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Restaurant Menu Labeling Use Among Adults — 17 States, 2012

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Many persons underestimate the calories in restaurant foods (*1*). Increased attention has been given to menu labeling (ML) as a way to provide consumers with point-of-purchase information that can help them reduce calorie intake and make healthier dietary choices (*1–3*). In 2010, a federal law was passed requiring restaurants with 20 or more establishments to display calorie information on menus and menu boards.* The regulations to implement this federal law have not been finalized, but some states and local jurisdictions have implemented their own ML policies, and many restaurants have already begun providing ML. To assess fast food and chain restaurant ML use by state and by demographic subgroup, CDC examined self-reported ML use by adults in 17 states that used the Sugar-Sweetened Beverages and Menu Labeling optional module in the 2012 Behavioral Risk Factor Surveillance System (BRFSS) survey. Based on approximately 97% of adult BRFSS respondents who noticed ML information at restaurants, the estimated overall proportion of ML users in the 17 states was 57.3% (range = 48.7% in Montana to 61.3% in New York). The prevalence of ML use was higher among women than men for all states; the patterns varied by age group and race/ethnicity across states. States and public health professionals can use these findings to track the use of ML and to develop targeted interventions to increase awareness and use of ML among nonusers.

BRFSS conducts an annual, state-based, random-digit–dialed landline and cellular telephone household survey of noninstitutionalized, civilian U.S. adults. It uses a complex multistage cluster sampling design to select a representative sample and weighting by iterative proportional fitting to adjust for nonresponse, noncoverage, and selection bias (*4*). A core module is administered to all BRFSS respondents and states can add topic-specific optional modules. In 2012, a ML question was offered in the Sugar-Sweetened Beverages and Menu Labeling optional module that was administered by 18 states in their combined landline and cellular survey. One state, California, was dropped from this analysis because of a high proportion of missing data for the ML question (58%). The median survey response rate for combined landline and cellular telephone respondents in the 17 states (Table 1) was 47.0% (range = 34.0%–60.4%).†

The ML question was, "The next question is about eating out at fast food and chain restaurants. When calorie information is available in the restaurant, how often does this information help you decide what to order?" Valid response options were "always," "most of the time," "about half the time," "sometimes," and "never." The potential respondent population included 118,013 adults in 17 states. The analytic sample was limited to those who visited restaurants and noticed ML. Consequently, 10,548 respondents who said they "never noticed or never looked for calorie information" (2.2%), "usually cannot find calorie information" (0.3%), or "do not eat at fast food or chain restaurants" (6.4%) were excluded.

* Menu and vending machine labeling requirements available at http://www.fda.gov/food/ingredientspackaginglabeling/labelingnutrition/ucm217762.htm.

† BRFSS response rates available at http://www.cdc.gov/brfss/annual_data/2012/pdf/summarydataqualityreport2012_20130712.pdf.

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TABLE 1. Fast food and chain restaurant menu labeling use among U.S. adults, by state — Behavioral Risk Factor Surveillance System, 17 states, 2012

State	No.†	Menu-labeling user* Weighted proportion (%)	(95% CI)
Delaware	4,481	54.1	(52.1–56.1)
Georgia	5,041	56.7	(54.5–58.4)
Hawaii	6,083	60.2	(58.3–62.1)
Iowa	3,047	52.2	(49.9–54.4)
Kansas	5,265	51.3	(49.4–53.1)
Maryland	5,236	59.1	(56.7–61.6)
Minnesota	10,435	53.7	(52.4–55.0)
Mississippi	6,189	56.3	(54.4–58.1)
Montana	7,588	48.7	(47.2–50.2)
Nebraska	11,241	54.5	(53.2–55.7)
Nevada	4,086	53.9	(51.6–56.2)
New Hampshire	6,541	54.8	(53.0–56.6)
New Jersey	4,168	59.0	(56.7–61.2)
New York	4,695	61.3	(59.3–63.4)
Oklahoma	3,601	55.0	(52.8–57.2)
South Dakota	6,938	52.5	(50.6–54.4)
Tennessee	5,506	57.8	(55.9–59.6)
Total	**100,141**	**57.3**	**(56.6–57.9)**

Abbreviation: CI = confidence interval.
* Determined by responses of "always," "most of the time," "about half of the time," and "sometimes" to the question, "When calorie information is available in the restaurant, how often does this information help you decide what to order?"
† Persons who reported they do not eat at fast food restaurants, could not find menu labeling, or never noticed menu labeling were excluded (8.9%).

Another 7,324 respondents (6.2%) were excluded because of missing data for the ML question. Respondents were categorized into two groups: ML users (always [11.9%], most of the time [13.7%], about half the time [8.8%], sometimes [22.8%]) and nonusers (42.7%) (Table 2). Data analyses were performed with statistical software to account for the complex sampling design. Chi-square tests were used to determine if ML use differed by age group, sex, and race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, or non-Hispanic other races) for each state, and a p-value <0.05 was considered statistically significant. Prevalence estimates with sample sizes <50 or relative standard errors ≥30% were considered unstable and were not reported.§

In 2012, an estimated 57.3% of adults in the 17 states were ML users (Table 1). The proportion of ML users ranged from highs of 61.3% in New York and 60.2% in Hawaii to a low of 48.7% in Montana.

In the 17 states, the weighted prevalence of ML use was highest among women (66.8%) (Table 2). In each state, ML use was greater for women than men, with the highest proportion of ML female users in New York (71.0%) and Maryland (68.0%). The pattern of ML use by age group and race/ethnicity varied among the states.

Discussion

In 2012, among adults who noticed ML information at fast food and chain restaurants, 57.3% were restaurant ML users. This is similar to the estimated 52% of BRFSS respondents in three states (Hawaii, Minnesota, and Wisconsin) who said

§ Comparability of Data BRFSS 2012 available at http://www.cdc.gov/brfss/annual_data/2012/pdf/compare_2012.pdf.

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TABLE 2. Proportion of fast food and chain restaurant menu-labeling users,* by state, age group, sex, and race/ethnicity — Behavioral Risk Factor Surveillance System, 17 states, 2012

