CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

October 26, 2001 / Vol. 50 / No. 42

MMWR™
MORBIDITY AND MORTALITY
WEEKLY REPORT

Update: Investigation of Bioterrorism-Related Anthrax and Interim Guidelines for Exposure Management and Antimicrobial Therapy, October 2001

Since October 3, 2001, CDC and state and local public health authorities have been investigating cases of bioterrorism-related anthrax. This report updates previous findings, provides new information on case investigations in two additional areas, presents the susceptibility patterns of *Bacillus anthracis* isolates, and provides interim recommendations for managing potential threats and exposures and for treating anthrax.

As of October 24, investigations in the District of Columbia (DC), Florida, New Jersey, New York City (NYC), Maryland, Pennsylvania, and Virginia have identified 15 (11 confirmed and four suspected) cases of anthrax according to the CDC surveillance case definition (*1*). Seven of the 15 cases were inhalational anthrax and eight were cutaneous. Of the seven inhalational cases, five occurred in postal workers in New Jersey and DC, and one in a person who sorted and distributed mail at a media company in Florida. Two letters mailed to two different recipients in NYC and one letter mailed to a recipient in DC are known to have contained *B. anthracis* spores. Six cases were identified in employees of media companies; one was a 7-month-old infant who visited a media company; and eight cases are consistent with exposures along the postal route of letters known to be contaminated with *B. anthracis* spores in New Jersey and DC. Using molecular typing, analysis of *B. anthracis* isolates from cases in Florida, NYC, and DC indicated that the isolates are indistinguishable (*2*). Epidemiologic investigations and surveillance in other locations are continuing; no additional cases have been identified.

Florida

As of October 24, investigations in Florida have identified two confirmed cases of inhalational anthrax in persons who worked at the same media company; no additional cases of disease have been identified since the last report (*1*). A pleural biopsy for the second confirmed patient was positive for *B. anthracis* by immunohistochemical (IHC) staining. In addition, a >4-fold increase in levels of serum antibody (IgG) to the protective antigen (PA) component of the anthrax toxin using enzyme-linked immunosorbant assay (ELISA) was demonstrated.

Environmental sampling of the work site revealed *B. anthracis* contamination and implicated one or more mailed letters or packages as the likely source of exposure. Several environmental specimens from regional and local postal centers that provided mail services to the work site were culture-positive for *B. anthracis*. Thirty postal workers

had no evidence of *B. anthracis* exposure by nasal swab testing. No cases of disease have been identified among postal workers. On the basis of the positive environmental swabs, focused clean-up procedures continue at regional and local postal centers. The Environmental Protection Agency (EPA), in consultation with health officials, is conducting decontamination of the work site.

Approximately 1,100 persons were started on antimicrobial prophylaxis for suspected *B. anthracis* exposure; 555 worked either full- or part-time in the affected building. The majority of other persons reported spending at least 1 hour in the affected building since August 1. Additional follow-up for compliance with prophylaxis recommendations and monitoring adverse events associated with long-term antimicrobial prophylaxis is ongoing.

New York

Investigations in NYC have identified five (three confirmed and two suspected) cutaneous anthrax cases; three cases (one confirmed and two suspected) have been identified since the last report (*1*). These five cases were associated with four media companies (A–D). The two previously reported cases were related to work sites A and B, and the three additional cases were related to work sites C, D, and A, respectively. No cases among postal workers have been identified.

On October 1, a 27-year-old woman who regularly handled mail at work site C sought medical care at a local hospital for two lesions on the left cheek, which developed surrounding erythema and edema and local adenopathy. A biopsy obtained on October 16 was positive by IHC staining for the cell wall antigen of *B. anthracis* and serologic testing was weakly reactive. No suspicious letter was identified from her work site.

Two suspected cases of cutaneous anthrax also have been detected. The first suspected case, a 29-year-old woman with onset of illness on September 22, frequently handled mail at work site D. At her work site, an unopened letter postmarked September 18, which contained powder contaminated with *B. anthracis* was found on October 19. The second suspected case, a 23-year-old woman with onset of illness on September 28, handled a suspicious letter postmarked September 18 from work site A. All three patients were treated with ciprofloxacin and have shown clinical improvement. A total of three persons were confirmed by nasal swabs to have been exposed to *B. anthracis*, presumably acquired during handling and processing of specimens during the investigation of the first confirmed case (*1*).

In work site A, potentially exposed persons were identified and prescribed antimicrobial prophylaxis. An environmental investigation of work site A was conducted subsequently; environmental samples taken from work site A were culture-positive for *B. anthracis*. Of 1,360 persons who were tested by nasal swabs from work site A, all were confirmed negative. Nasal swabs were obtained from 1,202 persons from work sites B, C, and D; 1,183 tested negative and 19 are pending final results. Environmental samples taken from work site A were positive. Testing of environmental specimens from work sites B, C, and D is ongoing.

Prophylaxis was recommended for potentially exposed persons at work site A. Antimicrobial prophylaxis was initiated for nine persons who had recent contact with the sealed letter containing *B. anthracis* in work site D.

Update: Investigation of Bioterrorism-Related Anthrax — Continued

New Jersey

To date, investigations in New Jersey and Pennsylvania have identified four (two confirmed and two suspected) anthrax cases. Cutaneous disease has been diagnosed in three patients and one has illness suspected to be inhalational anthrax, but laboratory tests to confirm the diagnosis are pending. All four of these patients worked at one of two postal facilities in New Jersey. Although no specific contaminated letter was identified, contaminated letters destined for both NYC and DC passed through at least one of these postal facilities in New Jersey.

On October 1, a 45-year-old female mail carrier sought medical care at a local hospital for a 4-day history of worsening skin lesions on her right forearm. A biopsy was obtained and arrived at CDC on October 17 and later that night was found positive by IHC. In addition, tissue was positive for *B. anthracis* by polymerase chain reaction (PCR), and serologic testing was reactive. The patient's condition improved on antimicrobial therapy.

On October 16, a 35-year-old male mail processor, with a history of a chronic, bullous-like skin condition, was taken to a local hospital complaining of a 2-day history of a large pustular lesion on his neck. He returned 1 day later with increasing ulceration of the skin lesion associated with fatigue, chills, and a swollen throat; he was afebile but had vesicles and bullae around the pustular lesion. Biopsy was positive by IHC, and serologic testing was reactive to *B. anthracis*. The patient's lesions responded to antimicrobial therapy.

Two suspected cases also have been detected. The first case occurred in a 39-year-old male machine mechanic who was taken to a local hospital on September 26 for two bullous, vesicular lesions with surrounding erythema, edema, and induration on the right forearm, which progressed to black eschars. The patient was treated for cellulitis with ceftriaxone followed by amoxicillin/clavulanate. The patient was reported to CDC on October 17 and serologic testing at CDC was reactive to *B. anthracis*. No biopsy was obtained. The patient's condition improved.

On October 14, the second suspected case occurred in a 56-year-old female postal worker who sought medical care for fever, diarrhea, and vomiting at a local hospital. On October 19, the patient was admitted to the hospital with chills, dry cough, and pleuritic chest pain. A chest radiograph showed a small right infiltrate and bilateral effusions, but no evidence of a widened mediastinum. The next day, her respiratory status and pleural effusions worsened. A chest computerized tomography (CT) showed an enlarged mediastinal and cervical lymph nodes without parenchymal disease. The pleural fluid was positive for *B. anthracis* by PCR. Bilateral pleural effusions have complicated the patient's hospital course and she continues to require supplemental oxygen.

On October 20, the postal facility was closed; the New Jersey Department of Health and Senior Services recommended that postal workers at both postal facilities initiate antimicrobial prophylaxis pending further epidemiologic and environmental investigation. Both facilities have been closed pending results of further environmental evaluation. Environmental sampling is being conducted at both postal facilities. In one facility, 13 of 23 samples from high-risk areas were preliminarily culture-positive for *B. anthracis*. Clean-up efforts are ongoing. Results of cultures from samples taken in the second facility and results from approximately 600 nasal swab cultures obtained from postal employees are pending.

Update: Investigation of Bioterrorism-Related Anthrax — Continued

District of Columbia

To date, investigations in DC, Maryland, and Virginia have identified four confirmed anthrax cases. All patients had inhalational illness and all worked at a single postal facility in DC.

On October 15, a staff member in the office of a U.S. Senator noted a small burst of dust released while opening a tightly sealed letter. The U.S. Capitol Police and Federal Bureau of Investigation (FBI) were notified and the area was vacated and secured immediately; ventilation systems for the Senator's offices were deactivated within 45 minutes of recognizing the threat. The letter and surrounding carpet were removed and sent for testing. On October 16, the letter tested positive for *B. anthracis* by PCR, and an epidemiologic investigation was initiated by the health officials from the Office of Attending Physician, U.S. Capitol; DC Department of Health (DCDOH); Infectious Disease Service, National Naval Medical Center; and CDC.

Based on the initial investigation, the area of exposure was determined to consist of two floors in the southeast quadrant of the building where the U.S. Senator's office is located. Approximately 340 staff and visitors potentially were exposed. Beginning October 15, nasal swab testing was performed on these persons and approximately 5,000 additional persons who referred themselves for testing. Twenty-eight persons had evidence of exposure by nasal swab testing; 13 were in the immediate office space where the letter was opened, nine were in adjacent areas, and six were first responders. Antimicrobial prophylaxis was administered to persons from the area of exposure and first-responders to the incident. Environmental specimens were collected at the affected building and other buildings in the U.S. Capitol complex. To date, environmental specimens are positive from the area of exposure as well as two mail rooms in the U.S. Capitol complex; one of the mail rooms did not process the contaminated letter. None of the mail room personnel and none of the postal workers at the post office serving the mail rooms had positive nasal swabs. These mail handlers were all offered prophylactic antibiotics. Initially, a single positive environmental sample for the post office serving these mail rooms was positive. Subsequent samples from this post office and the mail distribution center serving this post office were positive.

On October 19, enhanced regional surveillance activities (a collaborative effort between DCDOH, Maryland Department of Health and Mental Hygiene, and the Virginia Department of Health) identified a case of pulmonary illness in a postal worker. The postal worker, a 56-year-old man, sought medical care at a Virginia hospital for fever, chills, chest heaviness, malaise, and minimally productive cough of 3 days' duration. Initial evaluation in the emergency department (ED) revealed a widened mediastinum on a chest radiograph; a subsequent CT scan revealed mediastinal lymphadenopathy and small, bilateral pleural effusions. The patient was hospitalized for suspected inhalational anthrax and was treated with broad spectrum antimicrobial agents, including ciprofloxacin. Blood cultures grew gram-positive rods within 15 hours of collection, later confirmed to be *B. anthracis* at the Virginia State Health Laboratory and CDC on October 21. The patient is clinically stable and remains hospitalized.

On October 20, a second postal worker, also a 56-year-old man, who worked at the same distribution center, was admitted to the hospital with a 3-day history of progressively worsening headache and night sweats. He had no fever, stiff neck, or other symptoms or signs consistent with meningitis. He had a mild sore throat and occasional dry cough. Because the patient was linked epidemiologically to the index case of inhalational

anthrax, a chest radiograph and chest CT scan were performed that revealed mediastinal lymphadenopathy and a right middle lobe infiltrate. Antimicrobial therapy was initiated. Blood cultures grew *B. anthracis* within 18 hours. The patient is clinically stable and remains hospitalized.

On October 21, a third postal worker, a 55-year-old man, who worked at the same distribution center was admitted to the hospital with suspected inhalational anthrax. The patient had initially sought medical care at a physician's office on October 18 for 2 days of progressive fatigue, myalgias, and fever. The patient had a temperature of 102 F (38.9 C) and normal white blood cell count and was sent home. The patient returned to the ED on October 21 with persistent symptoms, including chills, vague chest tightness, and temperature of 102 F (38.9 C). Chest radiograph revealed right middle and lower lobe alveolar infiltrates and right hilar and peritracheal soft tissue fullness. Evaluation revealed hypoxia, leukocytosis, and hemoconcentration. Antimicrobial therapy was initiated, and the patient was mechanically ventilated. The patient's condition deteriorated, and he died on October 21. Blood cultures obtained on admission to the hospital grew gram-positive bacilli, which were confirmed later as *B. anthracis* at CDC.

