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HIV Transmission Among Black College Student and Non-Student Men Who Have Sex With Men — North Carolina, 2003

In the United States, young black men who have sex with men (MSM) and reside in urban settings have high rates of infection with human immunodeficiency virus (HIV), with incidence and prevalence as high as 14% and 32%, respectively (1-4). Few epidemiologic and behavioral studies have been conducted in this population, and even fewer data are available for black MSM from non-urban areas of the southern United States. In November 2002, the North Carolina Department of Health (NCDOH) identified two cases of acute HIV infection among non-Hispanic black male college students. A retrospective review of all men aged 18-30 years with HIV diagnosed during January 2000-May 2003 indicated an increase in HIV case reports in male college students, from two cases in 2000 to 56 during January 2001–May 2003 (5). Of these 56, a total of 49 (88%) were black, and nearly all were MSM, including some men who had sex with both men and women. In August 2003, NCDOH invited CDC to assist with an epidemiologic investigation of young HIVpositive black MSM in North Carolina. This report summarizes the results of that investigation, which indicated that black MSM college students and non-students in North Carolina had high rates of HIV risk behaviors, underscoring the need for enhanced HIV-prevention programs in these populations.

NCDOH surveillance data from 1998–2002 for newly reported HIV infections and North Carolina census data were reviewed (6); age- and race-specific HIV rates were calculated. A case-control study was conducted to identify behavioral risk factors for HIV infection in young black MSM. Cases were defined as those occurring in HIV-positive college students who had HIV diagnosed during 2001–2003, were black MSM aged 18–30 years, and were North Carolina residents. Two groups of HIV-negative controls were enrolled in the study (i.e., college students and non-students), all of whom also were black MSM aged 18–30 years who lived in North Carolina.

Face-to-face interviews were conducted to obtain epidemiologic and behavioral information. Sexual behaviors were reported for the 12-month period preceding either the date of diagnosis for HIV-positive college students or the date of interview for HIV-negative college students and non-students.

To complement quantitative information collected by questionnaire, all participants were asked to share insights about why high-risk sexual behavior was occurring among young black MSM. In addition, three discussion groups were convened with approximately 60 black male and female students from 11 colleges in North Carolina to discern perceived barriers to sexual risk reduction and to elicit suggestions for prevention programs targeting college students.

During 1998–2002, rates of newly reported HIV infection in North Carolina were higher in black men in all age groups compared with white men overall (Figure). Among black men aged 18–24 years, a statistically significant increase was observed during this period, from 65 per 100,000 population in 1998 to 92 in 2002 (p<0.01).

Of the 49 HIV-positive black male college students who had been identified previously by the NCDOH HIV surveillance system, 17 (35%) were recruited for the study; 24 could

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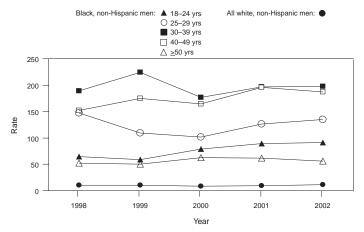
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Notifiable Disease Morbidity and 122 Cities Mortality Data

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FIGURE. Rates* of newly reported human immunodeficiency virus infection among non-Hispanic black men, by year and age group, and among all non-Hispanic white men, by year — North Carolina, 1998–2002



* Per 100,000 population.

no longer be located or did not respond to inquiries, seven refused participation, and one was deceased. One case was identified in an HIV-positive college student during control recruitment activities. Overall, 19 HIV-negative college students and 15 HIV-negative non-students were recruited during HIV pre- or post-test counseling activities at local health departments (n = five), gay nightclubs (n = 26), and the North Carolina Pride Festival (n = three).

In general, characteristics of the HIV-positive and HIV-negative college student groups were similar to one another but different from the HIV-negative non-student group (Table). Other than lifetime history of gonorrhea, no statistically significant differences were seen among the three groups. College students were younger than non-students, and the mean number of lifetime sex partners was lower for college students than non-students. The mean number of partners and the frequency of unprotected receptive anal intercourse with casual and steady partners were similar for the three groups. The majority of both steady and casual sexual partners for all three groups were black and aged 18–30 years. Approximately 20% of study participants had a female sex partner during the preceding 12 months.

Nearly one third of both HIV-positive and HIV-negative college students met sex partners on college campuses, but the majority of both of these groups met their sex partners at gay nightclubs or over the Internet. Fewer college students than non-students identified as gay or disclosed their sexual identity to everyone or to most people. Nearly 70% of study participants previously had tested for HIV, and 70% believed they were unlikely to have been infected with HIV at the time of their most recent HIV test. Two HIV-positive students, six

TABLE. Selected characteristics of young non-Hispanic black college student and non-student men who have sex with men — North Carolina, 1998–2002

	col stud	oositive llege dents = 18)	college students (n = 19)	HIV-negative non- students (n = 15)
Median age (yrs)		1.2	21.2	24.7
Mean no. (median; range) of lifetime sex partners	20 (20); 3–60)		43 (12; 4–250)
No. and % with steady				
male partners during	16	(00)	47 (90)	10 (07)
preceding 12 months Mean no. of partners		(89) I.8	17 (89) 1.5	13 (87) 1.7
% black, non-Hispanic		00	94	69
% 18–22 years old	į	56	65	39
% 23-30 years old	(62	41	54
% unprotected receptive anal intercourse	į	56	47	38
No. and % with casual				
male partners during		(55)	40 (00)	40 (22)
preceding 12 months		(55)	12 (63)	12 (80)
Mean no. of partners % black, non-Hispanic		3.8 00	3.9 92	6.3 92
% 18–22 years old		80	92 75	50
% 23–30 years old		70	75	83
% unprotected receptive				
anal intercourse No. and % with recent	4	40	33	25
female partner during				
preceding 12 months	4	(22)	3 (16)	3 (20)
% unprotected vaginal intercourse	į	50	33	100
No. and % with lifetime history of sexually transmitted disease	7 /	(00)	4 (5)	4 (07)
Gonorrhea [†]	,	(39)	1 (5)	4 (27)
Syphilis Chlamydia	1 1	(6) (6)	1 (5) 1 (5)	0 (0) 0 (0)
No. and % by partner	'	(0)	1 (3)	0 (0)
meeting venues				
College campus		(33)	6 (32)	0 (0)
Gay night clubs Internet		(33) (33)	10 (53) 7 (37)	9 (60) 5 (33)
Telephone chat lines		22)	1 (5)	3 (20)
No. and % by sexual identity§	. (,—–)	. (0)	3 (23)
Straight	2 (11)	0 (0)	0 (0)
Bisexual		39)	8 (42)	3 (20)
Gay		44)	11 (58)	12 (80)
No. and % by disclosure of sexual identity				
No one/Some people	13 (72)	12 (63)	5 (33)
Half of people		11)	1 (5)	1 (7)
Everyone/Most people	3 ((17)	6 (32)	9 (60)
No. and % by HIV				
risk perception Likely	0	(0)	2 (11)	0 (0)
Equally likely/Unlikely		(0)	5 (26)	5 (33)
Unlikely	13 (,	12 (63)	10 (67)
No. and % with	`	•		, ,
previous HIV test	12 ((67)	13 (68)	11 (73)

^{*} Human immunodeficiency virus.

HIV-negative students, and four non-students reported having had recent sex partners in multiple states outside of North Carolina, including Delaware, Florida, Georgia, New York, South Carolina, Tennessee, Texas, Virginia, and the District of Columbia.

Both MSM study participants and college student discussion group participants provided similar explanations for why MSM specifically, and young black people in general, continue to engage in high-risk sexual behavior. The most common reasons were 1) lack of sustained prevention messages targeting young blacks, 2) feeling personally disconnected from the reality that they might contract HIV, and 3) believing that physical characteristics and appearance can inform one about their partner's HIV status.

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Editorial Note: The findings in this report highlight the need for enhanced HIV-prevention programs among young black MSM and are consistent with previous studies documenting elevated HIV risk behaviors and infection in this population (3,4). The high-risk sexual behaviors noted among the limited number of black MSM college students and non-students in this investigation could be related to the increase in HIV rates observed for black men aged 18–24 years in North Carolina surveillance data and might provide insights into the broader HIV transmission patterns among young, black MSM in general.

Although one third of black MSM college students reported meeting partners on campus, the majority reported meeting partners either at nightclubs or over the Internet, suggesting that prevention activities need to be targeted both on and off campus. Moreover, because many young black MSM might not regularly visit traditional testing sites such as health departments for sexually transmitted disease (STD)- and HIV-related health concerns, alternative venues such as nightclubs and the Internet should be considered as nontraditional testing and/or prevention sites for this population.

Despite the high rates of high-risk behaviors, STDs, and previous HIV testing in this population, the majority of study participants did not perceive themselves at risk for HIV infection at the time of their most recent HIV tests. This finding suggests that current HIV-prevention messages are not effectively reaching young black MSM and that education about HIV risk needs to be more effectively communicated at the time of HIV testing. Moreover, because risk perception might

[†]HIV-negative college students compared with HIV-positive college

students by Fisher exact test (p<0.05).

One HIV-positive college student had no preferred sexual identity.

be diminished by receipt of a negative HIV test, reports of high-risk sexual behavior must be addressed with appropriate prevention messages at the time of HIV pre- and post-test counseling. In addition, the results of this study support the integration of HIV-prevention activities into routine STD evaluation and care.

Because a substantial proportion of the college students either did not identify as gay or were not open about their sexual identity, prevention messages that focus on sexual risk reduction rather than gay identity should be developed for young black MSM. In addition, because nearly 20% of study participants also reported having recent female sex partners, HIV risk—reduction messages should be developed and communicated to young women as well. The information collected in the discussion groups with black college students highlights the value of soliciting community input before developing on- and off-campus HIV-prevention messages for this population.

Because study participants reported having recent sex contacts in multiple states, the frequency of high-risk behaviors in this population might not be limited to North Carolina. Further surveillance activities are needed to define the extent of high-risk behaviors among young black MSM in other geographic areas so appropriate on- and off-campus HIV-prevention activities can be designed.

The findings in this report are subject to at least four limitations. First, the sexual behaviors of enrolled participants might have been different from those persons not enrolled. Second, recall bias for high-risk behaviors might have occurred, especially for students with HIV diagnosed in 2001. Third, a selection bias might have been introduced because HIV-positive participants were identified through case reports, whereas HIV-negative participants were recruited primarily at nightclubs. Finally, the small sample size limits the ability to make certain inferences regarding differences in sexual behaviors.

This investigation demonstrates that expansion of multiple HIV-prevention activities for young black MSM is needed. Because this is the first investigation conducted in young black MSM outside of large urban settings, further studies should explore whether similar phenomena are occurring in other states, particularly in the southern United States. In response to these findings, CDC and NCDOH are collaborating to adapt a scientifically based preventive intervention for the black MSM population in North Carolina (7). In addition, CDC recently announced the availability of funding to implement rapid—HIV-testing demonstration projects in settings that include college campuses. State and local health departments as well as community-based organizations should consider

engaging in similar HIV-prevention efforts and in the development of effective preventive interventions for young black MSM.

