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Contribution of Selected Metabolic Diseases to Early Childhood Deaths — Virginia, 1996–2001

Sudden infant death syndrome (SIDS), or the death of an infant aged <1 year that remains unexplained after a thorough investigation*, is the third most common cause of death among infants in the United States (*1*). Sudden, unexplained deaths also occur among children aged ≥1 year; however, the number of these deaths is not well documented. Certain cases of SIDS and sudden unexplained death beyond infancy might be attributable to complications of unrecognized metabolic diseases (*2–4*). Tandem mass spectrometry (tandem MS) can be used to screen for several of these disorders (*5*). Despite the low prevalence of these diseases (*6*), newborn screening for these disorders has been found to compare favorably with the cost of other screening programs (*7*). However, the contribution of these diseases to early childhood deaths is not well understood. To determine the proportion of sudden, unexpected early childhood deaths associated with selected metabolic diseases, CDC, the Office of the Chief Medical Examiner (ME) in Virginia, and a private laboratory conducted a population-based study. This report summarizes the results of the study, which indicate that 1% of children had a positive postmortem metabolic screen using tandem MS. Of the eight children with positive screening tests, seven might have had improved outcomes had they been identified and treated during the newborn period. The use of tandem MS in newborn screening programs could offer an opportunity to prevent early childhood mortality.

The Virginia ME's records, including available autopsy reports, were reviewed for children who died before age 3 years during 1996–2001. In Virginia, the deaths of all children who die before age 18 months and whose death is attributed to SIDS, who die suddenly when in apparent good health, or who die when not under the care of a physician must be examined by the ME (*8*). For each child, data were recorded on demographics, the cause of death assigned by the ME, and the results of metabolic screening using tandem MS and dried postmortem blood samples†, if available. Additional medical information was collected for each child who had a positive metabolic screening result. For children without a screening result (32%), an archived, dried postmortem blood spot on standard metabolic screening filter paper, if available, was sent to an independent reference laboratory (Neo Gen Screening, Inc., Bridgeville, Pennsylvania) for testing and interpretation (*3*). Confirmatory molecular testing, if testing was available, was performed for each child with a positive screening test. If a confirmatory test using postmortem blood was not available for an identified disease, an independent biochemical geneticist with expertise in tandem MS performed a secondary interpretation of each mass spectrum.

A total of 793 (88%) of the 904 children who died before age 3 years, whose deaths were investigated by the ME, and whose deaths occurred during 1996–2001 were included in the analysis. The remaining children were excluded because neither postmortem metabolic screening results nor stored postmortem blood were available. Among children excluded from the study, none had a cause of death listed as SIDS. Of

*Including a scene investigation and autopsy.

†Tandem MS can identify selected disorders of fatty acid oxidation and amino acid metabolism in dried postmortem blood samples (*3*).

INSIDE

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the 793 children included in the study, eight (1%) had a positive screening result suggestive of a metabolic disease. Four children had screening results that suggested the presence of fatty acid oxidation disorders, and four had possible organic acidemias. Molecular testing for the most common genetic mutation (G985A) seen in medium-chain acyl-CoA dehydrogenase deficiency, a fatty acid oxidation disorder, confirmed the diagnosis in two children. For the remaining six children with positive tandem MS metabolic screens, no confirmatory tests using postmortem blood were available. However, their mass spectra printouts were confirmed to be indicative of the identified disorder by a second independent biochemical geneticist specializing in tandem MS who was blinded to the previous spectra interpretation.

Sex, race/ethnicity, and age group were not associated with having a positive screening result (Table). Five children had fatty livers at the time of autopsy; this finding is used occasionally to identify children for whom postmortem screening for these diseases is required. However, three children had normal liver pathology. The median age at death of the eight children with positive metabolic screens was 7.5 months (range: 2.0 days–2.7 years). Of these eight children, seven might have benefitted from identification by newborn screening. One child died at age 2 days and would not have benefitted from newborn screening because results would not have been available in time to initiate treatment. All of the children had medical histories and manners of death that were consistent with the natural history of these diseases (*9*).

TABLE. Number and rate* of children with risk factors for positive postmortem metabolic screening tests using tandem mass spectrometry among children who died before age 3 years and whose cases were referred to the Medical Examiner, by selected characteristics — Virginia, 1996–2001

Characteristic	No.	Rate	Rate ratio	(95% CI†)
Sex				
Male	4	8.4	Referent	
Female	4	12.7	1.5	(0.4–6.4)
Race/Ethnicity				
White, non-Hispanic	3	7.3	Referent	
Other§	5	13.2	1.8	(0.4–8.6)
Age at death				
0–1 month	2	28.2	5.4	(0.7–32.9)
1 month– <1 year	3	5.2	Referent	
1 year– <2 years	2	23.8	4.6	(0.6–27.9)
2 years– <3 years	1	16.4	3.2	(0.1–25.9)

* Per 1,000 unexpected deaths in children aged <3 years.
† Confidence interval; Fisher's exact test.
§ Black (n = two); Hispanic (n = three).

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Editorial Note: The findings in this report suggest that, during 1996–2001, undiagnosed metabolic diseases were contributing factors in 1% of unexpected deaths in young children in Virginia. Postmortem metabolic screening might have identified a cause of death for certain children who died unexpectedly. Because three of the children with positive tandem MS metabolic screens did not have fat in their livers, performing postmortem metabolic disease screening on the basis of abnormal liver pathology might not have identified all affected children. Approximately 5% of sudden infant deaths might be associated with metabolic diseases (*2*). The postmortem identification of affected children should prompt testing of siblings who might be affected by the same genetic disorder and might benefit from effective interventions. No population-based studies of survival have been performed for these conditions. Of the eight children with positive tandem MS metabolic screening tests, seven might have had improved outcomes if they had been identified by newborn screening and effective therapy had been initiated in time to prevent their deaths. Newborn screening programs considering including testing for metabolic diseases that can be detected by tandem MS (*5*) can use these results to estimate the number of children who might benefit from early identification and treatment.

The findings in this report are subject to at least three limitations. First, no test was available to confirm that six of the identified children had the disease suggested by tandem MS metabolic screening. However, the predictive value of tandem MS metabolic screening using postmortem blood is high for the fatty acid oxidation disorders identified (*4*). The positive predictive value of tandem MS metabolic screening for organic acidemias has not been established. Second, the contribution of metabolic diseases that can be identified by tandem MS to unexpected deaths might be underestimated. Affected persons sometimes die after age 3 years (*9*), and these persons were excluded from this study. In addition, children included in this study died in a manner that caused their deaths to fall under the jurisdiction of the Virginia ME; other deaths were not studied. All previously healthy children in Virginia who died suddenly or of an unknown cause should have been referred to the ME and would have been eligible for the study; however, a child with an undiagnosed metabolic disease who was under the care of a physician and whose death was attributed to another apparently clear cause (e.g., infection) might not have been referred. Finally, the sensitivity and specificity of tandem MS using postmortem blood is not known.

The data in this report illustrate one aspect of the natural history of the diseases detectable by tandem MS and could be useful to programs considering the addition of this technology to their newborn screening programs. These programs should consider several factors when deciding to add tests for metabolic diseases, including the prevalence (*6*) and natural history of the diseases, the availability of effective interventions, the costs and benefits of newborn screening (*7*), and the reliability of available screening technologies (*10*).

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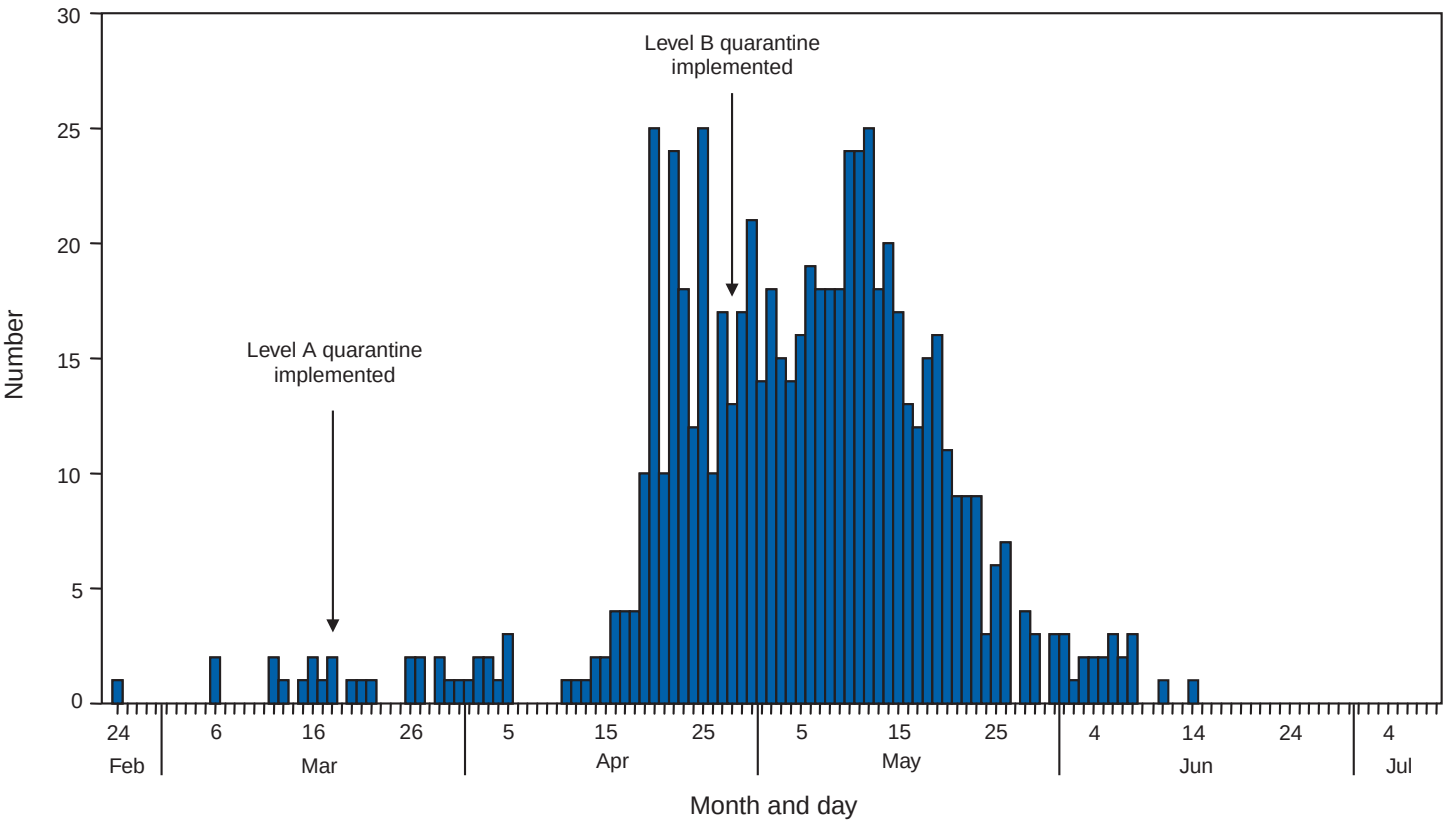
Use of Quarantine to Prevent Transmission of Severe Acute Respiratory Syndrome — Taiwan, 2003