	Menu-labeling user Weighted % (95% CI)†								
	Age group (n = 99,383)			Sex (n = 100,141)§		Race/Ethnicity (n = 96,400)			
State	18–34 yrs	35–54 yrs	≥55 yrs	Men	Women	White, non-Hispanic	Black, non-Hispanic	Hispanic	Other, non-Hispanic¶
Delaware	54.5 (50.1–58.8)	56.5 (53.1–59.9)	51.2 (48.7–54.1)	45.0 (41.8–48.1)	62.4 (59.9–64.9)	53.8 (51.6–56.0)	55.0 (50.6–60.5)	47.9 (37.1–58.8)	65.4 (53.7–77.2)
Georgia	52.8** (48.3–57.3)	59.8** (56.7–62.9)	56.1** (53.7–58.6)	47.9 (44.8–51.0)	64.1 (61.7–66.5)	55.7†† (53.3–58.0)	59.5†† (55.6–63.4)	48.9†† (39.8–58.0)	68.6†† (59.3–78.0)
Hawaii	64.4** (60.8–68.0)	60.0** (56.6–63.3)	57.1** (54.3–59.9)	54.1 (51.3–56.8)	66.4 (63.9–69.0)	54.9†† (51.4–58.4)	48.5†† (28.6–68.3)	64.3†† (57.4–71.2)	61.2†† (58.2–64.1)
Iowa	49.7 (44.5–55.0)	55.3 (51.6–58.9)	51.1 (48.4–53.8)	38.6 (35.3–41.9)	65.1 (62.2–68.0)	52.5 (50.2–54.8)	—§§	51.4 (37.1–65.7)	—§§
Kansas	51.6 (47.5–55.7)	53.4 (50.2–56.6)	48.9 (46.7–51.1)	40.4 (37.6–43.2)	61.9 (59.6–64.1)	51.6 (49.7–53.5)	52.7 (43.1–62.2)	48.3 (39.4–57.2)	55.5 (43.7–67.3)
Maryland	59.8** (53.8–65.8)	61.1** (57.5–64.7)	56.0** (53.1–59.0)	49.2 (45.4–53.1)	68.0 (65.1–71.0)	58.3 (55.4–61.2)	59.8 (54.9–64.7)	59.1 (46.5–71.7)	71.7 (61.9–81.5)
Minnesota	51.6 (48.8–54.5)	54.9 (52.8–57.0)	54.3 (52.5–56.1)	41.8 (39.9–43.7)	65.3 (63.6–66.9)	53.6 (52.2–54.9)	53.6 (45.7–61.5)	55.3 (47.2–63.3)	58.3 (50.9–65.6)
Mississippi	59.1 (55.0–63.1)	56.3 (53.4–59.2)	53.6 (51.5–55.7)	46.4 (43.5–49.3)	65.1 (63.0–67.3)	54.2†† (52.0–56.4)	60.4†† (57.2–63.5)	65.1†† (50.4–79.7)	50.5†† (34.9–66.2)
Montana	47.1 (43.8–50.5)	51.0 (48.4–53.6)	47.9 (45.9–49.9)	36.3 (34.2–38.4)	61.0 (59.0–63.0)	48.8 (47.2–50.3)	—§§	48.3 (36.2–60.4)	50.1 (43.8–56.5)
Nebraska	53.6 (50.9–56.3)	56.8 (54.6–59.0)	53.0 (51.3–54.8)	42.1 (40.2–44.0)	66.5 (64.9–68.1)	54.1 (52.8–55.4)	60.9 (53.7–68.1)	55.8 (49.9–61.6)	51.0 (42.0–59.9)
Nevada	54.6 (50.0–59.3)	54.5 (50.6–58.3)	52.5 (49.1–55.8)	44.2 (40.8–47.5)	63.5 (60.7–66.4)	52.2†† (49.5–54.8)	55.7†† (46.5–65.0)	53.0†† (47.8–58.3)	67.0†† (57.8–76.2)
New Hampshire	52,2 (47.4–57.0)	56.2 (53.5–59.0)	55.1 (53.0, 57.1)	43.2 (40.6–45.8)	65.8 (63.5–68.1)	54.3 (52.5–56.1)	—§§	70.2 (54.3–86.0)	56.7 (46.1–67.3)
New Jersey	57.7** (52.3–63.0)	62.5** (59.1–65.8)	55.7** (52.6, 58.8)	49.8 (46.4–53.2)	67.4 (64.7–70.2)	57.8†† (55.2–60.4)	60.8†† (54.0–67.5)	52.9†† (46.7–59.1)	74.3†† (66.6–2.1)
New York	61.3 (56.9–65.8)	63.2 (60.0–66.4)	59.2 (56.2, 62.3)	50.6 (47.5–53.7)	71.0 (68.4–73.5)	60.7 (58.4–62.9)	59.0 (52.3–65.6)	65.2 (59.9–70.6)	64.7 (55.1–74.3)
Oklahoma	58.8** (54.0–63.7)	54.8** (51.2–58.3)	51.9** (49.1, 54.6)	46.0 (42.6–49.4)	63.8 (61.1–66.5)	54.7 (52.3–57.2)	53.3 (43.8–62.7)	57.3 (48.6–65.9)	60.1 (52.1–68.2)
South Dakota	52.3 (48.8–55.7)	54.5 (51.2–57.9)	50.7 (47.7, 53.7)	39.1 (36.5–41.7)	65.3 (62.9–67.8)	52.7 (50.7–54.7)	—§§	58.0 (44.0–72.0)	52.2 (45.5–58.8)
Tennessee	62.7** (58.5–67.0)	59.7** (56.7–62.8)	51.8** (49.4, 54.2)	47.2 (44.2–50.2)	67.1 (65.0–69.2)	57.2 (55.2–59.2)	58.3 (53.3–63.4)	69.6 (52.5–86.7)	62.0 (47.0–77.0)
Total¶¶	**57.1 (55.6–58.6)**	**59.4 (58.3–60.5)**	**55.1 (54.1–56.0)**	**46.9 (45.9–47.9)**	**66.8 (65.9–67.6)**	**56.2 (55.5–56.9)**	**58.9 (56.8–61.1)**	**58.2 (55.4–60.9)**	**65.0 (61.6–68.3)**

Abbreviation: CI = confidence interval.

* Determined by responses of "always," "most of the time," "about half of the time," and "sometimes" to the question, "When calorie information is available in the restaurant, how often does this information help you decide what to order?"

† Chi-square tests were used to examine the differences in proportion of menu labeling users by age group, sex, and race/ethnicity in each state, and for the total.

§ For sex specific values, proportions significantly varied in all states; p<0.05.

¶ Non-Hispanic other race included Asian, Hawaiian or Pacific Islander, American Indian/Alaska Native, and multiracial groups.

** Within state comparison, proportions significantly varied by age group; p<0.05.

†† Within state comparison, proportions significantly varied by race/ethnicity; p<0.05.

§§ Data where the sample sizes were <50 or the prevalence relative standard errors were ≥30% were considered unstable and were not reported.

¶¶ For all tests, p<0.05.

in 2011 that they were ML users (*5*). In aggregate and in all states, women more often reported using ML than men. Although adults aged 35–54 years and those in non-Hispanic other racial/ethnic groups in aggregate had the highest proportion of ML users, no consistent patterns by race/ethnicity were found across states.

Among the states, some differences in ML use were noted. The prevalence of ML use in New York overall was 12.6 percentage points higher than in Montana. The reasons for differences in ML use are unclear. Factors that affect ML use, such as requirements that food service establishments display menu item calorie counts, as in New York City and several New York counties (e.g., Suffolk and Albany),¶ and promotional activities in restaurants (*2*) might have led to the variations across states.

¶ Additional information available at http://cspinet.org/new/pdf/ml_map.pdf.

What is already known on this topic?

Menu labeling (ML) can help consumers purchase items with fewer calories when eating out. An analysis of the Behavioral Risk Factor Surveillance System (BRFSS) data from Hawaii, Minnesota, and Wisconsin indicated that 52.0% of adults in the three states used ML in 2011.

What is added by this report?

In 2012, among adult BRFSS respondents in 17 states who noticed ML information at fast food or chain restaurants, 57.3% indicated that they used ML at least some of the time. Across all states, women were more likely than men to report using ML. ML use by age group and race/ethnicity varied by states.

What are the implications for public health practice?