References

- CDC. HIV/AIDS among racial/ethnic minority men who have sex with men—United States, 1989–1998. MMWR 2000;49:4–11.
- Blair JM, Fleming PL, Karon JM. Trends in AIDS incidence and survival among racial/ethnic minority men who have sex with men, United States, 1990–1999. J AIDS 2002;31:339–47.
- Valleroy LA, MacKellar DA, Karon JM, et al. HIV prevalence and associated risks in young men who have sex with men. JAMA 2000;284:198–204.
- CDC. HIV incidence among young men who have sex with men seven U.S. cities, 1994–2000. MMWR 2001;50:440–4.
- Hightow L, Leone P, MacDonald P, et al. Are colleges high transmission areas in the rural southeast? Insights from acute HIV surveillance [Abstract WO-L305]. Presented at National HIV Prevention Conference, Atlanta, Georgia, July 27–30, 2003.
- Ingram DD, Parker JD, Schenker N, et al. United States Census 2000 population with bridged race categories. Vital Health Stat 2003;2(135).
- 7. Kelly J, St. Lawrence J, Diaz Y, et al. HIV risk behavior reduction following intervention with key opinion leaders of population: an experimental analysis. Am J Public Health 1991;81:168–71.

Tuberculosis Transmission in Multiple Correctional Facilities — Kansas, 2002–2003

Tuberculosis (TB) is a substantial health concern in correctional facilities; inmates and employees are at high risk, and TB outbreaks can lead to transmission in surrounding communities (1–3). The Advisory Council for the Elimination of Tuberculosis (ACET) recommends that all correctional facilities have a written TB infection-control plan (TBICP) (4). In September 2002, after diagnosis of smear-positive pulmonary TB in a prison inmate, the Kansas TB Control Program, with assistance from CDC, initiated a 6-month contact investigation. This report summarizes the results of that investigation, which determined that, while symptomatic for TB, the inmate had resided in three different jails and a state prison, placing hundreds of employees and other inmates at risk for TB infection. The circumstances of this case underscore the need for effective TBICPs to be implemented by trained employees in jails and prisons and for establishment of mechanisms to facilitate information-sharing between correctional facilities and local and state health departments.

Case Report

In October 2001, a U.S.-born man aged 36 years who was living temporarily in a California homeless shelter had a productive cough with hemoptysis. In December 2001, a physician at the shelter examined the man, suspected TB or

a·ware: adj

(ə-'wâr) 1 : marked by comprehension, cognizance, and perception; see

also MMWR.



neoplasia, and recommended a chest radiograph; however, the man did not follow the recommendation.

In January 2002, the man returned to his residence in Kansas. Shortly after arrival, he turned himself in to police on an outstanding arrest warrant. He was held in jail A for 3 days before being transferred to jail B. While in jail B, he received a medical evaluation, and bronchial asthma was diagnosed. A tuberculin skin test (TST) was not administered, nor was a chest radiograph obtained. After 7 weeks in jail B, the man was released in March 2002.

In June 2002, the man was convicted of a crime and again placed in jail A for 3 days. He was then transferred to jail C, a large overflow facility, pending sentencing. During the 6 weeks the man was in jail C, 125 transferred inmates passed through the facility.

In August 2002, after being held for a total of 14 weeks in three jails, none of which had a TBICP or had provided TB screening for inmates or employees, the man was sentenced and transported to a Kansas state prison. During routine processing of entering inmates, he answered affirmatively to six of seven questions regarding TB symptoms. The state prison had a TBICP in place, and a medical evaluation was indicated on the basis of the man's answers; however, he was not referred for medical evaluation. Following the prison's TBICP procedure for entering prisoners who are to be serially TB screened, medical staff performed a two-step TST, which was read as 0 mm induration on both occasions. The new inmate was then placed among the general prison population.

Medical staff at the state prison did not see the inmate again until 4 weeks later, when he was scheduled to receive chronic care for asthma. At this medical examination, he received a chest radiograph that showed a cavitary lesion of the right lower lobe. Despite having TB symptoms, he was placed back with the general prison population and scheduled for a computerized tomography (CT) scan 2 weeks later to rule out neoplasia. After the CT scan indicated cavitary lesions consistent with TB, the man, now the TB index patient, was placed in airborne infection isolation (AII), and sputum samples were collected. The AII room was newly constructed and in working condition, according to maintenance and monitoring documentation. However, because the recommended N95 respirators (5) were not available, prison health staff used surgical masks when in the AII room with the index patient. The first laboratory result from the index patient of 4+ smearpositive Mycobacterium tuberculosis was reported in late September, 6 weeks after he had arrived at the prison facility.

Contact Investigation

A contact investigation conducted in Kansas and Missouri identified 318 of an estimated 800 possible contacts of the index patient during the infectious period, defined as the time from symptom onset to diagnosis, October 2001–September 2002. Of these contacts, two (0.6%) received a diagnosis of TB disease. These two patients had been cellmates of the index patient, one in jail A and the other in jail C. Tests of samples from these patients and the index patient determined they had *M. tuberculosis* isolates with a matching 10-band restriction fragment-length polymorphism pattern. The three isolates also had matching spacer oligonucleotide typing and mycobacterial interspersed repetitive unit patterns.

Of 318 contacts identified, 256 were tested, and 47 (19.1%) of those received diagnoses of latent TB infection (LTBI); 60 contacts could not be located or refused follow-up. Two (4.1%) had a previously documented positive TST. Sixty (23.4%) contacts had a previously documented negative TST, and six (10.0%) of these had a positive TST during investigation screening. Among 196 contacts with no previously documented TST, 41 (20.9%) had a positive TST during the investigation screening (Table). The majority of infections among jail and prison employees occurred in jail B (TST reaction rate: eight of 36 [22.2%]) and jail C (TST reaction rate: five of 32 [15.6%]), compared with jail A (TST reaction rate: one of 14 [7.1%]) and the state prison (TST reaction rate: one of 58 [1.7%]). All three jails had an open-cell design with multiple inmates per cell; the state prison had singleoccupancy cells with solid walls and doors.

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TABLE. Tuberculin skin test (TST) reaction rate*, by contact group and TST history — Kansas, 2002–2003

Contact group	Total tested [†]	Contacts with positive TST	TST reaction rate (%)
Household			
Previously negative TST	1	1	100
No previous TST	5	3	60
Inmates			
Previously negative TST	21	3	14.3
No previous TST	81	25	30.9
Jail/Prison employees			
Previously negative TST	38	2	5.3
No previous TST	102	13	12.7
Other contacts			
Previously negative TST	0	0	0
No previous TST	8	0	0
Total contacts			
Previously negative TST	60	6	10.0
No previous TST	196	41	20.9

 $^{^{\}star}_{1}$ TST reaction rate = contacts with positive TST/total contacts. $^{\dagger}_{1}$ N = 256.

Editorial Note: During 1992–2002, the TB rate in Kansas increased from 2.2 per 100,000 population to 3.3, the largest increase among all 50 states and the District of Columbia; in the majority of states, the TB rate declined (6). Although the contribution of correctional facilities to the TB burden in Kansas is unknown, a study in Tennessee reported that 43% of persons identified with TB in the city of Memphis had previous contact with a single urban jail and no other identified common exposure (3).

As a result of the investigation findings described in this report, the Kansas TB Control Program worked with prisons, jails, and local health departments to provide guidance for developing or improving TBICPs and providing TB education and baseline TSTs for all correctional employees. This guidance has improved communication among all agencies to coordinate the return to the community of inmates receiving TB medications.

Outbreak investigators were limited in their ability to determine the extent of TB transmission directly attributable to the index patient because of lack of previously documented TST results and the large number of contacts who could not be located or refused follow-up.

Compared with the general population, inmates have higher TB prevalence, associated with their higher prevalence of human immunodeficiency virus, increased illicit substance use, and lower socioeconomic status [SES]. The risk for TB is known to increase with lower SES, with crowded living conditions having the greatest impact (7). Overcrowding enhances the likelihood of infectious droplet nuclei transmission and has been correlated with TST conversion in the Maryland state correctional system (8). Cell design and overcrowding might have been factors in TB transmission in these three Kansas jails. However, the impact of overcrowding and ventilation could not be assessed directly in this investigation because facility surveys were not conducted.

Early identification and treatment of persons with TB disease remains the most effective means of preventing disease transmission. With the assistance of state and local health departments, correctional facilities should develop formal TBICPs (Box). Health departments should provide assistance to correctional facilities in developing TBICPs and conducting contact investigations, thereby controlling transmission within facilities and the surrounding communities. Employee education and continuous monitoring and evaluation of these policies should be part of every TBICP. In addition, correctional facilities should maintain a tracking system for inmate TB screening and treatment and establish a mechanism for sharing this information with local and state health departments and other correctional facilities (4).

BOX. Recommendations for a tuberculosis (TB) infection-control plan (TBICP) in a correctional facility

Goal of TBICP in correctional facilities

• Prevent disease transmission by enabling early identification and prompt initiation of treatment of TB disease.

Screen inmates

- Identify inmates with TB disease and latent TB infection (LTBI) promptly.
- Follow guidelines of the Advisory Council for the Elimination of Tuberculosis for screening based on correctional facility type.
- Report cases of suspected or confirmed TB disease to the health department.

Isolate persons with suspected or confirmed TB disease

- Use an airborne-infection isolation (AII) room within the facility or transfer the patient to a local hospital where an AII room is available.
- Instruct persons who enter the AII room to wear N95 respirators.
- Implement a thorough contact investigation promptly.

Treat persons with TB disease and LTBI

- Provide appropriate diagnostic, treatment, and laboratory services.
- Follow American Thoracic Society treatment guidelines.
- Perform directly observed therapy with all TB medications.
- Follow up with inmates released before completing treatment.

Assess TB prevention activities

- Monitor and evaluate screening and containment efforts.
- Collect and analyze data to monitor whether these activities are being implemented successfully.

Engineering controls

- Ensure that all engineering controls are properly installed and maintained.
- Consider supplementing ventilation systems in temporary holding and communal areas with high-efficiency particulate air filtration and ultraviolet germicidal irradiation.

Employee protection program

- Obtain medical history, provide physical examinations, and perform tuberculin skin testing for all new employees at the time of hiring.
- Implement a formal respiratory protection program, including employee education and fit testing for respirator use.

Sources: CDC. Prevention and control of tuberculosis in correctional facilities: recommendations of the Advisory Council for the Elimination of Tuberculosis, MMWR 1996;45(No. RR-8).

Blumberg HM, Burman WJ, Chaisson RE, et al. American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America: treatment of tuberculosis. Am J Respir Crit Care Med 2003;167:603–62.

CDC. Guidelines for environmental infection control in health-care facilities: recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC). MMWR 2003;52(No. RR-10).