On July 5, 2003, Taiwan was removed from the World Health Organization (WHO) list of severe acute respiratory syndrome (SARS)–affected countries. As of July 9, a total of 671 probable cases of SARS had been reported in Taiwan (Figure). On February 21, the first identified SARS patient in Taiwan returned from travel to Guangdong Province, mainland China, by way of Hong Kong. Initial efforts to control SARS appeared to be effective; these efforts included isolation of suspect and probable SARS patients, use of personal protective equipment (PPE) for health-care workers (HCWs) and visitors, and quarantine of contacts of known SARS patients (*1*). However, beginning in mid-April, unrecognized cases of SARS led to a large nosocomial cluster and subsequent SARS-associated coronavirus transmission to other health-care facilities and community settings (*2*). In response to the growing epidemic, additional measures were taken to limit nosocomial and community transmission of SARS, including more widespread use of quarantine. By the end of the epidemic, 131,132 persons had been placed in quarantine, including 50,319 close contacts of SARS patients and 80,813 travelers from WHO-designated SARS-affected areas (Table). This report describes the quarantine measures used in Taiwan and discusses the need for further evaluation of quarantine and other control measures used to prevent SARS.

Beginning March 18, persons who had been in close contact with a SARS patient were quarantined for 10–14 days (Level A quarantine) (Figure); initially, quarantine was for 14 days, but after June 10, the time was changed to 10 days in accordance with the incubation period for SARS. Close contact was defined as the following eight types of exposures: 1) HCWs who were not wearing PPE when evaluating and/or treating a SARS patient; 2) family members who provided care for a SARS patient; 3) persons who worked in the same office and whose cubicles or work stations were located within 3 meters (10 feet) of a SARS patient's work area; 4) friends of a SARS patient, as deemed appropriate by local health authorities; 5) classmates or teachers of a SARS patient who

FIGURE. Number* of probable cases of severe acute respiratory syndrome, by date of illness onset — Taiwan, February 24–July 9, 2003



* N = 671.

TABLE. Number of persons quarantined, number of persons with suspect or probable severe acute respiratory syndrome (SARS)*, and percentage of persons quarantined with suspect or probable SARS, by level and reason for quarantine — Taiwan, March–July 2003

Level/Reason for quarantine	No. persons quarantined	No. patients with suspect SARS	No. patients with probable SARS	% persons quarantined with suspect or probable SARS
Level A quarantine				
Health-care workers	1,751	6	0	(0.34)
Family members	6,663	14	8	(0.33)
Co-workers and friends	4,351	5	1	(0.14)
Classmates and teachers	14,919	7	2	(0.06)
Passengers on an airplane who sat in the same row as or adjacent three rows from a SARS patient	1,380	5	0	(0.36)
Other†	18,273	32	23	(0.30)
Discharged suspect and probable SARS patients§	1,796	9	0	(0.50)
Missing information	1,186	0	0	(0)
Total	**50,319**	**78¶**	**34****	(**0.22**)
Level B quarantine				
Travel from SARS-affected areas	80,813	10††	11§§	(0.03)
Total	**131,132**	**88**	**45**	**(0.09)**

* Persons with suspect SARS were defined as those who had a temperature of ≥100.4° F (≥38° C) and cough or shortness of breath and, within the 10 days before onset of symptoms, had one or more of the following contact exposures: 1) close contact with a person with probable or suspect SARS, 2) history of travel to an area with recent local transmission of SARS, or 3) residence in an area with recent local transmission of SARS. Persons with probable SARS were defined as those having suspect SARS plus one or more of the following: 1) chest radiograph consistent with findings of pneumonia, 2) acute respiratory distress syndrome (ARDS), 3) an unexplained respiratory illness resulting in death, with an autopsy consistent with ARDS and without another identifiable cause, or 4) laboratory confirmation, including one or more of the following: two oropharyngeal swab specimens positive by polymerase chain reaction (PCR) for SARS-associated coronavirus (SARS-CoV), serologic specimen positive by enzyme-linked immunosorbent assay for SARS antibody, serologic specimen positive by indirect immunofluorescence antibody for SARS antibody, or any specimen positive by viral culture for SARS-CoV.

† Includes passengers and drivers of internal public transportation who traveled for ≥1 hour in the same bus or train cabin with a SARS patient, persons who had contact with a person under quarantine who received care in a medical facility in which a cluster of SARS occurred, and homeless persons.

§ Discharged suspect and probable SARS patients were required to remain isolated for 10 days after their last symptom. If they were discharged to home, they were monitored by quarantine personnel.

¶ Oropharyngeal swab specimens were obtained for 60 patients; five (8%) specimens were PCR positive.

** Oropharyngeal swab specimens were obtained for 32 patients; 15 (47%) specimens were PCR positive.

†† Oropharyngeal swab specimens were obtained for eight patients; no specimen was PCR positive.

§§ Oropharyngeal swab specimens were obtained for eight patients; one (13%) specimen was PCR positive.

attended a class for ≥1 hour with the patient; 6) persons who sat in the same or adjacent three rows from a SARS patient on an airplane flight; 7) passengers and drivers of public transportation who traveled for ≥1 hour in the same bus or train cabin with a SARS patient; and 8) persons who had contact with a person under quarantine who received care in a medical facility in which a cluster of SARS occurred. Hospital staff and patients who had contact with a SARS patient were quarantined, usually in a health-care facility. All others were quarantined at home. Homeless persons, who often use hospital toilet facilities, were asked to go voluntarily to government quarantine centers under Level A quarantine.

During April 28–July 4, travelers arriving on airplane flights from WHO-designated SARS-affected areas were quarantined for 10 days (Level B quarantine). Arriving passengers could choose quarantine in an airport transit hotel, at home, or at a quarantine site designated and paid for by their employer. If these options were not available, the traveler was quarantined at a government quarantine center located at military bases. On June 9, quarantine regulations were eased for staff of Taiwanese companies based in mainland China who were returning to Taiwan for business. Travelers in this category were allowed to conduct business if they wore surgical masks. When not conducting business, they were to follow the rules of quarantine.

Persons under quarantine were required to stay where they were quarantined; take their temperature two to three times a day; seek medical attention promptly if they had fever (≥100.4° F [≥38° C]), cough, shortness of breath, or other respiratory symptoms; cover their nose and mouth with tissue paper when coughing or sneezing; and wear surgical masks when around other persons and outside the quarantine site. They were not allowed to use public transportation, visit hospitalized patients, or visit crowded public places. Persons under Level A quarantine could leave the quarantine site only for activities deemed necessary by local health authorities; meals were delivered. Persons under Level B quarantine were allowed to leave the quarantine site to seek medical attention, exercise in an open area, purchase meals, dispose of garbage, and perform other activities deemed necessary by local health authorities. All outdoor trips were recorded to facilitate possible future investigations. Failure to comply with quarantine regulations,

submitting incomplete SARS survey forms, or providing inaccurate contact information was punishable by fines of U.S. $1,765–$8,824 and incarceration of ≤2 years.

The direct management and supervision of persons under quarantine was conducted by local HCWs or civil servants. This activity included ensuring the initial registration of all persons requiring quarantine; recording each person's whereabouts, with information obtained either by daily visits or telephone calls; overseeing the person's daily temperature recordings; evaluating patients who reported a fever; and directing persons with possible SARS to appropriate medical attention. Local health officials reported daily on the status of quarantined persons to the Taiwan Department of Health through a web-based database.

In addition to these measures, video monitoring was conducted for some persons who were contacts of a SARS patient and quarantined at home. Although the intervention was conceived initially for quarantine violators who were residents of the high-population density areas of Taipei and Kaohsiung, the low number of quarantine violators allowed broader use of this intervention. By mid-May, video monitoring was used for almost all persons living in these cities and under quarantine at home.

At government quarantine facilities, persons were placed in individual rooms (not negative-pressure); meals were delivered. Police guarded the rooms to ensure compliance with quarantine.

Several social supports were developed to ease the burden of quarantine on persons and their families. Service providers telephoned quarantined persons to provide psychologic support. Care was provided for the family members of quarantined persons, including day care and care for ill persons. Persons who completed quarantine received the equivalent of U.S. $147. Quarantined persons could request other social services from local health or civil affairs departments.

Of the 131,132 persons who were quarantined during the SARS epidemic in Taiwan, 286 (0.2%) were fined for violation of quarantine. Of the 50,319 persons placed under Level A quarantine, 4,063 (8.0%) were placed on video monitoring at home. A total of 112 (0.22%) persons had suspect or probable SARS diagnosed while under Level A quarantine. Of the 80,813 persons placed under Level B quarantine, 21 (0.03%) had suspect or probable SARS diagnosed.

The highest percentage of persons who had suspect or probable SARS diagnosed subsequently were among HCWs exposed to a SARS patient (0.34%), family members of a SARS patient (0.33%), and persons on the same airplane flight who sat within three rows of a SARS patient (0.36%). Travelers arriving from SARS-affected areas had the lowest percentage for subsequent SARS diagnosis (0.03%).

