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Physical Health Status of World Trade Center Rescue and Recovery Workers and Volunteers — New York City, July 2002–August 2004

In the months after the September 11, 2001, attacks on the World Trade Center (WTC), concerns grew about the health consequences of exposures sustained by persons involved in the rescue and recovery response. In addition to the estimated 10,000 Fire Department of New York (FDNY) personnel, an estimated 30,000 other workers and volunteers potentially were exposed to numerous psychological stressors, environmental toxins, and other physical hazards. These concerns prompted CDC's National Institute for Occupational Safety and Health (NIOSH) to support the WTC Worker and Volunteer Medical Screening Program, which provided free, standardized medical assessments, clinical referrals, and occupational health education for workers and volunteers exposed to hazards during the WTC rescue and recovery effort. During July 16, 2002–August 6, 2004, the program evaluated 11,768 non-FDNY workers and volunteers. This report summarizes data analyzed from a subset of 1,138 of the 11,768 participants evaluated at Mount Sinai School of Medicine during July 16–December 31, 2002. These data indicated that a substantial proportion of participants experienced new-onset or worsened preexisting lower and upper respiratory symptoms, with frequent persistence of symptoms for months after their WTC response work stopped. These findings underscore the need for comprehensive health assessment and treatment for workers and volunteers participating in rescue and recovery efforts.

The clinical program included a single screening evaluation consisting of medical- and exposure-assessment questionnaires, physical examination, pre- and post-bronchodilator (BD) spirometry, complete blood count, blood chemistries, urinalysis, chest radiograph, and mental health screening questionnaires. Participants were recruited through outreach that included community and union meetings, mailings, and articles in the media. Eligibility for the screening program was based on arrival date and duration of exposure to the site* rather than on symptomatology. Institutional review board approval and informed consent were obtained for data aggregation and analyses.

The subset of 1,138 program participants was predominantly male (91%) and non-Hispanic white (58%), with a median age of 41 years (range: 21–74 years). Non-Hispanic blacks and Hispanics accounted for 11% and 15% of the population, respectively. The largest occupational sectors represented in this sample were technical and utilities (25%), law enforcement (21%), and construction (18%). Numerous other occupational groups accounted for the remaining 36%; 89% were union members.

* Minimum of 24 hours working/volunteering during September 11–30, 2001, or >80 hours during September 11–November 30, 2001, either south of Canal Street, the Staten Island landfill, or the barge loading piers. Employees of the Office of the Chief Medical Examiner also were eligible, regardless of hours worked. FDNY and State of New York employees had access to other screening programs and were not eligible for this program.

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Of the 1,138 participants, 525 (46%) worked on WTC rescue and recovery efforts on September 11, 2001, and 963 (84%) worked or volunteered during September 11–14, when exposures were greatest. During that period, a total of 239 (21%) participants reported using appropriate respiratory protection (i.e., full- or half-face respirators) (*1*). The median length of time worked on the WTC effort was 966 hours (range 24–4,080 hours). Of the 610 examinees present in lower Manhattan on September 11, a total of 313 (51%) reported being directly in the cloud of dust created by the collapse of the WTC buildings, and an additional 191 (31%) reported exposure to substantial amounts of dust.

A participant was considered to have a WTC-related symptom if the symptom either first developed (incident) or worsened (exacerbated) while working or volunteering on the WTC effort. WTC-related lower respiratory symptoms were reported by 682 (60%) of the sample, and 836 (74%) reported WTC-related upper respiratory symptoms. A total of 450 (40%) examinees had WTC-incident lower respiratory symptoms that persisted to the month before screening, and 565 (50%) reported WTC-incident and persistent upper respiratory symptoms (Table 1). Among the 851 participants who reported persistent WTC-related symptoms, an average of 32 weeks (range: 7–63 weeks) had elapsed since either they stopped working at the site or since the end of May 2002, when site cleanup was officially completed[†]. On examination, 527 (46%) had nasal mucosal inflammation. Other respiratory abnormalities (e.g., abnormal nasal turbinates or sinuses, rhonchi, and wheezing) were less common.

All participants underwent spirometry before and after an inhaled BD using standard techniques (*2*). A total of 360 (33%) participants had abnormal spirometry findings (Table 2), primarily because of results suggesting restriction; 84 (23%) had a significant[§] post-BD response. A total of 22 (27%) of those with airway obstruction had a significant BD response consistent with asthma.

Compared with a general population sample of employed, adult, white males (National Health and Nutrition Examination Surveys [NHANES III]) (*3*), the 599 participants who had never smoked had a higher prevalence of abnormalities on spirometry (31% versus 13%), which was attributable to a higher prevalence of restriction (21% versus 4%).

Participants experienced numerous other symptoms (Table 3), including a substantial proportion with incident and persistent musculoskeletal symptoms, such as low back pain (16%) and upper or lower extremity pain (16% and 13%,

[†] After official site closure, exposure levels were reduced markedly.
[§] Defined by using the American Thoracic Society criteria or an increase in either forced expiratory volume in 1 second (FEV1) or forced vital capacity (FVC) of >12% and >0.2 L, respectively.

TABLE 1. Number and percentage of World Trade Center (WTC) rescue and recovery workers and volunteers reporting upper and lower respiratory symptoms, by symptom — New York City, July 16–December 31, 2002

Symptom	Previous history (prevalence in year before September 11, 2001)*†		Worsened while working or volunteering on WTC effort§		Incidence (new onset) while working or volunteering on WTC effort¶		Incidence (new onset) and persistent to month before screening¶	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Lower respiratory	**217**	**(19.1)**	**87**	**(40.1)**	**654**	**(57.5)†**	**450**	**(39.5)†**
Dry cough (excluding colds)	58	(5.1)	23	(39.7)	403	(37.3)	213	(19.7)
Cough with phlegm (excluding colds)	57	(5.0)	25	(43.9)	214	(19.8)	110	(10.2)
Shortness of breath	79	(6.9)	28	(35.4)	261	(24.6)	206	(19.5)
Wheezing apart from having a cold	75	(6.6)	24	(32.0)	195	(18.3)	105	(9.9)
Chest tightness upon waking or at any other time of day	51	(4.5)	16	(31.4)	216	(19.9)	148	(13.6)
Upper respiratory**	**487**	**(42.8)**	**250**	**(51.3)**	**794**	**(69.8)†**	**565**	**(49.6)†**
Facial pain or pressure	41	(3.6)	18	(43.9)	84	(7.7)	67	(6.1)
Head or sinus congestion	292	(25.7)	151	(51.7)	249	(29.4)	177	(20.9)
Post-nasal discharge	143	(12.6)	55	(38.5)	174	(17.5)	121	(12.2)
Blowing nose more than usual	52	(4.6)	23	(44.2)	388	(35.7)	196	(18.0)
Nosebleeds	30	(2.6)	8	(26.7)	84	(7.6)	24	(2.2)
Stuffy nose	208	(18.3)	91	(43.8)	326	(35.1)	216	(23.2)
Sneezing	131	(11.4)	53	(40.8)	245	(24.3)	148	(14.7)
Runny nose	105	(9.2)	37	(35.2)	195	(18.9)	114	(11.0)
Irritation in nose	46	(4.0)	28	(60.9)	187	(17.1)	92	(8.4)
Ear fullness (“blocked”)	66	(5.8)	18	(27.3)	144	(13.4)	115	(10.7)
Ear pain	16	(1.4)	5	(31.3)	64	(5.8)	44	(3.9)
Throat irritation	50	(4.4)	23	(46.0)	481	(44.2)	246	(22.6)
Sore throat	52	(4.6)	22	(42.3)	360	(33.1)	180	(16.6)
Hoarseness	49	(4.3)	18	(36.7)	298	(27.4)	171	(15.7)
Losing voice	4	(0.4)	1	(25.0)	86	(7.6)	35	(3.1)

* A number of participants (n = two to 19) are missing data on this question; except for chest tightness, 164 are missing.
† Denominator = 1,138.
§ Denominator = participants with previous history.
¶ Denominator = 1,138 minus participants with previous history.
** All are excluding colds, except for those with facial pain or pressure.

TABLE 2. Number and percentage of World Trade Center (WTC) rescue and recovery workers and volunteers who received spirometry testing, by cigarette smoking status, bronchodilator (BD) response, and spirometry results — New York City, July 16–December 31, 2002

Spirometry results	Cigarette smoking status: Never		Former		Current		Total*		BD response†	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Normal	412	(69)	179	(70)	134	(59)	725	(67)	39	(5)
Obstruction§	48	(8.0)	18	(7)	15	(7)	81	(7)	22	(27)
Obstruction and low FVC¶	11	(2)	5	(2)	10	(4)	26	(2)	10	(38)
Restriction** ††	128	(21)	55	(21)	70	(31)	253	(23)	52	(21)
Total	**599**	**(55)**	**257**	**(24)**	**229**	**(21)**	**1,085**		**123**	**(11)**

* Includes 1,085 participants with three good spirometry maneuvers and valid smoking-status responses.
† Defined as an increase of >12% and >0.2 L in forced vital capacity (FVC) or forced expiratory volume in 1 second (FEV1) after inhaling albuterol, respectively.
§ FEV1 / FVC < lower limit of normal range (LLN) and FVC > LLN (pre-BD).
¶ FEV1 / FVC < LLN and FVC < LLN.
** FVC < LLN and FEV1 / FVC ≥ LLN.
†† Includes 75 participants with a normal FVC after BD (pseudo-restriction).

respectively). Other incident and persistent symptoms included heartburn (15%), eye irritation (14%), and frequent headache (13%). Overall, 364 (23%) of the sample reported previously receiving medical care for WTC-related respiratory conditions. A total of 214 (19%) of examinees reported missing work because of WTC-related health problems (median: 10 days; range: 1–364 days).

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TABLE 3. Number and percentage of World Trade Center (WTC) rescue and recovery workers and volunteers reporting symptoms* other than upper and lower respiratory symptoms, by type of symptom — New York City, July 16–December 31, 2002

Symptom	Previous history (prevalence in year before September 11, 2001)†§ No.	(%)	Worsened while working or volunteering on WTC effort¶ No.	(%)	Incidence (new onset) while working or volunteering on WTC effort** No.	(%)	Incidence (new onset) and persistent to month before screening** No.	(%)
Musculoskeletal symptoms								
Low back pain	304	(26.7)	80	(26.3)	155	(18.6)	130	(15.6)
Neck/Upper back pain	138	(12.1)	39	(28.3)	136	(13.6)	116	(11.6)
Any upper extremity pain	**215**	**(18.9)**	**52**	**(24.2)**	**203**	**(17.8)§**	**182**	**(16.0)§**
Shoulder pain	119	(10.5)	27	(22.7)	98	(9.6)	88	(8.6)
Elbow/Forearm pain	51	(4.5)	8	(15.7)	50	(4.8)	44	(4.0)
Hand/Wrist pain	75	(6.6)	16	(21.3)	61	(5.7)	55	(5.2)
Pain, numbeness, or tingling in fingers	85	(7.5)	20	(23.5)	97	(9.2)	84	(8.0)
Any lower extremity pain	**256**	**(22.5)**	**75**	**(29.3)**	**170**	**(14.9)§**	**146**	**(12.8)§**
Hip/Thigh pain	58	(5.1)	18	(31.0)	48	(4.4)	40	(3.8)
Knee pain	174	(15.3)	48	(27.4)	64	(6.6)	60	(6.3)
Lower leg pain	45	(4.0)	9	(20.0)	41	(3.8)	38	(3.5)
Pain, numbness, or tingling in feet	69	(6.1)	15	(21.7)	79	(7.4)	62	(5.8)
Other symptoms								
Frequent headache	110	(9.7)	35	(31.8)	179	(17.4)	130	(12.6)
Eye irritation	66	(5.8)	33	(50.0)	422	(39.4)	146	(13.6)
Dizziness	40	(3.5)	9	(22.5)	151	(13.8)	99	(9.0)
Chest pain with exertion	27	(2.4)	3	(11.1)	58	(5.2)	42	(3.8)
Chest pain at rest	27	(2.4)	5	(18.5)	66	(5.9)	48	(4.3)
Coughing up blood	2	(0.2)	0	(0.0)	44	(3.9)	5	(0.4)
Nausea/Vomiting	19	(1.7)	4	(21.1)	117	(10.5)	55	(4.9)
Indigestion/Heartburn	248	(21.8)	76	(30.7)	168	(18.9)	135	(15.2)
Diarrhea	57	(5.0)	15	(26.3)	93	(8.6)	57	(5.3)
Rash	64	(5.6)	16	(25.0)	164	(15.3)	79	(7.4)

* Lasting more than a week or severe enough to result in missed work.
† A number of participants (n = four to 20) are missing data on specific questions.
§ Denominator = 1,138.
¶ Denominator = participants with previous history.
** Denominator = 1,138 minus participants with previous history.