On October 22, a fourth postal worker, a 47-year-old man, who worked at the same distribution center was admitted to the hospital with suspected inhalational anthrax. The patient had initially presented to the ED on October 21 with complaints of 5 days of progressive fatigue, nausea, vomiting, and diarrhea, and syncope. The patient was afebrile and had orthostatic hypotension. A chest radiograph was obtained and reported to be normal. The patient received intravenous fluids and was discharged. He returned to the ED 26 hours later following another syncopal episode and persistent gastrointestinal complaints. The patient was afebrile, hypotensive, diaphoretic, and in respiratory distress. A second chest radiograph and a chest CT revealed mediastinal lymphadenopathy and bilateral pleural effusions. Subsequent review of the first chest radiograph revealed an ill-defined area of increased density in the right subhilar region. Laboratory evaluation revealed leukocytosis and hemoconcentration. Antimicrobial therapy was initiated, and the patient was mechanically ventilated. Peripheral blood smear demonstrated gram-positive bacilli; blood cultures grew gram-positive bacilli within 18 hours and were confirmed as *B. anthracis* at CDC. The patient died on October 22.

On October 20, CDC and DCDOH initiated an investigation of the postal facility where the four patients were employed. Although no specific exposure event was identified, the contaminated tightly sealed letter that was mailed to the Senator's office was processed at this facility on October 12 before entering the Capitol mail distribution system. The postal facility was closed on October 21, and antimicrobial prophylaxis was recommended to employees working in proximity to the same mail sorting area of the first patient. In addition, visitors to nonpublic operations areas of this facility also were offered antimicrobial prophylaxis.

On October 22, because of concern about the potential for unrecognized aerosol exposures among postal workers, antimicrobial therapy was recommended for all workers and visitors to nonpublic areas in this postal facility. Subsequently, this recommendation has been extended to all postal workers in the DC area directly served by this postal facility pending results of ongoing epidemiologic and environmental investigation.

The first patient also worked at a second postal facility. On October 21, this facility also was closed. Antimicrobial prophylaxis also was recommended for workers at this facility pending further epidemiologic and environmental testing.

Update: Investigation of Bioterrorism-Related Anthrax — Continued

Susceptibility Testing of *B. anthracis* Isolates

Antimicrobial susceptibility patterns were determined for 11 *B. anthracis* isolates associated with intentional exposures in Florida, NYC, and DC. Susceptibility breakpoints for interpreting minimum inhibitory concentration (MIC) results for *B. anthracis* have not been determined by the National Committee for Clinical Laboratory Standards (NCCLS); thus, breakpoints for staphylococci were used (*3*). All *B. anthracis* isolates were susceptible to ciprofloxacin (MIC≤0.06 µg/mL), doxycycline (MIC≤0.03 µg/mL), chloramphenicol (MIC=4 µg/mL), clindamycin (MIC≤0.5 µg/mL), tetracycline (MIC=0.06 µg/mL), rifampin (MIC≤0.5 µg/mL), and vancomycin (MIC=1–2 µg/mL). Limited testing of imipenem suggests that these organisms are also susceptible to this agent (MIC≤0.12 µg/mL) and are likely susceptible to meropenem. Susceptibility of the isolates was considered intermediate to erythromycin (MIC=1 µg/mL) and borderline susceptible to azithromycin (MIC=2 µg/mL); clarithromycin was considered susceptible (MIC=0.25 µg/mL).

B. anthracis isolates were susceptible to penicillin (MIC range: ≤0.06 ug/mL–0.12 µg/mL) and amoxicillin (MIC≤0.06 µg/mL); ceftriaxone (MIC=16) was considered intermediate. NCCLS has not defined either a *B. anthracis* or staphylococcal interpretive breakpoint for ceftriaxone results; thus, breakpoints for gram-negative organisms were used to interpret ceftriaxone results. These ceftriaxone MICs and additional laboratory data at CDC indicate the presence in *B. anthracis* isolates of a cephalosporinase, an enzyme that inhibits the antibacterial activity of cephalosporins such as ceftriaxone. Additional studies were performed with some of the *B. anthracis* isolates to identify other beta-lactamases, the general class of enzymes that inactivate penicillins, cephalosporins, and related drugs. These preliminary studies indicate the presence of a class B cephalosporinase and suggest that a penicillinase also may be present. These enzymes often are present in naturally occurring *B. anthracis* isolates.

This information is current as of October 24, 2001, 9 p.m. eastern daylight time. Intensive surveillance activities and environmental and case investigations are in progress to identify and treat all U.S. Postal Service workers and others at potential risk for anthrax. Surveillance also is being conducted to monitor adverse events associated with antimicrobial prophylaxis for anthrax. CDC and FBI are collaborating to accelerate all aspects of the investigation surrounding these events.

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Editorial Note: Bioterrorism attacks using *B. anthracis* spores sent through the mail have resulted in 15 anthrax cases and three deaths. The initial anthrax cases occurred among persons with known or suspected contact with opened letters contaminated with *B. anthracis* spores. Later, investigations identified four confirmed cases and one suspected case among postal workers who had no known contact with contaminated opened letters. This suggests that sealed envelopes contaminated with *B. anthracis*

passing through the postal system may be the source of exposure. The number of contaminated envelopes passing through the postal system is not known. In addition, automated sorting could damage envelopes and release spores into postal environments; other circumstances that could contribute to the contamination of postal facility environments may be identified.

Because these cases are the result of intentional exposures, FBI and other law enforcement authorities are investigating these events as criminal acts and are working to identify and eliminate the source of these exposures. Until that occurs, the possibility of further exposure to *B. anthracis* and subsequent clinical illness exists. Clinicians and laboratorians should be vigilant for symptoms or laboratory findings that indicate *B. anthracis* infection, particularly among mail handlers. Information to guide health-care providers and laboratorians is available at <http://www.bt.cdc.gov>.

Managing Threats

Letters containing *B. anthracis* spores have been sent to persons in NYC and DC. Prompt identification of a threat and institution of appropriate measures may prevent inhalational anthrax. To prevent exposure to *B. anthracis* and subsequent infection, suspicious letters or packages should be recognized and appropriate protective steps taken.

Characteristics of suspicious packages and letters include inappropriate or unusual labeling, strange return address or no return address, postmarks from a city or state different from the return address, excessive packaging material, and others. If a package appears suspicious, it should not be opened. The package should be handled as little as possible. The room should be vacated and secured promptly and appropriate security or law enforcement agencies promptly notified (Box 1).

Box 1. Handling of Suspicious Packages or Envelopes

- Do not shake or empty the contents of a suspicious package or envelope.
- Do not carry the package or envelope, show it to others, or allow others to examine it.
- Put the package or envelope on a stable surface; do not sniff, touch, taste, or look closely at it or any contents that may have spilled.
- Alert others in the area about the suspicious package or envelope. Leave the area, close any doors, and take actions to prevent others from entering the area. If possible, shut off the ventilation system.
- Wash hands with soap and water to prevent spreading potentially infectious material to face or skin. Seek additional instructions for exposed or potentially exposed persons.
- If at work, notify a supervisor, a security officer, or a law enforcement official. If at home, contact the local law enforcement agency.
- If possible, create a list of persons who were in the room or area when this suspicious letter or package was recognized and a list of persons who also may have handled this package or letter. Give the list to both the local public health authorities and law enforcement officials.

Update: Investigation of Bioterrorism-Related Anthrax — Continued

Managing Exposures

Identification of a patient with anthrax or a confirmed exposure to *B. anthracis* should prompt an epidemiologic investigation. The highest priority is to identify at-risk persons and initiate appropriate interventions to protect them. The exposure circumstances are the most important factors that direct decisions about prophylaxis. Persons with an exposure or contact with an item or environment known, or suspected to be contaminated with *B. anthracis*—regardless of laboratory tests results—should be offered antimicrobial prophylaxis. Exposure or contact, not laboratory test results, is the basis for initiating such treatment. Culture of nasal swabs is used to detect anthrax spores. Nasal swabs can occasionally document exposure, but cannot rule out exposure to *B. anthracis*. As an adjunct to epidemiologic evaluations, nasal swabs may provide clues to help assess the exposure circumstances. In addition, rapid evaluation of contaminated powder, including particle size and characteristics, may prove useful in assessing the risk for inhalational anthrax.

CDC is working with U.S. Postal Service employees and managers on several strategies to address the risk for anthrax among workers involved in mail handling. These strategies include personal protective equipment for workers handling mail and engineering controls in mail facilities. Clinicians and laboratorians should be vigilant for symptoms or laboratory findings that indicate possible anthrax infection, particularly among workers involved in mail sorting and distribution. Information to guide health-care providers and laboratories is available at <http://www.bt.cdc.gov> (*1*).

Antimicrobial Treatment

A high index of clinical suspicion and rapid administration of effective antimicrobial therapy is essential for prompt diagnosis and effective treatment of anthrax. Limited clinical experience is available and no controlled trials in humans have been performed to validate current treatment recommendations for inhalational anthrax. Based on studies in nonhuman primates and other animal and *in vitro* data, ciprofloxacin or doxycycline should be used for initial intravenous therapy until antimicrobial susceptibility results are known (Table 1). Because of the mortality associated with inhalational anthrax, two or more antimicrobial agents predicted to be effective are recommended; however, controlled studies to support a multiple drug approach are not available. Other agents with in vitro activity suggested for use in conjunction with ciprofloxacin or doxycycline include rifampin, vancomycin, imipenem, chloramphenicol, penicillin and ampicillin, clindamycin, and clarithromycin; but other than for penicillin, limited or no data exist regarding the use of these agents in the treatment of inhalational *B. anthracis* infection. Cephalosorins and trimethoprim-sulfamethoxazole should not be used for therapy. Regimens being used to treat patients described in this report include ciprofloxacin, rifampin, and vancomycin; and ciprofloxacin, rifampin, and clindamycin.

Penicillin is labelled for use to treat inhalational anthrax. However, preliminary data indicate the presence of constitutive and inducible beta-lactamases in the *B. anthracis* isolates from Florida, NYC, and DC. Thus, treatment of systemic *B. anthracis* infection using a penicillin alone (i.e., penicillin G and ampicillin) is not recommended. The *B. anthracis* genome sequence shows that this organism encodes two beta-lactamases: a penicillinase and a cephalosporinase. Data in the literature also show that some beta-lactamase negative *B. anthracis* strains for which the penicillin MICs are 0.06 µg/mL increase to 64 µg/mL and become beta-lactamase positive when exposed to semisynthetic penicillins (*4*). The frequency of this induction event is unknown. Although

Update: Investigation of Bioterrorism-Related Anthrax — Continued

TABLE 1. Inhalational anthrax treatment protocol*,† for cases associated with this bioterrorism attack

Category	Initial therapy (intravenous)§,¶	Duration
Adults	Ciprofloxacin 400 mg every 12 hrs* **or** Doxycycline 100 mg every 12 hrs†† **and** One or two additional antimicrobials¶	IV treatment initially**. Switch to oral antimicrobial therapy when clinically appropriate: Ciprofloxacin 500 mg po BID **or** Doxycycline 100 mg po BID Continue for 60 days (IV and po combined)§§
Children	Ciprofloxacin 10–15 mg/kg every 12hrs ¶¶,*** **or** Doxycycline:†††,†† >8 yrs and >45 kg: 100 mg every 12 hrs >8 yrs and ≤45 kg: 2.2 mg/kg every 12 hrs ≤8 yrs: 2.2 mg/kg every 12 hrs **and** One or two additional antimicrobials¶	IV treatment initially**. Switch to oral antimicrobial therapy when clinically appropriate: Ciprofloxacin 10–15 mg/kg po every 12 hrs*** **or** Doxycycline:††† >8 yrs and >45 kg: 100 mg po BID >8 yrs and ≤45 kg: 2.2 mg/kg po BID ≤8 yrs: 2.2 mg/kg po BID Continue for 60 days (IV and po combined)§§
Pregnant women§§§	Same for nonpregnant adults (the high death rate from the infection outweighs the risk posed by the antimicrobial agent)	IV treatment initially. Switch to oral antimicrobial therapy when clinically appropriate.† Oral therapy regimens same for nonpregnant adults
Immunocompromised persons	Same for nonimmunocompromised persons and children	Same for nonimmunocompromised persons and children

* For gastrointestinal and oropharyngeal anthrax, use regimens recommended for inhalational anthrax.
† Ciprofloxacin or doxycycline should be considered an essential part of first-line therapy for inhalational anthrax.
§ Steroids may be considered as an adjunct therapy for patients with severe edema and for meningitis based on experience with bacterial meningitis of other etiologies.
¶ Other agents with *in vitro* activity include rifampin, vancomycin, penicillin, ampicillin, chloramphenicol, imipenem, clindamycin, and clarithromycin. Because of concerns of constitutive and inducible beta-lactamases in *Bacillus anthracis*, penicillin and ampicillin should not be used alone. Consultation with an infectious disease specialist is advised.
** Initial therapy may be altered based on clinical course of the patient; one or two antimicrobial agents (e.g., ciprofloxacin or doxycycline) may be adequate as the patient improves.
†† If meningitis is suspected, doxycycline may be less optimal because of poor central nervous system penetration.
§§ Because of the potential persistence of spores after an aerosol exposure, antimicrobial therapy should be continued for 60 days.
¶¶ If intravenous ciprofloxacin is not available, oral ciprofloxacin may be acceptable because it is rapidly and well absorbed from the gastrointestinal tract with no substantial loss by first-pass metabolism. Maximum serum concentrations are attained 1–2 hours after oral dosing but may not be achieved if vomiting or ileus are present.
*** In children, ciprofloxacin dosage should not exceed 1 g/day.
††† The American Academy of Pediatrics recommends treatment of young children with tetracyclines for serious infections (e.g., Rocky Mountain spotted fever).
§§§ Although tetracyclines are not recommended during pregnancy, their use may be indicated for life-threatening illness. Adverse effects on developing teeth and bones are dose related; therefore, doxycycline might be used for a short time (7–14 days) before 6 months of gestation.

amoxicillin/clavulanic acid is more active than amoxicillin alone against beta-lactamase, producing strains *in vitro*, the combination may not be clinically effective for inhalational anthrax where large numbers of organisms are likely to be present.