Oropharyngeal swab specimens were obtained from 68 (77.0%) of 88 patients with suspect SARS (Table); five (7.0%) specimens tested positive by polymerase chain reaction (PCR). Oropharyngeal swab specimens were obtained from 40 (88.0%) of 45 patients with probable SARS; 16 (40.0%) specimens were PCR positive.

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Editorial Note: Quarantine, the separation and/or restriction of movement of persons who are not ill but are believed to have been exposed to infection to prevent transmission of diseases, was developed in the 14th century but has been implemented rarely on a large scale during the past century (*3,4*). The SARS pandemic has demonstrated that governments and public health officials might use quarantine as a public health tool to prevent infectious diseases, particularly when other preventive interventions (e.g., vaccines and antibiotics) are unavailable. In Taiwan, only a small percentage of persons quarantined had suspect or probable SARS diagnosed subsequently, and an even smaller percentage of persons quarantined had a laboratory-confirmed case of SARS. However, because one infected person could expose others and generate successive waves of infection, the use of quarantine might have prevented additional cases. This possibility should be examined through future mathematical modeling studies. Taiwan was one of several countries that implemented quarantine measures during the global SARS outbreak, and more study is needed to determine whether the logistics and costs of quarantine warrant its use. Such studies should examine both the direct (e.g., stipends, resources, personnel time, and lost work days) and indirect (e.g., social stigma, curtailment of civil liberties [e.g., restrictions on freedom of movement], declining personal and community mental health, and delay in reporting symptoms) costs of quarantine.

Numerous SARS control measures were undertaken simultaneously, making it difficult to determine the independent contribution of any one measure. These other control measures included designating dedicated SARS hospitals throughout the island; constructing additional negative-pressure rooms; instituting fever-screening clinics for all health-care facilities; performing fever screening on all persons entering public buildings and restaurants; and requiring masks for all persons working in restaurants, entering hospitals, and using public transportation systems. Evaluation of the contribution of all control measures, including quarantine, should be

performed to determine the appropriate role of each intervention in response to future outbreaks.

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Progress Toward Poliomyelitis Eradication — Afghanistan and Pakistan, January 2002–May 2003

Since 1988, when the World Health Assembly resolved to eradicate poliomyelitis worldwide (*1*), the number of countries in which polio is endemic has decreased from 127 to seven, including Afghanistan and Pakistan (*2*). These two countries are considered one epidemiologic block because of their geographic proximity, frequent cross-border population movement, and the presence of genetically similar wild poliovirus (WPV) lineages. Although polio remains endemic in both countries, progress in interrupting poliovirus transmission has been substantial (*3*). This report describes intensified polio eradication activities in Afghanistan and Pakistan during January 2002–May 2003, summarizes progress made, and highlights the remaining challenges to interrupting poliovirus transmission.

Routine Vaccination

In 2002 in Afghanistan, reported national routine vaccination coverage of infants aged <12 months with 3 doses of oral poliovirus vaccine (OPV) was 48% (range: 6% [Urozgan]–84% [Nagarhar]) (Ministry of Health, unpublished data, 2003). In 2002 in Pakistan, coverage was 71% (Ministry of Health, unpublished data, 2003).

Supplementary Immunization Activities

Since 2000, Afghanistan and Pakistan have conducted frequent supplementary immunization activities (SIAs) that use house-to-house vaccine delivery, including at least four rounds of national immunization days (NIDs)* and three rounds of sub-NIDs (SNIDs)† annually. Areas targeted for SNIDs are those in which various factors (e.g., surveillance results, genetic sequencing, supplementary or routine immunization coverage, and population dynamics) indicate a high risk for continuing virus transmission. In 2002, Pakistan conducted four rounds of NIDs and four rounds of SNIDs in close coordination with Afghanistan, which conducted five rounds of NIDs and three rounds of SNIDs. During 2003, planned SIAs include four rounds of NIDs (in April, May, September, and October) and three rounds of SNIDs (in March, July, and December) in Afghanistan and four rounds of NIDs (in March, April, September, and October) and four rounds of SNIDs (in January, June, July, and December) in Pakistan. In both countries, SIA quality is monitored by independent groups; university teachers and students (in Afghanistan) and private survey companies and university teams (in Pakistan) monitor SIA quality while rounds are being carried out and conduct immediate post-SIA coverage assessments.

To provide additional information about vaccination coverage, national polio eradication programs analyze the OPV vaccination status (routine and supplemental) of children with nonpolio acute flaccid paralysis (AFP) reported through the AFP surveillance system. During 2000–2002, the proportion of nonpolio AFP patients aged <24 months who received <3 OPV doses decreased from 72% to 18% in Afghanistan and from 46% to 28% in Pakistan.

Surveillance for AFP

The quality of AFP surveillance is evaluated by two key indicators established by the World Health Organization (WHO): sensitivity of reporting (target: nonpolio AFP rate of ≥1 case per 100,000 children aged <15 years) and completeness of stool specimen collection (target: two adequate stool specimens§ from ≥80% of all persons with AFP). In 2002 in Afghanistan, the national nonpolio AFP rate was 3.3, and the adequate stool specimen collection rate was 81%; during January–May 2003, the nonpolio AFP rate increased to 3.8, and the adequate stool specimen collection rate increased to 85% (Table). In 2002, in Pakistan, the national nonpolio AFP rate was 2.8, reported nonpolio AFP rates in all provinces were ≥2.0, and adequate stool specimens were collected from 87% of persons with AFP; during January–May 2003, the nonpolio AFP rate increased to 3.0, and the adequate stool specimen collection rate increased to 89% (Table).

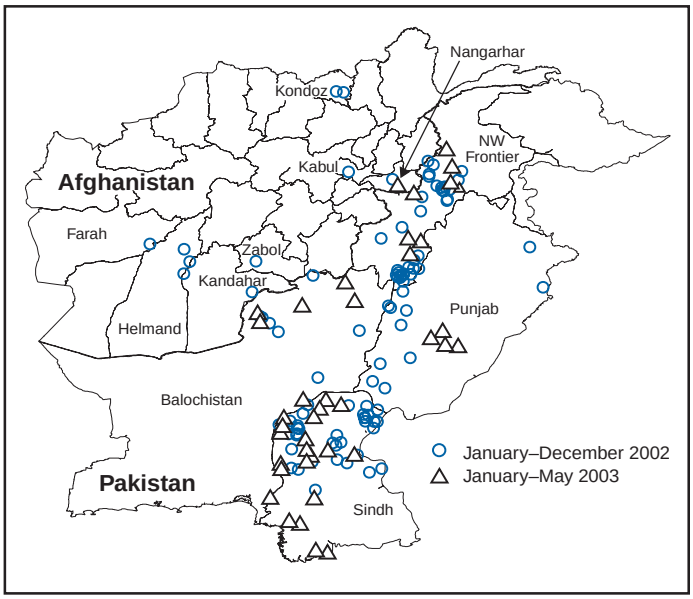
* Nationwide mass campaigns implemented over a short period (days to weeks) in which 2 doses of OPV are administered to all children (usually aged <5 years), regardless of vaccination history, with an interval of 4–6 weeks between doses.
† Campaigns similar to NIDs but confined to part of the country.
§ Two stool specimens collected ≥24 hours apart, within 14 days of paralysis onset, and adequately shipped to the laboratory (target: ≥80%).

The WHO-accredited regional reference laboratory at the National Institutes of Health (NIH) in Islamabad, Pakistan, performs virologic testing of stool specimens from both Afghanistan and Pakistan, including primary virus isolation and intratypic differentiation (ITD). The nonpolio enterovirus (NPEV) isolation rate among stool samples (target: ≥10% isolation rate) is a combined indicator of the quality of specimen transport (i.e., maintenance of specimens at the appropriate temperature from time of collection until delivery to the laboratory) and sensitivity of laboratory processing. In 2002, NPEV isolation rates for Afghanistan and Pakistan were 15% and 19%, respectively; during January–May 2003, rates were 17% and 20%, respectively (Table). Laboratory efficiency is measured by the proportion of persons with AFP for whom virus isolation results are available within 28 days of receipt of specimens (target: 80% of persons with AFP). In 2002, the NIH laboratory reported final results for primary virus isolation within 28 days for 99% of specimens received from both Afghanistan and Pakistan. During January–May 2003, the proportion of specimen culture results that were reported within 28 days was 77% from Afghanistan and 94% from Pakistan (Table). During 2002–2003, for persons in whom poliovirus was isolated, the average interval between the onset of paralysis and the communication of final ITD results was 4–5 weeks.

Incidence of Polio

During 2001–2002, the number of polio cases in Pakistan that were confirmed virologically decreased from 119 (reported from 39 [29%] of 135 districts) to 90 (reported from 34 [25%] districts). In 2002, of 90 cases reported, 67 (74%) were WPV type 1 (P1), and 23 (26%) were WPV type 3 (P3). During January–May 2003, a total of 39 cases were reported from 20 (15%) districts, compared with 24 cases reported from 16 (12%) districts during the same period in 2002 (Figure). In 2001, of the 90 cases reported, 64 (71%) occurred in children aged <24 months; during January–May 2003, of the 39 cases reported, 22 (56%) occurred in this age group. In 2002, transmission in Pakistan occurred primarily in northern Sindh, the Peshawar area, the southern part of Northwest Frontier Province (NWFP), and southwestern Punjab; several areas considered previously to be virus reservoirs, (e.g., Karachi and Hyderabad in Sindh, the Quetta area in Balochistan, and the

FIGURE. Confirmed cases of poliomyelitis, by date — Afghanistan and Pakistan, January 2002–May 2003*



* As of June 24, 2003.

TABLE. Number of confirmed wild poliovirus (WPV) cases and key surveillance indicators, by year — Afghanistan and Pakistan, January 2002–May 2003*

Country	No. confirmed WPV cases	Serotype distribution of WPV isolates			No. AFP† cases	Nonpolio AFP rate§	% persons with AFP with adequate specimens¶	% stool specimens with nonpolio enterovirus isolated**	% results reported within 28 days
		Type 1	Type 2	Type 3					
Afghanistan									
2002	10	5	0	5	335	3.3	81	15	99
2003	1	0	0	1	226	3.8	85	17	77
Pakistan									
2002	90	67	0	23	1,802	2.8	87	19	99
2003	39	23	0	16	980	3.0	89	20	94

* As of June 24, 2003.
† Acute flaccid paralysis.
§ Per 100,000 children aged <15 years (target: ≥1 case nonpolio AFP per 100,000); rate for 2003 is annualized.
¶ Two stool specimens collected ≥24 hours apart, within 14 days of paralysis onset, and adequately shipped to the laboratory (target: ≥80%).
** Combined indicator of maintaining a reverse cold chain during specimen transport and sensitivity of laboratory processing (target: ≥10% isolation rate).