Targeted health communication strategies might help improve awareness and use of ML and benefit adults who want to make lower calorie choices at restaurants.

Although ML use was higher among women in all of the states, ML use by age group and race/ethnicity varied across states. Previous studies reported that when calorie information is available, women were more likely to see and use this information than men (*2,3,5–8*). Women might perceive ML to be more useful than men (*2,3*). One study found women's mean calories per purchase in restaurant chains and coffee chains decreased 18 months after implementation of ML, but men's did not change significantly (*6*). The reasons for differences in ML use by age group and race/ethnicity are unknown. Further research could help identify why these disparities exist and inform targeted interventions about ML use.

The findings in this report are subject to at least four limitations. First, ML data are self-reported, and no validation studies were conducted. Second, because the BRFSS median response rate in the 17 states was 47.0% (range = 34.0%−60.4%), nonresponse bias might have affected the results. Third, because only 17 states produced usable data, the results cannot be generalized to the entire U.S. adult population. Finally, information about ML users' food choices was not reported. Hence, data were not available to determine whether frequent or moderate ML users choose more healthful foods than nonusers.

For persons who want to reduce their caloric intake at restaurants, ML can help them select items with lower calorie content. Although research findings regarding the efficacy of ML use are inconsistent (*2*), some studies have found that persons who used calorie information purchased meals with about 100−140 fewer calories than those who did not see or use calorie information (*6,8*). Increasing appropriate use of ML might be achieved through health communication and social marketing strategies. For example, one study found that a health communication strategy that provided information on the recommended daily caloric requirement plus ML significantly reduced total calories consumed during and after the meal by 250 calories (*9*). Furthermore, using point-of-purchase approaches (e.g., highlighting healthful options) concurrently with ML might reinforce the selection of lower calorie, more healthful food and beverages (*2*). For example, ¡Por Vida!, a healthy menu initiative in San Antonio, Texas, has identified menu items that meet nutritional guidelines and lists menus and nutritional information online.** Lastly, engaging public health practitioners, restaurants, and other key stakeholders to assist in efforts to increase ML awareness and use might help patrons make more healthful food and beverage choices.

** Example available at http://www.porvidasa.com.

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Prevalence and Correlates of Cryptococcal Antigen Positivity Among AIDS Patients — United States, 1986–2012

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Cryptococcal meningitis (CM) is one of the leading opportunistic infections associated with human immunodeficiency virus (HIV) infection (*1*). The worldwide burden of CM among persons living with HIV/acquired immunodeficiency syndrome (AIDS) was estimated in 2009 to be 957,900 cases, with approximately 624,700 deaths annually (*1*). The high burden of CM globally comes despite the fact that cryptococcal antigen (CrAg) is detectable weeks before the onset of symptoms, allowing screening for cryptococcal infection and early treatment to prevent CM and CM-related mortality (*2*). However, few studies have been conducted in the United States to assess the prevalence of cryptococcal infection. To quantify the prevalence of undiagnosed cryptococcal infection in HIV-infected persons in the United States during 1986–2012, stored sera from 1,872 participants in the Multicenter AIDS Cohort Study and the Women's Interagency HIV Study with CD4 T-cell counts <100 cells/µL were screened for CrAg, using the CrAg Lateral Flow Assay (LFA) (Immy, Inc.). This report describes the results of that analysis, which indicated the overall prevalence of CrAg positivity in this population to be 2.9% (95% confidence interval [CI] = 2.2%–3.7%).

CrAg is detectable in serum a median of 3 weeks before the onset of symptoms of CM, making screening for serum CrAg and subsequent treatment of those with a positive test result a potential means of reducing CM-related mortality (*2*). In 2011, the World Health Organization declared early antiretroviral therapy (ART) initiation the most important and cost-effective preventive strategy to reduce the incidence and high mortality associated with CM. They further declared (as a conditional recommendation, given the low quality of evidence) that routine screening of and treatment for cryptococcal antigenemia might be considered before ART initiation for ART-naïve adults with a CD4 T-cell count <100 cells/µL in areas with a high prevalence (approximately 3%) of cryptococcal antigenemia.*

There are few data from the United States on the prevalence of cryptococcal antigenemia. To estimate the prevalence, stored sera collected from 1986–2012 from the Multicenter AIDS Cohort Study and the Women's Interagency HIV Study were screened for CrAg. To be eligible for the study, specimens needed to come from study participants who were HIV-infected, had a CD4 T-cell count <100 cells/µL, and had ≥0.5mL of stored serum available for testing. Sera from participants on and off ART were eligible for screening. Serum specimens randomly selected from those eligible were tested using the CrAg LFA. This is a Food and Drug Administration–cleared CrAg detection test, which demonstrated a sensitivity of 100% for the detection of CrAg in archived sera from 704 HIV-infected patients hospitalized for acute respiratory illness in Thailand (*3*). Chi-square and Student's t-tests were performed to test differences between those with positive and negative CrAg test results.

A total of 1,872 serum specimens from the Multicenter AIDS Cohort Study and the Women's Interagency HIV Study were screened. The median age of the study population was 39 years (range = 20–70 years). Of the 1,872 specimens, 55 (2.9% [CI = 2.2%–3.7%]) were positive for CrAg. No significant differences were observed in the proportion of CrAg-positive specimens by specimen collection year, age, sex, study location, level of education, or race/ethnicity, except that persons of "other" ethnicity (i.e., not white, black, or Hispanic) had a prevalence of 6.4% (CI = 3.9%–10.3%) (Table). Persons with a CD4 count >50 cells/µL were less likely to be CrAg-positive compared with persons with a CD4 count ≤50 cells/µL (1.7% [CI = 1.1%–2.7%] and 4.3% [CI = 3.2%–5.9%], respectively).

Discussion

Results from this U.S. study indicated a 2.9% (CI = 2.2%–3.7%) prevalence of cryptococcal antigenemia in advanced AIDS patients. However, within certain subgroups, CrAg prevalences were higher. Existing prevalence data for CrAg antigenemia are mostly from resource-limited settings and range from as low as 2% in northern Vietnam (*4*) to 21% in Benin City, Nigeria (*5*). South Africa, which began piloting CrAg screening in HIV-infected patients with CD4 T-cell counts <100 cells/µL, and treatment of those with positive CrAg tests in 2012, reported a prevalence of 5% in the 12 months after the initiation of that program.†

In the United States, early access to ART has reduced the morbidity and mortality attributable to CM (*6*). However, the

* Additional information available at http://www.who.int/hiv/pub/cryptococcal_disease2011.

† Additional information available at http://www.nicd.ac.za/assets/files/Monthly%20NICD%20Surveillance%20Report%20-%20January%202013.pdf.