Toxin-mediated morbidity is a major complication of systemic anthrax. Corticosteroids have been suggested as adjunct therapy for inhalational anthrax associated with extensive edema, respiratory compromise, and meningitis (*5*).

For cutaneous anthrax, ciprofloxacin and doxycycline also are first-line therapy (Table 2). As for inhalational disease, intravenous therapy with a multidrug regimen is recommended for cutaneous anthrax with signs of systemic involvement, for extensive edema, or for lesions on the head and neck (Table 2). In cutaneous anthrax, antimicrobial treatment may render lesions culture negative in 24 hours, although progression to eschar formation still occurs (*5*). Some experts recommend that corticosteroids be considered for extensive edema or swelling of the head and neck region associated with cutaneous anthrax. Cutaneous anthrax is typically treated for 7–10 days; however, in this bioterrorism attack, the risk for simultaneous aerosol exposure appears to be high. Although infection may produce an effective immune response, a potential for reactivation of latent infection may exist. Therefore, persons with cutaneous anthrax associated with this attack should be treated for 60 days.

TABLE 2. Cutaneous anthrax treatment protocol* for cases associated with this bioterrorism attack

Category	Initial therapy (oral)†	Duration
Adults*	Ciprofloxacin 500 mg BID **or** Doxycycline 100 mg BID	60 days§
Children*	Ciprofloxacin 10–15 mg/kg every 12 hrs (not to exceed 1 g/day)† **or** Doxycycline:¶ >8 yrs and >45 kg: 100 mg every 12 hrs >8 yrs and ≤45 kg: 2.2 mg/kg every 12 hrs ≤8 yrs: 2.2 mg/kg every 12 hrs	60 days§
Pregnant women*,**	Ciprofloxacin 500 mg BID **or** Doxycycline 100 mg BID	60 days§
Immunocompromised persons*	Same for nonimmunocompromised persons and children	60 days§

* Cutaneous anthrax with signs of systemic involvement, extensive edema, or lesions on the head or neck require intravenous therapy, and a multidrug approach is recommended. Table 1.

† Ciprofloxacin or doxycycline should be considered first-line therapy. Amoxicillin 500 mg po TID for adults or 80 mg/kg/day divided every 8 hours for children is an option for completion of therapy after clinical improvement. Oral amoxicillin dose is based on the need to achieve appropriate minimum inhibitory concentration levels.

§ Previous guidelines have suggested treating cutaneous anthrax for 7–10 days, but 60 days is recommended in the setting of this attack, given the likelihood of exposure to aerosolized *B. anthracis* (*6*).

¶ The American Academy of Pediatrics recommends treatment of young children with tetracyclines for serious infections (e.g., Rocky Mountain spotted fever).

** Although tetracyclines or ciprofloxacin are not recommended during pregnancy, their use may be indicated for life-threatening illness. Adverse effects on developing teeth and bones are dose related; therefore, doxycycline might be used for a short time (7–14 days) before 6 months of gestation.

Update: Investigation of Bioterrorism-Related Anthrax — Continued

Prophylaxis for inhalational anthrax exposure has been addressed in a previous report (*1*) and indicates the use of either ciprofloxacin or doxycycline as first line agents. High-dose penicillin (e.g., amoxicillin or penicillin VK) may be an option for antimicrobial prophylaxis when ciprofloxacin or doxycycline are contraindicated. The likelihood of beta-lactamase induction events that would increase the penicillin MIC is lower when only small numbers of vegetative cells are present, such as during antimicrobial prophylaxis.

All medications may have undesirable side effects and allergic reactions may result from any medication. Clinicians prescribing these medications should be aware of their side effects and consult an infectious disease specialist as needed. Patients should be urged to inform their health-care provider of any adverse event.

This is the first bioterrorism-related anthrax attack in the United States, and the public health ramifications of this attack continue to evolve. Additional updates and recommendations will be published in *MMWR*.

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Methicillin-Resistant *Staphylococcus aureus* Skin or Soft Tissue Infections in a State Prison — Mississippi, 2000

On October 25, 2000, the Mississippi State Department of Health (MSDH) notified CDC that, since November 1999, 31 inmates had acquired methicillin-resistant *Staphylococcus aureus* (MRSA) skin or soft tissue infections at a state prison. During November 1998–October 1999, no MRSA infections had been reported at the prison, which houses approximately 1,200 female and 1,800 male inmates. This report summarizes the case investigation and the nasal culture prevalence survey conducted by MSDH and CDC during November 2000. Findings indicate that MRSA infections were transmitted person-to-person within the prison, and that the number of asymptomatic carriers was unexpectedly high for a nonhealth-care setting. Correctional facilities can reduce the increasing prevalence of MRSA disease by identifying and appropriately treating infected persons and by instituting prevention measures.

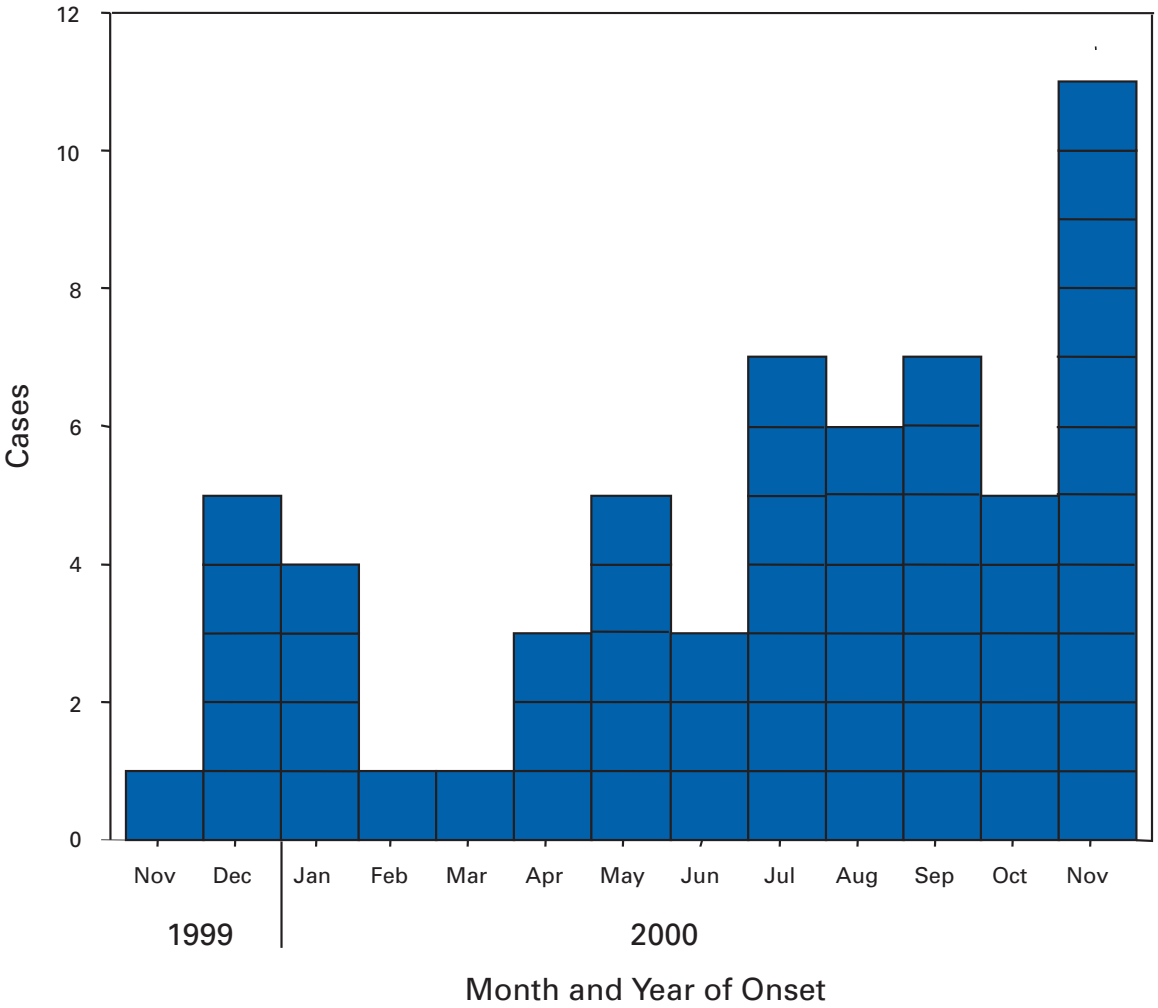
A case of MRSA infection was defined as a skin or soft tissue lesion occurring in a state prison inmate with symptoms (e.g., pus, pain, warmth, or tenderness) and with MRSA cultured from the site of infection during November 1999–November 2000. Cases were identified by interviews with physicians and inmates and a review of the prison's medical, laboratory, and pharmacy records. Fifty-nine inmates had an illness that met

Methicillin-Resistant Staphylococcus aureus — *Continued*

the case definition (Figure 1); 46 (78%) were women, and the median age was 33 years (range: 19–70 years). The median length of incarceration was 397 days (range: 3–3,717 days).

Records of 45 (76%) infected inmates were reviewed. Three (7%) had been hospitalized during the year preceding infection. Twenty-six (58%) had infections on the legs and seven (16%) on the arms. Fifteen (33%) were diagnosed with furuncles, 12 (27%) with skin abscesses, and 11 (24%) with open wounds; 21 (47%) had cellulitis, and two (4%) had systemic infections requiring hospitalization. Infections resolved after a median of 3 weeks (range: 1–36 weeks). Systemic antimicrobials were used to treat 44 (98%) infected inmates, 35 (78%) received topical antimicrobials, six (13%) required incision

FIGURE 1. Number of cases of methicillin-resistant *Staphylococcus aureus (MRSA) in a state prison, by month and year of onset — Mississippi, November 1999–November 2000†**



* Defined as a skin or soft tissue lesion occurring in a state prison inmate with symptoms (e.g., pus, pain, warmth, or tenderness) and with MRSA cultured from the site of infection during November 1999–November 2000.

† n=59.

Methicillin-Resistant Staphylococcus aureus — *Continued*

and drainage, and wound dressing was prescribed for 21 (47%). Nineteen (90%) of the 21 infected inmates with wound dressings changed their dressings themselves. During interviews, 15 (33%) infected inmates reported helping or being helped by other inmates with wound care or dressing changes. Twenty-six (58%) reported lancing their own boils or other inmates' boils with fingernails or tweezers; 40 (89%) shared personal items (e.g., linen, pillows, clothing, and tweezers) that potentially were contaminated by wound drainage.

