboratory containment. By the end of 2002, a total of 149 WHO member states had initiated national laboratory surveys. Of those, 79

FIGURE. Location of laboratory-confirmed poliomyelitis in countries where polio is endemic, 2002*



* As of April 9, 2003.

countries had completed and submitted an inventory of facilities holding wild-type polioviruses and potentially infectious materials, including 41 of 51 European, 33 of 36 Western Pacific, and five of 23 Eastern Mediterranean countries. Laboratory surveys are ongoing in 19 of 48 countries in the Region of the Americas, including the United States.

As part of post-eradication polio vaccination policy development, a framework was created for assessing and managing the risks for polio in the post-eradication era and addresses risks associated with 1) polio from continued use of OPV (i.e., vaccine-associated paralytic polio), 2) cVDPV or vaccine-derived poliovirus associated with immunodeficiency, and 3) the handling of wild poliovirus stocks. The framework summarizes knowledge on the magnitude of these risks and their expected evolution over time.

Reported by: *Vaccines and Biologicals Dept, World Health Organization, Geneva, Switzerland. Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Global Immunization Div, National Immunization Program, CDC.*

Editorial Note: Progress toward global polio eradication in 2002 included the certification of eradication in 51 countries of the European Region, a decrease from 10 remaining countries in 2001 to seven countries in 2002, and continued absence of indigenous wild poliovirus type 2, last detected in

October 1999 (*10*). Approximately 3 billion persons now live in 134 countries, areas, and territories certified free of indigenous wild poliovirus.

Further progress was evident in the reduction in diversity of poliovirus lineages in the majority of countries, and polio-free status was sustained in recently endemic, challenging country settings such as Bangladesh, the Democratic Republic of Congo, Ethiopia, and Sudan. In Angola, the April 2002 cease fire resulted in vaccinators having access to children in areas that had been inaccessible for years. Access to children also improved in Somalia in 2002. In addition, Afghanistan has recovered from a disruption in AFP surveillance activities following the September 11, 2001, terrorist attacks in the United States.

Despite these achievements, the fourfold increase in polio incidence globally, focused in India and northern Nigeria, represents a critical challenge to the program. Efforts are being focused on the northern Indian states of Uttar Pradesh and Bihar because of the intensity of transmission, and genetic evidence that these states were the source for re-introduction of poliovirus into other states that had become polio-free. Key factors contributing to the epidemic include the decline in the number, extent, and quality of SIAs during 2001–2002 in areas where large birth cohorts, population density, hygiene, and climate favored poliovirus transmission. Six large-scale SIAs will be conducted in India in 2003 (two NIDs and four SNIDs), and two NIDs are planned for early 2004. Afghanistan, Egypt, Niger, Nigeria, Pakistan, and Somalia also will conduct multiple additional rounds of large-scale SIAs during 2003–2004.

The global funding gap for polio eradication is another challenge to the program. This financial shortfall for 2003–2005, resulting largely from the recent global economic slowdown, has resulted in a lack of resources available for SIAs in countries where polio was recently but not currently endemic and that remain at high risk for re-emergence of polio. To ensure activities will proceed for the second half of 2003, the polio partnership has appealed to donors to have funds in place before mid-2003.

Progress achieved in laboratory containment is encouraging, and planning for the post-eradication era has included ongoing evaluation of the scientific, economic, political, operational, and financial implications of policy options. An April 2002 meeting of public health leaders (primarily from developing countries) in Annecy, France, generated advice on the development of postcertification policies. A communications and public information plan will keep countries and interested parties abreast of the issues. The international community should make every effort to overcome remaining challenges and achieve a polio-free world.

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Notice to Readers

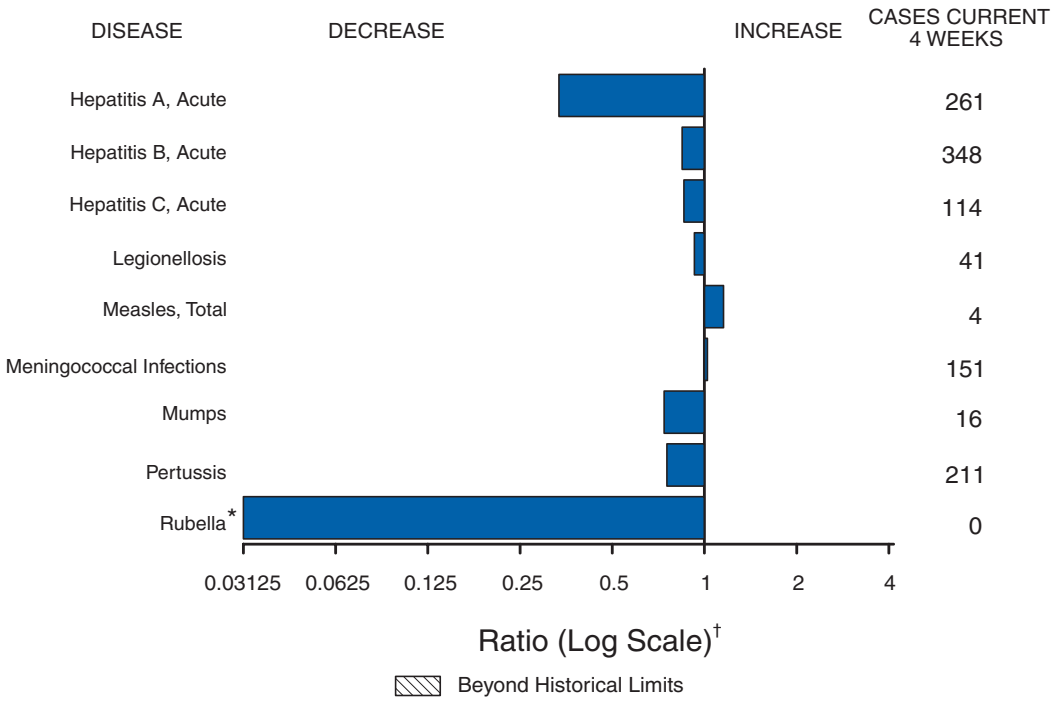
Public Health Information Network Conference

The first annual Public Health Information Network (PHIN) Conference will be held May 13–15, 2003, in Atlanta, Georgia. Sponsored by CDC and collaborating public health organizations, this conference brings together the various elements involved in the development of public health information systems, including Health Alert Network, BioWatch, the National Electronic Disease Surveillance System (NEDSS), the Epidemic Information Exchange, the many current systems used by both CDC and its partners in surveillance and response activities, and the co-developed or state/locally developed information systems that need to be compatible with PHIN.