TABLE. Selected characteristics of participants (N = 1,872) with tested specimens and cryptococcal antigen prevalence — Multicenter AIDS Cohort Study and Women's Interagency HIV Study, United States, 1986–2012

			Cryptococcal antigen prevalence	
Characteristic	**No.**	**(%)**	**(%)**	**(95% CI)**
Total	**1,872**	**(100)**	**2.9**	**(2.2–3.7)**
Sex				
Male	989	(53.3)	2.6	(1.7–3.8)
Female	866	(46.7)	3.3	(2.3–4.7)
Study location				
Baltimore, MD	241	(12.9)	3.0	(1.5–6.0)
Bronx, NY	183	(9.9)	4.3	(2.2–8.4)
Brooklyn, NY	162	(8.7)	1.9	(0.6–5.3)
Chicago, IL	342	(18.4)	0.5	(0.1–2.8)
District of Columbia	123	(6.6)	4.0	(1.7–9.1)
Los Angeles, CA	514	(27.7)	3.3	(2.1–5.2)
Pittsburgh, PA	187	(10.1)	4.2	(2.1–8.3)
San Francisco, CA	103	(5.6)	3.9	(1.5–9.5)
Race/Ethnicity				
White	849	(45.9)	2.5	(1.6–3.8)
Black	651	(35.2)	2.5	(1.5–4.0)
Hispanic	117	(6.3)	1.7	(0.5–6.7)
Other	234	(12.6)	6.4	(3.9–10.3)
Education				
High school or less	790	(42.9)	3.8	(2.7–5.4)
College	773	(42.1)	2.5	(1.6–3.8)
Graduate school	275	(14.9)	1.5	(0.6–3.9)
Period of specimen collection				
1986–1990	485	(26.3)	2.1	(1.1–3.8)
1991–1995	620	(33.7)	3.6	(2.4–5.3)
1996–2000	255	(13.9)	1.6	(0.6–4.0)
2001–2005	288	(15.6)	3.5	(1.9–6.3)
2006–2012	193	(10.5)	3.6	(1.8–7.3)
Age group (yrs)				
20–30	188	(10.0)	2.1	(0.8–5.4)
31–40	775	(41.4)	3.1	(2.1–4.6)
41–50	556	(29.7)	2.5	(1.5–4.2)
51–60	142	(7.6)	4.2	(2.0–8.9)
≥61	18	(9.6)	5.6	(1.0–25.8)
CD4 count				
>50 cells/μL	992	(53.0)	1.7	(1.1–2.7)
≤50 cells/μL	881	(47.1)	4.3	(3.2–5.9)
Receiving ART at time of specimen collection				
Yes	1,047	(55.9)	1.4	(1.0–2.1)
No	743	(39.7)	1.4	(1.0–2.1)

Abbreviations: CI = confidence interval; ART = antiretroviral therapy.

incidence of CM among those with AIDS remains between two and seven cases per 1,000 persons, with a mortality rate as high as 12% (*7*). Late presentation to care among HIV-infected persons remains a problem in the United States, with 38% of persons newly diagnosed with HIV infection receiving an AIDS diagnosis concurrently or within the next year; these "late presenters" are more likely to be diagnosed and to die from preventable opportunistic infections, including CM.[§]

The devastating health effects of CM are compounded by the substantial clinical and financial burdens incurred when treating the disease. Treatment of CM requires toxic drugs, such as amphotericin B, repeated procedures, such as lumbar punctures, and close monitoring, all of which require hospitalization. In the United States, the mean hospital stay for persons diagnosed with CM is 14.7 days, costing, on average, $50,000 (U.S.) for the entire hospital stay, and totaling $301.6 million spent per year treating CM (*7*). Those costs do not include the costs associated with complications, relapse, or outpatient care once a patient has been discharged. A proportion of CM cases are preventable, as was shown in an observational study conducted in Uganda: among ART-naïve, HIV-infected patients, with a CD4 T-cell count <100 cells/μL, the number needed to screen to prevent one case of CM was 11.3, and the number needed to screen to prevent one death was 15.9 (*8*). Therefore, screening would have tangible cost benefits because fewer cases of CM would mean less money spent on treating the disease. Several studies have examined the cost-effectiveness of CrAg screening. In a model using South African data, two screen-and-treat strategies, CrAg screening followed by high dose of fluconazole and CrAg screening followed by lumbar puncture, were compared to the standard of care, no screening (*9*). Both screen-and-treat strategies were more cost-effective than the standard of care. The least costly strategy was screening followed by high-dose fluconazole treatment, which was more cost-effective than the standard of care at prevalence levels ≥0.6%, lower than the estimated prevalences presented in this report (*9*).

The implementation of CrAg screening programs has begun in several countries, including South Africa, Rwanda, and Mozambique. However, in most of the world, including the United States, no recommendation for CrAg screening exists, despite the fact that a large number of HIV-infected persons present late to care every year, many of whom might benefit from CrAg screening. In 2013, the HIV Medicine Association of the Infectious Disease Society of America did not recommend routine screening for CrAg, but stated that screening "may be considered in selected patients with CD4 cell counts <50 cells/μL" (*10*).

Inclusion of CrAg screening in a "late presenter" care package for HIV-infected persons in the United States has several advantages. Treatment of patients with isolated cryptococcal antigenemia has been shown to prevent the development of CM and CM-related death (*7*). Additionally, because those with cryptococcal antigenemia would likely undergo a lumbar puncture to be evaluated for CM, screening would likely improve the early diagnosis of CM. Early diagnosis of CM would translate into a reduction in CM-related deaths because patients who receive early antifungal treatment have

[§] Additional information available at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5824a2.htm.

What is already known on this topic?

Cryptococcal meningitis is the leading opportunistic infection worldwide among persons infected with human immunodeficiency virus (HIV). No recent study of the prevalence of cryptococcal antigenemia among HIV-infected persons has been conducted in the United States.

What is added by this report?

Serum specimens from HIV-infected persons with low CD4 T-cell counts enrolled in studies in the United States during 1986–2012 were screened for cryptococcal antigen using a new lateral flow assay. The prevalence of cryptococcal antigenemia was 2.9% (95% confidence interval = 2.2%–3.7%).

What are the implications for public health practice?

The prevalence of cryptococcal infection among patients with advanced acquired immunodeficiency syndrome (AIDS) in the United States is high enough that screening for cryptococcal antigenemia might save lives and be cost-effective.

been shown to have better outcomes than those who receive delayed treatment (*8*).

This study has several limitations. First, the study spanned more than two decades and includes many participants who were diagnosed before the advent of highly active ART. Predictors of cryptococcal infection might be different among groups before and after the introduction of highly active ART. However, when CrAg results were compared by various periods and current ART use, no differences were found. Second, no lumbar puncture results were available to help determine what proportion of patients with a positive serum CrAg result had prior or incident CM. Finally, this study was conducted using participants from the Multicenter AIDS Cohort Study and Women's Interagency HIV Study, both of which include participants that might not be representative of the U.S. HIV/AIDS population.

These findings provide national CrAg seroprevalence data for HIV-infected persons with CD4 T-cell count <100 cells/μL in the United States. The findings show the prevalence to be above the published cost-effectiveness thresholds in resource-limited countries and on par with many other countries that are currently pursuing programs of routine CrAg screening and treatment. Based on these data, updated strategies for the prevention of CM among AIDS patients in the United States should be considered.

