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Editorial Note: The number of new HIV infections among MSM at public HIV-testing sites in San Francisco and Los Angeles did not increase during 1999–2002, a period when syphilis cases among MSM increased substantially in both cities. Within the SFCC population, no temporal correlation was detected between an increase in the number of MSM P&S syphilis cases and the rates of new HIV infections among MSM who received HIV testing at this STD clinic. Whether the syphilis outbreaks are sentinel events indicating increased risk behavior that could eventually result in increased HIV incidence is not known.

The findings of this ecological analysis are subject to at least five limitations. First, whereas the overall P&S syphilis morbidity data were reported from both private and public providers, with the majority of MSM P&S syphilis cases being reported from private sources, HIV incidence (San Francisco) and new HIV diagnoses (Los Angeles) could be examined only for select populations at publicly funded HIV-testing sites. MSM attending public HIV-testing venues might differ in their demographics and risk behaviors from MSM who seek HIV testing from private providers or who have not been HIV tested. Second, changes in testing practices and number and characteristics of MSM in the two public HIV-testing populations might weaken inferences about trends in HIV incidence or new HIV diagnoses among these populations. Analyses might include persons who tested anonymously and repeatedly at SFCC, AHP, and Los Angeles HIV-testing sites, and potential changes in repeat HIV-testing patterns over time could affect HIV incidence trends. Third, the proportion of oral HIV antibody tests performed for MSM at AHP sites increased from 11% in 1998 to 36% in 2002, thus increasing the proportion of patients tested who were excluded from STARHS-based estimates of HIV incidence. Fourth, STARHS might misclassify a small percentage of persons with long-standing infection as recently infected and vice versa (*9,10*). Finally, the SFCC estimate of HIV incidence among MSM with P&S syphilis (13.9% per year) has wide associated variability (95% CI = 0.3–27.5) and must be interpreted with caution because not all male syphilis patients accepted HIV testing.

Despite the high HIV incidence in men with P&S syphilis, HIV incidence rates among MSM tested at large public sites in San Francisco and Los Angeles did not increase during 1999–2002. This stability likely is because 1) the number of new syphilis cases is small compared with the numbers of MSM at risk for HIV infection and 2) in both cities more than half of the MSM P&S syphilis patients had longstanding HIV infection before they acquired syphilis. However, if the outbreaks of syphilis continue unabated, HIV incidence among MSM at public HIV-testing sites and in the larger MSM community might increase. Recommendations include behavioral risk assessment, frequent STD screening, and prompt treatment of syphilis in HIV-infected persons and their partners to control syphilis outbreaks and prevent a potential increase in HIV infections.

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Adult Blood Lead Epidemiology and Surveillance — United States, 2002

CDC's state-based Adult Blood Lead Epidemiology and Surveillance (ABLES) program tracks laboratory-reported blood lead levels (BLLs) in adults. A national health objective for 2010 is to reduce to zero the number of adults with BLLs

≥25 μg/dL (objective no. 20-07) (*1*). A second key ABLES measurement is BLLs ≥40 μg/dL, the level under which the Occupational Safety and Health Administration allows workers to return to work after being removed with an elevated BLL, and the level under which an annual medical evaluation of health effects related to lead exposure is required (*2,3*). The most recent ABLES report provided data collected during 1994–2001 (*4*). This report presents ABLES data for 2002, the first year that individual rather than summary data were collected. The 2002 data indicate that approximately 95% of adult lead exposures were occupational, 94% of those exposed were male, and 91% were aged 25–64 years. The findings also indicated that the national decline in the number of adults with elevated BLLs continued in 2002; however, even greater prevention activities, particularly in work environments, will be necessary to achieve the 2010 health objective.

