
MMWR. 2000;50:1101-1106
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TOBACCO USE, PARTICULARLY CIGARETTE SMOKING, IS THE LEADING PREVENTABLE CAUSE OF DEATH IN THE UNITED STATES, but the health consequences extend beyond smokers to nonsmokers involuntarily exposed to environmental tobacco smoke or secondhand smoke (SHS). Each year, an estimated 3,000 lung cancer deaths and 62,000 deaths from coronary heart disease in adult nonsmokers are attributed to SHS. Among children, SHS causes sudden infant death syndrome, low birthweight, chronic middle ear infections, and respiratory illnesses (e.g., asthma, bronchitis, and pneumonia). Two national health objectives for 2010 are to reduce cigarette smoking among adults to 12% (objective 27-1) and the proportion of nonsmokers exposed to environmental tobacco smoke to 45% (objective 27-10). To characterize state-specific prevalence of cigarette smoking among adults, exposure to SHS at home, smoke-free workplace policies, and attitudes toward smoke-free policies by state, CDC analyzed data from the 2000 Behavioral Risk Factor Surveillance System (BRFSS). This report summarizes the results of that analysis and indicates that in 2000, state-specific adult smoking prevalence ranged from 12.9%-30.5%, and high levels of public support exist, even among smokers, for smoke-free policies in many settings. States should implement comprehensive programs to reduce tobacco use and adopt clean indoor air policies to reduce involuntary exposure to SHS.

BRFSS is a state-based, random-digit-dialed telephone survey of the noninstitutionalized U.S. population aged ≥18 years. The 2000 BRFSS was conducted in the 50 states, the District of Columbia (DC), and Puerto Rico. To determine current cigarette smoking, respondents were asked, “Have you smoked at least 100 cigarettes in your entire life?” and “Do you now smoke cigarettes every day, some days, or at all?” Current smokers were defined as those who reported having smoked ≥100 cigarettes during their lifetime and who currently smoked every day or some days.

Respondents in 20 states were asked questions on smoking in the home, awareness of an official workplace smoke-free policy, and their attitudes about smoking bans in specific areas. To assess home exposure to SHS, respondents were asked, “In the past 30 days has anyone, including yourself, smoked cigarettes, cigars, or pipes anywhere inside your home?” Those who reported no smoking in the home during the preceding 30 days provided some indication of protection from exposure but not the existence of any rules or policies about smoking in the home. To assess awareness of workplace smoking policies, respondents who reported working indoors most of the time were asked, “Which of the following best describes your place of work’s official smoking policy for indoor public or common areas, such as lobbies, rest rooms, and lunch rooms?” and “Which of the following best describes your place of work’s official smoking policy for work areas?” Possible responses for both questions were “not allowed in any public/work areas,” “allowed in some public/work areas,” “allowed in all public/work areas,” or “no official policy.” To assess attitudes about smoke-free policies, respondents were asked, “In the following locations, do you think that smoking should be allowed in all areas, some areas, or not allowed at all?” These locations were restaurants, schools, day care centers, and indoor work areas. The percentage of respondents who reported that no smoking was allowed in the home, that smoking was not allowed in work areas, and that smoking should not be allowed at all in restaurants, schools, day care centers, and indoor work areas was calculated and reported by state. Estimates were weighted by age, race/ethnicity, and sex distribution of each state’s population, and 95% confidence intervals were calculated using SUDAAN. Statistical significance was determined on the basis of nonoverlapping confidence intervals. The median response rate was 53.2% (range: 35.5%-77.7%).

The cigarette smoking prevalence in 2000 differed approximately twofold. The 12 areas with the highest prevalence of current smoking (Kentucky, Nevada, Missouri, Indiana, Ohio, West Virginia, North Carolina, Tennessee, New Hampshire, Alabama, Arkansas, and Alaska) differed significantly from the 12 areas with lower prevalence (Utah, Puerto Rico, California, Arizona, Montana, Hawaii, Minnesota, Connecticut, Massachusetts, Colorado, Maryland, and Washington). The median smoking prevalence among men was 24.4% (range: 14.5%-33.4%) and among women was 21.2% (range: 9.9%-29.5%). Utah had the lowest prevalence for men (14.5%) and Puerto Rico had the lowest for women (9.9%).