To assess the extent of MRSA carriage among the inmates, swab specimens of both anterior nares were collected from all female and a one third systematic sample of male inmates. Of 1,757 inmates sampled, 86 (4.9%) were MRSA carriers. More women (73 of 1,241 [5.9%]) were carriers than men (13 of 516 [2.5%]) (p=0.003), and inmates who had been incarcerated for >60 days were more likely to be carriers (84 of 1,565 [5.4%]) than those who had served less time (one of 142 [0.7%]) (p=0.01).

Of the 59 infection-associated isolates, 41 (69%) were tested and genotyped at CDC. All 41 isolates were confirmed as MRSA and 40 (98%) were susceptible to gentamicin, rifampin, trimethoprim-sulfamethoxazole, clindamycin, vancomycin, and chloramphenicol; three (7%) were resistant to levofloxacin. Pulsed-field gel electrophoresis of isolates revealed that three MRSA strains predominated: genotype A (24 [59%]), genotype B (seven [17%]), and genotype C (four [10%]).

During December 2000, CDC and MSDH provided the Mississippi State Department of Corrections and the prison with control measures such as optimizing antimicrobial treatment of infected inmates, reinforcing infection control practices (e.g., implementing Standard Precautions [*1*] at prison clinics, educating inmates in personal hygiene and wound care), using antibacterial soap, and establishing an MRSA skin infection surveillance system.

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Editorial Note: *S. aureus* is an important and common pathogen in humans. It is found in the nose or on the skin of many healthy, asymptomatic persons (i.e., carriers) and can cause infections with clinical manifestations ranging from pustules to sepsis and death. Most transmission occurs through the contaminated hands of a person infected with or carrying *S. aureus*. MRSA infections frequently are encountered in health-care settings (*2*). Since the 1960s, treatment of these infections has become more difficult because *S. aureus* has progressively acquired resistance to previously effective antimicrobial agents (*2*). In 1999, 2,538 (53.5%) of 4,744 intensive care unit patients with hospital-acquired *S. aureus*-associated infection had MRSA (*3*). Less information is available on long-term–care facilities, where prevalence of MRSA carriage may range from zero to 33% of the residents (*4*).

Risk factors for infection with MRSA in health-care settings include prolonged hospital stay, exposure to multiple or prolonged broad-spectrum antimicrobial therapy, stay in an intensive care or burn unit, proximity to patients colonized or infected with MRSA, use of invasive devices, surgical procedures, underlying illnesses, and MRSA nasal carriage (*5*).

Although community-onset MRSA infections have been reported recently (*6*), little is known about their epidemiology or prevalence of carriage. Community outbreaks have occurred among injection-drug users; aboriginals in Canada, New Zealand, and Australia; Native Americans/Alaska Natives in the United States; and players of close-contact

Methicillin-Resistant Staphylococcus aureus — *Continued*

sports (*6*). Reported most commonly have been uncomplicated skin infections; however, community-acquired MRSA infections can be severe. Four deaths from community-acquired MRSA in children were reported in Minnesota and North Dakota in 1999 (*7*).

Disease transmission can occur easily among inmates at correctional facilities. In 1999, approximately two million persons were incarcerated in the United States (*8*). Skin or soft tissue infections are recognized problems in these facilities (*9*). MRSA disease in prisons can be controlled or prevented using several approaches. First, severe skin disease or treatment failures of presumed *S. aureus* skin infection should be evaluated with appropriate cultures or other diagnostic tests. Efforts to monitor the etiology of skin disease should be linked to these data to determine whether MRSA is a problem in the facility. MRSA outbreaks can be reported to CDC (telephone [800] 893-0485) through state departments of corrections and state health departments. Second, optimal treatment of MRSA disease should be based on the infecting organism's antimicrobial susceptibility result and, when available, input by infectious disease expertise. Third, close contact among inmates may place them at increased risk for transmission of skin-colonizing or skin-infecting organisms. To prevent skin disease, all inmates should practice good personal hygiene, including daily showers. Inmates should avoid touching wounds or drainage of others and should have access to sinks and plain soap (in this setting, the usefulness of antibacterial soap is unknown). Hands should be washed with soap as soon as possible after touching wounds or dressings. Personnel that provide wound care should follow Standard Precautions (*1*).

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Shigella sonnei Outbreak Among Men Who Have Sex with Men — San Francisco, California, 2000–2001

Shigella sonnei causes approximately 10,000 cases of gastroenteritis each year in the United States (*1*). These infections occur predominately among young children and usually are associated with poor hygienic conditions in child-care settings. Outbreaks of

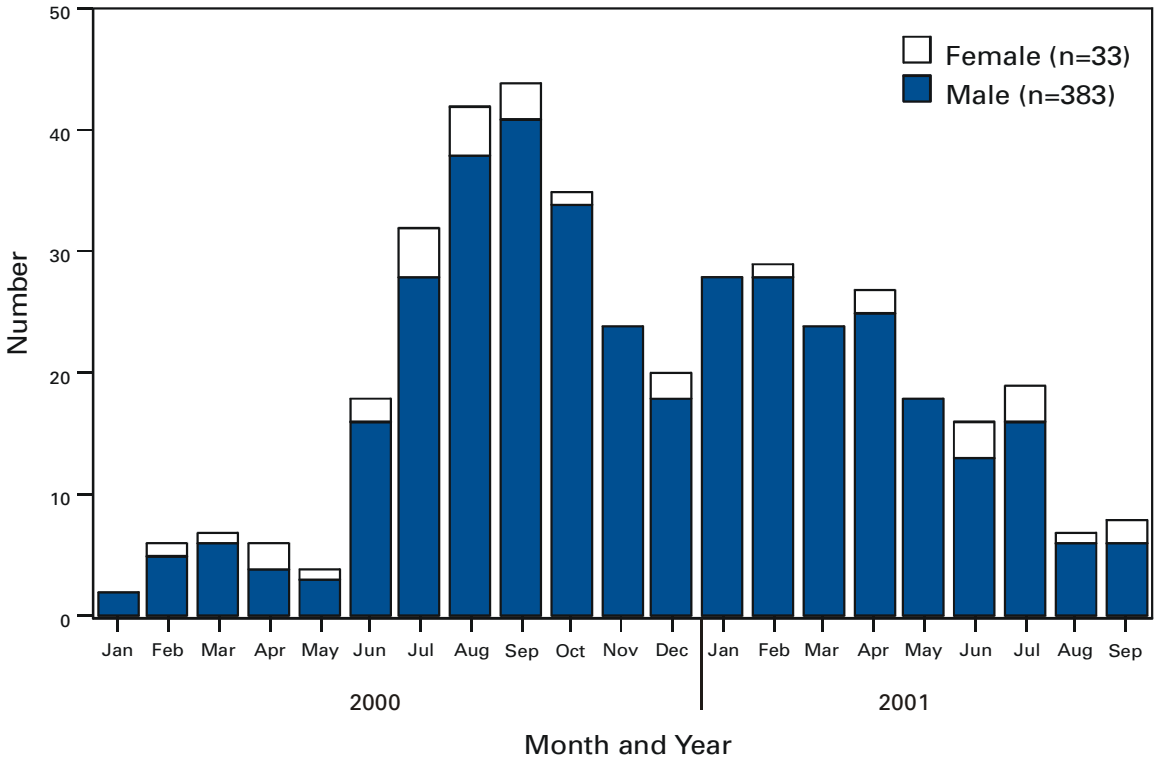
Shigella sonnei *Outbreak — Continued*

shigellosis among men who have sex with men (MSM) have occurred because of direct or indirect oral-anal contact (*2,3*) but usually are caused by *Shigella flexneri* (*4*). This report describes an investigation of *S. sonnei* cases that occurred among MSM in San Francisco during May–December 2000. Following efforts to heighten awareness, the number of cases has declined, but new cases continue to occur at low levels in this risk group (Figure 1). The increased incidence of sexually transmitted *Shigella* and other sexually transmitted diseases (STDs) in MSM require renewed and innovative prevention efforts.

During June–December 2000, 230 cases of culture-confirmed* *S. sonnei* infection were reported to the San Francisco Department of Public Health; an average of 21 cases (range: 13–29 cases) occurred during the same period from 1996 to 1999. Based on data obtained from 230 reported cases, the median age was 39 years (range: 16–77 years) and 211 (92%) patients were males. Of 199 males for whom information was available, 141 (71%) were non-Hispanic whites, 159 (80%) were residents of predominantly gay neighborhoods, and 121 (61%) were self-reported MSM. Sexual behavior was unknown for 62 (31%) patients, and 16 (8%) were self-reported heterosexuals. On the basis of denominator data obtained from the annual San Francisco HIV/AIDS epidemiology report, the rate of *S. sonnei* infection among MSM was 259 per 100,000 population. The rate among all other groups, including women and heterosexual men, was 16 (*5*).

*Defined as culture-confirmed *S. sonnei* infection in residents of San Francisco County aged ≥15 years.

FIGURE 1. Number of adult *Shigella sonnei* infections, by month, year, and sex — San Francisco, California, January 2000–September 2001



Shigella sonnei *Outbreak — Continued*

Among persons aged ≥18 years with *S. sonnei* and symptom onset during May–December 2000, 106 were selected randomly for telephone interview; 35 (33%) could not be contacted and four (4%) refused to participate. Of the 67 (63%) who agreed to participate, 64 (96%) were male. Among the 64 male respondents, 62 (97%) were MSM, 42 (66%) were college graduates, and 29 (46%) had an annual income >$45,000. Of the respondents, 49 (78%) had health insurance coverage, 45 (70%) thought they became ill from a sexual partner, and 35 (55%) reported concurrent infection with human immunodeficiency virus (HIV).

The median duration of symptoms for male respondents was 7 days (range: 2–90 days); 62 (97%) reported diarrhea, 50 (78%) abdominal cramps, 49 (77%) fever, 47 (73%) weight loss, and 20 (31%) blood in stool.

In the week before illness, 50 (78%) of the 64 males reported being sexually active, including 34 (53%) who had multiple sex partners; 32 (50%) answered "yes" to, "The week before your illness did you put your tongue in a partner's anus?" Forty-seven (73%) answered "yes" to, "The week before your illness did you have a penis in your mouth?"

Of the 14 patients who reported sexual activity during the week of or the week following illness, three (21%) answered "yes" to, "During [or after] your illness did you have a tongue in your anus?" All 14 persons who were sexually active during and after illness reported diarrhea (duration: 3–23 days) for which they were prescribed antibiotics.

Local response to the outbreak included a press release, development of an Internet web site, and a media campaign with newspaper and Internet articles for the gay community. Approximately 2,000 notices were mailed to community agencies and providers, 10 presentations were conducted for community agencies, and 4,000 health alerts were distributed through a mass mailing to 40 acquired immunodeficiency syndrome-related agencies and their clients, several large gay and lesbian fairs, bars, sex clubs, and the city STD clinic.

Free *Shigella* screening was offered for 1 month at the city STD clinic. Of 119 patients screened, five reported having diarrhea at presentation to the STD clinic. Two of the five had *S. sonnei* isolated from their rectal swab samples; no *Shigella* species were isolated from the 114 remaining clients.

A convenience sample of *S. sonnei* from outbreak-related patients and controls (women and children with *S. sonnei* infection in the outbreak period and region) was subtyped by pulsed-field gel electrophoresis (PFGE). Of 26 outbreak-related isolates, 23 (88%) shared one of two closely related patterns, and only one (12%) of eight isolates from controls had a similar PFGE patterns.

Of 20 randomly selected isolates from outbreak-related patients, 19 were resistant to trimethoprim-sulfamethoxazole, tetracycline, ampicillin, sulfisoxazole, and streptomycin. All isolates were susceptible to ciprofloxacin, nalidixic acid, and ceftriaxone.

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Editorial Note: This report indicates that *S. sonnei* can cause large community outbreaks through sexual transmission among MSM. The strains circulating among MSM were different from those circulating in the rest of the community, indicating unique

transmission. The recent increases in STDs and enteric infections in MSM follow a 10-year decline (*4*). The rate of *S. sonnei* remained low in MSM until the summer of 2000 in San Francisco. These trends paralleled changes in sexual behavior that increased the risk for HIV and other STDs (*6*).

Approximately half of the patients in this report were infected with HIV compared with an estimated prevalence of 20% among MSM in San Francisco (*7*), suggesting that MSM with HIV infection are more likely to participate in sexual behaviors that place them at risk for shigellosis. Standard HIV management includes stool bacteria cultures of persons with diarrhea. However, HIV-infected persons with shigellosis might have more severe illness (*8*) leading to more frequent diagnosis and reporting.