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Tobacco Use Among Youths — Argentina, 2007 and 2012

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Tobacco use is the leading preventable cause of deaths worldwide (*1*). The MPOWER package, the six recommended policies of the World Health Organization (WHO) to reverse the tobacco epidemic, strongly recommends monitoring tobacco use trends (*2*). Because evidence indicates that smoking addiction often starts before the age of 18 years (*3*), there is a need to monitor tobacco use among youths. During 2011, a National Tobacco Control Law was enacted in Argentina that included implementation of 100% smoke-free environments, a comprehensive advertising ban (prohibiting advertising, promotion, and sponsorship of cigarettes or tobacco products through any media or communications outlets), pictorial health warnings, and a prohibition against the sale of tobacco products through any means to persons aged <18 years (*4,5*). To ascertain trends in tobacco use among youths in Argentina, the Argentina Ministry of Health and CDC analyzed data from the Global Youth Tobacco Survey (GYTS) for 2007 and 2012 (the next year that it was administered in Argentina). The findings indicated that the overall proportion of youths aged approximately 13–15 years who reported ever smoking a cigarette declined from 52.0% in 2007 to 41.9% in 2012 with significant decreases among both males and females. In 2012, 52.5% of youths in Argentina reported secondhand smoke (SHS) exposure in their homes and 47.5% in enclosed public places in the 7 days preceding the survey. Increased public education and tobacco control efforts will be important to discouraging tobacco use and decreasing SHS exposure among youths in Argentina.

GYTS is a nationally representative, school-based survey of students in grades associated with the ages of 13–15 years and is designed to produce cross-sectional estimates for each country. GYTS uses standardized sample design, core questionnaire, and data collection procedures. The survey assists countries in fulfilling their obligations under the WHO Framework Convention on Tobacco Control to generate comparable data within and among countries. In Argentina, GYTS was conducted at a national level for the first time in 2007 (*6*) and repeated in 2012, under the coordination of the Ministry of Health. In 2007, the survey was completed by 4,926 students aged 13–15 years, with an overall response rate of 68.2%. In 2012, the survey was completed by 2,069 students aged 13–15 years, with an overall response rate of 76.9%.

GYTS uses a two-stage sample design with schools selected with the probability of selection proportional to school enrollment size. The classrooms within selected schools are chosen randomly, and all students in selected classes are invited to participate in the survey (*7*). The survey uses a globally standardized core questionnaire with a set of optional questions about tobacco use and key tobacco control indicators, which permit adaptation to meet the needs of the country. The questionnaire covers the following topics: tobacco use (smoking and smokeless), cessation, exposure to SHS, protobacco and antitobacco media and advertising, access to and ability to obtain tobacco products, and knowledge and attitudes about tobacco. The questionnaire is self-administered, uses scannable answer sheets, and is anonymous to ensure confidentiality.

For this report, statistical software was used to analyze weighted 2007 and 2012 Argentina GYTS data for the following categories: current cigarette smoker, frequent cigarette smoker, current smoker of other tobacco, ever smoked a cigarette, current smokeless tobacco user, current tobacco user, and exposure to SHS. Differences between rates were determined to be statistically significant by Student's t-test. The overall current cigarette smoker rate (the weighted percentage of respondents who reported having smoked a cigarette any time during the previous 30 days) was 24.5% in 2007 and 19.6% in 2012 (Table). Among females, the rates were 27.3% and 21.5%, respectively; among males, the rates were 21.1% and 17.4%, respectively. Rates of ever cigarette smoking (ever taking a puff on a cigarette) decreased from 52.0% in 2007 to 41.9% in 2012. Among females, the rate decreased from 54.8% to 43.3%; among males, the rate decreased from 48.9% to 40.5%.

The overall smokeless tobacco user rate was 4.3% in 2007 and 3.7% in 2012, a decrease that was not statistically significant, and remained higher among males than females (Table). The tobacco use rate (either smoked or smokeless) also showed a decrease that was not statistically significant, from 28.0% to 24.1%, and remained higher among females than males. In addition, the overall rates for frequent smoking (smoking on 20 or more days of the previous 30 days) were 5.6% in 2007 and 4.1% in 2012, and remained higher among females.

Exposure to SHS in enclosed public places decreased from 54.7% in 2007 to 47.5% in 2012 (Table). In 2012, 50.1% of females and 44.5% of males reported SHS exposure in enclosed public places. Rates were higher in 2012 for exposure to SHS inside the home than in enclosed public places: 52.5% overall, 55.7% among females, and 48.8% among males.

TABLE. Prevalence of tobacco use and exposure to secondhand smoke (SHS) among youths aged 13–15 years — Global Youth Tobacco Survey, Argentina, 2007 and 2012

	2007			2012			Overall percentage point change from 2007 to 2012	p-value*
	Overall	Males	Females	Overall	Males	Females		
	% (95% CI)			% (95% CI)				
Smoked tobacco use								
Current cigarette smokers†	24.5 (22.2–27.0)	21.1 (18.5–23.8)	27.3 (23.4–31.6)	19.6 (16.4–23.3)	17.4 (14.7–20.5)	21.5 (17.1–26.7)	-4.9	0.021
Frequent cigarette smokers§	5.6 (4.2–7.4)	4.9 (3.8–6.4)	6.0 (3.7–9.5)	4.1 (3.0–5.6)	3.1 (2.1–4.6)	5.0 (3.3–7.3)	-1.5	0.158
Current smokers of other tobacco¶	6.7 (5.6.8.1)	9.1 (7.4–11.2)	4.6 (3.5–6.2)	6.5 (5.0–8.3)	7.0 (5.4–9.1)	6.0 (4.3–8.2)	-0.2	0.810
Ever cigarette smokers**	52.0 (49.5–54.5)	48.9 (45.6–52.2)	54.8 (50.6–58.9)	41.9 (38.2–45.8)	40.5 (36.5–44.6)	43.3 (38.2–48.6)	-10.1	<0.001
Smokeless tobacco use								
Current smokeless tobacco users††	4.3 (3.5–5.2)	5.5 (4.3–6.9)	3.2 (2.4–4.3)	3.7 (2.9–4.8)	4.4 (3.2–6.1)	3.0 (2.0–4.5)	-0.6	0.420
Tobacco use								
Current tobacco users§§	28.0 (25.9–30.3)	26.1 (23.6–28.8)	29.7 (25.7–34.0)	24.1 (20.8–27.8)	22.7 (20.1–25.5)	25.4 (20.3–31.2)	-3.9	0.058
Exposure to SHS								
Exposure to SHS inside any enclosed public place	54.7 (51.9–57.4)	51.7 (48.3–55.2)	57.7 (54.4–61.0)	47.5 (43.1–51.9)	44.5 (39.7–49.4)	50.1 (44.6–55.7)	-13.6	0.006
Exposure to SHS inside the home	NA	NA	NA	52.5 (49.8–55.1)	48.8 (45.0–52.7)	55.7 (52.3–59.1)	NA	NA

Abbreviations: CI = confidence interval; NA = not available.
* Comparing overall values for 2007 and 2012.
† Smoked cigarettes any time during the preceding 30 days.
§ Smoked cigarettes on 20 or more of the preceding 30 days.
¶ Smoked tobacco other than cigarettes anytime during the preceding 30 days.
** Ever smoked cigarettes, even one or two puffs.
†† Used smokeless tobacco anytime during the preceding 30 days.
§§ Used smoked tobacco and/or smokeless tobacco anytime during the preceding 30 days.

