HIV/AIDS — Continued

These incidence estimates must be refined to measure the growth of the epidemic and the effectiveness of current and future prevention efforts. Nonetheless, AIDS case projections and HIV-prevalence estimates indicate that the annual toll of AIDS cases and the nationwide burden of HIV-related disease will continue to grow, requiring further prevention efforts and increased medical and social services for the next several years for persons with HIV infection.

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Occupational Disease Surveillance: Occupational Asthma

In 1987, the National Institute for Occupational Safety and Health (NIOSH), CDC, initiated the Sentinel Event Notification System for Occupational Risks (SENSOR) (*1*), a pilot project conducted in association with state health departments. A goal of SENSOR is to improve the reporting and surveillance of work-related health conditions, including occupational asthma. Of the 10 states* participating in the SENSOR

*California, Colorado, Massachusetts, Michigan, New Jersey, New York, Ohio, Oregon, Texas, and Wisconsin.

Occupational Asthma — Continued

program, six (Colorado, Massachusetts, Michigan, New Jersey, New York, and Wisconsin) have identified occupational asthma as a condition targeted for surveillance. This report describes the implementation and early results of occupational asthma surveillance in Michigan, Colorado, and New Jersey, whose programs share certain features.

SENSOR programs in each of these three states receive occupational asthma case reports by telephone from any health-care provider in the respective state. Information about the surveillance activity has been disseminated to groups of "sentinel providers" (such as allergists and pulmonary and occupational medicine specialists) who are most likely to encounter occupational asthma in their clinical practices. Characteristics of the case report (including its congruence with the surveillance case definition [see box], the number of co-workers with exposures similar to those of the reported case-patient, and the number of co-workers with respiratory symptoms) determine priorities for follow-up workplace investigations conducted by the SENSOR program personnel. Each program sends to reporting physicians summaries of worksite investigations conducted in response to cases they have reported. To assist physicians in the evaluation of possible cases, the programs may provide other services such as peak flow meters (New Jersey and Colorado) or radioallergosorbent testing (Michigan). In addition, all three programs actively collaborate with academic occupational medicine programs in their states.

Michigan. In Michigan, an occupational disease reporting law was already in effect when the SENSOR program started. With the implementation of SENSOR, physician-education efforts and case follow-up were enhanced and focused on a few target conditions, including occupational asthma. Consequently, the number of occupational asthma reports increased sharply, from 18 during 1984–1986 to 101 cases reported from September 1988 through August 1989. Cases have been reported in persons who worked in a variety of exposure settings, and case follow-ups have led to the recognition of at least one new setting for occupational asthma—sugar beet pulp processing. Thus far, at eight worksites where investigations have been completed or are in progress, employee interviews have identified 97 co-workers of reported patients with symptoms suggestive of occupational asthma.

Colorado. In Colorado, voluntary reporting of occupational asthma cases started in October 1987; in August 1988, state health regulations were modified to make occupational asthma and occupational hypersensitivity pneumonitis reportable conditions. From October 1987 through December 1989, Colorado SENSOR received 87 case reports of occupational asthma and 21 case reports of hypersensitivity pneumonitis. In Colorado, the SENSOR program gives health-care providers a mechanism to report unusual clusters of occupational illness. For example, from two case reports received in Colorado, a cluster of 14 cases of probable hypersensitivity pneumonitis was identified among workers at an indoor swimming pool; follow-up investigation is under way.

New Jersey. New Jersey implemented voluntary reporting of occupational asthma in 1988. From June 1988 through October 1989, the New Jersey SENSOR program received reports of 66 possible cases of occupational asthma. Seven of the first eight worksites investigated had inadequate engineering controls; at these sites, 35 co-workers of possible case-patients had work-related respiratory symptoms.

Occupational Asthma — Continued

SURVEILLANCE GUIDELINES FOR STATE HEALTH DEPARTMENTS: OCCUPATIONAL ASTHMA

REPORTING GUIDELINES

State health departments should encourage providers to report all suspected or diagnosed cases of occupational asthma. These should include persons with:

A. A physician diagnosis of asthma
   AND
B. An association between symptoms of asthma and work.

State health departments should collect appropriate clinical, epidemiologic, and workplace information on reported cases to set priorities for workplace investigations.

SURVEILLANCE CASE DEFINITION

A. A physician diagnosis of asthma*
   AND
B. An association between symptoms of asthma and work† *and* any one of the following:
   1. Workplace exposure to an agent or process previously associated with occupational asthma§
      OR
   2. Significant work-related changes in FEV1 or PEFR
      OR
   3. Significant work-related changes in airways responsiveness as measured by nonspecific inhalation challenge¶
      OR
   4. Positive response to inhalation provocation testing with an agent to which patient is exposed at work. Inhalation provocation testing with workplace substances is potentially dangerous and should be performed by experienced personnel in a hospital setting where resuscitation facilities are available and where frequent observations can be made over sufficient time to monitor for delayed reactions.

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*Asthma is a clinical syndrome characterized by increased responsiveness of the tracheobronchial tree to a variety of stimuli (*2*). Symptoms of asthma include episodic wheezing, chest tightness, and dyspnea, or recurrent attacks of "bronchitis" with cough, sputum production, and rhinitis (*3*). The primary physiologic manifestation of airways hyperresponsiveness is variable or reversible airflow obstruction, which may be demonstrated by significant changes in the forced expiratory volume in 1 second (FEV1) or peak expiratory flow rate (PEFR). Airflow changes can occur spontaneously, with treatment, with a precipitating exposure, or with diagnostic maneuvers such as nonspecific inhalation challenge.