Sessions are planned on how PHIN can support and transform areas such as terrorism preparedness and response, integrated child health, environmental health, interaction with clinical medicine, laboratory information systems, and distance learning. In addition, sessions will be held addressing information technology (IT) project management, workforce requirements, and information dissemination to multiple audiences. Workshops for IT specialists will be held in topical areas such as data modeling, PHIN architecture, requirements definitions, HL-7 messaging, and the NEDSS Base system.

(*Continued on page 379*)

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending April 19, 2003, with historical data



* No rubella cases were reported for the current 4-week period yielding a ratio for week 16 of zero (0).
† Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary of provisional cases of selected notifiable diseases, United States, cumulative, week ending April 19, 2003 (16th Week)*

	Cum. 2003	Cum. 2002		Cum. 2003	Cum. 2002
Anthrax	-	1	Hansen disease (leprosy)†	20	24
Botulism:	-	-	Hantavirus pulmonary syndrome†	4	1
foodborne	4	5	Hemolytic uremic syndrome, postdiarrheal†	34	26
infant	15	21	HIV infection, pediatric†§	75	48
other (wound & unspecified)	6	6	Measles, total	9¶	9**
Brucellosis†	16	27	Mumps	70	85
Chancroid	11	21	Plague	-	-
Cholera	-	1	Poliomyelitis, paralytic	-	-
Cyclosporiasis†	12	31	Psittacosis†	2	11
Diphtheria	-	-	Q fever†	20	13
Ehrlichiosis:	-	-	Rabies, human	-	1
human granulocytic (HGE)†	9	18	Rubella	1	1
human monocytic (HME)†	10	4	Rubella, congenital	-	2
other and unspecified	-	-	Streptococcal toxic-shock syndrome†	47	48
Encephalitis/Meningitis:	-	-	Tetanus	1	6
California serogroup viral†	-	-	Toxic-shock syndrome	30	41
eastern equine†	-	-	Trichinosis	2	5
Powassan†	-	-	Tularemia†	4	5
St. Louis†	-	-	Yellow fever	-	1
western equine†	-	-			

-: No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).
† Not notifiable in all states.
§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP). Last update March 30, 2003.
¶ Of nine cases reported, seven were indigenous and two were imported from another country.
** Of nine cases reported, four were indigenous and five were imported from another country.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending April 19, 2003, and April 20, 2002 (16th Week)*

Reporting area	AIDS		Chlamydia†		Coccidiodomycosis		Cryptosporidiosis		Encephalitis/Meningitis West Nile	
	Cum. 2003§	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	8,129	10,083	226,916	242,525	1,124	1,190	488	633	-	-
NEW ENGLAND	277	314	8,048	8,170	-	-	31	27	-	-
Maine	-	1	249	432	N	N	2	-	-	-
N.H.	5	8	467	504	-	-	2	6	-	-
Vt.	5	5	327	236	-	-	6	5	-	-
Mass.	49	173	3,300	3,195	-	-	14	8	-	-
R.I.	30	34	980	820	-	-	5	5	-	-
Conn.	188	93	2,725	2,983	N	N	2	3	-	-
MID. ATLANTIC	1,909	2,082	20,730	26,623	-	-	58	94	-	-
Upstate N.Y.	93	145	5,364	4,369	N	N	19	17	-	-
N.Y. City	1,108	1,281	5,527	9,082	-	-	16	40	-	-
N.J.	230	391	3,222	3,972	-	-	3	6	-	-
Pa.	478	265	6,617	9,200	N	N	20	31	-	-
E.N. CENTRAL	708	963	37,936	42,826	2	7	93	193	-	-
Ohio	111	191	7,584	11,831	-	-	19	43	-	-
Ind.	121	133	4,719	5,044	N	N	7	17	-	-
Ill.	271	475	11,685	11,602	-	1	10	36	-	-
Mich.	168	116	9,632	9,246	2	6	24	37	-	-
Wis.	37	48	4,316	5,103	-	-	33	60	-	-
W.N. CENTRAL	148	144	13,984	13,437	-	-	49	58	-	-
Minn.	23	27	2,773	3,182	N	N	30	20	-	-
Iowa	20	32	1,243	1,379	N	N	7	5	-	-
Mo.	77	46	5,249	4,404	-	-	2	10	-	-
N. Dak.	-	-	396	361	N	N	2	5	-	-
S. Dak.	3	2	751	659	-	-	6	3	-	-
Nebr.	8	16	1,377	1,192	-	-	2	12	-	-
Kans.	17	21	2,195	2,260	N	N	-	3	-	-
S. ATLANTIC	2,216	3,477	45,406	45,677	1	1	89	95	-	-
Del.	30	57	953	831	N	N	1	1	-	-
Md.	47	419	5,080	4,664	1	1	7	3	-	-
D.C.	163	152	741	1,025	-	-	-	3	-	-
Va.	216	229	5,218	5,035	-	-	9	1	-	-
W. Va.	5	19	770	732	N	N	-	1	-	-
N.C.	211	260	7,224	6,746	N	N	10	16	-	-
S.C.	160	253	4,206	4,219	-	-	1	2	-	-
Ga.	220	649	9,236	9,872	-	-	39	32	-	-
Fla.	1,164	1,439	11,978	12,553	N	N	22	36	-	-
E.S. CENTRAL	339	404	15,967	16,338	N	N	33	37	-	-
Ky.	10	46	2,584	2,750	N	N	7	1	-	-
Tenn.	170	185	5,591	5,004	N	N	7	20	-	-
Ala.	73	85	4,014	5,216	-	-	16	13	-	-
Miss.	86	88	3,778	3,368	N	N	3	3	-	-
W.S. CENTRAL	1,005	1,047	29,838	33,034	-	-	15	11	-	-
Ark.	34	58	1,836	2,155	-	-	1	3	-	-
La.	133	258	4,527	5,493	N	N	-	2	-	-
Okla.	49	48	2,436	3,145	N	N	3	2	-	-
Tex.	789	683	21,039	22,241	-	-	11	4	-	-
MOUNTAIN	351	313	12,480	15,397	816	789	27	36	-	-
Mont.	6	4	410	642	N	N	3	3	-	-
Idaho	-	6	806	666	N	N	6	10	-	-
Wyo.	1	3	319	266	-	-	1	5	-	-
Colo.	76	63	2,381	4,371	N	N	5	7	-	-
N. Mex.	27	11	818	2,438	-	4	-	3	-	-
Ariz.	168	133	4,772	4,570	803	771	3	4	-	-
Utah	42	18	1,276	563	2	4	7	1	-	-
Nev.	31	75	1,698	1,881	11	10	2	3	-	-
PACIFIC	1,176	1,339	42,527	41,023	305	393	93	82	-	-
Wash.	89	141	4,736	4,394	N	N	-	-	-	-
Oreg.	50	127	2,369	2,053	-	-	9	11	-	-
Calif.	1,026	1,053	33,143	32,209	305	393	84	70	-	-
Alaska	8	2	1,068	1,080	-	-	-	-	-	-
Hawaii	3	16	1,211	1,287	-	-	-	1	-	-
Guam	1	-	-	-	-	-	-	-	-	-
P.R.	58	273	346	13	N	N	N	N	-	-
V.I.	2	51	-	63	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	-	U	-	U	-	U	-	U