Bannu and Lakki Marwat districts in NWFP) reported few or no cases. In 2003, cases continued to be concentrated in two transmission zones (northern Sindh and northern NWFP) that were active in 2002, with some transmission in southwestern Punjab.

In 2002 in Afghanistan, 10 cases (five P1 and five P3) were reported from seven of 32 provinces, compared with 11 cases from six provinces in 2001. In May 2003, one case of P3 was reported from Nangarhar province; the most recent case reported previously was in December 2002 in the Southern Region; as of June 24, no other cases had been reported. Nangarhar province borders Pakistan, and genetic sequencing results indicate that this virus is related to those circulating across the border in NWFP. Sequencing results from the cases in Afghanistan in 2002 suggest that the only remaining endemic poliovirus reservoir in 2002 was in the southwestern part of the country, west of Kandahar. In 2003, no wild polioviruses had been isolated from this area as of June 24.

Genetic sequencing data from WPVs isolated from the Afghanistan/Pakistan epidemiologic block indicate that biodiversity continues to decrease. During 2000–2001, the number of virus lineage clusters for P1 decreased from 10 to six, and the number of clusters for P3 decreased from six to three. In 2002, five clusters (four P1 and one P3) accounted for 90% of confirmed cases from both countries.

Reported by: *National Institutes of Health; Country Office of the World Health Organization; United Nations Children's Fund, Islamabad, Pakistan. Ministry of Public Health; Country Office of the World Health Organization; United Nations Children's Fund, Kabul, Afghanistan. Regional Office for the Eastern Mediterranean Region, World Health Organization, Cairo, Egypt. Dept of Vaccines and Biologicals, World Health Organization, Geneva, Switzerland. Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Global Immunization Div, National Immunization Program; Div of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion, CDC.*

Editorial Note: Progress toward interrupting WPV transmission has continued in both Afghanistan and Pakistan despite armed conflict and ongoing political instability. Important achievements for 2002 include a reduction in the number of WPV cases, further restriction of poliovirus circulation to well-defined zones of transmission, and decreased genetic diversity of isolated wild polioviruses. In addition, both countries obtained support from the Global Alliance for Vaccines and Immunization to strengthen their routine vaccination programs.

Despite the progress made, critical challenges to achieving eradication remain in both countries, and overcoming surveillance quality gaps is of critical importance. Although Afghanistan began sentinel surveillance in 1997, systematic active surveillance at major health facilities was initiated only recently. In Pakistan, genetic data for 2002–2003 indicate that surveillance might have missed ongoing transmission for prolonged periods in some areas, including northern NWFP and southern Punjab. In both countries, analysis of OPV status among nonpolio AFP patients indicates that vaccination teams missed a substantial number of children aged <24 months during recent campaigns. Although Afghanistan has returned program quality to levels achieved before armed conflict began in late 2001, increasing security problems within the country, particularly in the south and southeast, have limited access to critical areas during SIAs and might have compromised the quality of AFP surveillance.

For the polio eradication activities in the remaining transmission zones to be improved, close collaboration between the national governments and their partners[¶] and between the Afghanistan and Pakistan programs are critical. A comprehensive communication and advocacy strategy is needed to help motivate and engage district governments and communities, reach persons at high risk during SIAs, and strengthen vaccination teams. For surveillance quality to be improved further and maintained, AFP surveillance performance indicators should be monitored continuously, particularly to detect inadequate performance at the subnational level.

Through the efforts of thousands of health-care workers and volunteers, Afghanistan and Pakistan have made progress toward interrupting WPV transmission. Polio teams in both countries, with government support and commitment, have implemented high-quality strategies. For polio to be eradicated, maintaining this commitment and improving the quality of activities in the remaining transmission zones should be a priority of the national and local governments and their partners.

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[¶] Polio eradication efforts in Afghanistan and Pakistan are supported by the governments of both countries; Rotary International; WHO; the United Nations Children's Fund (UNICEF); the governments of Canada, Japan, the Netherlands, and the United Kingdom; the U.S. Agency for International Development (USAID); the International Committee of the Red Cross; the International Federation of the Red Cross and Red Crescent Societies; the Investment Partnership for Polio (a joint program of the World Bank, the Bill and Melinda Gates Foundation, Rotary International, and the United Nations Foundation); and CDC.

West Nile Virus Activity — United States, July 17–23, 2003

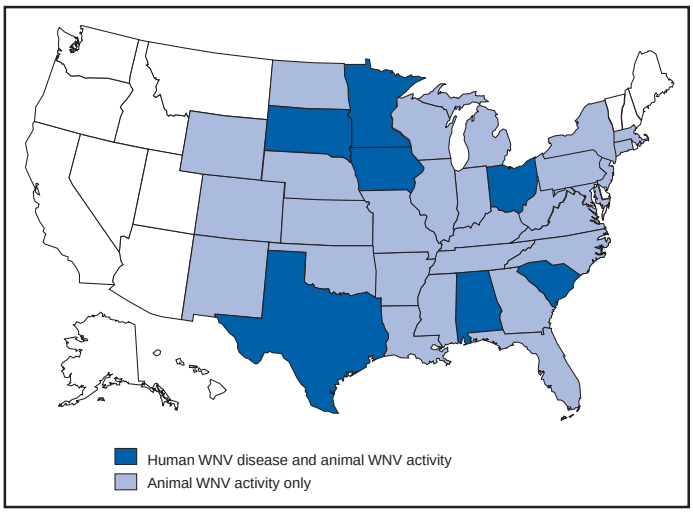
This report summarizes West Nile virus (WNV) surveillance data reported to CDC through ArboNET as of 8 a.m., Mountain Daylight Time, July 23, 2003.

During the reporting week of July 17–23, six human cases of WNV infection were reported from five states (Iowa, Minnesota, Ohio, South Dakota, and Texas). During the same period, WNV infections were reported in 309 dead corvids (crows and related species), 69 other dead birds, 12 horses, and 144 mosquito pools.

During 2003, a total of 11 human cases of WNV infection have been reported from Texas (n = five), Alabama (n = one), Iowa (n = one), Minnesota (n = one), Ohio (n = one), South Carolina (n = one), and South Dakota (n = one) (Figure). Among these cases, seven (64%) occurred among men; the median age was 70 years (range: 42–80 years), and the dates of illness onset ranged from May 29 to July 13. In addition, 551 dead corvids and 150 other dead birds with WNV infection were reported from 34 states; 55 WNV infections in horses have been reported from 16 states (Alabama, Arkansas, Colorado, Georgia, Kansas, Kentucky, Minnesota, Missouri, Nebraska, New Mexico, North Carolina, North Dakota, Oklahoma, Texas, Wisconsin, and Wyoming), and one WNV infection was reported in a dog (South Dakota). During 2003, WNV seroconversions have been reported in 56 sentinel chicken flocks from Florida, Iowa, and North Carolina. South Dakota reported three seropositive sentinel horses; 327 WNV-positive mosquito pools have been reported from 15 states (Colorado, Georgia, Illinois, Indiana, Kansas, Maryland, Massachusetts, Michigan, Mississippi, Nebraska, New Jersey, South Dakota, Texas, Virginia, and Wisconsin).

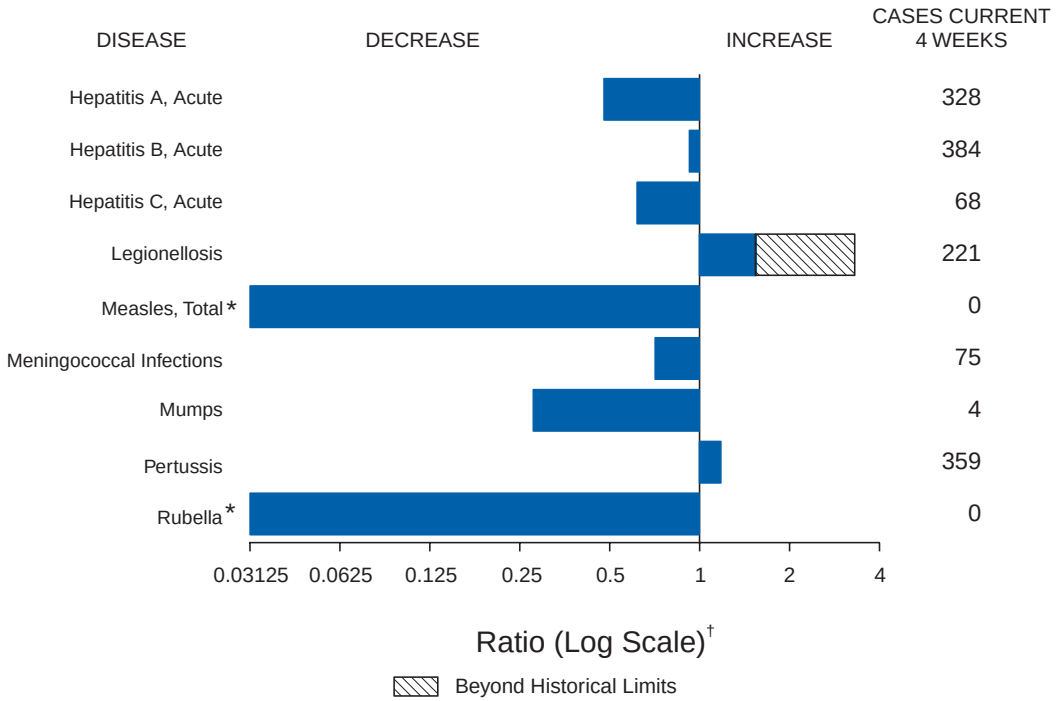
Additional information about WNV activity is available from CDC at http://www.cdc.gov/ncidod/dvbid/westnile/index.htm and http://www.cindi.usgs.gov/hazard/event/west_nile/west_nile.html.