Discussion

The findings in this report show a decrease in current use of tobacco among adolescents in Argentina. Although the current use rates for both males and females were lower in 2012 than in 2007, cigarette smoking rates (one or more cigarettes in the past 30 days) remained at approximately 20%; without further prevention efforts these rates will result in avoidable tobacco-related morbidity and mortality in this generation. Although the differences were not statistically significant, the prevalence of frequent cigarette smoking likely was higher among females (5.0%) when compared with males (3.1%), and the prevalence of current smokeless tobacco use (any use in the previous 30 days) likely was higher among males (4.4%) when compared with females (3.0%). These findings suggest that sex-specific tobacco control approaches among youths might merit consideration in Argentina. In addition, the observation that youths had high exposure rates to SHS in enclosed public places, similar to what has been reported in other regions (*8*), shows the challenge of protecting youths from public SHS. Finally, over half of youths in Argentina reported exposure to SHS in their homes, suggesting the importance of public education regarding the dangers of SHS exposure.

The findings in this report are subject to at least four limitations. First, because GYTS is limited to students, the survey is not representative of all youths aged 13–15 years. However, in Argentina as in most countries, the majority of persons in this age group attend public, private, or technical schools (*9*). Second, these data apply only to youths who were in school on the day of the survey and who completed the survey. Third, the survey response rates were 68.1% and 76.9% in 2007 and 2012, respectively, and nonresponse bias might have affected the results. Finally, data were based on the self-report of students, who might underreport or overreport their behaviors. The extent of this bias cannot be determined from these data; however, reliability studies in the United States have indicated good test/retest results for similar tobacco-related questions (*10*).

The findings that “ever tobacco” use among adolescent males and females is decreasing in Argentina are consistent with the decrease reported among adults in Argentina in the

What is already known on this topic?

Argentina has implemented work at the subnational level regarding smoke-free policies for more than a decade. The country conducted the Global Youth Tobacco Survey (GYTS) at a national level for the first time in 2007. The GYTS is a standardized, nationally representative, school-based survey of students aged approximately 13–15 years.

What is added by this report?

In 2012, Argentina repeated GYTS for the first time since 2007. The proportion of respondents who reported that they had ever puffed on a cigarette declined from 52.0% in 2007 to 41.9% in 2012. Frequent smoking (smoking ≥20 days in the previous 30 days) in 2012 was reported more commonly by females (5.0%) than males (3.1%), but was lower than in 2007 (6.0% and 4.9%, respectively). Current smokeless tobacco use was more commonly reported by males (4.4%) than females (3.0%). Secondhand smoke exposure was reported by a majority (52.5%) of students in their homes and by 47.5% in enclosed public places in the 7 days preceding the survey.

What are the implications for public health practice?

Despite progress, tobacco use remains a threat to the health of youths in Argentina. In 2012, approximately one fifth of youths aged 13–15 years were current smokers, and nearly half were exposed to secondhand smoke in enclosed public places. Efforts to reduce secondhand smoke and discourage tobacco use among youths are needed, and different approaches for females and males might be appropriate.

2012 Global Adult Tobacco Survey.* Although Argentina has not ratified the WHO Framework Convention on Tobacco Control, these findings could be partly related to the country's national tobacco control law in 2011 and to the work that has been done at a subnational level over more than a decade to create smoke-free environments.

WHO's MPOWER framework provides evidence-based interventions that countries can use to reduce tobacco use. Although Argentina has made progress on key components of MPOWER, including surveillance as evidenced by these data, many opportunities for prevention exist. For example, because price increases have been shown to be the most effective single measure to decrease consumption and discourage initiation among youths (*3*), increasing tobacco product prices might be an effective approach to promote further decline in youth smoking in Argentina. In addition, increased enforcement of the current national law could help to address the problem, including preventing access by youths to tobacco products, restricting advertising at point of sale, and protecting youths from SHS.

* Global Adult Tobacco Survey Argentina 2012 [Spanish]. Available at http://www.msal.gov.ar/ent/images/stories/vigilancia/pdf/GATS_FactSheetARG_FINAL.pdf.

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Interim CDC Guidance for Polio Vaccination for Travel to and from Countries Affected by Wild Poliovirus

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On July 7, 2014, this report was posted as an MMWR *Early Release on the* MMWR *website (http://www.cdc.gov/mmwr).*

In the prevaccine era, infection with wild poliovirus (WPV) was common worldwide, with seasonal peaks and epidemics in the summer and fall in temperate areas. The incidence of poliomyelitis in the United States declined rapidly after the licensure of inactivated polio vaccine (IPV) in 1955 and live oral polio vaccine (OPV) in the 1960s (*1*). The last cases of indigenously acquired WPV in the United States occurred in 1979, the last WPV case in a U.S. resident traveling abroad occurred in 1986, and the last WPV imported case was in 1993 (*2,3*). Since 2000, the United States has exclusively used IPV, resulting in prevention of 8–10 vaccine-associated paralytic poliomyelitis cases annually. In 2005, an unvaccinated U.S. adult traveling abroad acquired vaccine-associated paralytic poliomyelitis after contact with an infant recently vaccinated with OPV (*4*).

The Global Polio Eradication Initiative has made great progress in eradicating WPV, reducing the number of reported polio cases worldwide by >99% since the late 1980s. Only three countries remain in which WPV circulation has never been interrupted: Afghanistan, Nigeria, and Pakistan. However, polio could be brought into the United States from countries where WPV is circulating. During the last 6 months, 10 countries have had active transmission of WPV, and four of these countries have exported WPV to other countries. In the last 10 years, at least 40 polio-free countries have been affected through international travel (*5*).

In 2012, the completion of polio eradication was declared a programmatic emergency by the World Health Assembly (*6*). On May 5, 2014, the director-general of the World Health Organization (WHO) declared the international spread of polio to be a public health emergency of international concern under the authority of the International Health Regulations (*7*) and issued temporary vaccination recommendations for travelers from countries with active WPV transmission to prevent further spread of the disease (*8*). On June 2, 2014, CDC issued a health alert providing guidance to U.S. clinicians regarding new WHO polio vaccination requirements for travel by residents of and long-term visitors to countries with active poliovirus transmission (*9*). This report provides an update on CDC policy for polio vaccination of travelers for health protection. It also provides additional interim guidance for physicians whose U.S. resident patients will travel to or reside in affected countries for >4 weeks, to ensure those patients will have evidence of administration of polio vaccine (IPV or OPV) within 12 months of travel that might be required when they depart from countries with active poliovirus transmission. This interim guidance is to ensure compliance with WHO International Health Regulations temporary recommendations for countries designated as "polio-infected" to reduce the risk for exportation of WPV from those countries.

Vaccine Recommendations and Requirements

Advisory Committee on Immunization Practices (ACIP) and CDC recommendations are evidence-based and provide public health recommendations to the general public on the basis of the best available epidemiological and scientific data to prevent poliovirus infection. This includes recommendations for travelers visiting countries with WPV circulation in the last 12 months or countries and provinces where they will be in situations with a high risk for exposure to persons with imported poliovirus infection.

Three countries are still endemic for polio (Afghanistan, Nigeria, and Pakistan). Countries where WPV has circulated during the previous 12 months include those endemic countries and those with polio outbreaks or environmental evidence of active WPV circulation during this time (Cameroon, Ethiopia, Equatorial Guinea, Iraq, Israel, Somalia, and Syria). Travelers working in health-care settings, refugee camps, or other humanitarian aid settings in these and neighboring countries might be at particular risk for exposure to WPV.