Nationwide Magnitude and Trend

During 2002, a total of 10,658 adults from 35 states were reported with BLLs ≥25 μg/dL (Figure 1). During 2001, a total of 9,943 adults from 23 states were reported with BLLs ≥25 μg/dL (*4*). To compare yearly totals, the numbers of adults with elevated BLLs from each state were divided by the state's annual employed population aged ≥16 years to determine an annual state rate (*5*). The mean of the state rates in each year was then calculated to derive the average state rate. The average state rate for 2002 was 10.1 per 100,000 employed population, representing an 18% decrease from 2001 (12.3 per 100,000 employed population) (Figure 2) (*4*). Of the 10,658 adults with BLLs ≥25 μg/dL in 2002, a total of 1.7 per 100,000 employed population (1,854) were reported with BLLs ≥40 μg/dL, a 37% decrease compared with the 2.7 per 100,000 employed population (2,009) that were reported in 2001* (*4*).

Occupational Sources of Exposure

In 2002, ABLES began to collect individual data rather than summary data. These individual data for adults with BLLs ≥25 μg/dL included Standard Industrial Classification (SIC) codes for the industries in which they worked and information regarding nonoccupational exposures. Twenty-seven of the 35 ABLES states provided SIC codes for 6,540 adults. These 27 states reported an additional 1,257 adults for whom SIC codes were unknown or unavailable. By industrial sector, among the 6,540 adults, 58% (3,771) were exposed in the manufacturing industry; 22% (1,458) in the construction

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* Rates differ slightly from those previously published (*4*) because the employed populations have been updated by the Bureau of Labor Statistics' Current Population Survey (*5*).

FIGURE 1. Rate* of adult blood lead levels ≥25 μg/dL, by state — Adult Blood Lead Epidemiology and Surveillance program[†], United States, 2002
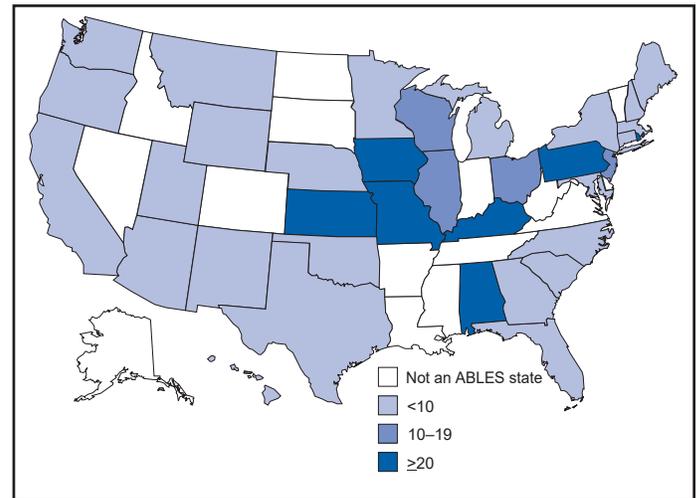
- ☐ Not an ABLES state
- ◼ <10
- ◼ 10–19
- ◼ ≥20

* Per 100,000 employed persons aged ≥16 years, according to the Bureau of Labor Statistics' Current Population Survey.
[†] Alabama, Arizona, California, Connecticut, Florida, Georgia, Hawaii, Illinois, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Washington, Wisconsin, and Wyoming.

FIGURE 2. Average state rate* of adult elevated blood lead levels (BLLs), by year — Adult Blood Lead Epidemiology and Surveillance program[†], United States, 1994–2002
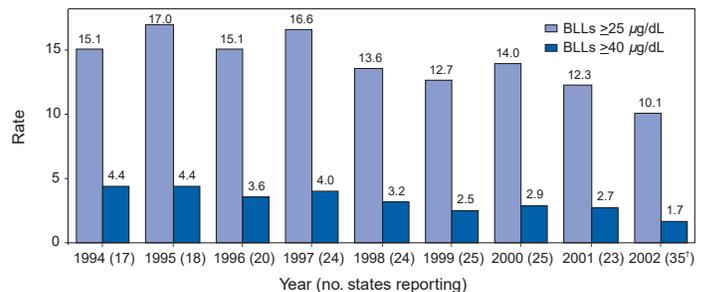
* Per 100,000 employed persons aged ≥16 years, according to the Bureau of Labor Statistics' Current Population Survey. The average is determined by first calculating individual state rates for each year, and then calculating the average.
[†] Alabama, Arizona, California, Connecticut, Florida, Georgia, Hawaii, Illinois, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Washington, Wisconsin, and Wyoming.

industry; 8% (524) in mining; 7% (450) in the wholesale and retail trades; 3% (209) in the service industry; and 2% (128) in transportation and public utilities; finance, insurance, and real estate; or public administration. A further breakdown of

occupational exposure is provided by using the 10 SIC codes with the most exposed workers (Table).