Acknowledgments

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References

- Brock NN, Reeves M, LaMarre M, DeVoe B. Tuberculosis case detection in a state prison system. Public Health Rep 1998;113:359–64.
- Cone JE, Harrison R, Katz E, Chan J, Dewsnup D, Osorio AM. Tuberculosis transmission to prison employees during an outbreak among prisoners at two California prisons. J Healthcare Safety 2000;4:75–9.
- 3. Jones TF, Craig AS, Valway SE, Woodley CL, Schaffner W. Transmission of tuberculosis in a jail. Ann Intern Med 1999;131:557–63.
- CDC. Prevention and control of tuberculosis in correctional facilities: recommendations of the Advisory Council for the Elimination of Tuberculosis. MMWR 1996;45(No. RR-8).
- CDC. Guidelines for environmental infection control in health-care facilities: recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC). MMWR 2003;52(No. RR-10).
- CDC. Trends in tuberculosis morbidity—United States, 1992–2002. MMWR 2003;52:217–22.
- Cantwell MF, McKenna MT, McCray E, Onorato IM. Tuberculosis and race/ethnicity in the United States: impact of socioeconomic status. Am J Respir Crit Care Med 1998;157:1016–20.
- 8. MacIntyre CR, Kendig N, Kummer L, Birago S, Graham NM. Impact of tuberculosis control measures and crowding on the incidence of tuberculosis infection in Maryland prisons. Clin Infect Dis 1997;24:1060–7.

Possible Dialysis-Related West Nile Virus Transmission — Georgia, 2003

In October 2003, the Georgia Division of Public Health (DPH) was notified of two patients from the same county with confirmed West Nile virus (WNV) disease who had received hemodialysis on the same day and on the same dialysis machine. The two dialysis patients (patients A and C) had the only confirmed cases of human WNV disease reported in their county in 2003. Review of the dialysis center's records indicated that another patient (patient B) had received dialysis on the same machine between these two patients on the same day. This report summarizes results of the epidemiologic investigation, which suggested that WNV might have been transmitted at the dialysis center. Hemodialysis centers should adhere strictly to established infection-control procedures to avoid WNV transmission through dialysis.

Patient A. The first patient, who received dialysis on the machine (machine A) in late August, was a man aged 77 years with a history of hypertension and end-stage renal disease (ESRD). Eight days after dialysis, patient A was hospitalized with a 48-hour history of fever, chills, confusion, and anorexia. Blood cultures were negative. Serologic testing of serum

revealed IgM and IgG antibodies to WNV by enzyme-linked immunosorbent assay (ELISA) and a higher neutralizing antibody titer to WNV (1:1,280) than to St. Louis encephalitis virus (SLEV) (1:320). Patient A had not received a blood transfusion <30 days before symptom onset. After a 9-day hospitalization, he was afebrile at discharge.

Patient B. The second patient, who received dialysis on machine A between patients A and C, was a woman aged 71 years with a history of type 2 diabetes, ESRD, and hypertension. Dialysis center and hospital records and patient interview revealed no symptoms of illness during late August or early September, and patient B had not received a blood transfusion in July, August, or September. In addition, she had never received a flavivirus vaccination (which might elicit crossreactive antibody to serologic tests for WNV) or traveled outside the United States. A serum sample obtained 42 days after dialysis was uninterpretable for IgM antibody to WNV (i.e., because of high background reactivity), negative for IgM to SLEV, and positive for IgG to both WNV and SLEV by ELISA; the neutralizing antibody titers were 1:160 to WNV and 1:10 to SLEV. A second specimen taken from this patient 84 days after dialysis was negative for IgM antibody to WNV and SLEV by ELISA, positive for IgG to both WNV and SLEV by ELISA, and had neutralizing antibody titers of 1:320 to WNV and 1:20 to SLEV.

Patient C. The third and last patient to receive dialysis on machine A on the same day in late August was a man aged 60 years with a history of type 2 diabetes, hypertension, alcoholism, recent onset of ESRD, and prostate cancer. Nineteen days after his dialysis procedure, patient C was admitted to a local hospital with fever, chills, altered mental status, and cachexia. After admission, he had seizures and was intubated and placed on a ventilator. Analysis of cerebrospinal fluid (CSF) indicated a mild pleocytosis (67 white blood cells [62% polynuclear cells, 38% mononuclear cells] and five red blood cells/mm³) and an elevated protein level (122 mg/dL). Computerized tomography scans of the patient's brain on the second and tenth days of hospitalization revealed bilateral lacunar infarcts, white matter changes, and cortical and subcortical atrophy. Serologic tests of serum were positive for IgM and IgG antibodies to WNV by ELISA. The neutralizing antibody titer was higher to WNV (1:1,280) than to SLEV (1:20). Patient C had not received a blood transfusion <30 days before symptom onset. Twenty days after admission, he had a high fever and respiratory failure and died.

DPH and the local health department investigated practices and procedures at the dialysis center. No breakdowns in disinfection procedures for the dialysis machine or dialyzers

and no breaches in infection-control practices were revealed. All bloodline attachments to the dialysis machine were disposable and discarded after each dialysis session. Patient blood samples were withdrawn from the bloodline for testing on a monthly basis, unless otherwise directed by the physician. Medications were bottled in multiple-dose units but were drawn by using a needle in a separate medication room and injected into the patients' bloodlines with a syringe. Both the needle and syringe were then discarded. No single medication was administered to all three patients on the day of their dialyses. However, patients A and B had received a common medication, and patients A and C also had received a common medication, although most likely from separate vials. Blood samples from three other patients who had received dialysis on machine A on the previous day and on the following day were all negative for IgM and IgG antibodies to WNV.

Patients A and C resided in the same neighborhood, 0.2 miles apart, and patient B resided approximately 1 mile away from this neighborhood. An environmental assessment around the homes of patients A and C and in the neighborhood where they resided revealed a high potential for mosquito exposure, including lack of window screens, barrels of stagnant water, and wooded areas between homes. Mosquito surveillance of the area in mid-October indicated that Culex quinquefasciatus mosquitoes were the most abundant mosquito species; however, no WNV-positive mosquitoes were identified, as would be expected from mosquito collections obtained so late in the transmission season. Pesticide spraying to kill adult mosquitoes in the neighborhood was conducted two days after surveillance. Three neighbors of patients A and C submitted blood samples for testing for WNV; all samples were negative for IgM and IgG antibodies to WNV.

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Editorial Note: This cluster of hemodialysis patients with WNV infections suggests possible transmission of WNV in the dialysis center. However, the epidemiologic investigation was inconclusive in determining a source of infection. One or more of these dialysis patients might have acquired WNV infection at the dialysis center through an undetected breach in infection-control procedures, or outside the dialysis center from the bite of an infected mosquito. Mosquito bites are the

most common transmission route for WNV; however, WNV transmissions through blood transfusion, organ transplantation, in utero, and possibly through breast milk have been described (1–4). Unlike patients A and C, patient B was not confirmed with WNV disease, although laboratory results for patient B were consistent with previous WNV infection (with typical cross-reactivity to the closely related SLEV). The lack of detectable IgM and stable neutralization titers precluded very recent infection of patient B but was consistent with infection as recent as early September.

In the United States, transmission of bloodborne pathogens such as hepatitis B and hepatitis C viruses has occurred in health-care settings. The majority of the outbreaks of hepatitis viruses among hemodialysis patients were caused by cross-contamination of supplies, equipment, or medication and lapses in infection-control practices (5). Human immunodeficiency virus transmission to hemodialysis patients outside of the United States has been associated with reuse of access needles, dialyzers, and improper injection practices (6–8).

Patients on dialysis are highly susceptible to infections because they often are immunocompromised and are exposed routinely to invasive techniques and devices (9,10). The possibility that WNV might be transmitted during dialysis underscores the necessity for dialysis facilities to strictly adhere to proper infection-control procedures at all times (9).

References

- Pealer LN, Marfin AA, Petersen LR, et al. Transmission of West Nile virus through blood transfusion in the United States, 2002. N Engl J Med 2003;349:1236–45.
- Iwamoto M, Jernigan DB, Guasch A, et al. Transmission of West Nile virus from an organ donor to four transplant recipients. N Engl J Med 2003;348:2196–203.
- 3. CDC. Possible West Nile virus transmission to an infant through breast-feeding—Michigan, 2002. MMWR 2002;51:877–8.
- CDC. Intrauterine West Nile virus infection—New York, 2002. MMWR 2002;51:1135–6
- Alter MJ, Tokars JI, Arduino MJ, Favero MS. Control of infections associated with hemodialysis. In: Mayhall CG, ed. Hospital Epidemiology and Infection Control, 3rd edition, Philadelphia, Pennsylvania: Lippincott Williams & Wilkins, 2004.
- El Sayed NM, Gomatos PJ, Beck-Sague CM, et al. Epidemic transmission of human immunodeficiency virus in renal dialysis centers in Egypt. J Infect Dis 2000;181:91–7.
- 7. Velandia M, Fridkin SK, Cardenas V, et al. Transmission of HIV in dialysis centre. Lancet 1995;345:1417–22.
- 8. Dyer E. Argentinian doctors accused of spreading AIDS. BMJ 1993;307:584.
- CDC. Recommendations for preventing transmission of infections among chronic hemodialysis patients. MMWR 2001;50(No. RR-5).
- 10. Horl WH. Neutrophil function and infections in uremia. Am J Kidney Dis 1999;33:xlv–xlviii.

Brief Report

Illness Associated with Drift of Chloropicrin Soil Fumigant into a Residential Area — Kern County, California, 2003

Chloropicrin is the fourth most commonly used soil fumigant in California. Exposure to chloropicrin causes eye and respiratory tract irritation, vomiting, and diarrhea (1). This report describes an investigation by the California Department of Pesticide Regulation (CDPR) and the Kern County Agriculture Commissioner (KCAC) into illnesses associated with the offsite drift of chloropicrin in Kern County. A total of 165 persons experienced symptoms consistent with chloropicrin exposure. The findings underscore health risks associated with fumigants and the usefulness of procedures adopted in California to ensure both prompt identification of exposure events and timely notification of the affected public.

On October 3, 2003, an agricultural pest control service began applying 100% chloropicrin at a concentration of 80 pounds/acre to 34 acres of fallow land in Kern County. Chloropicrin was injected 17–18 inches into the soil; a weighted board was used to compact the soil, treating 18 acres. That evening, residents living one quarter mile west of the application site experienced irritant symptoms. The Kern County Fire Department (KCFD) was contacted to investigate; however, darkness, distance from the treated field, and absence of chloropicrin odor prevented firefighters from identifying the source of the irritation. Records from a weather station approximately 7 miles southeast of the application site indicated low wind speeds and stable atmospheric conditions but also that the wind direction had changed that evening, blowing from the field toward the residential dwellings.

The next day, chloropicrin was applied to the remaining 16 acres. A 60-foot, chloropicrin-free buffer was maintained around the perimeter of the field because workers noted a persistent odor when they arrived. Residents one quarter mile west and south of the field complained about irritant symptoms that evening. Residents notified KCFD; several responding firefighters experienced eye irritation. The wind had changed again that evening and begun blowing from the field toward the residential dwellings. Suspecting a pesticide release, KCFD notified KCAC. The field was recompacted, and the odor ceased.