The findings in this report are subject to at least two limitations. First, approximately a third of the selected cases could not be contacted, and those who were might have had difficulty accurately recalling events that occurred up to 6 months preceding the interview. Second, the magnitude of this outbreak probably was underestimated because reporting shigellosis in California is required of physicians but not of laboratories, and many cases probably were undiagnosed and unreported.

Because most patients in this outbreak were sexually active with multiple partners, the potential for ongoing transmission is high. In San Francisco and other communities with high rates of shigellosis in adult men, clinicians should obtain stool cultures and sexual orientation data from men with diarrhea and report suspected cases of shigellosis to the health department. Appropriate antimicrobial therapy will decrease the duration, transmission, and severity of symptoms and should be prescribed based on the severity of illness or the need to protect close contacts. Patients in certain occupations (i.e., foodhandlers, child-care providers, and health-care workers) and children who attend child care often are required to have a negative stool culture documented following treatment. The incubation period of shigellosis is 1–4 days, and *shigellae* are shed in stool from several days to several weeks after illness. Persons who receive appropriate antimicrobial therapy will be culture negative at 72 hours (*9*).

Patients with shigellosis should be counseled to abstain from sexual behavior that is likely to transmit infection for at least 3 days after starting an appropriate course of antimicrobial therapy (*9*). Because antimicrobial resistance is common, in cases in which antimicrobial susceptibility data are not available, patients should be counseled on abstaining from high-risk sexual behavior until at least one negative posttreatment stool culture is obtained. Patients also should be counseled on methods to avoid or reduce the risk for sexual transmission of enteric infections such as *Shigella* and hepatitis A, should be educated to avoid sexual practices that might result in fecal-oral transmission, and should be advised to wash with soap and water the perianal/perineal area, other body parts, and sex toys before and after sexual activity.

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Shigella sonnei *Outbreak — Continued*

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Weekly Update: West Nile Virus Activity — United States, October 17–23, 2001

The following report summarizes West Nile virus (WNV) surveillance data reported to CDC through ArboNET and verified by states and other jurisdictions as of October 23, 2001.

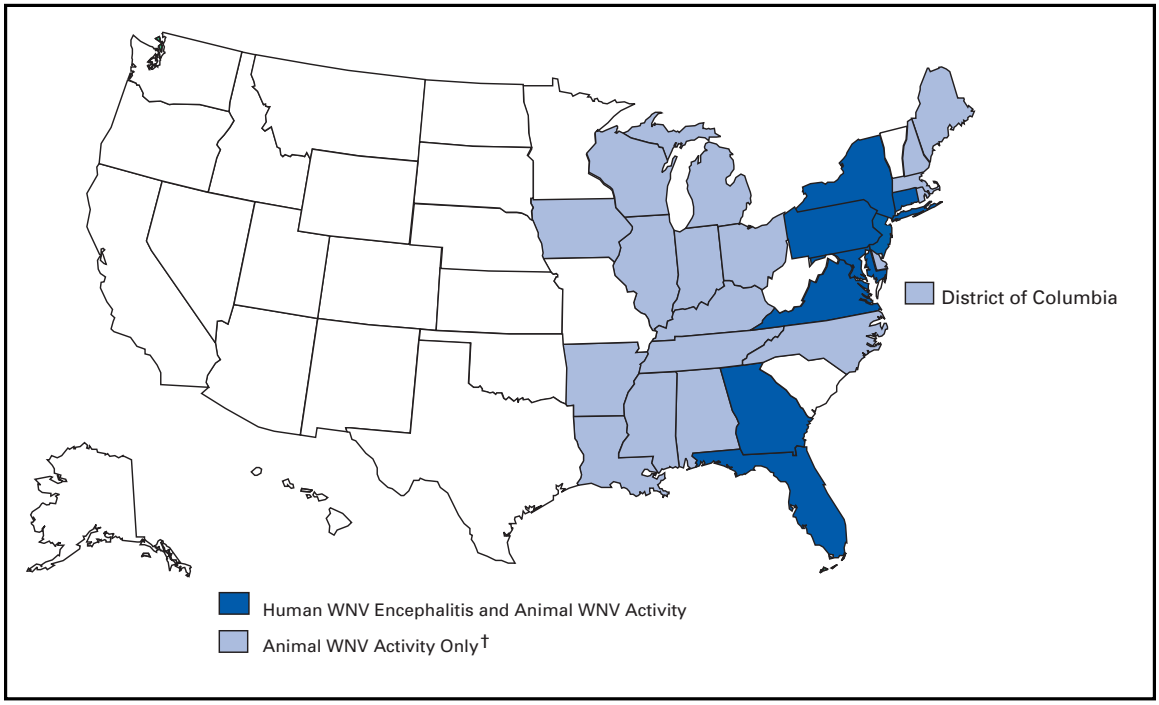
During the week of October 17–23, six human cases of WNV encephalitis or meningitis were reported in Pennsylvania (three), New Jersey (two), and Florida (one). During the same period, WNV infections were reported in 101 crows, 45 other birds, and 26 horses. A total of 31 WNV-positive mosquito pools were reported in five states (Connecticut, Florida, Georgia, New York, and Ohio).

During 2001, 37 human cases of WNV encephalitis or meningitis have been reported in Florida (10), Maryland (six), New York (six), New Jersey (six), Connecticut (five), Pennsylvania (three), and Georgia (one); one death occurred in Georgia. Among these 37 cases, 20 (54%) were in males, the median age was 69 years (range: 36–81 years), and dates of illness onset ranged from July 13 to October 7. A total of 3,796 crows and 1,394 other birds with WNV infection were reported from 25 states and the District of Columbia (Figure 1); 151 WNV infections in other animals (all horses) were reported from 11 states (Alabama, Connecticut, Florida, Georgia, Kentucky, Louisiana, Massachusetts, Mississippi, New York, Pennsylvania, and Virginia); and 725 WNV-positive mosquito pools were reported from 14 states (Connecticut, Florida, Georgia, Illinois, Kentucky, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, and Rhode Island).

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

Update: West Nile Virus — Continued

FIGURE 1. Areas reporting West Nile virus (WNV) activity — United States, 2001*



* As of October 23, 2001.
† Mississippi reported WNV infection in a horse but no birds.

Notice to Readers

National Lead Poisoning Prevention Week — October 21–27, 2001

October 21–27 is National Lead Poisoning Prevention Week (NLPPW), and this year's theme is "Treat Yourself to Lead-Safe Living: Harvest the Rewards." Childhood lead poisoning is considered the most preventable environmental disease of young children, but approximately one million children have elevated blood lead levels. One of the national health objectives for 2010 is to eliminate childhood lead poisoning in the United States (objective 8-11) (*1*). The goal of NLPPW is 1) to raise awareness about this serious health issue and the importance of screening at-risk children at aged 1–2 years and children aged 3–5 years who have not been screened previously and 2) to urge persons to take precautions to minimize exposure to lead.

In commemoration of NLPPW, events such as state proclamations, free screenings, lead-awareness community events, and educational campaigns will be conducted nationwide. CDC, the Environmental Protection Agency, and the U.S. Department of Housing and Urban Development are collaborating to coordinate activities and offer assistance to campaigns at the local level. Additional information about NLPPW activities is available from state or local health departments.

Additional information about preventing childhood lead poisoning is available at http://cdc.gov/nceh/lead or from the National Lead Information Center, telephone (800) 424-LEAD ([800] 424-5323).

Notices to Readers — Continued

Reference

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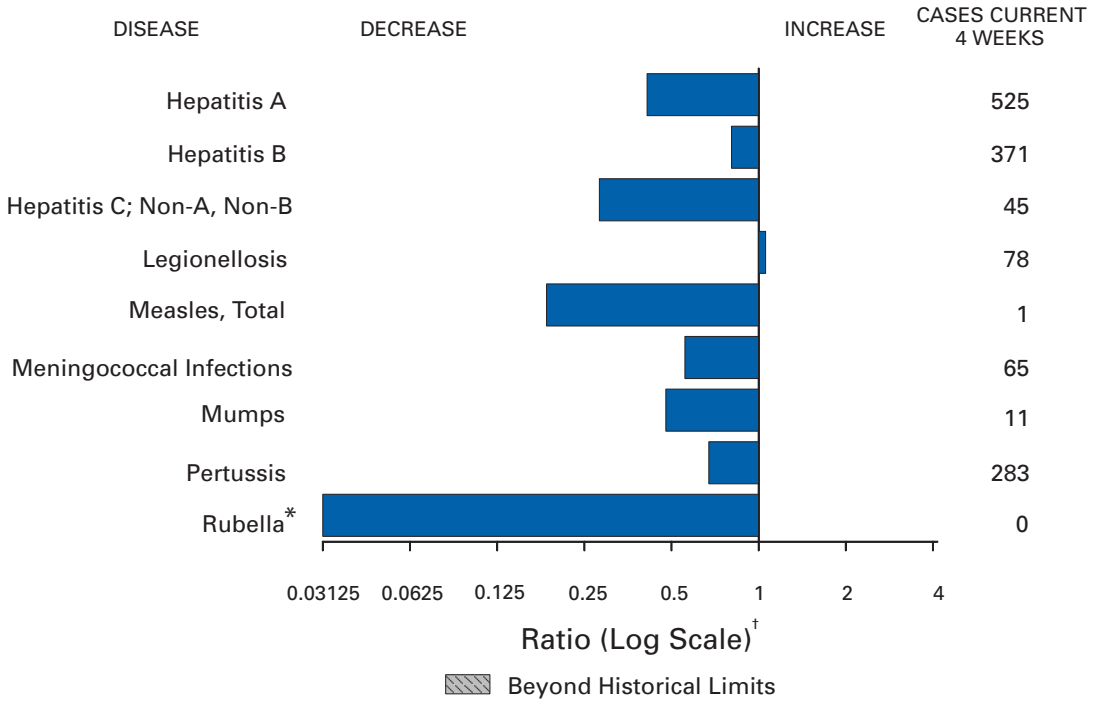
Notice to Readers

Availability of Final Recommendations on Reducing the Risk for Transmission of Enteric Pathogens at Petting Zoos, Open Farms, Animal Exhibits, and Other Venues

Final Recommendations on "Reducing the Risk for Transmission of Enteric Pathogens at Petting Zoos, Open Farms, Animal Exhibits, and Other Venues Where the Public Has Contact With Farm Animals" are available on the Internet. Draft recommendations were published in *MMWR* on April 20, 2001. Readers were invited to submit comments and suggestions before July 1. Twenty-six submissions were received and reviewed. The final recommendations are posted under "Outbreak Reports and Publications" at http://www.cdc.gov/ncidod/dbmd/outbreak/recomm_farm_animal.htm.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending October 20, 2001, with historical data



* No rubella cases were reported for the current 4-week period yielding a ratio for week 42 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 October 20, 2001 (42nd Week)*

	Cum. 2001		Cum. 2001
Anthrax	8	Poliomyelitis, paralytic	-
Brucellosis†	73	Psittacosis†	17
Cholera	3	Q fever†	18
Cyclosporiasis†	121	Rabies, human	1
Diphtheria	2	Rocky Mountain spotted fever (RMSF)	443
Ehrlichiosis: human granulocytic (HGE)†	168	Rubella, congenital syndrome	-
human monocytic (HME)†	70	Streptococcal disease, invasive, group A	2,927
Encephalitis: California serogroup viral†	72	Streptococcal toxic-shock syndrome†	47
eastern equine†	7	Syphilis, congenital¶	166
St. Louis†	1	Tetanus	22
western equine†	-	Toxic-shock syndrome	96
Hansen disease (leprosy)†	70	Trichinosis	21
Hantavirus pulmonary syndrome†	7	Tularemia†	90
Hemolytic uremic syndrome, postdiarrheal†	119	Typhoid fever	212
HIV infection, pediatric†§	153	Yellow fever	-
Plague	2		

-: No reported cases.
*Incidence data for reporting year 2001 are provisional and cumulative (year-to-date).
† Not notifiable in all states.
§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP). Last update September 25, 2001.
¶ Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending October 20, 2001, and October 21, 2000 (42nd Week)*