Recommendations for vaccination under the International Health Regulations differ from ACIP and CDC recommendations and include exit requirements for proof of polio vaccination when leaving the country at borders or through airports. If implemented by a country, these requirements could be mandatory and are intended to prevent exportation of WPV.

Vaccine Recommendations for Travelers to Countries with WPV Circulation

Persons at greatest risk for acquiring polio are unvaccinated persons. In the United States, infants and children should be vaccinated against polio as part of a routine immunization series. Before traveling to areas with WPV circulation, all travelers should ensure that they have completed the recommended age-appropriate polio vaccine series and have received a booster dose, if necessary.*

Infants and Children

In the United States, all infants and children should receive 4 doses of IPV at ages 2, 4, and 6–18 months and 4–6 years (*10*). The final dose should be administered at age ≥4 years, regardless of the number of previous doses, and should be given ≥6 months after the previous dose. A fourth dose in the routine IPV series is not necessary if the third dose was administered at age ≥4 years and ≥6 months after the previous dose (*11*). Infants and children traveling to areas where there has been WPV circulation in the last 12 months should be vaccinated according to the routine schedule. If the routine series cannot be administered within the recommended intervals before protection is needed, an accelerated schedule can be used as follows: 1) the first dose should be given to infants aged ≥6 weeks, 2) the second and third doses should be administered ≥4 weeks after the previous doses, and 3) the minimum interval between the third and fourth doses is 6 months.

If the age-appropriate series is not completed before departure, the remaining IPV doses to complete a full series should be administered when feasible, at the intervals recommended for the accelerated schedule. If doses are needed while residing in the affected country, the polio vaccine that is available (IPV or OPV) may be administered.

Adults

Adults, who are traveling to areas where there has been WPV circulation in the last 12 months and who are unvaccinated, incompletely vaccinated, or whose vaccination status is unknown should receive a series of 3 doses: 2 doses of IPV administered at an interval of 4–8 weeks; a third dose should be administered 6–12 months after the second. If 3 doses of IPV cannot be administered within the recommended intervals before protection is needed, the following alternatives are recommended:

- If >8 weeks are available before protection is needed, 3 doses of IPV should be administered ≥4 weeks apart.
- If <8 weeks but >4 weeks are available before protection is needed, 2 doses of IPV should be administered ≥4 weeks apart.
- If <4 weeks are available before protection is needed, a single dose of IPV is recommended.

If <3 doses are administered, the remaining IPV doses to complete a 3-dose series should be administered when feasible, at appropriate intervals, if the person remains at increased risk for poliovirus exposure. If doses are needed while residing in the affected country, the polio vaccine that is available (IPV or OPV) may be administered.

Adults who have completed a routine series of polio vaccine are considered to have lifelong immunity to poliovirus, but data are lacking (*12*). As a precaution, persons aged ≥18 years who are traveling to areas where there has been WPV circulation in the last 12 months and who have received a routine series with either IPV or OPV in childhood should receive another dose of IPV before departure. For adults, available data do not indicate the need for more than a single lifetime booster dose with IPV.

Interim Vaccination Guidance to Comply with WHO International Health Regulations Temporary Recommendations for Countries Designated as "Polio-infected"

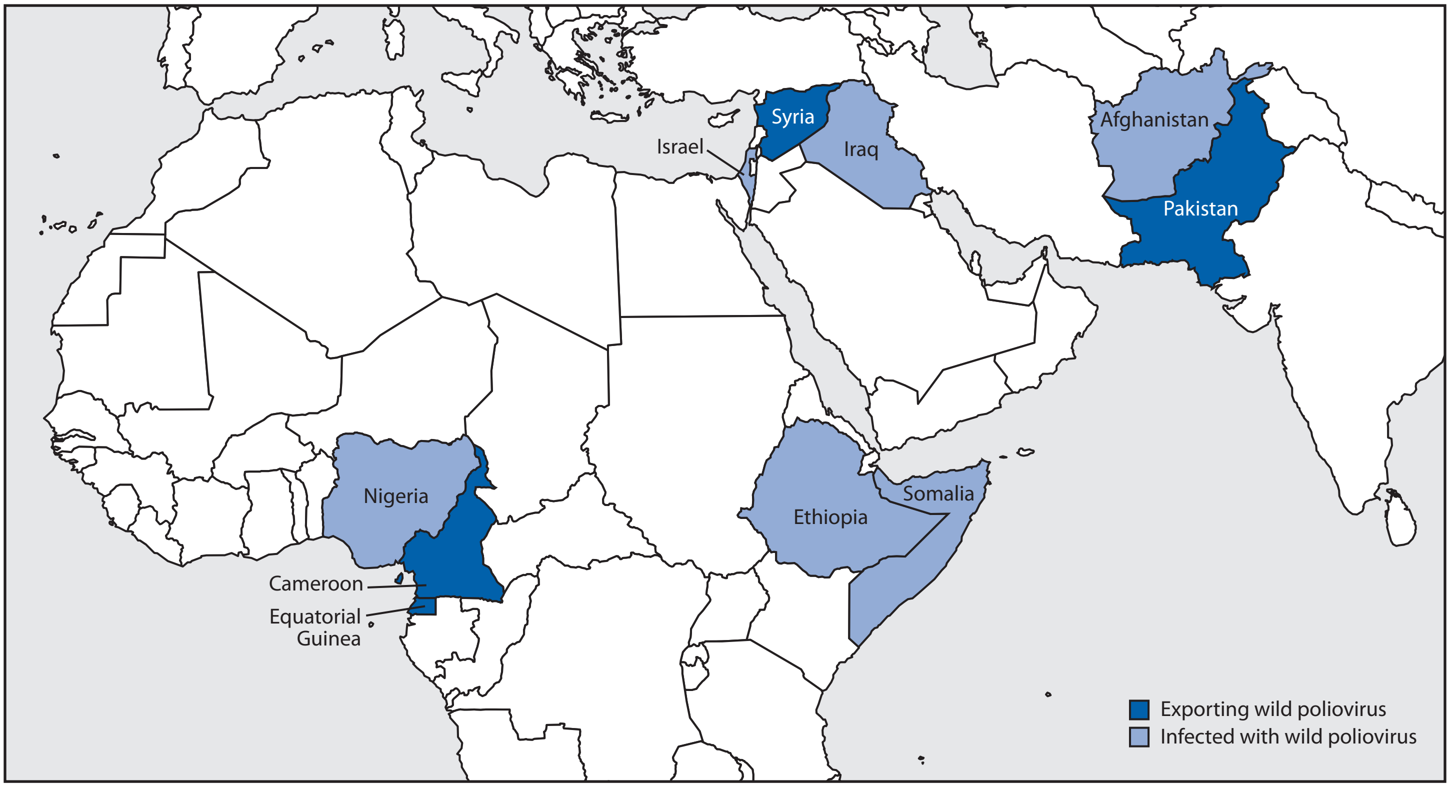
U.S. clinicians should be aware of possible new vaccination requirements for patients planning travel for >4 weeks to the 10 countries identified by WHO as polio-infected (Figure) (*13*). Four countries (Cameroon, Equatorial Guinea, Pakistan, and Syria) are now designated as "exporting wild poliovirus." Those countries should "ensure" recent (4–52 weeks before travel) polio boosters among departing residents and long-term travelers (of >4 weeks). An additional six countries (Afghanistan, Ethiopia, Iraq, Israel, Nigeria, and Somalia) are designated as "infected with wild poliovirus." Those countries should "encourage" recent polio vaccination boosters among departing residents and long-term travelers. This list might change when the public health emergency of international concern is reassessed at the end of July, and, for some countries, these measures could extend beyond the 3 months validity of these temporary recommendations.†