For the 20 states that collected optional information, the proportion of adults reporting no smoking in their home during the 30 days preceding the survey ranged from 60.8% in West Virginia to 79.0% in Colorado. The proportion of adults who work primarily indoors and reported an official workplace policy that no smoking was
allowed in indoor public or common areas and work areas ranged from 61.4% in Mississippi to 83.9% in Montana. The proportion who thought that smoking should not be allowed in restaurants ranged from 44.3% in North Carolina to 63.6% in Montana. The proportion who thought that smoking should not be allowed at all in schools and day care centers was uniformly high. The proportion who thought that smoking should not be allowed at all in indoor work areas ranged from 66.4% in Wisconsin to 83.8% in DC. Current smokers and nonsmokers reported similar attitudes about not allowing smoking at all in schools (median: 89.1% for smokers and 95.6% for nonsmokers) and day care centers (median: 94.2% for smokers and 97.6% for nonsmokers); however, the proportion who thought smoking should not be allowed at all differed widely between smokers and nonsmokers for restaurants (median: 25.9% for smokers versus 66.2% for nonsmokers) and indoor work areas (median: 57.6% for smokers versus 82.1% for nonsmokers).

The national health objective for 2000 of ≤15% of adults smoking cigarettes was achieved by Puerto Rico, Utah, and California for women (objective 3.4). The low prevalence in Utah and Puerto Rico may be a result of stronger social and cultural norms against tobacco use compared with other parts of the country. California’s efforts to change social norms about smoking through large-scale social interventions have been temporally linked to a reduction in tobacco use. According to the Surgeon General, if the recommendations from the 2000 report Reducing Tobacco Use for a comprehensive program combining social, educational, clinical, economic, and regulatory strategies were implemented fully, the 2010 national health objectives related to tobacco use could be met. Similarly, decreases in adult prevalence in other states could be accelerated if the funding guidelines for comprehensive tobacco-control programs were followed more widely.

The findings in this report are subject to at least four limitations. First, the prevalence estimates may be affected by a low response rate. Second, smoking data were based on self-reports without biochemical verification; however, self-reporting has generally been found to be accurate in population-based surveys among adults. Third, telephone surveys may result in both response and sampling bias because of greater nonresponse from subgroups at higher risk for smoking. Finally, respondents’ definitions of “official policy” may vary, and the validity of self-report of workplace policies is unknown.

As of December 1999, 45 states and DC reported some restricted smoking in public places; however, many state and local laws for clean indoor air reduce but do not eliminate involuntary exposure to tobacco smoke. During 1988-1991 to 1999, exposure to SHS among nonsmokers aged 18 years decreased 75%; however, men, persons <20 years, and blacks continued to have substantially higher levels of exposure compared with those of women, persons aged ≥20 years, and other racial/ethnic groups. In addition, smoke-free workplace policies protected approximately 70% of the U.S. workforce in 1999, but protection levels varied widely among states.

Involuntary exposure to SHS remains a common public health hazard that is preventable by appropriate regulatory policies. Bans on smoking in public places reduce exposure to SHS and the number of cigarettes smoked by smokers. The findings in this report indicate support for smoking bans, with nearly universal support for bans in schools and day care centers and strong support for bans in indoor work areas and restaurants. Clean indoor air policies are one way to change social norms about smoking and reduce tobacco consumption, but comprehensive approaches are needed to achieve the national health objectives for 2010 to reduce smoking prevalence and involuntary exposure to SHS.