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

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

† Chlamydia refers to genital infections caused by *C. trachomatis*.

§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update March 30, 2003.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 19, 2003, and April 20, 2002 (16th Week)*

Reporting area	*Escherichia coli*, Enterohemorrhagic (EHEC)						Giardiasis		Gonorrhea	
	O157:H7		Shiga toxin positive, serogroup non-O157		Shiga toxin positive, not serogrouped					
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	272	382	38	14	20	5	4,093	5,224	86,626	104,531
NEW ENGLAND	17	31	4	1	-	1	282	502	2,082	2,467
Maine	1	1	-	-	-	-	35	53	21	24
N.H.	5	2	-	-	-	-	13	16	36	38
Vt.	-	1	-	-	-	-	19	31	28	32
Mass.	6	17	-	1	-	1	138	258	828	1,067
R.I.	1	3	-	-	-	-	33	35	294	290
Conn.	4	7	4	-	-	-	44	109	875	1,016
MID. ATLANTIC	16	30	-	-	5	2	750	1,155	8,547	12,457
Upstate N.Y.	9	24	-	-	4	-	235	288	2,136	2,432
N.Y. City	3	-	-	-	-	-	322	472	2,301	3,713
N.J.	4	6	-	-	-	-	56	134	1,721	2,419
Pa.	N	N	-	-	1	2	137	261	2,389	3,893
E.N. CENTRAL	63	113	8	1	5	-	632	899	17,561	21,100
Ohio	16	18	8	1	5	-	239	253	4,634	6,408
Ind.	8	8	-	-	-	-	-	-	1,828	2,267
Ill.	11	32	-	-	-	-	135	248	5,622	6,331
Mich.	16	24	-	-	-	-	180	259	3,972	4,376
Wis.	12	31	-	-	-	-	78	139	1,505	1,718
W.N. CENTRAL	40	53	4	4	5	-	402	496	4,772	5,385
Minn.	14	15	3	3	-	-	133	186	712	955
Iowa	3	11	-	-	-	-	61	72	246	338
Mo.	15	14	N	N	N	N	108	133	2,518	2,607
N. Dak.	1	-	-	-	1	-	9	6	12	18
S. Dak.	2	1	-	-	-	-	15	19	46	74
Nebr.	4	7	1	1	-	-	44	39	445	437
Kans.	1	5	-	-	4	-	32	41	793	956
S. ATLANTIC	35	32	10	5	-	-	769	766	22,532	26,773
Del.	-	2	N	N	N	N	14	14	392	524
Md.	1	1	-	-	-	-	32	30	2,464	2,680
D.C.	1	-	-	-	-	-	13	14	551	870
Va.	3	6	-	-	-	-	79	47	2,494	3,317
W. Va.	1	-	-	-	-	-	7	9	262	311
N.C.	8	8	-	-	-	-	N	N	3,984	4,698
S.C.	-	-	-	-	-	-	26	11	2,286	2,445
Ga.	9	10	2	4	-	-	326	219	4,737	5,242
Fla.	12	5	8	1	-	-	272	422	5,362	6,686
E.S. CENTRAL	12	15	-	-	-	-	91	92	7,815	9,156
Ky.	2	3	-	-	-	-	N	N	1,071	1,059
Tenn.	6	9	-	-	-	-	38	39	2,398	2,738
Ala.	3	1	-	-	-	-	53	53	2,403	3,298
Miss.	1	2	-	-	-	-	-	-	1,943	2,061
W.S. CENTRAL	14	11	6	-	3	1	63	34	12,195	14,811
Ark.	2	1	-	-	-	-	35	34	1,053	1,325
La.	-	-	-	-	-	-	3	-	2,915	3,496
Okla.	1	1	-	-	-	-	25	-	970	1,335
Tex.	11	9	6	-	3	1	-	-	7,257	8,655
MOUNTAIN	29	33	5	1	2	1	342	348	2,810	3,462
Mont.	-	7	-	-	-	-	13	18	29	37
Idaho	9	1	3	-	-	-	45	16	27	26
Wyo.	-	1	-	1	-	-	5	4	17	20
Colo.	8	4	1	-	2	1	91	125	681	1,156
N. Mex.	-	3	1	-	-	-	13	39	164	464
Ariz.	8	5	N	N	N	N	67	48	1,256	1,134
Utah	4	6	-	-	-	-	79	61	115	54
Nev.	-	6	-	-	-	-	29	37	521	571
PACIFIC	46	64	1	2	-	-	762	932	8,312	8,920
Wash.	15	6	-	-	-	-	48	81	872	917
Oreg.	7	23	1	2	-	-	84	122	291	269
Calif.	24	29	-	-	-	-	581	672	6,730	7,374
Alaska	-	1	-	-	-	-	25	21	165	191
Hawaii	-	5	-	-	-	-	24	36	254	169
Guam	N	N	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	4	1	31	4
V.I.	-	-	-	-	-	-	-	-	-	18
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 19, 2003, and April 20, 2002 (16th Week)*