Nonoccupational Sources of Exposure

The same 27 states that provided SIC codes also provided exposure sources for 338 adults whose lead exposures were determined to be nonoccupational. This group represented 5% of the 6,878 (6,540 occupational plus 338 nonoccupational) adults with BLLs $\geq$25 μg/dL. By state, percentages of nonoccupational exposures ranged from $\geq$15% in Connecticut, Maine, Maryland, Michigan, and Utah to <1% in Hawaii, Iowa, Montana, Nebraska, and Wisconsin. Among the 338 persons exposed to nonoccupational sources, 23% (78) were exposed from shooting firearms, 19% (65) from remodeling or renovation activities, 13% (45) from hobbies (e.g., casting, ceramics, and stained glass), 11% (36) from retained bullets or gunshot wounds, 7% (26) from pica, and 4% (13) from ingesting lead-contaminated food or liquids or nontraditional medicines.

Distribution by State

For adults with BLLs $\geq$25 μg/dL, with the exception of Alabama, states reporting prevalence rates of $\geq$10 per 100,000 employed population are clustered in the Midwest and lower Northeast (Figure 1). Rates ranged from a high of 46.9 per 100,000 employed population for Kansas to 0.8 for Arizona. Eighteen of the 23 states that reported BLLs in both 2001 and 2002 reported lower rates in 2002. The annual state rates of adults with BLLs $\geq$40 μg/dL ranged from a high of 7.4 per 100,000 employed population for Alabama to no reported cases for Montana and Wyoming. Eighteen of the 23 states that reported in both 2001 and 2002 reported lower rates in 2002 for adults with BLLs $\geq$40 μg/dL.

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Editorial Note: ABLES data for 2002 indicated that the nationwide rates of elevated BLLs in adults decreased, continuing their decline since 1994 (Figure 2). The decrease in rates could have resulted from improved prevention measures and also changes in employment patterns (e.g., decline in manufacturing jobs). The 2002 ABLES data provide nationwide information on individual adults for the first time; these data are expected to become more complete as reporting states become more experienced with the new individual reporting requirements.

The findings in this report are subject to at least two limitations. First, inconsistencies exist in the numerators used to calculate the rates. The number of adults with elevated BLLs reported by ABLES states is underreported because 1) not all employers provide BLL testing to all lead-exposed workers and 2) certain laboratories might not report all tests. In addition, these factors can vary among the 35 ABLES states. Second, using the employed population as denominator has the advantage of excluding unemployed adults, most of whom have little or no risk for lead exposure. However, because the distribution of jobs that include lead exposure varies among the ABLES states, caution should be exercised in comparing rates among states. Additional information regarding interpretation of specific state ABLES data is available at http://www.cdc.gov/niosh/ables.html.

Despite improvements in control of lead exposures, this hazard remains an occupational health problem in the United States. CDC's ABLES program continues to enhance surveillance for this preventable condition by increasing the number of participating states and by identifying the sources of persistent overexposures, helping states focus their intervention, education, and prevention activities.

TABLE. Number of workers with elevated blood lead levels (BLLs), by industry — Adult Blood Lead Epidemiology and Surveillance (ABLES) program*, 2002

Industry (Standard Industrial Classification [sic])	$\geq$25 μg/dL	$\geq$40 μg/dL
Manufacture of storage batteries (SIC 3691)	1,494	141
Painting, paperhanging, and decorating (SIC 1721)	863	236
Mining of lead and zinc ores (SIC 1031)	522	70
Secondary smelting (SIC 3341)	384	63
Wholesale distribution of electrical apparatus and equipment, wiring supplies, and construction materials (SIC 5063)	351	55
Manufacture of primary batteries (SIC 3692)	209	15
Bridge tunnel and elevated highway construction (SIC 1622)	149	16
Special trade contractors (e.g., lead abatement workers) (SIC 1799)	144	33
Primary smelting (SIC 3339)	121	17
Auto repair shops (e.g., radiator repair) (SIC 7539)	106	24

* A total of 27 of 35 ABLES states reported; eight states (Alabama, Arizona, Georgia, Kentucky, North Carolina, Pennsylvania, Rhode Island, and Wyoming) did not track BLLs by SIC code.

