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Alcohol Awareness Month — April 2002

The National Council on Alcoholism and Drug Dependence (NCADD) has designated April 2002 as the 16th annual Alcohol Awareness Month. NCADD, in collaboration with CDC and other federal agencies and community organizations, will highlight the health risks associated with problem drinking and the importance of identification and intervention. The theme of this year's campaign is "Recovery: It's a Family Affair—and Everyone's Invited!"

April 11 is National Alcohol Screening Day; screening sites throughout the country will offer participants an educational presentation, a written screening questionnaire, and an opportunity to meet with a health-care professional. Online and telephone screening also will be available. Locations of screening sites are available at http://www.mentalhealthscreening.org/alcohol.htm, telephone, 800-405-9200. Press kits, fact sheets, and information about "Alcohol-Free Weekend" (April 5–7) are available at http://www.ncadd.org.

This issue of *MMWR* presents findings from the Behavioral Risk Factor Surveillance System regarding alcohol consumption among women of childbearing age in the United States, which indicate that frequent drinking and binge drinking during pregnancy continue to pose a risk to the healthy pregnancy outcomes of many women. CDC is conducting a comprehensive public health research program to prevent alcohol-exposed pregnancies and provide effective interventions for persons with fetal alcohol syndrome and other disorders caused by prenatal alcohol exposure. Information about CDC's programs and the health effects of prenatal alcohol exposure is available at http://www.cdc.gov/ncbddd/fas. Additional information is available at http://www.niaaa.nih.gov and at http://www.samhsa.gov.

Alcohol Use Among Women of Childbearing Age — United States, 1991–1999

Prenatal exposure to alcohol is one of the leading preventable causes of birth defects, mental retardation, and neurodevelopmental disorders in the United States (*1*). One of the national health objectives for 2010 is to decrease alcohol use among pregnant women to 94% (*2*). During 1991–1995, alcohol use by pregnant women increased substantially, and alcohol use by nonpregnant women of childbearing age increased slightly (*3*). To characterize trends in alcohol use among women of childbearing age, CDC analyzed representative survey data from the Behavioral Risk Factor Surveillance System (BRFSS) during 1991–1999. This report summarizes the results of the analysis, which indicate that the rate of any alcohol use (i.e., at least one drink) during pregnancy has declined since 1995. However, rates of binge drinking (i.e., ≥5 drinks on any one occasion) and frequent drinking (i.e., ≥7 drinks per week or ≥5 drinks on any one occasion) during pregnancy have not declined among nonpregnant women of childbearing age. Health-care providers should routinely screen women of childbearing age for alcohol use and counsel them about the adverse effects of alcohol use during pregnancy.

BRFSS is an ongoing, state-based, random-digit–dialed telephone survey of the noninstitutionalized U.S. civilian population aged ≥18 years. Data were analyzed for women aged 18–44 years in all 50 states. Women were asked about their

INSIDE

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Suspected Cutaneous Anthrax in a Laboratory Worker — Texas, 2002

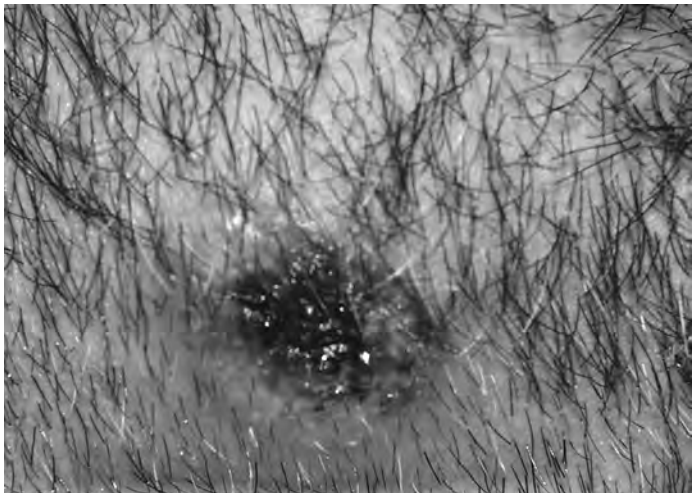
On March 6, 2002, CDC's National Institute for Occupational Safety and Health (NIOSH) received a request for a health hazard evaluation from the director of Laboratory A to assist in the evaluation of a worker who had been diagnosed with cutaneous anthrax. Laboratory A, a provisionally approved Laboratory Response Network level B laboratory, had been processing environmental samples for *Bacillus anthracis* in support of CDC investigations of the bioterrorist attacks in the United States during fall 2001. Since March 7, CDC has interviewed the ill laboratory worker and other workers at the laboratory and conducted environmental assessments of the workplace. This report summarizes the epidemiologic and environmental investigation of this case, which indicates that the likely source of exposure was the surface of vials containing *B. anthracis* isolates that the worker placed in a freezer on March 1. Laboratory workers handling specimens of *B. anthracis* should follow recommended procedures to minimize the risk of *B. anthracis* transmission and anthrax.