On October 6, KCAC notified CPDR about the incident. KCAC and CDPR conducted in-person interviews at 35 households located approximately one quarter mile west and

south of the field and at a day care center; additional interviews were conducted on October 15. The 35 households and day care center had a total of 172 persons present during the exposure period. Representatives from each household and the day care center were interviewed by using a standardized questionnaire (2). In addition, five workers involved with the fumigation were questioned informally, and KCFD records were reviewed to identify affected firefighters.

The investigation determined that 165 persons reported symptoms compatible with illness caused by chloropicrin; median age of the persons was 16 years (range: 3 months–63 years). Nearly all (99%) had irritant symptoms (e.g., eye or upper respiratory) (Table); nine (5%) received medical evaluations. Seven had persistent respiratory symptoms when interviewed 11 days after the event. Follow-up medical care was limited because most of the affected persons lacked health insurance.

Exposures were retrospectively estimated by using a standard air dispersion model (3). Estimated 1-hour average chloropicrin air concentrations in areas south and west of the field ranged up to 0.20 parts per million (ppm). Peak-to-mean extrapolations indicated that peak concentrations might have exceeded 1 ppm. The Occupational Safety and Health Administration permissible exposure limit and the National Institute for Occupational Safety and Health (NIOSH)-recommended exposure limit is 0.10 ppm averaged during 8 hours. However, extrapolations from animal studies suggest 0.0044 ppm as a safe level for a 1-hour environmental exposure (4).

According to KCAC, a possible cause of the offsite drift was failure to contain the chloropicrin adequately after application. After the incident, KCAC imposed new restrictions on chloropicrin applications, including prohibition of applications within one quarter mile of an occupied structure and mandatory use of a heavy-duty tarp or water seal for applications within one half mile of such structures.

The findings in this report are subject to at least two limitations. First, this report is limited by an imprecise estimate of reported cases. Some affected persons likely were not interviewed, leading to an underestimation. Conversely, false-positive cases cannot be excluded because some self-reported symptoms might not have been related to exposure. Second, environmental measurements were not conducted to confirm chloropicrin exposure.

Adequate chloropicrin containment measures are needed to prevent similar community outbreaks. In addition, when outbreaks occur, measures are needed to prevent the community distress that arises when government authorities do not provide timely information regarding the emergency response and follow-up investigation findings. In 2003, CDPR developed procedures to respond to incidents involving offsite drift of pesticides (2). This approach might be useful in other jurisdictions where offsite pesticide drift can occur.

TABLE. Number* and percentage of persons with acute chloropicrin-related illness, by selected characteristics — Kern County, California, October 2003

Characteristic	No.	(%)
Age group (yrs)		
0–5	22	(13)
6–9	17	(10)
10–14	23	(14)
15–19	15	(9)
20–29	18	(11)
30–39	21	(13)
40–64	26	(16)
Unknown	23	(14)
Sex		
Female	77	(47)
Male	88	(53)
Severity [†]		, ,
Low	163	(99)
Moderate	2	(1)
Date of exposure		()
October 3	9	(6)
October 4	135	(82)
Both dates	22	(14)
Occupation		(/
Firefighter	9	(6)
Applicator/Grower	4	(2)
Day care worker	2	(1)
Nonoccupational (community resident)	150	(91)
Symptoms		(= -)
Eye	164	(99)
Lacrimation	125	(82)
Pain/Burning	89	(54)
Skin (pruritis or rash)	3	(2)
Gastrointestinal	77	(47)
Vomiting	37	(22)
Nausea	35	(21)
Abdominal pain	10	(6)
Diarrhea	5	(3)
Hematochezia	1	(1)
Respiratory	85	(51)
Cough	53	(32)
Dyspnea	27	(16)
Upper respiratory irritation	22	(13)
Chest pain	8	(5)
Asthma exacerbation	6	(4)
Neurologic	40	(24)
Headache	39	(25)
Dizziness	1	`(1)
Fatigue	1	(1)

^{*} N = 165

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Using CDCs severity index for use in state-based surveillance of acute pesticide-related illness and injury. Available at http://www.cdc.gov/niosh/topics/pesticides/pdfs/pest-sevindexv6.pdf.

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References

- Prentiss AM. Chemicals in War: A Treatise on Chemical Warfare. New York, New York: McGraw-Hill, 1937.
- California Department of Pesticide Regulation. Responding to nonoccupational pesticide use-related exposure episodes. Sacramento, California: California Department of Pesticide Regulation, 2003. Available at http://www.cdpr.ca.gov/docs/enfcmpli/penfltrs/penf2003/ 2003044.htm.
- 3. U.S. Environmental Protection Agency. User's Guide for the Industrial Source Complex (ISC3) Dispersion Models for Use in the Multimedia, Multipathway and Multireceptor Risk Assessment (3MRA) for HWIRR99, Volume II: Description of Model Algorithms. Washington, DC: U.S. Environmental Protection Agency, 1999. Available at http://www.epa.gov/epaoswer/hazwaste/id/hwirwste/pdf/risk/reports/s0528.pdf.
- 4. Alexeeff GV, Budroe JD, Collins JF, et al. Air Toxics Hot Spots Program Risk Assessment Guidelines. Part I. The Determination of Acute Reference Exposure Levels for Airborne Toxicants. Sacramento, California: California Office of Environmental Health Hazard Assessment, 1999. Available at http://oehha.ca.gov/air/pdf/acuterel.pdf.

West Nile Virus Activity — United States, August 11–17, 2004

During August 11–17, a total of 194 cases of human West Nile virus (WNV) illness were reported from 17 states (Alabama, Arizona, California, Colorado, Florida, Illinois, Louisiana, Maryland, Minnesota, Mississippi, Missouri, New Mexico, Ohio, South Dakota, Texas, Utah, and Virginia).

During 2004, a total of 27 states have reported 689 cases of human WNV illness to CDC through ArboNET (Table, Figure). Of these, 291 (42%) cases were reported from Arizona. A total of 386 (56%) of the 689 cases occurred in males; the median age of patients was 50 years (range: 1 month–99 years). Illness onset ranged from April 23 to August 12; a total of 20 cases were fatal.

A total of 55 presumptive West Nile viremic blood donors (PVDs) have been reported to ArboNET in 2004. Of these, 33 (60%) were reported from Arizona, eight from California, three each from Florida, New Mexico, and South Dakota, two from Colorado, and one each from Iowa, Missouri, and Wisconsin. Of the 55 PVDs, two persons aged 66 and 69 years subsequently had neuroinvasive illness, and 11 persons (median age: 55 years [range: 22–73 years]) subsequently had West Nile fever.

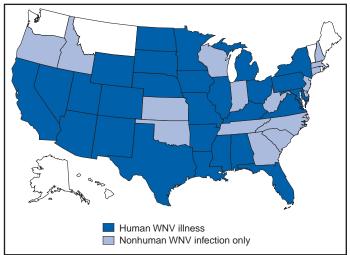
In addition, during 2004, a total of 2,530 dead corvids and 441 other dead birds with WNV infection have been

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	4	0	0	4	0
Arizona	112	31	148	291	3
Arkansas	1	2	0	3	0
California	64	74	24	162	5
Colorado	18	104	0	122	1
Florida	9	3	0	12	1
Illinois	3	2	1	6	0
Iowa	1	2	0	3	1
Kentucky	0	1	0	1	0
Louisiana	10	0	0	10	5
Maryland	0	1	0	1	0
Michigan	1	0	0	1	0
Minnesota	4	3	0	7	0
Mississippi	3	1	1	5	1
Missouri	2	1	1	4	0
Nebraska	0	1	0	1	0
Nevada	2	0	0	2	0
New Mexico	5	12	1	18	0
New York	2	1	0	3	0
North Dakota	a 0	2	0	2	0
Ohio	2	0	0	2	1
Pennsylvania	a 1	0	0	1	0
South Dakota	a 2	13	0	15	0
Texas	4	1	0	5	2
Utah	2	2	0	4	0
Virginia	0	0	1	1	0
Wyoming	1	2	0	3	0
Total	253	259	177	689	20

- * As of August 17, 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 cases of human WNV illness reported to CDC through 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, August 17, 2004.

reported from 36 states. WNV infections have been reported in horses from 25 states (Alabama, Arizona, Arkansas, California, Colorado, Florida, Idaho, Illinois, Iowa, Kentucky, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Mexico, North Carolina, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Virginia, Wisconsin, and Wyoming) and in one dog each from Nevada and New Mexico. Two unidentified animal species with WNV infection were reported from Illinois and Nevada. WNV seroconversions have been reported in 393 sentinel chicken flocks from eight states (Arizona, California, Delaware, Florida, Louisiana, Nebraska, Nevada, and Utah) and in two wild hatchling birds from Ohio. Three seropositive sentinel horses were reported from Puerto Rico. A total of 3,109 WNV-positive mosquito pools have been reported from 30 states (Arizona, Arkansas, California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, and Wisconsin).

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

Release of BRFSS Maps

BRFSS Maps is an Internet-based Behavioral Risk Factor Surveillance System (BRFSS) mapping application that allows users to map BRFSS data interactively for state and metropolitan/micropolitan statistical areas (MMSAs). Beginning with 2002 BRFSS data, visitors to the BRFSS website can create, save, and print state- and MMSA-level maps for health-related risk factors.

State and MMSA data can be displayed independently or in combination to facilitate exploratory data analysis of within-state variations and identification of regional patterns. Users can choose from several advanced map display options, including number of data classes (i.e., two through six), data classification method (e.g., equal interval, natural breaks, quantile, and standard deviations), state and MMSA labels, and the option to display or hide outlying states and territories. Standard map interface tools are provided to enhance users' abilities to interact with the map, including zoom (via tool or drop-down menus), pan, rate retrieval, map recenter, and map reset. Users also can download state and MMSA BRFSS data in a geographic information system (GIS) shapefile format for in-depth analysis in a GIS.

BRFSS Maps is available at http://apps.nccd.cdc.gov/gisbrfss. Plans are under way for additional enhancements to BRFSS Maps, including advanced exploratory data analysis tools, data histograms, multivariate mapping capabilities, county-level mapping, and trend maps. Additional information is available at e-mail jgh4@cdc.gov.

Notice to Readers

Third Global Conference on the Promotion of Mental Health and Prevention of Mental Health and Behavioral Disorders

The Third Global Conference on the Promotion of Mental Health and Prevention of Mental and Behavioral Disorders will be held in Auckland, New Zealand, September 15–17, 2004. The conference is organized by the World Federation for Mental Health (WFMH), the Clifford Beers Foundation, and the Mental Health Foundation of New Zealand, in collaboration with the Carter Center.

WFMH is an international, nongovernmental organization founded in 1948 with the purpose of advancing, among all persons and nations, the prevention of mental and emotional disorders, advocating the appropriate treatment and care for those with such disorders, and promoting mental health. Planning for the WFMH conferences was initiated in 1997 with support from the Carter Center. The first of the biennial conferences was held in Atlanta, Georgia, in 2000. The 2004 conference will celebrate mental health promotion and prevention around the world and highlight the federation's support of World Mental Health Day, October 10, which has as its theme, "The Relationship Between Physical and Mental Health: Co-Occurring Disorders." Key topics to be covered at the conference are worldwide research, evidence-based programs, implementation of programs, discrimination, policy-making, and training and workforce issues. Additional information is available at http://www.wfmh.org/PandPConference.htm.