Editorial Note: The findings in this report indicate that a substantial proportion of program participants had new-onset and persistent upper and lower airway symptoms, musculoskeletal symptoms, and gastrointestinal symptoms. In addition, a substantial proportion of participants had respiratory abnormalities on spirometry. This preliminary analysis is consistent with earlier reports from WTC screening programs conducted by FDNY (*4,5*), which documented a substantial proportion of respiratory symptoms in emergency response workers. These findings suggest a need for continued monitoring and appropriate treatment of WTC responders.

NIOSH recently funded a program that will provide continued medical screening of responders for an additional 5 years. Through philanthropic sources, a WTC Health Effects Treatment Program was established to provide further clinical evaluation and treatment to responders at no cost. Thus far, this program has provided approximately 3,587 services to 844 responders, 40% of whom lacked health insurance.

A substantial proportion of workers evaluated in this program had low forced vital capacity (FVC). Restrictive lung diseases (low FVC) typically develop during a long period and are not the consequence of airway irritant exposures such as those experienced by WTC workers. Reduction in FVC might be attributable to air trapping rather than true restriction (i.e., pseudo-restriction), a hypothesis supported by the increase of FVC into the normal range after inhaled BD in 29% of the workers with low FVC. Further analyses that include lung volume measurement might clarify the implications of these findings.

The destruction of the WTC towers resulted in the release of high levels of airborne contaminants (*6*). The Environmental Protection Agency estimated that potential dust exposures ranged from 1,000 $\mu g/m^3$ to >100,000 $\mu g/m^3$ in the hours after the towers' collapse. Exposures were attributed primarily to smoldering fires (until December 2001), dust resuspension, and diesel exhaust from heavy equipment. WTC dust contained pulverized (alkaline) cement, glass fibers, asbestos, polycyclic aromatic hydrocarbons (PAHs), polychlorinated

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biphenyls (PCBs), and polychlorinated furans and dioxins. WTC dust was highly alkaline (pH: 9.0–11.0) (*7*). The deposit of larger particles in the upper respiratory tract might have resulted in persistent upper airway inflammation. Highly irritant, respirable particles are likely to have accounted for lower airway symptoms and clinical findings. Administration of respirable particulate (particles <2.5 μm in diameter) WTC dust to rodents resulted in lower airway hyper-responsiveness (*8*). Thus, the findings in WTC examinees are consistent with current understanding of WTC exposures; however, the persistence of symptoms for >1 year after the 9/11 event is a new finding and requires further study.

The findings in this report are subject to at least three limitations. First, no reliable statistics exist on the size or composition of the exposed worker/volunteer population, so determining participation rates for the screening program is not possible, and generalizations to all WTC-exposed workers should be made with caution. Second, the screened population might overrepresent those most affected; those screened earlier might not be representative of all persons screened with regard to WTC exposures or health outcomes, and persons examined earlier might have had more severe health problems and sought out the program for that reason. However, preliminary analyses of exposure data among all persons examined through January 2, 2004, demonstrate similar patterns of acute and longer-term WTC exposures. Additional analyses of data for the remainder of the cohort will address concerns regarding health outcomes of persons screened later in the program. Finally, because of the absence of pre-9/11 symptom prevalence and pulmonary function tests (PFTs) for these participants, the ability to measure accurately the impact of WTC exposures on responders' health is limited. Because of the absence of an unexposed control group, spirometry data from this sample were compared with those of NHANES III (*3*).

This report underscores the need for comprehensive occupational health assessment and treatment for rescue workers and volunteers as part of all emergency preparedness programs. Guidelines for professional emergency response workers have been developed (*1*). The results described in this report suggest that disaster preparedness also should include 1) planning for rapid provision of suitable respiratory and other protective gear and 2) provision of medical care for first responders and nontraditional responders (e.g., persons from construction trades, utility workers, and other occupational groups).

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Mental Health Status of World Trade Center Rescue and Recovery Workers and Volunteers — New York City, July 2002–August 2004

After the September 11, 2001, attacks on the World Trade Center (WTC), a comprehensive screening program was established to evaluate the physical and mental health of rescue and recovery workers and volunteers. Persons were eligible for this program if they participated in the WTC rescue or recovery efforts and met specific time criteria for exposure to the site. During July 16, 2002–August 6, 2004, the program evaluated 11,768 workers and volunteers. This report summarizes data analyzed from a subset of 1,138 of the 11,768 participants evaluated at the Mount Sinai School of Medicine during July 16–December 31, 2002. On the basis of one or more standardized screening questionnaires, approximately half (51%) of participants met threshold criteria for a clinical mental health evaluation. Continued surveillance is needed to assess the long-term psychological impact of the aftermath of the 9/11 attacks and to determine needs for continued treatment.

The program was approved by an institutional review board, and informed consent was obtained for data aggregation and analyses. Participants were asked to complete standardized, self-administered questionnaires that screened for symptoms of anticipated postdisaster mental health conditions. The questionnaires used were the General Health Questionnaire-28

(GHQ), which identifies general psychiatric symptoms (*1*); Post Traumatic Stress Disorder (PTSD) Symptom Checklist (PCL), which identifies possible cases of PTSD (*2*); Patient Health Questionnaire (PHQ), which identifies panic, generalized anxiety, and depression (*3*); CAGE Questionnaire, which identifies likely alcohol dependence and abuse (*4*); and Sheehan Disability Scale, which measures functioning at home and work (*5*). Participants who met threshold criteria or acknowledged suicidal ideation or substantial disability on any questionnaire were referred for clinical evaluations by mental health professionals on the same day.

The 1,138 program participants were predominantly male (91%) and non-Hispanic white (58%), with a median age of 41 years (range: 21–74 years). Non-Hispanic blacks and Hispanics accounted for 11% and 15% of the population, respectively. Participants had sustained a median of 966 hours (range: 24–4,080 hours) of exposure (approximately 4 months of 8-hour workdays) to the WTC site. During July 16–December 31, the majority of participants (51%) met criteria for a clinical mental health evaluation on at least one screening questionnaire (Table). Symptoms of depression, panic, and generalized anxiety were each reported by approximately 6% of participants. Nearly 10% reported at least one item on the CAGE Questionnaire. The Sheehan Disability Scale indicated that the top three emotionally related disabilities were problems with social life (15%), work (14%), and home life (13%).

On the PCL, approximately 20% of participants reported symptoms meeting the thresholds for PTSD (*2*). The diagnosis of PTSD requires both a characteristic pattern of symptoms and impaired functioning or substantive clinical distress relative to a qualifying trauma (*6*). Among program participants, sufficient exposure to qualifying traumatic events was assumed and not assessed; however, despite meeting threshold by symptom count on the PCL (*2*), approximately one third (32%) did not meet the criteria for both pattern of symptoms and impaired functioning or substantive clinical distress. Application of the diagnostic criteria reduces the proportion considered to have PTSD from 20% to 13%. Of the 1,138 participants, only 36 (3%) reported accessing mental health services before participating in this program.

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Editorial Note: The direct and protracted nature of the rescue and recovery workers and volunteers' exposure to the aftermath of the 9/11 attacks differentiates these persons from the general population (*7*). These responders are unlike previous populations of rescue workers (*8*) because of the heterogeneity of their occupations (e.g., construction trades, utilities and sanitation workers, and first responders) and the documented health effects of their WTC work. The proportion of those meeting PCL threshold scores (*2*) for posttraumatic stress in the predominantly male sample is approximately four times the 5% reported lifetime prevalence of PTSD in the general male population (*6*). The point prevalences of approximately 6%, respectively, for panic and generalized anxiety symptoms represent a two- to fourfold increase, compared with the 12-month prevalences of 2% and 3%, respectively, reported in the general population (*9*). However, depression was detected at a prevalence of 6%, nearly half the 12-month prevalence of 10% reported in the general population (*9*). The point prevalence of alcohol abuse and dependence of nearly 10% documented by CAGE suggests rates at least as high as the 12-month prevalence of 9.7% reported in the general population (*9*).

TABLE. Mental health screening questionnaire results of World Trade Center rescue and recovery workers and volunteers, by category — New York City, July 16–December 31, 2002

Category	No.	(%)
Referred for routine mental health evaluation*	492	(43.2)
Evaluated for suicidality†	92	(8.0)
Total	584	(51.3)
Total sample	**1,138**	**(100.0)**
Possible reason(s) for referral		
General Health Questionnaire-28 (GHQ)		
Somatic symptoms, anxiety and insomnia, social dysfunction, or severe depression	500	(43.9)
Post Traumatic Stress Disorder (PTSD) Symptom Checklist (PCL)	224	(19.7)
PTSD PCL + met PTSD symptom algorithm	174	(15.3)
PTSD PCL + met PTSD symptom algorithm + functional difficulty on Sheehan Disability Scale	146	(12.8)
Patient Health Questionnaire		
Panic symptoms	66	(5.8)
General anxiety	67	(5.9)
Major depression	64	(5.6)
CAGE Questionnaire	108	(9.5)
Sheehan Disability Scale		
Problem(s) with spouse/partner	52	(4.5)
Problem(s) with children	15	(1.3)
Problem(s) with work	155	(13.5)
Problem(s) with social life	175	(15.3)
Problem(s) with home life	149	(12.9)
Proportion who reported receiving mental health care	36	(3.2)
Total reasons for referral§	**1,575**	

* If exceeds threshold criteria on General Health Questionnaire (GHQ), Post Traumatic Stress Disorder Symptom Checklist, Patient Health Questionnaire (PHQ), or Sheehan Disability Scale.
† If suicidal ideation was indicated on GHQ or PHQ.
§ Total exceeds 1,138 because persons might have had more than one reason for referral.

The findings in this report are subject to at least three limitations. First, no reliable data exist regarding the size of the worker/volunteer responder population; therefore, determining participation rates for the screening program was not possible. Second, persons who participated in the screening might have done so because they experienced (or perceived) greater exposures and/or symptoms; therefore, these results are not generalizable to all responders. Finally, the questionnaires, which had been validated by using psychiatric patients, were applied to nonpsychiatric patients; in addition, certain questionnaires had been validated primarily among women and might not be equally valid in a predominantly male population.

Preliminary findings regarding the possible cases of PTSD among these workers underscore the need for better tools to assess the mental health of responders to a disaster. For example, the popular PCL (*2*) used in this screening program does not conform to established clinical diagnostic criteria for PTSD (*6*) and might provide either over- or underestimates of posttraumatic psychopathology. In addition, the comparatively low rate of postdisaster depression identified by PHQ challenges assumptions about its sensitivity for detecting depression, especially because the proportion appears lower than that documented for the general population.

Approximately half of the participants met preestablished screening criteria for mental health problems. Despite substantial resources directed at the mental health effects of 9/11, only 3% of this population reported having accessed mental health treatment. Project Liberty (*10*), a crisis counseling program funded by the Federal Emergency Management Administration, offered interventions beyond crisis counseling to help persons who experienced persistent and disabling distress. In addition, the Public Safety Workers Program, funded by the Substance Abuse and Mental Health Services Administration, has made limited funds available for the mental health treatment of this specific population through September 30, 2005. The mental health effects observed in this population suggest the need for further mental health screening, follow-up, and access to mental health services for WTC rescue and recovery workers and volunteers.

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Preliminary Results from the World Trade Center Evacuation Study — New York City, 2003

On September 11, 2001, an estimated 13,000–15,000 persons successfully evacuated the two World Trade Center (WTC) towers. Because full-scale evacuations of such buildings are rare, little is known about how readily and rapidly these buildings can be evacuated and what factors serve as facilitators or barriers to the process (*1*). In 2002, the Mailman School of Public Health at Columbia University and CDC initiated The World Trade Center Evacuation Study, a multiyear qualitative and quantitative research study designed to assess factors that affected evacuation of the two WTC towers. This report summarizes qualitative data collected from Phase I of the study, which suggested that improved preparedness at the individual, organizational, and building environmental levels can facilitate rapid evacuation. Completion of Phase II of the study, together with other research efforts, should help workers, management, and local authorities develop and evaluate model emergency preparedness programs for high-rise occupancies.

Qualitative data for Phase I of the WTC study were collected from 56 participants during 2003, approximately 18 months after the events of September 11, 2001. Participants were self-selected into the qualitative study in response to a multimedia recruitment campaign; they consisted of 36 persons who were administered in-depth, semi-structured interviews and 20 who participated in five focus groups. The data collected helped guide development of a detailed study questionnaire for the quantitative Phase II* of the study.

*More information is available at http:\\www.wtcsurvey.cumc.columbia.edu.

The 56 participants ranged in age from 23 to 61 years; the mean and median age was 43 years. A total of 31 (55%) were male; 42 (75%) were white, seven (13%) were black, and one (2%) was Asian. Four (7%) identified themselves as of Hispanic ethnicity. A total of 37 (66%) of the participants were college graduates.

Interview scripts were designed to identify the factors that influenced both the decision-making process, as well as the actual evacuation-related behaviors. Transcripts of the taped responses were read and categorized by two reviewers, with coding themes verified by a third reviewer using a modified Q-sort methodology (*2*). Inter-rater reliability was high, with >95% concordance.