The laboratory worker was one of three employees of Laboratory A who had primary responsibility for processing environmental *B. anthracis* specimens. Neither this worker nor any of the other approximately 40 employees of Laboratory A had received anthrax vaccine. The laboratory worker did not handle *B. anthracis*-containing samples or cultures during February 19–28. On February 28, he cut a small bump on his right jaw while shaving, which bled briefly and then became itchy and irritated. On March 1, he assisted a co-worker moving vials containing aliquots of confirmed *B. anthracis* isolates from the biological safety cabinet (BSC) in the main laboratory to the freezer in an adjacent room. The co-worker had transferred the isolates from blood agar plates to the vials by collecting the growth with a swab. The co-worker removed the vials from the BSC and handed them to the patient. Without gloves, the patient took the vials from the co-worker, placed the vials in the freezer, and then washed his hands with soap and water. During the next 2–3 days, the worker's facial wound increased in size and developed a scab. He also reported right cervical adenopathy, a low-grade fever, and swelling and erythema on his right cheek and neck. The patient's health-care provider obtained a swab of the area underneath the scab and of the area under a vesicle, without cleansing the skin first. The health-care provider made a presumptive diagnosis of cutaneous anthrax and the patient was administered a 2-week course of ciprofloxacin.

The culture of this specimen was positive for *B. anthracis* on testing at Laboratory A and CDC. Because of culture results, the patient was admitted to the hospital on March 5 and treated with intravenous ciprofloxacin and doxycycline pending antimicrobial susceptibility testing. The lesion developed the characteristic eschar of cutaneous anthrax (Figure 1). A chest radiograph performed on admission demonstrated possible fullness of the mediastinum, but computed tomography of the chest was normal. The isolate was susceptible to ciprofloxacin and doxycycline, and the patient continued receiving ciprofloxacin. The patient's symptoms improved during hospitalization, and he was discharged on March 9. Serologic studies for antibodies to *B. anthracis* are planned.

On March 5, Laboratory A's certified industrial hygienist (CIH) performed environmental sampling of both Laboratory A and the patient's residence. Seven wipe samples were taken at the laboratory (i.e., the top of the vials the patient had handled, the key to the freezer where the vials were placed, the doorknob of the freezer room, the centrifuge where specimens are prepared, the two BSCs where specimens are handled,

FIGURE 1. Anthrax lesion on patient's right jaw



Photo/CDC File

and surfaces in the patient's office in Laboratory A), seven were taken at the patient's residence. The CIH then cleaned surfaces and equipment throughout the laboratory and the patient's residence by using a disinfectant containing a phenolic and a quaternary ammonium compound, which are not sporicidal. The environmental samples were analyzed in Laboratory A. All samples were negative except the wipe sample collected from tops of the vials that the patient had handled, which was positive for *B. anthracis*. Confirmation of the vial top specimen at CDC is planned.