FIGURE. Areas reporting West Nile virus (WNV) activity — United States, 2003*



* As of 8 a.m., Mountain Daylight Time, July 23, 2003.

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



* No measles or rubella cases were reported for the current 4-week period yielding a ratio for week 29 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 July 19, 2003 (29th Week)*

	Cum. 2003	Cum. 2002		Cum. 2003	Cum. 2002
Anthrax	-	2	Hansen disease (leprosy)†	27	55
Botulism:	-	-	Hantavirus pulmonary syndrome†	10	12
foodborne	7	16	Hemolytic uremic syndrome, postdiarrheal†	56	91
infant	32	40	HIV infection, pediatric†§	108	91
other (wound & unspecified)	15	8	Measles, total	31¶	19**
Brucellosis†	38	64	Mumps	117	165
Chancroid	24	42	Plague	1	-
Cholera	1	1	Poliomyelitis, paralytic	-	-
Cyclosporiasis†	31	106	Psittacosis†	9	12
Diphtheria	-	1	Q fever†	39	30
Ehrlichiosis:	-	-	Rabies, human	-	1
human granulocytic (HGE)†	78	121	Rubella	5	9
human monocytic (HME)†	41	70	Rubella, congenital	-	1
other and unspecified	6	10	Streptococcal toxic-shock syndrome†	114	76
Encephalitis/Meningitis:	-	-	Tetanus	5	15
California serogroup viral†	-	-	Toxic-shock syndrome	73	66
eastern equine†	-	-	Trichinosis	1	10
Powassan†	-	-	Tularemia†	32	35
St. Louis†	-	-	Yellow fever	-	-
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 May 25, 2003.
¶ Of 31 cases reported, 29 were indigenous and two were imported from another country.
** Of 19 cases reported, 10 were indigenous and nine were imported from another country.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending July 19, 2003, and July 20, 2002 (29th 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	19,482	21,708	438,145	447,675	1,809	2,405	1,044	1,188	-	-
NEW ENGLAND	654	936	15,068	14,904	-	-	63	75	-	-
Maine	27	19	929	821	N	N	6	2	-	-
N.H.	15	20	846	872	-	-	6	14	-	-
Vt.	6	8	544	442	-	-	14	15	-	-
Mass.	277	513	5,907	5,935	-	-	25	26	-	-
R.I.	51	61	1,619	1,536	-	-	9	13	-	-
Conn.	278	315	5,223	5,298	N	N	3	5	-	-
MID. ATLANTIC	4,098	4,991	46,550	49,362	-	-	143	169	-	-
Upstate N.Y.	274	425	10,523	8,951	N	N	42	38	-	-
N.Y. City	1,976	2,775	17,768	16,801	-	-	43	70	-	-
N.J.	787	827	7,774	6,769	-	-	4	12	-	-
Pa.	1,061	964	10,485	16,841	N	N	54	49	-	-
E.N. CENTRAL	1,982	2,270	75,992	82,740	3	15	236	345	-	-
Ohio	303	428	19,893	20,966	-	-	41	73	-	-
Ind.	259	304	9,138	9,113	N	N	30	25	-	-
Ill.	959	1,028	21,653	26,207	-	2	26	61	-	-
Mich.	359	401	16,897	17,206	3	13	49	57	-	-
Wis.	102	109	8,411	9,248	-	-	90	129	-	-
W.N. CENTRAL	358	329	25,028	25,012	1	1	128	118	-	-
Minn.	74	73	5,437	5,811	N	N	48	40	-	-
Iowa	41	46	2,676	2,875	N	N	25	13	-	-
Mo.	177	135	9,055	8,271	-	-	10	16	-	-
N. Dak.	-	1	700	686	N	N	11	10	-	-
S. Dak.	7	2	1,394	1,178	-	-	20	5	-	-
Nebr.¶	25	31	2,076	2,348	1	1	6	25	-	-
Kans.	34	41	3,690	3,843	N	N	8	9	-	-
S. ATLANTIC	5,488	6,491	86,609	84,156	3	2	161	152	-	-
Del.	106	113	1,684	1,465	N	N	3	1	-	-
Md.	558	1,056	9,146	8,392	3	2	8	7	-	-
D.C.	595	321	1,579	1,805	-	-	7	3	-	-
Va.	481	482	10,360	9,285	-	-	15	4	-	-
W. Va.	42	48	1,373	1,320	N	N	3	2	-	-
N.C.	581	438	14,177	13,349	N	N	19	23	-	-
S.C.	330	440	7,975	7,936	-	-	2	2	-	-
Ga.	736	1,089	18,254	17,435	-	-	57	57	-	-
Fla.	2,059	2,504	22,061	23,169	N	N	47	53	-	-
E.S. CENTRAL	841	997	29,339	29,001	N	N	57	72	-	-
Ky.	79	151	4,490	4,755	N	N	13	3	-	-
Tenn.	374	428	10,517	8,818	N	N	19	38	-	-
Ala.	185	194	7,703	9,044	-	-	22	27	-	-
Miss.	203	224	6,629	6,384	N	N	3	4	-	-
W.S. CENTRAL	2,125	2,366	56,698	59,468	-	5	14	34	-	-
Ark.	65	164	4,175	4,031	-	-	4	5	-	-
La.	368	685	9,946	10,250	N	N	1	8	-	-
Okla.	92	118	5,942	5,751	N	N	6	6	-	-
Tex.	1,600	1,399	36,635	39,436	-	5	3	15	-	-
MOUNTAIN	722	725	26,208	27,554	1,255	1,625	56	76	-	-
Mont.	10	6	1,004	1,129	N	N	12	4	-	-
Idaho	13	17	1,338	1,380	N	N	8	18	-	-
Wyo.	4	5	544	486	-	-	2	6	-	-
Colo.	159	155	6,195	7,701	N	N	11	20	-	-
N. Mex.	52	51	3,691	4,173	4	5	3	11	-	-
Ariz.	341	272	7,969	8,084	1,225	1,595	3	9	-	-
Utah	31	42	2,287	1,280	6	8	11	5	-	-
Nev.	112	177	3,180	3,321	20	17	6	3	-	-
PACIFIC	3,214	2,603	76,653	75,478	546	756	186	147	-	-
Wash.	214	257	8,626	8,055	N	N	25	9	-	-
Oreg.	126	193	4,096	3,726	-	-	25	23	-	-
Calif.	2,815	2,074	60,554	59,242	546	756	136	114	-	-
Alaska	12	12	2,070	2,012	-	-	-	-	-	-
Hawaii	47	67	1,307	2,443	-	-	-	1	-	-
Guam	2	1	-	353	-	-	-	-	-	-
P.R.	514	600	985	1,530	N	N	N	N	-	-
V.I.	15	56	-	108	-	-	-	-	-	-
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 May 25, 2003.