Individual factors. Participants cited four factors that affected their decision to begin evacuating: 1) perceived ability to walk down multiple flights of stairs (i.e., more than 80 for certain persons); 2) experience in evacuation of a WTC tower, including knowledge of stairwell locations and whether individual stairwells led to street level exits; 3) concern over leaving their work areas without the approval of executives or managers; and 4) information regarding what had occurred, what floors were involved, and how to respond. Direct evidence of the magnitude of the event (e.g., observing an aircraft strike a building, smelling fuel, or feeling a building move) caused some persons to leave immediately.

The qualitative data also suggested that, after a decision to evacuate was made, many persons stopped to attend to last-minute activities (e.g., making telephone calls, shutting down computers, or gathering up personal items). Deciding which route to take (e.g., stairs or elevators) might have delayed evacuation progress for others. Progress was reportedly slowed for some persons because of poor physical condition or inadequate footwear (e.g., high-heeled shoes or "flip-flops"). Some persons also delayed their progress to stop and assist others.

Organizational factors. Two major organizational factors affecting evacuation were identified by participants: 1) workplace preparedness planning and training, including evacuation drills (e.g., when drills were held, the majority reported they never actually entered their designated stairwells) and 2) inadequate risk communication. An announcement broadcast in WTC 2 (South Tower) shortly after the first aircraft had struck WTC 1 (North Tower) urged persons to remain in the building and likely led many to return to their work stations.

Building environmental factors. Three major evacuation factors in the WTC building environment were identified as 1) structural damage that blocked egress routes (e.g., debris on stairs or partially collapsed interior walls); 2) heavy congestion on certain stairways, which in some cases caused evacuees to move back upstairs in hopes of switching to a less

congested stairwell; and 3) lack of back-up communication systems (e.g., public address system, elevator telephone system, and telephone system). When these systems failed, communication was severely limited.

Participants' experience with evacuations and emergency training varied by occupation. Service workers and temporary employees were less likely than others to have received fire safety training or been instructed in procedures during an emergency. Temporary workers were at a disadvantage because of their lack of familiarity with building evacuation procedures. Many permanent workers, even those with years of experience in the buildings, also reported they did not know how to evacuate via routes that deviated from their normal paths. Many reported confusion at the sky lobby levels, where transfer to express elevators occurred.

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Editorial Note: These qualitative data provide initial insights regarding preparedness planning for total evacuation of other multistory buildings, either business or residential. The data suggest that preparedness planning at the individual, organizational, and structural levels factored into evacuation efforts at the WTC towers.

The findings in this report are subject to at least three limitations. First, the study cannot provide an estimate of the prevalence of these factors among WTC evacuees. Second, the data are subject to recall and response biases, which are common to self-reported qualitative and behavioral data. Finally, because of the study design and small sample size, the generalizability of these data to other high-rise evacuations is unknown.

The high rate of survivability of persons on floors in WTC 1 and 2 that were below the aircraft impacts was attributed to the small percentage (estimated at 20%–30%) of the building occupants at their work stations at the time of the first attack (*3*), reducing the flow of evacuees on the stairways and hastening evacuation (*4*). The lessons learned from the 1993 WTC bombing resulted in extensive fire safety improvements (e.g., improved signage and better lighting in stairwells) and also are believed to have facilitated the evacuation process (*5*). The 1993 bombing led some employers to enhance their emergency preparedness plans, which might have helped evacuate their employees more rapidly (*6*). In addition, on September 11, 2001, evacuees almost uniformly acted in an orderly and cooperative manner. The large numbers of first responders on the stairwells, in the lobby, and at ground level, might have helped to reassure and motivate evacuees (Figure).

FIGURE. The presence of large numbers of firefighters and other first responders might have helped reassure and motivate evacuees after the attacks on the two World Trade Center towers on September 11, 2001

AP Photo/John Labriola

High-rise buildings should be prepared for rapid, total building evacuation (*7*). More detailed information on the impact of these various factors on evacuation behaviors and how these behaviors affected the length of time to evacuate is being collected in Phase II, the quantitative phase of this study. A total of 1,500 randomly selected evacuees are completing detailed survey questionnaires that focus on their individual decision-making processes during the disaster. These data will provide a better understanding of the factors that helped shape evacuation decisions. Data from this phase of the study, as well as from similar initiatives, can help inform builders, developers, insurance companies, employee groups, and emergency planners about risk-reduction strategies. Data from such sources also might be of value to regulators at the federal, state, and local levels. To ensure adequate readiness, further studies should focus on the development and evaluation of model emergency preparedness programs for high-rise buildings.

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Investigation of Acute Idiopathic Pulmonary Hemorrhage Among Infants — Massachusetts, December 2002–June 2003

During 1993–1996, investigation of cases of acute idiopathic pulmonary hemorrhage (AIPH) among infants in Cleveland, Ohio (*1*), suggested an association between AIPH and being male, exposure to molds (notably *Stachybotrys chartarum*), exposure to environmental tobacco smoke, and lack of breastfeeding. However, reviews of that investigation by CDC and external consultants identified shortcomings in the methodology and determined that no association between AIPH and exposure to molds had been established (*2*). The reviewers recommended that CDC collaborate with state and local public health officials to investigate future cases of AIPH, particularly when clusters are identified. During December 2002–June 2003, four cases of AIPH among full-term infants were reported in the Boston, Massachusetts, area. In a 4-month period, three of the infants were patients at the same hospital, which typically has one case of AIPH among infants per year. CDC, in collaboration with the Massachusetts Department of Public Health (MDPH), investigated this cluster, the first reported since CDC's case definition* for AIPH in infants was published in 2001. This report summarizes the results of that investigation, which determined that two of the infants had von Willebrand disease (vWD), an inherited bleeding disorder, and one had borderline test results for vWD. The findings suggest that the infants with AIPH might have had underlying acquired or genetic susceptibility that predisposed them to pulmonary bleeding. Before a diagnosis of AIPH is made, clinicians should use tests to rule out vWD and other bleeding disorders.

Reviewers of the earlier investigation of AIPH among infants recommended that investigators consider associations with multiple possible etiologies. These etiologies might include environmental factors such as exposure to mold, evidence of pests, tobacco smoke, and exposure to multiple allergens and biologically active compounds. Because of the overlap between AIPH in infants and sudden infant death syndrome (SIDS) (*3*), investigators also were advised to consider risk factors for SIDS.

In the Boston area investigation, CDC and MDPH reviewed December 2001–June 2003 admission records of pediatric and neonatal intensive care units (PICUs and NICUs) and hospital discharge records at each of the four area hospitals with PICUs and found no additional cases. For each of the four cases that were consistent with the CDC case definition, investigators used a standard data abstraction form to collect information about family demographics, prenatal and birth histories, diet and medication, preexisting medical conditions, and medical procedures and tests after admission for AIPH. Blood samples collected from the four infants were sent to CDC's hemostasis laboratory and tested for vWD and other bleeding disorders.

CDC and MDPH investigators visited the homes of the four infants. During each home visit, investigators conducted a 1–2-hour interview with family members to obtain additional information about family travel, medical history, and self-reported environmental exposures. An indoor-air–quality inspector from MDPH visually examined each home for signs of water damage and mold. Four weeks after the initial home visit, investigators conducted environmental sampling for fungi and mold spores in the homes of three of the four infants. For one infant, no environmental sampling was possible because the family had relocated; reported water and mold damage in the home already had been remediated. Environmental samples (e.g., air, dust, and surface) were taken from different areas in the homes, including the location where the infant was reported to have spent the most time. In each area, air sampling was performed under varying conditions (e.g., with room ceiling fans on or off and before and after foot traffic). Floor registers and electrical outlets were sampled to detect reservoirs of mold in heating, ventilation, and air conditioning ductwork and behind walls. Air samples were tested to identify total spores and culturable fungi.

The four infants were male and, at onset of illness, had a median age of 48 days (range: 28–77 days). All four infants had symptoms of upper respiratory illness <2 weeks before their pulmonary hemorrhage (Table). On admission to the hospital, each infant required intubation and mechanical

*A clinically confirmed case was defined as an illness in a previously healthy infant aged <1 year with a gestational age of ≥32 weeks, no history of neonatal medical problems that might cause pulmonary hemorrhage, and whose illness is consistent with the following criteria: 1) abrupt or sudden onset of overt bleeding or frank evidence of blood in the airway; 2) severe presentation leading to acute respiratory distress or respiratory failure, resulting in hospitalization in a pediatric intensive care unit with intubation and mechanical ventilation; and 3) diffuse, bilateral pulmonary infiltrates on chest radiograph or computerized tomography of the chest.
Source: CDC. Availability of case definition for acute idiopathic pulmonary hemorrhage among infants. MMWR 2001;50:494–5.

ventilation. All four infants had evidence of blood in the airway (i.e., identified by bronchoscopy in three and by bronchoalveolar lavage fluid containing hemosiderin-laden macrophages in the fourth). The four infants had a median stay in the PICU of 8 days (range: 7–9 days). All were discharged in good health.

Although a history of vWD was reported only by the family of infant A (Table), testing at CDC's hemostasis laboratory revealed that both infant A and infant B had laboratory evidence of vWD, and infant D had borderline von Willebrand factor antigen and ristocetin cofactor results consistent with a vWD diagnosis. All laboratory tests for bleeding disorders for infant C were within the normal range. Infant B also had a history of recurring bruising and possibly gastrointestinal bleeding. Although he received vitamin K at birth, infant B also had characteristics that might predispose to vitamin-K deficiency, including antibiotic use by the mother and infant (*4*). The family of infant D reported finding him face down on a couch at the time hemoptysis was first observed, suggesting the possibility of unintentional asphyxia.

The environmental investigation of the infants' homes determined that one primary residence had flooded and three had undergone recent renovations; infants A, B, and D were exposed to increased indoor concentrations of dust and particulate matter within a few days of their bleeding events. Although only one family reported visible mold, indications of active fungal growth were present in all the homes. Common molds, such as species of *Cladosporium* and *Penicillium* were the dominant culturable species identified in each of the homes tested. One *S. chartarum* spore was found in the basement of one home, and seven *S. chartarum* spores were found in another home.

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Edito rial Note: Although the rate of AIPH among infants in the United States is unknown, the condition is thought to be rare (*5*); what national AIPH data exist are inconsistent and likely unreliable (*3*). CDC has reported clusters of AIPH among infants in Cleveland, Ohio, and Chicago, Illinois (*3,6*); however, the specific etiologic factors for AIPH remain unknown. Previous studies have not reported an association between pulmonary hemorrhage and vWD, although specific testing for vWD might not have been conducted. The most common inherited bleeding disorder, vWD has multiple variants affecting an estimated 1%–3% of the U.S. population (*7*); persons with vWD tend to have mucocutaneous bleeding. For infants A, B, and D, a previously undiagnosed bleeding diathesis might have contributed to their hemorrhage; hematologic tests confirmed the diagnosis of vWD in two infants (infants A and B) and suggested vWD in the third (infant D). The hematologic test findings appear consistent with a reported family history of vWD for infant A and with unexplained facial bruising in infant B that occurred before his hemorrhage; infant B also had risk factors that might have been associated with transient vitamin-K deficiency. For infant D, acute unintentional asphyxia, a known risk factor for pulmonary hemorrhage, might have been a contributing factor.

All the infants in this cluster also were exposed to certain environmental factors that might have affected their lungs, including environmental tobacco smoke, particulate matter (e.g., construction dust), and mold. *Cladosporium* and *Penicillium,* the molds most commonly identified in each of the homes, typically are the most abundant fungal genera in indoor air (*8*). Total fungal spore counts in two of the homes were at concentrations that have been associated with increased risk for lower respiratory illness (*9*), and all four infants were treated presumptively for respiratory infections before their hemorrhage episodes. Only seven spores of *S. chartarum* were found in one home, and a single spore was found in another. Although the full significance of spore counts is not known, toxic and other non-IgE–mediated health effects that have been hypothesized to occur with exposure to *S. chartarum* appear unlikely to have contributed to these AIPH cases (*10*).

The findings in this report are subject to at least three limitations. First, the findings are from a case series; because no comparison group was used, definitive conclusions cannot be made about the hypotheses. Second, the findings are limited by the intervals between the illnesses and interviews of family members (range: 1 week–6 months); families with longer intervals might have been less likely to remember all of the circumstances related to the illness. Finally, the intervals between illnesses and environmental sampling (range: 3 weeks–7 months) might have resulted in samples that were not representative of the environment at the time of illness onset.

When cases of AIPH among infants occur, tests should be undertaken to rule out vWD and other bleeding disorders. If vWD is identified, appropriate therapy should be initiated to reduce the time course and severity of bleeding. Testing for vWD also might help to further explain any interaction between predisposing acquired or genetic vWD and environmental or infectious factors.