Workers reported that specimen processing of environmental samples suspected of containing *B. anthracis* is done under Biosafety Level 3 (BSL-3) conditions (*1*). These samples, including swab, wipe, dust (collected onto filter media by a vacuum), and air samples, are opened in a Class II, Type A BSC in a room designated for acid-fast bacillus specimens (AFB room). Personal protective equipment (PPE) for procedures performed in this room includes disposable, fluid-resistant laboratory coats, gloves, and either a NIOSH-certified N95 or P100 disposable, filtering-facepiece respirator, which are disposed of into a biohazard container before exiting the room. Work with purified *B. anthracis* cultures is performed in a separate BSC located in the main laboratory room. PPE at this workstation consists of gloves and a laboratory coat. Aliquots of confirmed isolates of *B. anthracis* are placed in vials and stored in a locked freezer in a room located off the main laboratory. A 10% bleach solution is routinely used to decontaminate surfaces after processing specimens potentially containing *B. anthracis.* However, because bleach caused labels to become dislodged, storage vials had been sprayed with 70% isopropyl alcohol instead of being wiped with bleach. By the time of the CDC site visit, Laboratory A personnel had obtained labels for storage vials that would not dislodge with bleach.

On March 7 and 8, CDC interviewed Laboratory A workers; none reported illness among other employees or their family members. CDC also conducted environmental sampling at Laboratory A on March 7, consisting of 40 surface wipe and 36 air samples. Wipe samples obtained with sterile polyester/rayon pads, moistened with sterile water, were collected from various surfaces in the laboratory and in the adjacent office area, including desks, flooring, door knobs, BSCs, heating, ventilation, air-conditioning return air grills, and laboratory equipment (including the centrifuge and shaker used for processing environmental samples). Air samples were collected in three locations in the laboratory: the AFB room, the area adjacent to the BSC used for anthrax work, and the general microbiology area; two locations in the adjacent office area; and outdoors. All environmental samples were negative for *B. anthracis* at CDC.

On March 8, CDC performed a building assessment, including a ventilation survey, airflow distribution mapping, and BSC characterization. The AFB room was not under negative pressure in relation to adjacent areas of the main laboratory; however, the laboratory was under negative pressure relative to the outside and to the adjacent office areas. The BSCs were functioning adequately.

Reported by: *TA Mackey, PhD, University of Texas Health Science Center at Houston; EH Page, MD, KF Martinez, MSEE, TA Seitz, MPH, BP Bernard, MD, AL Tepper, PhD, Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health; RS Weyant, PhD, Office of Health and Safety; NE Rosenstein, MD, BA Perkins, MD, T Popovic, PhD, Div of Bacterial and Mycotic Diseases; HT Holmes, PhD, Div of Healthcare Quality Promotion, National Center for Infectious Disease; CW Shepard, MD, EIS Officer, CDC.*

Editorial Note: The findings of this investigation indicate that the worker at Laboratory A likely developed cutaneous anthrax because of skin exposure to a contaminated surface. The health hazard evaluation also identified additional steps Laboratory A should take to ensure worker safety.

Because *B. anthracis* can cause lethal infections and can form infectious aerosols, CDC and the National Institutes of Health recommend that laboratories producing quantities or concentrations of *B. anthracis* (i.e., culturing the organism for diagnostic purposes) apply practices appropriate to BSL-3 conditions (*1*). BSL-3 practices emphasize primary and secondary barriers to protect personnel in contiguous areas from exposure to potentially infectious aerosols. A vigorous program of routine decontamination with a 10% bleach solution is needed to kill viable *B. anthracis* spores on laboratory surfaces and vials. Alcohol is not sufficient to eliminate viable *B. anthracis* spores from contaminated surfaces (*2*). Gloves should be used whenever handling material that contains or might contain *B. anthracis,* and skin defects should be covered with an impermeable occlusive bandage while working in the laboratory. Work should be organized so that all *B. anthracis* sample manipulations are performed in a single room with most procedures performed in a BSC. Access to such rooms should be limited to laboratorians directly working with the samples.

The Advisory Committee on Immunization Practices developed guidelines for routine vaccination with anthrax vaccine (*3*). This suspected case of laboratory-acquired cutaneous anthrax highlights the need for anthrax vaccination, in addition to standard laboratory safety procedures, for laboratorians who work routinely with *B. anthracis* specimens.