Erratum: Vol. 53, No. RR-6

In the MMWR Recommendations and Reports, "Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP)," an error occurred on page 14 in Table 4. The first sentence of the first footnote (*) should read, "A 0.5-mL dose contains 15 mg each of A/Fujian/411/2002 (H3N2)-like, A/New Caledonia/20/99 (H1N1)-like, and B/Shanghai/361/2002-like antigens."

Erratum: Vol. 52, No. RR-12

Incorrect information was contained in Table 6 on page 10 of the *MMWR Recommendations and Reports*, "Incorporating HIV Prevention into the Medical Care of Persons Living with HIV: Recommendations of CDC, the Health Resources and Services Administration, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America." Following is the corrected table:

TABLE 6. Adjusted rate ratios of the risk for transmission of human immunodeficiency virus type 1 (HIV-1) among discordant partners*

Serum viral load of HIV-infected partners (copies/mL) [†]	for transmission partners (adj	1-positive partners to HIV-1-negative usted rate ratio ence interval])
<3,500	Re	ferent
3,500-9,999	5.80	(2.26-17.80)
10,000-49,999	6.91	(2.96-20.15)
≥50,000	11.87	(5.02 - 34.88)
Per log increment viral load	2.45	(1.85-3.26)

^{*} Source: Quinn TC, Wawer MJ, Sewankambo N, et al. Viral load and heterosexual transmission of human immunodeficiency virus type 1. Rakai project study group. N Engl J Med 2000;342:921–9.

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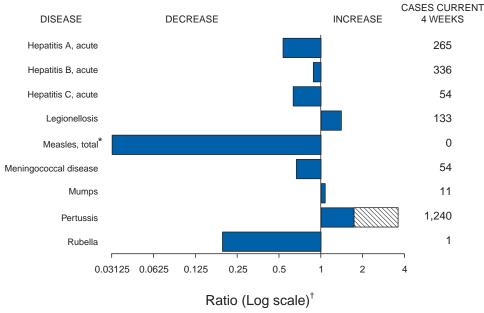
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Patients in this study did not receive antiretroviral medications, and those with low viral loads might have been long-term nonprogressors. Risks might not be equivalent for treated persons with low viral loads. Viral load in the blood might not be predictive of viral load in the genital tract; therefore, risks can vary with genital tract viral load.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals August 14, 2004, with historical data



Beyond historical limits

TABLE I. Summary of provisional cases of selected notifiable diseases, United States, cumulative, week ending August 14, 2004 (32nd Week)*

	Cum. 2004	Cum. 2003		Cum. 2004	Cum. 2003
Anthrax	-	-	Hemolytic uremic syndrome, postdiarrheal†	68	87
Botulism:	-	-	HIV infection, pediatric ^{†¶}	98	135
foodborne	8	8	Measles, total	19**	40 ^{††I}
infant	42	39	Mumps	124	136
other (wound & unspecified)	8	16	Plague	-	1
Brucellosis†	67	60	Poliomyelitis, paralytic	-	-
Chancroid	19	36	Psittacosis†	5	8
Cholera	4	1	Q fever [†]	38	50
Cyclosporiasis†	124	51	Rabies, human	3	1
Diphtheria	-	-	Rubella	17	6
Ehrlichiosis:	-	-	Rubella, congenital syndrome	-	1
human granulocytic (HGE)†	128	154	SARS-associated coronavirus disease†§§	-	8
human monocytic (HME)†	106	116	Smallpox [†] ¶	-	NA
human, other and unspecified	8	25	Staphylococcus aureus:	-	-
Encephalitis/Meningitis:	-	-	Vancomycin-intermediate (VISA)† ¶¶	4	NA
California serogroup viral†§	21	44	Vancomycin-resistant (VRSA)† ¶¶	1	NA
eastern equine†§	1	8	Streptococcal toxic-shock syndrome [†]	66	121
Powassan ^{†§}	-	-	Tetanus	7	7
St. Louis†§	3	12	Toxic-shock syndrome	64	79
western equine ^{† §}	-	-	Trichinosis	5	-
Hansen disease (leprosy)†	52	55	Tularemia [†]	41	43
Hantavirus pulmonary syndrome†	13	17	Yellow fever	-	-

^{-:} No reported cases.

^{*} No measles cases were reported for the current 4-week period yielding a ratio for week 32 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.

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 19 cases reported, 10 were indigenous, and nine were imported from another country.

^{††} Of 40 cases reported, 25 were indigenous, and 15 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 August 14, 2004, and August 9, 2003 (32nd Week)*

(32nd Week)*	All	DS	Chla	mydia [†]	Coccidio	domycosis	Cryptosp	oridiosis		s/Meningitis t Nile§
Reporting area	Cum. 2004 [¶]	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	23,710	26,286	526,048	523,409	3,554	2,082	1,582	1,435	252	864
NEW ENGLAND	775	907	17,989	16,523	-	-,	86	96		2
Maine	10	49	1,213	1,196	N	N	14	8	-	- 1
N.H. /t.	29 13	22 11	890 613	944 621	-	-	16 12	12 18	-	-
Mass.	236	371	8,302	6,540	-	-	29	43	-	1
R.I. Conn.	82 405	68 386	2,035 4,936	1,668 5,554	N	- N	3 12	10 5	-	-
MID. ATLANTIC	5,023	6,201	66,604	64,886	-	-	240	192	3	26
Jpstate N.Y.	625	645	13,810	11,615	N	N	62	49	-	-
N.Y. City N.J.	2,759 923	3,193 1,045	20,165 10,252	21,392 9,784	-	-	51 12	64 10	2	3 3
Pa.	716	1,318	22,377	22,095	N	N	115	69	1	20
E.N. CENTRAL	1,946	2,620	88,118	94,400	9	6	405	401	6	15
Ohio nd.	240 257	463 346	20,998 10,379	25,868 10,390	N N	N N	103 52	53 34	2	8 4
III.	961	1,235	23,014	29,144	-	-	13	52	3	2
Mich.	382	452	23,281	18,574	9	6	93	61	1	1
Nis.	106	124	10,446	10,424	4		144	201	-	150
W.N. CENTRAL Minn.	483 120	490 96	31,659 5,690	30,304 6,598	N N	2 N	223 74	166 61	8 4	159 6
owa	37	54	3,642	3,410	N	N	47	34	-	13
Ио. N. Dak.	211 13	233 3	12,213 952	10,860 962	3 N	1 N	36 9	15 10	2	- 17
S. Dak.	7	7	1,513	1,528	-	-	23	23	2	50
lebr.** (ans.	18 77	33 64	3,145 4,504	2,677 4,269	1 N	1 N	16 18	6 17	-	47 26
S. ATLANTIC	7,289	7,613	102,787	98,096		3	282	186	9	25
Del.	105	146	1,756	1,858	N	N	-	3	-	-
Md. D.C.	808 460	877 724	11,604 1,948	10,012 1,994	-	3	11 8	11 4	-	1
√a.	403	625	13,686	11,395	-	-	30	19	-	3
W. Va. N.C.	33 401	53 782	1,730 17,612	1,551 15,822	N N	N N	3 49	3 19	-	2
S.C.**	428	497	9,921	8,543	-	-	9	3	-	1
Ga. Fla.	1,034 3,617	1,205 2,704	18,609 25,921	21,430 25,491	- N	- N	95 77	69 55	9	3 15
E.S. CENTRAL	1,179	1,143	34,607	34,008	3	1	57	67	7	30
Ky.	130	98	3,502	5,006	N N	Ň	23	15	-	4
Tenn.**	466	517	13,781	12,151	N	N	12	24 24	4	3
Ala. Miss.	295 288	272 256	7,417 9,907	9,010 7,841	3	1	13 9	4	3	11 12
W.S. CENTRAL	2,978	2,691	67,157	65,397	2	-	43	45	15	256
Ark.	130	106	4,844	4,750	1	-	13	5	1	5
∟a. Okla.	606 120	403 137	13,364 7,081	13,221 6,795	1 N	- N	14	2 7	10	41 13
Гех.	2,122	2,045	41,868	40,631	-	-	16	31	4	197
MOUNTAIN	861	963	28,097	30,480	2,293	1,384	96	70	140	351
Иont. daho	5 9	10 16	1,306 1,749	1,345 1,491	N N	N N	29 9	13 15	-	13
Vyo.	8	5	647	595	1	1	2	2	.1	39
Colo. N. Mex.	166 118	213 71	6,497 2,586	7,824 4,571	N 9	N 5	32 4	16 6	18 5	274 22
Ariz.	331	433	10,096	8,880	2,224	1,350	16	3	112	2
Jtah Nev.	44 180	40 175	2,207 3,009	2,275 3,499	19 40	4 24	2 2	9 6	2 2	- 1
PACIFIC	3,176	3,658	89,030	89,315	1,243	686	150	212	64	-
Nash.	215	287	10,594	9,859	1,243 N	N	17	25	-	-
Oreg. Calif.	157 2,717	166 3,130	5,053	4,527	1 2/12	686	20 112	26 161	64	-
Alaska	29	3,130	69,574 2,169	69,320 2,362	1,243 -	-	112	-	-	-
lawaii	58	62	1,640	3,247	-	-	1	-	-	-
Guam	2	5	1 474	408	- N1	- N	- N1	- N1	-	-
P.R. /.I.	401 6	723 22	1,474 143	1,491 234	N -	N -	N -	N -	-	-
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

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

TABLE II. (Continued) Provisional cases of selected notifiable diseases, United States, weeks ending August 14, 2004, and August 9, 2003 (32nd Week)*