TABLE. Summary of epidemiologic, laboratory, and environmental findings from four reported cases of acute idiopathic pulmonary hemorrhage (AIPH) among infants — Massachusetts, December 2002–June 2003

Epidemiologic/ Environmental findings	Infant A	Infant B	Infant C		Infant D
Epidemiologic					
Date of illness onset	December 2002	February 2003	April 2003		June 2003
Age at illness onset	45 days	28 days	77 days		50 days
Race/Ethnicity	White, non-Hispanic	Asian	White, non-Hispanic		White, non-Hispanic
Sex	Male	Male	Male		Male
Maternal perinatal and/or infant antibiotic use	Yes/No	Yes/Yes	No/No		Yes/Yes
Upper respiratory infection symptoms <2 weeks of AIPH	Yes	Yes	Yes		Yes
Reported family history of bleeding disorders	von Willebrand disease	None	None		None
Infant history of susceptibility to bruising	No	Yes	No		No
Possible history of unintentional asphyxiation or trauma	No	No	No		Yes
Abnormal hospital hematology laboratory findings	Hemoglobin: reduced, 8.7g/dL Platelets: elevated, 574K	Partial thromboplastin time: elevated, 40–60 sec	Platelets: elevated, 567K Fibrinogen: elevated, 626 mg/dL		Platelets: elevated, 571K Prothrombin time: normal Partial thromboplastin time: normal
CDC hemostasis laboratory results*					
von Willebrand factor antigen	Reduced, 64%	Borderline, 66%	Normal, 151%		Borderline, 56%
Ristocetin cofactor	Borderline, 69%	Reduced, 41%	Normal, 144%		Borderline, 52%
Factor VIII	Normal, 94%	Reduced, 40%	Normal, 167%		Normal, 70%
ABO blood type	B	B	Not tested		O
Home environmental			**Parents' home**	**In-laws' home**	
Reported cigarette smoking in the home	Yes	No	No	No	No
Reported flooding in the home	Yes	No	No	Yes	No
Reported mold in the home	Yes	No	No	No	No
Home renovations during infant's life	Yes	Yes	No	No	Yes
Range of culturable fungal counts (cfu/m^3) for all samples collected	No sampling performed	304–394	197–500	18–768	215–1,430
Dominant genera		*Cladosporium, Penicillium*	*Cladosporium, Penicillium*	*Cladosporium, Penicillium Chaetomium*	*Cladosporium, Penicillium*
Location with maximum value		Infant's room	Infant's room	Basement	Basement
Range of total spore counts (spores/m^3) for all samples collected	No sampling performed	1,633–2,369	1,099–19,500	33–2,869	1,836–33,460
Dominant genera		*Penicillium/Aspergillus* types, *Cladosporium*, Basidiospores	Smuts, *Penicillium/ Aspergillus* types, *Cladosporium*, *Botrytis*, Basidiospores	*Cladosporium*, *Penicillium/ Aspergillus* types, Basidiospores, *Chaetomium*	Basidiospores, *Cladosporium, Penicillium/Aspergillus* types
Location with maximum value		Infant's room	Infant's room	Basement	Basement
Amount of *Stachybotrys chartarum* found in home (spores/m^3)	No sampling performed	None	Basement: one spore, 33	None	Infant's bedroom: two spores, 67 Parent's bedroom: three spores, 100 (electrical outlet); one spore, 33 (ambient) Basement: one spore, 33 Hallway: positive identification from tape lift of ceiling stain

* Normal reference ranges — Blood type O: von Willebrand disease factor (vWF) antigen 48%–199%, ristocetin cofactor 38%–166%, factor VIII 49%–190%, blood type non-O: vWF antigen 66%–245%, ristocetin cofactor 60%–205%, factor VIII 66%–224%.

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Progress Towards Poliomyelitis Eradication — Egypt, 2003–2004

Since 1988, the estimated number of wild poliovirus (WPV) cases worldwide has decreased >99%, and three World Health Organization (WHO) regions (Americas, European, and Western Pacific) are now certified as polio-free. Substantial progress has been made in the Eastern Mediterranean Region, where 18 of the 22 countries are polio-free and polio remains endemic in only three countries (Afghanistan, Egypt, and Pakistan). This report summarizes progress towards polio eradication in Egypt from 2003 through mid-2004 and describes the measures needed to ensure successful interruption of poliovirus transmission.

Routine Vaccination

Since 1994, reported routine vaccination coverage of infants (aged <12 months) with >3 doses of oral poliovirus vaccine (OPV) has remained >90% in Egypt. During 2003, reported routine coverage of infants with >4 doses of OPV was >95%. Coverage with >4 doses of OPV was >95% in 234 (94%) of 250 districts and was 90%–95% in the remaining 16 districts.

Supplementary Immunization Activities (SIAs)

In 2003, Egypt conducted four rounds of National Immunization Days (NIDs)* and three rounds of Subnational Immunization Days (SNIDs)†. As of June 2004, Egypt has conducted two rounds of NIDs and one round of SNIDs. In addition, two mop-up rounds§ were conducted in June and July in response to a confirmed polio case in May. SNIDs implemented in 2003 and 2004 targeted mainly Greater Cairo¶ and governorates in Upper Egypt that were the focus of WPV circulation in 2003 and 2004. All SIAs in 2003 and 2004 were conducted by using an intensified house-to-house approach. Further improvements in SIA quality were introduced in 2004, including revised tally sheets, supervisory guidelines and checklists, and training materials. The increasingly high quality of these SIA rounds was documented by international observers and independent monitor surveys (Ministry of Health and Population [EMOHP], unpublished data, 2004). Administrative data indicate that the number of children vaccinated during NIDs increased by approximately 15%, from 9.8 million in the December 2002 round to 11.3 million in the April 2004 round.

WPV Surveillance

Surveillance for acute flaccid paralysis (AFP) cases in Egypt improved substantially in 2003 and 2004 (Table) in response to recommendations from the Egypt Technical Advisory Group (TAG) made in March 2002, which included strengthening central level supervision and data management and increased awareness of reporting. Nationwide, the nonpolio AFP rate per 100,000 children aged <15 years reached 2.5 in 2003 and increased to 3.3 in 2004 (annualized as of June 2004). In 2004, a total of 23 governorates achieved a nonpolio AFP rate of >2.0 cases per 100,000 children aged <15 years, compared with 21 governorates in 2003. The four governorates with rates below 2.0 in 2003 had low population density. Adequate stool specimens were collected within 14 days of paralysis onset from 93% and 94% of persons with AFP nationwide in 2003

* Mass campaigns conducted during a short period (days) in which 2 doses of OPV are administered in two rounds 4–6 weeks apart to all children in the target group (usually those aged <5 years) regardless of previous vaccination history.
† Campaigns similar to NIDs but confined to part of the country.
§ Intensive house-to-house vaccination with OPV in districts with populations at high risk, conducted in two rounds, 4–6 weeks apart.
¶ *Greater Cairo*: Cairo, Giza, and Kalioubia Governorates. *Upper Egypt*: governorates located on the River Nile south of Giza and Cairo, from Fayoum to Aswan. *Lower Egypt*: governorates located north of Cairo and Giza, including Suez Governorate and excluding Matrouh, and North and South Sinai Governorates.

TABLE. Number of reported cases of acute flaccid paralysis (AFP), number of confirmed poliovirus cases, and key surveillance indicators, by year — Egypt, 1998–2004*

Year	No. AFP cases	No. laboratory-confirmed poliovirus cases	Nonpolio AFP rate†	% of persons with AFP with adequate stool specimens§	% AFP cases detected within 1 week of onset	% stool specimens with nonpolio enterovirus isolates
2002	576	7	2.4	91	78	19
2003	608	1	2.5	93	84	19
2004	454	1	3.3¶	96	91	18

*As of August 4, 2004.
†Number of persons with AFP per 100,000 population aged <15 years .
§Two stool specimens collected ≥24 hours apart within 14 days of paralysis onset and shipped properly to the laboratory.
¶Annualized as of June 2004.

and 2004, respectively, with all governorates achieving >80% in both years.

Environmental surveillance (i.e., collecting and testing wastewater samples for the presence of WPV) in Egypt began in September 2000 as a supplement to AFP surveillance. In 2001, this network encompassed 11 sites in eight governorates and expanded to 33 sites in 18 governorates by June 2004.

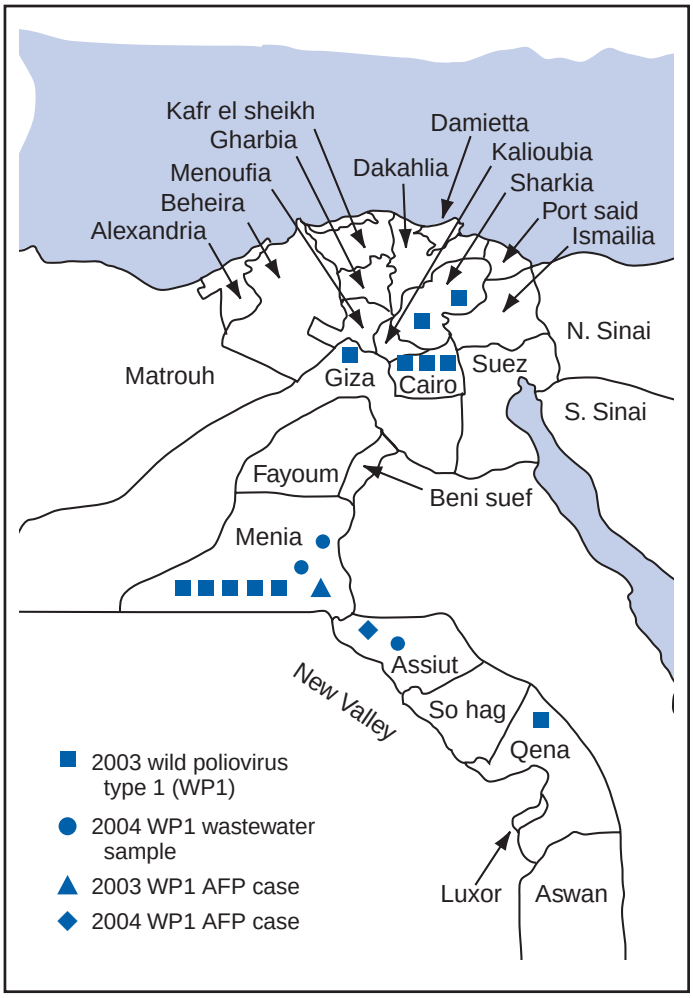
WPV Incidence

WPV type 2 (P2) was last detected in Egypt in 1979, and type 3 (P3) was last detected in December 2000. Incidence of WPV type 1 (P1) decreased from seven cases in 2002 (six from Lower Egypt and Greater Cairo and one from Upper Egypt) to one in 2003, reported in June from Abu Korkas District, Menia Governorate (Upper Egypt). WPV was isolated from a contact of an AFP patient in the same district in October 2003. In May 2004, one case was identified from Dairut District, Assiut Governorate (Upper Egypt, bordering Menia Governorate) (Figure). WPV also was isolated from two of the close contacts of this patient. All AFP patients and positive contacts in 2003 and 2004 had received >10 valid doses of OPV before paralysis onset. All isolates from patients and contacts in 2004 were P1.

In 2001, a total of 75 P1 isolates were detected from environmental surveillance in eight governorates (seven in Upper Egypt and one in Lower Egypt). In 2003, a total of 12 P1 isolates were identified from five governorates: three from Cairo and one from Giza, two from Sharkia (Lower Egypt), and five from Menia and one from Qena (Upper Egypt). As of June 2004, three P1 isolates had been identified from two neighboring governorates in Upper Egypt (Assiut and Menia).

Genetic sequence analyses have been performed routinely on all WPV isolates obtained in Egypt since 1996. Results indicate a substantial decline in the number of P1 clusters, from 12 in 2001 to one in 2004. All isolates in 2004 have been from a single cluster of closely related lineages. However, the P1 isolated from the polio patient in May 2004 had >1.0% nucleotide sequence difference from any other isolate and represents an "orphan" lineage that surveillance failed to detect during the preceding year.

FIGURE. Acute flaccid paralysis (AFP) cases and positive environmental (wastewater) samples — Egypt, 2003–2004



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Editorial Note: Ongoing improvements in the quality and frequency of polio-eradication activities, especially the intensified SIA rounds beginning in late 2002, resulted in a reduction in the geographic distribution and genetic diversity of P1 circulation in Egypt during 2003 and 2004. Focusing efforts on Cairo, Giza, and governorates in Upper Egypt with documented P1 transmission in 2003 and 2004 contributed to reducing transmission. The Intersectoral SIA Task Force, which was established by EMOHP and includes WHO and United Nations Children Fund (UNICEF), was instrumental in identifying and addressing problems at district and subdistrict levels and in setting strategic directions for the program such as performance of the vaccination and supervision, training, and selection of vaccination teams. A Task Force plan for response to WPV isolation was developed in 2004 and implemented after detection of the polio case in May.