Reporting Area	AIDS		Chlamydia§		Cryptosporidiosis		*Escherichia coli* O157:H7†			
							NETSS		PHLIS	
	Cum. 2001¶	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000
UNITED STATES	29,580	29,975	561,232	560,703	2,346	2,493	2,385	3,843	1,936	3,139
NEW ENGLAND	1,129	1,586	18,403	18,613	99	124	210	334	204	349
Maine	36	27	877	1,174	16	18	25	25	26	27
N.H.	31	27	1,093	885	10	21	31	31	24	32
Vt.	13	29	491	428	30	26	13	31	8	33
Mass.	602	998	7,747	7,925	39	32	109	151	105	160
R.I.	78	75	2,379	2,158	4	3	12	18	10	16
Conn.	369	430	5,816	6,043	-	24	20	78	31	81
MID. ATLANTIC	6,710	6,678	61,857	52,600	218	321	176	385	165	269
Upstate N.Y.	731	662	10,951	1,801	86	100	136	253	121	59
N.Y. City	3,385	3,609	23,969	21,493	73	152	9	21	10	15
N.J.	1,389	1,295	8,694	8,800	7	15	31	111	34	111
Pa.	1,205	1,112	18,243	20,506	52	54	N	N	-	84
E.N. CENTRAL	2,238	2,865	85,919	95,892	896	846	614	938	450	668
Ohio	430	430	17,985	25,207	150	233	154	230	137	203
Ind.	264	282	11,797	10,704	70	56	71	107	39	80
Ill.	992	1,568	21,767	26,993	1	107	132	175	128	143
Mich.	413	437	24,186	19,788	154	82	79	128	69	102
Wis.	139	148	10,184	13,200	521	368	178	298	77	140
W.N. CENTRAL	637	680	28,973	31,835	351	261	389	551	394	529
Minn.	108	129	5,646	6,549	137	55	151	138	186	169
Iowa	71	69	3,797	4,320	72	70	74	167	59	137
Mo.	312	318	10,595	10,822	35	27	42	96	68	86
N. Dak.	2	2	750	714	12	9	17	15	30	19
S. Dak.	22	7	1,414	1,480	6	15	37	53	40	57
Nebr.	52	53	2,175	3,039	88	76	51	57	-	45
Kans.	70	102	4,596	4,911	1	9	17	25	11	16
S. ATLANTIC	9,497	8,257	107,104	106,106	268	398	192	317	120	255
Del.	203	156	2,041	2,328	6	5	4	2	6	1
Md.	1,506	1,056	9,096	11,513	32	9	23	30	1	1
D.C.	644	569	2,372	2,584	10	13	-	1	U	U
Va.	723	556	14,718	12,569	22	16	47	61	36	55
W. Va.	61	46	1,874	1,745	2	3	10	14	8	11
N.C.	726	505	16,445	18,185	24	21	41	77	28	65
S.C.	577	639	9,110	7,831	-	-	9	21	11	16
Ga.	1,031	991	22,775	22,427	103	147	26	35	15	36
Fla.	4,026	3,739	28,673	26,924	69	184	32	76	15	70
E.S. CENTRAL	1,423	1,529	39,174	41,189	39	44	115	118	95	97
Ky.	278	159	7,205	6,394	4	5	57	39	46	31
Tenn.	456	635	11,713	11,893	12	11	35	48	36	47
Ala.	347	417	10,731	12,800	13	15	16	8	6	9
Miss.	342	318	9,525	10,102	10	13	7	23	7	10
W.S. CENTRAL	3,141	3,006	83,888	84,931	32	143	82	211	86	261
Ark.	159	149	5,903	5,414	6	10	11	54	-	37
La.	665	493	14,077	14,928	7	10	4	13	25	44
Okla.	186	259	8,325	7,501	12	16	25	17	24	15
Tex.	2,131	2,105	55,583	57,088	7	107	42	127	37	165
MOUNTAIN	1,073	1,105	32,592	31,184	178	146	236	373	120	271
Mont.	14	11	1,542	1,104	28	10	16	30	-	-
Idaho	17	19	1,492	1,468	20	19	54	60	-	34
Wyo.	3	7	660	656	6	5	5	17	1	9
Colo.	231	259	6,963	8,763	34	60	81	143	53	103
N. Mex.	103	116	4,738	4,045	21	14	13	19	9	16
Ariz.	437	348	11,575	10,220	7	10	22	44	22	34
Utah	90	108	1,512	1,722	58	24	30	47	34	65
Nev.	178	237	4,110	3,206	4	4	15	13	1	10
PACIFIC	3,732	4,269	103,322	98,353	265	210	371	616	302	440
Wash.	395	379	10,941	10,410	43	U	103	195	62	191
Oreg.	154	113	5,853	5,322	43	16	61	125	57	107
Calif.	3,112	3,669	81,303	77,714	175	194	186	255	176	128
Alaska	16	15	2,150	2,014	1	-	4	27	1	3
Hawaii	55	93	3,075	2,893	3	-	17	14	6	11
Guam	10	13	-	413	-	-	N	N	U	U
P.R.	934	1,023	1,930	U	-	-	1	6	U	U
V.I.	2	27	53	-	-	-	-	-	U	U
Amer. Samoa	-	-	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	103	U	-	U	-	U	U	U

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

* Incidence data for reporting year 2001 are provisional and cumulative (year-to-date). Incidence data for reporting year 2000 are finalized and cumulative (year-to-date).

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

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

¶ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last updated September 25, 2001.

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending October 20, 2001, and October 21, 2000 (42nd Week)*

Reporting Area	Gonorrhea		Hepatitis C; Non-A, Non-B		Legionellosis		Listeriosis	Lyme Disease	
	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2001	Cum. 2000
UNITED STATES	258,213	287,298	2,643	2,587	802	884	372	10,228	13,915
NEW ENGLAND	5,298	5,258	14	24	54	50	33	3,227	4,336
Maine	94	76	-	2	8	2	1	-	-
N.H.	152	89	-	-	10	2	4	113	60
Vt.	53	54	6	4	5	5	2	14	31
Mass.	2,445	2,180	8	13	13	16	18	653	1,081
R.I.	662	519	-	5	9	8	1	436	414
Conn.	1,892	2,340	-	-	9	17	7	2,011	2,750
MID. ATLANTIC	30,926	31,134	1,313	581	159	241	57	5,182	7,352
Upstate N.Y.	6,778	5,710	51	33	54	72	25	2,871	3,173
N.Y. City	10,061	9,325	-	-	16	39	8	2	167
N.J.	5,321	5,954	1,214	511	7	20	10	927	2,323
Pa.	8,766	10,145	48	37	82	110	14	1,382	1,689
E.N. CENTRAL	46,030	57,559	148	195	216	230	50	505	739
Ohio	10,140	15,392	8	10	103	93	13	100	55
Ind.	5,132	5,046	1	-	19	30	8	20	22
Ill.	13,370	16,964	13	19	-	28	1	-	33
Mich.	13,787	14,469	126	166	63	42	21	1	23
Wis.	3,601	5,688	-	-	31	37	7	384	606
W.N. CENTRAL	12,410	14,428	566	468	45	53	15	335	280
Minn.	1,846	2,566	9	5	9	7	-	279	187
Iowa	997	1,014	-	1	7	13	2	29	29
Mo.	6,584	7,100	545	451	19	23	8	22	45
N. Dak.	33	59	-	-	1	-	-	-	1
S. Dak.	228	251	-	-	3	2	-	-	-
Nebr.	710	1,211	3	4	5	4	1	3	3
Kans.	2,012	2,227	9	7	1	4	4	2	15
S. ATLANTIC	66,427	75,220	94	92	168	161	61	731	980
Del.	1,212	1,392	-	2	11	8	-	49	167
Md.	4,938	7,944	15	12	31	57	11	468	574
D.C.	2,187	2,091	-	3	7	4	-	10	5
Va.	8,638	8,368	-	3	20	31	11	110	130
W. Va.	536	529	9	14	N	N	5	11	26
N.C.	13,705	14,870	18	14	7	13	4	35	42
S.C.	6,143	6,980	6	2	10	4	5	5	7
Ga.	12,541	14,473	-	3	9	6	11	-	-
Fla.	16,527	18,573	46	39	73	38	14	43	29
E.S. CENTRAL	25,342	29,697	169	385	49	30	19	51	47
Ky.	2,873	2,839	8	31	11	17	5	22	11
Tenn.	7,894	9,500	57	80	24	9	8	20	28
Ala.	8,308	9,894	4	9	12	3	6	8	5
Miss.	6,267	7,464	100	265	2	1	-	1	3
W.S. CENTRAL	41,069	44,851	171	623	5	21	17	79	74
Ark.	3,593	3,174	4	8	-	-	1	-	5
La.	9,667	11,053	83	369	2	7	-	1	7
Okla.	3,789	3,306	3	8	3	2	2	-	-
Tex.	24,020	27,318	81	238	-	12	14	78	62
MOUNTAIN	8,177	8,528	58	63	46	33	30	11	10
Mont.	86	38	1	4	-	1	-	-	-
Idaho	61	69	2	3	3	5	1	6	2
Wyo.	65	40	6	2	1	-	1	1	3
Colo.	2,373	2,614	18	12	13	11	7	1	-
N. Mex.	799	885	11	13	2	1	7	-	-
Ariz.	3,150	3,456	9	17	18	7	6	-	-
Utah	119	172	3	-	5	8	2	1	2
Nev.	1,524	1,254	8	12	4	-	6	2	3
PACIFIC	22,534	20,623	110	156	60	65	90	107	97
Wash.	2,426	1,835	19	28	8	15	7	8	7
Oreg.	923	756	12	25	N	N	8	7	9
Calif.	18,365	17,377	79	101	48	49	69	90	79
Alaska	344	280	-	-	-	-	-	2	2
Hawaii	476	375	-	2	4	1	6	N	N
Guam	-	44	-	3	-	-	-	-	-
P.R.	461	412	1	1	2	1	-	N	N
V.I.	6	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	-	U	U
C.N.M.I.	10	U	-	U	-	U	-	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 are provisional and cumulative (year-to-date). Incidence data for reporting year 2000 are finalized and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending October 20, 2001, and October 21, 2000 (42nd Week)*

Reporting Area	Malaria		Rabies, Animal		Salmonellosis†			
					NETSS		PHLIS	
	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000
UNITED STATES	928	1,198	5,487	5,813	29,419	31,840	24,208	27,066
NEW ENGLAND	63	64	611	678	2,030	1,877	1,946	1,905
Maine	4	6	58	109	158	108	137	88
N.H.	2	1	20	19	151	119	137	124
Vt.	1	2	56	52	69	99	63	95
Mass.	26	30	220	224	1,132	1,086	1,043	1,080
R.I.	7	8	56	49	113	117	150	131
Conn.	23	17	201	225	407	348	416	387
MID. ATLANTIC	238	320	1,025	1,068	3,436	4,155	3,212	4,439
Upstate N.Y.	57	61	664	682	1,014	1,009	1,043	1,097
N.Y. City	122	183	24	11	827	1,024	1,091	1,107
N.J.	25	42	163	162	651	994	657	862
Pa.	34	34	174	213	944	1,128	421	1,373
E.N. CENTRAL	92	121	119	145	3,967	4,406	3,627	2,972
Ohio	22	16	42	48	1,129	1,189	1,061	1,206
Ind.	16	5	3	-	448	523	399	524
Ill.	1	59	24	22	1,026	1,306	1,049	101
Mich.	35	28	44	64	678	745	689	806
Wis.	18	13	6	11	686	643	429	335
W.N. CENTRAL	30	47	289	477	1,828	1,999	2,023	2,184
Minn.	6	13	42	73	487	454	609	587
Iowa	6	2	71	69	291	305	277	295
Mo.	11	15	38	49	515	593	763	741
N. Dak.	-	2	33	106	53	48	73	68
S. Dak.	-	1	25	85	139	83	111	93
Nebr.	2	8	4	2	125	192	-	132
Kans.	5	6	76	93	218	324	190	268
S. ATLANTIC	235	269	1,874	1,989	7,120	6,510	4,873	5,006
Del.	2	4	30	42	79	101	87	114
Md.	100	89	279	349	685	667	750	589
D.C.	13	15	-	-	72	52	U	U
Va.	44	47	389	473	1,132	829	747	795
W. Va.	1	3	121	101	113	136	121	125
N.C.	13	31	496	480	1,055	910	905	955
S.C.	6	2	99	142	681	628	595	478
Ga.	12	19	294	268	1,236	1,165	1,210	1,482
Fla.	44	59	166	134	2,067	2,022	458	468
E.S. CENTRAL	31	42	184	175	2,135	1,974	1,600	1,534
Ky.	12	17	29	19	319	321	192	223
Tenn.	11	11	96	90	526	514	663	687
Ala.	6	13	57	65	597	550	474	512
Miss.	2	1	2	1	693	589	271	112
W.S. CENTRAL	11	67	876	763	3,163	4,097	2,068	2,494
Ark.	3	3	20	20	754	605	92	492
La.	4	11	-	3	313	717	566	596
Okla.	3	8	57	51	397	326	292	251
Tex.	1	45	799	689	1,699	2,449	1,118	1,155
MOUNTAIN	46	41	216	241	1,778	2,288	1,451	2,144
Mont.	2	1	31	60	60	79	-	-
Idaho	3	3	28	9	116	103	4	95
Wyo.	-	-	20	50	50	55	43	47
Colo.	19	20	-	-	495	609	484	591
N. Mex.	3	-	14	19	243	199	205	182
Ariz.	8	7	108	85	512	585	517	630
Utah	3	5	14	10	179	420	175	419
Nev.	8	5	1	8	123	238	23	180
PACIFIC	182	227	293	277	3,962	4,534	3,408	4,388
Wash.	9	24	-	-	429	474	491	566
Oreg.	10	35	3	7	202	253	271	311
Calif.	153	158	253	244	2,989	3,555	2,335	3,272
Alaska	1	-	37	26	34	52	28	33
Hawaii	9	10	-	-	308	200	283	206
Guam	-	2	-	-	-	22	U	U
P.R.	3	5	73	65	455	556	U	U
V.I.	-	-	-	-	-	-	U	U
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	11	U	U	U

N: Not notifiable. U: Unavailable. -: No reported cases.