†Patterns of association can vary. The following examples are patterns that may suggest an occupational etiology: symptoms of asthma develop after a worker starts a new job or after new materials are introduced on a job (a substantial period of time may elapse between initial exposure and development of symptoms); symptoms develop within minutes of specific activities or exposures at work; delayed symptoms occur several hours after exposure, during the evenings of workdays; symptoms occur less frequently or not at all on days away from work and on vacations; symptoms occur more frequently on returning to work. Work-related changes in medication requirements may have similar patterns, also suggesting an occupational etiology.

§Many agents and processes have been associated with occupational asthma (*3,4*), and others continue to be recognized.

¶Changes in nonspecific bronchial hyperreactivity can be measured by serial inhalation challenge testing with methacholine or histamine. Increased bronchial reactivity (manifested by reaction to lower concentrations of methacholine or histamine) following exposure and decreased bronchial reactivity after a period away from work are evidence of work-relatedness.

Occupational Asthma — Continued

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Editorial Note: Asthma caused by occupational exposures has been recognized for nearly 3 centuries (*3*), but the true incidence and prevalence of work-induced asthma remain uncertain. More than 200 agents have been associated with workplace asthma (*5*), and the classes of agents implicated include certain microbial products (e.g., *Bacillus subtilis* enzymes in the detergent industry), certain animal proteins (e.g., urine protein/dander from laboratory mammals), certain plant products (e.g., wheat flour), and certain industrial chemicals (e.g., toluene diisocyanate). Occupational asthma is an increasingly important cause of respiratory impairment; it can persist for years, even after termination of workplace exposures (*6*). Early recognition is particularly important because a more favorable prognosis is associated with a shorter duration of symptoms before diagnosis (*7*) and because prompt removal from further exposures to the offending agent is beneficial. Fatal cases have been reported when workplace exposures continue (*8*). Identification of occupational asthma can also lead to recognition of affected co-workers, identification and correction of inadequate worksite exposure controls, and discovery of new causes of occupational asthma (*9*).

Early experience in Michigan, Colorado, and New Jersey indicates that physician reporting of occupational asthma can be used to identify workplaces with remediable health hazards. This approach may improve surveillance of occupational asthma and provide opportunities for primary and secondary prevention.

To facilitate provider-based surveillance of work-related conditions and to enhance uniformity of reporting in the states, NIOSH periodically disseminates recommended surveillance case definitions for selected occupational diseases and injuries. Because these definitions are designed for surveillance-related functions, they may differ from those used for other purposes, such as determining workers' compensation or level of disability. The reporting guidelines and case definition for surveillance for occupational asthma[†] (see box) are recommended for surveillance of work-related asthma by state health departments receiving reports of cases from physicians and other health-care providers.

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[†]This definition was reviewed and approved by a panel of consultants convened by NIOSH that comprise the Surveillance Subcommittee of the NIOSH Board of Scientific Counselors: H Anderson, MD, Wisconsin Department of Health and Social Services; M Cullen, MD, Yale University School of Medicine; E Eisen, ScD, Harvard School of Public Health; R Feldman, MD, Boston University School of Medicine; J Hughes, MD, University of California, San Francisco; MJ Jacobs, MD, University of California, Berkeley; K Kriess, MD, National Jewish Center for Immunology and Respiratory Medicine; J Melius, MD, New York State Department of Health; J Peters, MD, University of Southern California School of Medicine; D Wegman, MD, University of Lowell.

Occupational Asthma — Continued

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Erratum: Vol. 39, No. 1

In the article, "Repeat Injuries in an Inner City Population—Philadelphia, 1987–1988," the last author on the first line of credits on page 2 should read: A Wishner, MSN.

CENTERS FOR DISEASE CONTROL

MMWR

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Progress in Chronic Disease Prevention

Alzheimer Disease — California, 1985–1987

In 1984, the California legislature established the Alzheimer Disease Program (ADP) in the California Department of Health Services (CDHS). Purposes of the ADP are to improve services for the diagnosis and treatment of dementias, support medical education about dementias, and promote research on Alzheimer disease (AD) and related disorders. In 1985, the ADP created six AD diagnostic and treatment centers in affiliation with medical schools and established additional centers in 1989.

Each treatment center collects uniform data on all suspected dementia* patients referred to the center and reports these data to a central registry at the Institute for Aging at the University of California, San Francisco. Sources of data are the initial diagnostic evaluation, periodic follow-up evaluations, and postmortem reports. Data entered in the registry include information from the patients' medical histories, clinical findings, and potential risk factors; medical and social support services used; types of care received; and social and demographic characteristics. Information has been collected on >1700 persons and is available for analysis on 1011 patients referred to the six original treatment centers from June 10, 1985, to December 31, 1987 (Table 1). These centers are located in five counties (Alameda, Los Angeles, Sacramento, San Diego, and San Francisco), which contain 50.5% of the California population >50 years of age.

Of the 439 patients with a diagnosis of AD only, 298 (67.9%) were women. Three hundred thirty-nine (77.2%) were white; 40 (9.1%), black; 33 (7.5%), Hispanic; nine (2.1%), Asian/Pacific Islander; three (0.7%), other races; and 15 (3.4%), unknown race. The ages of patients at onset of symptoms ranged from 45 to 92 years (mean: 70.3 years) (Table 2).

The 439 AD patients were referred to treatment centers from several sources, including family (289 [65.8%]), physicians (106 [24.1%]), social services and support groups (83 [18.9%]), special-care facilities (59 [13.4%]), friends (43 [9.8%]), and self (22 [5.0%]). The most common reasons for referral included evaluation of a memory problem (387 [88.2%]) or personality change (143 [32.6%]), desire for a second opinion about a previous diagnosis of AD or other dementia (201 [45.8%]), concern about patient agitation (160 [36.4%]), and difficulty with patient management (100 [22.8%]).

*Global cognitive impairment and a decline in intellectual function in a person with clear consciousness.