¶ For Nebraska, data for hepatitis A, B, and C; meningococcal disease; pertussis; streptococcal disease (invasive, group A); and *Streptococcus pneumoniae* (invasive) were collected by using the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 19, 2003, and July 20, 2002 (29th 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	803	1,241	97	68	60	20	8,083	9,611	166,714	189,731
NEW ENGLAND	47	107	18	15	7	2	549	862	3,764	4,261
Maine	5	11	1	-	-	-	69	85	105	66
N.H.	9	10	1	-	-	-	17	27	56	64
Vt.	3	4	-	-	-	-	45	65	43	57
Mass.	17	52	2	10	7	2	247	459	1,439	1,838
R.I.	1	5	-	-	-	-	55	68	492	482
Conn.	12	25	14	5	-	-	116	158	1,629	1,754
MID. ATLANTIC	99	143	3	-	19	2	1,636	2,074	19,469	22,523
Upstate N.Y.	42	63	1	-	9	-	452	574	4,043	4,572
N.Y. City	3	7	-	-	-	-	571	779	6,856	6,801
N.J.	5	24	-	-	-	-	157	244	4,923	3,929
Pa.	49	49	2	-	10	2	456	477	3,647	7,221
E.N. CENTRAL	190	307	13	18	10	3	1,316	1,594	34,230	39,770
Ohio	43	58	10	5	9	2	441	422	11,076	11,578
Ind.	39	26	-	-	-	-	-	-	3,497	3,950
Ill.	30	98	-	6	-	-	321	477	9,629	13,233
Mich.	34	42	-	2	-	1	340	417	7,118	7,750
Wis.	44	83	3	5	1	-	214	278	2,910	3,259
W.N. CENTRAL	131	170	14	9	13	2	824	896	8,395	9,630
Minn.	43	53	8	6	-	-	308	309	1,389	1,681
Iowa	20	46	-	-	-	-	118	128	607	651
Mo.	38	24	2	-	1	-	228	246	4,240	4,739
N. Dak.	5	4	-	-	5	-	19	13	30	35
S. Dak.	8	17	3	1	-	-	24	37	112	146
Nebr.	6	16	1	2	-	-	59	76	678	837
Kans.	11	10	-	-	7	2	68	87	1,339	1,541
S. ATLANTIC	67	105	35	13	-	-	1,358	1,430	42,460	48,578
Del.	1	5	N	N	N	N	18	28	648	879
Md.	2	9	-	-	-	-	58	54	4,280	4,781
D.C.	1	-	-	-	-	-	20	22	1,230	1,480
Va.	18	24	5	1	-	-	189	113	4,799	5,430
W. Va.	2	2	-	-	-	-	18	26	471	554
N.C.	5	17	9	-	-	-	N	N	8,036	8,932
S.C.	-	2	-	-	-	-	59	38	4,300	4,956
Ga.	14	30	2	7	-	-	481	453	9,011	9,470
Fla.	24	16	19	5	-	-	515	696	9,685	12,096
E.S. CENTRAL	39	52	-	-	4	7	175	174	14,226	16,521
Ky.	11	13	-	-	4	7	N	N	1,916	1,894
Tenn.	15	23	-	-	-	-	75	79	4,247	4,993
Ala.	10	10	-	-	-	-	100	95	4,738	5,821
Miss.	3	6	-	-	-	-	-	-	3,325	3,813
W.S. CENTRAL	24	57	1	-	3	2	144	96	23,303	26,459
Ark.	4	5	-	-	-	-	79	71	2,260	2,468
La.	1	1	-	-	-	-	5	1	6,047	6,387
Okla.	10	10	-	-	-	-	60	23	2,315	2,448
Tex.	9	41	1	-	3	2	-	1	12,681	15,156
MOUNTAIN	101	115	11	9	4	2	720	695	5,511	5,976
Mont.	4	9	-	-	-	-	36	36	55	54
Idaho	25	7	6	3	-	-	81	47	40	40
Wyo.	2	4	-	1	-	-	11	12	26	31
Colo.	28	41	1	4	4	2	201	237	1,410	1,876
N. Mex.	2	4	3	1	-	-	22	80	615	821
Ariz.	16	14	N	N	N	N	138	89	2,078	1,964
Utah	18	25	1	-	-	-	164	125	214	128
Nev.	6	11	-	-	-	-	67	69	1,073	1,062
PACIFIC	105	185	2	4	-	-	1,361	1,790	15,356	16,013
Wash.	27	21	1	-	-	-	116	213	1,500	1,599
Oreg.	23	48	1	4	-	-	178	207	544	447
Calif.	53	89	-	-	-	-	1,002	1,267	12,716	13,259
Alaska	1	5	-	-	-	-	43	50	297	355
Hawaii	1	22	-	-	-	-	22	53	299	353
Guam	N	N	-	-	-	-	-	6	-	32
P.R.	-	1	-	-	-	-	30	30	106	227
V.I.	-	-	-	-	-	-	-	-	-	26
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 July 19, 2003, and July 20, 2002 (29th 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	944	1,027	8	18	55	80	106	99	3,079	5,218
NEW ENGLAND	68	67	-	-	6	7	5	1	146	188
Maine	2	1	-	-	-	-	1	-	8	6
N.H.	9	5	-	-	-	-	-	-	8	11
Vt.	6	5	-	-	-	-	-	-	4	1
Mass.	36	29	-	-	6	3	3	1	74	82
R.I.	4	9	-	-	-	-	1	-	11	27
Conn.	11	18	-	-	-	4	-	-	41	61
MID. ATLANTIC	201	184	-	2	1	8	29	19	618	666
Upstate N.Y.	75	70	-	2	1	2	9	6	67	110
N.Y. City	32	42	-	-	-	-	6	8	193	229
N.J.	40	40	-	-	-	-	6	5	85	109
Pa.	54	32	-	-	-	6	8	-	273	218
E.N. CENTRAL	126	214	1	2	4	9	20	29	348	635
Ohio	43	60	-	-	-	1	7	7	68	180
Ind.	28	31	-	1	2	7	-	-	39	32
Ill.	36	77	-	-	-	-	9	14	106	171
Mich.	13	9	1	1	2	1	2	-	111	130
Wis.	6	37	-	-	-	-	2	8	24	122
W.N. CENTRAL	71	39	-	-	6	2	7	3	107	187
Minn.	25	20	-	-	6	2	1	1	32	26
Iowa	-	1	-	-	-	-	-	-	18	40
Mo.	30	10	-	-	-	-	6	2	35	55
N. Dak.	1	4	-	-	-	-	-	-	-	1
S. Dak.	1	1	-	-	-	-	-	-	-	3
Nebr.	2	-	-	-	-	-	-	-	5	10
Kans.	12	3	-	-	-	-	-	-	17	52
S. ATLANTIC	223	227	-	3	8	12	14	18	777	1,460
Del.	-	-	-	-	-	-	-	-	4	10
Md.	49	60	-	1	4	2	-	1	76	162
D.C.	-	-	-	-	-	-	-	-	24	52
Va.	31	17	-	-	-	-	5	2	46	50
W. Va.	8	9	-	-	-	-	-	1	12	12
N.C.	17	21	-	-	1	3	1	-	38	135
S.C.	3	8	-	-	-	-	-	2	18	43
Ga.	48	52	-	-	-	-	5	9	315	300
Fla.	67	60	-	2	3	7	3	3	244	696
E.S. CENTRAL	47	39	1	1	-	3	6	7	88	166
Ky.	2	3	-	-	-	-	-	-	16	38
Tenn.	27	19	-	-	-	-	4	5	48	65
Ala.	16	10	1	1	-	3	1	1	11	24
Miss.	2	7	-	-	-	-	1	1	13	39
W.S. CENTRAL	40	36	1	2	5	5	2	2	80	536
Ark.	5	1	-	-	1	-	-	-	15	29
La.	7	4	-	-	-	-	2	2	31	48
Okla.	25	29	-	-	4	5	-	-	8	25
Tex.	3	2	1	2	-	-	-	-	26	434
MOUNTAIN	116	123	4	4	15	19	17	11	262	315
Mont.	-	-	-	-	-	-	-	-	2	9
Idaho	3	2	-	-	-	-	1	1	-	20
Wyo.	1	2	-	-	-	-	-	-	1	2
Colo.	21	22	-	-	-	-	4	2	37	49
N. Mex.	14	20	-	-	3	4	2	1	9	9
Ariz.	61	56	4	2	6	12	7	5	158	172
Utah	10	14	-	1	3	3	3	-	20	24
Nev.	6	7	-	1	3	-	-	2	35	30
PACIFIC	52	98	1	4	10	15	6	9	653	1,065
Wash.	6	2	-	1	4	1	1	-	32	101
Oreg.	30	38	-	-	-	-	3	3	37	43
Calif.	11	31	1	3	6	14	2	2	575	899
Alaska	-	1	-	-	-	-	-	1	6	7
Hawaii	5	26	-	-	-	-	-	3	3	15
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	1	-	-	-	-	-	-	23	120
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).

† Non-serotype b: nontypeable and type other than b; Unknown serotype: type unknown or not reported. Previously, cases reported without type information were counted as non-serotype b.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 19, 2003, and July 20, 2002 (29th 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	3,378	4,006	749	1,009	757	512	251	262	4,987	7,502
NEW ENGLAND	131	149	-	17	23	31	15	26	624	1,365
Maine	1	4	-	-	1	2	2	2	68	-
N.H.	11	12	-	-	4	4	2	2	26	74
Vt.	2	3	-	12	1	3	-	1	10	11
Mass.	105	83	-	5	7	18	6	15	98	1,136
R.I.	4	17	-	-	2	-	-	1	121	76
Conn.	8	30	U	U	8	4	5	5	301	68
MID. ATLANTIC	558	868	98	55	162	140	50	55	3,574	4,564
Upstate N.Y.	61	69	30	27	45	39	14	18	1,535	1,693
N.Y. City	241	456	-	-	11	24	9	14	2	46
N.J.	109	156	-	4	4	19	7	8	544	1,456
Pa.	147	187	68	24	102	58	20	15	1,493	1,369
E.N. CENTRAL	231	324	124	61	161	137	31	35	146	710
Ohio	81	52	7	-	96	59	10	9	27	26
Ind.	17	18	-	-	9	7	2	4	6	6
Ill.	1	56	8	12	3	16	5	9	-	33
Mich.	109	167	109	46	42	33	11	9	1	13
Wis.	23	31	-	3	11	22	3	4	112	632
W.N. CENTRAL	170	120	128	463	33	25	6	8	98	103
Minn.	21	9	4	1	3	2	2	-	60	55
Iowa	4	11	-	1	5	6	-	1	12	17
Mo.	115	66	123	453	17	8	1	5	20	25
N. Dak.	-	4	-	-	1	-	-	1	-	-
S. Dak.	2	-	-	-	1	2	-	-	-	-
Nebr.	14	17	1	8	2	7	3	-	2	2
Kans.	14	13	-	-	4	-	-	1	4	4
S. ATLANTIC	1,055	967	102	104	237	97	60	40	429	587
Del.	5	9	-	-	9	5	N	N	69	78
Md.	67	83	10	6	52	18	10	5	256	377
D.C.	1	9	-	-	1	5	-	-	5	12
Va.	87	114	3	1	46	8	7	3	30	26
W. Va.	10	13	1	1	8	-	2	-	5	5
N.C.	96	142	6	14	16	5	10	3	35	52
S.C.	78	67	23	4	4	6	1	6	1	5
Ga.	345	253	3	46	17	7	17	8	11	1
Fla.	366	277	56	32	84	43	13	15	17	31
E.S. CENTRAL	222	208	46	70	50	15	12	8	24	33
Ky.	40	33	8	2	20	7	2	2	6	13
Tenn.	100	80	9	16	18	3	2	3	9	7
Ala.	41	45	6	4	11	5	6	3	1	6
Miss.	41	50	23	48	1	-	2	-	8	7
W.S. CENTRAL	175	598	165	131	11	14	8	18	33	83
Ark.	32	75	3	10	1	-	1	-	-	-
La.	33	70	33	53	-	4	-	1	3	3
Okla.	31	25	2	4	4	2	1	5	-	-
Tex.	79	428	127	64	6	8	6	12	30	80
MOUNTAIN	353	291	36	38	40	17	17	19	10	8
Mont.	8	3	1	-	2	1	1	-	-	-
Idaho	-	5	-	-	3	-	1	2	2	2
Wyo.	22	12	-	5	2	1	-	-	-	-
Colo.	47	44	21	4	8	3	7	2	3	-
N. Mex.	18	74	-	2	2	1	2	2	-	1
Ariz.	183	94	4	4	9	5	5	9	-	2
Utah	31	23	-	4	10	5	-	3	2	2
Nev.	44	36	10	19	4	1	1	1	3	1
PACIFIC	483	481	50	70	40	36	52	53	49	49
Wash.	31	37	8	14	4	1	2	5	-	2
Oreg.	69	84	8	10	N	N	2	4	12	7
Calif.	371	348	33	46	36	35	46	39	36	39
Alaska	8	6	1	-	-	-	-	-	1	1
Hawaii	4	6	-	-	-	-	2	5	N	N
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	36	100	-	-	-	-	-	2	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 July 19, 2003, and July 20, 2002 (29th 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	443	679	958	1,149	3,123	3,998	2,726	3,953	246	427
NEW ENGLAND	13	41	50	68	290	367	256	448	-	2
Maine	2	2	5	3	9	5	27	26	-	-
N.H.	2	5	3	8	24	7	10	21	-	-
Vt.	-	1	-	4	33	69	18	63	-	-
Mass.	9	18	32	35	216	262	95	147	-	2
R.I.	-	3	2	5	7	4	28	34	-	-
Conn.	-	12	8	13	1	20	78	157	-	-
MID. ATLANTIC	103	167	127	152	347	172	247	606	13	38
Upstate N.Y.	30	24	31	34	157	114	184	330	1	-
N.Y. City	46	102	25	24	-	9	1	10	4	8
N.J.	10	23	19	23	22	-	62	87	5	14
Pa.	17	18	52	71	168	49	-	179	3	16
E.N. CENTRAL	46	101	153	172	224	478	50	50	6	16
Ohio	11	12	45	55	120	234	19	12	4	6
Ind.	1	5	31	22	29	24	6	8	-	1
Ill.	16	44	34	39	-	83	6	8	-	8
Mich.	16	32	29	26	29	33	17	13	2	1
Wis.	2	8	14	30	46	104	2	9	-	-
W.N. CENTRAL	25	42	87	90	176	324	364	270	18	65
Minn.	13	14	18	21	59	117	17	17	1	-
Iowa	3	2	16	13	42	98	51	38	2	1
Mo.	2	11	38	36	42	67	9	19	12	60
N. Dak.	1	1	1	-	3	5	36	23	-	-
S. Dak.	1	1	1	2	3	5	67	55	1	-
Nebr.	-	5	6	13	2	3	60	-	1	4
Kans.	5	8	7	5	25	29	124	118	1	-
S. ATLANTIC	129	140	175	175	273	226	1,355	1,409	167	188
Del.	-	1	7	6	1	2	23	24	-	-
Md.	34	50	18	4	38	28	147	233	46	23
D.C.	7	8	-	-	-	1	-	-	-	-
Va.	17	12	18	27	59	91	308	305	6	12
W. Va.	4	2	3	-	5	14	50	100	4	1
N.C.	9	9	21	19	75	20	427	367	74	102
S.C.	3	5	9	16	33	28	120	47	11	31
Ga.	21	20	20	22	23	18	199	234	21	16
Fla.	34	33	79	81	39	24	81	99	5	3
E.S. CENTRAL	7	10	48	63	73	122	115	147	34	63
Ky.	1	3	9	11	20	49	21	16	-	2
Tenn.	4	2	12	23	35	44	79	108	26	31
Ala.	2	3	13	15	14	22	15	23	3	10
Miss.	-	2	14	14	4	7	-	-	5	20
W.S. CENTRAL	13	28	67	138	245	939	159	716	3	44
Ark.	4	1	10	20	8	434	25	-	-	2
La.	2	3	24	29	6	5	-	-	-	-
Okla.	3	-	10	16	12	34	134	67	2	35
Tex.	4	24	23	73	219	466	-	649	1	7
MOUNTAIN	19	31	48	66	560	484	75	147	5	10
Mont.	-	1	3	2	1	3	11	8	1	1
Idaho	1	-	6	3	35	46	3	9	1	-
Wyo.	1	-	2	-	118	7	1	13	2	3
Colo.	11	16	12	21	196	191	12	22	-	1
N. Mex.	-	2	6	3	31	95	5	5	-	-
Ariz.	4	5	14	21	106	94	36	86	1	-
Utah	1	4	1	1	56	27	5	2	-	-
Nev.	1	3	4	15	17	21	2	2	-	5
PACIFIC	88	119	203	225	935	886	105	160	-	1
Wash.	13	12	16	44	268	276	-	-	-	-
Oreg.	7	5	36	34	247	110	4	3	-	1
Calif.	65	94	146	140	412	483	98	131	-	-
Alaska	-	2	1	1	-	4	3	26	-	-
Hawaii	3	6	4	6	8	13	-	-	-	-
Guam	-	-	-	1	-	2	-	-	-	-
P.R.	-	1	2	5	-	2	44	46	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 July 19, 2003, and July 20, 2002 (29th Week)*