Substantial improvement in AFP surveillance performance during the previous 2 years is evident based on the recommended surveillance indicators. However, the finding of an orphan lineage of P1 from the WPV case in May 2004 suggests potential gaps in AFP surveillance. Environmental surveillance, an adjunct to AFP surveillance, has been a useful source of information on poliovirus circulation. However, because the isolation rates of nonpolio enterovirus (NPEV) and Sabin virus from environmental samples demonstrated unexplained gradual decreases since late 2003, recent environmental surveillance data should be considered with caution. In June 2004, with the help of national and international experts, a systematic evaluation of possible deficiencies in sample processing was conducted. The technical problem, related to reagents used for concentration of samples, appears to be resolved, and environmental sampling is again yielding important surveillance information. Regaining the sensitivity and reliability observed in the past will be important to clarify progress and plan future activities to eradicate polio.

Available evidence suggests that Egypt is now closer than ever to achieving interruption of WPV transmission. However, given the high population density, frequent population movement throughout the country, and suboptimal sanitation, ongoing P1 circulation in Upper Egypt demonstrates the need for further increasing the frequency of nationwide rounds and sustaining very high OPV coverage to definitively interrupt transmission. In addition, the strong commitment and support of EMOHP and its partners to the eradication goal is critical and will need to be maintained to interrupt transmission.

West Nile Virus Activity — United States, September 1–7, 2004

During September 1–7, a total of 138 cases of human West Nile virus (WNV) illness were reported from 22 states (Alabama, Arizona, Colorado, Georgia, Illinois, Kentucky, Maryland, Michigan, Mississippi, Missouri, Nebraska, New Mexico, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, Wisconsin, and Wyoming).

During 2004, a total of 37 states have reported 1,191 cases of human WNV illness to CDC through ArboNET (Table, Figure). Of these, 330 (28%) cases were reported from Arizona, 326 (27%) cases were reported from California, and 195 (16%) cases were reported from Colorado. A total of 663 (57%) of the 1,163 cases for which all data were available occurred in males; the median age of patients was 51 years (range: 1 month–99 years). Illness onset ranged from April 23 to August 29; a total of 30 cases were fatal.

A total of 98 presumptive West Nile viremic blood donors (PVDs) have been reported to ArboNET in 2004. Of these, 37 (38%) were reported from Arizona, 20 from California, 10 from Texas, nine from New Mexico, four each from Colorado and Georgia, three each from Florida and South Dakota, two each from Missouri and Wisconsin, and one each from Iowa, Louisiana, Minnesota, and Oklahoma. Of the 98 PVDs, five persons aged 35, 50, 66, 69, and 77 years subsequently had neuroinvasive illness, and 24 persons (median age: 55 years; range: 17–75 years) subsequently had West Nile fever.

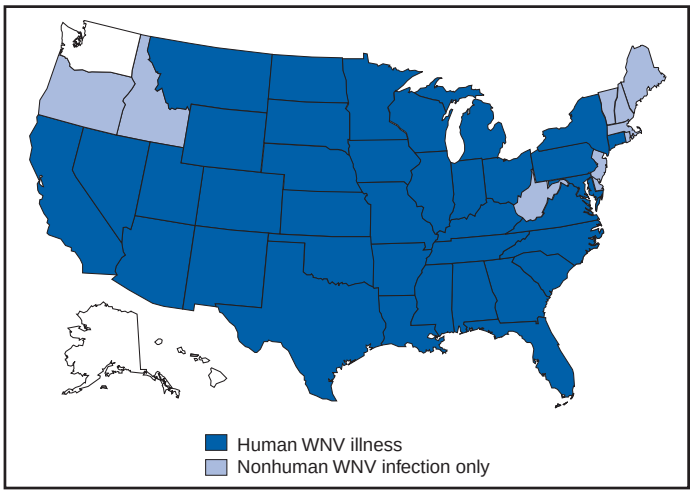
In addition, during 2004, a total of 3,574 dead corvids and 749 other dead birds with WNV infection have been reported from 44 states. WNV infections have been reported in horses from 32 states (Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Iowa, Kansas, Kentucky, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, South Dakota, Tennessee, Texas, Utah, Virginia, Wisconsin, West Virginia, and Wyoming) and in five dogs from Nevada and New Mexico. Three squirrels with WNV infection were reported from Arizona. Three unidentified animal species with WNV infection were reported from Illinois, Iowa, and Nevada. WNV seroconversions have been reported in 640 sentinel chicken flocks from 13 states (Alabama, Arizona, Arkansas, California, Delaware, Florida,

TABLE. Number of human cases of West Nile virus (WNV) illness, by state — United States, 2004*

State	Neuroinvasive disease†	West Nile fever§	Other clinical/ unspecified¶	Total reported to CDC**	Deaths
Alabama	8	0	0	**8**	0
Arizona	128	35	167	**330**	5
Arkansas	1	2	0	**3**	0
California	85	126	115	**326**	9
Colorado	28	167	0	**195**	2
Connecticut	0	1	0	**1**	0
Florida	16	3	0	**19**	1
Georgia	4	2	1	**7**	0
Illinois	12	9	1	**22**	1
Indiana	2	0	0	**2**	0
Iowa	2	3	1	**6**	1
Kansas	10	0	0	**10**	0
Kentucky	0	3	0	**3**	0
Louisiana	30	4	0	**34**	3
Maryland	4	1	0	**5**	0
Michigan	3	0	0	**3**	0
Minnesota	8	6	0	**14**	0
Mississippi	9	7	1	**17**	2
Missouri	5	1	3	**9**	0
Montana	1	3	0	**4**	0
Nebraska	0	8	0	**8**	0
Nevada	16	8	1	**25**	0
New Mexico	15	21	4	**40**	1
New York	2	1	0	**3**	0
North Carolina	2	0	0	**2**	0
North Dakota	1	13	0	**14**	1
Ohio	2	1	0	**3**	1
Oklahoma	2	1	0	**3**	1
Pennsylvania	1	2	0	**3**	0
South Carolina	0	1	0	**1**	0
South Dakota	5	24	0	**29**	0
Tennessee	3	0	0	**3**	0
Texas	13	6	0	**19**	2
Utah	3	2	0	**5**	0
Virginia	2	0	1	**3**	0
Wisconsin	4	2	0	**6**	0
Wyoming	2	4	0	**6**	0
Total	**429**	**467**	**295**	**1,191**	**30**

* As of September 7, 2004.
† Cases with neurologic manifestations (i.e., West Nile meningitis, West Nile encephalitis, and West Nile myelitis).
§ Cases with no evidence of neuroinvasion.
¶ Illnesses for which sufficient clinical information was not provided.
** Total number of human cases of WNV illness reported to ArboNet by state and local health departments.

FIGURE. Areas reporting West Nile virus (WNV) activity — United States, 2004*



* As of 3 a.m., Mountain Standard Time, September 7, 2004.

Iowa, Louisiana, Nebraska, Nevada, Pennsylvania, South Dakota, and Utah) and in four wild hatchling birds from Missouri and Ohio. Three seropositive sentinel horses were reported from Puerto Rico. A total of 4,657 WNV-positive mosquito pools have been reported from 32 states.

Additional information about national WNV activity is available from CDC at http://www.cdc.gov/ncidod/dvbid/westnile/index.htm and at http://westnilemaps.usgs.gov.

Notice to Readers

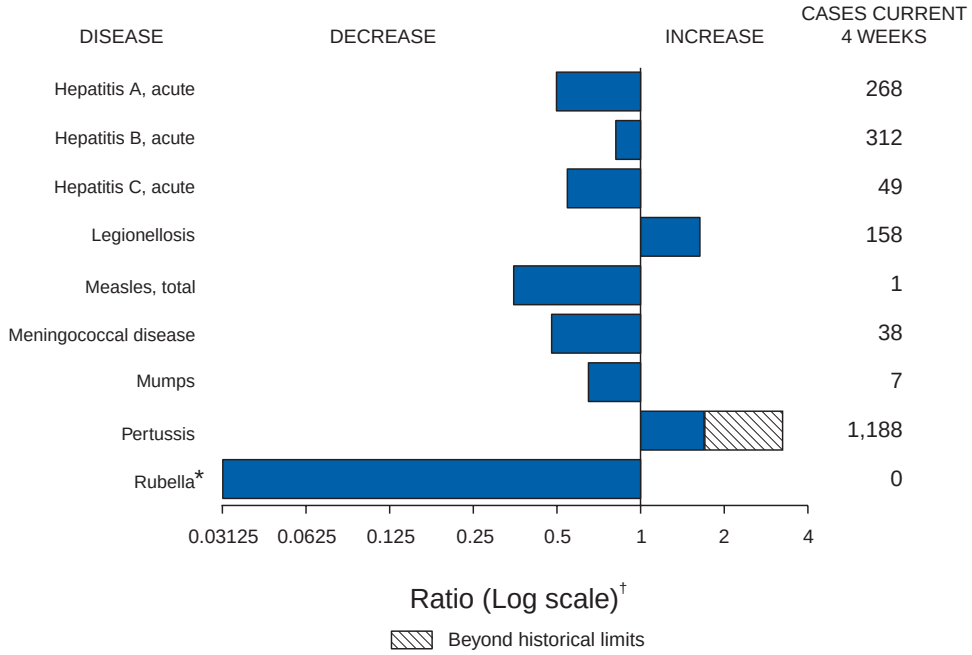
National Occupational Respiratory Mortality System

The National Occupational Respiratory Mortality System (NORMS), a recent addition to CDC's website, is a data storage and data retrieval system developed and maintained by the National Institute for Occupational Safety and Health, Division of Respiratory Disease Studies. The system contains national mortality data obtained annually since 1968 from the National Center for Health Statistics for asthma, chronic obstructive pulmonary disease, lung cancer, malignant mesothelioma, pneumoconiosis, tuberculosis, and other respiratory diseases and conditions.

This system offers a range of search options for generating tables, charts, and maps of the number of deaths, crude mortality rates, age-adjusted mortality rates, and years of potential life lost at national, state, and county levels for U.S. residents by age, race, and sex. In addition, users of NORMS can tabulate proportionate mortality ratios by usual industry and/or occupation at national and state levels.

NORMS can be useful for all persons interested in finding data on work-related lung disease mortality by time and place. NORMS data are available at http://webappa.cdc.gov/ords/norms.html.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals September 4, 2004, with historical data



* No Rubella cases were reported for the current 4-week period yielding a ratio for week 35 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 September 4, 2004 (35th Week)*

	Cum. 2004	Cum. 2003		Cum. 2004	Cum. 2003
Anthrax	-	-	Hemolytic uremic syndrome, postdiarrheal†	83	98
Botulism:	-	-	HIV infection, pediatric†¶	98	143
foodborne	8	8	Measles, total	22**	48††
infant	49	45	Mumps	135	148
other (wound & unspecified)	7	16	Plague	1	1
Brucellosis†	71	65	Poliomyelitis, paralytic	-	-
Chancroid	27	37	Psittacosis†	5	9
Cholera	3	1	Q fever†	40	53
Cyclosporiasis†	183	57	Rabies, human	3	1
Diphtheria	-	-	Rubella	15	6
Ehrlichiosis:	-	-	Rubella, congenital syndrome	-	1
human granulocytic (HGE)†	157	205	SARS-associated coronavirus disease†§§	-	8
human monocytic (HME)†	150	150	Smallpox†¶¶	-	NA
human, other and unspecified	11	29	*Staphylococcus aureus*:	-	-
Encephalitis/Meningitis:	-	-	Vancomycin-intermediate (VISA)†¶¶	4	NA
California serogroup viral†§	41	78	Vancomycin-resistant (VRSA)†¶¶	1	NA
eastern equine†§	1	12	Streptococcal toxic-shock syndrome†	68	124
Powassan†§	-	-	Tetanus	9	13
St. Louis†§	4	32	Toxic-shock syndrome	73	85
western equine†§	-	-	Trichinosis	4	-
Hansen disease (leprosy)†	57	58	Tularemia†	49	52
Hantavirus pulmonary syndrome†	15	17	Yellow fever	-	-

-: No reported cases.
* Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).
† Not notifiable in all states.
§ Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).
¶ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update July 25, 2004.
** Of 22 cases reported, 10 were indigenous, and 12 were imported from another country.
†† Of 48 cases reported, 29 were indigenous, and 19 were imported from another country.
§§ Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (notifiable as of July 2003).
¶¶ Not previously notifiable.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending September 4, 2004, and August 30, 2003 (35th Week)*