Reporting area	*Haemophilus influenzae*, invasive								Hepatitis (viral, acute), by type	
	All ages		Age <5 years							
	All serotypes		Serotype B		Non-serotype B		Unknown serotype		A	
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	457	613	2	7	68	106	10	7	1,593	3,145
NEW ENGLAND	37	41	-	-	1	4	2	2	52	124
Maine	3	1	-	-	-	-	1	-	2	4
N.H.	5	4	-	-	-	-	-	-	3	6
Vt.	5	3	-	-	-	-	-	-	1	-
Mass.	16	23	-	-	1	2	1	2	32	58
R.I.	1	-	-	-	-	-	-	-	4	15
Conn.	7	10	-	-	-	2	-	-	10	41
MID. ATLANTIC	79	120	-	1	12	18	3	-	223	457
Upstate N.Y.	31	45	-	1	6	7	-	-	32	53
N.Y. City	13	33	-	-	4	7	-	-	105	210
N.J.	16	30	-	-	2	3	-	-	36	62
Pa.	19	12	-	-	-	1	3	-	50	132
E.N. CENTRAL	52	119	1	1	9	21	-	-	170	376
Ohio	20	38	-	-	5	5	-	-	31	92
Ind.	13	16	-	-	1	5	-	-	12	17
Ill.	14	40	-	-	3	7	-	-	52	135
Mich.	5	6	1	1	-	-	-	-	63	79
Wis.	-	19	-	-	-	4	-	-	12	53
W.N. CENTRAL	32	18	-	-	4	1	2	2	59	119
Minn.	15	13	-	-	4	1	-	1	14	15
Iowa	-	1	-	-	-	-	-	-	15	26
Mo.	11	3	-	-	-	-	2	1	13	25
N. Dak.	-	-	-	-	-	-	-	-	-	1
S. Dak.	1	-	-	-	-	-	-	-	-	3
Nebr.	-	-	-	-	-	-	-	-	4	6
Kans.	5	1	-	-	-	-	-	-	13	43
S. ATLANTIC	110	123	-	-	10	18	-	-	417	860
Del.	-	-	-	-	-	-	-	-	3	6
Md.	23	37	-	-	2	1	-	-	47	100
D.C.	-	-	-	-	-	-	-	-	9	31
Va.	9	9	-	-	3	2	-	-	21	28
W. Va.	3	2	-	-	-	-	-	-	4	9
N.C.	10	13	-	-	-	1	-	-	26	100
S.C.	2	3	-	-	-	1	-	-	13	16
Ga.	24	32	-	-	2	7	-	-	159	179
Fla.	39	27	-	-	3	6	-	-	135	391
E.S. CENTRAL	37	25	-	1	5	6	-	-	46	105
Ky.	2	3	-	-	-	-	-	-	10	26
Tenn.	21	12	-	-	3	3	-	-	23	42
Ala.	12	5	-	1	1	2	-	-	9	12
Miss.	2	5	-	-	1	1	-	-	4	25
W.S. CENTRAL	24	24	-	2	3	4	-	-	95	210
Ark.	4	1	-	-	1	-	-	-	2	13
La.	5	2	-	-	-	-	-	-	12	17
Okla.	15	19	-	-	2	4	-	-	4	12
Tex.	-	2	-	2	-	-	-	-	77	168
MOUNTAIN	61	77	1	2	17	17	2	2	122	189
Mont.	-	-	-	-	-	-	-	-	1	5
Idaho	-	1	-	-	-	-	-	-	-	18
Wyo.	-	1	-	-	-	-	-	-	1	2
Colo.	13	14	-	-	4	2	-	-	12	27
N. Mex.	8	13	-	-	3	4	-	-	7	5
Ariz.	30	35	1	1	7	8	-	1	76	96
Utah	6	10	-	1	3	2	-	-	10	12
Nev.	4	3	-	-	-	1	2	1	15	24
PACIFIC	25	66	-	-	7	17	1	1	409	705
Wash.	3	1	-	-	2	1	1	-	15	49
Oreg.	15	30	-	-	3	4	-	-	25	37
Calif.	2	19	-	-	2	9	-	1	363	601
Alaska	-	1	-	-	-	1	-	-	3	7
Hawaii	5	15	-	-	-	2	-	-	3	11
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	-	-	6	47
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 19, 2003, and April 20, 2002 (16th Week)*