Long-term (staying >4 weeks) residents of polio exporting or infected countries, including potential immigrants and refugees migrating to the United States, and travelers to those countries might be required to show proof of polio vaccination when departing the country. The polio vaccine must be received between 4 weeks and 12 months before the date of departure. As of June 12, 2014, Pakistan has implemented exit requirements for polio vaccination and the remaining exporting countries are expected to implement these requirements. The

* Full information on ACIP recommendations for poliomyelitis vaccination is available at http://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/polio.html. Additional information is available at http://wwwnc.cdc.gov/travel/yellowbook/2014/chapter-3-infectious-diseases-related-to-travel/poliomyelitis. Vaccine recommendation information for specific countries is available at http://wwwnc.cdc.gov/travel/destinations/list.

† Updates will be available at http://wwwnc.cdc.gov/travel/page/clinician-updates.

FIGURE. Countries identified by the World Health Organization as exporting wild poliovirus and those currently wild poliovirus–infected — worldwide, 2014*



* As of June 30, 2014.

remaining countries with active WPV transmission might also implement exit requirements.

To ensure that U.S. travelers are properly prepared for any vaccination requirements they might face departing polio-exporting or polio-infected countries, CDC provides the following additional guidance:

- All polio vaccination administration should be documented on an International Certificate of Vaccination or Prophylaxis (often referred to as the WHO "yellow card").[§]
- For children and adolescents who are up to date with IPV vaccination, including those who have completed the routine IPV series and who will be in a polio-exporting or polio-infected country for >4 weeks and their last dose of polio vaccine was administered >12 months before the date they will be departing that country, an additional dose of IPV should be given. Children who receive this additional dose as a fourth dose between ages 18 months and 4 years will still require an IPV booster dose at age ≥4 years.
- For adults with documentation of a polio vaccine series and an adult IPV booster dose who will be in a polio-exporting or polio-infected country for >4 weeks and their last dose of polio vaccine was administered >12 months before the date they will be departing that country, an additional dose of IPV should be given.
- If, before departure from the United States, the time residing in the polio-exporting or polio-infected country is anticipated to be >12 months, available polio vaccine (IPV or OPV) may be administered while in the affected country and 4 weeks to 12 months before departing that country.
- Clinicians performing overseas evaluations of immigrants and refugees migrating to the United States from polio-exporting or polio-infected countries should consult the 2014 Addendum to Technical Instructions for Panel Physicians for Vaccinations: Technical Instructions for Polio Vaccination for Applicants for U.S. Immigration for specific instructions.[¶]

§ Additional information on the International Certificate of Vaccination or Prophylaxis is available at http://wwwnc.cdc.gov/travel/yellowbook/2014/chapter-3-infectious-diseases-related-to-travel/yellow-fever#2849.

¶ Available at http://www.cdc.gov/immigrantrefugeehealth/exams/ti/panel/technical-instructions-panel-physicians.html.

Vaccine Safety, Contraindications, and Precautions

Minor local reactions (pain and redness) can occur after IPV administration. No serious adverse reactions to IPV have been documented; however, experience with administration of multiple additional doses is limited. IPV should not be administered to persons who have experienced a severe allergic reaction (such as anaphylaxis) after a previous dose of IPV or after receiving streptomycin, polymyxin B, or neomycin, which IPV contains in trace amounts. Hypersensitivity reactions can occur after IPV administration among persons sensitive to these three antibiotics. If a pregnant woman is unvaccinated or incompletely vaccinated and requires immediate protection against polio because of planned travel to a country or area where polio cases are occurring, IPV can be administered as recommended for adults. Breastfeeding is not a contraindication to administration of polio vaccine to an infant or mother (*10,12*).**

** Additional information on precautions, contraindications, and immunization of persons with immunosuppression and their household contacts is available at http://www.cdc.gov/vaccines/vpd-vac/polio.

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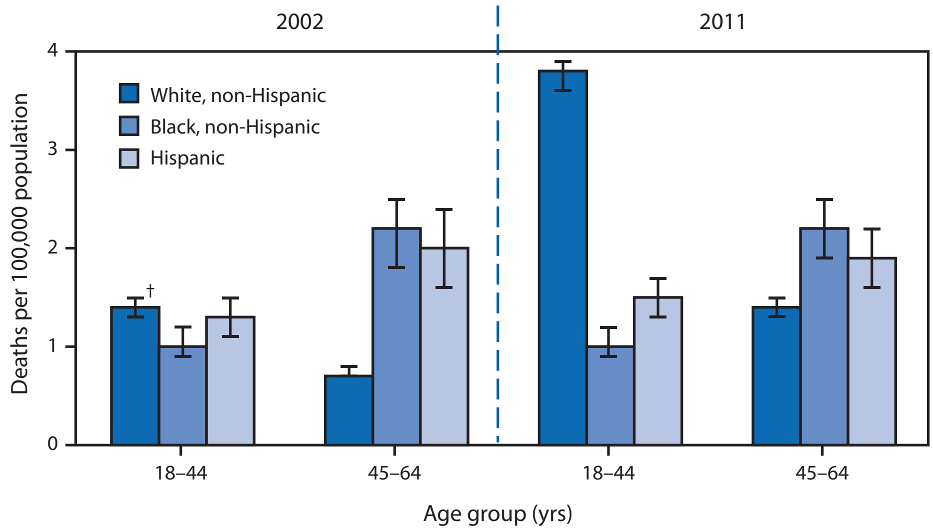
QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Rates of Drug Poisoning Deaths Involving Heroin,* by Selected Age and Racial/Ethnic Groups — United States, 2002 and 2011



* Per 100,000 population. Based on *International Classification of Diseases, 10th Revision* underlying cause codes X40–X44, X60–X64, X85 and Y10–Y14, with a multiple cause of death code of T40.1 (heroin).
† 95% confidence interval.

In the decade from 2002 to 2011, the annual number of drug poisoning deaths involving heroin doubled, from 2,089 deaths in 2002 to 4,397 deaths in 2011. In 2002, non-Hispanic blacks aged 45–64 years and Hispanics aged 45–64 years had the highest rates of drug poisoning deaths involving heroin (2.2 and 2.0 deaths per 100,000, respectively). In comparison, in 2011, non-Hispanic whites aged 18–44 years had the highest rate. From 2002 to 2011, the rate for non-Hispanic whites more than doubled for the 18–44 years age group (from 1.4 to 3.8 deaths per 100,000) and doubled for the 45–64 years age group (from 0.7 to 1.4 per 100,000). The rates for both age groups of Hispanics and non-Hispanic blacks did not significantly change during the decade.

Source: National Vital Statistics System mortality data. Available at http://www.cdc.gov/nchs/deaths.htm.

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