Reporting area	AIDS		Chlamydia†		Coccidiodomycosis		Cryptosporidiosis		Encephalitis/Meningitis West Nile§	
	Cum. 2004¶	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	23,710	29,948	578,769	572,669	3,889	2,361	1,924	1,822	427	1,871
NEW ENGLAND	775	992	19,926	18,315	-	-	101	121	-	6
Maine	10	49	1,348	1,325	N	N	16	9	-	-
N.H.	29	24	890	1,033	-	-	16	15	-	1
Vt.	13	13	679	688	-	-	19	23	-	-
Mass.	236	408	9,063	7,223	-	-	32	55	-	2
R.I.	82	79	2,271	1,923	-	-	4	12	-	-
Conn.	405	419	5,675	6,123	N	N	14	7	-	3
MID. ATLANTIC	5,023	6,700	72,409	70,735	-	-	265	248	3	78
Upstate N.Y.	625	671	15,234	12,731	N	N	70	66	-	-
N.Y. City	2,759	3,396	22,143	23,076	-	-	52	72	2	22
N.J.	923	1,160	10,736	10,609	-	-	16	12	-	9
Pa.	716	1,473	24,296	24,319	N	N	127	98	1	47
E.N. CENTRAL	1,946	2,916	96,482	103,046	10	7	567	544	23	37
Ohio	240	552	22,194	28,052	N	N	162	65	2	16
Ind.	257	378	11,784	11,421	N	N	59	57	2	7
Ill.	961	1,341	25,952	31,792	-	-	60	57	12	8
Mich.	382	509	25,212	20,435	10	7	108	81	3	3
Wis.	106	136	11,340	11,346	-	-	178	284	4	3
W.N. CENTRAL	483	568	34,684	33,260	4	2	255	230	29	450
Minn.	120	110	6,566	7,269	N	N	85	79	8	28
Iowa	37	64	3,642	3,574	N	N	55	48	-	40
Mo.	211	268	13,403	11,947	3	1	42	22	5	13
N. Dak.	13	3	989	1,053	N	N	9	10	1	74
S. Dak.	7	8	1,629	1,686	-	-	23	26	5	121
Nebr.**	18	38	3,411	3,024	1	1	22	9	-	125
Kans.	77	77	5,044	4,707	N	N	19	36	10	49
S. ATLANTIC	7,289	8,475	113,964	107,416	-	3	323	222	28	72
Del.	105	173	1,911	2,019	N	N	-	3	-	1
Md.	808	989	12,767	10,831	-	3	14	12	4	17
D.C.	460	764	2,130	2,157	-	-	11	7	-	1
Va.	403	652	14,853	12,656	-	-	38	28	2	8
W. Va.	33	60	1,875	1,715	N	N	4	3	-	-
N.C.	401	851	19,215	17,499	N	N	53	23	2	8
S.C.**	428	544	13,162	8,797	-	-	13	5	-	1
Ga.	1,034	1,375	20,703	23,641	-	-	104	78	4	9
Fla.	3,617	3,067	27,348	28,101	N	N	86	63	16	27
E.S. CENTRAL	1,179	1,308	37,779	37,485	4	1	72	85	20	44
Ky.	130	111	3,850	5,498	N	N	28	19	-	5
Tenn.**	466	575	15,148	13,471	N	N	12	29	3	7
Ala.	295	310	8,190	9,863	-	-	15	29	8	14
Miss.	288	312	10,591	8,653	4	1	17	8	9	18
W.S. CENTRAL	2,978	3,085	73,507	71,882	2	-	53	59	46	445
Ark.	130	126	5,026	5,304	1	-	14	6	1	14
La.	606	415	15,796	14,182	1	-	-	2	30	60
Okla.	120	153	7,576	7,661	N	N	15	9	2	30
Tex.	2,122	2,391	45,109	44,735	-	-	24	42	13	341
MOUNTAIN	861	1,143	32,482	32,929	2,512	1,582	120	81	193	739
Mont.	5	11	1,486	1,346	N	N	33	14	1	56
Idaho	9	18	1,946	1,697	N	N	16	17	-	-
Wyo.	8	5	724	661	1	1	2	3	2	86
Colo.	166	295	7,624	8,638	N	N	41	21	28	537
N. Mex.	118	88	3,795	5,010	11	5	7	6	15	55
Ariz.	331	486	10,958	9,364	2,433	1,545	17	4	128	3
Utah	44	47	2,349	2,521	23	5	2	10	3	-
Nev.	180	193	3,600	3,692	44	26	2	6	16	2
PACIFIC	3,176	4,761	97,536	97,601	1,357	766	168	232	85	-
Wash.	215	309	11,842	10,635	N	N	17	25	-	-
Oreg.	157	184	5,475	5,020	-	-	26	28	-	-
Calif.	2,717	4,184	76,173	75,809	1,357	766	124	179	85	-
Alaska	29	13	2,406	2,547	-	-	-	-	-	-
Hawaii	58	71	1,640	3,590	-	-	1	-	-	-
Guam	2	5	-	431	-	-	-	-	-	-
P.R.	401	787	1,699	1,659	N	N	N	N	-	-
V.I.	6	25	143	271	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	32	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 2003 and 2004 are provisional and cumulative (year-to-date).

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

§ Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases (ArboNet Surveillance).

¶ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update July 25, 2004.

** Contains data reported through National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 4, 2004, and August 30, 2003 (35th Week)*

Reporting area	*Escherichia coli*, Enterohemorrhagic (EHEC)						Giardiasis		Gonorrhea	
	O157:H7		Shiga toxin positive, serogroup non-O157		Shiga toxin positive, not serogrouped					
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	1,487	1,445	142	163	104	97	10,885	11,679	203,008	217,433
NEW ENGLAND	97	97	33	31	19	10	953	908	4,715	4,670
Maine	6	7	-	-	-	-	81	108	155	134
N.H.	10	13	5	3	-	-	18	27	64	76
Vt.	9	12	-	-	-	-	106	70	58	56
Mass.	46	38	6	8	19	10	442	452	2,148	1,812
R.I.	6	1	1	-	-	-	68	74	579	637
Conn.	20	26	21	20	-	-	238	177	1,711	1,955
MID. ATLANTIC	162	164	21	17	21	20	2,377	2,366	23,078	27,093
Upstate N.Y.	77	58	11	9	10	7	854	624	4,977	4,895
N.Y. City	27	6	-	-	-	-	630	775	7,033	8,927
N.J.	24	22	3	2	4	-	244	337	4,088	5,595
Pa.	34	78	7	6	7	13	649	630	6,980	7,676
E.N. CENTRAL	275	329	25	25	13	13	1,520	2,056	39,596	45,594
Ohio	62	65	8	13	11	13	538	569	11,106	14,651
Ind.	37	55	-	-	-	-	-	-	4,198	4,348
Ill.	44	66	1	2	-	-	312	622	11,312	14,091
Mich.	54	51	5	-	2	-	434	469	10,068	8,714
Wis.	78	92	11	10	-	-	236	396	2,912	3,790
W.N. CENTRAL	346	236	23	30	16	16	1,234	1,181	10,978	11,534
Minn.	79	77	11	14	2	1	443	447	2,091	1,949
Iowa	97	51	-	-	-	-	194	160	649	887
Mo.	57	55	12	9	6	1	305	315	5,633	5,769
N. Dak.	12	8	-	3	6	6	18	28	72	54
S. Dak.	27	14	-	3	-	-	42	39	174	141
Nebr.	52	15	-	1	-	-	89	82	664	970
Kans.	22	16	-	-	2	8	143	110	1,695	1,764
S. ATLANTIC	111	100	22	34	26	24	1,713	1,711	51,505	53,356
Del.	2	5	N	N	N	N	32	26	602	793
Md.	20	9	3	2	2	1	79	71	5,472	5,177
D.C.	1	1	-	-	-	-	41	29	1,587	1,655
Va.	25	28	9	8	-	-	329	228	6,011	5,925
W. Va.	2	3	-	-	-	-	23	25	606	585
N.C.	-	-	-	-	16	19	N	N	10,287	10,073
S.C.	6	-	-	-	-	-	34	82	6,393	5,088
Ga.	17	21	6	5	-	-	457	553	8,977	11,697
Fla.	38	33	4	19	8	4	718	697	11,570	12,363
E.S. CENTRAL	52	54	1	1	8	5	191	227	16,318	18,390
Ky.	19	18	1	1	5	5	N	N	1,682	2,399
Tenn.	15	22	-	-	3	-	82	105	5,585	5,490
Ala.	11	11	-	-	-	-	109	122	4,984	6,196
Miss.	7	3	-	-	-	-	-	-	4,067	4,305
W.S. CENTRAL	56	60	2	4	1	4	182	191	27,968	29,750
Ark.	10	7	1	-	-	-	73	102	2,433	2,848
La.	2	3	-	-	-	-	19	9	7,296	8,031
Okla.	14	17	-	-	-	-	87	80	3,211	3,070
Tex.	30	33	1	4	1	4	3	-	15,028	15,801
MOUNTAIN	151	179	13	19	-	5	994	980	6,919	6,980
Mont.	12	12	-	-	-	-	42	62	44	71
Idaho	32	40	6	14	-	-	114	118	57	51
Wyo.	4	2	1	-	-	-	15	15	42	30
Colo.	39	45	2	3	-	5	351	281	1,735	1,926
N. Mex.	7	6	1	2	-	-	51	33	492	825
Ariz.	15	23	N	N	N	N	132	176	2,597	2,581
Utah	28	34	2	-	-	-	210	210	354	240
Nev.	14	17	1	-	-	-	79	85	1,598	1,256
PACIFIC	237	226	2	2	-	-	1,721	2,059	21,931	20,066
Wash.	80	52	-	1	-	-	216	193	1,773	1,839
Oreg.	44	57	2	1	-	-	298	262	755	657
Calif.	104	112	-	-	-	-	1,106	1,491	18,614	16,438
Alaska	1	1	-	-	-	-	50	55	388	355
Hawaii	8	4	-	-	-	-	51	58	401	777
Guam	N	N	-	-	-	-	-	2	-	44
P.R.	-	1	-	-	-	-	35	177	135	185
V.I.	-	-	-	-	-	-	-	-	49	59
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	3	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 4, 2004, and August 30, 2003 (35th 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. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	1,258	1,296	10	19	65	84	126	143	3,672	4,255
NEW ENGLAND	107	91	1	2	5	5	3	3	677	209
Maine	10	2	-	-	-	-	-	1	10	8
N.H.	13	10	-	1	2	-	-	-	11	12
Vt.	5	6	-	-	-	-	1	-	8	5
Mass.	45	44	1	1	-	5	2	1	573	116
R.I.	3	4	-	-	-	-	-	1	17	11
Conn.	31	25	-	-	3	-	-	-	58	57
MID. ATLANTIC	271	280	-	1	4	2	31	34	424	887
Upstate N.Y.	91	100	-	1	4	2	5	8	57	77
N.Y. City	57	48	-	-	-	-	11	9	165	324
N.J.	55	55	-	-	-	-	3	7	86	138
Pa.	68	77	-	-	-	-	12	10	116	348
E.N. CENTRAL	201	214	-	3	6	3	29	41	346	414
Ohio	76	54	-	-	2	-	13	10	36	76
Ind.	38	36	-	-	4	-	1	4	65	44
Ill.	45	79	-	-	-	-	9	20	120	119
Mich.	14	17	-	3	-	3	5	1	102	137
Wis.	28	28	-	-	-	-	1	6	23	38
W.N. CENTRAL	79	86	2	-	3	6	9	11	134	120
Minn.	34	34	1	-	3	6	-	2	28	33
Iowa	1	-	1	-	-	-	-	-	36	18
Mo.	26	35	-	-	-	-	5	9	40	41
N. Dak.	3	2	-	-	-	-	-	-	1	-
S. Dak.	-	1	-	-	-	-	-	-	3	-
Nebr.	7	1	-	-	-	-	1	-	8	9
Kans.	8	13	-	-	-	-	3	-	18	19
S. ATLANTIC	290	275	-	1	16	10	21	16	708	920
Del.	-	-	-	-	-	-	-	-	5	5
Md.	47	64	-	-	4	5	-	-	87	96
D.C.	-	1	-	-	-	-	-	-	5	27
Va.	28	39	-	-	-	-	1	5	88	52
W. Va.	11	13	-	-	-	-	3	-	4	12
N.C.	41	24	-	-	5	2	1	1	70	47
S.C.	4	5	-	-	-	-	-	1	23	26
Ga.	80	49	-	-	-	-	14	6	231	383
Fla.	79	80	-	1	7	3	2	3	195	272
E.S. CENTRAL	47	55	1	1	-	2	8	5	107	120
Ky.	5	5	-	-	-	1	-	-	27	23
Tenn.	27	31	-	-	-	1	6	3	54	69
Ala.	12	17	1	1	-	-	2	2	6	14
Miss.	3	2	-	-	-	-	-	-	20	14
W.S. CENTRAL	53	59	1	2	6	10	1	4	254	433
Ark.	2	5	-	-	-	1	-	-	53	23
La.	8	17	-	-	-	2	1	4	15	36
Okla.	42	34	-	-	6	7	-	-	18	9
Tex.	1	3	1	2	-	-	-	-	168	365
MOUNTAIN	147	127	3	6	18	22	18	13	333	333
Mont.	-	-	-	-	-	-	-	-	5	7
Idaho	5	3	-	-	-	-	2	1	14	11
Wyo.	-	1	-	-	-	-	-	-	4	1
Colo.	35	24	-	-	-	-	4	5	40	49
N. Mex.	29	15	-	-	5	4	5	1	15	16
Ariz.	55	64	-	6	9	9	2	4	206	189
Utah	12	10	2	-	1	5	4	2	38	23
Nev.	11	10	1	-	3	4	1	-	11	37
PACIFIC	63	109	2	3	7	24	6	16	689	819
Wash.	3	7	2	-	-	5	1	1	40	41
Oreg.	32	27	-	-	-	-	2	2	49	44
Calif.	17	48	-	3	7	19	1	8	578	718
Alaska	4	18	-	-	-	-	1	5	5	8
Hawaii	7	9	-	-	-	-	1	-	17	8
Guam	-	-	-	-	-	-	-	-	-	2
P.R.	-	-	-	-	-	-	-	-	15	55
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 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 4, 2004, and August 30, 2003 (35th Week)*