Reporting area	Hepatitis (viral, acute), by type				Legionellosis		Listeriosis		Lyme disease	
	B		C							
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	1,827	2,000	535	608	252	210	116	116	1,333	1,812
NEW ENGLAND	62	77	-	14	9	7	6	11	104	162
Maine	-	1	-	-	-	1	-	2	-	-
N.H.	3	5	-	-	-	1	1	2	4	16
Vt.	1	2	-	6	1	-	-	-	3	1
Mass.	53	47	-	8	3	3	3	4	8	137
R.I.	3	8	-	-	1	-	-	1	48	3
Conn.	2	14	-	-	4	2	2	2	41	5
MID. ATLANTIC	330	610	36	39	36	61	16	24	1,002	1,390
Upstate N.Y.	28	38	15	18	19	14	5	9	548	666
N.Y. City	123	360	-	-	6	14	6	7	-	65
N.J.	151	107	-	5	2	11	3	2	147	228
Pa.	28	105	21	16	9	22	2	6	307	431
E.N. CENTRAL	129	172	75	37	57	69	11	18	12	48
Ohio	42	25	3	-	29	30	2	9	8	6
Ind.	4	9	1	-	3	4	1	1	4	2
Ill.	1	22	5	10	3	8	3	1	-	-
Mich.	68	104	66	27	22	18	5	4	-	-
Wis.	14	12	-	-	-	9	-	3	U	40
W.N. CENTRAL	84	74	87	259	9	14	4	4	22	18
Minn.	8	1	1	-	2	1	2	-	15	12
Iowa	4	11	-	1	3	3	-	1	2	3
Mo.	51	40	86	255	2	6	-	1	3	3
N. Dak.	-	1	-	-	1	-	-	1	-	-
S. Dak.	1	-	-	-	-	1	-	-	-	-
Nebr.	12	12	-	3	-	3	2	-	-	-
Kans.	8	9	-	-	1	-	-	1	2	-
S. ATLANTIC	574	463	68	61	84	22	32	13	143	133
Del.	2	4	-	3	-	3	N	N	26	20
Md.	32	49	5	6	15	6	4	3	78	82
D.C.	1	6	-	-	1	-	-	-	2	6
Va.	28	63	-	-	4	2	2	1	9	3
W. Va.	2	10	-	1	N	N	1	-	-	-
N.C.	51	46	3	6	8	3	7	1	17	14
S.C.	35	22	20	3	2	3	1	2	-	1
Ga.	222	125	3	27	7	4	9	2	2	1
Fla.	201	138	37	15	47	1	8	4	9	6
E.S. CENTRAL	95	101	25	73	5	5	4	6	10	8
Ky.	17	15	6	1	-	3	-	1	2	3
Tenn.	39	43	1	12	3	-	-	2	5	-
Ala.	22	20	4	2	1	2	3	3	-	3
Miss.	17	23	14	58	1	-	1	-	3	2
W.S. CENTRAL	69	119	207	87	16	5	8	8	5	21
Ark.	2	39	-	6	-	-	-	-	-	-
La.	26	19	16	14	-	1	-	-	2	1
Okla.	8	1	-	-	2	1	1	3	-	-
Tex.	33	60	191	67	14	3	7	5	3	20
MOUNTAIN	187	121	17	9	14	7	11	9	5	4
Mont.	8	3	1	-	-	1	1	-	-	-
Idaho	-	2	-	-	1	-	-	-	1	1
Wyo.	2	7	-	2	1	-	-	-	-	-
Colo.	26	25	12	2	2	2	5	2	1	-
N. Mex.	7	21	-	-	1	1	1	-	-	1
Ariz.	110	39	3	-	5	-	4	5	-	1
Utah	13	10	-	-	2	3	-	2	2	-
Nev.	21	14	1	5	2	-	-	-	1	1
PACIFIC	297	263	20	29	22	20	24	23	30	28
Wash.	13	15	1	4	2	1	1	1	-	-
Oreg.	40	48	4	7	N	N	1	2	6	1
Calif.	233	193	14	18	20	19	22	20	23	27
Alaska	7	5	-	-	-	-	-	-	1	-
Hawaii	4	2	1	-	-	-	-	-	N	N
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	7	27	-	-	-	-	-	-	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 19, 2003, and April 20, 2002 (16th Week)*

Reporting area	Malaria		Meningococcal disease		Pertussis		Rabies, animal		Rocky Mountain spotted fever	
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	249	312	609	661	1,240	1,847	1,093	1,952	75	90
NEW ENGLAND	6	18	31	47	139	224	119	242	-	-
Maine	1	1	4	3	1	3	11	14	-	-
N.H.	1	4	3	5	12	3	3	5	-	-
Vt.	-	-	-	3	20	37	7	47	-	-
Mass.	4	9	20	26	105	174	47	78	-	-
R.I.	-	-	1	3	1	-	11	17	-	-
Conn.	-	4	3	7	-	7	40	81	-	-
MID. ATLANTIC	49	96	41	75	117	97	103	255	6	13
Upstate N.Y.	14	11	11	22	68	71	74	151	-	1
N.Y. City	25	61	9	16	-	6	1	9	3	3
N.J.	3	13	8	11	7	-	28	32	3	1
Pa.	7	11	13	26	42	20	-	63	-	8
E.N. CENTRAL	25	44	80	94	109	232	8	11	1	2
Ohio	6	7	28	35	72	129	2	2	1	2
Ind.	-	2	14	13	12	15	2	1	-	-
Ill.	8	15	13	15	-	38	1	2	-	-
Mich.	10	15	19	16	13	23	3	2	-	-
Wis.	1	5	6	15	12	27	-	4	-	-
W.N. CENTRAL	9	23	55	56	68	167	160	121	2	8
Minn.	6	8	13	12	33	59	8	7	-	-
Iowa	2	2	7	7	9	45	21	11	1	-
Mo.	-	4	26	24	16	37	4	6	1	8
N. Dak.	-	1	-	-	-	-	16	7	-	-
S. Dak.	-	-	1	2	2	5	6	28	-	-
Nebr.	-	3	4	7	1	3	37	-	-	-
Kans.	1	5	4	4	7	18	68	62	-	-
S. ATLANTIC	71	57	117	90	142	105	539	670	61	58
Del.	-	1	7	4	1	1	-	9	-	-
Md.	22	22	11	3	17	15	2	114	7	8
D.C.	4	2	-	-	-	-	-	-	-	-
Va.	6	7	6	14	33	37	168	161	1	1
W. Va.	2	1	1	-	1	3	23	49	-	-
N.C.	6	7	16	11	54	13	211	178	47	38
S.C.	2	2	4	11	4	23	36	20	3	6
Ga.	6	9	14	10	15	7	63	110	-	5
Fla.	23	6	58	37	17	6	36	29	3	-
E.S. CENTRAL	6	4	24	28	28	55	15	121	4	6
Ky.	1	1	-	4	4	12	10	7	-	-
Tenn.	3	1	6	8	14	28	-	108	3	5
Ala.	2	-	8	9	8	8	5	6	-	1
Miss.	-	2	10	7	2	7	-	-	1	-
W.S. CENTRAL	20	2	111	78	69	396	83	401	-	1
Ark.	2	-	7	11	-	227	25	-	-	-
La.	1	2	19	8	4	3	-	-	-	-
Okla.	1	-	6	7	2	12	58	29	-	-
Tex.	16	-	79	52	63	154	-	372	-	1
MOUNTAIN	9	11	20	49	273	255	22	54	1	1
Mont.	-	-	2	2	-	2	3	4	-	-
Idaho	1	-	2	2	9	23	-	-	-	-
Wyo.	-	-	-	-	45	5	-	1	-	-
Colo.	7	6	4	15	97	112	-	-	-	-
N. Mex.	-	-	3	1	16	27	-	-	-	-
Ariz.	1	2	6	16	78	70	19	48	1	-
Utah	-	2	-	1	20	10	-	-	-	-
Nev.	-	1	3	12	8	6	-	1	-	1
PACIFIC	54	57	130	144	295	316	44	77	-	1
Wash.	7	3	10	23	67	106	-	-	-	-
Oreg.	5	1	25	21	78	15	-	-	-	-
Calif.	42	50	89	96	150	188	41	54	-	1
Alaska	-	1	-	1	-	2	3	23	-	-
Hawaii	-	2	6	3	-	5	-	-	-	-
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	2	1	-	-	20	18	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 19, 2003, and April 20, 2002 (16th Week)*