* Incidence data for reporting year 2001 are provisional and cumulative (year-to-date). Incidence data for reporting year 2000 are finalized and cumulative (year-to-date).

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

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending October 20, 2001, and October 21, 2000 (42nd Week)*

Reporting Area	Shigellosis† NETSS Cum. 2001	Shigellosis† NETSS Cum. 2000	Shigellosis† PHLIS Cum. 2001	Shigellosis† PHLIS Cum. 2000	Syphilis (Primary & Secondary) Cum. 2001	Syphilis (Primary & Secondary) Cum. 2000	Tuberculosis Cum. 2001	Tuberculosis Cum. 2000
UNITED STATES	14,325	18,128	6,689	10,403	4,639	4,937	9,543	11,364
NEW ENGLAND	218	344	239	331	49	70	334	337
Maine	6	10	2	11	-	1	8	16
N.H.	6	6	3	8	1	1	13	16
Vt.	7	4	5	-	2	-	4	4
Mass.	171	244	164	223	27	49	193	194
R.I.	17	24	23	26	9	4	29	27
Conn.	11	56	42	63	10	15	87	80
MID. ATLANTIC	1,076	2,188	669	1,408	420	230	1,783	1,809
Upstate N.Y.	424	618	101	184	24	9	280	241
N.Y. City	286	859	319	587	220	96	869	974
N.J.	185	466	184	400	115	59	396	430
Pa.	181	245	65	237	61	66	238	164
E.N. CENTRAL	3,578	3,557	1,585	1,038	768	1,001	1,040	1,140
Ohio	2,491	311	1,047	253	68	64	191	235
Ind.	184	1,335	34	139	135	293	83	112
Ill.	395	1,036	288	61	229	348	500	534
Mich.	262	587	192	536	316	254	203	187
Wis.	246	288	24	49	20	42	63	72
W.N. CENTRAL	1,486	2,021	1,102	1,730	74	58	363	411
Minn.	360	668	384	747	26	15	176	128
Iowa	335	437	276	304	4	10	34	33
Mo.	276	592	174	418	21	26	109	151
N. Dak.	20	16	27	49	-	-	3	2
S. Dak.	372	7	206	4	-	-	12	14
Nebr.	63	106	-	98	5	2	29	19
Kans.	60	195	35	110	18	5	-	64
S. ATLANTIC	1,986	2,446	639	1,004	1,628	1,639	1,919	2,269
Del.	14	20	10	20	9	8	15	14
Md.	128	172	78	97	191	248	176	199
D.C.	50	67	U	U	43	34	51	24
Va.	286	375	124	313	90	111	194	215
W. Va.	8	4	8	3	3	3	26	24
N.C.	290	298	143	238	374	405	274	276
S.C.	223	111	112	81	197	185	153	223
Ga.	250	209	130	157	299	314	365	500
Fla.	737	1,190	34	95	422	331	665	794
E.S. CENTRAL	1,297	925	480	481	511	730	652	767
Ky.	599	380	236	85	39	67	90	98
Tenn.	83	305	85	341	263	437	237	295
Ala.	184	63	130	49	97	104	220	251
Miss.	431	177	29	6	112	122	105	123
W.S. CENTRAL	1,899	2,827	1,098	896	582	680	750	1,666
Ark.	485	170	155	50	28	84	123	157
La.	121	236	137	145	134	182	-	146
Okla.	56	99	17	38	58	100	115	126
Tex.	1,237	2,322	789	663	362	314	512	1,237
MOUNTAIN	793	966	564	711	197	192	379	417
Mont.	4	7	-	-	-	-	6	14
Idaho	33	43	-	25	1	1	8	7
Wyo.	3	5	1	3	1	1	3	2
Colo.	204	209	213	172	35	8	90	69
N. Mex.	109	123	72	96	18	15	24	36
Ariz.	326	397	224	276	126	161	166	165
Utah	49	70	46	73	8	1	30	41
Nev.	65	112	8	66	8	5	52	83
PACIFIC	1,992	2,854	313	2,804	410	337	2,323	2,548
Wash.	171	395	167	364	41	53	193	195
Oreg.	72	151	91	98	13	11	84	81
Calif.	1,686	2,270	-	2,310	346	272	1,887	2,074
Alaska	6	7	6	3	-	-	40	88
Hawaii	57	31	49	29	10	1	119	110
Guam	-	34	U	U	-	3	-	47
P.R.	8	29	U	U	172	127	76	119
V.I.	-	-	U	U	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	4	U	U	U	4	U	23	U

N: Not notifiable. U: Unavailable. -: No reported cases.

* Incidence data for reporting year 2001 are provisional and cumulative (year-to-date). Incidence data for reporting year 2000 are finalized and cumulative (year-to-date).

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

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending October 20, 2001, and October 21, 2000 (42nd Week)*

Reporting Area	*H. influenzae*, Invasive		Hepatitis (Viral), By Type				Measles (Rubeola)					
			A		B		Indigenous		Imported†		Total	
	Cum. 2001§	Cum. 2000	Cum. 2001	Cum. 2000	Cum. 2001	Cum. 2000	2001	Cum. 2001	2001	Cum. 2001	Cum. 2001	Cum. 2000
UNITED STATES	1,037	1,008	8,271	10,682	5,226	5,673	-	49	-	42	91	71
NEW ENGLAND	73	83	510	319	82	93	-	4	-	1	5	6
Maine	2	1	10	17	5	5	-	-	-	-	-	-
N.H.	4	12	16	18	14	15	-	-	-	-	-	3
Vt.	3	7	12	8	4	6	-	1	-	-	1	3
Mass.	35	36	222	120	3	13	-	2	-	1	3	-
R.I.	3	4	46	22	25	18	-	-	-	-	-	-
Conn.	26	23	204	134	31	36	-	1	-	-	1	-
MID. ATLANTIC	153	188	773	1,250	838	949	-	4	-	11	15	21
Upstate N.Y.	58	79	207	207	114	107	-	1	-	4	5	10
N.Y. City	37	50	227	425	338	461	-	2	-	1	3	10
N.J.	38	35	159	241	169	149	-	-	-	1	1	-
Pa.	20	24	180	377	217	232	-	1	-	5	6	1
E.N. CENTRAL	140	151	918	1,384	724	593	-	-	-	10	10	7
Ohio	57	45	190	223	89	93	-	-	-	3	3	2
Ind.	43	26	92	87	42	41	-	-	-	4	4	-
Ill.	10	51	304	603	124	104	-	-	-	3	3	3
Mich.	8	9	278	399	469	320	-	-	-	-	-	2
Wis.	22	20	54	72	-	35	-	-	-	-	-	-
W.N. CENTRAL	54	61	342	587	166	244	-	4	-	-	4	1
Minn.	32	32	34	163	20	34	-	2	-	-	2	1
Iowa	-	-	30	61	21	27	-	-	-	-	-	-
Mo.	13	19	91	238	88	121	-	2	-	-	2	-
N. Dak.	7	2	3	3	1	2	-	-	-	-	-	-
S. Dak.	-	1	2	1	1	1	-	-	-	-	-	-
Nebr.	1	3	30	28	19	37	U	-	U	-	-	-
Kans.	1	4	152	93	16	22	-	-	-	-	-	-
S. ATLANTIC	304	231	1,940	1,184	1,158	1,004	-	4	-	1	5	3
Del.	-	-	-	13	-	13	-	-	-	-	-	-
Md.	73	70	227	173	118	107	-	2	-	1	3	-
D.C.	-	-	43	23	11	27	-	-	-	-	-	-
Va.	25	35	110	129	145	136	-	1	-	-	1	2
W. Va.	14	8	18	52	20	11	-	-	-	-	-	-
N.C.	42	20	173	121	173	205	-	-	-	-	-	-
S.C.	5	7	65	69	26	13	-	-	-	-	-	-
Ga.	72	55	752	223	305	162	-	1	-	-	1	-
Fla.	73	36	552	381	360	330	-	-	-	-	-	1
E.S. CENTRAL	63	39	323	347	361	376	-	2	-	-	2	-
Ky.	2	12	114	44	41	64	-	2	-	-	2	-
Tenn.	33	16	125	121	193	176	-	-	-	-	-	-
Ala.	26	9	68	46	73	48	-	-	-	-	-	-
Miss.	2	2	16	136	54	88	-	-	-	-	-	-
W.S. CENTRAL	37	61	1,136	2,009	536	944	-	1	-	-	1	-
Ark.	-	2	61	121	80	85	-	-	-	-	-	-
La.	3	16	56	72	39	132	-	-	-	-	-	-
Okla.	34	41	105	218	70	130	-	-	-	-	-	-
Tex.	-	2	914	1,598	347	597	-	1	-	-	1	-
MOUNTAIN	122	100	630	738	419	425	-	1	-	1	2	12
Mont.	-	1	10	7	3	6	-	-	-	-	-	-
Idaho	1	4	53	22	10	6	-	-	-	1	1	-
Wyo.	-	1	7	4	2	3	-	-	-	-	-	-
Colo.	31	25	78	172	91	76	-	-	-	-	-	2
N. Mex.	20	20	31	62	124	117	-	-	-	-	-	-
Ariz.	54	35	342	369	128	156	-	1	-	-	1	-
Utah	6	10	60	46	23	20	U	-	U	-	-	3
Nev.	10	4	49	56	38	41	-	-	-	-	-	7
PACIFIC	91	94	1,699	2,864	942	1,045	-	29	-	18	47	21
Wash.	3	5	120	241	116	87	-	13	-	2	15	3
Oreg.	17	28	67	148	86	93	-	4	-	-	4	-
Calif.	43	33	1,495	2,451	715	844	-	10	-	11	21	14
Alaska	6	6	14	11	9	10	-	-	-	-	-	1
Hawaii	22	22	3	13	16	11	-	2	-	5	7	3
Guam	-	1	-	1	-	9	U	-	U	-	-	-
P.R.	1	4	91	217	136	233	U	-	U	-	-	2
V.I.	-	-	-	-	-	-	U	-	U	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	28	U	U	-	U	-	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.

* Incidence data for reporting year 2001 are provisional and cumulative (year-to-date). Incidence data for reporting year 2000 are finalized and cumulative (year-to-date).

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

§ Of 219 cases among children aged <5 years, serotype was reported for 113, and of those, 20 were type b.