Reporting area	Hepatitis (viral, acute), by type				Legionellosis		Listeriosis		Lyme disease	
	B		C							
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	4,150	4,671	699	710	1,108	1,324	394	437	10,471	13,835
NEW ENGLAND	227	232	7	5	29	71	20	32	1,143	2,595
Maine	1	1	-	-	-	1	5	5	53	95
N.H.	23	11	-	-	1	6	1	3	52	83
Vt.	3	3	3	5	3	4	1	-	34	26
Mass.	123	153	3	-	5	41	3	14	274	1,278
R.I.	3	8	-	-	5	3	1	-	148	286
Conn.	74	56	1	U	15	16	9	10	582	827
MID. ATLANTIC	790	530	87	83	304	367	92	90	7,383	9,202
Upstate N.Y.	59	55	9	10	60	86	28	18	2,454	2,677
N.Y. City	72	151	-	-	26	41	12	15	-	174
N.J.	458	130	-	-	54	56	16	20	2,007	2,340
Pa.	201	194	78	73	164	184	36	37	2,922	4,011
E.N. CENTRAL	365	324	70	109	303	272	67	59	627	753
Ohio	88	91	5	7	150	150	31	17	59	42
Ind.	30	23	7	6	51	17	15	4	68	16
Ill.	50	38	10	16	10	34	-	17	-	60
Mich.	174	141	48	75	85	56	19	15	18	3
Wis.	23	31	-	5	7	15	2	6	482	632
W.N. CENTRAL	255	216	173	146	29	48	8	12	291	236
Minn.	36	28	12	7	6	3	3	3	207	166
Iowa	13	8	-	1	3	9	1	-	25	32
Mo.	167	145	161	136	12	24	2	5	50	33
N. Dak.	4	2	-	-	2	1	-	-	-	-
S. Dak.	-	2	-	-	3	1	-	-	-	-
Nebr.	22	18	-	2	1	2	2	3	6	2
Kans.	13	13	-	-	2	8	-	1	3	3
S. ATLANTIC	1,269	1,314	119	110	246	348	67	85	875	853
Del.	26	6	-	-	8	18	N	N	102	158
Md.	106	82	13	6	52	86	10	14	513	536
D.C.	15	7	1	-	8	9	-	-	3	5
Va.	169	114	15	6	32	64	13	9	99	52
W. Va.	26	20	18	1	5	12	2	5	14	11
N.C.	129	110	10	8	25	26	15	14	84	57
S.C.	56	105	7	24	2	6	1	2	8	1
Ga.	408	443	9	9	30	26	10	21	9	10
Fla.	334	427	46	56	84	101	16	20	43	23
E.S. CENTRAL	272	304	66	53	53	82	17	17	32	44
Ky.	40	50	23	10	24	32	4	5	13	9
Tenn.	108	124	20	13	17	28	7	4	9	12
Ala.	53	66	4	5	11	18	4	6	2	6
Miss.	71	64	19	25	1	4	2	2	8	17
W.S. CENTRAL	168	753	84	125	37	47	26	39	27	80
Ark.	51	57	2	3	-	2	2	1	4	-
La.	34	92	44	80	3	1	2	2	2	6
Okla.	34	43	3	2	3	5	-	1	-	-
Tex.	49	561	35	40	31	39	22	35	21	74
MOUNTAIN	352	414	39	34	59	43	16	25	25	11
Mont.	2	13	2	1	1	2	-	1	-	-
Idaho	9	7	-	1	7	3	1	2	5	3
Wyo.	7	26	2	-	5	2	-	-	2	1
Colo.	38	55	8	8	12	8	6	9	3	-
N. Mex.	11	30	7	-	2	2	-	2	-	1
Ariz.	200	190	5	6	11	9	-	7	6	1
Utah	33	36	3	-	17	13	2	2	9	2
Nev.	52	57	12	18	4	4	7	2	-	3
PACIFIC	452	584	54	45	48	46	81	78	68	61
Wash.	38	47	15	15	9	6	8	4	9	1
Oreg.	77	78	13	7	N	N	5	3	25	10
Calif.	320	437	23	21	39	40	65	67	33	47
Alaska	14	4	-	-	-	-	-	-	1	3
Hawaii	3	18	3	2	-	-	3	4	N	N
Guam	-	5	-	3	-	-	-	-	-	-
P.R.	38	90	-	-	1	-	-	-	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 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 4, 2004, and August 30, 2003 (35th Week)*

Reporting area	Malaria		Meningococcal disease		Pertussis		Rabies, animal		Rocky Mountain spotted fever	
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	816	815	919	1,190	8,636	5,263	3,635	4,783	816	492
NEW ENGLAND	49	37	48	51	949	668	406	381	14	7
Maine	5	2	8	5	2	12	32	34	-	-
N.H.	1	5	3	3	26	56	11	16	-	-
Vt.	3	1	2	-	54	50	17	25	-	-
Mass.	25	14	28	32	839	509	174	142	12	7
R.I.	2	1	1	2	16	12	26	46	1	-
Conn.	13	14	6	9	12	29	146	118	1	-
MID. ATLANTIC	190	205	117	141	1,842	560	367	617	49	32
Upstate N.Y.	30	36	28	32	1,321	240	333	263	1	-
N.Y. City	80	103	21	33	92	77	5	6	10	10
N.J.	41	42	26	19	150	90	-	62	15	15
Pa.	39	24	42	57	279	153	29	286	23	7
E.N. CENTRAL	72	76	133	191	2,000	507	97	113	43	13
Ohio	23	14	52	46	379	160	49	41	14	6
Ind.	11	2	20	36	68	43	7	14	25	1
Ill.	13	34	12	50	315	49	29	17	-	3
Mich.	15	19	39	34	99	72	12	34	4	3
Wis.	10	7	10	25	1,139	183	-	7	-	-
W.N. CENTRAL	46	35	68	87	1,086	218	357	487	80	48
Minn.	18	20	18	20	156	59	59	24	-	1
Iowa	2	3	12	16	47	61	76	77	-	2
Mo.	14	3	20	35	207	57	31	15	63	38
N. Dak.	3	1	2	1	604	3	48	42	-	-
S. Dak.	1	2	2	1	18	3	10	108	4	4
Nebr.	2	-	3	6	8	6	53	87	11	2
Kans.	6	6	11	8	46	29	80	134	2	1
S. ATLANTIC	215	206	155	214	399	415	1,270	1,887	368	258
Del.	4	2	2	8	7	7	9	26	-	1
Md.	43	49	8	24	80	58	157	257	49	69
D.C.	10	8	4	4	3	-	-	-	-	-
Va.	33	22	12	19	105	77	341	372	17	14
W. Va.	-	4	5	4	11	6	43	63	4	5
N.C.	14	14	24	27	62	87	434	559	250	100
S.C.	7	3	11	19	38	80	98	158	11	13
Ga.	40	48	10	24	11	25	184	264	21	49
Fla.	64	56	79	85	82	75	4	188	16	7
E.S. CENTRAL	23	19	39	61	114	114	95	143	86	79
Ky.	4	4	8	14	44	37	18	29	1	-
Tenn.	3	4	10	15	37	53	31	90	31	43
Ala.	11	7	10	17	22	15	37	23	25	14
Miss.	5	4	11	15	11	9	9	1	29	22
W.S. CENTRAL	79	94	82	136	386	414	793	872	152	48
Ark.	7	4	14	12	32	38	35	25	78	-
La.	2	4	23	34	7	8	-	2	3	-
Okla.	7	4	7	13	17	52	84	150	70	38
Tex.	63	82	38	77	330	316	674	695	1	10
MOUNTAIN	35	25	47	63	856	688	131	125	19	7
Mont.	-	-	3	3	32	2	19	16	3	1
Idaho	1	1	6	6	24	60	2	10	3	2
Wyo.	-	1	2	2	14	123	2	4	2	2
Colo.	12	12	12	17	427	235	31	26	1	2
N. Mex.	2	1	6	8	94	51	3	5	2	-
Ariz.	10	6	11	21	145	116	66	51	2	-
Utah	6	3	4	-	108	75	5	9	6	-
Nev.	4	1	3	6	12	26	3	4	-	-
PACIFIC	107	118	230	246	1,004	1,679	119	158	5	-
Wash.	12	17	23	24	452	436	-	-	-	-
Oreg.	14	9	46	38	297	346	5	6	3	-
Calif.	79	87	155	170	236	887	106	144	2	-
Alaska	-	-	2	4	8	1	8	8	-	-
Hawaii	2	5	4	10	11	9	-	-	-	-
Guam	-	1	-	-	-	1	-	-	-	-
P.R.	-	1	5	8	3	2	40	49	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.
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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 4, 2004, and August 30, 2003 (35th Week)*

Reporting area	Salmonellosis		Shigellosis		Streptococcal disease, invasive, group A		*Streptococcus pneumoniae*, invasive			
							Drug resistant, all ages		Age <5 years	
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	24,760	26,776	7,302	15,543	3,313	4,318	1,466	1,452	465	499
NEW ENGLAND	1,321	1,429	179	212	145	379	22	73	53	6
Maine	63	93	2	6	7	23	2	-	3	-
N.H.	51	97	5	5	15	24	-	-	N	N
Vt.	37	47	2	6	8	17	7	6	1	3
Mass.	795	855	113	148	98	169	N	N	42	N
R.I.	75	71	13	7	17	9	13	10	7	3
Conn.	300	266	44	40	-	137	-	57	U	U
MID. ATLANTIC	3,640	3,127	794	1,678	562	751	102	95	80	74
Upstate N.Y.	820	654	345	255	188	284	43	52	55	54
N.Y. City	779	861	225	276	73	107	U	U	U	U
N.J.	551	550	150	281	132	144	-	-	5	2
Pa.	1,490	1,062	74	866	169	216	59	43	20	18
E.N. CENTRAL	3,420	3,811	643	1,332	659	1,048	356	327	115	216
Ohio	911	951	120	240	179	249	249	215	60	76
Ind.	400	373	137	104	80	103	107	112	25	21
Ill.	992	1,340	229	707	135	264	-	-	-	81
Mich.	568	533	76	185	228	301	N	N	N	N
Wis.	549	614	81	96	37	131	N	N	30	38
W.N. CENTRAL	1,615	1,581	293	512	224	263	13	11	66	56
Minn.	392	340	38	66	116	126	-	-	48	40
Iowa	335	252	57	44	N	N	N	N	N	N
Mo.	422	593	115	267	44	59	8	7	8	2
N. Dak.	29	27	2	6	10	13	-	3	2	4
S. Dak.	75	71	9	11	12	19	5	1	-	-
Nebr.	104	101	21	67	11	22	-	-	5	5
Kans.	258	197	51	51	31	24	N	N	3	5
S. ATLANTIC	6,497	6,233	1,844	4,745	642	715	749	776	36	15
Del.	64	65	6	153	3	6	4	1	N	N
Md.	575	518	100	452	133	176	-	14	25	-
D.C.	39	23	29	50	6	6	5	-	3	5
Va.	794	647	104	290	60	87	N	N	N	N
W. Va.	158	80	4	-	18	30	84	56	8	10
N.C.	877	769	220	603	85	80	N	N	U	U
S.C.	562	372	255	318	35	35	65	112	N	N
Ga.	1,031	1,196	401	895	137	141	169	166	N	N
Fla.	2,397	2,563	725	1,984	165	154	422	427	N	N
E.S. CENTRAL	1,455	1,780	412	638	147	150	88	104	1	-
Ky.	233	270	51	69	51	39	22	14	N	N
Tenn.	246	490	145	228	96	111	65	90	N	N
Ala.	439	431	176	203	-	-	-	-	N	N
Miss.	537	589	40	138	-	-	1	-	1	-
W.S. CENTRAL	1,851	4,037	1,616	4,013	197	201	36	58	80	78
Ark.	320	454	48	80	15	6	6	19	7	5
La.	274	567	170	309	2	1	30	39	12	15
Okla.	270	279	322	583	48	65	N	N	32	39
Tex.	987	2,737	1,076	3,041	132	129	N	N	29	19
MOUNTAIN	1,600	1,418	530	707	377	359	25	4	34	54
Mont.	116	68	4	2	-	1	-	-	-	-
Idaho	119	122	9	23	8	15	N	N	N	N
Wyo.	35	66	3	5	6	2	6	3	-	-
Colo.	398	339	108	148	97	101	-	-	31	42
N. Mex.	168	157	74	146	63	88	5	-	-	8
Ariz.	504	412	275	316	167	127	N	N	N	N
Utah	149	140	29	34	34	24	12	1	3	4
Nev.	111	114	28	33	2	1	2	-	-	-
PACIFIC	3,361	3,360	991	1,706	360	452	75	4	-	-
Wash.	346	376	75	118	38	41	-	-	N	N
Oreg.	290	282	51	178	N	N	N	N	N	N
Calif.	2,466	2,514	830	1,372	260	326	N	N	N	N
Alaska	41	53	5	6	-	-	-	-	N	N
Hawaii	218	135	30	32	62	85	75	4	-	-
Guam	-	35	-	28	-	-	-	-	-	-
P.R.	128	445	4	18	N	N	N	N	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	3	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 4, 2004, and August 30, 2003 (35th Week)*