Reporting area	Salmonellosis		Shigellosis		Streptococcal disease, invasive, group A		*Streptococcus pneumoniae*, invasive: Drug resistant, all ages		*Streptococcus pneumoniae*, invasive: Age <5 years	
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	7,165	8,357	5,584	3,989	1,813	1,616	857	811	115	84
NEW ENGLAND	342	437	87	74	118	84	3	3	1	1
Maine	23	48	4	2	13	15	-	-	-	-
N.H.	22	22	1	3	11	19	-	-	N	N
Vt.	6	17	2	-	11	4	3	3	1	1
Mass.	194	244	53	53	82	46	N	N	N	N
R.I.	19	15	3	2	1	-	-	-	-	-
Conn.	78	91	24	14	-	-	-	-	-	-
MID. ATLANTIC	660	1,282	334	301	242	304	37	43	30	24
Upstate N.Y.	169	272	83	40	141	125	22	40	24	24
N.Y. City	251	446	112	141	33	78	U	U	U	U
N.J.	65	267	72	65	15	64	N	N	N	N
Pa.	175	297	67	55	53	37	15	3	6	-
E.N. CENTRAL	973	1,416	360	524	406	396	167	65	56	36
Ohio	326	347	83	262	123	83	116	-	43	-
Ind.	79	78	32	19	30	16	51	63	8	10
Ill.	301	548	146	157	84	130	-	2	-	-
Mich.	157	244	71	48	152	114	N	N	N	N
Wis.	110	199	28	38	17	53	N	N	5	26
W.N. CENTRAL	450	568	222	384	142	105	92	233	13	18
Minn.	126	130	27	42	65	53	-	154	13	17
Iowa	85	80	10	35	N	N	N	N	N	N
Mo.	131	215	72	40	28	24	5	4	-	1
N. Dak.	11	9	-	7	5	-	3	-	-	-
S. Dak.	19	24	8	124	13	4	-	1	-	-
Nebr.	33	34	78	90	16	8	4	20	N	N
Kans.	45	76	27	46	15	16	80	54	N	N
S. ATLANTIC	2,019	1,840	2,209	1,351	355	261	472	358	4	2
Del.	16	13	86	5	4	-	-	3	N	N
Md.	186	158	175	184	126	41	-	-	-	-
D.C.	11	25	16	18	6	3	2	26	-	1
Va.	178	184	87	307	22	33	N	N	N	N
W. Va.	17	19	-	2	16	7	24	22	4	1
N.C.	303	251	221	100	36	56	N	N	U	U
S.C.	77	102	57	18	10	21	45	80	N	N
Ga.	494	276	798	339	44	69	154	140	N	N
Fla.	737	812	769	378	91	31	247	87	N	N
E.S. CENTRAL	409	420	263	316	58	44	47	64	-	-
Ky.	79	65	36	48	10	5	3	8	N	N
Tenn.	135	127	84	17	48	39	44	56	N	N
Ala.	133	127	101	128	-	-	-	-	N	N
Miss.	62	101	42	123	-	-	-	-	-	-
W.S. CENTRAL	481	691	1,125	324	100	78	25	24	11	1
Ark.	75	81	17	50	2	1	6	4	-	-
La.	57	128	61	59	1	1	19	20	7	1
Okla.	63	67	183	69	31	14	N	N	4	-
Tex.	286	415	864	146	66	62	N	N	-	-
MOUNTAIN	488	473	271	146	208	150	13	21	-	2
Mont.	30	19	1	1	-	-	-	-	-	-
Idaho	59	30	6	2	10	4	N	N	N	N
Wyo.	8	17	1	1	-	6	3	8	-	-
Colo.	127	128	42	33	71	45	-	-	-	-
N. Mex.	37	71	41	40	51	43	10	13	-	-
Ariz.	149	120	151	49	69	43	-	-	N	N
Utah	48	33	15	12	7	9	-	-	-	2
Nev.	30	55	14	8	-	-	-	-	-	-
PACIFIC	1,343	1,230	713	569	184	194	1	-	-	-
Wash.	98	67	44	19	-	-	-	-	N	N
Oreg.	120	88	24	31	N	N	N	N	N	N
Calif.	1,046	994	629	500	150	177	N	N	N	N
Alaska	31	17	4	2	-	-	-	-	N	N
Hawaii	48	64	12	17	34	17	1	-	-	-
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	34	65	1	1	N	N	N	N	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending April 19, 2003, and April 20, 2002 (16th Week)*