TABLE III. (Cont'd) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending October 20, 2001, and October 21, 2000 (42nd Week)*

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000	2001	Cum. 2001	Cum. 2000
UNITED STATES	1,737	1,802	5	179	273	91	3,784	5,495	-	20	146
NEW ENGLAND	95	112	-	-	4	-	333	1,399	-	-	12
Maine	4	8	-	-	-	-	21	41	-	-	-
N.H.	12	11	-	-	-	-	26	102	-	-	2
Vt.	5	3	-	-	-	-	27	205	-	-	-
Mass.	49	64	-	-	1	-	237	995	-	-	8
R.I.	4	9	-	-	1	-	5	16	-	-	1
Conn.	21	17	-	-	2	-	17	40	-	-	1
MID. ATLANTIC	181	205	-	19	22	3	253	558	-	5	9
Upstate N.Y.	51	63	-	3	9	3	127	275	-	1	1
N.Y. City	33	38	-	9	6	-	38	73	-	3	8
N.J.	43	39	-	3	3	-	18	30	-	1	-
Pa.	54	65	-	4	4	-	70	180	-	-	-
E.N. CENTRAL	231	322	1	17	20	29	569	620	-	3	1
Ohio	75	77	-	1	7	-	257	263	-	-	-
Ind.	36	36	1	2	1	7	74	86	-	1	-
Ill.	22	76	-	11	6	3	62	90	-	2	1
Mich.	56	95	-	3	5	19	115	76	-	-	-
Wis.	42	38	-	-	1	-	61	105	-	-	-
W.N. CENTRAL	124	126	-	7	17	35	241	460	-	3	1
Minn.	18	18	-	3	-	35	105	282	-	-	-
Iowa	25	28	-	-	7	-	19	46	-	1	-
Mo.	44	60	-	-	4	-	86	65	-	1	-
N. Dak.	6	2	-	-	1	-	4	6	-	-	-
S. Dak.	5	5	-	-	-	-	4	4	-	-	-
Nebr.	12	6	U	1	2	U	4	21	U	-	1
Kans.	14	7	-	3	3	-	19	36	-	1	-
S. ATLANTIC	326	254	1	34	39	12	204	399	-	6	94
Del.	4	1	-	-	-	-	-	8	-	1	1
Md.	37	26	-	6	9	-	31	104	-	-	-
D.C.	-	-	-	-	-	-	1	3	-	-	-
Va.	35	37	-	6	9	-	36	90	-	-	-
W. Va.	12	12	-	-	-	-	2	1	-	-	-
N.C.	60	34	1	5	5	5	63	77	-	-	64
S.C.	31	20	-	5	10	-	31	26	-	2	27
Ga.	40	42	-	7	2	7	14	35	-	-	-
Fla.	107	82	-	5	4	-	26	55	-	3	2
E.S. CENTRAL	117	119	-	6	5	-	124	99	-	-	6
Ky.	19	25	-	1	1	-	31	50	-	-	1
Tenn.	55	48	-	1	2	-	55	29	-	-	1
Ala.	30	33	-	-	2	-	34	17	-	-	4
Miss.	13	13	-	4	-	-	4	3	-	-	-
W.S. CENTRAL	193	188	-	10	29	7	374	316	-	1	8
Ark.	18	11	-	1	1	1	25	33	-	-	1
La.	58	42	-	2	5	-	2	19	-	-	1
Okla.	26	25	-	-	-	-	11	21	-	-	-
Tex.	91	110	-	7	23	6	336	243	-	1	6
MOUNTAIN	83	76	-	11	18	3	1,138	643	-	1	2
Mont.	4	4	-	1	1	-	31	35	-	-	-
Idaho	7	7	-	1	-	-	168	57	-	-	-
Wyo.	5	-	-	1	1	-	1	4	-	-	-
Colo.	29	26	-	1	-	3	227	373	-	1	1
N. Mex.	12	7	-	2	1	-	129	81	-	-	-
Ariz.	13	22	-	1	4	-	498	63	-	-	1
Utah	7	7	U	1	5	U	71	18	U	-	-
Nev.	6	3	-	3	6	-	13	12	-	-	-
PACIFIC	387	400	3	75	119	2	548	1,001	-	1	13
Wash.	58	46	-	1	9	2	132	337	-	-	7
Oreg.	34	55	N	N	N	-	44	101	-	-	-
Calif.	281	283	3	37	82	-	334	507	-	-	6
Alaska	2	8	-	1	8	-	7	19	-	-	-
Hawaii	12	8	-	36	20	-	31	37	-	1	-
Guam	-	-	U	-	14	U	-	3	U	-	1
P.R.	4	9	U	-	-	U	2	7	U	-	-
V.I.	-	-	U	-	-	U	-	-	U	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	U	-	U	U	-	U	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.

* Incidence data for reporting year 2001 are provisional and cumulative (year-to-date). Incidence data for reporting year 2000 are finalized and cumulative (year-to-date).

TABLE IV. Deaths in 122 U.S. cities,* week ending October 20, 2001 (42nd Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	416	311	63	29	9	4	43
Boston, Mass.	U	U	U	U	U	U	U
Bridgeport, Conn.	35	27	5	3	-	-	3
Cambridge, Mass.	14	11	3	-	-	-	2
Fall River, Mass.	28	27	1	-	-	-	3
Hartford, Conn.	59	38	16	3	2	-	2
Lowell, Mass.	25	21	2	2	-	-	3
Lynn, Mass.	18	13	3	1	1	-	1
New Bedford, Mass.	16	12	3	1	-	-	2
New Haven, Conn.	44	36	2	1	2	3	7
Providence, R.I.	59	40	8	8	2	1	-
Somerville, Mass.	5	2	3	-	-	-	-
Springfield, Mass.	36	25	7	3	1	-	3
Waterbury, Conn.	16	11	3	2	-	-	1
Worcester, Mass.	61	48	7	5	1	-	16
MID. ATLANTIC	2,560	1,547	513	415	51	33	122
Albany, N.Y.	45	36	7	-	1	1	5
Allentown, Pa.	15	13	1	1	-	-	-
Buffalo, N.Y.	96	75	15	4	-	2	9
Camden, N.J.	24	17	5	1	1	-	4
Elizabeth, N.J.	18	10	6	2	-	-	-
Erie, Pa.§	29	22	5	1	1	-	-
Jersey City, N.J.	42	34	7	1	-	-	-
New York City, N.Y.	1,568	819	340	361	31	16	51
Newark, N.J.	U	U	U	U	U	U	U
Paterson, N.J.	22	14	5	-	1	2	2
Philadelphia, Pa.	272	176	55	26	10	5	19
Pittsburgh, Pa.§	42	32	9	1	-	-	5
Reading, Pa.	24	21	2	1	-	-	1
Rochester, N.Y.	143	105	27	6	1	4	7
Schenectady, N.Y.	27	21	3	2	1	-	3
Scranton, Pa.§	34	26	6	2	-	-	5
Syracuse, N.Y.	102	82	11	4	2	3	8
Trenton, N.J.	39	29	7	1	2	-	3
Utica, N.Y.	18	15	2	1	-	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	1,662	1,156	324	115	33	34	124
Akron, Ohio	55	38	13	2	-	2	3
Canton, Ohio	37	28	6	2	-	1	6
Chicago, Ill.	U	U	U	U	U	U	U
Cincinnati, Ohio	42	27	11	2	1	1	4
Cleveland, Ohio	138	85	32	13	3	5	7
Columbus, Ohio	173	121	36	12	4	-	6
Dayton, Ohio	133	107	16	7	1	2	8
Detroit, Mich.	188	107	50	23	4	4	14
Evansville, Ind.	43	30	7	5	-	1	4
Fort Wayne, Ind.	66	51	6	5	2	2	8
Gary, Ind.	18	7	7	2	2	-	-
Grand Rapids, Mich.	64	45	7	6	1	5	4
Indianapolis, Ind.	175	125	28	14	5	3	12
Lansing, Mich.	58	43	12	3	-	-	9
Milwaukee, Wis.	99	79	15	5	-	-	14
Peoria, Ill.	61	39	16	1	4	1	7
Rockford, Ill.	67	45	15	4	2	1	8
South Bend, Ind.	54	36	11	4	1	2	5
Toledo, Ohio	115	89	18	3	2	3	3
Youngstown, Ohio	76	54	18	2	1	1	2
W.N. CENTRAL	734	503	147	52	11	17	51
Des Moines, Iowa	36	26	8	2	-	-	5
Duluth, Minn.	30	22	6	2	-	-	-
Kansas City, Kans.	21	12	6	3	-	-	2
Kansas City, Mo.	96	51	27	12	2	4	4
Lincoln, Nebr.	41	29	8	3	-	1	4
Minneapolis, Minn.	205	148	35	10	3	5	18
Omaha, Nebr.	76	62	8	3	1	2	9
St. Louis, Mo.	109	57	33	11	4	4	2
St. Paul, Minn.	83	64	12	5	1	1	3
Wichita, Kans.	37	32	4	1	-	-	4
S. ATLANTIC	1,240	818	272	88	35	26	78
Atlanta, Ga.	144	84	41	13	4	2	5
Baltimore, Md.	164	99	37	16	9	2	16
Charlotte, N.C.	88	57	17	8	4	2	10
Jacksonville, Fla.	167	107	41	16	2	1	9
Miami, Fla.	148	97	35	10	2	4	14
Norfolk, Va.	76	53	13	4	3	3	1
Richmond, Va.	58	38	11	2	3	4	8
Savannah, Ga.	55	40	13	1	-	1	-
St. Petersburg, Fla.	54	43	10	1	-	-	6
Tampa, Fla.	170	122	31	9	5	3	9
Washington, D.C.	103	65	23	8	3	4	-
Wilmington, Del.	13	13	-	-	-	-	-
E.S. CENTRAL	825	553	165	68	21	14	48
Birmingham, Ala.	186	132	28	20	4	2	9
Chattanooga, Tenn.	56	42	11	1	2	-	4
Knoxville, Tenn.	75	46	18	5	2	-	7
Lexington, Ky.	66	40	14	6	1	5	4
Memphis, Tenn.	149	95	39	8	4	3	8
Mobile, Ala.	72	53	11	4	3	1	2
Montgomery, Ala.	50	30	14	3	3	-	2
Nashville, Tenn.	171	115	30	21	2	3	12
W.S. CENTRAL	1,369	895	305	117	30	22	94
Austin, Tex.	74	52	11	7	2	2	6
Baton Rouge, La.	83	48	20	11	3	1	-
Corpus Christi, Tex.	67	47	17	-	1	2	4
Dallas, Tex.	206	125	55	19	5	2	15
El Paso, Tex.	69	48	18	2	1	-	3
Ft. Worth, Tex.	113	73	25	10	3	2	7
Houston, Tex.	358	220	81	41	9	7	25
Little Rock, Ark.	U	U	U	U	U	U	U
New Orleans, La.	U	U	U	U	U	U	U
San Antonio, Tex.	196	136	38	16	5	1	11
Shreveport, La.	78	56	17	3	1	1	12
Tulsa, Okla.	125	90	23	8	-	4	11
MOUNTAIN	1,043	689	207	87	34	26	65
Albuquerque, N.M.	120	86	21	7	6	-	3
Boise, Idaho	35	21	8	2	2	2	1
Colo. Springs, Colo.	50	32	8	3	2	5	3
Denver, Colo.	103	67	22	9	2	3	3
Las Vegas, Nev.	246	154	58	25	4	5	17
Ogden, Utah	31	23	4	4	-	-	7
Phoenix, Ariz.	177	108	35	19	12	3	13
Pueblo, Colo.	31	23	7	-	1	-	1
Salt Lake City, Utah	111	75	18	11	3	4	6
Tucson, Ariz.	139	100	26	7	2	4	11
PACIFIC	1,607	1,138	281	114	38	36	108
Berkeley, Calif.	19	13	3	-	-	3	3
Fresno, Calif.	148	98	26	11	8	5	6
Glendale, Calif.	10	6	3	-	1	-	2
Honolulu, Hawaii	83	64	8	6	4	1	6
Long Beach, Calif.	68	50	9	8	-	1	7
Los Angeles, Calif.	310	227	54	18	6	5	14
Pasadena, Calif.	25	16	3	2	-	4	2
Portland, Oreg.	129	88	26	11	-	4	6
Sacramento, Calif.	221	156	42	13	6	4	22
San Diego, Calif.	136	90	26	13	3	4	9
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	176	124	36	10	4	2	14
Santa Cruz, Calif.	31	24	5	2	-	-	3
Seattle, Wash.	104	66	22	11	3	2	3
Spokane, Wash.	48	40	5	1	1	1	4
Tacoma, Wash.	99	76	13	8	2	-	7
TOTAL	11,456¶	7,610	2,277	1,085	262	212	733

U: Unavailable. -:No reported cases.

* Mortality data in this table are reported voluntarily 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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