Reporting area	Syphilis: Primary & secondary		Syphilis: Congenital		Tuberculosis		Typhoid fever		Varicella (Chickenpox)	
	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	4,840	4,693	219	300	6,714	8,348	182	235	12,779	10,961
NEW ENGLAND	132	143	1	-	231	274	15	20	590	2,210
Maine	2	6	-	-	-	18	-	-	179	642
N.H.	3	15	-	-	9	10	-	2	-	-
Vt.	-	-	-	-	-	7	-	-	411	492
Mass.	84	92	-	-	155	134	12	11	-	118
R.I.	18	15	-	-	19	37	1	2	-	3
Conn.	25	15	1	-	48	68	2	5	-	955
MID. ATLANTIC	659	566	36	44	1,383	1,458	35	43	66	24
Upstate N.Y.	69	27	3	7	180	183	5	7	-	-
N.Y. City	399	316	11	24	705	767	11	23	-	-
N.J.	104	114	21	13	275	281	10	12	-	-
Pa.	87	109	1	-	223	227	9	1	66	24
E.N. CENTRAL	540	632	36	48	773	761	14	27	3,960	3,818
Ohio	151	139	1	2	129	136	4	1	1,029	940
Ind.	44	34	9	9	86	89	-	4	-	-
Ill.	197	257	4	18	341	349	-	15	-	-
Mich.	127	188	22	19	155	143	8	7	2,539	2,278
Wis.	21	14	-	-	62	44	2	-	392	600
W.N. CENTRAL	110	106	3	4	293	309	8	5	123	41
Minn.	15	33	1	-	113	126	4	2	-	-
Iowa	5	8	-	-	23	20	-	1	N	N
Mo.	67	36	1	4	72	77	2	1	5	-
N. Dak.	-	2	-	-	3	-	-	-	75	41
S. Dak.	-	1	-	-	8	16	-	-	43	-
Nebr.	5	5	-	-	24	12	2	1	-	-
Kans.	18	21	1	-	50	58	-	-	-	-
S. ATLANTIC	1,247	1,245	32	59	1,298	1,597	36	36	1,630	1,580
Del.	6	4	1	-	-	-	-	-	4	21
Md.	247	204	3	10	179	156	9	8	-	-
D.C.	53	35	1	-	56	-	1	-	19	22
Va.	70	63	2	1	140	169	3	11	412	441
W. Va.	2	2	-	-	14	12	-	-	955	921
N.C.	122	110	8	14	188	194	3	6	N	N
S.C.	84	78	6	4	127	105	-	-	240	175
Ga.	184	335	1	13	11	350	13	5	-	-
Fla.	479	414	10	17	583	611	7	6	-	-
E.S. CENTRAL	270	213	16	11	391	452	5	5	-	-
Ky.	30	29	1	1	72	81	2	-	-	-
Tenn.	89	88	7	2	144	157	3	2	-	-
Ala.	122	75	6	6	142	139	-	3	-	-
Miss.	29	21	2	2	33	75	-	-	-	-
W.S. CENTRAL	787	591	35	55	488	1,269	12	23	4,723	2,899
Ark.	32	38	-	2	76	64	-	-	-	-
La.	174	86	-	1	-	-	-	-	42	10
Okla.	19	43	2	1	101	100	1	-	-	-
Tex.	562	424	33	51	311	1,105	11	23	4,681	2,889
MOUNTAIN	245	218	37	27	321	289	5	4	1,687	389
Mont.	-	-	-	-	4	5	-	-	-	-
Idaho	15	4	2	2	4	5	-	-	-	-
Wyo.	1	-	-	-	2	3	-	-	26	39
Colo.	25	24	-	3	64	66	1	3	1,282	-
N. Mex.	43	40	1	4	16	31	-	-	68	-
Ariz.	138	136	34	18	149	129	2	1	-	-
Utah	4	5	-	-	29	28	1	-	311	350
Nev.	19	9	-	-	53	22	1	-	-	-
PACIFIC	850	979	23	52	1,536	1,939	52	72	-	-
Wash.	78	50	-	-	146	169	4	2	-	-
Oreg.	19	30	-	-	58	76	2	3	-	-
Calif.	750	892	23	51	1,235	1,578	40	66	-	-
Alaska	-	1	-	-	27	42	-	-	-	-
Hawaii	3	6	-	1	70	74	6	1	-	-
Guam	-	1	-	-	-	38	-	-	-	94
P.R.	77	141	5	12	60	75	-	-	190	409
V.I.	4	1	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	-	U	10	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2003 and 2004 are provisional and cumulative (year-to-date).

TABLE III. Deaths in 122 U.S. cities,* week ending September 4, 2004 (35th Week)

Reporting Area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
NEW ENGLAND	457	293	105	36	15	8	35
Boston, Mass.	129	69	37	13	8	2	9
Bridgeport, Conn.	37	23	11	1	1	1	2
Cambridge, Mass.	17	13	3	1	-	-	3
Fall River, Mass.	17	10	7	-	-	-	1
Hartford, Conn.	44	24	16	1	2	1	2
Lowell, Mass.	25	18	4	2	1	-	2
Lynn, Mass.	16	9	5	2	-	-	-
New Bedford, Mass.	17	15	1	1	-	-	3
New Haven, Conn.	33	25	4	2	-	2	3
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	6	4	1	-	1	-	-
Springfield, Mass.	32	22	4	5	1	-	4
Waterbury, Conn.	28	21	5	2	-	-	3
Worcester, Mass.	56	40	7	6	1	2	3
MID. ATLANTIC	1,822	1,273	381	105	34	25	96
Albany, N.Y.	47	33	10	2	-	2	1
Allentown, Pa.	19	18	1	-	-	-	2
Buffalo, N.Y.	53	36	8	5	2	2	4
Camden, N.J.	19	11	4	2	1	1	1
Elizabeth, N.J.	11	9	2	-	-	-	2
Erie, Pa.	25	20	5	-	-	-	1
Jersey City, N.J.	36	25	8	2	-	1	-
New York City, N.Y.	989	680	219	59	18	9	41
Newark, N.J.	42	20	13	7	2	-	1
Paterson, N.J.	15	9	5	1	-	-	-
Philadelphia, Pa.	178	118	44	9	3	4	5
Pittsburgh, Pa.§	27	22	4	1	-	-	2
Reading, Pa.	32	28	3	-	1	-	4
Rochester, N.Y.	135	93	26	7	4	5	15
Schenectady, N.Y.	18	10	5	3	-	-	2
Scranton, Pa.	33	33	-	-	-	-	3
Syracuse, N.Y.	73	61	8	1	2	1	9
Trenton, N.J.	33	20	8	4	1	-	-
Utica, N.Y.	16	12	3	1	-	-	2
Yonkers, N.Y.	21	15	5	1	-	-	1
E.N. CENTRAL	1,878	1,248	411	118	51	49	110
Akron, Ohio	45	31	5	5	2	2	5
Canton, Ohio	39	31	5	2	1	-	6
Chicago, Ill.	295	157	90	27	13	7	18
Cincinnati, Ohio	67	49	12	6	-	-	4
Cleveland, Ohio	249	188	44	8	3	6	7
Columbus, Ohio	199	137	39	10	6	7	16
Dayton, Ohio	101	74	23	2	1	1	11
Detroit, Mich.	160	95	41	15	6	3	7
Evansville, Ind.	45	31	10	-	1	3	2
Fort Wayne, Ind.	57	37	12	2	1	5	1
Gary, Ind.	14	10	1	2	1	-	1
Grand Rapids, Mich.	72	49	13	6	3	1	11
Indianapolis, Ind.	198	124	47	14	3	10	8
Lansing, Mich.	31	27	3	1	-	-	-
Milwaukee, Wis.	89	52	26	6	2	3	6
Peoria, Ill.	51	28	16	4	3	-	3
Rockford, Ill.	42	32	6	3	1	-	1
South Bend, Ind.	40	34	3	-	3	-	2
Toledo, Ohio	84	62	15	5	1	1	1
Youngstown, Ohio	U	U	U	U	U	U	U
W.N. CENTRAL	512	332	122	31	19	7	34
Des Moines, Iowa	18	10	5	3	-	-	2
Duluth, Minn.	40	30	9	1	-	-	2
Kansas City, Kans.	10	6	4	-	-	-	1
Kansas City, Mo.	90	57	20	7	6	-	6
Lincoln, Nebr.	46	33	9	1	3	-	2
Minneapolis, Minn.	55	33	12	4	4	2	1
Omaha, Nebr.	89	60	18	6	3	2	9
St. Louis, Mo.	82	43	26	7	3	2	5
St. Paul, Minn.	52	40	10	1	-	1	3
Wichita, Kans.	30	20	9	1	-	-	3
S. ATLANTIC	1,043	614	259	85	36	48	43
Atlanta, Ga.	270	128	84	19	5	34	7
Baltimore, Md.	175	103	41	21	7	3	17
Charlotte, N.C.	87	57	16	9	5	-	4
Jacksonville, Fla.	U	U	U	U	U	U	U
Miami, Fla.	57	36	13	5	-	2	4
Norfolk, Va.	46	27	8	7	2	2	-
Richmond, Va.	42	29	9	3	1	-	-
Savannah, Ga.	49	35	11	-	1	2	2
St. Petersburg, Fla.	42	30	8	2	1	1	5
Tampa, Fla.	161	111	39	9	2	-	2
Washington, D.C.	100	49	27	9	12	3	2
Wilmington, Del.	14	9	3	1	-	1	-
E.S. CENTRAL	843	540	190	72	21	20	36
Birmingham, Ala.	155	112	33	5	2	3	11
Chattanooga, Tenn.	96	69	20	2	3	2	3
Knoxville, Tenn.	121	78	24	15	3	1	5
Lexington, Ky.	23	14	6	3	-	-	-
Memphis, Tenn.	152	87	38	19	4	4	6
Mobile, Ala.	77	54	13	5	4	1	1
Montgomery, Ala.	83	47	21	8	1	6	3
Nashville, Tenn.	136	79	35	15	4	3	7
W.S. CENTRAL	1,380	865	309	113	59	34	80
Austin, Tex.	79	52	19	6	2	-	3
Baton Rouge, La.	33	21	5	4	3	-	-
Corpus Christi, Tex.	55	41	8	3	1	2	6
Dallas, Tex.	179	101	44	18	10	6	17
El Paso, Tex.	55	38	11	3	3	-	2
Ft. Worth, Tex.	134	77	34	10	9	4	8
Houston, Tex.	361	209	88	40	14	10	27
Little Rock, Ark.	81	51	19	4	2	5	1
New Orleans, La.	53	28	13	6	6	-	-
San Antonio, Tex.	218	155	42	12	5	4	10
Shreveport, La.	U	U	U	U	U	U	U
Tulsa, Okla.	132	92	26	7	4	3	6
MOUNTAIN	677	452	144	47	21	12	40
Albuquerque, N.M.	79	56	15	5	3	-	8
Boise, Idaho	39	27	5	4	2	1	-
Colo. Springs, Colo.	63	42	15	2	2	2	2
Denver, Colo.	103	64	26	8	4	1	6
Las Vegas, Nev.	212	133	52	16	5	5	14
Ogden, Utah	38	26	10	-	1	1	-
Phoenix, Ariz.	U	U	U	U	U	U	U
Pueblo, Colo.	33	27	4	2	-	-	3
Salt Lake City, Utah	110	77	17	10	4	2	7
Tucson, Ariz.	U	U	U	U	U	U	U
PACIFIC	1,249	837	277	76	32	22	104
Berkeley, Calif.	17	12	3	-	1	1	1
Fresno, Calif.	U	U	U	U	U	U	U
Glendale, Calif.	12	10	2	-	-	-	4
Honolulu, Hawaii	58	38	9	3	5	3	5
Long Beach, Calif.	56	36	15	2	3	-	4
Los Angeles, Calif.	226	163	44	14	3	2	24
Pasadena, Calif.	U	U	U	U	U	U	U
Portland, Oreg.	156	105	35	10	4	2	6
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	160	99	35	16	4	5	10
San Francisco, Calif.	125	69	41	10	4	1	15
San Jose, Calif.	207	149	41	12	3	2	22
Santa Cruz, Calif.	U	U	U	U	U	U	U
Seattle, Wash.	84	52	25	3	2	2	6
Spokane, Wash.	56	38	11	1	1	1	1
Tacoma, Wash.	92	66	16	5	2	3	6
TOTAL	9,861¶	6,454	2,198	683	288	225	578

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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