CDC will work with state and local health departments to identify and vaccinate these laboratory workers.

This case is defined by CDC as a suspected case of cutaneous anthrax rather than a confirmed case (*4*) because processing of the swab of the lesion at the same laboratory where the suspected exposure occurred introduces the possibility of contamination of the patient's sample with *B. anthracis* from the laboratory. However, this patient's clinical syndrome and environmental exposure are consistent with cutaneous anthrax (*4*). CDC will update the surveillance status of this case as the results of other laboratory tests (e.g., serologic tests) become available.

Any exposure leading to a suspected case of cutaneous anthrax requires a public health investigation to identify other exposures in the same setting that might have led to other cases of cutaneous or inhalational anthrax. Local public health authorities should be notified immediately and appropriate laboratory procedures followed when treating clinicians suspect anthrax. This investigation did not identify inhalation exposures, and CDC does not recommend prophylaxis for the prevention of cutaneous anthrax. Active surveillance for cutaneous and inhalational disease should be ongoing among laboratorians working with *B. anthracis.*

Acknowledgment

This report is based on data contributed by D Mattorano, MS, B King, MPH, D Booher, Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, CDC.

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Imported Dengue — United States, 1999 and 2000

Dengue is a mosquito-transmitted acute viral illness caused by any of the four dengue virus serotypes (DEN-1, DEN-2, DEN-3, and DEN-4). Dengue is endemic in most tropical and subtropical areas of the world and has occurred among U.S. residents returning from travel to such areas. CDC maintains a laboratory-based passive surveillance system for imported dengue among U.S. residents (laboratory-diagnosed dengue in a U.S. resident living in an area without known authochthonous dengue transmission, with travel history outside the United States in the 14 days before symptom onset). The system relies on reports by clinicians to state health departments, which forward patient specimens to CDC for diagnostic testing. This report summarizes information about imported dengue cases among U.S. residents during 1999–2000. The findings indicate that dengue continues to cause disease in U.S. travelers abroad. Travelers to tropical areas should protect themselves from mosquito bites, and health-care providers should consider dengue in the differential diagnosis of illness for patients who have returned recently from such areas.

Serum samples from 216 persons who had suspected dengue on the basis of clinical presentation and onset of symptoms in 1999 and 2000 were submitted to CDC from 34 states and the District of Columbia (*1*). From these samples, 41 (19%) cases were laboratory-diagnosed as dengue, of which 38 (93%) had IgM antibody or single high titers of IgG antibody in serum samples, and three (7%) patients had isolation of dengue virus (DEN-2, DEN-3, and DEN-4; one case each) (Table 1). Dengue diagnosis was negative in 112 (52%) patients, and indeterminate among 63 (29%) patients because convalescent samples for serologic testing were unavailable.

Of the 40 laboratory-diagnosed dengue cases with available data, 22 (55%) were males. Age was reported for 35 persons (median: 37 years, range: 5–72 years). Clinical information was available for 28 patients with laboratory-diagnosed dengue. The most commonly reported symptoms were fever (100%), headache (64%), rash (54%), and myalgia (39%). At least three patients were identified as having been hospitalized, and one of these died (a male aged 41 years who had recently returned from Bangladesh).

States reporting the highest number of cases were Massachusetts (four) in 1999 and New York (five) in 2000. Travel histories within the 2 weeks before illness, available for 33 persons, indicated that infections probably were acquired in Asia (13 cases), the Caribbean islands (12), Central America (seven), South America (one), and Africa (one). One patient reported traveling both in the Caribbean islands and South America.

Data for both 1999 and 2000 indicated a marked decline in persons tested and in the percentage of persons laboratory-diagnosed with dengue, compared with 1997 and 1998, when 349 persons were tested and 143 (41%) were laboratory-diagnosed with dengue (*2*).

Reported by: *GG Clark, PhD, JG Rigau-Pérez, MD, V Vorndam, PhD, Div of Vector-Borne Infectious Diseases, National Center for Infectious Diseases; JM Hayes, DrPH, EIS Officer, CDC.*