(32nd Week)*		Escher	ichia coli, Ente	rohemorrhagio	: (EHEC)	1				
		LSONCI		n positive,	Shiga toxi	n positive,				
		57:H7		non-O157	not sero	` 		rdiasis		orrhea
Reporting area	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	1,209	1,133	121	128	90	80	9,395	10,042	183,293	197,737
NEW ENGLAND	79	73	30	25	18	8	808	746	4,252	4,149
Maine N.H.	5 10	6 11	5	2	-	-	73 18	88 24	147 64	127 69
Vt.	6	6	-	-	1	-	79	56	49	50
Mass. R.I.	39 6	28 1	6 1	7	17 -	8 -	392 62	359 66	1,976 524	1,612 520
Conn.	13	21	18	16	-	-	184	153	1,492	1,771
MID. ATLANTIC Upstate N.Y.	137 64	137 46	21 11	14 6	14 5	16 7	2,097 715	2,072 518	21,238 4,507	24,808 4,503
N.Y. City	26	4	-	-	-	-	605	703	6,453	8,204
N.J. Pa.	18 29	21 66	3 7	2 6	4 5	9	210 567	302 549	3,869 6,409	5,182 6,919
E.N. CENTRAL	238	269	22	19	12	9	1,172	1,799	36,022	41,665
Ohio Ind.	55 34	51 47	8	10 -	11	9	471 -	500	10,513 3,621	13,464 3,925
III.	39	49	-	2	-	-	84	559	9,868	12,806
Mich. Wis.	48 62	42 80	4 10	7	1 -	-	402 215	403 337	9,307 2,713	7,951 3,519
W.N. CENTRAL	267	196	18	19	15	13	1,079	1,021	9,960	10,319
Minn. Iowa	57 76	60 45	8 -	10 -	2	1 -	371 169	385 136	1,883 649	1,726 795
Mo.	50	46	10	2	6	1	270	285	5,043	5,204
N. Dak. S. Dak.	9 18	6 13	-	3 3	5 -	4	18 35	25 24	71 162	48 121
Nebr. Kans.	38 19	11 15	-	1	2	7	83 133	72 94	617 1,535	863 1,562
S. ATLANTIC	92	79	17	30	22	20	1,556	1,509	45,978	48,531
Del.	1	2	N	N	N	N	30	20	557	721
Md. D.C.	20 1	4 1	1 -	2	3	1 -	69 37	66 25	5,044 1,427	4,770 1,508
Va. W. Va.	19 2	22 3	7	5	-	-	258 19	206 24	5,501 560	5,296 523
N.C.	-	-	-	-	13	17	N	N	9,413	9,031
S.C. Ga.	4 17	18	- 5	4	-	-	28 450	68 487	4,675 7,944	4,961 10,576
Fla.	28	29	4	19	6	2	665	613	10,857	11,145
E.S. CENTRAL Ky.	47 17	46 15	1 1	1 1	8 5	5 5	175 N	194 N	14,870 1,513	16,635 2,179
Tenn.	15	19	-	-	3	-	81	89	5,040	4,939
Ala. Miss.	8 7	9 3	-	-	-	-	94	105 -	4,532 3,785	5,582 3,935
W.S. CENTRAL	47	48	2	3	1	4	163	172	25,182	26,963
Ark. La.	9 2	5 3	1	-	-	-	69 19	93 8	2,352 6,056	2,535 7,437
Okla.	12	14	-	-	-	-	75	71	3,013	2,678
Tex.	24	26	1	3	1	4	- 027	- 020	13,761	14,313
MOUNTAIN Mont.	118 11	139 5	9	15 -	-	5 -	837 30	820 44	6,021 39	6,420 70
Idaho Wyo.	26 1	26 2	3 1	10	-	-	98 14	95 11	49 32	42 28
Colo.	34	45	2	3	-	5	296	242	1,600	1,761
N. Mex. Ariz.	5 11	4 19	1 N	2 N	N	- N	43 115	28 142	313 2,290	747 2,392
Utah	21 9	28 10	1 1	-	-	-	178	182	329 1,369	210
Nev. PACIFIC	184	146	1	2	-	-	63 1,508	76 1,709	19,770	1,170 18,247
Wash.	67	40	-	1	-	-	193	169	1,502	1,696
Oreg. Calif.	31 79	22 80	1 -	1 -	-	-	254 973	230 1,210	658 16,858	611 14,912
Alaska Hawaii	1 6	1 3	-	-	-	-	39 49	49 51	351 401	332 696
Guam	N	N	-	_	_	_	-	-	-	42
P.R.	-	1	-	-	-	-	30	145	119	164
V.I. Amer. Samoa	U	U	Ū	U	U	Ū	U	U	49 U	56 U
C.N.M.I.	-	Ū	<u> </u>	Ū		Ū	-	Ū	3	Ū

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 August 14, 2004, and August 9, 2003 (32nd Week)*

(32nd Week)*				Haemophilus	influenzae, inv	/asive			Hen	atitis
	All	ages		Пасторинас		years			→ .	te), by type
		otypes	Serot	ype b		rotype b	Unknown	serotype	_	Α
Poporting area	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
Reporting area UNITED STATES	1,189	1,201	10	17	64	77	114	133	3,323	3,851
NEW ENGLAND	104	86	1	2	5	5	3	3	575	180
Maine N.H.	9 13	2 10	-	- 1	2	-	-	1	10 11	8 9
Vt.	5	6	-	-	-	-	1	-	8	5
Mass. R.I.	45 3	43 4	1 -	1 -	-	5	2	1 1	487 13	96 11
Conn.	29	21	-	-	3	-	-	-	46	51
MID. ATLANTIC Upstate N.Y.	255 84	257 91	-	1	3 3	2 2	28 4	31 7	399 55	812 72
N.Y. City	54	46	-	-	-	-	9	8	161	293
N.J. Pa.	50 67	51 69	-	-	-	-	3 12	7 9	75 108	127 320
E.N. CENTRAL	191	197	-	3	6	3	28	36	326	386
Ohio Ind.	72 37	48 32	-	-	2 4	-	12 1	8 3	32 59	75 38
III.	41	73	-	-	-	-	9	18	110	112
Mich. Wis.	14 27	16 28	-	3	-	3	5 1	1 6	102 23	124 37
W.N. CENTRAL	67	81	2	-	3	6	4	10	125	112
Minn. Iowa	29 1	31 -	1 1	-	3	6	-	1 -	28 35	33 16
Mo.	21 3	34 2	-	-	-	-	2	9	38	37
N. Dak. S. Dak.	-	1	-	-	-	-	-	-	1 2	-
Nebr. Kans.	6 7	1 12	-	-	-	-	2	-	8 13	8 18
S. ATLANTIC	279	250	-	-	17	9	21	16	628	827
Del. Md.	8 45	61	-	-	- 5	5	2	-	5 81	5
D.C.	-	-	-	-	-	-	-	-	4	86 26
Va. W. Va.	25 10	36 11	-	-	-	-	1 3	5	59 4	48 12
N.C. S.C.	40 2	22	-	-	5	1	1	1	63 21	46
Ga.	74	5 45	-	-	-	-	13	6	212	25 336
Fla.	75	70	-	-	7	3	1	3	179	243
E.S. CENTRAL Ky.	43 4	49 3	1 -	1 -	-	2 1	8 -	4	95 17	110 22
Tenn. Ala.	27 12	29 16	- 1	- 1	-	1	6 2	3 1	53 6	62 12
Miss.	-	1	-	-	-	-	-	-	19	14
W.S. CENTRAL	50	54	1	1	6	8	1	4	245	381
Ark. La.	2 8	5 17	-	-	-	1 2	1	4	51 15	21 34
Okla. Tex.	39 1	30 2	- 1	- 1	6	5	-	-	18 161	9 317
MOUNTAIN	138	124	3	6	17	21	15	13	287	295
Mont.	-	-	-	-	-		-	-	4	4
Idaho Wyo.	5	3 1	-	-	-	-	2	1 -	12 4	9 1
Colo. N. Mex.	32 25	24 15	-	-	- 5	4	3 3	5 1	32 11	46 12
Ariz.	53	64	-	6	8	9	2	4	180	167
Utah Nev.	12 11	10 7	2 1	-	1 3	5 3	4 1	2	35 9	19 37
PACIFIC	62	103	2	3	7	21	6	16	643	748
Wash. Oreg.	3 31	6 25	2	-	-	4	1 2	1 2	39 43	40 42
Calif.	18	46	-	3	7	17	2	8	540	652
Alaska Hawaii	6	18 8	-	-	-	-	1 -	5	5 16	7 7
Guam	-	-	-	-	-	-	-	-	-	2
P.R. V.I.	-	-	-	-	-	-	-	-	15 -	54 -
Amer. Samoa C.N.M.I.	U	U U	U	U U	U	U U	U	U U	U	U U
N: Not notifiable.	U: Unavailable.		orted cases.	<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 August 14, 2004, and August 9, 2003 (32nd Week)*

(32nd Week)*	,									•
		lepatitis (viral	, acute), by ty	pe C	Legio	nellosis	Liste	riosis	Lvme	disease
Reporting area	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	3,754	4,229	675	663	925	1,080	352	373	8,343	11,618
NEW ENGLAND	200	196	4	3	19	49	14	27	825	2,094
Maine N.H.	1 23	1 11	-	-	- 1	1 5	5 1	5 2	53 52	70 52
Vt.	3	2	1	3	2	2	-	-	19	17
Mass. R.I.	113 3	138 8	3	-	4 2	27 2	3 1	14 -	207 108	1,124 141
Conn.	57	36	U	U	10	12	4	6	386	690
MID. ATLANTIC	711	486	78	81	253	265	84	74	6,173	7,789
Upstate N.Y. N.Y. City	56 68	51 144	8	10	49 20	62 28	27 12	15 15	2,121	2,125 156
N.J. Pa.	404 183	120 171	70	- 71	49 135	34 141	14 31	16 28	1,584 2,468	2,176 3,332
E.N. CENTRAL	340	310	61	97	241	236	57	47	306	674
Ohio	77	86	5	7	112	130	23	12	56	30
Ind. III.	30 50	22 38	4 9	4 15	40 10	15 29	15 -	2 13	55 -	13 55
Mich.	160	133	43	66	72	48	17	14	13	-
Wis. W.N. CENTRAL	23 231	31 202	202	5 139	7 23	14 46	2 7	6 10	182 208	576 162
Minn.	30	26	202 11	7	3	3	3	3	137	105
Iowa Mo.	12 154	7 137	- 191	1 129	3 12	9 22	1 2	4	14 48	23 29
N. Dak.	4	1	-	-	1	1	-	-	-	-
S. Dak. Nebr.	- 18	2 17	-	2	3	1 2	1	3	6	2
Kans.	13	12	-	-	1	8	-	-	3	3
S. ATLANTIC Del.	1,148	1,194	110	103	209	293	60	70	713	734 128
Md.	22 97	6 74	13	6	4 39	11 68	N 9	N 11	86 434	463
D.C. Va.	13 136	6 102	1 14	4	5 26	8 55	- 12	8	3 65	5 44
W. Va.	24	16	17	1	4	11	2	4	8	8
N.C. S.C.	107 54	110 94	8 7	8 23	24 1	21 5	14 -	11 2	64 5	56 1
Ga.	382	390	8	8	28	21	9	19	9	10
Fla. E.S. CENTRAL	313 243	396 274	42 59	53 49	78 46	93 68	14 17	15 15	39 26	19 33
Ky.	38	44	21	9	20	25	4	3	11	7
Tenn. Ala.	103 42	114 55	20 2	11 5	16 9	23 16	8 3	4 6	9 1	9 3
Miss.	60	61	16	24	1	4	2	2	5	14
W.S. CENTRAL	147	685	83	123	37	42	23	36	22	76
Ark. La.	36 34	53 90	2 44	3 78	3	2 1	2 2	1 2	4 2	6
Okla. Tex.	29 48	40 502	3 34	2 40	3 31	4 35	- 19	1 32	- 16	- 70
MOUNTAIN	315	360	33	27	51	42	15	19	16	7
Mont.	2	8	2	1	1	2	-	1	-	-
Idaho Wyo.	6 7	5 22	-	1 -	6 5	3 2	1 -	- -	2 2	2
Cólo. N. Mex.	35 10	52 28	8 7	6	10	7 2	6	6 2	1	- 1
Ariz.	177	165	4	6	10	9	-	5	5	-
Utah Nev.	30 48	30 50	2 10	13	16 3	13 4	1 7	2 2	6	1 3
PACIFIC	419	522	45	41	46	39	75	- 75	54	49
Wash.	33 72	42 76	13 11	11 7	9 N	5 N	7 5	4 3	4 22	10
Oreg. Calif.	298	386	18	21	37	N 34	61	64	27	37
Alaska Hawaii	13 3	3 15	3	2	-	-	2	- 4	1 N	2 N
Guam	-	4	-	3	-	-	-	-	-	-
P.R. V.I.	37	84	-	-	1	-	-	-	N	N
Amer. Samoa	U	Ū	Ū	U	U	U	U	Ū	Ū	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 August 14, 2004, and August 9, 2003 (32nd Week)*