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Acute Flaccid Paralysis Associated With Circulating Vaccine-Derived Poliovirus—Philippines, 2001

THREE CASES OF ACUTE FLACCID PARALYSIS (AFP) associated with circulating vaccine-derived poliovirus (cVDPV) isolates were reported in the Philippines during March 15–July 26, 2001. The first case-patient, a child aged 8 years from northern Mindanao island (500 miles south of Manila) who had received 3 doses of oral polio vaccine (OPV), had onset of paralysis on March 15. A second child, aged 3 years from Laguna province on Luzon island (60 miles south of Manila) who had received 3 OPV doses, presented with signs of meningitis but no paralysis on July 23. A third child, aged 14 months from Cavite province (25 miles from Manila and 45 miles north of Laguna province) who had received 2 OPV doses, had onset of paralysis on July 26. No patients had traveled outside of their province of residence since birth. Characterization of isolates from the three patients revealed type 1 polioviruses derived from Sabin vaccine strain type 1, with a 3% genetic sequence difference between Sabin 1 vaccine and vaccine-derived poliovirus (VDPV) isolates. The three polioviruses are not identical but are closely related (>99% sequence homology); they also appear to share an identical recombination site with a nonpolio enterovirus in the noncapsid region of the genome.

Following cVDPV outbreaks in the Democratic Republic of Haiti (Hispaniola) during 2000-2001,1 the global polio laboratory network implemented additional testing requirements for all polioviruses under investigation, prospectively and retrospectively. Both an antigenic-based (ELISA) and a molecular-based test (probe hybridization) are used to determine whether a poliovirus is wild or derived from vaccine (i.e., intratypic differentiation [ITD]). Divergent ITD results (one test showing vaccine-derived and the other wild-type virus) for any poliovirus isolate now require genomic sequencing of the suspect isolates. Retrospective testing of >2,000 vaccine-related isolates from AFP cases globally has revealed no additional cVDPVs, although testing results of other isolates in the laboratory network are pending. The cVDPVs from the Philippines were detected after the implementation of new testing requirements for prospective virus investigations.

In response to these cases, the Department of Health in the Philippines (1) enhanced surveillance by active record review for AFP cases in hospitals and other health-care facilities in the affected and neighboring provinces, (2) established surveillance to conduct virologic investigations of aseptic meningitis at major health-care facilities, (3) collected stool samples from healthy contacts of case-patients, (4) conducted field investigations of clustered AFP cases to determine the extent of cVDPV circulation, and (5) assessed polio vaccination coverage in these communities. The investigations have found no unreported cases, although some AFP cases remain under investigation. To interrupt cVDPV circulation, a large-scale mass vaccination campaign with OPV is planned.

Low routine vaccination coverage is one of the most important causes of VDPV. Because the location of the originating events is unknown, the contribution of other factors is difficult to assess; however, a combination of two concurrent events within the virus is necessary for cVDPV emergence: reversion of attenuating mutations to increase neurovirulence, and a presumed increase in transmission characteristics that might be related to recombination with a nonpolio enterovirus. The molecular basis for the second property is not understood.

Wild poliovirus was last reported in the Philippines in 1993,2 and national vaccination rounds were last conducted in the Philippines in 1997 followed by subnational immunization days in 1998 and 1999. Among the areas covered were Cebu, Davao, Manila, and parts of Mindanao; however, coverage did not extend to the three provinces now reporting cVDPV cases. Routine coverage with 3 OPV doses has been approximately 80% nationwide since the early 1990s; however, coverage gaps are likely, particularly in slum areas.

Travelers to the Philippines should ensure that they are vaccinated appropriately against polio according to national recommendations.3

REFERENCES
3 available

Revised ACIP Recommendation for Avoiding Pregnancy After Receiving a Rubella-Containing Vaccine

ON OCTOBER 18, 2001, THE ADVISORY Committee on Immunization Practices (ACIP) reviewed data from several sources indicating that no cases of congenital rubella syndrome (CRS) had been identified among infants born to women who were vaccinated inadvertently against rubella within 3 months or early in pregnancy. On the basis of these data, ACIP shortened its recommended period to avoid pregnancy after receipt of rubella-containing vaccine from 3 months to 28 days.