Reporting area	Syphilis				Tuberculosis		Typhoid fever		Varicella (Chickenpox)
	Primary & secondary		Congenital						
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003
UNITED STATES	1,927	1,874	105	127	2,336	3,190	68	87	3,924
NEW ENGLAND	53	22	-	-	73	111	6	7	699
Maine	2	-	-	-	-	5	-	-	352
N.H.	5	-	-	-	3	4	-	-	-
Vt.	-	1	-	-	-	1	-	-	265
Mass.	37	14	-	-	44	50	2	6	80
R.I.	6	1	-	-	5	18	2	-	2
Conn.	3	6	-	-	21	33	2	1	-
MID. ATLANTIC	193	199	22	20	532	534	11	29	3
Upstate N.Y.	6	8	8	1	49	73	3	3	N
N.Y. City	106	112	7	8	324	260	5	14	-
N.J.	48	43	7	10	97	135	3	9	-
Pa.	33	36	-	1	62	66	-	3	3
E.N. CENTRAL	275	372	28	17	256	296	4	10	2,097
Ohio	64	48	2	-	38	45	-	4	440
Ind.	10	19	3	-	36	30	1	1	-
Ill.	98	110	12	15	130	141	-	1	-
Mich.	99	188	11	2	48	57	3	3	1,351
Wis.	4	7	-	-	4	23	-	1	306
W.N. CENTRAL	53	31	2	-	111	125	-	4	12
Minn.	13	15	-	-	47	55	-	2	N
Iowa	3	2	-	-	6	-	-	-	N
Mo.	22	8	2	-	16	41	-	1	-
N. Dak.	-	-	-	-	-	-	-	-	12
S. Dak.	-	-	-	-	9	5	-	-	-
Nebr.	-	3	-	-	6	1	-	1	-
Kans.	15	3	-	-	27	23	-	-	-
S. ATLANTIC	528	454	14	30	410	601	16	8	811
Del.	2	6	-	-	-	-	-	-	3
Md.	96	47	2	3	55	68	2	2	-
D.C.	6	19	1	-	-	-	-	-	7
Va.	27	9	1	-	57	60	8	-	174
W. Va.	-	-	-	-	5	8	-	-	567
N.C.	56	105	5	9	60	79	3	-	N
S.C.	37	36	2	3	43	36	-	-	60
Ga.	101	80	2	7	73	121	1	2	-
Fla.	203	152	1	8	117	229	2	4	N
E.S. CENTRAL	109	189	10	11	197	218	2	2	-
Ky.	16	29	1	2	31	32	-	2	N
Tenn.	46	75	4	3	61	91	-	-	N
Ala.	41	64	4	4	76	62	2	-	-
Miss.	6	21	1	2	29	33	-	-	-
W.S. CENTRAL	262	244	15	30	219	579	-	5	207
Ark.	12	13	-	1	26	34	-	-	-
La.	29	44	-	-	-	-	-	-	3
Okla.	15	22	-	1	28	39	-	-	N
Tex.	206	165	15	28	165	506	-	5	204
MOUNTAIN	82	91	10	4	70	83	4	5	95
Mont.	-	-	-	-	-	-	-	-	N
Idaho	6	1	-	-	1	2	-	-	N
Wyo.	-	-	-	-	1	1	-	-	16
Colo.	3	11	2	1	25	20	3	2	-
N. Mex.	7	11	-	-	-	10	1	-	-
Ariz.	59	61	8	3	34	38	-	-	-
Utah	3	2	-	-	9	8	-	2	79
Nev.	4	5	-	-	-	4	-	1	-
PACIFIC	372	272	4	15	468	643	25	17	-
Wash.	18	18	-	1	64	64	-	-	-
Oreg.	14	4	-	-	23	26	2	2	-
Calif.	334	246	4	14	334	496	23	15	-
Alaska	-	-	-	-	18	19	-	-	-
Hawaii	6	4	-	-	29	38	-	-	-
Guam	-	-	-	-	-	-	-	-	-
P.R.	52	8	1	-	-	17	-	-	49
V.I.	-	1	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE III. Deaths in 122 U.S. cities,* week ending April 19, 2003 (16th Week)