Reporting area	Salmonellosis		Shigellosis		Streptococcal disease, invasive, group A		*Streptococcus pneumoniae*, invasive			
							Drug resistant, all ages		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	16,521	19,074	10,394	8,852	3,421	3,041	1,408	1,654	275	196
NEW ENGLAND	938	1,048	149	151	285	235	40	72	6	1
Maine	62	73	6	3	19	17	-	-	-	-
N.H.	74	66	5	5	19	26	-	-	N	N
Vt.	32	37	5	-	16	9	6	3	3	1
Mass.	534	599	92	105	131	81	N	N	N	N
R.I.	43	72	5	6	5	13	10	6	3	-
Conn.	193	201	36	32	95	89	24	63	U	U
MID. ATLANTIC	1,936	2,670	1,164	742	579	516	89	79	64	55
Upstate N.Y.	469	714	175	104	267	209	46	70	50	45
N.Y. City	509	664	188	238	79	124	U	U	U	U
N.J.	211	565	161	279	42	105	N	N	N	N
Pa.	747	727	640	121	191	78	43	9	14	10
E.N. CENTRAL	2,470	2,941	977	933	801	652	306	139	120	68
Ohio	733	707	204	364	230	147	201	18	71	-
Ind.	288	233	76	43	77	38	105	119	29	28
Ill.	799	1,051	481	354	178	197	-	2	-	-
Mich.	379	478	149	83	270	196	N	N	N	N
Wis.	271	472	67	89	46	74	N	N	20	40
W.N. CENTRAL	1,189	1,202	417	647	226	175	121	321	40	37
Minn.	283	278	48	128	111	90	-	220	34	33
Iowa	181	200	25	66	N	N	N	N	N	N
Mo.	434	409	208	90	47	37	9	5	2	1
N. Dak.	24	24	3	16	9	-	3	1	4	3
S. Dak.	45	50	9	150	17	9	1	1	-	-
Nebr.	74	75	86	141	21	14	-	25	N	N
Kans.	148	166	38	56	21	25	108	69	N	N
S. ATLANTIC	4,357	4,325	4,286	2,865	632	492	707	771	8	16
Del.	35	36	136	12	6	1	1	3	N	N
Md.	408	405	315	514	190	75	-	-	-	13
D.C.	16	41	32	37	10	5	2	-	4	1
Va.	457	428	230	515	80	51	N	N	N	N
W. Va.	58	58	-	4	29	13	49	34	4	2
N.C.	534	545	515	155	75	94	N	N	U	U
S.C.	219	274	246	64	26	29	74	134	N	N
Ga.	815	782	1,184	692	78	93	183	193	N	N
Fla.	1,815	1,756	1,628	872	138	131	398	407	N	N
E.S. CENTRAL	1,095	1,231	509	734	131	70	93	97	-	-
Ky.	209	165	62	79	31	12	12	12	N	N
Tenn.	343	307	168	34	100	58	81	85	N	N
Ala.	296	323	177	374	-	-	-	-	N	N
Miss.	247	436	102	247	-	-	-	-	-	-
W.S. CENTRAL	1,067	1,908	1,301	1,380	114	195	30	143	33	16
Ark.	289	352	55	110	4	5	7	5	-	-
La.	154	393	118	285	1	1	23	138	10	4
Okla.	199	194	489	256	57	33	N	N	23	2
Tex.	425	969	639	729	52	156	N	N	-	10
MOUNTAIN	1,064	1,081	510	303	328	382	19	32	4	3
Mont.	49	52	2	2	2	-	-	-	-	-
Idaho	98	64	12	2	14	5	N	N	N	N
Wyo.	50	33	1	3	1	7	4	10	-	-
Colo.	255	298	82	63	89	78	-	-	-	-
N. Mex.	93	146	99	56	83	71	15	22	-	-
Ariz.	326	280	257	142	129	196	-	-	N	N
Utah	109	87	29	18	9	25	-	-	4	3
Nev.	84	121	28	17	1	-	-	-	-	-
PACIFIC	2,405	2,668	1,081	1,097	325	324	3	-	-	-
Wash.	271	250	84	71	38	18	-	-	N	N
Oreg.	209	202	56	49	N	N	N	N	N	N
Calif.	1,803	2,030	929	941	243	271	N	N	N	N
Alaska	50	39	4	2	-	-	-	-	N	N
Hawaii	72	147	8	34	44	35	3	-	-	-
Guam	-	27	-	18	-	-	-	3	-	-
P.R.	133	225	1	19	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 July 19, 2003, and July 20, 2002 (29th 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	3,653	3,577	191	226	5,582	6,859	133	173	7,870
NEW ENGLAND	116	70	1	-	156	223	13	8	1,229
Maine	4	1	1	-	5	10	-	-	630
N.H.	12	1	-	-	7	7	1	-	-
Vt.	-	1	-	-	3	4	-	-	489
Mass.	77	51	-	-	98	105	5	6	107
R.I.	11	1	-	-	19	33	2	-	3
Conn.	12	15	-	-	24	64	5	2	-
MID. ATLANTIC	428	393	36	31	1,116	1,164	17	48	13
Upstate N.Y.	20	20	8	1	134	165	4	3	N
N.Y. City	256	232	21	13	639	570	7	25	-
N.J.	82	74	7	16	215	261	5	13	-
Pa.	70	67	-	1	128	168	1	7	13
E.N. CENTRAL	510	684	38	33	587	667	10	18	3,632
Ohio	125	80	2	-	104	102	-	5	918
Ind.	25	38	7	1	70	61	4	2	-
Ill.	187	259	13	26	272	323	-	6	-
Mich.	164	294	16	6	115	141	6	3	2,227
Wis.	9	13	-	-	26	40	-	2	487
W.N. CENTRAL	86	70	2	-	202	297	2	6	37
Minn.	30	32	-	-	92	128	-	3	N
Iowa	4	2	-	-	11	17	1	-	N
Mo.	30	16	2	-	22	84	1	1	-
N. Dak.	-	-	-	-	-	4	-	-	37
S. Dak.	1	-	-	-	16	10	-	-	-
Nebr.	1	5	-	-	9	9	-	2	-
Kans.	20	15	-	-	52	45	-	-	-
S. ATLANTIC	977	879	37	54	1,104	1,433	30	21	1,491
Del.	4	8	-	-	-	13	-	-	16
Md.	162	105	6	10	121	153	7	5	-
D.C.	32	26	1	1	-	-	-	-	18
Va.	54	43	1	1	98	140	10	-	418
W. Va.	-	-	-	-	11	14	-	-	882
N.C.	93	163	10	14	169	166	5	1	N
S.C.	61	71	4	6	85	104	-	-	157
Ga.	220	179	3	9	156	265	4	4	-
Fla.	351	284	12	13	464	578	4	11	N
E.S. CENTRAL	174	295	12	15	353	427	4	4	-
Ky.	23	56	1	2	68	74	-	4	N
Tenn.	74	110	6	5	112	165	1	-	N
Ala.	65	98	4	5	129	120	3	-	-
Miss.	12	31	1	3	44	68	-	-	-
W.S. CENTRAL	455	444	32	51	815	1,074	1	19	1,110
Ark.	29	18	-	3	54	71	-	-	-
La.	59	69	-	-	-	-	-	-	3
Okla.	31	36	1	1	75	89	-	-	N
Tex.	336	321	31	47	686	914	1	19	1,107
MOUNTAIN	150	171	19	8	175	216	3	7	358
Mont.	-	-	-	-	-	6	-	-	N
Idaho	6	1	-	-	3	10	-	-	N
Wyo.	-	-	-	-	2	2	-	-	36
Colo.	12	34	3	1	42	41	3	3	-
N. Mex.	28	19	-	-	6	22	-	-	-
Ariz.	93	108	16	7	83	105	-	-	3
Utah	4	2	-	-	18	17	-	2	319
Nev.	7	7	-	-	21	13	-	2	-
PACIFIC	757	571	14	34	1,074	1,358	53	42	-
Wash.	40	27	-	1	124	129	2	4	-
Oreg.	26	7	-	-	70	56	3	2	-
Calif.	690	531	14	32	826	1,065	48	35	-
Alaska	-	-	-	-	32	31	-	-	-
Hawaii	1	6	-	1	22	77	-	1	-
Guam	-	6	-	-	-	37	-	-	-
P.R.	110	148	1	18	33	57	-	-	263
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 July 19, 2003 (29th Week)