(32nd Week)*	Mal	laria		gococcal ease	Pert	ussis	Rabie	s, animal		Rocky Mountain spotted fever	
Reporting area	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	
UNITED STATES	721	697	904	1,138	7,248	4,615	3,218	4,298	637	397	
NEW ENGLAND	48	30	47	51	798	535	340	318	14	5	
Maine N.H.	5 1	1 5	8 3	5 3	2 26	11 38	32 11	29 14	-	-	
Vt.	3	-	2	32	44	49	13	21	-	-	
Mass. R.I.	24 2	13	27 1	32 2	698 16	408 7	146 20	112 40	12 1	5 -	
Conn.	13	11	6	9	12	22	118	102	1	-	
MID. ATLANTIC Upstate N.Y.	174 24	177 33	111 27	137 32	1,560 1,111	478 197	307 274	537 222	41 1	26	
N.Y. City	77	89	21	31	83	68	4	5	7	9	
N.J. Pa.	37 36	34 21	24 39	18 56	126 240	81 132	29	62 248	11 22	12 5	
E.N. CENTRAL	67	64	125	185	1,646	428	58	77	35	9	
Ohio	22	11	48	45	316	141	26	31	12	4	
Ind. III.	8 12	2 30	19 12	32 50	57 238	33 38	5 16	6 13	20	1 2	
Mich. Wis.	15 10	16 5	36 10	33 25	84	52 164	11	23 4	3	2	
W.N. CENTRAL	45	5 29	63	25 85	951 926	199	304	444	68	38	
Minn.	18	15	17	20	152	59	49	22	-	1	
Iowa Mo.	2 13	3 3	12 18	16 34	41 191	52 50	51 20	59 10	- 54	2 30	
N. Dak.	3	1	2	1	493	3	46	40	-	-	
S. Dak. Nebr.	1 2	2	2 2	1 6	10 4	3 5	10 53	100 83	3 10	2 2	
Kans.	6	5	10	7	35	27	75	130	1	1	
S. ATLANTIC	183	174	175	208	356	352	1,190	1,728	274	229	
Del. Md.	4 39	2 41	23 8	8 23	5 77	6 51	9 163	26 243	32	1 56	
D.C. Va.	9 16	7 20	4 11	4 19	2 105	- 64	- 299	342	- 12	- 13	
W. Va.	-	4	5	4	5	6	40	59	3	4	
N.C. S.C.	11 7	13 3	24 12	27 19	49 28	83 67	397 92	505 135	185 9	97 12	
Ga.	36	40	10	23	11	20	184	230	19	39	
Fla.	61	44	78	81	74	55	6	188	14	7	
E.S. CENTRAL Ky.	21 3	14 1	36 5	53 11	94 33	103 29	79 16	132 27	69	59 -	
Tenn.	3	4	11	13	37	51	26	86	29	33	
Ala. Miss.	11 4	6 3	10 10	15 14	16 8	15 8	28 9	18 1	21 19	8 18	
W.S. CENTRAL	65	83	83	125	320	351	733	825	119	26	
Ark. La.	7 2	4 3	14 23	11 31	30 7	28 7	33	25 2	77 3	-	
Okla.	4	3	7	12	17	41	80	142	38	18	
Tex.	52	73	39	71	266	275	620	656	1	8	
MOUNTAIN Mont.	30	22	45 3	60 3	701 28	625 1	102 19	96 13	12 3	5 1	
Idaho	1	1	6	6	21	48	1	4	2	1	
Wyo. Colo.	11	1 12	2 12	2 15	12 370	119 213	20	1 17	1 -	2 1	
N. Mex. Ariz.	1 8	4	6 9	7 21	73	44 114	2 55	5 46	2 1	-	
Utah	5	3	4	-	131 54	63	4	6	3	-	
Nev.	4	1	3	6	12	23	1	4	-	-	
PACIFIC Wash.	88 9	104 16	219 23	234 22	847 421	1,544 380	105	141	5 -	-	
Oreg.	12	7	45	35	269	320	4	5	3	-	
Calif. Alaska	66 -	77 -	146 1	163 4	138 8	836 1	93 8	130 6	2	-	
Hawaii	1	4	4	10	11	7	-	-	-	-	
Guam P.R.	-	-	- 5	- 8	-	1	- 36	-	- NI	- NI	
V.I.	-	-	-	-	3 -	2	-	46	N -	N -	
Amer. Samoa	U	U	U	U	U	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 August 14, 2004, and August 9, 2003 (32nd Week)*

(32nd Week)*			<u> </u>				Stro	ptococcus pne	umoniao inv	vasivo
						cal disease,	Drug re	<u> </u>	umomae, my	asive
		onellosis	Shige		invasive,	group A	all a	ges		5 years
Reporting area	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003
UNITED STATES	21,102	22,991	6,363	14,121	3,162	4,134	1,423	1,386	429	479
NEW ENGLAND	1,134	1,233	153	189	139	371	22	72	49	6
Maine N.H.	58 51	77 89	2 5	6 5	6 15	22 23	2	-	2 N	- N
Vt.	33	41	2	6	8	16	7	6	1	3
Mass.	678	746	95	131	93	167	N	N	40	N
R.I. Conn.	72 242	60 220	12 37	6 35	17 -	9 134	13	10 56	6 U	3 U
MID. ATLANTIC	3,255	2,730	739	1,509	534	716	103	92	77	72
Upstate N.Y.	696	573	325	206	180	268	47	49	53	52
N.Y. City N.J.	741 458	744 485	217 129	246 259	73 122	99 141	U	U	U 4	U 2
Pa.	1,360	928	68	798	159	208	56	43	20	18
E.N. CENTRAL	2,449	3,347	451	1,216	633	1,007	344	317	111	208
Ohio	798	842	97	234	171	239	239	208	56	76
Ind. III.	324 321	321 1,198	119 87	91 638	77 133	96 255	105	109	25	19 77
Mich.	516	466	72	170	216	289	N	N	N	N
Wis.	490	520	76	83	36	128	N	N	30	36
W.N. CENTRAL	1,452	1,375	252	456	217	250	12	11	56	54
Minn. Iowa	342 310	310 216	32 53	58 36	113 N	120 N	N	N	39 N	38 N
Mo.	377	500	103	238	43	55	8	7	8	2
N. Dak. S. Dak.	27 64	24 61	2 8	6 9	10 9	12 19	4	3 1	2	4
Nebr.	95	89	13	64	11	22	-	-	5	5
Kans.	237	175	41	45	31	22	N	N	2	5
S. ATLANTIC	5,466	5,282	1,671	4,385	617	688	723	731	27	13
Del. Md.	41 519	60 459	4 85	151 391	3 130	6 172	4	1 9	N 16	N
D.C.	28	19	24	43	4	5	4	-	3	4
Va.	676	550	92	250	55	84	N	N	N	N
W. Va. N.C.	133 666	77 643	4 175	596	17 85	30 80	82 N	50 N	8 U	9 U
S.C.	387	278	204	269	35	33	65	106	N	N
Ga. Fla.	897 2,119	996 2,200	386 697	854 1,831	129 159	134 144	163 405	161 404	N N	N N
E.S. CENTRAL	1,251	1,531	374	605	144	142	85	101		
Ky.	205	237	45	67	50	37	21	12	N	N
Tenn.	241	441	143	210	94	105	64	89	N	N
Ala. Miss.	359 446	358 495	151 35	194 134	-	-	-	-	N -	N -
W.S. CENTRAL	1,695	3,281	1,419	3,731	188	187	36	54	75	74
Ark.	301	369	47	67	14	6	6	18	7	5
La. Okla.	274 230	495 238	170 304	288 525	2 45	1 63	30 N	36 N	12 31	14 36
Tex.	890	2,179	898	2,851	127	117	N	N	25	19
MOUNTAIN	1,394	1,234	464	583	355	352	24	4	34	52
Mont.	92	57	4	2	-	1	- N	- N.	- N	- NI
Idaho Wyo.	104 31	105 59	8 2	17 3	7 6	14 2	N 6	N 3	N -	N -
Colo.	338	300	91	111	88	98	-	-	31	40
N. Mex. Ariz.	130 457	128 369	64 246	116 276	61 159	86 127	5 N	N	- N	8 N
Utah	140	116	26	28	32	23	11	1	3	4
Nev.	102	100	23	30	2	1	2	-	-	-
PACIFIC	3,006	2,978	840	1,447	335	421	74	4	-	-
Wash. Oreg.	300 250	346 256	67 39	114 166	38 N	41 N	N	N	N N	N N
Calif.	2,207	2,204	700	1,138	237	305	N	Ň	N	N
Alaska	39 210	51 121	4	5 24	60	- 75	- 74	4	N	N
Hawaii	210		30		00	75	14	4	-	-
Guam P.R.	126	28 398	3	23 14	N	N	N	N	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa C.N.M.I.	U 3	U U	U	U U	U -	U U	U	U U	U	U U
	3									<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 August 14, 2004, and August 9, 2003 (32nd Week)*