Reporting Area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	463	341	83	26	11	2	55
Boston, Mass.	164	114	32	10	6	2	15
Bridgeport, Conn.	36	25	7	3	1	-	5
Cambridge, Mass.	17	12	4	1	-	-	3
Fall River, Mass.	20	14	5	-	1	-	3
Hartford, Conn.	40	28	8	2	2	-	2
Lowell, Mass.	25	19	5	1	-	-	2
Lynn, Mass.	5	5	-	-	-	-	1
New Bedford, Mass.	23	20	3	-	-	-	1
New Haven, Conn.	U	U	U	U	U	U	U
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	5	2	-	2	1	-	1
Springfield, Mass.	35	25	7	3	-	-	2
Waterbury, Conn.	30	24	6	-	-	-	6
Worcester, Mass.	63	53	6	4	-	-	14
MID. ATLANTIC	2,095	1,506	392	116	31	44	113
Albany, N.Y.	48	35	10	2	-	1	7
Allentown, Pa.	21	21	-	-	-	-	3
Buffalo, N.Y.	103	71	23	4	3	2	9
Camden, N.J.	19	10	3	4	-	2	2
Elizabeth, N.J.	7	4	2	-	-	1	-
Erie, Pa.	41	35	4	-	-	2	2
Jersey City, N.J.	31	19	9	3	-	-	-
New York City, N.Y.	1,140	833	201	60	18	22	53
Newark, N.J.	44	20	14	7	-	3	1
Paterson, N.J.	21	9	8	3	-	1	1
Philadelphia, Pa.	217	142	53	12	8	2	9
Pittsburgh, Pa.§	32	22	6	3	-	1	1
Reading, Pa.	22	18	3	1	-	-	-
Rochester, N.Y.	116	92	13	6	1	4	5
Schenectady, N.Y.	22	14	5	3	-	-	2
Scranton, Pa.	28	25	2	1	-	-	4
Syracuse, N.Y.	127	90	27	6	1	3	9
Trenton, N.J.	19	13	6	-	-	-	1
Utica, N.Y.	24	22	1	1	-	-	1
Yonkers, N.Y.	13	11	2	-	-	-	3
E.N. CENTRAL	1,680	1,119	341	134	41	43	137
Akron, Ohio	53	36	12	1	1	3	9
Canton, Ohio	38	28	8	2	-	-	4
Chicago, Ill.	339	211	76	39	8	3	24
Cincinnati, Ohio	115	71	29	7	4	4	12
Cleveland, Ohio	77	50	20	4	2	1	6
Columbus, Ohio	177	125	33	12	5	2	18
Dayton, Ohio	126	89	23	5	4	5	9
Detroit, Mich.	182	99	36	33	6	8	21
Evansville, Ind.	23	14	6	2	-	1	4
Fort Wayne, Ind.	50	42	4	3	-	1	4
Gary, Ind.	U	U	U	U	U	U	U
Grand Rapids, Mich.	57	37	10	5	2	3	7
Indianapolis, Ind.	U	U	U	U	U	U	U
Lansing, Mich.	47	27	13	2	1	4	3
Milwaukee, Wis.	97	67	18	7	1	4	6
Peoria, Ill.	44	27	12	-	3	2	-
Rockford, Ill.	50	35	10	4	1	-	3
South Bend, Ind.	28	21	4	3	-	-	1
Toledo, Ohio	117	93	18	4	1	1	5
Youngstown, Ohio	60	47	9	1	2	1	1
W.N. CENTRAL	504	349	100	32	16	7	35
Des Moines, Iowa	59	41	13	3	1	1	5
Duluth, Minn.	23	15	4	1	3	-	2
Kansas City, Kans.	24	17	4	3	-	-	1
Kansas City, Mo.	76	51	15	4	5	1	2
Lincoln, Nebr.	46	34	8	3	-	1	4
Minneapolis, Minn.	66	47	12	4	-	3	6
Omaha, Nebr.	70	47	17	3	3	-	6
St. Louis, Mo.	U	U	U	U	U	U	U
St. Paul, Minn.	53	38	8	4	3	-	1
Wichita, Kans.	87	59	19	7	1	1	8
S. ATLANTIC	1,297	843	295	92	36	29	89
Atlanta, Ga.	143	86	37	9	4	7	4
Baltimore, Md.	121	77	25	11	5	3	16
Charlotte, N.C.	95	64	18	8	4	1	11
Jacksonville, Fla.	169	112	38	10	6	2	7
Miami, Fla.	98	55	28	8	6	1	6
Norfolk, Va.	50	36	5	5	-	4	2
Richmond, Va.	62	40	11	7	3	1	5
Savannah, Ga.	57	38	17	1	1	-	6
St. Petersburg, Fla.	79	64	11	1	1	2	5
Tampa, Fla.	211	136	53	13	3	5	15
Washington, D.C.	197	122	50	19	3	3	6
Wilmington, Del.	15	13	2	-	-	-	6
E.S. CENTRAL	835	556	169	72	23	14	62
Birmingham, Ala.	166	114	32	10	3	6	12
Chattanooga, Tenn.	59	31	16	9	3	-	1
Knoxville, Tenn.	66	51	8	4	2	1	7
Lexington, Ky.	42	31	7	3	1	-	2
Memphis, Tenn.	232	145	49	26	8	4	20
Mobile, Ala.	91	64	18	7	2	-	3
Montgomery, Ala.	32	23	6	1	1	1	6
Nashville, Tenn.	147	97	33	12	3	2	11
W.S. CENTRAL	1,484	903	331	134	71	45	122
Austin, Tex.	92	59	19	6	3	5	10
Baton Rouge, La.	20	14	2	3	-	1	-
Corpus Christi, Tex.	58	35	14	4	3	2	4
Dallas, Tex.	228	120	58	30	7	13	16
El Paso, Tex.	100	65	22	6	5	2	12
Ft. Worth, Tex.	100	68	25	3	1	3	7
Houston, Tex.	398	207	90	51	43	7	32
Little Rock, Ark.	56	32	15	6	2	1	3
New Orleans, La.	U	U	U	U	U	U	U
San Antonio, Tex.	228	158	48	14	4	4	13
Shreveport, La.	66	44	13	3	2	4	9
Tulsa, Okla.	138	101	25	8	1	3	16
MOUNTAIN	885	603	185	57	25	15	67
Albuquerque, N.M.	95	64	20	7	4	-	8
Boise, Idaho	47	33	8	2	2	2	5
Colo. Springs, Colo.	60	38	13	7	1	1	2
Denver, Colo.	111	72	27	7	3	2	11
Las Vegas, Nev.	243	161	59	16	6	1	14
Ogden, Utah	39	30	4	2	3	-	3
Phoenix, Ariz.	U	U	U	U	U	U	U
Pueblo, Colo.	30	22	4	2	2	-	2
Salt Lake City, Utah	107	73	21	7	1	5	16
Tucson, Ariz.	153	110	29	7	3	4	6
PACIFIC	1,693	1,163	358	105	37	27	153
Berkeley, Calif.	24	12	7	2	-	3	4
Fresno, Calif.	122	92	20	5	4	1	8
Glendale, Calif.	16	12	4	-	-	-	3
Honolulu, Hawaii	54	35	12	5	-	2	4
Long Beach, Calif.	98	64	24	5	4	1	24
Los Angeles, Calif.	309	210	64	20	8	7	13
Pasadena, Calif.	16	10	4	1	1	-	3
Portland, Oreg.	177	125	34	15	1	1	9
Sacramento, Calif.	210	139	49	14	7	1	19
San Diego, Calif.	166	110	34	11	8	3	21
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	168	126	32	6	2	2	17
Santa Cruz, Calif.	44	37	6	-	-	-	6
Seattle, Wash.	136	83	39	12	-	2	13
Spokane, Wash.	47	37	7	2	-	1	6
Tacoma, Wash.	106	71	22	7	2	3	3
TOTAL	10,936¶	7,383	2,254	768	291	226	833

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.

(*Continued from page 369*)

Registration and a tentative agenda are available at http://sec.cdcmeetings.com/phin/index.asp. On-line registration ends May 2, 2003.

Notice to Readers

Introduction of *M Guide*

To ensure that *MMWR* publications are both useful and easy to access, *MMWR* has introduced *M Guide Online Knowledge Centers*. Available through *MMWR* Online (http://www.cdc.gov/mmwr), each *M Guide* provides an online grouping of *MMWR* reports related to a single health topic. Features of the *M Guide* include a chronological list of *MMWR* reports relevant to the topic, summaries of the reports, links to the full reports, and links to other resources.

The first *M Guide* was introduced on April 23, 2003, and focused on severe acute respiratory syndrome (SARS). The SARS M Guide is available at http://www.cdc.gov/mmwr/mguide_sars.html.

Clarification: Vol. 52, No. 10

In the notice to readers, "FDA Licensure of Diphtheria and Tetanus Toxoids and Acellular Pertussis Adsorbed, Hepatitis B (Recombinant), and Poliovirus Vaccine Combined (PEDIARIX™) for Use in Infants," there were two potentially misleading statements in the paragraph following the heading "ACIP Approval for DTaP-HepB-IPV for the Vaccine for Children Program." First, the statement "3 doses of PEDIARIX™ can be administered to an infant who is born to a woman who is hepatitis B surface antigen (HBsAg)-positive or whose HBsAg status is unknown" is potentially misleading. A birth dose of single-antigen vaccine is preferred for all infants but must be administered to infants who are born to women who are HBsAg-positive or whose HBsAg status is unknown. The birth dose can then be followed by 3 doses of PEDIARIX™ at ages 2, 4, and 6 months. Second, the third dose of PEDIARIX™ should be administered at least 16 weeks after the first dose and at least 8 weeks after the second dose but not before age 6 months.

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