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Lead Poisoning Associated with Ayurvedic Medications — Five States, 2000–2003

Although approximately 95% of lead poisoning among U.S. adults results from occupational exposure (*1*), lead poisoning also can occur from use of traditional or folk remedies (*2–5*). Ayurveda is a traditional form of medicine practiced in India and other South Asian countries. Ayurvedic medications can contain herbs, minerals, metals, or animal products and are made in standardized and nonstandardized formulations (*2*). During 2000–2003, a total of 12 cases of lead poisoning among adults in five states associated with ayurvedic medications or remedies were reported to CDC (Table). This report summarizes these 12 cases. Culturally appropriate educational efforts are needed to inform persons in populations using traditional or folk medications of the potential health risks posed by these remedies.

The first three cases described in this report were reported to CDC by staff at Dartmouth Hitchcock Medical Center at Dartmouth Medical School, New Hampshire; the California Childhood Lead Poisoning Prevention Program; and the California Department of Health Services. To ascertain whether other lead poisoning cases associated with ayurvedic medicines had occurred, an alert was posted on the *Epidemic Information Exchange* (*Epi-X*), and findings from the cases in California were posted on the Adult Blood Lead Epidemiology and Surveillance (ABLES) listserv. Nine additional cases were reported by state health departments in Massachusetts, New York, and Texas (Table).

Case Reports

New Hampshire. A woman aged 37 years with rheumatoid arthritis visited an emergency department (ED) with diffuse abdominal pain, nausea, and vomiting of 6 days' duration. Tests revealed microcytic anemia, moderate basophilic stippling, and no identifiable source of blood loss. Her blood lead level (BLL) was 81 μg/dL (geometric mean BLL = 1.75 μg/dL for U.S. population aged $\geq$20 years [*6*]), and her zinc protoporphyrin (ZPP) concentration was 286 μg/dL (normal: <35 μg/dL [*7*]). She reported ingesting five different traditional medications (two powders and three tablets) obtained from an ayurvedic physician in India for her rheumatoid arthritis. Analysis of the two powders revealed 17,000 and 12,000 parts per million (ppm) lead, respectively, and 60–100 ppm lead in the three tablets. She began oral chelation therapy; 1 week after completion, her BLL was 35 μg/dL. Her

TABLE. Reported cases of adult lead poisoning related to ayurvedic medications, by state and selected characteristics — United States, 2000–2003

State	Year	Age (yrs)	Sex	Patient's country of origin	BLL* at presentation (μg/dL)	Type of ayurvedic medications ingested	Lead concentration of medications (ppm)	Received chelation therapy
New Hampshire	2001	37	Female	India	81	Two powders, three tablets	Powders: 12,000–17,000 Tablets: 60–100	Yes
California	2003	31	Female	India	112	Nine medications, including pill taken four times daily	Pill taken four times daily: 73,900; Three others: 21, 65, and 285	Yes
California	2003	34	Male	India	80	10 powders, tablets, syrups	Tablet: 78,000; Pill: 36	Yes
Massachusetts	2002	62	Male	India	89	Guglu tablets	14,000	Yes
Massachusetts	2002	56	Female	India	60	Guglu tablets	14,000	Yes
Massachusetts	2003	19	Female	Nepal	46	Sundari Kalp (pill and liquid)	Pill: 96,000; Liquid: 0	Yes
New York	2000	25	Female	India	91	Pill	79,000	Yes
New York	2001	52	Male	India	49	Unknown form	Not known	Not known
New York	2000	57	Female	India	27	Unknown form	Not known	No
New York	2000	40	Female	India	92	Jambrulin	44,000	Yes
New York	2001	56	Male	India	100	Powder	Not known	Yes
Texas	2003	50	Male	Not stated	92	Jambrulin	22,700–26,700	Yes

* Blood lead level.