		Syphi	lis						Varicella		
		secondary	Cong			culosis	 	d fever	(Chickenpox)		
Reporting area	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	Cum. 2004	Cum. 2003	
UNITED STATES	4,401	4,306	206	276	6,040	7,524	160	203	12,233	10,535	
NEW ENGLAND Maine	122 2	132 6	1	-	212	250 14	16	19	587 179	2,179 641	
N.H.	3	15	-	-	9	10	-	1	-	-	
√t. Mass.	- 79	83	-	-	133	7 119	13	11	408	492 112	
R.I. Conn.	17 21	13 15	- 1	-	19 51	33 67	1 2	2 5	-	3 931	
MID. ATLANTIC	603	519	35	43	1,221	1,317	33	37	63	17	
Jpstate N.Y. N.Y. City	59 362	24 289	5 10	7 24	159 612	150 701	4 11	5 20	-	-	
N.J. Pa.	101 81	105 101	19 1	12	245 205	256 210	9 9	11 1	63	- 17	
E.N. CENTRAL	467	590	35	46	703	706	8	25	3,945	3,788	
Ohio	136	126	1	2	122	121	2	-	1,019	929	
nd. II.	35 161	32 239	8 4	9 17	76 310	87 328	-	4 14	-	-	
Mich. Nis.	119 16	179 14	22	18	141 54	129 41	5 1	7	2,534 392	2,267 592	
W.N. CENTRAL	106	101	2	4	262	278	7	4	122	40	
Minn. owa	14 5	32 7	-	-	101 23	106 18	3	2 1	N	- N	
Mo.	64	34	1	4	68	71	2	1	5	-	
N. Dak. S. Dak.	-	2 1	-	-	3 5	- 16	-	-	74 43	40	
Nebr. Kans.	5 18	5 20	- 1	-	18 44	12 55	2	-	-	-	
S. ATLANTIC	1,176	1,124	25	53	1,195	1,437	33	36	1,559	1,547	
Del. Md.	4 229	4 180	1 3	9	149	140	9	8	4	20	
D.C. Va.	49 66	33 56	1	1	54	-	1 3	11	17 394	22 432	
N. Va.	2	2	2	-	137 14	158 12	-	-	919	905	
N.C. S.C.	110 67	100 67	6 1	11 4	156 115	180 97	3	6	N 225	N 168	
Ga.	175	298	1	13	11	311	11	5	-	-	
Fla.	474	384	10	15	559	539	6	6	-	-	
E.S. CENTRAL Ky.	249 27	196 24	16 1	10 1	347 62	419 68	5 2	5 -	-	-	
Tenn. Ala.	86 110	83 70	7 6	2 5	127 125	145 139	3	2 3	-	-	
Miss.	26	19	2	2	33	67	-	-	-	-	
W.S. CENTRAL Ark.	709 30	526 31	32	48 1	466 73	1,157 60	10	14	4,335	2,603	
La.	142	80	-	1	-	-	-	-	42	9	
Okla. Tex.	19 518	33 382	2 30	1 45	91 302	89 1,008	1 9	14	4,293	2,594	
MOUNTAIN	205	196	37	27	281	239	5	4	1,622	361	
Mont. daho	13	4	2	2	4 4	5 5	-	-	-	-	
Nyo. Colo.	1 21	23	-	3	2 58	2 58	- 1	3	24 1,225	38	
N. Mex.	26	37	1	4	14	30	-	-	68	-	
Ariz. Jtah	124 4	120 3	34	18	126 27	96 21	2 1	1	305	323	
Nev.	16	9	-	-	46	22	1	-	-	-	
PACIFIC Wash.	764 65	922 47	23	45	1,353 142	1,721 146	43 3	59 2	-	-	
Oreg.	19	29	-	-	52	65	1	2	-	-	
Calif. Alaska	677	839 1	23	45	1,072 20	1,404 37	33	55 -	-	-	
Hawaii	3	6	-	-	67	69	6	-	-	-	
Guam P.R.	- 71	1 122	3	9	60	38 58	-	-	- 186	90 396	
V.I.	4	1	-	-	-	-	-	-	-	-	
Amer. Samoa C.N.M.I.	U 2	U U	U -	U U	U 10	U U	U -	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 III. Deaths in 122 U.S. cities.* week ending August 14, 2004 (32nd Week)

TABLE III. Deaths	in 122 U. T					14, 2	004 (32n	id Week) T	All causes, by age (years)						
	ΔII	All causes, by age (years)		P&I [†]	PRIT		All Causes, by age (years)								
Reporting Area	Ages	<u>≥</u> 65	45-64	25-44	1-24	<1	Total	Reporting Area	Ages	<u>≥</u> 65	45-64	25-44	1-24	<1	P&I [†] Total
NEW ENGLAND	487	338	97	30	8	14	37	S. ATLANTIC	1,037	628	253	101	26	29	50
Boston, Mass. Bridgeport, Conn.	112 34	76 27	21 6	10	3	2 1	8 7	Atlanta, Ga. Baltimore, Md.	128 193	72 105	35 56	13 21	6 7	2 4	6 8
Cambridge, Mass.	11	10	1	_	_		1	Charlotte, N.C.	107	64	19	14	2	8	7
Fall River, Mass.	24	18	5	-	1	-	1	Jacksonville, Fla.	130	87	32	6	2	3	5
Hartford, Conn.	57	35	16	3	-	3	3	Miami, Fla.	29	17	8	4	-	-	2
Lowell, Mass.	21	15	4	2	-	-	2	Norfolk, Va.	44	26	13	3	1	1	2
Lynn, Mass.	9 26	8 21	1 3	2	-	-	-	Richmond, Va.	39 60	18 42	14 13	4 2	1	2	3 1
New Bedford, Mass. New Haven, Conn.	∠6 43	31	3 6	4	-	2	3	Savannah, Ga. St. Petersburg, Fla.	41	42 32	4	3	2	-	1
Providence, R.I.	45	31	7	2	1	4	3	Tampa, Fla.	152	99	30	16	2	5	11
Somerville, Mass.	4	3	1	-	-	-	-	Washington, D.C.	94	50	28	13	2	1	3
Springfield, Mass.	41	22	11	5	1	2	4	Wilmington, Del.	20	16	1	2	1	-	1
Waterbury, Conn.	13	9	4	-	-	-	1	E.S. CENTRAL	875	570	201	64	23	17	60
Worcester, Mass.	47	32	11	2	2		4	Birmingham, Ala.	156	101	37	8	5	5	17
MID. ATLANTIC	2,002	1,375	418	116	54	37	92	Chattanooga, Tenn.	79	50	20	4	3	2	5
Albany, N.Y.	51	35	11 3	2	-	3	2	Knoxville, Tenn.	113 77	68 55	28	15 5	2 1	2	1
Allentown, Pa. Buffalo, N.Y.	21 76	16 51	21	2 2	1	- 1	2 4	Lexington, Ky. Memphis, Tenn.	193	55 133	14 37	16	6	1	6 19
Camden, N.J.	17	9	5	2	1	-	-	Mobile, Ala.	89	59	26	2	1	1	3
Elizabeth, N.J.	12	4	5	3	-	-	-	Montgomery, Ala.	41	29	7	4	1	-	1
Erie, Pa.	49	39	10	-	-	-	2	Nashville, Tenn.	127	75	32	10	4	6	8
Jersey City, N.J.	29	16	8	5	-	-	-	W.S. CENTRAL	1,469	923	354	122	39	31	70
New York City, N.Y. Newark, N.J.	1,002 51	714 31	198 10	54 8	22 1	12 1	34	Austin, Tex.	82	52	20	8	1	1	3
Paterson, N.J.	19	13	4	2	-	-	1	Baton Rouge, La.	47	31	8	6	2	-	-
Philadelphia, Pa.	292	175	77	19	12	9	16	Corpus Christi, Tex.	47	30	12	1	1	3	5
Pittsburgh, Pa.§	27	12	9	4	2	-	2	Dallas, Tex. El Paso, Tex.	237 39	139 31	58 5	23 2	10 1	7	15 1
Reading, Pa.	27	21	5	1	-	-	1	Ft. Worth, Tex.	107	68	24	7	3	5	5
Rochester, N.Y.	110	85	17	2	3	3	13	Houston, Tex.	358	205	94	45	7	7	19
Schenectady, N.Y. Scranton, Pa.	23 23	15 17	2 4	1	5 1	1	2	Little Rock, Ark.	67	47	14	3	3	-	1
Syracuse, N.Y.	116	85	19	5	2	5	9	New Orleans, La.	56	31	16	7	2	-	-
Trenton, N.J.	33	19	6	2	4	2	1	San Antonio, Tex.	231	158	52 16	12	4 2	5 2	17
Utica, N.Y.	14	11	2	1	-	-	2	Shreveport, La. Tulsa, Okla.	69 129	47 84	16 35	2 6	3	1	4
Yonkers, N.Y.	10	7	2	1	-	-	1	MOUNTAIN	942	594	214	84	26	24	44
E.N. CENTRAL	1,921	1,247	437	143	42	52	102	Albuquerque, N.M.	103	62	31	3	3	4	44
Akron, Ohio	45	25	12	3	3	2	4	Boise, Idaho	40	29	5	5	-	1	5
Canton, Ohio Chicago, III.	30 326	23 187	6 87	1 31	- 11	10	23	Colo. Springs, Colo.	39	24	11	4	-	-	-
Cincinnati, Ohio	64	47	9	5	- '	3	1	Denver, Colo.	105	62	20	15	2	6	3
Cleveland, Ohio	246	171	53	14	3	5	7	Las Vegas, Nev. Ogden, Utah	289 31	188 18	65 10	24 3	7	5	17 1
Columbus, Ohio	166	112	39	11	2	2	12	Phoenix, Ariz.	51	23	17	9	1	1	1
Dayton, Ohio	92	67	17	7	-	1	7	Pueblo, Colo.	27	15	11	-	1		2
Detroit, Mich. Evansville, Ind.	150 40	78 26	44 9	18 4	6	4 1	6 1	Salt Lake City, Utah	106	74	19	5	5	3	4
Fort Wayne, Ind.	51	33	11	5	2	- '-	1	Tucson, Ariz.	151	99	25	16	7	4	7
Gary, Ind.	14	7	4	1	2	-	-	PACIFIC	1,759	1,196	365	117	46	35	128
Grand Rapids, Mich.	36	26	8	1	-	1	3	Berkeley, Calif.	16	11	4	-	1	-	-
Indianapolis, Ind.	203	130	50	10	2	11	10	Fresno, Calif.	105	71	24	9	1	-	8
Lansing, Mich. Milwaukee, Wis.	41 112	31 71	2 31	6 6	2	1	1 8	Glendale, Calif. Honolulu, Hawaii	19 85	16 62	2 15	1 7	1	-	2 2
Peoria, III.	66	41	15	2	2	6	2	Long Beach, Calif.	62	40	18	3	-	1	5
Rockford, III.	61	42	13	4	2	-	5	Los Angeles, Calif.	366	245	67	32	11	11	42
South Bend, Ind.	46	36	8	1	-	1	2	Pasadena, Calif.	35	23	7	3	1	1	5
Toledo, Ohio	83	60	11	11	-	1	3	Portland, Oreg.	122	84	27	7	3	1	4
Youngstown, Ohio	49	34	8	2	2	3	6	Sacramento, Calif.	177	119	40	10	5	3	8
W.N. CENTRAL	607	391	140	45	19	10	49	San Diego, Calif. San Francisco, Calif.	149 143	106 85	28 35	9 10	3 4	3 9	9 12
Des Moines, Iowa	52	38	10	2	2	-	4	San Jose, Calif.	180	129	38	6	4	3	16
Duluth, Minn.	29	23	5	1	-	-	2	Santa Cruz, Calif.	28	23	4	1	-	-	5
Kansas City, Kans. Kansas City, Mo.	25 69	16 47	5 14	2 4	1 2	1 1	1 3	Seattle, Wash.	130	72	34	13	8	3	3
Lincoln, Nebr.	30	24	5	1	_	-	3 4	Spokane, Wash.	50	40	. 7	2	1	-	2
Minneapolis, Minn.	55	31	17	6	-	1	8	Tacoma, Wash.	92	70	15	4	3	-	5
Omaha, Nebr.	83	53	19	3	3	5	11	TOTAL	11,099¶	7,262	2,479	822	283	249	632
St. Louis, Mo.	115	62	33	10	8	1	8								
St. Paul, Minn.	49	33	12	2	2	-	2								
Wichita, Kans.	100	64	20	14	1	1	6	<u> </u>							

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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