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Data were available from the U.S. Rubella Vaccine in Pregnancy Registry, the U.K. National Congenital Rubella Surveillance Programme (National Congenital Registry Surveillance Programme, unpublished data, 2001: P. Tookey, Ph.D., Center of Paediatric Epidemiology and Biostatistics, Institute of Child Health, London, personal communication, April 2001), and Sweden and Germany (G. Enders, M.D., Laboratory of Enders and Partners, and Institute for Virology, Infectology, and Epidemiology, personal communication, September 2001) on 680 live births to susceptible women who were inadvertently vaccinated 3 months before or during pregnancy with one of three rubella vaccines (HPV-77, Cendehill, or RA 27/3). None of the infants was born with CRS. However, a small theoretical risk of 0.5% (upper bound of 95% confidence limit=0.05%) cannot be ruled out. Limiting the analysis to the 293 infants born to susceptible mothers vaccinated 1-2 weeks before to 4-6 weeks after conception, the maximum theoretical risk is 1.3%. This risk is substantially less than the greater than or equal to 20% risk for CRS associated with maternal infection during the first 20 weeks of pregnancy.

Measles-mumps-rubella (MMR) vaccine and its component vaccines should not be administered to women known to be pregnant. Because a risk to the fetus from administration of these live virus vaccines cannot be excluded for theoretical reasons, women should be counseled to avoid becoming pregnant for 28 days after vaccination with measles or mumps vaccines or MMR or other rubella-containing vaccines.

The goal of the U.S. rubella vaccination program is to prevent congenital rubella infection. ACIP recommended that MMR vaccine should be offered to all women of childbearing age (i.e., adolescent girls and premenopausal women) who do not have acceptable evidence of rubella immunity.

Most rubella cases in the United States occur among young Hispanic adults born outside the United States, and most infants with CRS are born to foreign-born mothers. Ensuring immunity in women of childbearing age, especially those at highest risk for exposure, will help to prevent CRS.

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Coccidioidomycosis Among Persons Attending the World Championship of Model Airplane Flying—Kern County, California, October 2001

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1 figure omitted

On December 4, 2001, CDC was notified by the United Kingdom (UK) Public Health Laboratory Service (PHLS) of a UK resident aged 72 years who had culture-confirmed coccidioidomycosis (i.e., Valley fever) diagnosed in early December. During October 8-12, the patient had attended the world championship of model airplane flying in Lost Hills, California, located in Kern County in the Central Valley of California, an area where coccidioidomycosis is highly endemic. The patient had influenza-like symptoms on approximately October 25, 1 week after returning from Lost Hills. CDC, in collaboration with UK PHLS and the California Department of Health Services, is conducting an investigation.

The championship was an international event with competing teams from 30 countries in the Americas, Europe, and the Pacific. Each participating team had up to 11 members. In addition, several spectators may have traveled with each team.

Coccidioidomycosis is caused by inhalation of arthrospores of the dimorphic fungus Coccidioides immitis. Outbreaks typically have occurred following dust-generating events such as archaeologic digs. Forty percent of newly infected persons acquire a self-limited influenza-like syndrome with fever, chest pain, cough, malaise, chills, night sweats, arthralgias, and rash. Disseminated disease may develop involving the meninges, bones, joints, skin, and soft tissues. Infants, pregnant women, persons of Filipino and African descent, and immunosuppressed persons (e.g., those on chronic steroids or with acquired immunodeficiency syndrome) are at increased risk for disseminated infection. Treatment with antifungal drugs usually is required only for severe or disseminated disease.

Coccidioidomycosis is diagnosed by culture, histopathology, or serology. Serologic criteria for diagnosis include detection of coccidioidal IgG by immunodiffusion, enzyme immunoassay (ELA), latex agglutination, or tube precipitation, or by detection of rising IgG titers by immunodiffusion, ELA, or complement fixation.

Coccidioidomycosis should be considered in the differential diagnosis for persons with a clinically compatible illness and with a history of travel to this event. Persons who attended this event and who acquire symptoms should seek appropriate medical care. Clinical evaluation should include a serum specimen for IgG and IgM titers and appropriate cultures if evidence of disseminated disease exists.

Health-care providers or championship participants and spectators from California are encouraged to contact the California Department of Health Services at 619-692-8664 or kern6@cdc.gov to discuss the need for testing. Other participants, spectators, or health-care providers in the United States or abroad may contact CDC’s Mycotic Diseases Branch at 404-639-1299 or tnc4@cdc.gov.

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