Reporting Area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	560	402	97	35	14	12	46
Boston, Mass.	144	89	33	11	4	7	9
Bridgeport, Conn.	42	31	5	5	-	1	5
Cambridge, Mass.	22	17	4	1	-	-	1
Fall River, Mass.	33	29	3	-	1	-	2
Hartford, Conn.	31	24	2	2	2	1	6
Lowell, Mass.	17	13	3	1	-	-	2
Lynn, Mass.	9	7	1	1	-	-	-
New Bedford, Mass.	30	24	4	1	1	-	1
New Haven, Conn.	36	28	5	2	1	-	4
Providence, R.I.	66	44	17	2	1	2	-
Somerville, Mass.	7	6	1	-	-	-	2
Springfield, Mass.	33	25	5	1	2	-	1
Waterbury, Conn.	33	20	6	5	2	-	2
Worcester, Mass.	57	45	8	3	-	1	11
MID. ATLANTIC	2,586	1,765	558	163	45	47	109
Albany, N.Y.	47	35	9	3	-	-	-
Allentown, Pa.	19	15	3	1	-	-	3
Buffalo, N.Y.	105	71	21	6	3	4	10
Camden, N.J.	32	20	6	3	-	3	3
Elizabeth, N.J.	14	11	3	-	-	-	-
Erie, Pa.	52	40	7	3	2	-	4
Jersey City, N.J.	48	28	10	9	-	1	-
New York City, N.Y.	1,452	974	340	84	24	23	51
Newark, N.J.	62	26	16	9	2	8	6
Paterson, N.J.	16	11	3	1	1	-	1
Philadelphia, Pa.	357	235	78	26	10	8	12
Pittsburgh, Pa.§	38	26	8	4	-	-	3
Reading, Pa.	19	14	4	1	-	-	-
Rochester, N.Y.	135	102	25	6	2	-	4
Schenectady, N.Y.	23	16	6	-	1	-	2
Scranton, Pa.	31	24	5	2	-	-	2
Syracuse, N.Y.	84	72	8	4	-	-	4
Trenton, N.J.	21	15	6	-	-	-	1
Utica, N.Y.	17	17	-	-	-	-	2
Yonkers, N.Y.	14	13	-	1	-	-	1
E.N. CENTRAL	1,867	1,213	393	151	60	50	104
Akron, Ohio	60	39	14	2	4	1	8
Canton, Ohio	35	23	7	4	-	1	4
Chicago, Ill.	279	167	65	28	11	8	10
Cincinnati, Ohio	81	55	13	6	4	3	5
Cleveland, Ohio	138	85	34	13	1	5	9
Columbus, Ohio	183	117	39	16	7	4	7
Dayton, Ohio	135	101	22	8	2	2	12
Detroit, Mich.	186	86	61	21	8	10	10
Evansville, Ind.	46	39	6	1	-	-	1
Fort Wayne, Ind.	70	47	14	5	4	-	3
Gary, Ind.	29	9	8	7	4	1	2
Grand Rapids, Mich.	70	50	7	7	2	4	4
Indianapolis, Ind.	138	89	31	10	3	5	7
Lansing, Mich.	39	25	9	2	2	1	2
Milwaukee, Wis.	95	69	16	7	2	1	7
Peoria, Ill.	58	42	11	2	3	-	6
Rockford, Ill.	53	45	5	2	-	1	1
South Bend, Ind.	43	29	9	4	-	1	4
Toledo, Ohio	81	62	10	4	3	2	1
Youngstown, Ohio	48	34	12	2	-	-	1
W.N. CENTRAL	554	366	116	35	20	17	28
Des Moines, Iowa	92	65	18	5	3	1	6
Duluth, Minn.	33	26	4	3	-	-	-
Kansas City, Kans.	33	21	8	3	-	1	4
Kansas City, Mo.	63	38	16	5	3	1	4
Lincoln, Nebr.	29	18	8	1	2	-	1
Minneapolis, Minn.	75	49	13	5	1	7	7
Omaha, Nebr.	70	44	14	5	4	3	1
St. Louis, Mo.	U	U	U	U	U	U	U
St. Paul, Minn.	64	49	9	4	2	-	5
Wichita, Kans.	95	56	26	4	5	4	-
S. ATLANTIC	1,309	780	316	124	36	53	71
Atlanta, Ga.	159	76	44	15	2	22	3
Baltimore, Md.	181	98	59	18	5	1	11
Charlotte, N.C.	121	73	34	9	1	4	11
Jacksonville, Fla.	160	95	41	14	6	4	8
Miami, Fla.	132	70	35	20	4	3	9
Norfolk, Va.	40	23	9	5	-	3	-
Richmond, Va.	64	41	15	3	1	4	3
Savannah, Ga.	66	43	11	4	2	6	5
St. Petersburg, Fla.	73	45	14	10	2	2	4
Tampa, Fla.	189	137	32	16	4	-	9
Washington, D.C.	100	59	19	9	9	4	3
Wilmington, Del.	24	20	3	1	-	-	5
E.S. CENTRAL	907	607	215	51	20	14	67
Birmingham, Ala.	183	124	45	7	6	1	17
Chattanooga, Tenn.	93	68	19	3	2	1	8
Knoxville, Tenn.	116	79	24	9	3	1	5
Lexington, Ky.	71	47	20	1	1	2	8
Memphis, Tenn.	164	101	39	19	1	4	13
Mobile, Ala.	87	58	20	6	1	2	1
Montgomery, Ala.	42	28	10	2	1	1	4
Nashville, Tenn.	151	102	38	4	5	2	11
W.S. CENTRAL	1,324	822	294	114	49	45	65
Austin, Tex.	83	56	13	7	1	6	9
Baton Rouge, La.	38	25	10	3	-	-	-
Corpus Christi, Tex.	31	19	7	3	2	-	-
Dallas, Tex.	239	145	43	28	13	10	-
El Paso, Tex.	65	50	8	6	1	-	1
Ft. Worth, Tex.	133	82	34	12	1	4	8
Houston, Tex.	324	181	81	28	22	12	21
Little Rock, Ark.	77	39	21	10	3	4	4
New Orleans, La.	U	U	U	U	U	U	U
San Antonio, Tex.	268	180	59	15	6	8	18
Shreveport, La.	66	45	18	2	-	1	4
Tulsa, Okla.	U	U	U	U	U	U	U
MOUNTAIN	893	578	201	73	23	18	52
Albuquerque, N.M.	183	107	49	20	4	3	6
Boise, Idaho	48	30	10	3	-	5	3
Colo. Springs, Colo.	51	36	9	5	1	-	2
Denver, Colo.	96	57	29	4	2	4	6
Las Vegas, Nev.	226	155	45	19	6	1	18
Ogden, Utah	29	22	4	3	-	-	3
Phoenix, Ariz.	U	U	U	U	U	U	U
Pueblo, Colo.	34	20	6	7	1	-	1
Salt Lake City, Utah	98	65	21	7	3	2	10
Tucson, Ariz.	128	86	28	5	6	3	3
PACIFIC	1,410	985	276	89	36	24	98
Berkeley, Calif.	14	11	3	-	-	-	4
Fresno, Calif.	105	74	18	8	4	1	3
Glendale, Calif.	14	13	1	-	-	-	-
Honolulu, Hawaii	67	54	10	3	-	-	6
Long Beach, Calif.	77	48	18	4	3	4	8
Los Angeles, Calif.	288	214	53	16	3	2	16
Pasadena, Calif.	U	U	U	U	U	U	U
Portland, Oreg.	162	105	36	12	6	3	3
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	198	135	40	10	8	5	16
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	183	135	32	10	4	2	24
Santa Cruz, Calif.	U	U	U	U	U	U	U
Seattle, Wash.	148	91	35	15	4	3	9
Spokane, Wash.	48	34	6	2	3	3	3
Tacoma, Wash.	106	71	24	9	1	1	6
TOTAL	11,410¶	7,518	2,466	835	303	280	640

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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